



April 26, 2010  
Ref. No. 31129-069

Mr. Jaspal Walia  
Project Manager  
New York State Department of Environmental Conservation, Region 9  
270 Michigan Avenue  
Buffalo, New York 14203-2999

Subject: Status Report Annual Reporting 2009  
Leica, Inc. Site; Erie County, Cheektowaga, NY  
Inactive Hazardous Waste Disposal Site No. 915156

Dear Mr. Walia:

As required by Section VII of the Order of Consent (the "Order") for the subject site, EnergySolutions, LLC will prepare progress reports during the performance phase of the remedial action. This letter shall serve as the written progress report and its format is consistent with the items specified in Section VII (i)-(vii) of this Order. Attached, please also find the signed "Institutional and Engineering Controls Certification Form."

## **1. Actions Taken During the Previous Months (January 2009 – December 2009)**

### *General Maintenance*

Operations, maintenance and monitoring of the overburden and bedrock remediation systems was conducted in accordance with Section 6, System Operations, Maintenance, and Monitoring Plan included within the "Construction and Operation of Remedial System Project Design, Final Submittal" prepared by Sciencetech NES, Inc. (now EnergySolutions) dated March 1999 and submitted to the New York State Department of Environmental Conservation (NYSDEC), Region 9.

The EnergySolutions field crew continued to conduct routine scheduled maintenance of the groundwater pump and treatment system from January 2009 through December 2009. During the routine maintenance visits, the EnergySolutions field crew also inspected the site remediation system trailers, and other site items. All site equipment was in satisfactory working condition from April 2009 through December of 2009 and normal maintenance was performed during most of the period. The system was inoperable for the first part of 2009 as outlined below.

In late November or early December of 2008, problems with leaks in the air lines to the Area B recovery wells facilitated the need to discontinue operation of the groundwater pumping system. While the system was shut down, seasonally cold temperatures caused freezing of moisture in the air lines and subsequent line breakage. The system remained inoperable for the remainder of the 2008 calendar year. Repairs were eventually completed in early April of 2009, and the system began operation again on April 3, 2009. Spring, 2009 samples were collected on April 16 and 17, 2009.

### *Groundwater Sampling*

Groundwater samples and elevation measurements were collected on April 15, 2009, October 6, 2009, and on January 15, 2010. A summer sampling event, scheduled for June 2009, was not collected due to system inoperation. The winter sampling event, scheduled for December 2009, was delayed until January 2010 due to weather issues.

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Groundwater samples were collected from shallow wells MW-3, MW-5, MW-6, MW-10, MW-14, MW-16R, MW-18, MW-22, and MW-24, and bedrock wells MW-1A, MW-5A, MW-6A, MW-14A, MW-18A, MW-22A, MW-24A, in April 2009. Groundwater samples were collected from shallow wells MW-5, MW-6, MW-10, MW-14, MW-16R, MW-18, MW-22, and MW-24, and bedrock wells MW-1A, MW-5A, MW-6A, MW-14A, MW-18A, MW-22A, MW-24A in October 2009. Groundwater samples were collected from shallow wells MW-3, MW-5, MW-6, MW-14, MW-16R, MW-18, MW-22, and MW-24, and bedrock wells MW-1A, MW-5A, MW-6A, MW-14A, MW-18A, MW-22A, MW-24A, in January 2010. Samples of groundwater from MW-11A and MW-16A were collected in the discharge piping at the treatment facility. These samples were collected in April and October 2009, and in January 2010, and were intended to provide information regarding the effects of the HRC injection on the groundwater at the site.

Groundwater samples were also collected on September 2, 2009 from four monitoring wells located on Rowan Road (MW-25, MW-25A, MW-26, and MW-26A). These wells were installed in July 2009 in response to a NYSDEC request for additional delineation of the groundwater plume to the south of the facility. A second round of groundwater samples were collected from these four wells during the January 2010 sampling event.

Groundwater depth measurements were collected from most of the available wells at the site during the April, October, and January sampling rounds. A listing of groundwater elevation information is included in Table 1 through Table 3 in Appendix A.

All samples collected were submitted under chain of custody to Columbia Analytical Services, Inc., located in Rochester, New York, for volatile organic compound (VOC) analysis using EPA Method 8260. Selected samples were also analyzed for additional parameters designed to assess biological activity as proposed in the HRC injection plan.

The three rounds of groundwater sampling were performed in April and October 2009, and January 2010, in accordance with the sampling program established during the August 2006 meeting between representatives from the NYSDEC, the New York State Department of Health (NYSDOH), Leica and EnergySolutions.

#### *Soil Vapor Intrusion near Rowan Road*

In a letter dated April 22, 2008, the NYDEC expressed concern regarding VOC detections in wells at the south side of the site, up-gradient from residential homes on Rowan Road (MW-5A, MW-14A, MW-22, and MW-22A). In response to this letter, EnergySolutions prepared plans to assess the VOC impact in the area. The DEC recommended Vapor intrusion sampling of selected homes on Rowan Road, along with the installation of additional groundwater monitoring wells on the south side of Rowan Road, down gradient of MW-5/5A and MW-22/22A. EnviroGroup Limited was contracted to prepare and implement sampling plans designed to evaluate the potential presence, nature and extent of VOC impact in soil vapor and shallow groundwater in the area. Sampling plans were prepared and subsequently approved by NYSDEC and NYSDOH by letter dated January 21, 2009. These indoor air sampling and groundwater monitoring plans were implemented in March of 2009, and a final report dated May 15, 2009 was submitted to the NYSDEC on May 20, 2009.

### *Rowan Road Groundwater Investigation*

As part of the vapor intrusion study near Rowan Road, the NYDEC also requested the installation of additional groundwater monitoring wells south of the site along Rowan Road for the purpose of delineating the downgradient extent of chlorinated VOCs in groundwater. Two sets of overburden/bedrock well pairs, MW-25/25A and MW-26/26A were installed on the south side of Rowan Road; the MW-25 well pair to the east of Preston Road, and the MW-26 well pair to the west of Preston Road. One round of groundwater samples were collected on September 2, 2009. Sample results are summarized later in this report. A report with details of the well installation and groundwater sampling results was prepared, dated November 16, 2009, and submitted to NYDEC. A second round of groundwater samples were collected from the four wells as part of the January 2010 sampling event.

### *Discharge Permit Monitoring/Modification*

Effluent samples were collected from the groundwater treatment system discharge on April 16, June 5, and October 6 of 2009. Sample analysis indicated that there were no exceedances of permitted discharge concentrations during the year.

No revisions to the groundwater discharge permit were submitted during the dates covered in this report.

## **2. Results of Data Generated**

### *Groundwater Sampling*

The results of data collected during the April and October, 2009, and the January, 2010 rounds of groundwater sampling are included in this report. Samples collected in April, October and January were intended to serve as the annual and semi-Annual groundwater sampling and also as post HRC injection sampling for the site.

During the April, October and January sampling events, all wells scheduled for sampling provided sufficient water for sample collection. During all three events, three well volumes were purged from monitoring wells with sufficient water volume using a dedicated bailer prior to sample collection.

Groundwater quality frequently varies at the site from season to season. In order to compare data quality during the same successive season, concentrations of total VOCs in the spring of 2008 (March 31) were compared to concentrations in the spring of 2009 (April 15). When comparing the VOC concentrations in individual wells in Area B during these two seasons, they ranged as follows: MW-16A from 3190 to 2010 ug/l, MW-16R from 4220 to 690 ug/l, and MW-18, non-detect for both sampling dates. These changes in concentrations are thought to be associated with continued degradation of chlorinated solvents following the injection of HRC in this area, as well as seasonal fluctuations and the natural movement of the contaminants in the local groundwater.

Results from the spring sampling round indicated that concentrations of TCE in the majority of the wells were moderately to significantly decreased from 2008 to 2009. For monitoring well MW-16R, the TCE concentration declined to a non-detectable concentration. In most cases, these concentration reductions were significant enough to suggest that they were likely attributable to the HRC injection program. Concentrations of DCE and vinyl chloride, which are byproducts of the natural/biological degradation of TCE, remained relatively constant or increased in some cases, also attributable to the HRC injection program. Notable is the decrease in DCE in MW-16R from 2000 ug/l in 2008 to non-detectable concentrations in 2009. Chloroethane, a degradation product of DCE, was detected in the

groundwater sample collected from MW-16R. In addition, associated concentrations of the chlorinated solvent 1,1,1-trichloroethane (TCA) at MW-16A showed a decrease in concentration, coupled with a slight increase in the degradation product 1,1-dichloroethane (DCA). A similar response was also noted in MW-16R, with a decrease to a non-detectable concentration of TCA and an order of magnitude decrease in DCA concentrations.

The October 2009 results show no detectable concentrations of TCE in groundwater samples collected from the three overburden monitoring wells in Area B (MW-16R, MW-18 and MW-24). DCE and vinyl chloride concentrations were non-detect in monitoring wells MW-16R and MW-18. DCE concentrations remained relatively similar in MW-24, but vinyl chloride concentrations were slightly increased for this sampling event. Both DCA and chloroethane concentrations were lower in the groundwater sample collected from MW-16R, while the TCA concentrations remained non-detect. TCE and vinyl chloride concentrations were similar in the groundwater sample collected from bedrock monitoring well MW-16A, decreased at MW-18A, and were not detected at MW-24A. DCE concentrations increased at MW-16A, remained similar in MW-18A, and were not detected in MW-24A.

The January 2010 results continue to show no detectable concentrations of TCE in groundwater samples collected from the three overburden monitoring wells in Area B. DCE and vinyl chloride concentrations remain non-detect in monitoring wells MW-16R and MW-18. The DCE concentration reported for MW-24 is an order of magnitude less than the October 2009 sample, while the vinyl chloride concentration remained in the approximate same range. Both DCA and chloroethane concentrations were similar in the groundwater sample collected from MW-16R when compared to the October 2009 sample, while the TCA concentrations remained non-detect. TCE concentrations decreased in the groundwater sample collected from bedrock monitoring well at MW-18A, and were not detected at MW-24A. DCE and vinyl chloride concentrations increased at both MW-18A and MW-24A.

These increases in the relative concentrations of degradation products coupled with the degradation of the parent products suggest that the HRC injection has enhanced the biological degradation of the chlorinated solvents present in Area B. Future rounds of groundwater samples will provide additional evidence to aid in confirming that the HRC program has contributed to these reductions.

In order to assess potential trends in the contaminant concentrations in Area C, we have compared concentrations of total VOCs in the spring of 2008 with concentrations in the spring of 2009. When comparing the concentrations in individual wells in Area C during these two seasons, they ranged as follows: MW-3, MW-5 and MW-22 from 0 to 0, MW-5A from 24 to 71 ug/l, MW-6 from 143 to 141 ug/l, MW-6A from 600 to 720 ug/l, MW-10 from 263 to 488 ug/l, MW-14, from 245 to 235 ug/l, MW-14A, from 222 to 157 ug/l, and MW-22A from 160 to 46 ug/l, MW. These slight variations in concentrations are thought to be associated with seasonal fluctuations and the natural movement of the contaminants in the local groundwater and do not appear to be representative of any significant trends. Future rounds of groundwater samples will provide additional evidence to assess the success of the HRC injection in this area.

Low levels of TCE remain in Area C only in groundwater collected from monitoring well MW-6, screened in the overburden. TCE was not detected in any groundwater sample collected from any other overburden or bedrock wells in Area C. Concentrations of DCE and vinyl chloride remained relatively constant or increased in some cases. Notable are the decreases in DCE and vinyl chloride concentrations from April to October 2009 for groundwater samples for monitoring wells MW-6A and MW-14A, and decreases in DCE and vinyl chloride concentrations from 120 ug/l and 38 ug/l to non-detect from monitoring well MW-10. Slight increases in DCE and vinyl chloride were noted in the

October 2009 samples, versus non-detect for the several previous samples for monitoring wells MW-22 and MW-22A. Acetone, a byproduct of the degradation of chlorinated solvents, was detected in groundwater samples collected from monitoring wells MW-5A, MW-10, and MW-22A.

Concentrations in Area C have remained relatively consistent with previous rounds of sampling. Available data shows some decrease in concentrations, but does not provide conclusive evidence that the HRC injection program significantly affected contaminant concentrations.

The September 2009 results for the groundwater samples collected from the four new monitoring wells are also included in this report. These wells were sampled as part of the vapor intrusion and well installation program on Rowan Road. Vinyl chloride at 9.1 ug/l was detected in the bedrock well for the MW-25 well pair, located on the south side of Rowan Road, east of Preston Road. Higher concentrations of chlorinated VOC degradation products were detected in the MW-26 well pair, located on the south side of Rowan Road, west of Preston Road. DCE and vinyl chloride were detected in the groundwater sample collected from the overburden well at concentrations of 46 ug/l and 28 ug/l, respectively. DCE and vinyl chloride concentrations detected in the groundwater sample collected from the bedrock well were 750 ug/l and 560 ug/l, respectively.

The January 2010 results continue to show low levels of TCE remain in Area C only in groundwater collected from overburden monitoring well MW-6. TCE was not detected in any groundwater sample collected from any other overburden or bedrock wells in Area C. Concentrations of DCE and vinyl chloride remained relatively constant or increased in some cases. Notable are the decreases in vinyl chloride concentrations from October 2009 to January 2010 for groundwater samples collected from monitoring wells MW-6A, MW-14A, and MW-22A, and decreases in DCE and vinyl chloride concentrations to non-detect for monitoring well MW-22. Slight increases in concentrations for January 2010 groundwater samples were noted for DCE at MW-14A, and for vinyl chloride at MW-6.

Results show effective chlorinated VOC reduction has been observed in Area B over time with the elimination of TCE, DCE and vinyl chloride in MW-16R, and a reduction in TCE, DCE and vinyl chloride concentrations in MW-24. We have compared the total concentration of TCE, DCE and vinyl chloride to the total VOC concentration in each well providing a percentage of the total VOC concentration for each constituent. The percentage of vinyl chloride (in relation to the total VOC concentration) ranges from a minimum of 0 percent to a maximum of 39 percent (MW-24) in Area B wells indicating that there is still more DCE in the area. Relative percentages of vinyl chloride in Area C wells range from a minimum of 8 percent to a maximum of 80 percent with the vinyl chloride component in most wells in the 20 to 50 percent range suggesting higher percentages of vinyl chloride and thus more attenuation.

The January 2010 results for the offsite groundwater monitoring wells on Rowan Road were compared to the September 2009 results. Results for monitoring well MW-25 remain non-detect for all constituents, while bedrock well MW-25A showed slight increases in DCE and vinyl chloride concentrations. DCE and vinyl chloride concentrations were both lower for monitoring wells MW-26 and MW-26A for the January 2010 sampling event when compared to the September 2009 sampling event.

Groundwater data (Table 4A, 4B, & 4C) and groundwater elevation tables for April and October 2009, and January 2010 are included in Appendix A. Groundwater contour maps and contaminant concentration isopleth figures are included in Appendix B. Groundwater elevations were not previously collected from the two pumping wells, MW-11A and MW-16A. Incorporation of this data for the 2009 monitoring periods shows inward groundwater gradients during pumping operations and demonstrates control of groundwater in Area B and Area C. April 2009, October 2009 and January 2010 groundwater contours and contaminant concentration isopleths are shown on Figures 1 through 8 (April 2009), 9 through 16 (October 2009), and 17 through 24 (January 2010). Laboratory data is included in Appendix C.

### **3. Required Deliverables Submitted to NYSDEC**

No deliverables were submitted during the period.

### **4. Actions Scheduled for the Upcoming Months (January 2010 – December 2010)**

#### *System Maintenance and Groundwater Monitoring*

The EnergySolutions field crew will continue with routine scheduled maintenance to the groundwater pump and treatment system and groundwater monitoring activities in the upcoming months.

Future groundwater monitoring will be performed on an annual and semi-annual basis in accordance with the latest monitoring program schedule attached in Appendix A. Two additional rounds of groundwater sampling will be conducted to monitor the effectiveness of the HRC injections. The next scheduled quarterly groundwater sampling event will be conducted during the spring, scheduled for March 2010, as indicated in the current monitoring program.

#### *Remediation*

Additional remediation activities are not planned at this time. Sampling associated with the HRC plan will continue during 2010. Following review of this supplemental groundwater and soil data, EnergySolutions will assess the success of the HRC injection program on VOC concentrations in the groundwater, soils, sub-slab vapors and indoor air, and determine whether additional rounds of injection would be appropriate.

#### *Vapor Intrusion and Groundwater Monitoring at Rowan Road and Preston Road*

Based upon the indoor air results for the Rowan Road residences, and the groundwater sample results for the two new well pairs installed on Rowan Road, the NYDEC requested additional indoor air sampling of residences on Preston Road, and the installation of additional groundwater monitoring well pairs on Rowan Road and Preston Road. A Groundwater Monitoring Well Installation Vapor Intrusion Investigation Work Plan was submitted to the NYDEC on December 28, 2009. The Work Plan was approved after modification by the NYDEC on January 12, 2010. The vapor intrusion sampling will be conducted during the current 2009/2010 heating season and the installation of the new groundwater sampling wells will be completed as soon as practicable upon receipt of permission from the Town of Cheektowaga, New York and weather permitting.

### **5. Schedule Information**

No scheduling conflicts are anticipated at this time.

**6. Modifications to the Work Plan**

Additional work plans submitted, approved and/or implemented during this time period included the Vapor Intrusion Investigation Work Plan (approved on January 21, 2009), the Indoor Air Sampling and Analysis Plan, Rowan Road Residences (approved on January 21, 2009), and the Groundwater Monitoring Well Installation Vapor Intrusion Investigation Work Plan (approved on January 12, 2010 and currently in progress).

**7. Actions Taken in Support of the Citizen Participation Plan**

No private residents visited the site and no action was undertaken in support of community relations during this period.

If you have any questions regarding this report, please feel free to call me at 801-303-1092.

Sincerely,  
**EnergySolutions, LLC**



Robert E. McPeak, Jr., P.E., LEP  
Department Manager, Environmental Services

REM/lhc  
Enclosures

cc: J. Egan  
C. Grabinski  
C. O'Conner (NYSDOH)

Enclosures: **Appendix A Groundwater Monitoring Tables and Revised Monitoring Program Letter**

Table 1	Groundwater Elevation Data (April, 2009)
Table 2	Groundwater Elevation Data (October, 2009)
Table 3	Groundwater Elevation Data (January, 2010)
Table 4	Quarterly Groundwater Data (A (Wells 1-10), B (Wells 11-16R) & C Wells 18-26A))

**Appendix B Groundwater Monitoring Figures**

Figure 1	Groundwater Contours, April 2009, Overburden Wells
Figure 2	Groundwater Contours, April 2009, Bedrock Wells
Figure 3	Vinyl Chloride Contaminant Concentration Isopleths, April 2009, Overburden Wells
Figure 4	Vinyl Chloride Contaminant Concentration Isopleths, April 2009, Bedrock Wells
Figure 5	CIS 1,2 DCE Contaminant Concentration Isopleths, April 2009, Overburden Wells
Figure 6	CIS 1,2 DCE Contaminant Concentration Isopleths, April 2009, Bedrock Wells
Figure 7	TCE Contaminant Concentration Isopleths, April 2009, Overburden Wells
Figure 8	TCE Contaminant Concentration Isopleths, April 2009, Bedrock Wells
Figure 9	Groundwater Contours, October 2009, Overburden Wells
Figure 10	Groundwater Contours, October 2009, Bedrock Wells
Figure 11	Vinyl Chloride Contaminant Concentration Isopleths, October 2009, Overburden Wells
Figure 12	Vinyl Chloride Contaminant Concentration Isopleths, October 2009, Bedrock Wells
Figure 13	CIS 1,2 DCE Contaminant Concentration Isopleths, October 2009, Overburden Wells
Figure 14	CIS 1,2 DCE Contaminant Concentration Isopleths, October 2009, Bedrock Wells
Figure 15	TCE Contaminant Concentration Isopleths, October 2009, Overburden Wells
Figure 16	TCE Contaminant Concentration Isopleths, October 2009, Bedrock Wells
Figure 17	Groundwater Contours, January 2010, Overburden Wells
Figure 18	Groundwater Contours, January 2010, Bedrock Wells
Figure 19	Vinyl Chloride Contaminant Concentration Isopleths, January 2010, Overburden Wells
Figure 20	Vinyl Chloride Contaminant Concentration Isopleths, January 2010, Bedrock Wells

Figure 21 CIS 1,2 DCE Contaminant Concentration Isopleths, January 2010, Overburden Wells

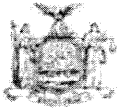
Figure 22 CIS 1,2 DCE Contaminant Concentration Isopleths, January 2010, Bedrock Wells

Figure 23 TCE Contaminant Concentration Isopleths, January 2010, Overburden Wells

Figure 24 TCE Contaminant Concentration Isopleths, January 2010, Bedrock Wells

### **Appendix C Analytical Data**

Analytical Data April 2009, October 2009 and January 2010  
Groundwater Analytical Data



Enclosure 1  
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION  
Site Management Periodic Review Report Notice  
Institutional and Engineering Controls Certification Form



	Site Details	Box 1
<b>Site No.</b> 915156		
<b>Site Name</b> Leica, Inc.		
Site Address: Eggert and Sugar Roads      Zip Code: 14215		
City/Town: Cheektowaga		
County: Erie		
Allowable Use(s) (If applicable, does not address local zoning): Industrial		
Site Acreage: 24.1		
Owner: Leica, Inc., 2345 Waukegan, Bannockburn, IL 60015		
Calypso Development, 203 Eggert Rd., Buffalo, NY 14215		
Reporting Period: March 31, 2009 to April 14, 2010		

	Box 2	
Verification of Site Details	YES	NO
1. Is the information in Box 1 correct?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
If NO, are changes handwritten above or included on a separate sheet?	<input type="checkbox"/>	
2. Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
If YES, is documentation or evidence that documentation has been previously submitted included with this certification?	<input type="checkbox"/>	
3. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
If YES, is documentation (or evidence that documentation has been previously submitted) included with this certification?	<input type="checkbox"/>	
4. If use of the site is restricted, is the current use of the site consistent with those restrictions?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
If NO, is an explanation included with this certification?	<input type="checkbox"/>	
5. For non-significant-threat Brownfield Cleanup Program Sites subject to ECL 27-1415.7(c), has any new information revealed that assumptions made in the Qualitative Exposure Assessment regarding offsite contamination are no longer valid?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
If YES, is the new information or evidence that new information has been previously submitted included with this Certification?	<input type="checkbox"/>	
6. For non-significant-threat Brownfield Cleanup Program Sites subject to ECL 27-1415.7(c), are the assumptions in the Qualitative Exposure Assessment still valid (must be certified every five years)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
If NO, are changes in the assessment included with this certification?	<input type="checkbox"/>	

**Description of Institutional Controls**ParcelInstitutional Control

S\_B\_L Image: 91.00-1-26.12

Ground Water Use Restriction  
Monitoring Plan  
O&M Plan

S\_B\_L Image: 91.00-1-26.11

Ground Water Use Restriction  
Monitoring Plan  
O&M Plan

**Description of Engineering Controls**ParcelEngineering Control

S\_B\_L Image: 91.00-1-26.12

Alternate Water Supply  
Fencing/Access Control  
Pump & Treat

S\_B\_L Image: 91.00-1-26.11

Alternate Water Supply  
Fencing/Access Control  
Pump & Treat

Attach documentation if IC/ECs cannot be certified or why IC/ECs are no longer applicable.  
(See instructions)

**Control Description for Site No. 915156****Parcel: 91.00-1-26.11**

As per ROD - March 1997, there will be:

- 1) OM&M of Groundwater extraction by Dual Vacuum Extraction System.
- 2) Groundwater Monitoring
- 3) Prohibition of use of groundwater

**Parcel: 91.00-1-26.12**

As per ROD - March 1997, there will be:

- 1) OM&M of Groundwater extraction by Dual Vacuum Extraction System.
- 2) Groundwater Monitoring
- 3) Prohibition of use of groundwater

### Periodic Review Report (PRR) Certification Statements

1. I certify by checking "YES" below that:

- a) the Periodic Review report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;
- b) to the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and the information presented is accurate and complete.

YES NO



2. If this site has an IC/EC Plan (or equivalent as required in the Decision Document), for each Institutional or Engineering control listed in Boxes 3 and/or 4, I certify by checking "YES" below that all of the following statements are true:

- (a) the Institutional Control and/or Engineering Control(s) employed at this site is unchanged since the date that the Control was put in-place, or was last approved by the Department;
- (b) nothing has occurred that would impair the ability of such Control, to protect public health and the environment;
- (c) access to the site will continue to be provided to the Department, to evaluate the remedy, including access to evaluate the continued maintenance of this Control;
- (d) nothing has occurred that would constitute a violation or failure to comply with the Site Management Plan for this Control; and
- (e) if a financial assurance mechanism is required by the oversight document for the site, the mechanism remains valid and sufficient for its intended purpose established in the document.

YES NO



3. If this site has an Operation and Maintenance (O&M) Plan (or equivalent as required in the Decision Document);

I certify by checking "YES" below that the O&M Plan Requirements (or equivalent as required in the Decision Document) are being met.

YES NO



4. If this site has a Monitoring Plan (or equivalent as required in the remedy selection document);

I certify by checking "YES" below that the requirements of the Monitoring Plan (or equivalent as required in the Decision Document) is being met.

YES NO



IC CERTIFICATIONS  
SITE NO. 915156

Box 6

SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

I certify that all information and statements in Boxes 2 and/or 3 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I CARL S. GRABINSKI at LEICA MICROSYSTEMS INC. c/o VIDEOJET  
print name print business address  
1500 MITTEL BLVD., WOOD DALE, ILL. 60191

am certifying as REMEDIAL PARTY (Owner or Remedial Party)

for the Site named in the Site Details Section of this form.

Carl S. Grabinski  
Signature of Owner or Remedial Party Rendering Certification

4/22/10  
Date

IC/EC CERTIFICATIONS

Box 7

QUALIFIED ENVIRONMENTAL PROFESSIONAL (QEP) SIGNATURE

I certify that all information in Boxes 4 and 5 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I Robert McPeak at Energy Solutions  
print name print business address  
100 Mill Plain Rd. Danbury CT.

am certifying as a Qualified Environmental Professional for the Leica site Leica Microsystems

(Owner or Remedial Party) for the Site named in the Site Details Section of this form.

Robert E. McPeak Jr.  
Signature of Qualified Environmental Professional, for  
the Owner or Remedial Party, Rendering Certification



Stamp (if Required)

4/26/10  
Date

**APPENDIX A**

**Groundwater Monitoring Tables and Revised Monitoring  
Program Letter**

Table 1	Groundwater Elevation Data (April, 2009)
Table 2	Groundwater Elevation Data (October, 2009)
Table 3	Groundwater Elevation Data (January, 2010)
Table 4	Quarterly Groundwater Data (A, (Wells 1-10), B, (Wells 11-16R) & C, Wells 18-26A)

**Table 1**  
**Groundwater Elevation Data**  
**April 2009**

Well Number	Depth to Water (ft.)	Depth to Bottom (ft.)	Top of PVC Elevation	Water Column (ft.)	Well ID (inches)	One Well Volume (gal.)	Water Elevation (ft.)	Notes
MW-1	6.50	10.34	662.38	3.84	2	0.63	655.88	
MW-1A	14.82	27.00	663.48	12.18	4	7.95	648.66	
MW-2	7.36	NM	657.01	NM	2	NA	649.65	
MW-2A	7.34	NM	657.02	NM	4	NA	649.68	
MW-3	6.42	10.28	655.94	3.86	2	0.63	649.52	
MW-4	5.42	12.02	655.57	6.60	2	1.08	650.15	
MW-5	5.54	11.06	654.80	5.52	2	0.90	649.26	
MW-5A	6.06	38.92	654.84	32.86	4	21.46	648.78	
MW-6	10.06	14.80	660.84	4.74	2	0.77	650.78	
MW-6A	10.56	20.60	659.38	10.04	4	6.56	648.82	
MW-7	6.70	12.26	658.21	5.56	2	0.91	651.51	
MW-8 <sup>1</sup>	Removed during excavation							
MW-9	3.78	10.40	654.99	6.62	2	1.08	651.21	
MW-9A	6.68	59.38	654.67	52.70	4	34.41	647.99	
MW-10	3.46	10.04	655.48	6.58	2	1.07	652.02	
MW-11 <sup>1</sup>	Removed during excavation							
MW-11A	8.24	Bedrock well with groundwater pump						
MW-12	Damaged							
MW-13	2.76	10.28	654.66	7.52	2	1.23	651.90	
MW-13A	5.20	45.10	655.13	39.90	4	26.05	649.93	
MW-14	4.38	10.52	653.38	6.14	2	1.00	649.00	
MW-14A	6.34	33.92	653.70	27.58	4	18.01	647.36	
MW-15	Filled with Gravel							
MW-15A <sup>1</sup>	Filled with Gravel							
MW-16R <sup>2</sup>	6.92	11.98	660.04	5.06	2	0.82	653.12	
MW-16A	17.06	NA	659.95	NA	6	NA	642.89	Pumping Well
MW-17A	NM	NM	659.18	NM	4	NA	NM	
MW-18	8.98	12.80	662.51	3.82	2	0.62	653.53	
MW-18A	14.44	34.58	662.72	20.14		13.15	648.28	
MW-19	7.90	13.28	660.84	5.38	2	0.88	652.94	
MW-20	4.82	11.78	659.12	6.96	2	1.13	654.30	
MW-22	3.16	10.02	652.51	6.86	2	1.12	649.35	
MW-22A	6.48	45.96	654.45	39.48	4	25.78	647.97	
MW-23	8.88	13.16	NA	4.28	2	0.70		
MW-24	10.00	13.36	662.74	3.36	2	0.55	652.74	
MW-24A	14.16	34.20	662.85	20.04	4	13.09	648.69	

**Notes**

- 1 Monitoring well accidentally damaged or removed during excavation activities in Area C
- 2 Monitoring well MW-16R installed to replace MW-16
- 3 NL = Not Located
- 4 NM = Not Measured
- 5 NA = Not Available

**Table 2**  
**Groundwater Elevation Data**  
**October 2009**

Well Number	Depth to Water (ft.)	Depth to Bottom (ft.)	Top of PVC Elevation	Water Column (ft.)	Well ID (inches)	One Well Volume (gal.)	Water Elevation (ft.)	Notes
MW-1	5.68	NM	662.38	NM	2	NA	656.70	
MW-1A	10.74	25.80	663.48	15.06	4	2.45	652.74	
MW-2	6.66	NM	657.01	NM	2	NA	650.35	
MW-2A	6.86	NM	657.02	NM	4	NA	650.16	
MW-3	6.56	NM	655.94	NM	2	NA	649.38	
MW-4	6.26	NM	655.57	NM	2	NA	649.31	
MW-5	4.70	11.06	654.80	6.36	2	1.04	650.10	
MW-5A	4.52	38.94	654.84	34.42	4	5.61	650.32	
MW-6	7.64	14.80	660.84	7.16	2	1.17	653.20	
MW-6A	8.22	20.60	659.38	12.38	4	2.02	651.16	
MW-7	5.40	NM	658.21	NM	2	NA	652.81	
MW-8 <sup>1</sup>	Removed during excavation							
MW-9	5.02	NM	654.99	NM	2	NA	649.97	
MW-9B	5.00	NM	654.67	NM	4	NA	649.67	
MW-10	8.14	NM	655.48	NM	2	NA	647.34	
MW-11 <sup>1</sup>	Removed during excavation							
MW-11A	19.02	Bedrock well with groundwater pump						
MW-12	Damaged							
MW-13	8.22	NM	654.66	NM	2	NA	646.44	
MW-13A	6.60	NM	655.13	NM	4	NA	648.53	
MW-14	7.92	10.52	653.38	2.60	2	0.42	645.46	
MW-14A	5.06	34.16	653.70	29.10	4	4.74	648.64	
MW-15	Filled with Gravel							
MW-15A <sup>1</sup>	Filled with Gravel							
MW-16R <sup>2</sup>	6.18	11.98	660.04	5.80	2	0.95	653.86	
MW-16A	15.80	NA	659.95	NA	6	NA	644.15	Pumping Well
MW-17A	3.10	NM	659.18	NM	4	NA	656.08	
MW-18	9.52	12.80	662.51	3.28	2	0.53	652.99	
MW-18A	11.08	34.58	662.72	23.50		3.83	651.64	
MW-19	6.38	NM	660.84	NM	2	NA	654.46	
MW-20	3.20	NM	659.12	NM	2	NA	655.92	
MW-22	7.22	10.02	652.51	2.80	2	0.46	645.29	
MW-22A	5.70	46.60	654.45	40.90	6	6.67	648.75	
MW-23	8.38	13.16	NA	4.78	2	0.78		
MW-24	9.76	13.36	662.74	3.60	2	0.59	652.98	
MW-24A	10.42	34.20	662.85	23.78	4	3.88	652.43	
MW-25	5.24	NM	653.20	NM	2	NA	647.96	
MW-25A	3.18	NM	653.28	NM	4	NA	650.10	
MW-26	8.60	NM	653.60	NM	2	NA	645.00	
MW-26A	5.62	NM	653.70	NM	4	NA	648.08	

**Notes**

- 1 Monitoring well accidentally damaged or removed during excavation activities in Area C
- 2 Monitoring well MW-16R installed to replace MW-16
- 3 NL = Not Located
- 4 NM = Not Measured
- 5 NA = Not Available

**Table 3**  
**Groundwater Elevation Data**  
**January 2010**

Well Number	Depth to Water (ft.)	Depth to Bottom (ft.)	Top of PVC Elevation	Water Column (ft.)	Well ID (inches)	One Well Volume (gal.)	Water Elevation (ft.)	Notes
MW-1	NM	NM	662.38	NM	2	NA	NM	NM
MW-1A	14.04	25.80	663.48	11.76	4	1.92	649.44	
MW-2	NM	NM	657.01	NM	2	NA	NM	NM
MW-2A	NM	NM	657.02	NM	4	NA	NM	NM
MW-3	NM	NM	655.94	NM	2	NA	NM	NM
MW-4	NM	NM	655.57	NM	2	NA	NM	NM
MW-5	4.12	11.06	654.80	6.94	2	1.13	650.68	
MW-5A	4.64	38.94	654.84	34.30	4	5.59	650.20	
MW-6	8.62	14.80	660.84	6.18	2	1.01	652.22	
MW-6A	8.86	20.60	659.38	11.74	4	1.91	650.52	
MW-7	NM	NM	658.21	NM	2	NA	NM	NM
MW-8 <sup>1</sup>	Removed during excavation							
MW-9	NM	NM	654.99	NM	2	NA	NM	NM
MW-9B	NM	NM	654.67	NM	4	NA	NM	NM
MW-10	NM	NM	655.48	NM	2	NA	NM	NM
MW-11 <sup>1</sup>	Removed during excavation							
MW-11A	8.14 Bedrock well with groundwater pump							NM
MW-12	Damaged							
MW-13	NM	NM	654.66	NM	2	NA	NM	NM
MW-13A	NM	NM	655.13	NM	4	NA	NM	NM
MW-14	4.04	10.52	653.38	6.48	2	1.06	649.34	
MW-14A	5.62	34.16	653.70	28.54	4	4.65	648.08	
MW-15	Filled with Gravel							
MW-15A <sup>1</sup>	Filled with Gravel							
MW-16R <sup>2</sup>	6.92	11.98	660.04	5.06	2	0.82	653.12	
MW-16A	10.66	NA	659.95	NA	6	NA	649.29	Pumping Well
MW-17A	NM	NM	659.18	NM	4	NA	NM	NM
MW-18	8.92	12.80	662.51	3.88	2	0.63	653.59	
MW-18A	13.76	34.58	662.72	20.82		3.39	648.96	
MW-19	NM	NM	660.84	NM	2	NA	NM	NM
MW-20	NM	NM	659.12	NM	2	NA	NM	NM
MW-22	3.22	10.02	652.51	6.80	2	1.11	649.29	
MW-22A	5.78	46.60	654.45	40.82	6	6.65	648.67	
MW-23	NM	NM	NA	NM	2	NA	NM	NM
MW-24	9.84	13.36	662.74	3.52	2	0.57	652.90	
MW-24A	13.70	34.20	662.85	20.50	4	3.34	649.15	
MW-25	5.24	NM	653.20	NM	2	NA	647.96	
MW-25A	3.18	NM	653.28	NM	4	NA	650.10	
MW-26	8.60	NM	653.60	NM	2	NA	645.00	
MW-26A	5.62	NM	653.70	NM	4	NA	648.08	

**Notes**

- 1 Monitoring well accidentally damaged or removed during excavation activities in Area C
- 2 Monitoring well MW-16R installed to replace MW-16
- 3 NL = Not Located
- 4 NM = Not Measured
- 5 NA = Not Available

Prepared by:DRS  
Date: 2/10  
Checked by:PWM  
Date:3/10

Table 4A (Wells 1-10 Treated Discharge)  
Quarterly Groundwater Data  
Leica Microsystems, Eggert Road  
Cheektowaga, NY

ANALYTE	CAS	Method Detection Limit	RAOs GW	MW-1A															MW-3		
Sample Collection Date:				Mar-25-05	June 26-05	Oct-24-05	Jan-05-06	Mar-17-06	July-13-06	May-02-07	Mar-31-08	May-14-08	Jul-30-08	Apr-15-09	Oct-6-09	Jan-14-10	May-02-07	May-14-08	Apr-15-09		
Dilution:				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Volatile Organic Compounds (ug/l)																					
acetone	67641	20	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
benzene	71432	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
bromodichloromethane	75274	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
bromoform	75252	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
bromomethane	74839	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-butanone (MEK)	78933	10	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
carbon disulfide	75150	10	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
carbon tetrachloride	56235	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
chlorobenzene	108907	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
chloroethane	75003	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
chloroform	67663	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
chloromethane	74873	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
dibromochloromethane	124481	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-dichloroethane	75343	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-dichloroethane	107062	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-dichloroethene	75354	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-dichloroethene	156592	5.0	5	ND	ND	ND	5.3	ND	ND	ND	ND	ND	ND	ND	ND	8.3	ND	ND	ND	ND	ND
trans-1,2-dichloroethene	156605	5.0	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-dichloropropane	78875	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-dichloropropene	542756	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-dichloropropene	542756	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ethylbenzene	100414	5.0	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-hexanone	591786	10	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
methylene chloride	75092	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-methyl-2-pentanone (MIBK)	108101	10	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
styrene	100425	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-tetrachloroethane	79345	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
tetrachloroethene	127184	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
toluene	108883	5.0	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-trichloroethane	71556	5.0	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-trichloroethane	79005	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trichloroethene	79016	5.0	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
vinyl chloride	75014	5.0	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
o-xylene	95476	5.0	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
m+p xylene	108383/106423	5.0	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TOTAL VOCs				0	0	0	5.3	0	0	0	0	0	0	0.00	0.00	8.3	0	0	0	0.00	
Percent TCE				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Percent DCE				0	0	0	100%	0	0	0	0	0	0	0	0	100%	0	0	0	0	0
Percent VC				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chemistry (mg/L)				MW-1A															MW-3		
Chloride				NA	NA	NA	NA	NA	NA	69.1	NA	57.3	46.6	99.8	82.1	NA	NA	NA	NA	NA	NA
Ferrous Iron				NA	NA	NA	NA	NA	NA	0.107	NA	<0.100	0.26	0.61	0.41	NA	NA	NA	NA	NA	NA
Nitrate Nitrogen				NA	NA	NA	NA	NA	NA	<0.500	NA	<0.500	0.50	U	0.74	0.50	U	NA	NA	NA	NA
Sulfate				NA	NA	NA	NA	NA	NA	36.3	NA	39.1	39.70	41.4	46.7	NA	NA	NA	NA	NA	NA
Total Organic Carbon				NA	NA	NA	NA	NA	NA	3.11	NA	3.00	4.90	5.4	8.1	NA	NA	NA	NA	NA	NA
Ferrous Iron Dissolved				NA	NA	NA	NA	NA	NA	,0.100	NA	0.288	0.28	0.35	0.29	NA	NA	NA	NA	NA	NA
Manganese				NA	NA	NA	NA	NA	NA	0.058	NA	0.0408	66	278	61	NA	NA	NA	NA	NA	NA
Manganese Dissolved				NA	NA	NA	NA	NA	NA	0.066	NA	0.0396	56	201	63	NA	NA	NA	NA	NA	NA
Dissolved Oxygen (DO)				NA	NA	NA	NA	NA	NA	NA	NA	11.32	NA	7.2	17.6	NA	NA	NA	NA	NA	NA
pH				NA	NA	NA	NA	NA	NA	NA	NA	7.29	NA	7.3	7.02	NA	NA	NA	NA	NA	NA
Oxygen Reduction Potential				NA	NA	NA	NA	NA	NA	NA	NA	-53.00	NA	-336.2	5.1	NA	NA	NA	NA	NA	NA

NOTES:  
RAOs GW = Remedial Action Objectives for Groundwater  
CAS = Chemical Abstract Service registry number  
Bold = Exceeds RAOs for groundwater (Not applicable to Treatment System Effluent)  
Bold/Shaded = Exceeds Buffalo Sewer Authority Discharge Limits (Groundwater Treatment Effluent Sample only)  
ND = Not Detected  
E = Exceeds Calibration Range  
D = Sample reanalyzed and quantified at higher dilution  
Well MW-11 was removed during excavation and is no longer sampled.  
Well MW-15A was filled with gravel and is no longer sampled.

Prepared by:DRS  
Date: 2/10  
Checked by:PWM  
Date:3/10

Table 4A (Wells 1-10 Treated Discharge)  
Quarterly Groundwater Data  
Leica Microsystems, Eggert Road  
Cheektowaga, NY

ANALYTE	CAS	Method Detection Limit	RAOs GW	MW-4																							
				Base	Jun-22-00	Aug-21-00	Nov-30-00	Dec-19-01	Mar-20-02	Jun-25-02	Jan-20-03	Mar-27-03	Oct-21-03	Feb-05-04	May-25-04	Sept-26-04	Dec-21-04	March-24-05	June-26-05	Oct-24-05	Jan-4-06	Mar-17-06	Mar-17-06				
				1,000.00	4.00	2.00	2.00	5.00	1.00	5.00	1 or 20	10.00	2.00	2.00	5.00	1.00	5.00	2.50	1.00	2.00	2.00	2.00	2.50				
Dilution:																											
Volatile Organic Compounds (ug/l)																											
acetone	67641	20	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND				
benzene	71432	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND				
bromodichloromethane	75274	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND				
bromoform	75252	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND				
bromomethane	74839	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND				
2-butanone (MEK)	78933	10	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND				
carbon disulfide	75150	10	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND				
carbon tetrachloride	56235	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND				
chlorobenzene	108907	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND				
chloroethane	75003	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND				
chloroform	67663	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND				
chloromethane	74873	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND				
dibromochloromethane	124481	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND				
1,1-dichloroethane	75343	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND				
1,2-dichloroethane	107062	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND				
1,1-dichloroethene	75354	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND				
cis-1,2-dichloroethene	156592	5.0	5	110000	460	280	940	580	190	480	2200	1700	260	310	560	180	330	320	79	180	320	420	E	420	D		
trans-1,2-dichloroethene	156605	5.0	5	ND	ND	ND	ND	ND	2.2	ND	26	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND			
1,2-dichloropropane	78875	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
cis-1,3-dichloropropene	542756	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
trans-1,3-dichloropropene	542756	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
ethylbenzene	100414	5.0	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
2-hexanone	591786	10	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
methylene chloride	75092	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
4-methyl-2-pentanone (MIBK)	108101	10	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
styrene	100425	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
1,1,2,2-tetrachloroethane	79345	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
tetrachloroethene	127184	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
toluene	108883	5.0	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
1,1,1-trichloroethane	71556	5.0	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
1,1,2-trichloroethane	79005	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
trichloroethene	79016	5.0	5	41000	130	200	120	62	24	36	70	ND	ND	20	ND	8.8	ND	ND	6.8	ND	ND	ND	ND	ND			
vinyl chloride	75014	5.0	5	ND	27	ND	25	ND	ND	ND	340	570	130	100	270	120	220	200	93	190	220	180		170			
o-xylene	95476	5.0	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
m+p xylene	108383/106423	5.0	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
TOTAL VOCs				151000	617	480	1085	642	216.2	516	2636	2270	390	430	830	308.8	550	520	178.8	370	540	600		590			
Percent TCE				27%	21%	42%	11%	10%	11%	7%	3%	0	0	5%	0	3%	0	0	4%	0	0	0		0			
Percent DCE				73%	75%	58%	87%	90%	88%	93%	83%	75%	67%	72%	67%	58%	60%	62%	44%	49%	59%	70%		71%			
Percent VC				0	4%	0	2%	0	0	0	13%	25%	33%	23%	33%	39%	40%	38%	52%	51%	41%	30%		29%			
Chemistry (mg/L)				MW-4																							
Chloride				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
Ferrous Iron				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
Nitrate Nitrogen				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
Sulfate				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
Total Organic Carbon				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
Ferrous Iron Dissolved				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
Manganese				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
Manganese Dissolved				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
Dissolved Oxygen (DO)				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
pH				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
Oxygen Reduction Potential				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			

NOTES:  
RAOs GW = Remedial Action Objectives for Groundwater  
CAS = Chemical Abstract Service registry number  
Bold = Exceeds RAOs for groundwater (Not applicable to Treatment System Effluent)  
Bold/Shaded = Exceeds Buffalo Sewer Authority Discharge Limits (Groundwater Treatr  
ND = Not Detected  
E = Exceeds Calibration Range  
D = Sample reanalyzed and quantified at higher dilution  
Well MW-11 was removed during excavation and is no longer sampled.  
Well MW-15A was filled with gravel and is no longer sampled.

Prepared by:DRS  
Date: 2/10  
Checked by:PWM  
Date:3/10

**Table 4A (Wells 1-10 Treated Discharge)**  
**Quarterly Groundwater Data**  
**Leica Microsystems, Eggert Road**  
**Cheektowaga, NY**

ANALYTE		CAS	Method Detection Limit	RAOs GW	MW-5							MW-5A						MW-6									
Sample Collection Date:					May-02-07	May-14-08	Jul-30-08	Apr-15-09	Oct-6-09	Jan-14-10	May-02-07	May-14-08	Jul-30-08	Apr-15-09	Oct-16-09	Jan-14-10	Base	Mar-29-00	Mar-29-00	Jun-22-00	Mar-27-01	Jun-13-01	Dec-19-01	Mar-20-02	Jun-25-02	Jan-20-03	Mar-27-03
Dilution:					1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	10.00	1.00	2.50	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volatile Organic Compounds (ug/l)																											
acetone	67641	20	-		ND	ND	ND	ND	ND	ND	ND	ND	ND	31	85	26	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
benzene	71432	5.0	-		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
bromodichloromethane	75274	5.0	-		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
bromoform	75252	5.0	-		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
bromomethane	74839	5.0	-		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-butanone (MEK)	78933	10	-		ND	ND	ND	ND	ND	ND	ND	ND	ND	24	81	72	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
carbon disulfide	75150	10	-		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
carbon tetrachloride	56235	5.0	-		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
chlorobenzene	108907	5.0	-		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
chloroethane	75003	5.0	-		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
chloroform	67663	5.0	-		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
chloromethane	74873	5.0	-		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
dibromochloromethane	124481	5.0	-		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	.....	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-dichloroethane	75343	5.0	-		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-dichloroethane	107062	5.0	-		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-dichloroethene	75354	5.0	-		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-dichloroethene	156592	5.0	5		ND	ND	ND	ND	ND	ND	12	10	9	ND	ND	ND	1200	450	420	190	48	60	41	44	42	53	53
trans-1,2-dichloroethene	156605	5.0	5		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.2	ND	ND	ND
1,2-dichloropropane	78875	5.0	-		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-dichloropropene	542756	5.0	-		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-dichloropropene	542756	5.0	-		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ethylbenzene	100414	5.0	5		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-hexanone	591786	10	-		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
methylene chloride	75092	5.0	-		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-methyl-2-pentanone (MIBK)	108101	10	-		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
styrene	100425	5.0	-		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-tetrachloroethane	79345	5.0	-		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
tetrachloroethene	127184	5.0	-		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
toluene	108883	5.0	5		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-trichloroethane	71556	5.0	5		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-trichloroethane	79005	5.0	-		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trichloroethene	79016	5.0	5		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	61	63	34	11	18	14	17	15	18	16
vinyl chloride	75014	5.0	5		ND	ND	ND	ND	ND	ND	16	14	9.6	16	18	19	120	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
o-xylene	95476	5.0	5		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
m+p xylene	108383/106423	5.0	5		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TOTAL VOCs					0	0	0	0.00	0.00	0.00	28	24	18.6	71	184	117	1320	961	483	224	59	78	55	62.2	57	71	69
Percent TCE					0	0	0	0	0	0	0	0	0	0	0	0	0	6%	13%	15%	19%	23%	25%	27%	26%	25%	23%
Percent DCE					0	0	0	0	0	0	43%	42%	48%	0	0	0	91%	47%	87%	85%	81%	77%	75%	71%	74%	75%	77%
Percent VC					0	0	0	0	0	0	57%	58%	52%	23%	10%	16%	9%	0	0	0	0	0	0	0	0	0	0
Chemistry (mg/L)					MW-5							MW-5A						MW-6									
Chloride					NA	18.1	23.8	3.7	2	U	4	NA	115.0	78.6	150	138	126	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron					NA	0.174	<0.100	0.1	U	0.1	U	NA	<0.100	<0.100	2.67	1.03	1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate Nitrogen					NA	<0.500	<0.500	0.5	U	0.88	0.91	NA	<0.500	<0.500	0.5	U	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate					NA	38.8	52.9	19.9	15		13	NA	89.5	60.0	81.5	55.2	44.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon					NA	2.11	2.71	2.7	2.3		2.6	NA	3.03	17.80	130	280	476	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron Dissolved					NA	<0.100	<0.100	0.1	U	0.5	U	NA	<0.100	<0.100	3.8	0.84	14.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese					NA	0.0476	0.0217	65	39		22	NA	0.0932	0.0903	195	512	175	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese Dissolved					NA	<0.0100	<0.0100	10	U	10	10	NA	0.0735	0.0405	151	502	171	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Oxygen (DO)					NA		0.70	NA		28.5	15.5	NA	NA	1.17	NA	11.2	29.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
pH					NA	NA	8.53	8.53	8.29		8.73	NA	NA	8.68	7.14	6.81	6.82	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Oxygen Reduction Potential					NA	NA	-131.00	-99.00	-207.4		-157.8	NA	NA	-124.0	-122.0	-207.4	-90.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

**NOTES:**  
 RAOs GW = Remedial Action Objectives for Groundwater  
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 Bold = Exceeds RAOs for groundwater (Not applicable to Treatment System Effluent)  
 Bold/Shaded = Exceeds Buffalo Sewer Authority Discharge Limits (Groundwater Treatment)  
 ND = Not Detected  
 E = Exceeds Calibration Range  
 D = Sample reanalyzed and quantified at higher dilution  
 Well MW-11 was removed during excavation and is no longer sampled.  
 Well MW-15A was filled with gravel and is no longer sampled.

Prepared by:DRS  
Date: 2/10  
Checked by:PWM  
Date:3/10

Table 4A (Wells 1-10 Treated Discharge)  
Quarterly Groundwater Data  
Leica Microsystems, Eggert Road  
Cheektowaga, NY

ANALYTE	CAS	Method Detection Limit	RAOs GW	MW-6 Cont.															
Sample Collection Date:				Feb-05-04	May-25-04	Sept-26-04	Dec-21-04	Mar-24-05	Jan-04-06	Mar-17-06	Dec-18-06	May-02-07	May-14-08	Apr-15-09	Oct-6-09	Jan-14-10			
Dilution:				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Volatile Organic Compounds (ug/l)																			
acetone	67641	20	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
benzene	71432	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
bromodichloromethane	75274	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
bromoform	75252	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
bromomethane	74839	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-butanone (MEK)	78933	10	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
carbon disulfide	75150	10	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
carbon tetrachloride	56235	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
chlorobenzene	108907	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
chloroethane	75003	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
chloroform	67663	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
chloromethane	74873	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
dibromochloromethane	124481	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-dichloroethane	75343	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-dichloroethane	107062	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-dichloroethene	75354	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-dichloroethene	156592	5.0	5	75	89	92	78	110	110	120	130	190	120	110	110	110	120	120	120
trans-1,2-dichloroethene	156605	5.0	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-dichloropropane	78875	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-dichloropropene	542756	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-dichloropropene	542756	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ethylbenzene	100414	5.0	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-hexanone	591786	10	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
methylene chloride	75092	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-methyl-2-pentanone (MIBK)	108101	10	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
styrene	100425	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-tetrachloroethane	79345	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
tetrachloroethene	127184	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
toluene	108883	5.0	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-trichloroethane	71556	5.0	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-trichloroethane	79005	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trichloroethene	79016	5.0	5	19	18	19	19	20	20	20	23	22	15	18	21	20	20	20	20
vinyl chloride	75014	5.0	5	ND	ND	ND	ND	5	6.6	6	7.8	5.8	8.1	13	14	28	28	28	28
o-xylene	95476	5.0	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
m+p xylene	108383/106423	5.0	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TOTAL VOCs				94	107	111	97	135	136.6	146	160.8	217.8	143.1	141	145	168			
Percent TCE				20%	17%	17%	20%	15%	15%	14%	14%	10%	10%	13%	14%	12%			
Percent DCE				80%	83%	83%	80%	81%	81%	82%	81%	87%	84%	78%	76%	71%			
Percent VC				0	0	0	0	4%	5%	4%	5%	3%	6%	9%	10%	17%			
Chemistry (mg/L)				MW-6 Cont.															
Chloride				NA	NA	NA	NA	NA	NA	NA	NA	NA	7.3	8.0	8.0	8.1			
Ferrous Iron				NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.100	0.1	U	0.1	U	0.1	U
Nitrate Nitrogen				NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.500	0.5	U	0.7		0.5	U
Sulfate				NA	NA	NA	NA	NA	NA	NA	NA	NA	172	203	222	193			
Total Organic Carbon				NA	NA	NA	NA	NA	NA	NA	NA	NA	6.12	6.2	5.6	7.7			
Ferrous Iron Dissolved				NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.100	0.1	U	0.1	U	0.1	U
Manganese				NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0397	34	20	115			
Manganese Dissolved				NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0301	27	13	77			
Dissolved Oxygen (DO)				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	35.5	19.5			
pH				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	7.04	7.47	7.39			
Oxygen Reduction Potential				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	-24.0	-178.9	7.4			

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Bold/Shaded = Exceeds Buffalo Sewer Authority Discharge Limits (Groundwater Treatr  
ND = Not Detected  
E = Exceeds Calibration Range  
D = Sample reanalyzed and quantified at higher dilution  
Well MW-11 was removed during excavation and is no longer sampled.  
Well MW-15A was filled with gravel and is no longer sampled.

Prepared by:DRS  
Date: 2/10  
Checked by:PWM  
Date:3/10

Table 4A (Wells 1-10 Treated Discharge)  
Quarterly Groundwater Data  
Leica Microsystems, Eggert Road  
Cheektowaga, NY

ANALYTE	CAS	Method Detection Limit	RAOs GW	MW-6A (Deep Well)															
Sample Collection Date: Dilution:				Base	Jun-22-00	Mar-27-01	Jun-13-01	Jun-13-01	Dec-19-01	Mar-20-02	Jun-25-02	Sept-19-02	Jan-20-03	Mar-27-03	Jul-11-03	Oct-21-03	Feb-05-04	May-25-04	
				20.00	2.50	5.00	5.00	10.00	5.00	5.00	10.00	5.00	2.00	2.00	2.00	2.00	2.00	2.00	
Volatile Organic Compounds (ug/l)																			
acetone	67641	20	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
benzene	71432	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
bromodichloromethane	75274	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
bromoform	75252	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
bromomethane	74839	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-butanone (MEK)	78933	10	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
carbon disulfide	75150	10	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
carbon tetrachloride	56235	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
chlorobenzene	108907	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
chloroethane	75003	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
chloroform	67663	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
chloromethane	74873	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
dibromochloromethane	124481	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-dichloroethane	75343	5.0	-	ND	ND	ND	ND	ND	ND	5.2	ND	ND	ND	12	ND	ND	ND	ND	10
1,2-dichloroethane	107062	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-dichloroethene	75354	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-dichloroethene	156592	5.0	5	3900	380	780	1,400	1400	460	590	930	950	250	410	310	380	350	380	
trans-1,2-dichloroethene	156605	5.0	5	ND	ND	34	40	ND	ND	26	ND	45	11	17	11	19	18	12	
1,2-dichloropropane	78875	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-dichloropropene	542756	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-dichloropropene	542756	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ethylbenzene	100414	5.0	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-hexanone	591786	10	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
methylene chloride	75092	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-methyl-2-pentanone (MIBK)	108101	10	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
styrene	100425	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-tetrachloroethane	79345	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
tetrachloroethene	127184	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
toluene	108883	5.0	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-trichloroethane	71556	5.0	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-trichloroethane	79005	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trichloroethene	79016	5.0	5	ND	ND	ND	ND	ND	ND	7.6	ND	ND	ND	19	ND	ND	ND	ND	28
vinyl chloride	75014	5.0	5	240	ND	230	690	750	230	290	140	820	65	260	92	120	99	96	
o-xylene	95476	5.0	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
m+p xylene	108383/106423	5.0	5	120	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TOTAL VOCs				4260	380	1044	2130	2150	690	918.8	1070	1815	326	718	413	519	467	526	
Percent TCE				0	0	0	0	0	0	1%	0	45%	20%	36%	22%	23%	0	5%	
Percent DCE				92%	100%	75%	66%	65%	67%	64%	87%	2%	3%	2%	3%	4%	75%	72%	
Percent VC				6%	0	22%	32%	35%	33%	32%	13%	0	0	0	0	0	21%	18%	
Chemistry (mg/L)				MW-6A (Deep Well)															
Chloride				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate Nitrogen				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron Dissolved				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese Dissolved				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Oxygen (DO)				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
pH				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Oxygen Reduction Potential				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

NOTES:  
RAOs GW = Remedial Action Objectives for Groundwater  
CAS = Chemical Abstract Service registry number  
Bold = Exceeds RAOs for groundwater (Not applicable to Treatment System Effluent)  
Bold/Shaded = Exceeds Buffalo Sewer Authority Discharge Limits (Groundwater Treatr  
ND = Not Detected  
E = Exceeds Calibration Range  
D = Sample reanalyzed and quantified at higher dilution  
Well MW-11 was removed during excavation and is no longer sampled.  
Well MW-15A was filled with gravel and is no longer sampled.

Prepared by:DRS  
Date: 2/10  
Checked by:PWM  
Date:3/10

Table 4A (Wells 1-10 Treated Discharge)  
Quarterly Groundwater Data  
Leica Microsystems, Eggert Road  
Cheektowaga, NY

ANALYTE	CAS	Method Detection Limit	RAOs GW	MW-6A (Deep Well) Cont.																										
Sample Collection Date:				Sept-26-04	Dec-21-04	Mar-24-05	Mar-24-05	June 26-05	Oct-24-05	Oct-24-05	Jan-04-06	Mar-17-06	Mar-17-06	July-13-06	Dec-18-06	May-02-07	May-02-07	Nov-14-07	Nov-14-07	May-14-08	Jul-30-08	Apr-15-09	Oct-6-09	Jan-14-10						
Dilution:				2.00	2.00	2.00	2.50	2.50	2.50	5.00	1.00	1.00	5.00	2.50	1.00	1.00	2.50	1.00	2.50	2.50	2.50	2.50	1.00	1.00	1.00					
Volatile Organic Compounds (ug/l)																														
acetone	67641	20	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
benzene	71432	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
bromodichloromethane	75274	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
bromoform	75252	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
bromomethane	74839	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
2-butanone (MEK)	78933	10	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
carbon disulfide	75150	10	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
carbon tetrachloride	56235	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
chlorobenzene	108907	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
chloroethane	75003	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
chloroform	67663	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
chloromethane	74873	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
dibromochloromethane	124481	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
1,1-dichloroethane	75343	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	5.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
1,2-dichloroethane	107062	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
1,1-dichloroethene	75354	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
cis-1,2-dichloroethene	156592	5.0	5	360	370	440E	420	390	510E	500	91	650	E	580	D	390	140	380	E	360	D	400	E	350	D	380	460	370	110	130
trans-1,2-dichloroethene	156605	5.0	5	12	16	17	20	17	18	ND	ND	17	ND	14	ND	11	ND	11	ND	11	ND	ND	ND	ND	ND	ND	ND	ND	ND	
1,2-dichloropropane	78875	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
cis-1,3-dichloropropene	542756	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
trans-1,3-dichloropropene	542756	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
ethylbenzene	100414	5.0	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
2-hexanone	591786	10	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
methylene chloride	75092	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
4-methyl-2-pentanone (MIBK)	108101	10	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
styrene	100425	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
1,1,2,2-tetrachloroethane	79345	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
tetrachloroethene	127184	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
toluene	108883	5.0	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
1,1,1-trichloroethane	71556	5.0	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
1,1,2-trichloroethane	79005	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
trichloroethene	79016	5.0	5	18	16	32	33	ND	ND	ND	ND	21	ND	ND	ND	10	ND	ND	ND	ND	ND	ND	ND	22	ND	ND	ND	ND	ND	
vinyl chloride	75014	5.0	5	120	150	140	140	96	240	230	23	250	E	220	D	110	47	160	170	280	E	250	D	220	120	350	170	51		
o-xylene	95476	5.0	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
m+p xylene	108383/106423	5.0	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
TOTAL VOCs				510	552	189	613	503	258	730	114	943.1		800		514	187	561	530	691	600	600	602	720	280	181				
Percent TCE				4%	3%	17%	5%	0	0	0	0	2%		0		0	0	2%	0	0	0	4%	0	0	0					
Percent DCE				71%	67%	#VALUE!	69%	78%	#VALUE!	68%	80%	69%	73%	76%	75%	68%	68%	58%	58%	63%	76%	51%	39%	72%						
Percent VC				24%	27%	74%	23%	19%	93%	32%	20%	27%	28%	21%	25%	29%	32%	41%	42%	37%	20%	49%	61%	28%						
Chemistry (mg/L)				MW-6A (Deep Well) Cont.																										
Chloride				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	8.8	51.5	13.2	9.1	6.4					
Ferrous Iron				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.412	1.340	2.38	0.39	0.25					
Nitrate Nitrogen				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.500	<0.500	0.50	U	0.85	0.50	U			
Sulfate				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	125	135	169	95.1	56.7					
Total Organic Carbon				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	7.36	5.38	11.6	5.6	3.4					
Ferrous Iron Dissolved				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.298	1.050	2.78	0.24	0.10					
Manganese				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0600	0.0944	54	434	206					
Manganese Dissolved				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0532	0.1040	104	423	96					
Dissolved Oxygen (DO)				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.67	NA	5.2	16.3					
pH				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	7.37	7.22	7.36	7.68						
Oxygen Reduction Potential				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	-89	-157	-259.6	11.5					

NOTES:  
RAOs GW = Remedial Action Objectives for Groundwater  
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Bold = Exceeds RAOs for groundwater (Not applicable to Treatment System Effluent)  
Bold/Shaded = Exceeds Buffalo Sewer Authority Discharge Limits (Groundwater Treatr  
ND = Not Detected  
E = Exceeds Calibration Range  
D = Sample reanalyzed and quantified at higher dilution  
Well MW-11 was removed during excavation and is no longer sampled.  
Well MW-15A was filled with gravel and is no longer sampled.

Prepared by:DRS  
Date: 2/10  
Checked by:PWM  
Date:3/10

Table 4A (Wells 1-10 Treated Discharge)  
Quarterly Groundwater Data  
Leica Microsystems, Eggert Road  
Cheektowaga, NY

ANALYTE	CAS	Method Detection Limit	RAOs GW	MW-7															
				Base	Mar-29-00	Mar-29-00	Jun-13-01	Mar-20-02	Jun-25-02	Jan-20-03	Mar-27-03	Feb-05-04	May-25-04	Sept-26-04	Dec-21-04	Mar-24-05	Jan-4-06	Mar-17-06	
				10.00	1.00	2.50	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Volatile Organic Compounds (ug/l)																			
acetone	67641	20	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
benzene	71432	5.0	-	140	8.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
bromodichloromethane	75274	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
bromoform	75252	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
bromomethane	74839	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-butanone (MEK)	78933	10	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
carbon disulfide	75150	10	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
carbon tetrachloride	56235	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
chlorobenzene	108907	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
chloroethane	75003	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
chloroform	67663	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
chloromethane	74873	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
dibromochloromethane	124481	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-dichloroethane	75343	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-dichloroethane	107062	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-dichloroethene	75354	5.0	-	ND	ND	ND	ND	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-dichloroethene	156592	5.0	5	900	330 E	310	160	52	23	43	27	25	50	53	54	64	110	100	
trans-1,2-dichloroethene	156605	5.0	5	64	8.6	ND	ND	22	ND	ND	ND	ND	ND	ND	ND	ND	5.4	5.9	
1,2-dichloropropane	78875	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-dichloropropene	542756	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-dichloropropene	542756	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ethylbenzene	100414	5.0	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-hexanone	591786	10	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
methylene chloride	75092	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-methyl-2-pentanone (MIBK)	108101	10	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
styrene	100425	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-tetrachloroethane	79345	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
tetrachloroethene	127184	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
toluene	108883	5.0	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-trichloroethane	71556	5.0	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-trichloroethane	79005	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trichloroethene	79016	5.0	5	ND	10	ND	12	12	ND	6.1	5.4	ND	5.6	6.4	6	6.5	5	ND	
vinyl chloride	75014	5.0	5	1600	7.8	ND	ND	56	ND	ND	ND	ND	8	11	8	11	17	13	
o-xylene	95476	5.0	5	ND	19	18	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
m+p xylene	108383/106423	5.0	5	ND	29	29	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TOTAL VOCs				2704	413.1	357	172	149	23	49.1	32.4	25	63.6	70.4	68	81.5	137.4	118.9	
Percent TCE				0	2%	0	7%	8%	0	12%	17%	0	9%	9%	9%	8%	4%	0	
Percent DCE				33%	#VALUE!	87%	93%	35%	100%	88%	83%	100%	79%	75%	79%	79%	80%	84%	
Percent VC				59%	2%	0	0	38%	0	0	0	0	13%	16%	12%	13%	12%	11%	
Chemistry (mg/L)				MW-7															
Chloride				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Ferrous Iron				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Nitrate Nitrogen				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Sulfate				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Total Organic Carbon				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Ferrous Iron Dissolved				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Manganese				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Manganese Dissolved				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Dissolved Oxygen (DO)				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
pH				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Oxygen Reduction Potential				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	

NOTES:  
RAOs GW = Remedial Action Objectives for Groundwater  
CAS = Chemical Abstract Service registry number  
Bold = Exceeds RAOs for groundwater (Not applicable to Treatment System Effluent)  
Bold/Shaded = Exceeds Buffalo Sewer Authority Discharge Limits (Groundwater Treatr  
ND = Not Detected  
E = Exceeds Calibration Range  
D = Sample reanalyzed and quantified at higher dilution  
Well MW-11 was removed during excavation and is no longer sampled.  
Well MW-15A was filled with gravel and is no longer sampled.

Prepared by:DRS  
Date: 2/10  
Checked by:PWM  
Date:3/10

Table 4A (Wells 1-10 Treated Discharge)  
Quarterly Groundwater Data  
Leica Microsystems, Eggert Road  
Cheektowaga, NY

ANALYTE	CAS	Method Detection Limit	RAOs GW	MW-10														
Sample Collection Date:				Base	Mar-27-01 <sup>1</sup>	Jun-13-01	Jun-13-01	Dec-19-01	Mar-20-02	Mar-20-02	Jun-25-02	Jan-20-03	Mar-27-03	Oct-21-03	Oct-21-03	Feb-05-04	May-25-04	Sept-26-04
Dilution:				100.0	50.00	2.00	10.00	1.00	1.00	2.00	1.00	2.00	2.00	2.00	2.00	10.00	5.00	5.00
Volatile Organic Compounds (ug/l)																		
acetone	67641	20	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
benzene	71432	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
bromodichloromethane	75274	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
bromoform	75252	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
bromomethane	74839	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-butanone (MEK)	78933	10	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
carbon disulfide	75150	10	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
carbon tetrachloride	56235	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
chlorobenzene	108907	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
chloroethane	75003	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
chloroform	67663	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
chloromethane	74873	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
dibromochloromethane	124481	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-dichloroethane	75343	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-dichloroethane	107062	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-dichloroethene	75354	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-dichloroethene	156592	5.0	5	16000	6300	450 E	460	96	220 E	220	160	210	360	1,500 E	1600	850	540	130
trans-1,2-dichloroethene	156605	5.0	5	ND	ND	ND	ND	ND	2.8	2.7	ND	ND	ND	13	ND	ND	ND	12
1,2-dichloropropane	78875	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-dichloropropene	542756	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-dichloropropene	542756	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ethylbenzene	100414	5.0	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-hexanone	591786	10	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
methylene chloride	75092	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-methyl-2-pentanone (MIBK)	108101	10	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
styrene	100425	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-tetrachloroethane	79345	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
tetrachloroethene	127184	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
toluene	108883	5.0	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-trichloroethane	71556	5.0	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-trichloroethane	79005	5.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trichloroethene	79016	5.0	5	ND	1500	460 E	470	30	47	48	57	78	130	ND	ND	ND	ND	ND
vinyl chloride	75014	5.0	5	5800	ND	27	ND	ND	ND	ND	ND	21	110	110	480	420	270	
o-xylene	95476	5.0	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
m+p xylene	108383/106423	5.0	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TOTAL VOCs				21800	7800	27	930	126	49.8	270.7	217	288	511	123	1710	1330	960	412
Percent TCE				0	19%	#VALUE!	51%	24%	94%	18%	26%	27%	25%	0	0	0	0	0
Percent DCE				73%	81%	#VALUE!	49%	76%	#VALUE!	81%	74%	73%	70%	#VALUE!	94%	64%	56%	32%
Percent VC				27%	0	100%	0	0	0	0	0	0	4%	89%	6%	36%	44%	66%
Chemistry (mg/L)				MW-10														
Chloride				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate Nitrogen				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron Dissolved				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese Dissolved				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Oxygen (DO)				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
pH				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Oxygen Reduction Potential				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

NOTES:  
RAOs GW = Remedial Action Objectives for Groundwater  
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Bold = Exceeds RAOs for groundwater (Not applicable to Treatment System Effluent)  
Bold/Shaded = Exceeds Buffalo Sewer Authority Discharge Limits (Groundwater Treatr  
ND = Not Detected  
E = Exceeds Calibration Range  
D = Sample reanalyzed and quantified at higher dilution  
Well MW-11 was removed during excavation and is no longer sampled.  
Well MW-15A was filled with gravel and is no longer sampled.

Prepared by:DRS  
Date: 2/10  
Checked by:PWM  
Date:3/10

Table 4A (Wells 1-10 Treated Discharge)  
Quarterly Groundwater Data  
Leica Microsystems, Eggert Road  
Cheektowaga, NY

ANALYTE	CAS	Method Detection Limit	RAOs GW	MW-10 cont.																	
				Dec-21-04	Mar-24-05	June-26-05	Oct-23-05	Jan-04-06	Jan-04-06	Mar-17-06	Mar-17-06	Dec-18-06	May-02-07	Nov-14-07	May-14-08	Apr-15-09	Oct-6-09				
				Dilution:	2.50	2.50	5.00	2.50	1.00	2.00	2.00	2.50	2.00	1.00	1.00	1.00	1.00	2.00			
Volatile Organic Compounds (ug/l)																					
acetone	67641	20	-	ND	ND	ND	ND	ND		ND		ND		ND		ND		ND	150	160	
benzene	71432	5.0	-	ND	ND	ND	ND	ND		ND		ND		ND		ND		ND	ND	ND	
bromodichloromethane	75274	5.0	-	ND	ND	ND	ND	ND		ND		ND		ND		ND		ND	ND	ND	
bromoform	75252	5.0	-	ND	ND	ND	ND	ND		ND		ND		ND		ND		ND	ND	ND	
bromomethane	74839	5.0	-	ND	ND	ND	ND	ND		ND		ND		ND		ND		ND	ND	ND	
2-butanone (MEK)	78933	10	-	ND	ND	ND	ND	ND		ND		ND		ND		ND		ND	180	270	
carbon disulfide	75150	10	-	ND	ND	ND	ND	ND		ND		ND		ND		ND		ND	ND	ND	
carbon tetrachloride	56235	5.0	-	ND	ND	ND	ND	ND		ND		ND		ND		ND		ND	ND	ND	
chlorobenzene	108907	5.0	-	ND	ND	ND	ND	ND		ND		ND		ND		ND		ND	ND	ND	
chloroethane	75003	5.0	-	ND	ND	ND	ND	ND		ND		ND		ND		ND		ND	ND	ND	
chloroform	67663	5.0	-	ND	ND	ND	ND	ND		ND		ND		ND		ND		ND	ND	ND	
chloromethane	74873	5.0	-	ND	ND	ND	ND	ND		ND		ND		ND		ND		ND	ND	ND	
dibromochloromethane	124481	5.0	-	ND	ND	ND	ND	ND		ND		ND		ND		ND		ND	ND	ND	
1,1-dichloroethane	75343	5.0	-	ND	ND	ND	ND	ND		ND		ND		ND		ND		ND	ND	ND	
1,2-dichloroethane	107062	5.0	-	ND	ND	ND	ND	ND		ND		ND		ND		ND		ND	ND	ND	
1,1-dichloroethene	75354	5.0	-	ND	ND	ND	ND	ND		ND		ND		ND		ND		ND	ND	ND	
cis-1,2-dichloroethene	156592	5.0	5	300	270	760	320	210	E	200	270	260	220	160	110	190	120	ND	ND	ND	
trans-1,2-dichloroethene	156605	5.0	5	ND	14	ND	ND	7.8		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
1,2-dichloropropane	78875	5.0	-	ND	ND	ND	ND	ND		ND		ND		ND		ND		ND	ND	ND	
cis-1,3-dichloropropene	542756	5.0	-	ND	ND	ND	ND	ND		ND		ND		ND		ND		ND	ND	ND	
trans-1,3-dichloropropene	542756	5.0	-	ND	ND	ND	ND	ND		ND		ND		ND		ND		ND	ND	ND	
ethylbenzene	100414	5.0	5	ND	ND	ND	ND	ND		ND		ND		ND		ND		ND	ND	ND	
2-hexanone	591786	10	-	ND	ND	ND	ND	ND		ND		ND		ND		ND		ND	ND	ND	
methylene chloride	75092	5.0	-	ND	ND	ND	ND	ND		ND		ND		ND		ND		ND	ND	ND	
4-methyl-2-pentanone (MIBK)	108101	10	-	ND	ND	ND	ND	ND		ND		ND		ND		ND		ND	ND	ND	
styrene	100425	5.0	-	ND	ND	ND	ND	ND		ND		ND		ND		ND		ND	ND	ND	
1,1,2,2-tetrachloroethane	79345	5.0	-	ND	ND	ND	ND	ND		ND		ND		ND		ND		ND	ND	ND	
tetrachloroethene	127184	5.0	-	ND	ND	ND	ND	ND		ND		ND		ND		ND		ND	ND	ND	
toluene	108883	5.0	5	ND	ND	ND	ND	ND		ND		ND		ND		ND		ND	ND	ND	
1,1,1-trichloroethane	71556	5.0	5	ND	ND	ND	ND	ND		ND		ND		ND		ND		ND	ND	ND	
1,1,2-trichloroethane	79005	5.0	-	ND	ND	ND	ND	ND		ND		ND		ND		ND		ND	ND	ND	
trichloroethene	79016	5.0	5	ND	ND	ND	ND	ND		ND		ND		ND		ND		ND	ND	ND	
vinyl chloride	75014	5.0	5	150	360	750	150	140		140	430	E	430	D	72	71	38	73	38	ND	
o-xylene	95476	5.0	5	ND	ND	ND	ND	ND		ND		ND		ND		ND		ND	ND	ND	
m+p xylene	108383/106423	5.0	5	ND	ND	ND	ND	ND		ND		ND		ND		ND		ND	ND	ND	
TOTAL VOCs				450	644	1510	470	357.8		340	700	690	292	231	148	263	488	430			
Percent TCE				0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	
Percent DCE				67%	42%	50%	68%	59%		59%	39%	38%	75%	69%	74%	72%	25%	0	0		
Percent VC				33%	56%	50%	32%	39%		41%	61%	62%	25%	31%	26%	28%	8%	0	0		
Chemistry (mg/L)				MW-10 cont.																	
Chloride				NA	NA	NA	NA	NA		NA		NA		NA		NA		NA	NA	NA	
Ferrous Iron				NA	NA	NA	NA	NA		NA		NA		NA		NA		NA	NA	NA	
Nitrate Nitrogen				NA	NA	NA	NA	NA		NA		NA		NA		NA		NA	NA	NA	
Sulfate				NA	NA	NA	NA	NA		NA		NA		NA		NA		NA	NA	NA	
Total Organic Carbon				NA	NA	NA	NA	NA		NA		NA		NA		NA		NA	NA	NA	
Ferrous Iron Dissolved				NA	NA	NA	NA	NA		NA		NA		NA		NA		NA	NA	NA	
Manganese				NA	NA	NA	NA	NA		NA		NA		NA		NA		NA	NA	NA	
Manganese Dissolved				NA	NA	NA	NA	NA		NA		NA		NA		NA		NA	NA	NA	
Dissolved Oxygen (DO)				NA	NA	NA	NA	NA		NA		NA		NA		NA		NA	NA	NA	
pH				NA	NA	NA	NA	NA		NA		NA		NA		NA		NA	NA	NA	
Oxygen Reduction Potential				NA	NA	NA	NA	NA		NA		NA		NA		NA		NA	NA	NA	

NOTES:  
RAOs GW = Remedial Action Objectives for Groundwater  
CAS = Chemical Abstract Service registry number  
Bold = Exceeds RAOs for groundwater (Not applicable to Treatment System Effluent)  
Bold/Shaded = Exceeds Buffalo Sewer Authority Discharge Limits (Groundwater Treatr  
ND = Not Detected  
E = Exceeds Calibration Range  
D = Sample reanalyzed and quantified at higher dilution  
Well MW-11 was removed during excavation and is no longer sampled.  
Well MW-15A was filled with gravel and is no longer sampled.

ANALYTE	CAS	Method Detection Limit	RAOs GW	MW-11 (Well removed during excavation on May 18, 2003)									
Sample Collection Date:				Jun-22-00	Aug-21-00	Nov-30-00	Mar-27-01 <sup>1</sup>	Jun-13-01	Dec-19-01	Mar-20-02	Jun-25-02	Jan-20-03	Mar-27-03
Dilution:				5or20	10.00	2.50	10.00	10.00	5.00	10.00	2.00	20.00	25.00
Volatile Organic Compounds (ug/l)													
acetone	67641	20	-	110	ND	ND	ND	ND	ND	ND	ND	ND	ND
benzene	71432	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
bromodichloromethane	75274	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
bromoform	75252	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
bromomethane	74839	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-butanone (MEK)	78933	10	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
carbon disulfide	75150	10	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
carbon tetrachloride	56235	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
chlorobenzene	108907	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
chloroethane	75003	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
chloroform	67663	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
chloromethane	74873	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
dibromochloromethane	124481	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-dichloroethane	75343	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-dichloroethane	107062	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-dichloroethene	75354	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-dichloroethene	156592	5	5	1200	500	440	450	1300	900	990	300	2900	4200
trans-1,2-dichloroethene	156605	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-dichloropropane	78875	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-dichloropropene	542756	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-dichloropropene	542756	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ethylbenzene	100414	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-hexanone	591786	10	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
methylene chloride	75092	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-methyl-2-pentanone (MIBK)	108101	10	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
styrene	100425	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-tetrachloroethane	79345	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
tetrachloroethene	127184	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
toluene	108883	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-trichloroethane	71556	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-trichloroethane	79005	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trichloroethene	79016	5	5	2100	1200	260	990	1200	140	130	51	ND	ND
vinyl chloride	75014	5	5	ND	ND	21	ND	ND	140	ND	10	ND	150
o-xylene	95476	5	5	28	ND	ND	ND	ND	140	ND	ND	ND	ND
m+p xylene	108383/106423	5	5	27	ND	ND	ND	ND	140	ND	ND	ND	ND
TOTAL VOCs				3465	1700	721	1440	2500	1460	1120	361	2900	4350
Percent TCE				61%	71%	36%	69%	48%	10%	12%	14%	0	0
Percent DCE				35%	29%	61%	31%	52%	62%	88%	83%	100%	97%
Percent VC				0	0	3%	0	0	10%	0	3%	0	3%
Chemisrty (mg/L)				MW-11 (Well removed during excavation on May 18, 2003)									
Chloride				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate Nitrogen				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carobn				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron Dissolved				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese Dissolved				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Oxygen (DO)				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
pH				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Oxygen Reduction Potential				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

NOTES:  
RAOs GW = Remedial Action Objectives for Groundwater  
CAS = Chemical Abstract Service registry number  
Bold = Exceeds RAOs for groundwater (Not applicable to Treatment System Effluent)  
Bold/Shaded = Exceeds Buffalo Sewer Authority Discharge Limits (Groundwater Treatment Effluent Sample only)  
ND = Not Detected  
E = Exceeds Calibration Range  
D = Sample reanalyzed and quantified at higher dilution  
Well MW-11 was removed during excavation and is no longer sampled.  
Well MW-15A was filled with gravel and is no longer sampled.

Prepared by:DRS Date:2/10 Checked by:PWM Date:3/10				Table 4B (Wells 11-16R) Quarterly Groundwater Data Leica Microsystems, Eggert Road Cheektowaga, NY													
ANALYTE	CAS	Method Detection Limit	RAOs GW	MW-11A (Deep Well)													
				Mar-29-00	Jun-22-00	Nov-30-00	Mar-27-01	Jun-13-01	Sep-28-01	Dec-19-01	Mar-20-02	Jun-25-02	Sept-19-02	Mar-27-03	Jul-11-03	Oct-21-03	Feb-06-04
				Dilution:	100.00	25.00	10.00	10.00	10.00	5.00	5.00	5.00	5.00	2.50	5.00	2.50	2.50
Volatile Organic Compounds (ug/l)																	
acetone	67641	20	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
benzene	71432	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
bromodichloromethane	75274	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
bromoform	75252	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
bromomethane	74839	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-butanone (MEK)	78933	10	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
carbon disulfide	75150	10	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
carbon tetrachloride	56235	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
chlorobenzene	108907	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
chloroethane	75003	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
chloroform	67663	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
chloromethane	74873	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
dibromochloromethane	124481	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-dichloroethane	75343	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-dichloroethane	107062	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-dichloroethene	75354	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-dichloroethene	156592	5	5	13000	3000	1400	1100	1000	600	830	610	420	250	550	320	340	580
trans-1,2-dichloroethene	156605	5	5	ND	ND	ND	ND	ND	ND	ND	19	ND	ND	14	ND	ND	ND
1,2-dichloropropane	78875	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-dichloropropene	542756	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-dichloropropene	542756	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ethylbenzene	100414	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-hexanone	591786	10	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
methylene chloride	75092	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-methyl-2-pentanone (MIBK)	108101	10	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
styrene	100425	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-tetrachloroethane	79345	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
tetrachloroethene	127184	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
toluene	108883	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-trichloroethane	71556	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-trichloroethane	79005	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trichloroethene	79016	5	5	ND	ND	72	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
vinyl chloride	75014	5	5	9000	1800	960	660	1000	580	820	820	580	340	710	170	38	960
o-xylene	95476	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
m+p xylene	108383/106423	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TOTAL VOCs				22000	4800	2432	1760	2000	1180	1650	1449	1000	590	1274	490	378	1540
Percent TCE				0	0	3%	0	0	0	0	0	0	0	0	0	0	0
Percent DCE				59%	63%	58%	63%	50%	51%	50%	42%	42%	42%	43%	65%	90%	38%
Percent VC				41%	38%	39%	38%	50%	49%	50%	57%	58%	58%	56%	35%	10%	62%
Chemisrty (mg/L)				MW-11A (Deep Well)													
Chloride				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate Nitrogen				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carobn				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron Dissolved				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese Dissolved				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Oxygen (DO)				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
pH				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Oxygen Reduction Potential				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

NOTES:  
RAOs GW = Remedial Action Objectives for Groundwater  
CAS = Chemical Abstract Service registry number  
Bold = Exceeds RAOs for groundwater (Not applicable to Treatment System Effluent)  
Bold/Shaded = Exceeds Buffalo Sewer Authority Discharge Limits (Groundwater Treatr  
ND = Not Detected  
E = Exceeds Calibration Range  
D = Sample reanalyzed and quantified at higher dilution  
Well MW-11 was removed during excavation and is no longer sampled.  
Well MW-15A was filled with gravel and is no longer sampled.

Table 4B (Wells 11-16R)  
Quarterly Groundwater Data  
Leica Microsystems, Eggert Road  
Cheektowaga, NY

ANALYTE	CAS	Method Detection Limit	RAOs GW	MW-11A (Deep Well)																			
Sample Collection Date:				May-25-04	Sept-26-04	Dec-21-04	Mar-25-05	June-27-05	Oct-23-05	Jan-05-06	Jan-05-06	Mar-17-06	July-11-06	Dec-18-06	Dec-18-06	May-02-07	Nov-14-07	Jul-1-08	Apr-15-09	Oct-6-09			
Dilution:				5.00	5.00	5.00	5.00	5.00	5.00	2.00	5.00	2.50	2.50	2.00	5.00	5.00	2.50	2.50	1.00	1.00			
Volatile Organic Compounds (ug/l)																							
acetone	67641	20	-	ND	ND	ND	ND	ND	ND	ND		ND		ND		ND		ND		ND		ND	
benzene	71432	5	-	ND	ND	ND	ND	ND	ND	ND		ND		ND		ND		ND		ND		ND	
bromodichloromethane	75274	5	-	ND	ND	ND	ND	ND	ND	ND		ND		ND		ND		ND		ND		ND	
bromoform	75252	5	-	ND	ND	ND	ND	ND	ND	ND		ND		ND		ND		ND		ND		ND	
bromomethane	74839	5	-	ND	ND	ND	ND	ND	ND	ND		ND		ND		ND		ND		ND		ND	
2-butanone (MEK)	78933	10	-	ND	ND	ND	ND	ND	ND	ND		ND		ND		ND		ND		ND		ND	
carbon disulfide	75150	10	-	ND	ND	ND	ND	ND	ND	ND		ND		ND		ND		ND		ND		ND	
carbon tetrachloride	56235	5	-	ND	ND	ND	ND	ND	ND	ND		ND		ND		ND		ND		ND		ND	
chlorobenzene	108907	5	-	ND	ND	ND	ND	ND	ND	ND		ND		ND		ND		ND		ND		ND	
chloroethane	75003	5	-	ND	ND	ND	ND	ND	ND	ND		ND		ND		ND		ND		ND		ND	
chloroform	67663	5	-	ND	ND	ND	ND	ND	ND	ND		ND		ND		ND		ND		ND		ND	
chloromethane	74873	5	-	ND	ND	ND	ND	ND	ND	ND		ND		ND		ND		ND		ND		ND	
dibromochloromethane	124481	5	-	ND	ND	ND	ND	ND	ND	ND		ND		ND		ND		ND		ND		ND	
1,1-dichloroethane	75343	5	-	ND	ND	ND	ND	ND	ND	ND		ND		ND		ND		ND		ND		ND	
1,2-dichloroethane	107062	5	-	ND	ND	ND	ND	ND	ND	ND		ND		ND		ND		ND		ND		ND	
1,1-dichloroethene	75354	5	-	ND	ND	ND	ND	ND	ND	ND		ND		ND		ND		ND		ND		ND	
cis-1,2-dichloroethene	156592	5	5	610	600	540	520	420	400	540	E	540	460	310	450	E	420	D	490	290	290	250	210
trans-1,2-dichloroethene	156605	5	5	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND		ND		ND	ND	ND	ND	ND
1,2-dichloropropane	78875	5	-	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND		ND		ND	ND	ND	ND	ND
cis-1,3-dichloropropene	542756	5	-	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND		ND		ND	ND	ND	ND	ND
trans-1,3-dichloropropene	542756	5	-	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND		ND		ND	ND	ND	ND	ND
ethylbenzene	100414	5	5	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND		ND		ND	ND	ND	ND	ND
2-hexanone	591786	10	-	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND		ND		ND	ND	ND	ND	ND
methylene chloride	75092	5	-	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND		ND		ND	ND	ND	ND	ND
4-methyl-2-pentanone (MIBK)	108101	10	-	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND		ND		ND	ND	ND	ND	ND
styrene	100425	5	-	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND		ND		ND	ND	ND	ND	ND
1,1,2,2-tetrachloroethane	79345	5	-	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND		ND		ND	ND	ND	ND	ND
tetrachloroethene	127184	5	-	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND		ND		ND	ND	ND	ND	ND
toluene	108883	5	5	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND		ND		ND	ND	ND	ND	ND
1,1,1-trichloroethane	71556	5	5	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND		ND		ND	ND	ND	ND	ND
1,1,2-trichloroethane	79005	5	-	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND		ND		ND	ND	ND	ND	ND
trichloroethene	79016	5	5	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND		ND		ND	ND	ND	ND	ND
vinyl chloride	75014	5	5	900	980	750	790	500	510	660	E	720	470	340	560	E	540	D	500	320	300	260	290
o-xylene	95476	5	5	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND		ND		ND	ND	ND	ND	ND
m+p xylene	108383/106423	5	5	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND		ND		ND	ND	ND	ND	ND
TOTAL VOCs				1510	1580	1290	1310	920	910	1200		1260	930	650	1010	960	990	610	590	510	500		
Percent TCE				0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0		
Percent DCE				40%	38%	42%	40%	46%	44%	45%		43%	49%	48%	45%	44%	49%	48%	49%	49%	42%		
Percent VC				60%	62%	58%	60%	54%	56%	55%		57%	51%	52%	55%	56%	51%	52%	51%	51%	58%		
Chemisrty (mg/L)																							
Chloride				NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	120		87.4	
Ferrous Iron				NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	0.13		0.1	
Nitrate Nitrogen				NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	0.5	U	0.5	U
Sulfate				NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	91.1		87.8	
Total Organic Carobn				NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	3.9		3.3	
Ferrous Iron Dissolved				NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	0.12		0.1	U
Manganese				NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	73		74	
Manganese Dissolved				NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	74		69	
Dissolved Oxygen (DO)				NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	96.8		
pH				NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	7.21		7.22	
Oxygen Reduction Potential				NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	-216		-283	

NOTES:  
RAOs GW = Remedial Action Objectives for Groundwater  
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Bold = Exceeds RAOs for groundwater (Not applicable to Treatment System Effluent)  
Bold/Shaded = Exceeds Buffalo Sewer Authority Discharge Limits (Groundwater Treatr  
ND = Not Detected  
E = Exceeds Calibration Range  
D = Sample reanalyzed and quantified at higher dilution  
Well MW-11 was removed during excavation and is no longer sampled.  
Well MW-15A was filled with gravel and is no longer sampled.

Prepared by:DRS Date:2/10 Checked by:PWM Date:3/10				Table 4B (Wells 11-16R) Quarterly Groundwater Data Leica Microsystems, Eggert Road Cheektowaga, NY											
ANALYTE	CAS	Method Detection Limit	RAOs GW	MW-14											
				Base	Mar-29-00	Jun-22-00	Aug-21-00	Nov-30-00	Mar-27-01	Jun-13-01	Dec-19-01	Mar-20-02	Jun-25-02	Jan-20-03	March-27-03
				2.00	2.50	2.00	2.00	2.50	2.00	5.00	2.00	2.00	2.00	2.00	1.00
Volatile Organic Compounds (ug/l)															
acetone	67641	20	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
benzene	71432	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
bromodichloromethane	75274	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
bromoform	75252	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
bromomethane	74839	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-butanone (MEK)	78933	10	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
carbon disulfide	75150	10	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
carbon tetrachloride	56235	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
chlorobenzene	108907	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
chloroethane	75003	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
chloroform	67663	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
chloromethane	74873	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
dibromochloromethane	124481	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-dichloroethane	75343	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-dichloroethane	107062	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-dichloroethene	75354	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-dichloroethene	156592	5	5	360	360	390	290	440	360	410	350	340	390	310	160
trans-1,2-dichloroethene	156605	5	5	ND	ND	ND	ND	ND	ND	ND	ND	9.2	ND	ND	ND
1,2-dichloropropane	78875	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-dichloropropene	542756	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-dichloropropene	542756	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ethylbenzene	100414	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-hexanone	591786	10	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
methylene chloride	75092	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-methyl-2-pentanone (MIBK)	108101	10	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
styrene	100425	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-tetrachloroethane	79345	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
tetrachloroethene	127184	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
toluene	108883	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-trichloroethane	71556	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-trichloroethane	79005	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trichloroethene	79016	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
vinyl chloride	75014	5	5	150	170	140	77	160	30	44	36	26	40	62	37
o-xylene	95476	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
m+p xylene	108383/106423	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TOTAL VOCs				510	530	530	367	600	390	454	386	375.2	430	372	197
Percent TCE				0	0	0	0	0	0	0	0	0	0	0	0
Percent DCE				71%	68%	74%	79%	73%	92%	90%	91%	91%	91%	83%	81%
Percent VC				29%	32%	26%	21%	27%	8%	10%	9%	7%	9%	17%	19%
Chemisrty (mg/L)				MW-14											
Chloride				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate Nitrogen				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carobn				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron Dissolved				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese Dissolved				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Oxygen (DO)				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
pH				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Oxygen Reduction Potential				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

NOTES:  
RAOs GW = Remedial Action Objectives for Groundwater  
CAS = Chemical Abstract Service registry number  
Bold = Exceeds RAOs for groundwater (Not applicable to Treatment System Effluent)  
Bold/Shaded = Exceeds Buffalo Sewer Authority Discharge Limits (Groundwater Treatr  
ND = Not Detected  
E = Exceeds Calibration Range  
D = Sample reanalyzed and quantified at higher dilution  
Well MW-11 was removed during excavation and is no longer sampled.  
Well MW-15A was filled with gravel and is no longer sampled.

Prepared by:DRS Date:2/10 Checked by:PWM Date:3/10				Table 4B (Wells 11-16R) Quarterly Groundwater Data Leica Microsystems, Eggert Road Cheektowaga, NY																									
ANALYTE	CAS	Method Detection Limit	RAOs GW	MW-14 Cont.																									
Sample Collection Date:				Jul-11-03	Feb-05-04	May-25-04	Sept-26-04	Dec-21-04	Mar-24-05	June-26-05	Oct-23-05	Jan-04-06	Jan-04-06	Mar-17-06	July-20-06	Dec-18-06	May-02-07	May-14-08	May-14-08	Jul-30-08	Apr-15-09	Oct-6-09	Jan-14-10						
Dilution:				2.50	2.50	1.00	2.50	2.50	2.50	2.50	1.00	2.50	2.50	2.50	2.00	2.00	1.00	2.00	1.00	2.00	1.00	1.00	2.00	2.00					
Volatile Organic Compounds (ug/l)																													
acetone	67641	20	-	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND		ND		ND		ND		ND		ND		ND		ND	
benzene	71432	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND		ND		ND		ND		ND		ND		ND		ND	
bromodichloromethane	75274	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND		ND		ND		ND		ND		ND		ND		ND	
bromoform	75252	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND		ND		ND		ND		ND		ND		ND		ND	
bromomethane	74839	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND		ND		ND		ND		ND		ND		ND		ND	
2-butanone (MEK)	78933	10	-	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND		ND		ND		ND		ND		ND		ND		ND	
carbon disulfide	75150	10	-	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND		ND		ND		ND		ND		ND		ND		ND	
carbon tetrachloride	56235	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND		ND		ND		ND		ND		ND		ND		ND	
chlorobenzene	108907	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND		ND		ND		ND		ND		ND		ND		ND	
chloroethane	75003	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND		ND		ND		ND		ND		ND		ND		ND	
chloroform	67663	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND		ND		ND		ND		ND		ND		ND		ND	
chloromethane	74873	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND		ND		ND		ND		ND		ND		ND		ND	
dibromochloromethane	124481	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND		ND		ND		ND		ND		ND		ND		ND	
1,1-dichloroethane	75343	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND		ND		ND		ND		ND		ND		ND		ND	
1,2-dichloroethane	107062	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND		ND		ND		ND		ND		ND		ND		ND	
1,1-dichloroethene	75354	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND		ND		ND		ND		ND		ND		ND		ND	
cis-1,2-dichloroethene	156592	5	5	280	400	320	380	300	310	290	400	380	E	350	320	250	310	270	230	E	220	D	150	190	230	200			
trans-1,2-dichloroethene	156605	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND		ND		ND		ND		ND		6.9	ND	ND			
1,2-dichloropropane	78875	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND		ND		ND		ND		ND		ND		ND		ND	
cis-1,3-dichloropropene	542756	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND		ND		ND		ND		ND		ND		ND		ND	
trans-1,3-dichloropropene	542756	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND		ND		ND		ND		ND		ND		ND		ND	
ethylbenzene	100414	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND		ND		ND		ND		ND		ND		ND		ND	
2-hexanone	591786	10	-	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND		ND		ND		ND		ND		ND		ND		ND	
methylene chloride	75092	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND		ND		ND		ND		ND		ND		ND		ND	
4-methyl-2-pentanone (MIBK)	108101	10	-	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND		ND		ND		ND		ND		ND		ND		ND	
styrene	100425	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND		ND		ND		ND		ND		ND		ND		ND	
1,1,2,2-tetrachloroethane	79345	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND		ND		ND		ND		ND		ND		ND		ND	
tetrachloroethene	127184	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND		ND		ND		ND		ND		ND		ND		ND	
toluene	108883	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND		ND		ND		ND		ND		ND		ND		ND	
1,1,1-trichloroethane	71556	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND		ND		ND		ND		ND		ND		ND		ND	
1,1,2-trichloroethane	79005	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND		ND		ND		ND		ND		ND		ND		ND	
trichloroethene	79016	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND		ND		ND		ND		ND		ND		ND		ND	
vinyl chloride	75014	5	5	110	290	64	320	44	42	62	530	420	E	410	190	120	120	86	26	25	D	48	38	270	20				
o-xylene	95476	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND		ND		ND		ND		ND		ND		ND		ND	
m+p xylene	108383/106423	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND		ND		ND		ND		ND		ND		ND		ND	
TOTAL VOCs				390	690	384	700	344	352	352	930	800		760	510	370	430	356	256	245		198	234.9	500	220				
Percent TCE				0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0		0	0	0	0	0			
Percent DCE				72%	58%	83%	54%	87%	88%	82%	43%	48%		46%	63%	68%	72%	76%	90%	90%		76%	81%	46%	91%				
Percent VC				28%	42%	17%	46%	13%	12%	18%	57%	53%		54%	37%	32%	28%	24%	10%	10%		24%	16%	54%	9%				
Chemisrty (mg/L)				MW-14 Cont.																									
Chloride				NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		NA		62.4		49.3		64.2		39		26.4	
Ferrous Iron				NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		NA		0.384		0.861		1.67		0.1	U	0.86	
Nitrate Nitrogen				NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		NA		<0.500		<0.500		0.5	U	0.5	U	0.5	U
Sulfate				NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		NA		379		288		314		71.1		152	
Total Organic Carobn				NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		NA		3.8		4.58		3.1		7.3		3.3	
Ferrous Iron Dissolved				NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		NA		0.326		0.918		1.36		0.1	U	0.74	
Manganese				NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		NA		0.11		0.0829		110		57		76	
Manganese Dissolved				NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		NA		0.106		0.0732		112		51		68	
Dissolved Oxygen (DO)				NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		NA		NA		2.84		NA		17.8		15.9	
pH				NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		NA		NA		6.07		6.99		7.05		7.07	
Oxygen Reduction Potential				NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		NA		NA		-24		-272		-278.4		-18.3	

NOTES:  
RAOs GW = Remedial Action Objectives for Groundwater  
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Bold/Shaded = Exceeds Buffalo Sewer Authority Discharge Limits (Groundwater Treatr  
ND = Not Detected  
E = Exceeds Calibration Range  
D = Sample reanalyzed and quantified at higher dilution  
Well MW-11 was removed during excavation and is no longer sampled.  
Well MW-15A was filled with gravel and is no longer sampled.

Prepared by:DRS Date:2/10 Checked by:PWM Date:3/10				Table 4B (Wells 11-16R) Quarterly Groundwater Data Leica Microsystems, Eggert Road Cheektowaga, NY													
ANALYTE	CAS	Method Detection Limit	RAOs GW	MW-14A (Deep Well)													
				Base	Jun-22-00	Mar-27-01	Jun-13-01	Sep-28-01	Dec-19-01	Mar-27-02	Jun-25-02	Sept-19-02	Jan-20-03	March-27-03	Jul-11-03	Oct-21-03	Feb-05-04
				1.00	2.00	1.00	2.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Sample Collection Date: Dilution:																	
Volatile Organic Compounds (ug/l)																	
acetone	67641	20	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
benzene	71432	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
bromodichloromethane	75274	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
bromoform	75252	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
bromomethane	74839	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-butanone (MEK)	78933	10	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
carbon disulfide	75150	10	-	14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
carbon tetrachloride	56235	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
chlorobenzene	108907	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
chloroethane	75003	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
chloroform	67663	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
chloromethane	74873	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
dibromochloromethane	124481	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-dichloroethane	75343	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-dichloroethane	107062	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-dichloroethene	75354	5	-	ND	ND	ND	ND	ND	ND	2.7	ND	ND	ND	ND	ND	ND	ND
cis-1,2-dichloroethene	156592	5	5	26	130	140	200	10	100	200	170	14	120	170	49	5.4	160
trans-1,2-dichloroethene	156605	5	5	ND	12	13	14	ND	9.7	18	15	ND	7.1	10	ND	ND	8.1
1,2-dichloropropane	78875	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-dichloropropene	542756	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-dichloropropene	542756	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ethylbenzene	100414	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-hexanone	591786	10	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
methylene chloride	75092	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-methyl-2-pentanone (MIBK)	108101	10	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
styrene	100425	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-tetrachloroethane	79345	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
tetrachloroethene	127184	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
toluene	108883	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-trichloroethane	71556	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-trichloroethane	79005	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trichloroethene	79016	5	5	ND	11	18	29	ND	5.9	26	14	ND	ND	5.3	ND	ND	ND
vinyl chloride	75014	5	5	13	280	29	31	ND	30	19	48	7.9	32	39	20	6.5	54
o-xylene	95476	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
m+p xylene	108383/106423	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TOTAL VOCs				53	433	200	274	10	145.6	265.7	247	21.9	159.1	224.3	69	11.9	222.1
Percent TCE				0	3%	9%	11%	0	4%	10%	6%	0	0	2%	0	0	0
Percent DCE				49%	30%	70%	73%	100%	69%	75%	69%	64%	75%	76%	71%	45%	72%
Percent VC				25%	65%	15%	11%	0	21%	7%	19%	36%	20%	17%	29%	55%	24%
Chemisrty (mg/L)				MW-14A (Deep Well)													
Chloride				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate Nitrogen				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carobn				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron Dissolved				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese Dissolved				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Oxygen (DO)				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
pH				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Oxygen Reduction Potential				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

NOTES:  
RAOs GW = Remedial Action Objectives for Groundwater  
CAS = Chemical Abstract Service registry number  
Bold = Exceeds RAOs for groundwater (Not applicable to Treatment System Effluent)  
Bold/Shaded = Exceeds Buffalo Sewer Authority Discharge Limits (Groundwater Treatr  
ND = Not Detected  
E = Exceeds Calibration Range  
D = Sample reanalyzed and quantified at higher dilution  
Well MW-11 was removed during excavation and is no longer sampled.  
Well MW-15A was filled with gravel and is no longer sampled.

Prepared by:DRS Date:2/10 Checked by:PWM Date:3/10				Table 4B (Wells 11-16R) Quarterly Groundwater Data Leica Microsystems, Eggert Road Cheektowaga, NY																			
ANALYTE	CAS	Method Detection Limit	RAOs GW	MW-14A (Deep Well) Cont.																			
Sample Collection Date:				May-25-04	Sept-26-04	Dec-21-04	Mar-24-05	June-26-05	Oct-23-05	Jan-04-06	Mar-17-06	July-13-06	Dec-18-06	May-02-07	Nov-14-07	May-14-08	Jul-30-08	Apr-15-09	Oct-6-09	Jan-14-10			
Dilution:				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Volatile Organic Compounds (ug/l)																							
acetone	67641	20	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
benzene	71432	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
bromodichloromethane	75274	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
bromoform	75252	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
bromomethane	74839	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
2-butanone (MEK)	78933	10	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
carbon disulfide	75150	10	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
carbon tetrachloride	56235	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
chlorobenzene	108907	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
chloroethane	75003	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
chloroform	67663	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
chloromethane	74873	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
dibromochloromethane	124481	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
1,1-dichloroethane	75343	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
1,2-dichloroethane	107062	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
1,1-dichloroethene	75354	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
cis-1,2-dichloroethene	156592	5	5	160	16	14	88	84	12	47	48	13	43	39	ND	160	6.2	100	12	38			
trans-1,2-dichloroethene	156605	5	5	6.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6.1	ND	ND	ND	ND			
1,2-dichloropropane	78875	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
cis-1,3-dichloropropene	542756	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
trans-1,3-dichloropropene	542756	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
ethylbenzene	100414	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
2-hexanone	591786	10	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
methylene chloride	75092	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
4-methyl-2-pentanone (MIBK)	108101	10	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
styrene	100425	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
1,1,2,2-tetrachloroethane	79345	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
tetrachloroethene	127184	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
toluene	108883	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
1,1,1-trichloroethane	71556	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
1,1,2-trichloroethane	79005	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
trichloroethene	79016	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
vinyl chloride	75014	5	5	61	19	8.7	78	55	15	57	40	10	42	29	7.2	56	8.2	57	16		ND		
o-xylene	95476	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
m+p xylene	108383/106423	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
TOTAL VOCs				227.8	35	22.7	166	139	27	104	88	23	85	68	7.2	222.1	14.4	157	28	38			
Percent TCE				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Percent DCE				70%	46%	62%	53%	60%	44%	45%	55%	57%	51%	57%	0	72%	43%	64%	43%	100%			
Percent VC				27%	54%	38%	47%	40%	56%	55%	45%	43%	49%	43%	100%	25%	57%	36%	57%		0		
Chemisrty (mg/L)				MW-14A (Deep Well) Cont.																			
Chloride				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	27.1	15.2	27.8		15.1		15.9	
Ferrous Iron				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.126	0.613	2.74		0.1	U	0.1	
Nitrate Nitrogen				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.500	<0.500	0.5	U	0.71		0.5	
Sulfate				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	224	54.1	210		41.6		82.5	
Total Organic Carobn				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.48	3.53	2.9		2.6		3.4	
Ferrous Iron Dissolved				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.100	1.29	4.17		0.1	U	0.1	
Manganese				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.105	0.116	113		79		39	
Manganese Dissolved				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0992	0.114	108		63		37	
Dissolved Oxygen (DO)				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.42	NA		9		17.3	
pH				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.74	6.99		7.53		7.58	
Oxygen Reduction Potential				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	-205	-280		-276.2		26.4	

NOTES:  
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Bold/Shaded = Exceeds Buffalo Sewer Authority Discharge Limits (Groundwater Treatr  
ND = Not Detected  
E = Exceeds Calibration Range  
D = Sample reanalyzed and quantified at higher dilution  
Well MW-11 was removed during excavation and is no longer sampled.  
Well MW-15A was filled with gravel and is no longer sampled.

Table 4B (Wells 11-16R)  
Quarterly Groundwater Data  
Leica Microsystems, Eggert Road  
Cheektowaga, NY

ANALYTE	CAS	Method Detection Limit	RAOs GW	MW-15						
Sample Collection Date:				Mar-25-05	June-27-05	Oct-23-05	Jan-04-06	Mar-17-06		
Dilution:				1.00	1.00	1.00	1.00	1.00		
Volatile Organic Compounds (ug/l)										
acetone	67641	20	-	ND	ND	ND	ND		ND	
benzene	71432	5	-	ND	ND	ND	ND		ND	
bromodichloromethane	75274	5	-	ND	ND	ND	ND		ND	
bromoform	75252	5	-	ND	ND	ND	ND		ND	
bromomethane	74839	5	-	ND	ND	ND	ND		ND	
2-butanone (MEK)	78933	10	-	ND	ND	ND	ND		ND	
carbon disulfide	75150	10	-	ND	ND	ND	ND		ND	
carbon tetrachloride	56235	5	-	ND	ND	ND	ND		ND	
chlorobenzene	108907	5	-	ND	ND	ND	ND		ND	
chloroethane	75003	5	-	ND	ND	ND	ND		ND	
chloroform	67663	5	-	ND	ND	ND	ND		ND	
chloromethane	74873	5	-	ND	ND	ND	ND		ND	
dibromochloromethane	124481	5	-	ND	ND	ND	ND		ND	
1,1-dichloroethane	75343	5	-	9.3	10	12	8.2		6.2	
1,2-dichloroethane	107062	5	-	ND	ND	ND	ND		ND	
1,1-dichloroethene	75354	5	-	ND	ND	ND	ND		ND	
cis-1,2-dichloroethene	156592	5	5	6.4	ND	ND	ND		ND	
trans-1,2-dichloroethene	156605	5	5	ND	ND	ND	ND		ND	
1,2-dichloropropane	78875	5	-	ND	ND	ND	ND		ND	
cis-1,3-dichloropropene	542756	5	-	ND	ND	ND	ND		ND	
trans-1,3-dichloropropene	542756	5	-	ND	ND	ND	ND		ND	
ethylbenzene	100414	5	5	ND	ND	ND	ND		ND	
2-hexanone	591786	10	-	ND	ND	ND	ND		ND	
methylene chloride	75092	5	-	ND	ND	ND	ND		ND	
4-methyl-2-pentanone (MIBK)	108101	10	-	ND	ND	ND	ND		ND	
styrene	100425	5	-	ND	ND	ND	ND		ND	
1,1,2,2-tetrachloroethane	79345	5	-	ND	ND	ND	ND		ND	
tetrachloroethene	127184	5	-	ND	ND	ND	ND		ND	
toluene	108883	5	5	ND	ND	ND	ND		ND	
1,1,1-trichloroethane	71556	5	5	ND	ND	ND	ND		ND	
1,1,2-trichloroethane	79005	5	-	ND	ND	ND	ND		ND	
trichloroethene	79016	5	5	ND	ND	ND	ND		ND	
vinyl chloride	75014	5	5	ND	ND	ND	ND		ND	
o-xylene	95476	5	5	ND	ND	ND	ND		ND	
m+p xylene	108383/106423	5	5	ND	ND	ND	ND		ND	
TOTAL VOCs				15.7	10	12	8.2		6.2	
Percent TCE				0	0	0	0		0	
Percent DCE				41%	0	0	0		0	
Percent VC				0	0	0	0		0	
Chemisrty (mg/L)				MW-15						
Chloride				NA	NA	NA	NA		NA	
Ferrous Iron				NA	NA	NA	NA		NA	
Nitrate Nitrogen				NA	NA	NA	NA		NA	
Sulfate				NA	NA	NA	NA		NA	
Total Organic Carobn				NA	NA	NA	NA		NA	
Ferrous Iron Dissolved				NA	NA	NA	NA		NA	
Manganese				NA	NA	NA	NA		NA	
Manganese Dissolved				NA	NA	NA	NA		NA	
Dissolved Oxygen (DO)				NA	NA	NA	NA		NA	
pH				NA	NA	NA	NA		NA	
Oxygen Reduction Potential				NA	NA	NA	NA		NA	

NOTES:

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Bold/Shaded = Exceeds Buffalo Sewer Authority Discharge Limits (Groundwater Treatr  
ND = Not Detected  
E = Exceeds Calibration Range  
D = Sample reanalyzed and quantified at higher dilution  
Well MW-11 was removed during excavation and is no longer sampled.  
Well MW-15A was filled with gravel and is no longer sampled.

ANALYTE	CAS	Method Detection Limit	RAOs GW	MW 16A (Deep Well)															
Sample Collection Date:				Base	Mar-29-00	Jun-22-00	Aug-21-00	Mar-27-01	Jun-13-01	Sep-28-01	Dec-19-01	Mar-20-02	Jun-25-02	Sept-19-02	Mar-27-03	Jul-11-03	Oct-21-03	Feb-06-04	May-25-04
Dilution:				500.00	20.00	25.00	20.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
Volatile Organic Compounds (ug/l)																			
acetone	67641	20	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
benzene	71432	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
bromodichloromethane	75274	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
bromoform	75252	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
bromomethane	74839	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-butanone (MEK)	78933	10	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
carbon disulfide	75150	10	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
carbon tetrachloride	56235	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
chlorobenzene	108907	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
chloroethane	75003	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
chloroform	67663	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
chloromethane	74873	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
dibromochloromethane	124481	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-dichloroethane	75343	5	-	ND	270	260	200	180	170	140	150	120	88	81	150	120	120	110	170
1,2-dichloroethane	107062	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-dichloroethene	75354	5	-	ND	ND	ND	ND	ND	ND	ND	ND	21	ND	ND	ND	ND	ND	ND	ND
cis-1,2-dichloroethene	156592	5	5	9400	3800	3100	3200	2000	2000	1800	1600	1300	1300	1200	1200	1100	1300	1200	1400
trans-1,2-dichloroethene	156605	5	5	ND	ND	ND	ND	150	ND	ND	ND	21	ND	ND	ND	ND	ND	ND	ND
1,2-dichloropropane	78875	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-dichloropropene	542756	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-dichloropropene	542756	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ethylbenzene	100414	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-hexanone	591786	10	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
methylene chloride	75092	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-methyl-2-pentanone (MIBK)	108101	10	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
styrene	100425	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-tetrachloroethane	79345	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
tetrachloroethene	127184	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
toluene	108883	5	5	ND	ND	ND	ND	ND	ND	ND	ND	10	ND	ND	ND	ND	ND	ND	ND
1,1,1-trichloroethane	71556	5	5	56000	410	290	200	160	120	89	120	92	55	ND	240	200	250	160	970
1,1,2-trichloroethane	79005	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trichloroethene	79016	5	5	17000	2200	1300	910	1100	1000	730	690	840	480	260	1200	560	430	330	790
vinyl chloride	75014	5	5	ND	620	620	1100	460	710	610	500	440	380	340	430	330	380	330	380
o-xylene	95476	5	5	3800	110	ND	ND	ND	ND	ND	ND	12	ND	ND	ND	ND	ND	ND	ND
m+p xylene	108383/106423	5	5	8400	ND	170	ND	ND	80	50	ND	19	ND	ND	ND	ND	ND	ND	ND
TOTAL VOCs				94600	7410	5740	5610	4050	4080	3419	3060	2875	2303	1881	3220	2310	2480	2130	3710
Percent TCE				18%	30%	23%	16%	27%	25%	21%	23%	29%	21%	14%	37%	24%	17%	15%	21%
Percent DCE				10%	51%	54%	57%	49%	49%	53%	52%	45%	56%	64%	37%	48%	52%	56%	38%
Percent VC				0	8%	11%	20%	11%	17%	18%	16%	15%	17%	18%	13%	14%	15%	15%	10%
Chemisrty (mg/L)				MW 16A (Deep Well)															
Chloride				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate Nitrogen				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carobn				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron Dissolved				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese Dissolved				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Oxygen (DO)				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
pH				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Oxygen Reduction Potential				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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Well MW-11 was removed during excavation and is no longer sampled.  
Well MW-15A was filled with gravel and is no longer sampled.

Table 4B (Wells 11-16R)  
Quarterly Groundwater Data  
Leica Microsystems, Eggert Road  
Cheektowaga, NY

ANALYTE	CAS	Method Detection Limit	RAOs GW	MW 16A (Deep Well) Cont.																							
Sample Collection Date:				Sept-26-04	Dec-21-04	Mar-25-05	June-27-05	June 27-05	Oct-23-05	Jan-04-06	Mar-17-06	July-11-06	Dec-21-06	May-02-07	Nov-14-07	Nov-14-07	Mar-31-2008	Mar-31-2008	July-01-08	Jul-30-08	Apr-15-09	Oct-6-09					
Dilution:				10.00	20.00	20.00	20.00	100.00	10.00	10.00	10.00	10.00	10.00	5.00	1.00	10.00	5.00	10.00		10.00	1.00	1.00					
Volatile Organic Compounds (ug/l)																											
acetone	67641	20	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
benzene	71432	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
bromodichloromethane	75274	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
bromoform	75252	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
bromomethane	74839	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
2-butanone (MEK)	78933	10	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
carbon disulfide	75150	10	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
carbon tetrachloride	56235	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
chlorobenzene	108907	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
chloroethane	75003	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
chloroform	67663	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
chloromethane	74873	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
dibromochloromethane	124481	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
1,1-dichloroethane	75343	5	-	240	190	200	410	ND	120	150	120	100	180	74	88	87	150	150	D	140	120	130	220				
1,2-dichloroethane	107062	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND				
1,1-dichloroethene	75354	5	-	ND	ND	ND	160	ND	ND	ND	ND	ND	ND	ND	10		ND	ND		ND	ND	ND	ND				
cis-1,2-dichloroethene	156592	5	5	1900	2100	2100	2300	2300	1200	1200	1100	1200	1500	860	980	E	960	D	1100	E	1100	D	1400	1400	950	1300	
trans-1,2-dichloroethene	156605	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	12		ND	ND		ND	ND	ND	ND				
1,2-dichloropropane	78875	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND				
cis-1,3-dichloropropene	542756	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND				
trans-1,3-dichloropropene	542756	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND				
ethylbenzene	100414	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND				
2-hexanone	591786	10	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND				
methylene chloride	75092	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND				
4-methyl-2-pentanone (MIBK)	108101	10	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND				
styrene	100425	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND				
1,1,2,2-tetrachloroethane	79345	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND				
tetrachloroethene	127184	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND				
toluene	108883	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND				
1,1,1-trichloroethane	71556	5	5	1200	2200	2000	16,000E	17000	230	530	630	210	840	190	210	E	200	D	730		750	D	580	330	370	420	
1,1,2-trichloroethane	79005	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND				
trichloroethene	79016	5	5	970	1500	1100	3000	3000	630	800	590	460	930	160	370	E	330	D	920		930	D	260	200	300	420	
vinyl chloride	75014	5	5	240	300	300	390	ND	330	320	260	280	430	170	240	E	210	D	250		260	D	290	350	260	290	
o-xylene	95476	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND				
m+p xylene	108383/106423	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND				
TOTAL VOCs				4550	6290	5700	6260	22300	2510	3000	2700	2250	3880	1454	1910	1787		3150	3190		2670	2400	2010	2650			
Percent TCE				21%	24%	19%	48%	13%	25%	27%	22%	20%	24%	11%	19%	18%		29%	29%		10%	8%	15%	16%			
Percent DCE				42%	33%	37%	37%	10%	48%	40%	41%	53%	39%	59%	51%	54%		35%	34%		52%	58%	47%	49%			
Percent VC				5%	5%	5%	6%	0	13%	11%	10%	12%	11%	12%	13%		8%	8%		11%	15%	13%	11%				
Chemisrty (mg/L)				MW 16A (Deep Well) Cont.																							
Chloride				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	306		NA		242		225		197	
Ferrous Iron				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.100		NA		0.412		0.24		0.34	
Nitrate Nitrogen				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.500		NA		<0.500		0.5	U	0.5	U
Sulfate				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	83.1		NA		93.3		66.9		80	
Total Organic Carobn				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.3		NA		7.62		5		4.5	
Ferrous Iron Dissolved				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.100		NA		0.288		0.3		0.23	
Manganese				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.102		NA		0.0963		79		84	
Manganese Dissolved				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.098		NA		0.0896		71		79	
Dissolved Oxygen (DO)				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		8.57		NA		15.5	
pH				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		7.33		NA		7.19	
Oxygen Reduction Potential				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		-172		NA		-262	

NOTES:  
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CAS = Chemical Abstract Service registry number  
Bold = Exceeds RAOs for groundwater (Not applicable to Treatment System Effluent)  
Bold/Shaded = Exceeds Buffalo Sewer Authority Discharge Limits (Groundwater Treatr  
ND = Not Detected  
E = Exceeds Calibration Range  
D = Sample reanalyzed and quantified at higher dilution  
Well MW-11 was removed during excavation and is no longer sampled.  
Well MW-15A was filled with gravel and is no longer sampled.

Prepared by:DRS Date:2/10 Checked by:PWM Date:3/10				Table 4B (Wells 11-16R) Quarterly Groundwater Data Leica Microsystems, Eggert Road Cheektowaga, NY														
ANALYTE	CAS	Method Detection Limit	RAOs GW	MW-16R														
				Jun-22-00	Aug-21-00	Mar-27-01	Jun-13-01	Dec-19-01	Mar-20-02	Jun-25-02	Sept-19-02	Jan-20-03	Mar-27-03	Jul-11-03	Oct-21-03	Feb-05-04	May-25-04	Sept-26-04
Sample Collection Date:				50 or 100	10.00	5.00	5.00	5.00	2.00	2.50	50.00	5 or 10	5.00	2.00	2.50	20.00	20.00	100.00
Dilution:																		
Volatile Organic Compounds (ug/l)																		
acetone	67641	20	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
benzene	71432	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
bromodichloromethane	75274	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
bromoform	75252	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
bromomethane	74839	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-butanone (MEK)	78933	10	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
carbon disulfide	75150	10	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
carbon tetrachloride	56235	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
chlorobenzene	108907	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
chloroethane	75003	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
chloroform	67663	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
chloromethane	74873	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
dibromochloromethane	124481	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-dichloroethane	75343	5	-	ND	ND	ND	28	35	26	38	390	72	53	42	99	110	150	ND
1,2-dichloroethane	107062	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-dichloroethene	75354	5	-	ND	ND	ND	ND	ND	5.7	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-dichloroethene	156592	5	5	350	1800	84	71	550	320	440	3000	1300	780	140	450	2300	2100	4700
trans-1,2-dichloroethene	156605	5	5	ND	ND	ND	ND	ND	11	24	ND	ND	ND	ND	ND	ND	ND	ND
1,2-dichloropropane	78875	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-dichloropropene	542756	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-dichloropropene	542756	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ethylbenzene	100414	5	5	1800	ND	26	38	ND	3.4	ND	ND	32	ND	ND	ND	ND	ND	ND
2-hexanone	591786	10	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
methylene chloride	75092	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-methyl-2-pentanone (MIBK)	108101	10	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
styrene	100425	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-tetrachloroethane	79345	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
tetrachloroethene	127184	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
toluene	108883	5	5	850	ND	ND	ND	ND	2.1	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-trichloroethane	71556	5	5	3900	ND	270	600	380	320	350	2700	570	460	230	160	300	140	520
1,1,2-trichloroethane	79005	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trichloroethene	79016	5	5	11000	ND	600	990	250	290	500	9400	26	140	46	50	110	460	12000
vinyl chloride	75014	5	5	ND	1300	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	ND	ND	ND
o-xylene	95476	5	5	7600	ND	110	140	25	6.6	ND	ND	46	ND	ND	ND	ND	ND	ND
m+p xylene	108383/106423	5	5	13000	ND	65	94	ND	5.9	ND	ND	52	26	ND	ND	ND	ND	ND
TOTAL VOCs				38500	3100	1155	1961	1240	1001.7	1352	15490	2098	1459	458	759	2820	2850	17220
Percent TCE				29%	0	52%	50%	20%	29%	37%	61%	1%	10%	10%	7%	4%	16%	70%
Percent DCE				1%	58%	7%	4%	44%	32%	33%	19%	62%	53%	31%	59%	82%	74%	27%
Percent VC				0	42%	0	0	0	1%	0	0	0	0	0	0	0	0	0
Chemisrty (mg/L)				MW-16R														
Chloride				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate Nitrogen				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carobn				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron Dissolved				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese Dissolved				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Oxygen (DO)				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
pH				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Oxygen Reduction Potential				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

NOTES:  
RAOs GW = Remedial Action Objectives for Groundwater  
CAS = Chemical Abstract Service registry number  
Bold = Exceeds RAOs for groundwater (Not applicable to Treatment System Effluent)  
Bold/Shaded = Exceeds Buffalo Sewer Authority Discharge Limits (Groundwater Treatr  
ND = Not Detected  
E = Exceeds Calibration Range  
D = Sample reanalyzed and quantified at higher dilution  
Well MW-11 was removed during excavation and is no longer sampled.  
Well MW-15A was filled with gravel and is no longer sampled.

Prepared by:DRS Date:2/10 Checked by:PWM Date:3/10				Table 4B (Wells 11-16R) Quarterly Groundwater Data Leica Microsystems, Eggert Road Cheektowaga, NY																							
ANALYTE	CAS	Method Detection Limit	RAOs GW	MW-16R Cont.																							
				Dec-21-04	Mar-24-05	June-26-05	Oct-24-05	Jan-05-06	Jan-05-06	Mar-17-06	July-13-06	Dec-18-06	May-02-07	May-02-07	Nov-15-07	Nov-15-07	Mar-31-08	May-14-08	May-14-08	Jul-30-08	Jul-30-08	Apr-15-09	Oct-6-09	Jan-14-10			
Sample Collection Date:				100.00	20.00	200.00	100.00	25.00	1,000.00	25.00	20.00	10.00	10.00	20.00	10.00	25.00	10.00	10.00	20.00	10.00	20.00	10.00	20.00	1.00	1.00	1.00	
Dilution:																											
Volatile Organic Compounds (ug/l)																											
acetone	67641	20	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
benzene	71432	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
bromodichloromethane	75274	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
bromoform	75252	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
bromomethane	74839	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
2-butanone (MEK)	78933	10	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	280	230	D	ND			
carbon disulfide	75150	10	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
carbon tetrachloride	56235	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
chlorobenzene	108907	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
chloroethane	75003	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	68	ND	70	ND	ND	ND	ND	ND	520	280			
chloroform	67663	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
chloromethane	74873	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
dibromochloromethane	124481	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
1,1-dichloroethane	75343	5	-	ND	250	ND	590	980	1000	1600	2000	1300	1900	2000	1400	1400	1700	1800	1800	D	1700	1700	D	170			
1,2-dichloroethane	107062	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
1,1-dichloroethene	75354	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	66	66	ND	ND	ND	ND	ND	ND	ND	ND			
cis-1,2-dichloroethene	156592	5	5	1500	930	6000	3500	6500	E	6200	3800	2100	840	2900	E	3000	D	2700	E	2600	D	1100	2000	E	2000		
trans-1,2-dichloroethene	156605	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
1,2-dichloropropane	78875	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
cis-1,3-dichloropropene	542756	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
trans-1,3-dichloropropene	542756	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
ethylbenzene	100414	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	26			
2-hexanone	591786	10	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	31			
methylene chloride	75092	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
4-methyl-2-pentanone (MIBK)	108101	10	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
styrene	100425	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
1,1,2,2-tetrachloroethane	79345	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
tetrachloroethene	127184	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
toluene	108883	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
1,1,1-trichloroethane	71556	5	5	ND	120	ND	ND	630	610	250	160	94	280	290	280	270	84	130	130	D	100	100	D	ND			
1,1,2-trichloroethane	79005	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
trichloroethene	79016	5	5	14000	3300	30000	15000	14000	E	14000	4500	1900	390	2900	E	3000	D	3800	E	3600	D	210	280	290			
vinyl chloride	75014	5	5	ND	ND	ND	ND	150	ND	ND	ND	58	72	ND	110	ND	ND	ND	ND	ND	240	240	ND	ND			
o-xylene	95476	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	12			
m+p xylene	108383/106423	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	28			
TOTAL VOCs				15500	4600	36000	19090	22260	21810	10150	6160	2682	8052	8290	8424	7936	3164	4210	4220	4405	4370	690	476	541			
Percent TCE				90%	72%	83%	79%	63%	64%	44%	31%	15%	36%	36%	45%	45%	7%	7%	7%	2%	0	0	0	0			
Percent DCE				10%	20%	17%	18%	29%	28%	37%	34%	31%	36%	36%	32%	33%	35%	48%	47%	45%	48%	0	0	0			
Percent VC				0	0	0	0	1%	0	0	0	2%	1%	0	1%	0	0	0	0	5%	5%	0	0	0			
Chemisrty (mg/L)				MW-16R Cont.																							
Chloride				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1060	NA	NA	NA	745	652	983	503			
Ferrous Iron				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.107	NA	NA	NA	31.7	0.28	2.85	1.49			
Nitrate Nitrogen				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.500	NA	NA	NA	<0.500	0.5	U	0.5			
Sulfate				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	31.7	NA	NA	NA	9.1	2.7	7.8	6.3			
Total Organic Carobn				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4.8	NA	NA	NA	1080	65.7	39.8	71.9			
Ferrous Iron Dissolved				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.100	NA	NA	NA	30.1	0.38	2.35	1.52			
Manganese				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.346	NA	NA	NA	1.05	184	175	156			
Manganese Dissolved				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.366	NA	NA	NA	0.854	123	167	73			
Dissolved Oxygen (DO)				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.97	NA	7.9	21.1			
pH				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.43	NA	7.09	7.36			
Oxygen Reduction Potential				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	-101	NA	-297	-77.8			

NOTES:  
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Bold = Exceeds RAOs for groundwater (Not applicable to Treatment System Effluent)  
Bold/Shaded = Exceeds Buffalo Sewer Authority Discharge Limits (Groundwater Treatr  
ND = Not Detected  
E = Exceeds Calibration Range  
D = Sample reanalyzed and quantified at higher dilution  
Well MW-11 was removed during excavation and is no longer sampled.  
Well MW-15A was filled with gravel and is no longer sampled.

Table 4C (Wells 18-26A)  
Quarterly Groundwater Data  
Leica Microsystems, Eggert Road  
Cheektowaga, NY

ANALYTE	CAS	Method Detection Limit	RAOs GW	MW-18												MW-18A									
				Mar-24-05	Oct-24-05	Jan-04-06	Mar-17-06	May-02-07	Mar-31-08	May-14-08	Apr-15-09	Oct-6-09	Jan-14-10	Mar-31-08	May-14-08	Jul-30-08	Jul-30-08	Apr-15-09	Oct-6-09	Jan-14-10					
				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	1.00	1.00	1.00					
Sample Collection Date: Dilution:																									
Volatile Organic Compounds (ug/l)																									
acetone	67641	20	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
benzene	71432	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
bromodichloromethane	75274	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
bromoform	75252	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
bromomethane	74839	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
2-butanone (MEK)	78933	10	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
carbon disulfide	75150	10	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
carbon tetrachloride	56235	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
chlorobenzene	108907	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
chloroethane	75003	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
chloroform	67663	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
chloromethane	74873	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
dibromochloromethane	124481	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
1,1-dichloroethane	75343	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
1,2-dichloroethane	107062	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
1,1-dichloroethene	75354	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
cis-1,2-dichloroethene	156592	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	18	26	83	76	D	56	33	57			
trans-1,2-dichloroethene	156605	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
1,2-dichloropropane	78875	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
cis-1,3-dichloropropene	542756	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
trans-1,3-dichloropropene	542756	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
ethylbenzene	100414	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
2-hexanone	591786	10	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
methylene chloride	75092	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
4-methyl-2-pentanone (MIBK)	108101	10	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
styrene	100425	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
1,1,2,2-tetrachloroethane	79345	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
tetrachloroethene	127184	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
toluene	108883	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
1,1,1-trichloroethane	71556	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
1,1,2-trichloroethane	79005	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
trichloroethene	79016	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	30	15	200	E	180	D	140	44	8.8		
vinyl chloride	75014	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	11	ND	ND	ND	ND	11	6.2	44		
o-xylene	95476	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
m+p xylene	108383/106423	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
TOTAL VOCs				0	0	0	0	0	0	0	0	0	0	0	48	52	283	256	207	83.2	109.8				
Percent TCE				0	0	0	0	0	0	0	0	0	0	0	63%	29%	71%	70%	68%	53%	8%				
Percent DCE				0	0	0	0	0	0	0	0	0	0	0	38%	50%	29%	30%	27%	40%	52%				
Percent VC				0	0	0	0	0	0	0	0	0	0	0	0	21%	0	0	5%	7%	40%				
Chemistry (mg/L)				MW-18												MW-18A									
Chloride				NA	NA	NA	NA	NA	29.6	NA	25.6	19.1	8.7	134	NA	NA	167	98.6	46.2	20.7					
Ferrous Iron				NA	NA	NA	NA	NA	<0.100	NA	0.79	0.64	0.98	<0.100	NA	NA	<0.100	0.7	0.49	0.12					
Nitrate Nitrogen				NA	NA	NA	NA	NA	<0.500	NA	0.5	0.5	0.5	<0.500	NA	NA	0.531	0.5	0.79	0.5	U				
Sulfate				NA	NA	NA	NA	NA	76.7	NA	74.8	73.9	64.8	98.2	NA	NA	63.3	128	95.5	119					
Total Organic Carbon				NA	NA	NA	NA	NA	3.98	NA	6.6	4	5.8	3.11	NA	NA	3.08	4	5	6.9					
Ferrous Iron Dissolved				NA	NA	NA	NA	NA	<0.100	NA	0.92	0.38	0.78	<0.100	NA	NA	<0.100	0.89	0.25	0.1	U				
Manganese				NA	NA	NA	NA	NA	0.162	NA	274	163	164	0.066	NA	NA	<0.0100	111	273	66					
Manganese Dissolved				NA	NA	NA	NA	NA	0.165	NA	199	164	169	0.0486	NA	NA	<0.0100	74	235	63					
Dissolved Oxygen (DO)				NA	NA	NA	NA	NA	NA	NA	NA	7.4	16.7	NA	NA	NA	4.27	NA	7.4	31					
pH				NA	NA	NA	NA	NA	NA	NA	NA	7.14	7.59	NA	NA	NA	7.48	NA	7.14	7.59					
Oxygen Reduction Potential				NA	NA	NA	NA	NA	NA	NA	NA	-296.9	-90.1	NA	NA	NA	-18	NA	-296.9	-90.1					

NOTES:  
Base = Baseline sample collected 12/14/99  
RAOs GW = Remedial Action Objectives for Groundwater  
CAS = Chemical Abstract Service registry number  
Bold = Exceeds RAOs for groundwater (Not applicable to Treatment System Effluent)  
Bold/Shaded = Exceeds Buffalo Sewer Authority Discharge Limits (Groundwater Treatment Effluent Sample only)  
ND = Not Detected  
E = Exceeds Calibration Range  
D = Sample reanalyzed and quantified at higher dilution  
NCD = (sample) Not Collected, Dry well  
NSPD = Not sampled, pump down  
Well MW-11 was removed during excavation and is no longer sampled.  
Well MW-15A was filled with gravel and is no longer sampled.

Prepared by:DRS Date:1/10 Checked by:PWM Date:3/10				Table 4C (Wells 18-26A) Quarterly Groundwater Data Leica Microsystems, Eggert Road Cheektowaga, NY																
ANALYTE	CAS	Method Detection Limit	RAOs GW	MW-22																
				Base	Jun-22-00	Mar-27-01	Jun-13-01	Dec-19-01	Mar-20-02	Jun-25-02	Sept-19-02	Jan-20-03	Mar-27-03	Jul-11-03	Oct-21-03	Feb-05-04	May-25-04	Sept-26-04	Dec-21-04	Mar-24-05
				Dilution:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	NA	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volatile Organic Compounds (ug/l)																				
acetone	67641	20	-	ND	ND	ND	ND	ND	ND	ND	NCD	ND	ND	ND	ND	ND	ND	ND	ND	ND
benzene	71432	5	-	ND	ND	ND	ND	ND	ND	ND	NCD	ND	ND	ND	ND	ND	ND	ND	ND	ND
bromodichloromethane	75274	5	-	ND	ND	ND	ND	ND	ND	ND	NCD	ND	ND	ND	ND	ND	ND	ND	ND	ND
bromoform	75252	5	-	ND	ND	ND	ND	ND	ND	ND	NCD	ND	ND	ND	ND	ND	ND	ND	ND	ND
bromomethane	74839	5	-	ND	ND	ND	ND	ND	ND	ND	NCD	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-butanone (MEK)	78933	10	-	ND	ND	ND	ND	ND	ND	ND	NCD	ND	ND	ND	ND	ND	ND	ND	ND	ND
carbon disulfide	75150	10	-	76	ND	ND	ND	ND	ND	ND	NCD	ND	ND	ND	ND	ND	ND	ND	ND	ND
carbon tetrachloride	56235	5	-	ND	ND	ND	ND	ND	ND	ND	NCD	ND	ND	ND	ND	ND	ND	ND	ND	ND
chlorobenzene	108907	5	-	ND	ND	ND	ND	ND	ND	ND	NCD	ND	ND	ND	ND	ND	ND	ND	ND	ND
chloroethane	75003	5	-	ND	ND	ND	ND	ND	ND	ND	NCD	ND	ND	ND	ND	ND	ND	ND	ND	ND
chloroform	67663	5	-	ND	ND	ND	ND	ND	ND	ND	NCD	ND	ND	ND	ND	ND	ND	ND	ND	ND
chloromethane	74873	5	-	ND	ND	ND	ND	ND	ND	ND	NCD	ND	ND	ND	ND	ND	ND	ND	ND	ND
dibromochloromethane	124481	5	-	ND	ND	ND	ND	ND	ND	ND	NCD	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-dichloroethane	75343	5	-	ND	ND	ND	ND	ND	ND	ND	NCD	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-dichloroethane	107062	5	-	ND	ND	ND	ND	ND	ND	ND	NCD	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-dichloroethene	75354	5	-	ND	ND	ND	ND	ND	ND	ND	NCD	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-dichloroethene	156592	5	5	ND	ND	ND	ND	ND	ND	ND	NCD	ND	ND	ND	ND	ND	ND	11	ND	ND
trans-1,2-dichloroethene	156605	5	5	ND	ND	ND	ND	ND	ND	ND	NCD	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-dichloropropane	78875	5	-	ND	ND	ND	ND	ND	ND	ND	NCD	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-dichloropropene	542756	5	-	ND	ND	ND	ND	ND	ND	ND	NCD	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-dichloropropene	542756	5	-	ND	ND	ND	ND	ND	ND	ND	NCD	ND	ND	ND	ND	ND	ND	ND	ND	ND
ethylbenzene	100414	5	5	ND	ND	ND	ND	ND	ND	ND	NCD	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-hexanone	591786	10	-	ND	ND	ND	ND	ND	ND	ND	NCD	ND	ND	ND	ND	ND	ND	ND	ND	ND
methylene chloride	75092	5	-	ND	ND	ND	ND	ND	ND	ND	NCD	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-methyl-2-pentanone (MIBK)	108101	10	-	ND	ND	ND	ND	ND	ND	ND	NCD	ND	ND	ND	ND	ND	ND	ND	ND	ND
styrene	100425	5	-	ND	ND	ND	ND	ND	ND	ND	NCD	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-tetrachloroethane	79345	5	-	ND	ND	ND	ND	ND	ND	ND	NCD	ND	ND	ND	ND	ND	ND	ND	ND	ND
tetrachloroethene	127184	5	-	ND	ND	ND	ND	ND	ND	ND	NCD	ND	ND	ND	ND	ND	ND	ND	ND	ND
toluene	108883	5	5	ND	ND	ND	ND	ND	ND	ND	NCD	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-trichloroethane	71556	5	5	ND	ND	ND	ND	ND	ND	ND	NCD	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-trichloroethane	79005	5	-	ND	ND	ND	ND	ND	ND	ND	NCD	ND	ND	ND	ND	ND	ND	ND	ND	ND
trichloroethene	79016	5	5	ND	ND	ND	ND	ND	ND	ND	NCD	ND	ND	ND	ND	ND	ND	ND	ND	ND
vinyl chloride	75014	5	5	ND	ND	ND	ND	ND	ND	ND	NCD	ND	ND	ND	5.7	ND	ND	48	ND	ND
o-xylene	95476	5	5	ND	ND	ND	ND	ND	ND	ND	NCD	ND	ND	ND	ND	ND	ND	ND	ND	ND
m+p xylene	108383/106423	5	5	ND	ND	ND	ND	ND	ND	ND	NCD	ND	ND	ND	ND	ND	ND	ND	ND	ND
TOTAL VOCs				76	0	0	0	0	0	0	0	0	0	0	5.7	0	0	59	0	0
Percent TCE				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Percent DCE				0	0	0	0	0	0	0	0	0	0	0	0	0	0	19%	0	0
Percent VC				0	0	0	0	0	0	0	0	0	0	0	100%	0	0	81%	0	0
Chemistry (mg/L)				MW-22																
Chloride				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate Nitrogen				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ferrous Iron Dissolved				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese Dissolved				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Oxygen (DO)				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
pH				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Oxygen Reduction Potential				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

NOTES:  
Base = Baseline sample collected 12/14/99  
RAOs GW = Remedial Action Objectives for Groundwater  
CAS = Chemical Abstract Service registry number  
Bold = Exceeds RAOs for groundwater (Not applicable to Treatment System Effluent)  
Bold/Shaded = Exceeds Buffalo Sewer Authority Discharge Limits (Groundwater Treatmr  
ND = Not Detected  
E = Exceeds Calibration Range  
D = Sample reanalyzed and quantified at higher dilution  
NCD = (sample) Not Collected, Dry well  
NSPD = Not sampled, pump down  
Well MW-11 was removed during excavation and is no longer sampled.  
Well MW-15A was filled with gravel and is no longer sampled.

Prepared by:DRS Date:1/10 Checked by:PWM Date:3/10				Table 4C (Wells 18-26A) Quarterly Groundwater Data Leica Microsystems, Eggert Road Cheektowaga, NY																							
ANALYTE	CAS	Method Detection Limit	RAOs GW	MW-22 cont.														MW-22A								MW-23	
				June-26-05	Oct-23-05	Jan-04-06	Mar-17-06	July-13-06	Dec-18-06	May-02-07	Nov-14-07	May-14-08	Jul-30-08	Apr-15-09	Oct-6-09	Jan-14-10	May-3-07	Nov-22-07	May-14-08	Jul-30-08	Apr-15-09	Oct-6-09	Jan-14-10	Apr-15-09	Oct-6-09		
Sample Collection Date: Dilution:				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Volatile Organic Compounds (ug/l)																											
acetone	67641	20	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	160	110	46	ND	ND	ND	ND		
benzene	71432	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
bromodichloromethane	75274	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
bromoform	75252	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
bromomethane	74839	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
2-butanone (MEK)	78933	10	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
carbon disulfide	75150	10	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	24	14		
carbon tetrachloride	56235	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
chlorobenzene	108907	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
chloroethane	75003	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
chloroform	67663	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
chloromethane	74873	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
dibromochloromethane	124481	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
1,1-dichloroethane	75343	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
1,2-dichloroethane	107062	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
1,1-dichloroethene	75354	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
cis-1,2-dichloroethene	156592	5	5	ND	13	ND	ND	ND	ND	ND	17	ND	ND	ND	ND	24	ND	ND	ND	ND	ND	5.1	ND	ND	ND		
trans-1,2-dichloroethene	156605	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
1,2-dichloropropane	78875	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
cis-1,3-dichloropropene	542756	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
trans-1,3-dichloropropene	542756	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
ethylbenzene	100414	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
2-hexanone	591786	10	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
methylene chloride	75092	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
4-methyl-2-pentanone (MIBK)	108101	10	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
styrene	100425	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
1,1,2,2-tetrachloroethane	79345	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
tetrachloroethene	127184	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
toluene	108883	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
1,1,1-trichloroethane	71556	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
1,1,2-trichloroethane	79005	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
trichloroethene	79016	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
vinyl chloride	75014	5	5	ND	36	ND	ND	ND	8.7	34	12	ND	ND	ND	96	ND	5	ND	ND	ND	ND	17	7.7	ND	ND		
o-xylene	95476	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
m+p xylene	108383/106423	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
TOTAL VOCs				0	49	0	0	0	8.7	34	29	0	0	0	120	0	5	0	160	110	46	22.1	7.7	24	14		
Percent TCE				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Percent DCE				0	27%	0	0	0	0	0	59%	0	0	0	20%	0	0	0	0	0	0	23%	0	0	0		
Percent VC				0	73%	0	0	0	100%	100%	41%	0	0	0	80%	0	100%	0	0	0	0	77%	100%	0	0		
Chemistry (mg/L)				MW-22 cont.														MW-22A									
Chloride				NA	NA	NA	NA	NA	NA	NA	NA	70.2	50.6	71.7	32.1	64.8	NA	NA	17.7	16.8	10.1	25.4	12.8	NA	NA		
Ferrous Iron				NA	NA	NA	NA	NA	NA	NA	NA	2.83	1.53	1.29	0.55	5.12	NA	NA	1.28	0.737	0.1	U	0.12	0.1	U		
Nitrate Nitrogen				NA	NA	NA	NA	NA	NA	NA	NA	<0.500	<0.500	0.5	U	0.5	U	0.5	U	<0.500	<0.500	0.5	U	0.5	U		
Sulfate				NA	NA	NA	NA	NA	NA	NA	NA	407	302	514	276	454	NA	NA	77.7	79.3	15.2	74	27.8	NA	NA		
Total Organic Carbon				NA	NA	NA	NA	NA	NA	NA	NA	3.88	3.81	4.5	5	4.1	NA	NA	7.96	6.18	3.8	3.3	4.1	NA	NA		
Ferrous Iron Dissolved				NA	NA	NA	NA	NA	NA	NA	NA	2.62	1.08	2.47	0.48	4.18	NA	NA	0.126	<0.100	0.13	0.1	U	0.1	U		
Manganese				NA	NA	NA	NA	NA	NA	NA	NA	0.368	0.125	328	208	231	NA	NA	0.3	0.139	67	55	70	NA	NA		
Manganese Dissolved				NA	NA	NA	NA	NA	NA	NA	NA	0.351	0.0929	273	156	241	NA	NA	0.163	0.131	64	52	66	NA	NA		
Dissolved Oxygen (DO)				NA	NA	NA	NA	NA	NA	NA	NA	NA	2.04	NA	26	25.2	NA	NA	NA	2.46	NA	30.1	17.7	NA	NA		
pH				NA	NA	NA	NA	NA	NA	NA	NA	NA	6.48	6.94	6.91	6.89	NA	NA	NA	7.02	7.02	7.06	7.02	NA	NA		
Oxygen Reduction Potential				NA	NA	NA	NA	NA	NA	NA	NA	NA	-112	-279	-273.8	-45.8	NA	NA	NA	-283	-337	-294.8	-249.7	NA	NA		

NOTES:  
Base = Baseline sample collected 12/14/99  
RAOs GW = Remedial Action Objectives for Groundwater  
CAS = Chemical Abstract Service registry number  
Bold = Exceeds RAOs for groundwater (Not applicable to Treatment System Effluent)  
Bold/Shaded = Exceeds Buffalo Sewer Authority Discharge Limits (Groundwater Treatr  
ND = Not Detected  
E = Exceeds Calibration Range  
D = Sample reanalyzed and quantified at higher dilution  
NCD = (sample) Not Collected, Dry well  
NSPD = Not sampled, pump down  
Well MW-11 was removed during excavation and is no longer sampled.  
Well MW-15A was filled with gravel and is no longer sampled.

Prepared by:DRS Date:1/10 Checked by:PWM Date:3/10				Table 4C (Wells 18-26A) Quarterly Groundwater Data Leica Microsystems, Eggert Road Cheektowaga, NY																											
ANALYTE	CAS	Method Detection Limit	RAOs GW	MW-24								MW-24A								MW-25		MW-25A			MW-26		MW-26A				
				Mar-31-08 10.00	Mar-31-08 50.00	May-14-08 25.00	Jul-30-08 25.00	Apr-15-09 1.00	Oct-6-09 1.00	Jan-14-10 1.00	Mar-31-08 2.00	May-14-08 2.00	May-14-08 20.00	Jul-30-08 2.00	Jul-30-08 20.00	Apr-15-09 1.00	Oct-6-09 1.00	Jan-14-10 1.00	Sept-9-09 1.00	Jan-27-09 1.00	Sept-9-09 1.00	Sept-9-09 1.00 Dup	Jan-27-10 1.00	Sept-9-09 1.00	Jan-27-10 1.00	Sept-9-09 1.00	Sept-9-09 10.00	Jan-27-10 10.00			
Sample Collection Date: Dilution:																															
Volatile Organic Compounds (ug/l)																															
acetone	67641	20	-	ND	ND	ND	ND	ND	ND	650	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
benzene	71432	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
bromodichloromethane	75274	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
bromoform	75252	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
bromomethane	74839	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
2-butanone (MEK)	78933	10	-	ND	ND	ND	ND	ND	1100	3700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
carbon disulfide	75150	10	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
carbon tetrachloride	56235	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
chlorobenzene	108907	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
chloroethane	75003	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	280	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
chloroform	67663	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	14	14	6.1	ND	ND	ND	ND	ND			
chloromethane	74873	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
dibromochloromethane	124481	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
1,1-dichloroethane	75343	5	-	300	330	D 240	190	350	370	470	26	61	ND	72	73	D 84	130	67	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
1,2-dichloroethane	107062	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
1,1-dichloroethene	75354	5	-	ND	ND	ND	ND	ND	ND	ND	ND	13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
cis-1,2-dichloroethene	156592	5	5	4600	E 4800	D 3600	2900	3200	2600	200	380	1800	E 1700	D 750	E 760	D 540	ND	140	ND	ND	ND	ND	6.4	46	5.2	750	E 740	D 490			
trans-1,2-dichloroethene	156605	5	5	72	ND	ND	ND	ND	ND	ND	ND	19	ND	12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	16	ND	ND	ND			
1,2-dichloropropane	78875	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
cis-1,3-dichloropropene	542756	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
trans-1,3-dichloropropene	542756	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
ethylbenzene	100414	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	26	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
2-hexanone	591786	10	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
methylene chloride	75092	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
4-methyl-2-pentanone (MIBK)	108101	10	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
styrene	100425	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
1,1,2,2-tetrachloroethane	79345	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
tetrachloroethene	127184	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
toluene	108883	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8.7	8.7	ND	ND	ND	ND	ND			
1,1,1-trichloroethane	71556	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
1,1,2-trichloroethane	79005	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
trichloroethene	79016	5	5	620	640	D 490	380	370	ND	ND	23	110	110	D 48	49	D 26	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
vinyl chloride	75014	5	5	2200	E 2300	D 2000	1300	1800	2600	1500	94	590	E 560	D 390	400	D 320	ND	190	ND	ND	9.1	9.9	23	28	ND	560	E 560	D 270			
o-xylene	95476	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
m+p xylene	108383/106423	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	28	ND	ND	ND	ND	8.3	8.1	ND	ND	ND	ND	ND	ND			
TOTAL VOCs				7792	8070	6330	4770	5720	6670	6520	523	2593	2370	1272	1282	970	476	397	0	0	40.1	40.7	35.5	74	5.2	1326	1300	760			
Percent TCE				8%	8%	8%	8%	6%	0	0	4%	4%	5%	4%	4%	3%	0	0	0	0	0	0	0	0	0	0	0	0			
Percent DCE				59%	59%	57%	61%	56%	39%	3%	73%	69%	72%	59%	59%	56%	0	35%	0	0	0	0	18%	62%	100%	57%	57%	64%			
Percent VC				28%	29%	32%	27%	31%	39%	23%	18%	23%	24%	31%	31%	33%	0	48%	0	0	23%	24%	65%	38%	0	42%	43%	36%			
Chemistry (mg/L)				MW-24								MW-24A								MW-25		MW-25A			MW-26		MW-26A				
Chloride				90.1	NA	NA	380	194	191	200	95.8	NA	NA	NA	218	231	186	183	49.4	NA	50.3	59.9	NA	550	NA	46.1	NA	NA			
Ferrous Iron				0.164	NA	NA	1.4	0.1	0.38	1	0.155	NA	NA	NA	<0.100	2.63	2.67	4.97	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
Nitrate Nitrogen				<0.500	NA	NA	<0.500	0.5	U 0.5	U 0.5	<0.500	NA	NA	NA	<0.500	0.5	U 0.5	U 0.5	U 0.88		0.91	0.91	0.5	U	0.5	U		NA			
Sulfate				46.7	NA	NA	69.1	37.3	12.8	5.7	94.5	NA	NA	NA	78.5	26.2	51.7	28.5	91.9		43	43.8	99.9		73.3						
Total Organic Carbon				6.4	NA	NA	5.																								

NOTES:  
Base = Baseline sample collected 12/14/99  
RAOs GW = Remedial Action Objectives for Groundwater  
CAS = Chemical Abstract Service registry number  
Bold = Exceeds RAOs for groundwater (Not applicable to Treatment System Effluent)  
Bold/Shaded = Exceeds Buffalo Sewer Authority Discharge Limits (Groundwater Treatr  
ND = Not Detected  
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D = Sample reanalyzed and quantified at higher dilution  
NCD = (sample) Not Collected, Dry well  
NSPD = Not sampled, pump down  
Well MW-11 was removed during excavation and is no longer sampled.  
Well MW-15A was filled with gravel and is no longer sampled.



# ENERGYSOLUTIONS

August 22, 2006  
Ref. No. 31128-034

Mr. Jaspal Walia  
Project Manager  
New York State Department of Environmental Conservation, Region 9  
270 Michigan Avenue  
Buffalo, New York 14203-2999

Subject: August 8, 2006 Meeting Summary  
Leica, Inc. Site; Erie County, Cheektowaga, NY  
Inactive Hazardous Waste Disposal Site No. 915156

Dear Mr. Walia:

As we discussed during the subject meeting at the former Leica facility, we are providing the following summary of the results of the meeting. Several changes to the current groundwater monitoring program were discussed during the meeting and are summarized below.

1. Installation of additional wells

- As requested, *EnergySolutions* will install a new deep well at location MW-22. Scheduling for this activity will be dependent on the cooperation of the property owner and availability of access and could take some time to arrange and complete. We may have to remove some trees in the area.

2. Existing wells to be added to the monitoring schedule

- As requested, *EnergySolutions* will collect groundwater samples periodically from monitoring wells MW-3, MW-5, MW-5A and the new deep well MW-22A

3. *EnergySolutions* proposes the following revisions to the monitoring program schedule

Well Number	Current Sampling Frequency	Proposed Sampling Frequency	Current Elevation Monitoring Frequency	Proposed Elevation Monitoring Frequency	Comments
MW-1	None	None	Quarterly	Semi-Annual	
MW-1A	Quarterly	Annual	Quarterly	Semi-Annual	
MW-2	None	None	Quarterly	Semi-Annual	
MW-2A	None	None	Quarterly	Semi-Annual	
MW-3	None	Annual	Quarterly	Semi-Annual	
MW-4	Quarterly	None	Quarterly	Semi-Annual	

**ENERGY SOLUTIONS**

Well Number	Current Sampling Frequency	Proposed Sampling Frequency	Current Elevation Monitoring Frequency	Proposed Elevation Monitoring Frequency	Comments
MW-5	None	Annual	Quarterly	Semi-Annual	
MW-5A	None	Annual	Quarterly	Semi-Annual	
MW-6	Quarterly	Semi-Annual	Quarterly	Semi-Annual	
MW-6A	Quarterly	Semi-Annual	Quarterly	Semi-Annual	
MW-7	Quarterly	None	Quarterly	Semi-Annual	
MW-8	None	None	None	None	Not Located
MW-9	None	None	Quarterly	Semi-Annual	
MW-9A	None	None	Quarterly	Semi-Annual	
MW-10	Quarterly	Semi-Annual	Quarterly	Semi-Annual	
MW-11	None	None	None	None	Removed during excavation
MW-11A	Quarterly	Semi-Annual	Quarterly	Semi-Annual	Pumping Well
MW-12	None	None	Quarterly	Semi-Annual	
MW-13	None	None	Quarterly	Semi-Annual	
MW-13A	None	None	Quarterly	Semi-Annual	
MW-14	Quarterly	Semi-Annual	Quarterly	Semi-Annual	
MW-14A	Quarterly	Semi-Annual	Quarterly	Semi-Annual	
MW-15	Quarterly	None	Quarterly	None	Well filled with stones from parking area
MW-16R	Quarterly	Semi-Annual	Quarterly	Semi-Annual	
MW-16A	Quarterly	Semi-Annual	Quarterly	Semi-Annual	Pumping Well
MW-17A	None	None	Quarterly	Semi-Annual	
MW-18	Quarterly	Annual	Quarterly	Semi-Annual	
MW-19	None	None	Quarterly	Semi-Annual	
MW-20	None	None	Quarterly	Semi-Annual	
MW-22	Quarterly	Semi-Annual	Quarterly	Semi-Annual	
MW-22A	None	Semi-Annual	Quarterly	Semi-Annual	
MW-23	None	None	None	None	Not accessible

## ENERGYSOLUTIONS

Proposed Semi-annual sampling will be performed in late spring (April) and also in the fall (October). Proposed Annual sampling will be performed in April. Based on this revised sampling schedule, periodic Status Reports required by the Consent Order would be submitted semi-annually following the completion of the April and October sampling. An annual report would be submitted in January or February of the following year.

EnergySolutions also proposes performance of sub-slab soil gas sampling and indoor air sampling at the facility. Before completing this air quality sampling, we will prepare and submit a plan to the DEC for approval. We anticipate submittal of this plan by the middle of September. The plan will include information regarding sampling locations and collection methods, Quality Assurance requirements and specified laboratory analyses. Sample collection methods will be in compliance with NYSDOH sub-slab and indoor air sampling protocols. Once the plan has been submitted and approved, we will complete the sampling.

Sub-slab soil gas data will be compared to available NYSDOH standards. Based on our understanding that chlorinated solvents are not used as a part of the current Samson Distributing facility operations, the air quality data from inside the building will be compared to NYSDOH Standards.

In conjunction with the completion of the sub-slab soil gas and indoor air sampling, EnergySolutions will also prepare and submit a plan to remediate soils beneath the building floors as discussed during the meeting. The indoor air quality would be monitored regularly during the remediation process to ensure that it remains acceptable. Remediation plans will include information regarding air monitoring requirements.

While we are in the process of preparing these plans, we will continue the groundwater monitoring program and the operation and maintenance of the groundwater recovery system. The next periodic groundwater sampling and monitoring effort would be completed in October, 2006. Based on the location of MW-22A on adjacent property, and the time needed to obtain authorization and gain access to install the well, we do not expect this well to be in place for the October sampling event.

If you have any questions regarding this meeting summary information, please feel free to call me at 801-303-1092 or 860-355-8194 (dial 1 for name list and enter robertmcpeak).

Sincerely,  
EnergySolutions, LLC



Robert E. McPeak, Jr., P.E., LEP  
Department Manager, Environmental Services

cc:	D. Simkowski	G. Hollerbach
	A. Szklany	C. O'Conner
	C. Grabinski	E. Doubleday
	R. Downey	

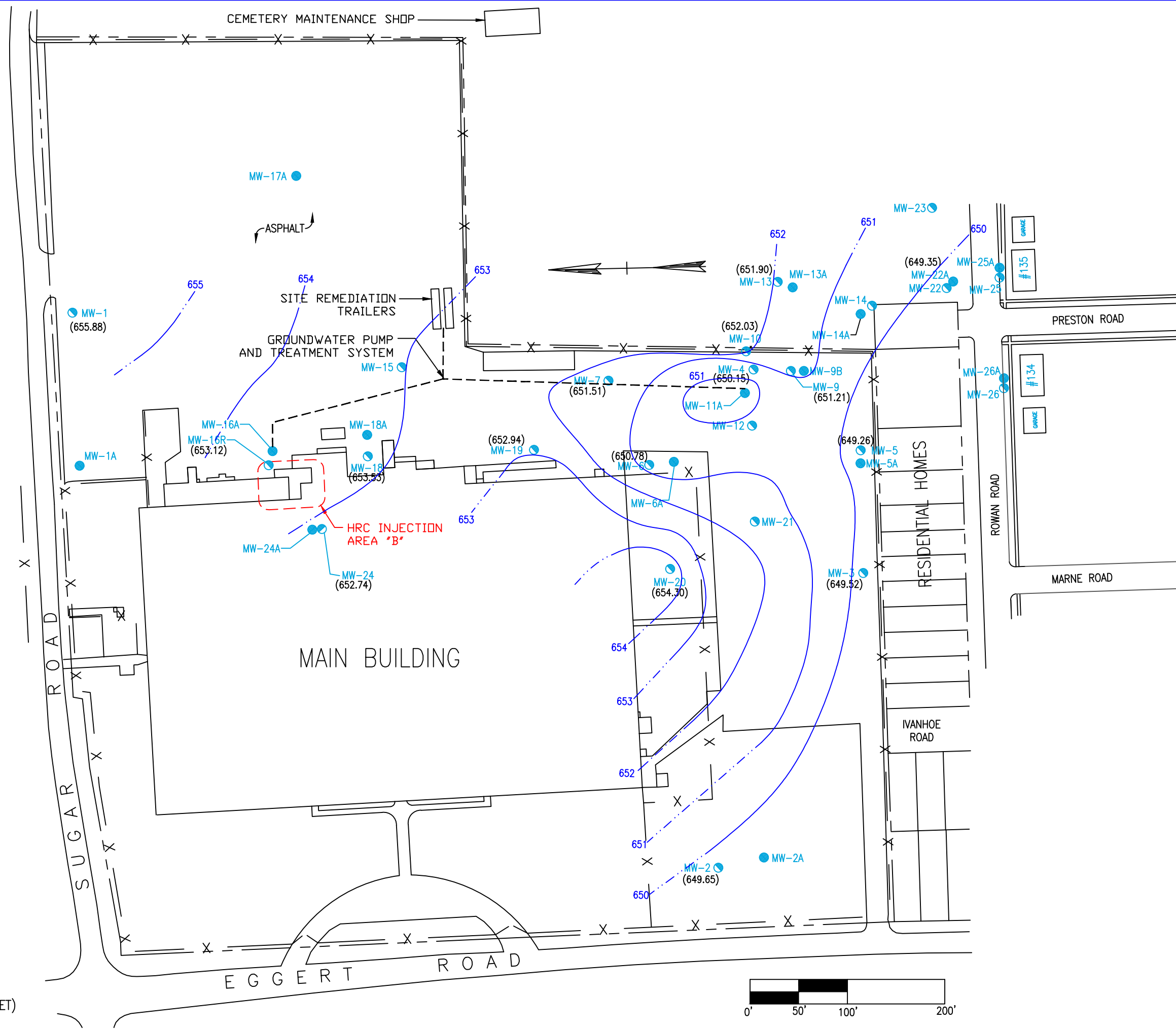
**APPENDIX B**


**Groundwater Monitoring Figures**

Figure 1	Groundwater Contours, April 2009, Overburden Wells
Figure 2	Groundwater Contours, October 2009, Bedrock Wells
Figure 3	Vinyl Chloride Contaminant Concentration Isopleths, April 2009, Overburden Wells
Figure 4	Vinyl Chloride Contaminant Concentration Isopleths, April 2009, Bedrock Wells
Figure 5	CIS 1,2 DCE Contaminant Concentration Isopleths, April 2009, Overburden Wells
Figure 6	CIS 1,2 DCE Contaminant Concentration Isopleths, April 2009, Bedrock Wells
Figure 7	TCE Contaminant Concentration Isopleths, April 2009, Overburden Wells
Figure 8	TCE Contaminant Concentration Isopleths, April 2009, Bedrock Wells
Figure 9	Groundwater Contours, October 2009, Overburden Wells
Figure 10	Groundwater Contours, October 2009, Bedrock Wells
Figure 11	Vinyl Chloride Contaminant Concentration Isopleths, October 2009, Overburden Wells
Figure 12	Vinyl Chloride Contaminant Concentration Isopleths, October 2009, Bedrock Wells
Figure 13	CIS 1,2 DCE Contaminant Concentration Isopleths, October 2009, Overburden Wells
Figure 14	CIS 1,2 DCE Contaminant Concentration Isopleths, October 2009, Bedrock Wells
Figure 15	TCE Contaminant Concentration Isopleths, October 2009, Overburden Wells
Figure 16	TCE Contaminant Concentration Isopleths, October 2009, Bedrock Wells
Figure 17	Groundwater Contours, January 2010, Overburden Wells
Figure 18	Groundwater Contours, January 2010, Bedrock Wells
Figure 19	Vinyl Chloride Contaminant Concentration Isopleths, January 2010, Overburden Wells
Figure 20	Vinyl Chloride Contaminant Concentration Isopleths, January 2010, Bedrock Wells
Figure 21	CIS 1,2 DCE Contaminant Concentration Isopleths, January 2010, Overburden Wells
Figure 22	CIS 1,2 DCE Contaminant Concentration Isopleths, January 2010, Bedrock Wells
Figure 23	TCE Contaminant Concentration Isopleths, January 2010, Overburden Wells
Figure 24	TCE Contaminant Concentration Isopleths, January 2010, Bedrock Wells

LEGEND

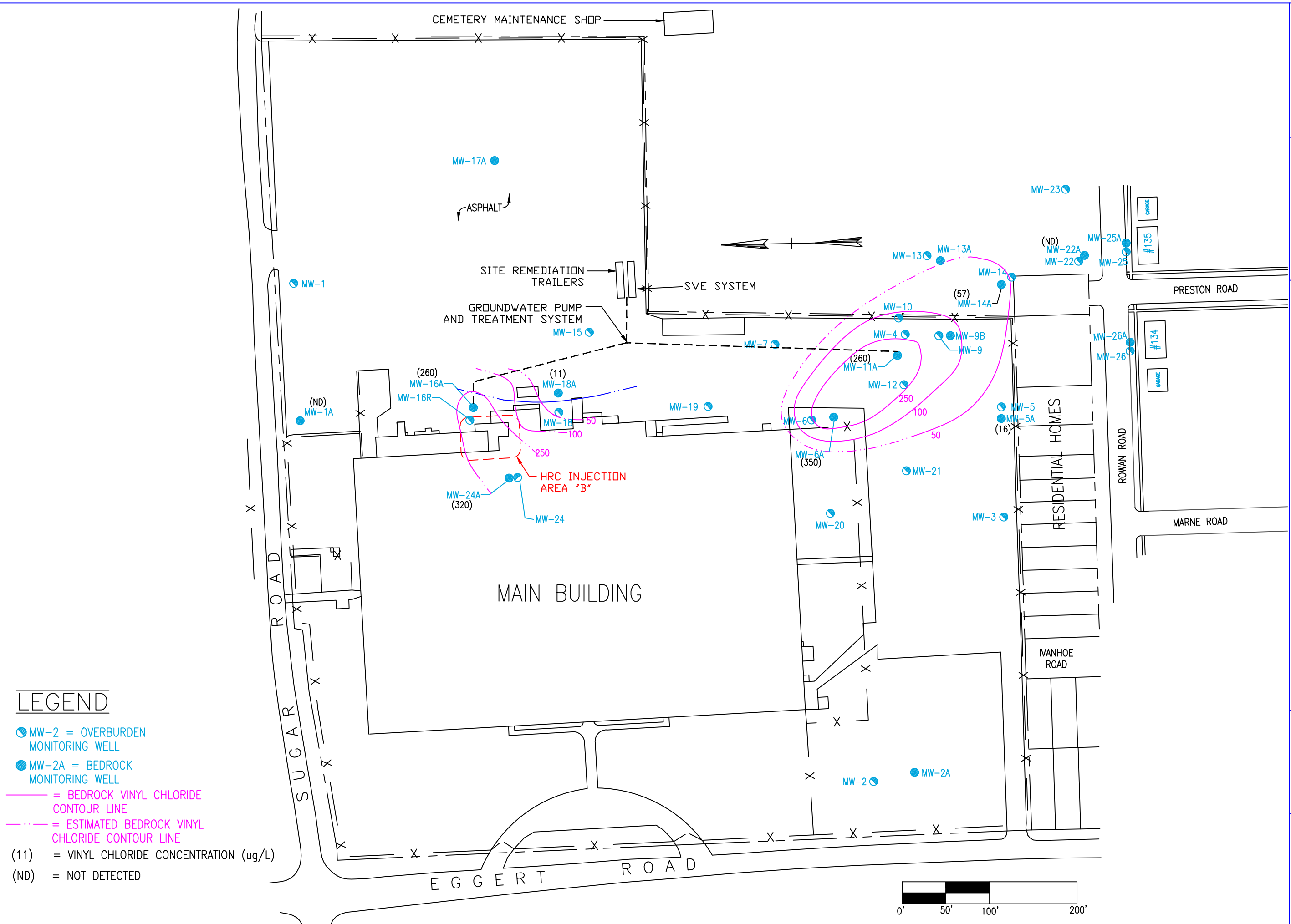
- MW-2 = OVERBURDEN MONITORING WELL
- MW-2A = BEDROCK MONITORING WELL
- = OVERBURDEN GROUNDWATER CONTOUR LINE
- - - = ESTIMATED OVERBURDEN GROUNDWATER CONTOUR LINE
- (649.52) = GROUNDWATER ELEVATION (FEET)



<i>DOCUMENT CONTROL NO.</i>	<i>PROJECT</i>	LEICA MICROSYSTEMS INC. 203 EGGERT RD CHEEKTOWAGA, NY	 100 MILL PLAIN RD DANBURY, CT. 06811 (203)797-8301	PROJECT # 137015	
				FILENAME:	
				SCALE: 1" : 100'	DATE: 3/23/10
				BY: MT	CK: PM
				FIGURE # 1	
<i>REVISION NO.</i>	<i>DRAWING</i>	GROUNDWATER CONTOURS, APRIL 2009 OVERBURDEN WELLS			





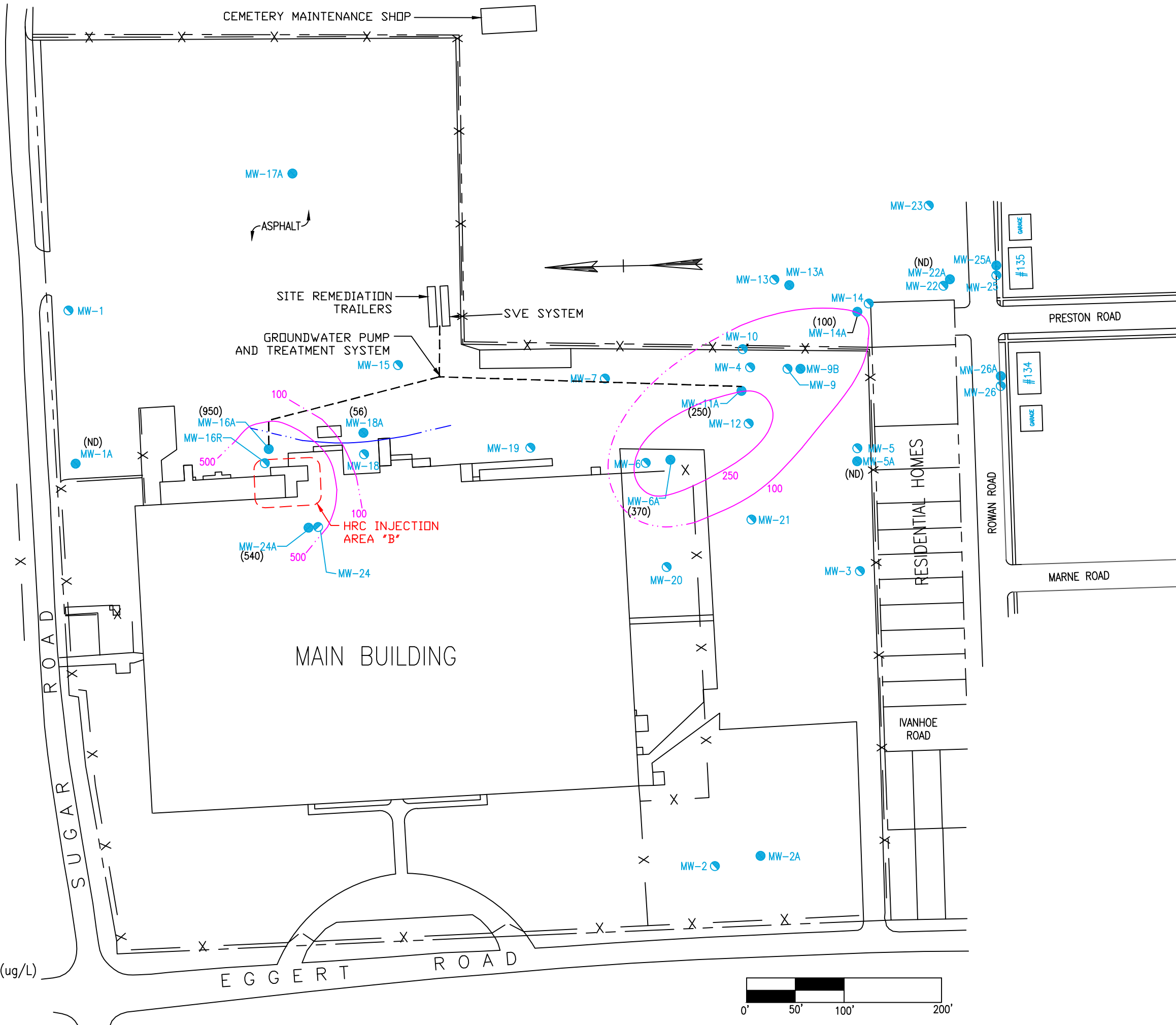


DOCUMENT CONTROL NO.	PROJECT	LEICA MICROSYSTEMS INC. 203 EGGERT RD CHEEKTOWAGA, NY		PROJECT #	137015
				FILENAME:	
REVISION NO.	DRAWING	VINYL CHLORIDE CONTAMINANT CONCENTRATION ISOPLETHS, APRIL 2009, BEDROCK WELLS	100 MILL PLAIN RD DANBURY, CT. 06811 (203)797-8301	SCALE:	1" = 100'
				DATE:	2/23/10
				BY:	MT
				CK:	PM
				FIGURE #	4



LEGEND

- MW-2 = OVERBURDEN MONITORING WELL
- MW-2A = BEDROCK MONITORING WELL
- = BEDROCK CIS 1,2 DCE CONTOUR LINE
- - - = ESTIMATED BEDROCK CIS 1,2 DCE CONTOUR LINE
- (540) = CIS 1,2 DCE CONCENTRATION (ug/L)
- (ND) = NOT DETECTED



100 MILL PLAIN RD  
DANBURY, CT. 06811  
(203)797-8301

LEICA MICROSYSTEMS INC.  
203 EGGERT RD  
CHEEKTOWAGA, NY

CIS 1,2 DCE CONTAMINANT  
CONCENTRATION ISOPLETHS, APRIL  
2009, BEDROCK WELLS

PROJECT # 137015

FILENAME:

SCALE: 1" = 100'

DATE: 2/25/10

BY: MT

CK: PM

FIGURE #

6

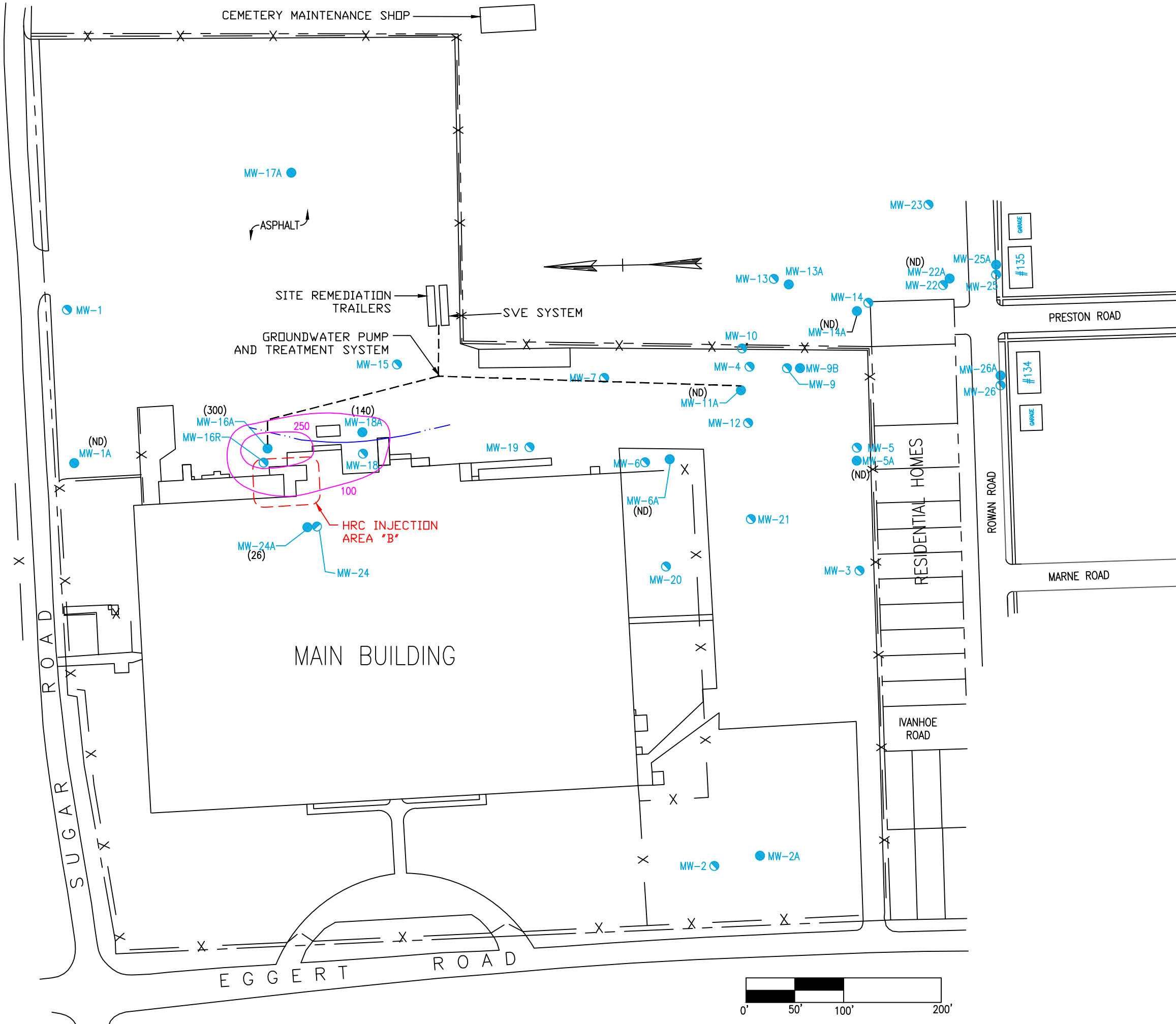
DOCUMENT  
CONTROL NO.


REVISION NO.



LEGEND

- MW-2 = OVERBURDEN MONITORING WELL
- MW-2A = BEDROCK MONITORING WELL
- = BEDROCK TCE CONTOUR LINE
- - - = ESTIMATED BEDROCK TCE CONTOUR LINE
- (26) = TCE CONCENTRATION (ug/L)
- (ND) = NOT DETECTED



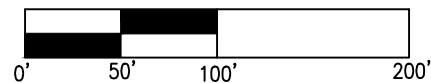
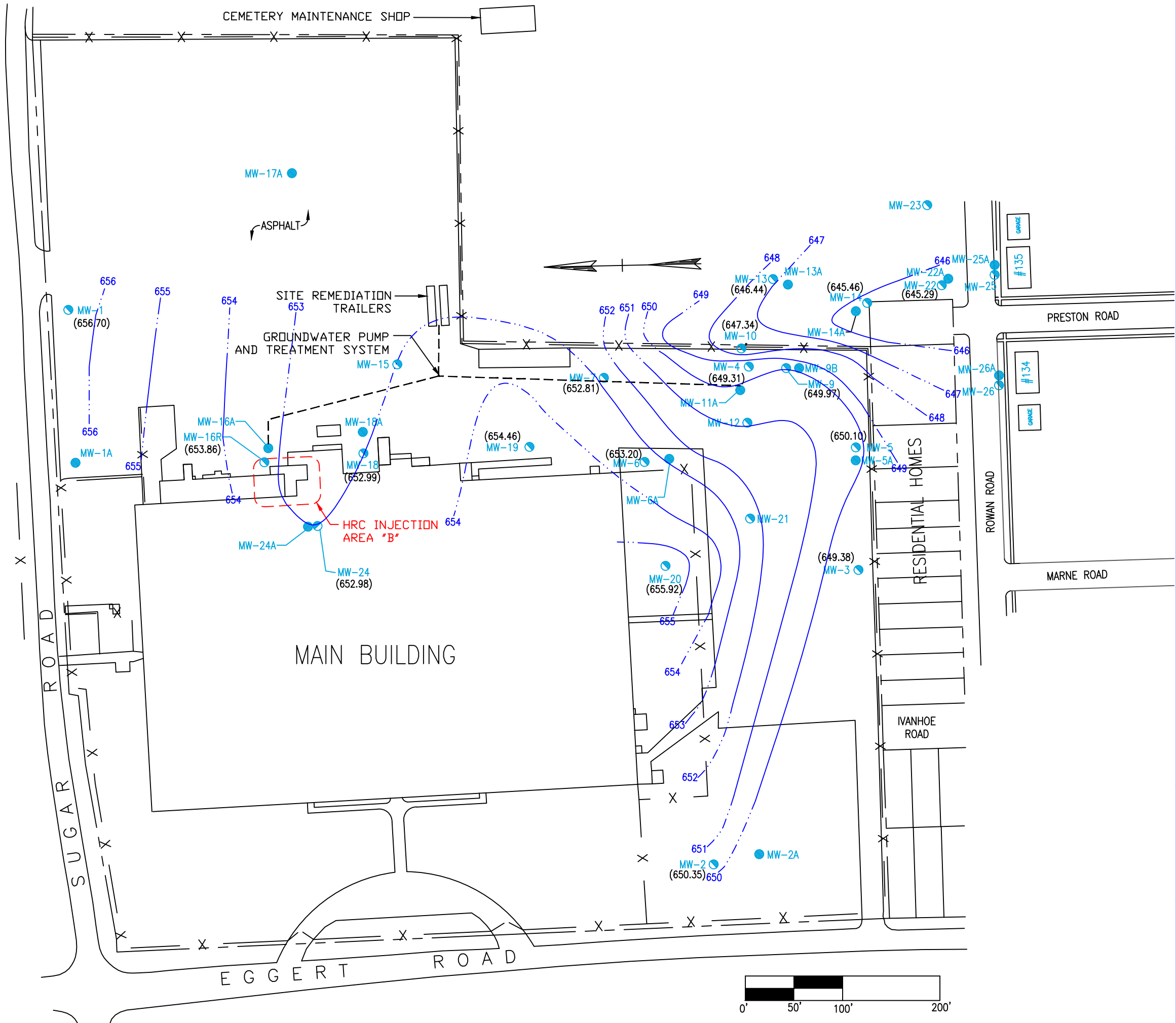
DOCUMENT CONTROL NO.	PROJECT	LEICA MICROSYSTEMS INC. 203 EGGERT RD CHEEKTOWAGA, NY		PROJECT #	137015
				FILENAME:	
REVISION NO.	DRAWING	TCE CONTAMINANT CONCENTRATION ISOPLETHS, APRIL 2009 BEDROCK WELLS	100 MILL PLAIN RD DANBURY, CT. 06811 (203)797-8301	SCALE: 1" : 100'	DATE: 3/19/10
				BY: MT	CK: PM
				FIGURE # 8	


LEGEND

- MW-2 = OVERBURDEN MONITORING WELL
- MW-2A = BEDROCK MONITORING WELL

- = OVERBURDEN GROUNDWATER CONTOUR LINE
- - - = ESTIMATED OVERBURDEN GROUNDWATER CONTOUR LINE

(652.98) = GROUNDWATER ELEVATION (FEET)  
(NM) = NOT MEASURED



DOCUMENT CONTROL NO.	PROJECT		LEICA MICROSYSTEMS INC. 203 EGGERT RD CHEEKTOWAGA, NY		 100 MILL PLAIN RD DANBURY, CT. 06811 (203)797-8301	PROJECT # 137015
	DRAWING		GROUNDWATER CONTOURS, OCTOBER 2009, OVERBURDEN WELLS			FILENAME:
REVISION NO.					SCALE: 1" = 100'	DATE: 3/31/10
					BY: MT	CK: PM
					FIGURE # 9	



LEGEND

● MW-2 = OVERBURDEN MONITORING WELL

● MW-2A = BEDROCK MONITORING WELL

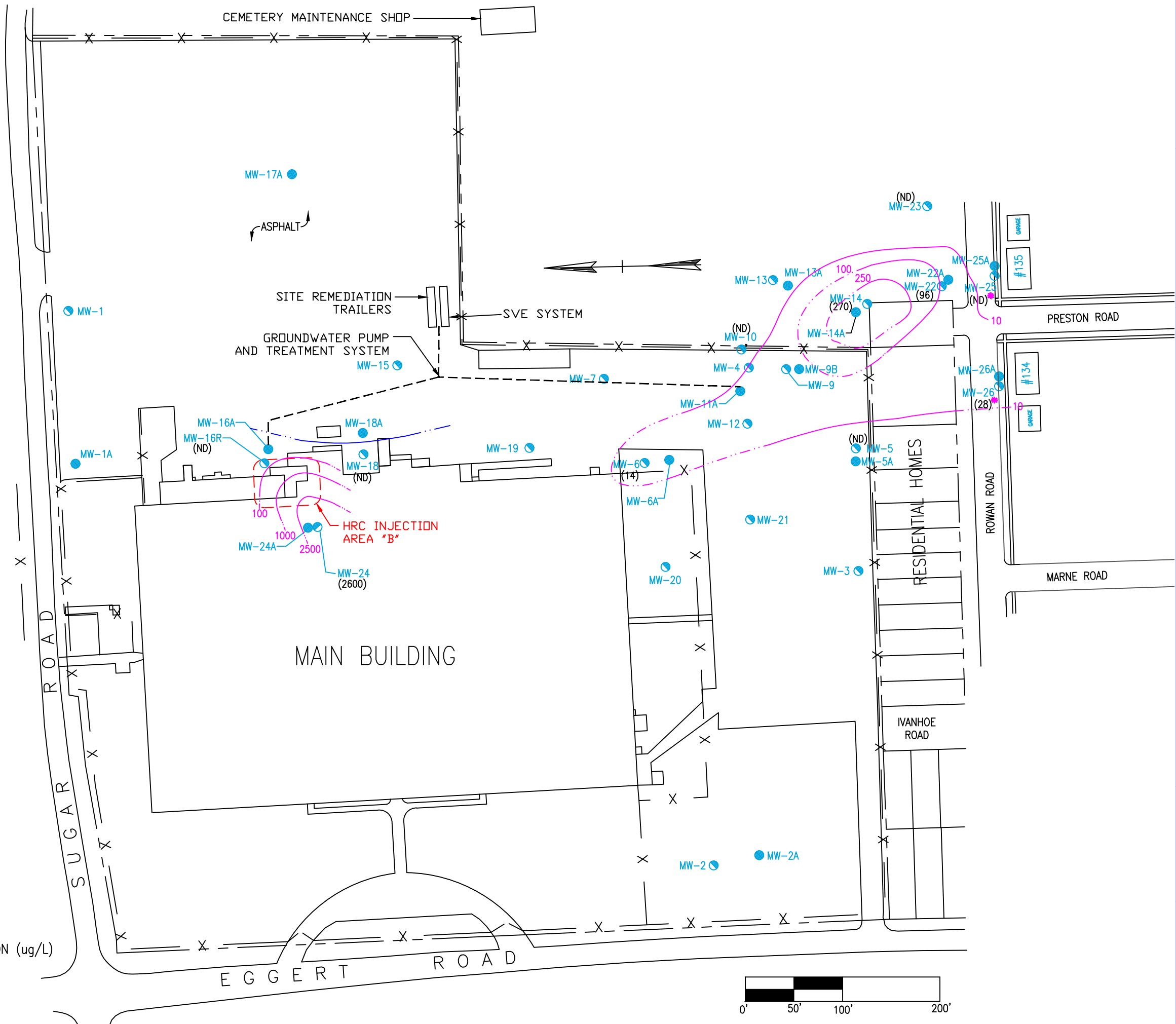
— = OVERBURDEN VINYL CHLORIDE CONTOUR LINE


- - - = ESTIMATED OVERBURDEN VINYL CHLORIDE CONTOUR LINE

(14) = VINYL CHLORIDE CONCENTRATION (ug/L)

\* = SAMPLED ON SEPT 9, 2009

(ND) = NOT DETECTED

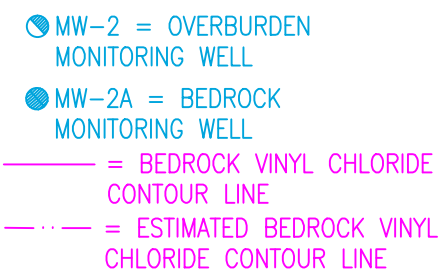


DOCUMENT CONTROL NO.	PROJECT	LEICA MICROSYSTEMS INC. 203 EGGERT RD CHEEKTOWAGA, NY	
		VINYL CHLORIDE CONTAMINANT CONCENTRATION ISOPLETHS, OCTOBER 2009, OVERBURDEN WELLS	
REVISION NO.	DRAWING	100 MILL PLAIN RD DANBURY, CT. 06811 (203)797-8301	
			



100 MILL PLAIN RD  
DANBURY, CT. 06811  
(203)797-8301

PROJECT # 137015	
FILENAME:	
SCALE: 1" = 100'	DATE: 2/23/10
BY: MT	CK: PM
FIGURE # 11	



A horizontal bar chart with a total length of 200'. The bar is divided into three segments: a white segment from 0' to 50', a black segment from 50' to 100', and a white segment from 100' to 200'.



**FILENAME:**

BY: $MT$	CK: $RM$
----------	----------

FIGURE #  
12

VINYL CHLORIDE CONTAMINANT  
CONCENTRATION ISOPLETHS,  
OCTOBER 2009, BEDROCK WELLS

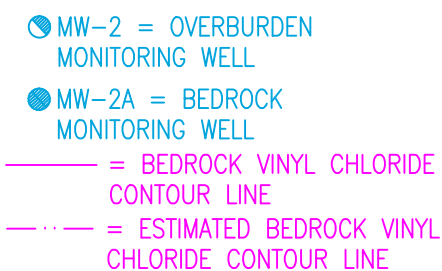
PROJECT

# DRAWING

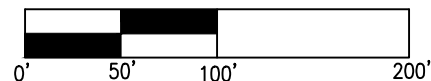
*DOCUMENT  
CONTROL NO.*


REVISION NO.

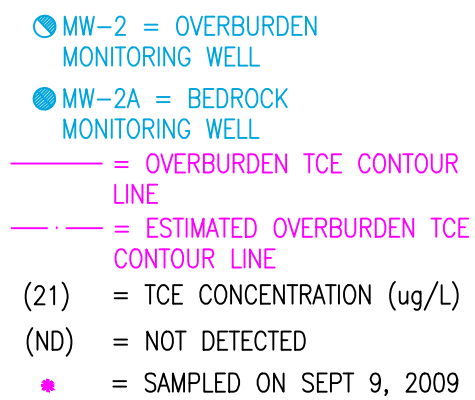





(33) = VINYL CHLORIDE CONCENTRATION (ug/L)  
 \* = SAMPLED ON SEPT 9, 2009  
 (ND) = NOT DETECTED



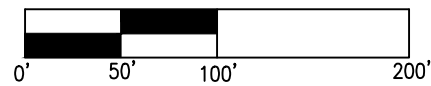
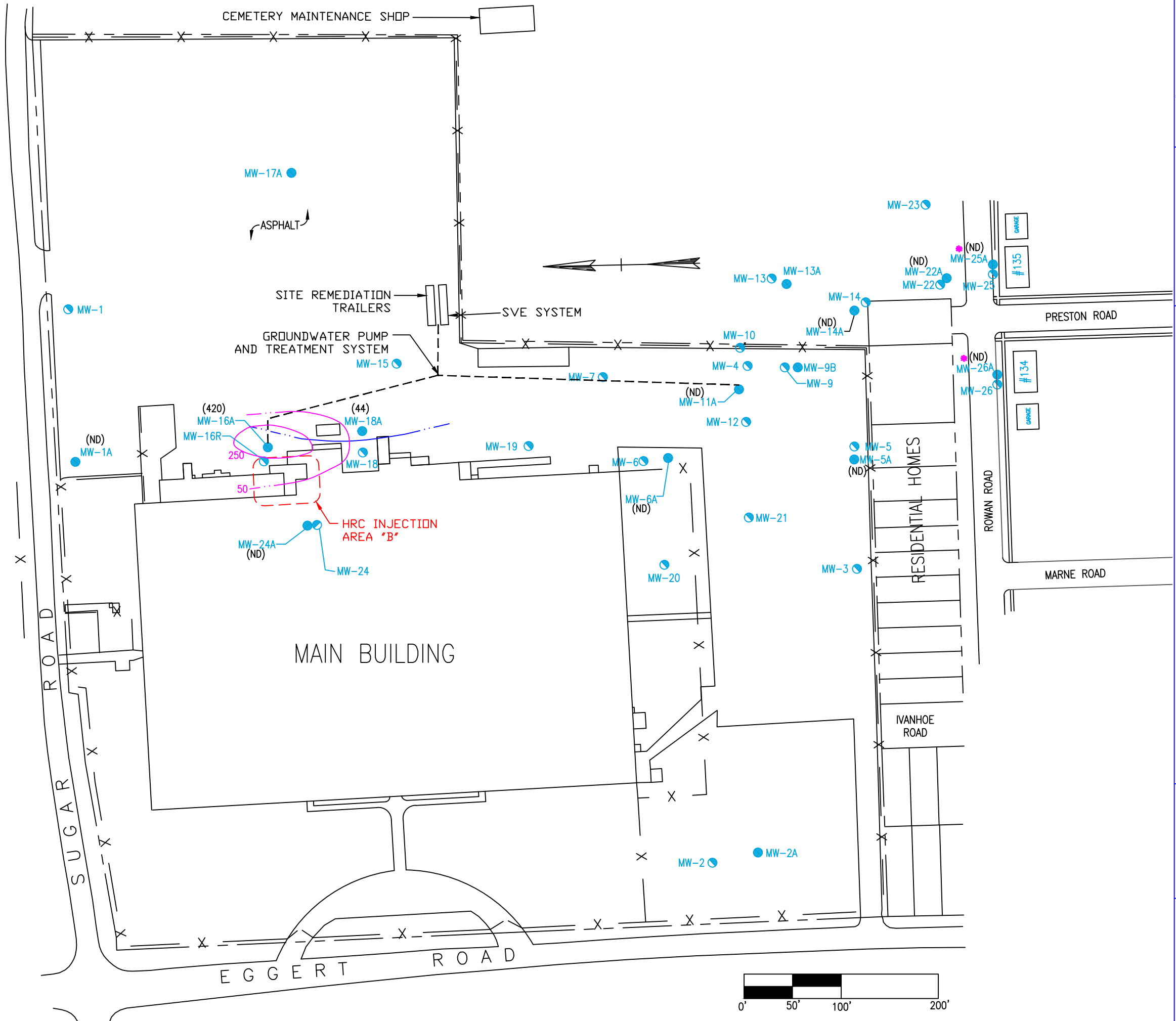
<i>DOCUMENT CONTROL NO.</i>	<p>LEICA MICROSYSTEMS INC. 203 EGGERT RD CHEEKTOWAGA, NY</p>		PROJECT #	137015
			FILENAME:	
<i>REVISION NO.</i>	<p>CIS 1,2 DCE CONTAMINANT CONCENTRATION ISOPLETHS, OCTOBER 2009, BEDROCK WELLS</p>	<p>100 MILL PLAIN RD DANBURY, CT. 06811 (203)797-8301</p>	SCALE:	DATE:
			BY: MT	CK: PM
			FIGURE #	14



<i>DOCUMENT CONTROL NO.</i>	<i>PROJECT</i>	LEICA MICROSYSTEMS INC. 203 EGGERT RD CHEEKTOWAGA, NY		PROJECT #	137015
				FILENAME:	
<i>REVISION NO.</i>	<i>DRAWING</i>	TCE CONTAMINANT CONCENTRATION ISOPLETHS, OCTOBER 2009 OVERBURDEN WELLS	100 MILL PLAIN RD DANBURY, CT. 06811 (203)797-8301	SCALE:	DATE:
				BY: <i>MT</i>	CK: <i>PM</i>
				FIGURE #	15

LEGEND

- MW-2 = OVERBURDEN MONITORING WELL
- MW-2A = BEDROCK MONITORING WELL
- = BEDROCK TCE CONTOUR LINE
- - - = ESTIMATED BEDROCK TCE CONTOUR LINE
- (44) = TCE CONCENTRATION (ug/L)
- (ND) = NOT DETECTED
- \* = SAMPLED ON SEPT 9, 2009



LEICA MICROSYSTEMS INC.  
203 EGGERT RD  
CHEEKTOWAGA, NY

TCE CONTAMINANT CONCENTRATION  
ISOPLETHS, OCTOBER 2009  
BEDROCK WELLS

PROJECT #	137015
FILENAME:	
SCALE:	1" = 100'
DATE:	2/25/10
BY:	MT
CK:	PM
FIGURE #	16

100 MILL PLAIN RD  
DANBURY, CT. 06811  
(203)797-8301

PROJECT

DRAWING

DOCUMENT  
CONTROL NO.

REVISION NO.

LEGEND

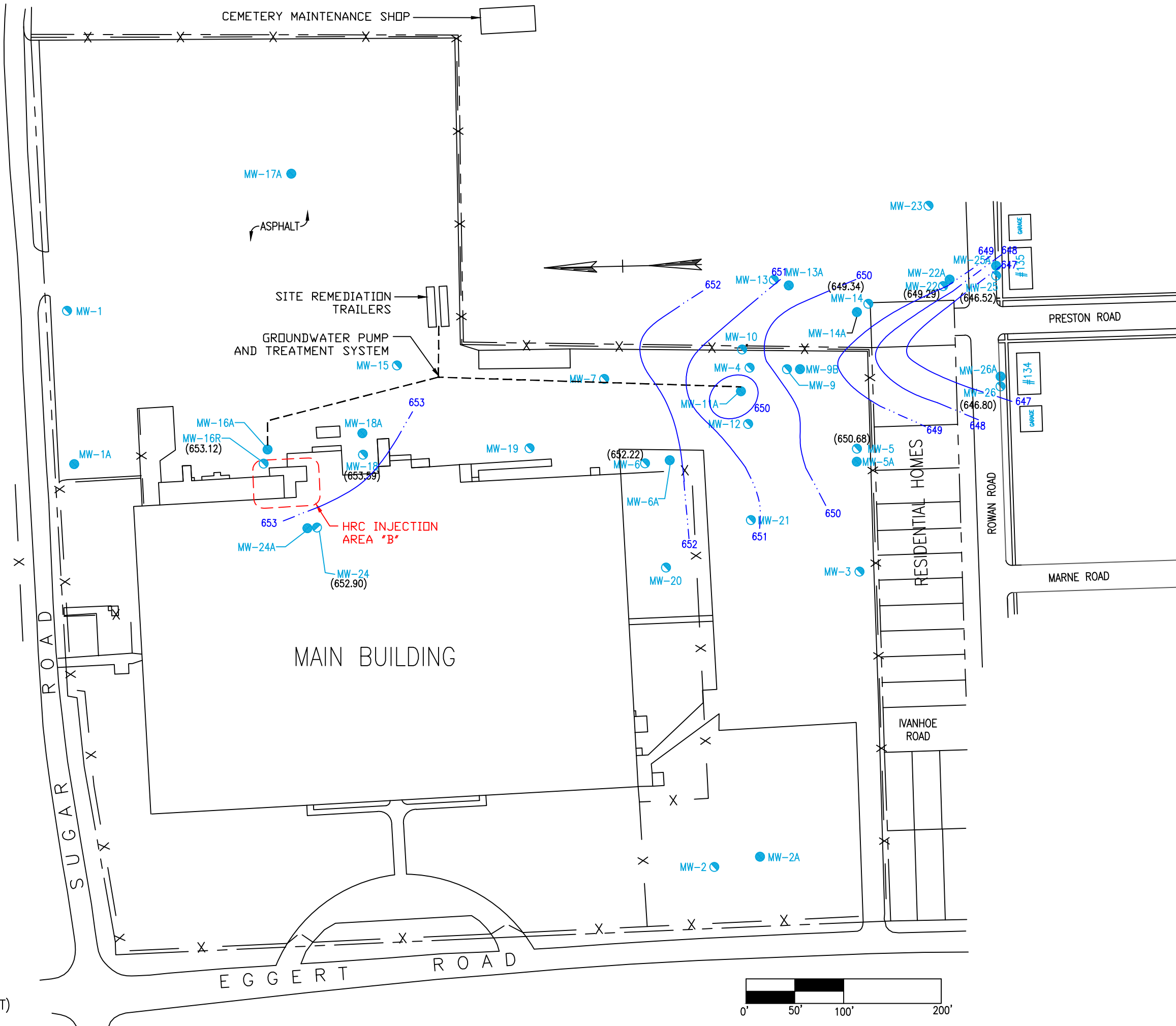
● MW-2 = OVERBURDEN MONITORING WELL


● MW-2A = BEDROCK MONITORING WELL

— = OVERBURDEN GROUNDWATER CONTOUR LINE

- - - = ESTIMATED OVERBURDEN GROUNDWATER CONTOUR LINE

(652.90) = GROUNDWATER ELEVATION (FEET)



DOCUMENT CONTROL NO.	PROJECT	LEICA MICROSYSTEMS INC. 203 EGGERT RD CHEEKTOWAGA, NY	 100 MILL PLAIN RD DANBURY, CT. 06811 (203)797-8301	PROJECT # 137015	
				FILENAME:	
REVISION NO.	DRAWING	GROUNDWATER CONTOURS, JANUARY 2010 OVERBURDEN WELLS		SCALE: 1" = 100'	DATE: 3/23/10
				BY: MT	CK: PM

LEGEND

MW-2 = OVERBURDEN  
MONITORING WELL

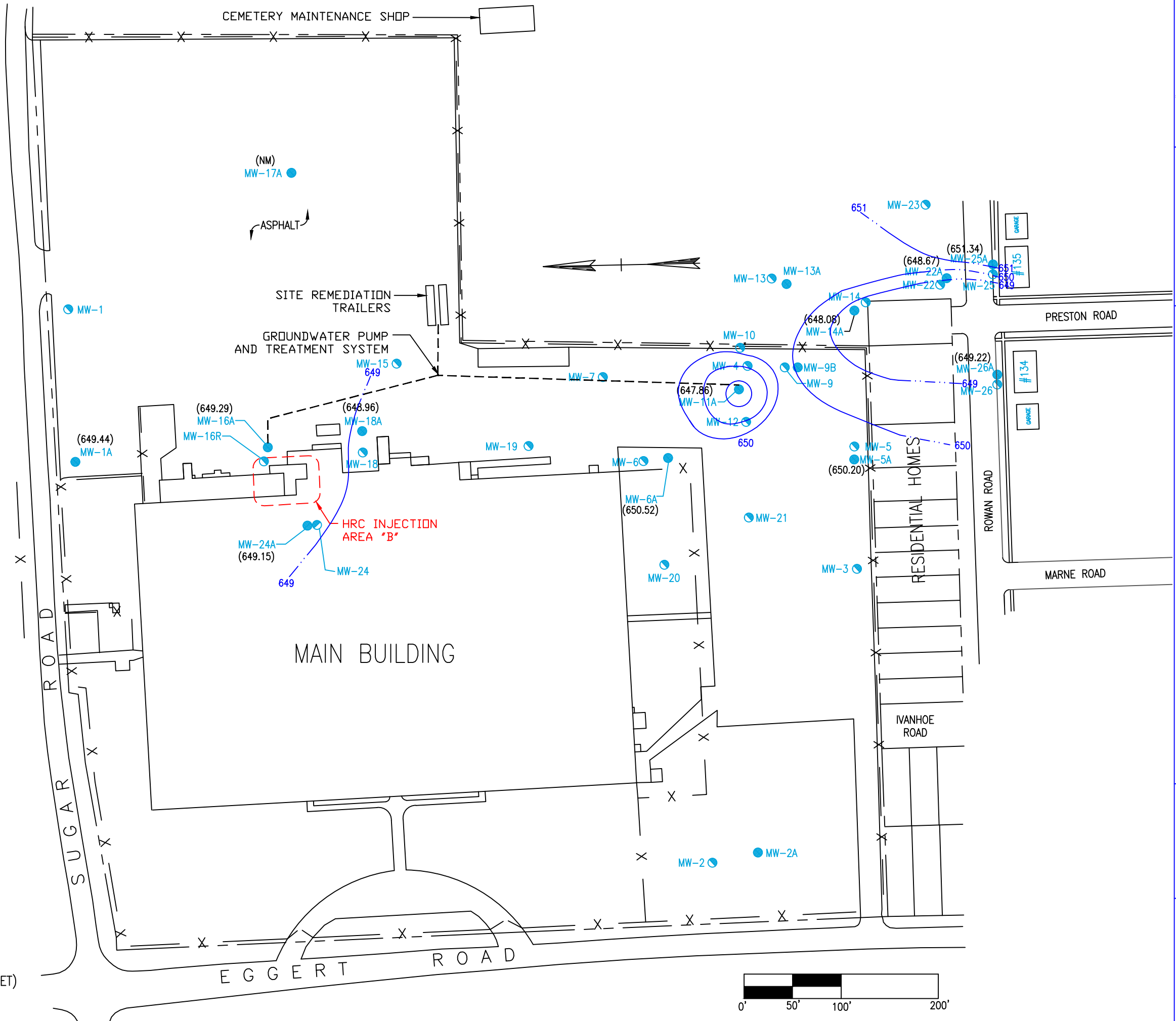
MW-2A = BEDROCK  
MONITORING WELL


— = BEDROCK GROUNDWATER  
CONTOUR LINE

- - - = ESTIMATED BEDROCK  
GROUNDWATER CONTOUR LINE

(649.15) = GROUNDWATER ELEVATION (FEET)

(NM) = NOT MEASURED



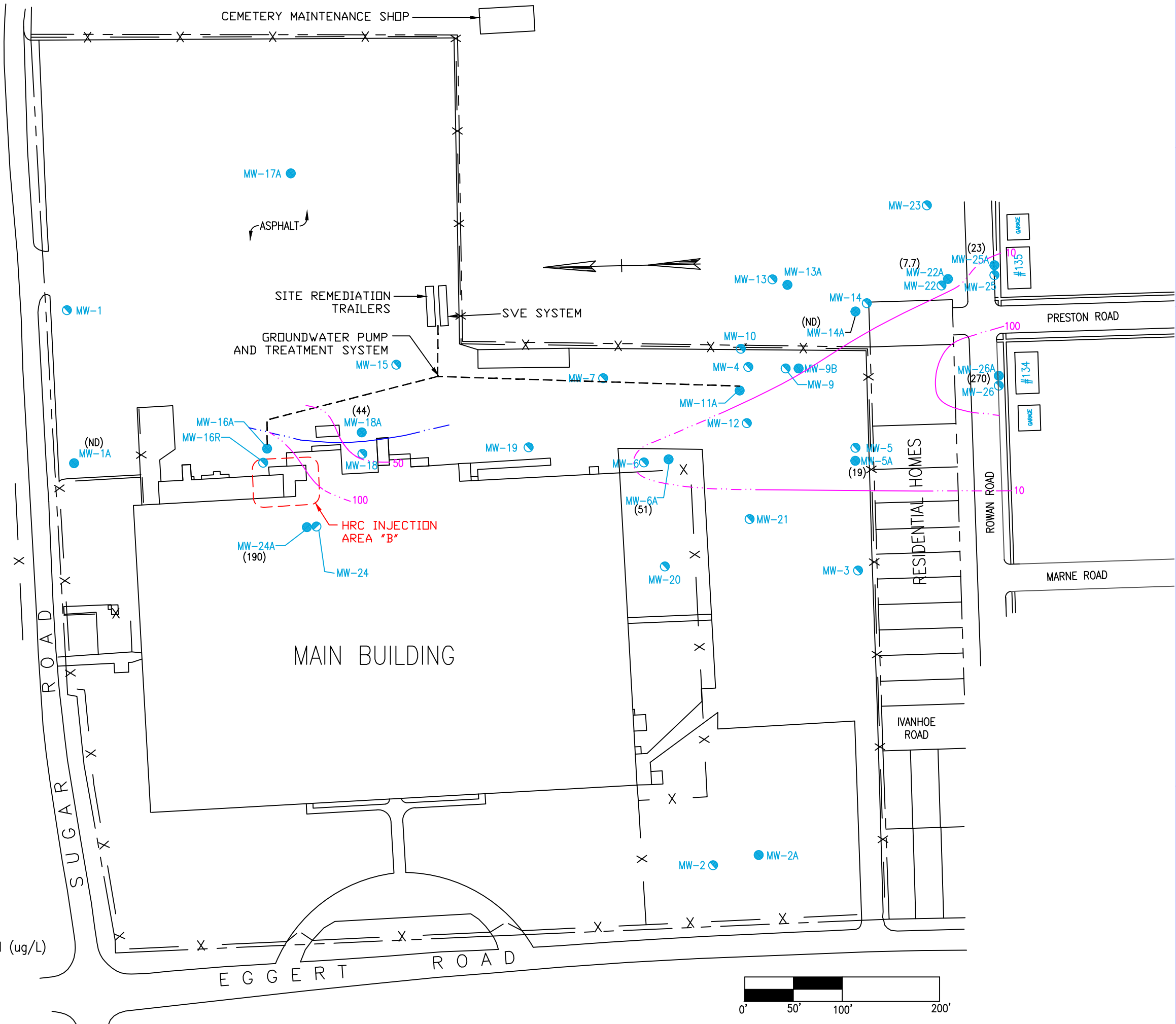
DOCUMENT CONTROL NO.		PROJECT	LEICA MICROSYSTEMS INC. 203 EGGERT RD CHEEKTOWAGA, NY	PROJECT # 137015
REVISION NO.		DRAWING	GROUNDWATER CONTOURS, JANUARY 2010 BEDROCK WELLS	SCALE: 1" : 100'
				DATE: 3/23/10
			100 MILL PLAIN RD DANBURY, CT. 06811 (203)797-8301	BY: MT
				CK: PM
				FIGURE # 18
				




LEGEND

- MW-2 = OVERBURDEN MONITORING WELL
- MW-2A = BEDROCK MONITORING WELL
- = BEDROCK VINYL CHLORIDE CONTOUR LINE
- - - = ESTIMATED BEDROCK VINYL CHLORIDE CONTOUR LINE

(190) = VINYL CHLORIDE CONCENTRATION (ug/L)  
(ND) = NOT DETECTED  
(NA) = NOT ANALYZED



DOCUMENT CONTROL NO.	PROJECT	LEICA MICROSYSTEMS INC. 203 EGGERT RD CHEEKTOWAGA, NY		PROJECT #	137015		
				FILENAME:			
REVISION NO.	DRAWING	VINYL CHLORIDE CONTAMINANT CONCENTRATION ISOPLETHS, JANUARY 2010, BEDROCK WELLS	100 MILL PLAIN RD DANBURY, CT. 06811 (203)797-8301	SCALE:	1" = 100'	DATE:	2/22/10
				BY:	MT	CK:	PM
				FIGURE #		20	

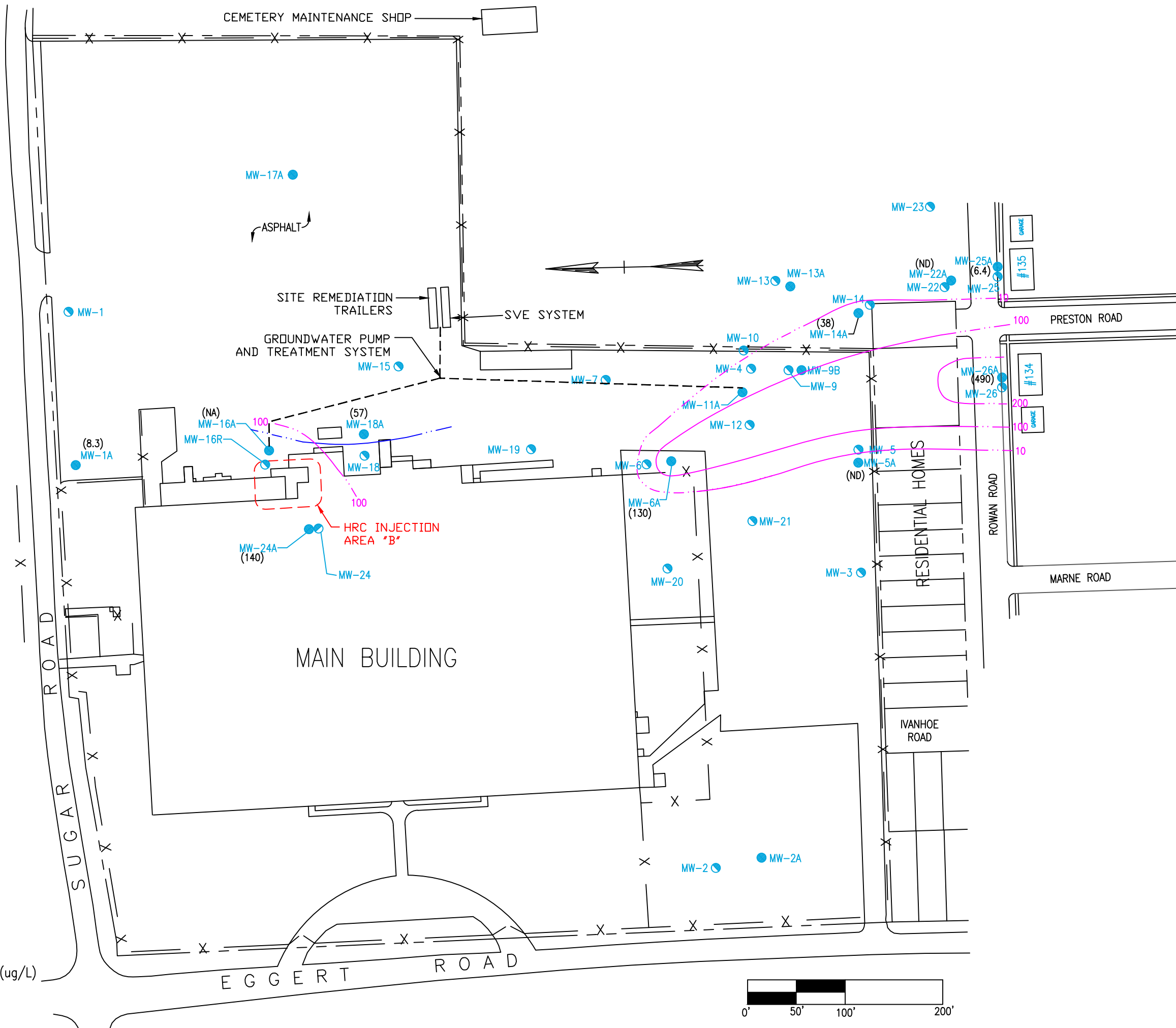


LEGEND

- MW-2 = OVERBURDEN MONITORING WELL
- MW-2A = BEDROCK MONITORING WELL

- = BEDROCK CIS 1,2 DCE CONTOUR LINE
- - - = ESTIMATED BEDROCK CIS 1,2 DCE CONTOUR LINE

- (140) = CIS 1,2 DCE CONCENTRATION (ug/L)
- (ND) = NOT DETECTED
- (NA) = NOT ANALYZED



DOCUMENT CONTROL NO.	PROJECT		LEICA MICROSYSTEMS INC. 203 EGGERT RD CHEEKTOWAGA, NY		PROJECT # 137015	
	REVISION NO.		CIS 1,2 DCE CONTAMINANT CONCENTRATION ISOPLETHS, JANUARY 2010, BEDROCK WELLS		FILENAME:	
					SCALE:	DATE:
					1" : 100'	2/22/10
					BY: MT	CK: PM
					FIGURE # 22	



100 MILL PLAIN RD  
DANBURY, CT. 06811  
(203)797-8301



LEGEND

MW-2 = OVERBURDEN MONITORING WELL

MW-2A = BEDROCK MONITORING WELL

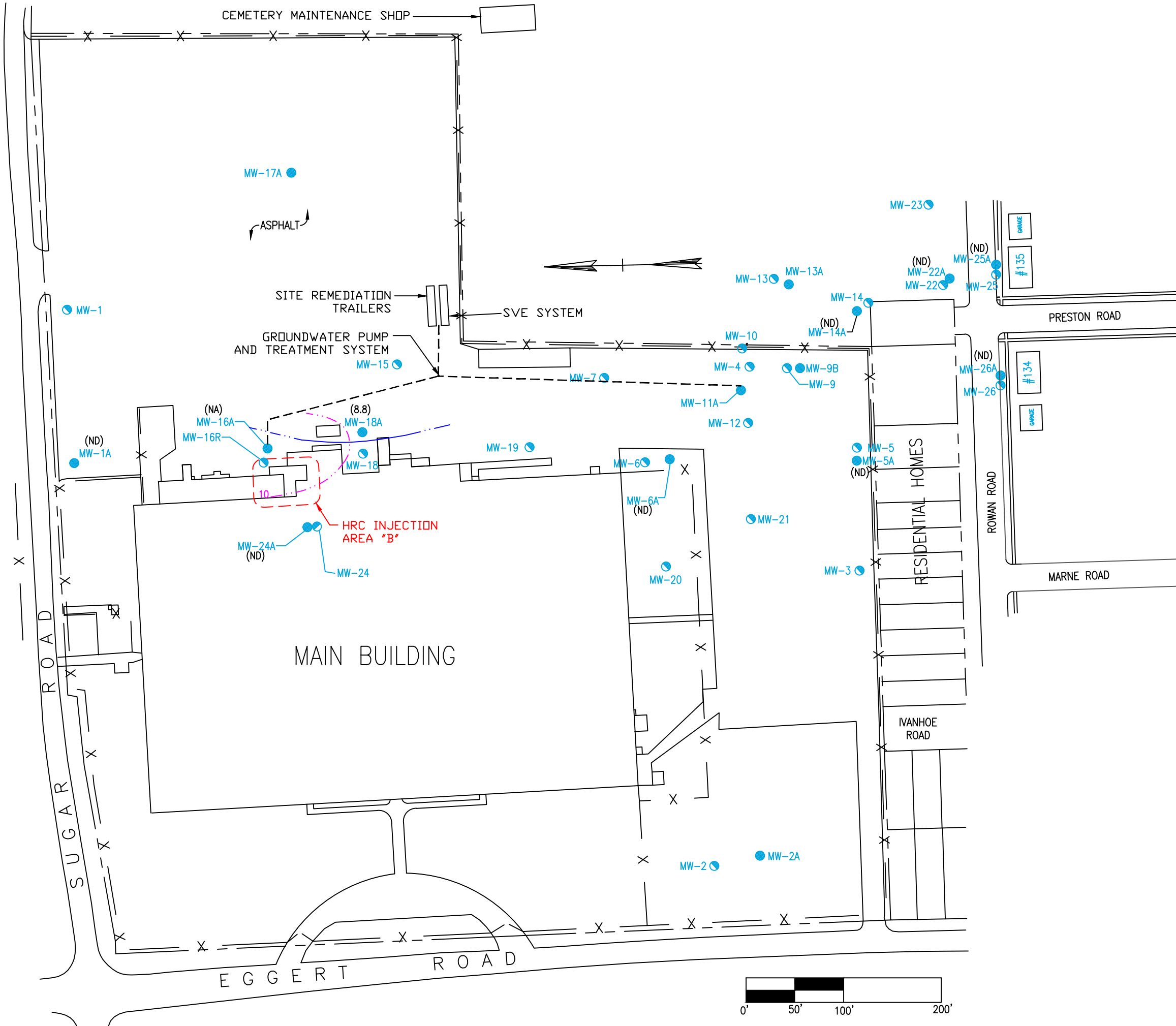
— = BEDROCK TCE CONTOUR LINE


- - - = ESTIMATED BEDROCK TCE CONTOUR LINE

(8.8) = TCE CONCENTRATION (ug/L)

(ND) = NOT DETECTED

(NA) = NOT ANALYZED



DOCUMENT CONTROL NO.	PROJECT	LEICA MICROSYSTEMS INC. 203 EGGERT RD CHEEKTOWAGA, NY		PROJECT #	137015
				FILENAME:	
REVISION NO.	DRAWING	TCE CONTAMINANT CONCENTRATION ISOPLETHS, JANUARY 2010 BEDROCK WELLS	100 MILL PLAIN RD DANBURY, CT. 06811 (203)797-8301	SCALE:	1" = 100'
				DATE:	2/23/10
				BY:	MT
				CK:	PM
				FIGURE #	
				24	



100 MILL PLAIN RD  
DANBURY, CT. 06811  
(203)797-8301

**APPENDIX C**

**Analytical Data**

April 2009, October 2009 and January 2010 Groundwater Analytical Data

May 06, 2009

Service Request No: R0902104

Mr. Robert McPeak  
Energy Solutions  
143 West Street  
New Milford, CT 06776

**Laboratory Results for: Leica Wells 4/15/09**

Dear Mr. McPeak:

Enclosed are the results of the sample(s) submitted to our laboratory on April 16, 2009. For your reference, these analyses have been assigned our service request number **R0902104**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 134. You may also contact me via email at KBunker@caslab.com.

Respectfully submitted,

**Columbia Analytical Services, Inc.**



Karen Bunker  
Project Manager

Page 1 of 63

**COLUMBIA ANALYTICAL SERVICES, INC.**

**Client:** Energy Solutions  
**Project:** Leica Wells 4/09  
**Sample Matrix:** Water

**Service Request No.:** R0902104  
**Date Received:** 4/16/09

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier II data deliverables. When appropriate to the method, method blank results have been reported with each analytical test. Surrogate recoveries have been reported for all applicable organic analyses.

**Sample Receipt**

Seven (7) groundwater samples were collected by the client on 4/15/09 and received for analysis at Columbia Analytical Services on the same day via CAS Courier. The samples were received in good condition and consistent with the accompanying chain of custody form. The cooler receipt temperature was 6°C, within the guidelines of 0-6°C.

**Volatile Organics**

Eight (8) water samples including one (1) Trip Blank were analyzed for Volatile Organic compounds by GC/MS method 8260B.

The Initial and Continuing Calibration Criteria were met.

Batch QC is included in the report. All Laboratory Control Sample (LCS) recoveries for target compounds were within QC limits.

All Surrogate recoveries are within acceptance limits.

All Laboratory Method Blanks were free from contamination.

The samples were analyzed within the 14 day holding time for the method. All vials are checked for preservation after the analysis in order to maintain the integrity of the sample. All vials were found to be preserved to a pH of <2.

No problems were encountered during the analysis of these samples.

**Inorganics**

Seven (7) water samples were analyzed for TOC, Total and Soluble Ferrous Iron and Manganese and IC compounds: Chloride, Nitrate, and Sulfate. All Method numbers are noted on the Data Form 1's of the report.

All Initial and Continuing Calibration Criteria was met for these analyses.

Batch QC is included in the report. All Laboratory Control Sample recoveries were within QC acceptance limits.

All Laboratory Method Blanks were free from contamination.

All holding times were met for these analyses including the 24 hour holding time for Ferrous Iron and the 48 hr holding time for Nitrate.

No problems were encountered with these analyses.

Approved by Karen Bunker Date 5/7/09

00002

## CASE NARRATIVE

This report contains analytical results for the following samples:

Service Request Number: R0902104

<u>Lab ID</u>	<u>Client ID</u>
R0902104-001	MW-18
R0902104-002	MW-18A
R0902104-003	MW-24
R0902104-004	MW-24A
R0902104-005	MW-16R
R0902104-006	MW-16A
R0902104-007	MW-1A
R0902104-009	MW-18 Soluble
R0902104-010	MW-18 A Soluble
R0902104-011	MW-24 Soluble
R0902104-012	MW-24A Soluble
R0902104-013	MW-16R Soluble
R0902104-014	MW-16A Soluble
R0902104-015	MW-1A Soluble
R0902104-016	TRIP BLANK



## REPORT QUALIFIERS

- U - Indicates compound was analyzed for but not detected. The sample quantitation limit must be corrected for dilution and for percent moisture.
- J - Indicates an estimated value. The flag is used either when estimating a concentration for tentatively identified compounds, or when the concentration is less than the reporting limit and greater than the MDL (concentrations are not verified within the initial calibration range).  
  
For DoD reports, the J-flag may also be used to indicate that the concentration between two columns for pesticides/Aroclors is greater than 40% difference.
- B - Indicates this compound was also detected in the associated method blank at a concentration that may have contributed to the sample result.
- B- Metals - Indicates an estimated value. The concentration is less than the reporting limit and greater than the MDL (concentrations are not verified within the initial calibration range).
- E - Indicates that the sample concentration had exceeded the calibration range for that specific analysis.
- D - Indicates the sample concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range.
- \* - Indicates that a quality control parameter has exceeded laboratory limits.
- X - See Case Narrative for discussion.
- P - This flag is used for a pesticide/Aroclor target concentration when there is a greater than 40% (25% for CLP) difference for detected concentrations between the two GC columns.  
  
For DoD reports, the J-flag is used instead of "P".
- N - Inorganics- Indicates the matrix spike recovery was outside laboratory limits.
- N- Organics- Indicates presumptive evidence of a compound (reported as a tentatively identified compound) based on the mass spectral library search.



### **CAS/Rochester Lab ID # for State Certifications<sup>1</sup>**

NELAP Accredited	Nevada ID # NY-00032
Delaware Accredited	New Jersey ID # NY004
Connecticut ID # PH0556	New York ID # 10145
Florida ID # E87674	New Hampshire ID # 294100 A/B
Illinois ID #200047	Pennsylvania ID# 68-786
Maine ID #NY0032	Rhode Island ID # 158
Nebraska Accredited	West Virginia ID # 292
Navy Facilities Engineering Service Center Approved	

<sup>1</sup> Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable, except as noted in the laboratory case narrative provided. For a specific list of accredited analytes, refer to the certifications section at [www.caslab.com](http://www.caslab.com).

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica Wells 4/15/09  
**Sample Matrix:** Water  
**Sample Name:** MW-18  
**Lab Code:** R0902104-001

**Service Request:** R0902104  
**Date Collected:** 4/15/09 0930  
**Date Received:** 4/16/09

**Basis:** NA

## General Chemistry Parameters

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Carbon, Total Organic (TOC)	SM20 5310 C	6.6	mg/L	2.0	2	NA	4/23/09 05:46
Chloride	300.0	25.6	mg/L	2.0	10	NA	4/16/09 11:23
Iron, Divalent (Ferrous Iron)	SM 3500-Fe B.4.c	0.92	mg/L	0.10	1	NA	4/15/09 16:45
Nitrate as Nitrogen	300.0	0.50 U	mg/L	0.50	10	NA	4/16/09 11:23
Sulfate	300.0	74.8	mg/L	2.0	10	NA	4/16/09 11:23

Comments:

---

**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica Wells 4/15/09  
**Sample Matrix:** Water  
**Sample Name:** MW-18 Soluble  
**Lab Code:** R0902104-009

**Service Request:** R0902104  
**Date Collected:** 4/15/09 0930  
**Date Received:** 4/16/09

**Basis:** NA

**Iron, Divalent, Phenanthroline Method 20th Ed.**

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Iron, Divalent (Ferrous Iron)	SM 3500-Fe B.4.c	0.99	mg/L	0.10	1	NA	4/15/09 16:45

Comments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica Wells 4/15/09  
**Sample Matrix:** Water  
**Sample Name:** MW-18  
**Lab Code:** R0902104-001

**Service Request:** R0902104  
**Date Collected:** 4/15/09 0930  
**Date Received:** 4/16/09

**Basis:** NA

**Manganese, Total, by Inductively Coupled Plasma-Atomic Emission Spectrometry**

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Total	6010B	274	µg/L	10	1	4/21/09	4/28/09 18:45

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

**Client:** Energy Solutions  
**Project:** Leica Wells 4/15/09  
**Sample Matrix:** Water  
**Sample Name:** MW-18 Soluble  
**Lab Code:** R0902104-009

**Service Request:** R0902104  
**Date Collected:** 4/15/09 0930  
**Date Received:** 4/16/09

**Basis:** NA

**Manganese, Dissolved, by Inductively Coupled Plasma-Atomic Emission Spectrometry**

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Dissolved	6010B	199	µg/L	10	1	4/21/09	4/28/09 20:00

**Comments:** \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica Wells 4/15/09  
**Sample Matrix:** Water  
**Sample Name:** MW-18  
**Lab Code:** R0902104-001

**Service Request:** R0902104  
**Date Collected:** 4/15/09 0930  
**Date Received:** 4/16/09  
**Units:** µg/L  
**Basis:** NA

## Volatile Organic Compounds by GC/MS

**Analytical Method:** 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Acetone	20	U	20	1	NA	4/23/09 13:20		151103	
Benzene	5.0	U	5.0	1	NA	4/23/09 13:20		151103	
Bromodichloromethane	5.0	U	5.0	1	NA	4/23/09 13:20		151103	
Bromoform	5.0	U	5.0	1	NA	4/23/09 13:20		151103	
Bromomethane	5.0	U	5.0	1	NA	4/23/09 13:20		151103	
2-Butanone (MEK)	10	U	10	1	NA	4/23/09 13:20		151103	
Carbon Disulfide	10	U	10	1	NA	4/23/09 13:20		151103	
Carbon Tetrachloride	5.0	U	5.0	1	NA	4/23/09 13:20		151103	
Chlorobenzene	5.0	U	5.0	1	NA	4/23/09 13:20		151103	
Chloroethane	5.0	U	5.0	1	NA	4/23/09 13:20		151103	
Chloroform	5.0	U	5.0	1	NA	4/23/09 13:20		151103	
Chloromethane	5.0	U	5.0	1	NA	4/23/09 13:20		151103	
Dibromochloromethane	5.0	U	5.0	1	NA	4/23/09 13:20		151103	
1,1-Dichloroethane	5.0	U	5.0	1	NA	4/23/09 13:20		151103	
1,2-Dichloroethane	5.0	U	5.0	1	NA	4/23/09 13:20		151103	
1,1-Dichloroethene	5.0	U	5.0	1	NA	4/23/09 13:20		151103	
cis-1,2-Dichloroethene	5.0	U	5.0	1	NA	4/23/09 13:20		151103	
trans-1,2-Dichloroethene	5.0	U	5.0	1	NA	4/23/09 13:20		151103	
1,2-Dichloropropane	5.0	U	5.0	1	NA	4/23/09 13:20		151103	
cis-1,3-Dichloropropene	5.0	U	5.0	1	NA	4/23/09 13:20		151103	
trans-1,3-Dichloropropene	5.0	U	5.0	1	NA	4/23/09 13:20		151103	
Ethylbenzene	5.0	U	5.0	1	NA	4/23/09 13:20		151103	
2-Hexanone	10	U	10	1	NA	4/23/09 13:20		151103	
Methylene Chloride	5.0	U	5.0	1	NA	4/23/09 13:20		151103	
4-Methyl-2-pentanone (MIBK)	10	U	10	1	NA	4/23/09 13:20		151103	
Styrene	5.0	U	5.0	1	NA	4/23/09 13:20		151103	
1,1,2,2-Tetrachloroethane	5.0	U	5.0	1	NA	4/23/09 13:20		151103	
Tetrachloroethene	5.0	U	5.0	1	NA	4/23/09 13:20		151103	
Toluene	5.0	U	5.0	1	NA	4/23/09 13:20		151103	
1,1,1-Trichloroethane	5.0	U	5.0	1	NA	4/23/09 13:20		151103	
1,1,2-Trichloroethane	5.0	U	5.0	1	NA	4/23/09 13:20		151103	
Trichloroethene	5.0	U	5.0	1	NA	4/23/09 13:20		151103	
Vinyl Chloride	5.0	U	5.0	1	NA	4/23/09 13:20		151103	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica Wells 4/15/09  
**Sample Matrix:** Water  
**Sample Name:** MW-18  
**Lab Code:** R0902104-001

**Service Request:** R0902104  
**Date Collected:** 4/15/09 0930  
**Date Received:** 4/16/09  
**Units:** µg/L  
**Basis:** NA

## Volatile Organic Compounds by GC/MS

**Analytical Method:** 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
o-Xylene	5.0	U	5.0	1	NA	4/23/09 13:20		151103	
m,p-Xylenes	5.0	U	5.0	1	NA	4/23/09 13:20		151103	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	99	80-123	4/23/09 13:20		
Toluene-d8	99	88-124	4/23/09 13:20		
Dibromofluoromethane	109	89-115	4/23/09 13:20		

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica Wells 4/15/09  
**Sample Matrix:** Water  
**Sample Name:** MW-18A  
**Lab Code:** R0902104-002

**Service Request:** R0902104  
**Date Collected:** 4/15/09 0950  
**Date Received:** 4/16/09

**Basis:** NA

## General Chemistry Parameters

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Carbon, Total Organic (TOC)	SM20 5310 C	4.0	mg/L	1.0	1	NA	4/21/09 19:09
Chloride	300.0	98.6	mg/L	4.0	20	NA	4/16/09 19:47
Iron, Divalent (Ferrous Iron)	SM 3500-Fe B.4.c	0.89	mg/L	0.10	1	NA	4/15/09 16:45
Nitrate as Nitrogen	300.0	0.50 U	mg/L	0.50	10	NA	4/16/09 11:39
Sulfate	300.0	128	mg/L	4.0	20	NA	4/16/09 19:47

Comments:

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**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica Wells 4/15/09  
**Sample Matrix:** Water  
**Sample Name:** MW-18 A Soluble  
**Lab Code:** R0902104-010

**Service Request:** R0902104  
**Date Collected:** 4/15/09 0950  
**Date Received:** 4/16/09

**Basis:** NA

**Iron, Divalent, Phenanthroline Method 20th Ed.**

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Iron, Divalent (Ferrous Iron)	SM 3500-Fe B.4.c	0.70	mg/L	0.10	1	NA	4/15/09 16:45

Comments:

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**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica Wells 4/15/09  
**Sample Matrix:** Water  
**Sample Name:** MW-18A  
**Lab Code:** R0902104-002

**Service Request:** R0902104  
**Date Collected:** 4/15/09 0950  
**Date Received:** 4/16/09

**Basis:** NA

**Manganese, Total, by Inductively Coupled Plasma-Atomic Emission Spectrometry**

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Total	6010B	111	µg/L	10	1	4/21/09	4/28/09 19:25

Comments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica Wells 4/15/09  
**Sample Matrix:** Water  
**Sample Name:** MW-18 A Soluble  
**Lab Code:** R0902104-010

**Service Request:** R0902104  
**Date Collected:** 4/15/09 0950  
**Date Received:** 4/16/09

**Basis:** NA

**Manganese, Dissolved, by Inductively Coupled Plasma-Atomic Emission Spectrometry**

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Dissolved	6010B	74	µg/L	10	1	4/21/09	4/28/09 20:18

**Comments:** \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica Wells 4/15/09  
**Sample Matrix:** Water  
**Sample Name:** MW-18A  
**Lab Code:** R0902104-002

**Service Request:** R0902104  
**Date Collected:** 4/15/09 0950  
**Date Received:** 4/16/09  
**Units:** µg/L  
**Basis:** NA

## Volatile Organic Compounds by GC/MS

**Analytical Method:** 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Acetone	20	U	20	1	NA	4/23/09 13:50		151103	
Benzene	5.0	U	5.0	1	NA	4/23/09 13:50		151103	
Bromodichloromethane	5.0	U	5.0	1	NA	4/23/09 13:50		151103	
Bromoform	5.0	U	5.0	1	NA	4/23/09 13:50		151103	
Bromomethane	5.0	U	5.0	1	NA	4/23/09 13:50		151103	
2-Butanone (MEK)	10	U	10	1	NA	4/23/09 13:50		151103	
Carbon Disulfide	10	U	10	1	NA	4/23/09 13:50		151103	
Carbon Tetrachloride	5.0	U	5.0	1	NA	4/23/09 13:50		151103	
Chlorobenzene	5.0	U	5.0	1	NA	4/23/09 13:50		151103	
Chloroethane	5.0	U	5.0	1	NA	4/23/09 13:50		151103	
Chloroform	5.0	U	5.0	1	NA	4/23/09 13:50		151103	
Chloromethane	5.0	U	5.0	1	NA	4/23/09 13:50		151103	
Dibromochloromethane	5.0	U	5.0	1	NA	4/23/09 13:50		151103	
1,1-Dichloroethane	5.0	U	5.0	1	NA	4/23/09 13:50		151103	
1,2-Dichloroethane	5.0	U	5.0	1	NA	4/23/09 13:50		151103	
1,1-Dichloroethene	5.0	U	5.0	1	NA	4/23/09 13:50		151103	
cis-1,2-Dichloroethene	56		5.0	1	NA	4/23/09 13:50		151103	
trans-1,2-Dichloroethene	5.0	U	5.0	1	NA	4/23/09 13:50		151103	
1,2-Dichloropropane	5.0	U	5.0	1	NA	4/23/09 13:50		151103	
cis-1,3-Dichloropropene	5.0	U	5.0	1	NA	4/23/09 13:50		151103	
trans-1,3-Dichloropropene	5.0	U	5.0	1	NA	4/23/09 13:50		151103	
Ethylbenzene	5.0	U	5.0	1	NA	4/23/09 13:50		151103	
2-Hexanone	10	U	10	1	NA	4/23/09 13:50		151103	
Methylene Chloride	5.0	U	5.0	1	NA	4/23/09 13:50		151103	
4-Methyl-2-pentanone (MIBK)	10	U	10	1	NA	4/23/09 13:50		151103	
Styrene	5.0	U	5.0	1	NA	4/23/09 13:50		151103	
1,1,2,2-Tetrachloroethane	5.0	U	5.0	1	NA	4/23/09 13:50		151103	
Tetrachloroethene	5.0	U	5.0	1	NA	4/23/09 13:50		151103	
Toluene	5.0	U	5.0	1	NA	4/23/09 13:50		151103	
1,1,1-Trichloroethane	5.0	U	5.0	1	NA	4/23/09 13:50		151103	
1,1,2-Trichloroethane	5.0	U	5.0	1	NA	4/23/09 13:50		151103	
Trichloroethene	140		5.0	1	NA	4/23/09 13:50		151103	
Vinyl Chloride	11		5.0	1	NA	4/23/09 13:50		151103	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica Wells 4/15/09  
**Sample Matrix:** Water  
**Sample Name:** MW-18A  
**Lab Code:** R0902104-002

**Service Request:** R0902104  
**Date Collected:** 4/15/09 0950  
**Date Received:** 4/16/09  
**Units:** µg/L  
**Basis:** NA

## Volatile Organic Compounds by GC/MS

**Analytical Method:** 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
o-Xylene	5.0	U	5.0	1	NA	4/23/09 13:50		151103	
m,p-Xylenes	5.0	U	5.0	1	NA	4/23/09 13:50		151103	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	99	80-123	4/23/09 13:50		
Toluene-d8	96	88-124	4/23/09 13:50		
Dibromofluoromethane	110	89-115	4/23/09 13:50		

**Comments:**

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## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica Wells 4/15/09  
**Sample Matrix:** Water  
**Sample Name:** MW-24  
**Lab Code:** R0902104-003

**Service Request:** R0902104  
**Date Collected:** 4/15/09 1040  
**Date Received:** 4/16/09

**Basis:** NA

## General Chemistry Parameters

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Carbon, Total Organic (TOC)	SM20 5310 C	7.0	mg/L	2.0	2	NA	4/23/09 06:04
Chloride	300.0	194	mg/L	8.0	40	NA	4/16/09 20:03
Iron, Divalent (Ferrous Iron)	SM 3500-Fe B.4.c	0.18	mg/L	0.10	1	NA	4/15/09 16:45
Nitrate as Nitrogen	300.0	0.50 U	mg/L	0.50	10	NA	4/16/09 11:55
Sulfate	300.0	37.3	mg/L	2.0	10	NA	4/16/09 11:55

Comments:

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**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica Wells 4/15/09  
**Sample Matrix:** Water  
**Sample Name:** MW-24 Soluble  
**Lab Code:** R0902104-011

**Service Request:** R0902104  
**Date Collected:** 4/15/09 1040  
**Date Received:** 4/16/09

**Basis:** NA

**Iron, Divalent, Phenanthroline Method 20th Ed.**

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Iron, Divalent (Ferrous Iron)	SM 3500-Fe B.4.c	0.10 U	mg/L	0.10	1	NA	4/15/09 16:45

Comments:

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COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

**Client:** Energy Solutions  
**Project:** Leica Wells 4/15/09  
**Sample Matrix:** Water  
**Sample Name:** MW-24  
**Lab Code:** R0902104-003

**Service Request:** R0902104  
**Date Collected:** 4/15/09 1040  
**Date Received:** 4/16/09

**Basis:** NA

Manganese, Total, by Inductively Coupled Plasma-Atomic Emission Spectrometry

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Total	6010B	45	µg/L	10	1	4/21/09	4/28/09 19:31

Comments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica Wells 4/15/09  
**Sample Matrix:** Water  
**Sample Name:** MW-24 Soluble  
**Lab Code:** R0902104-011

**Service Request:** R0902104  
**Date Collected:** 4/15/09 1040  
**Date Received:** 4/16/09

**Basis:** NA

**Manganese, Dissolved, by Inductively Coupled Plasma-Atomic Emission Spectrometry**

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Dissolved	6010B	40	µg/L	10	1	4/21/09	4/28/09 20:23

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica Wells 4/15/09  
**Sample Matrix:** Water  
**Sample Name:** MW-24  
**Lab Code:** R0902104-003

**Service Request:** R0902104  
**Date Collected:** 4/15/09 1040  
**Date Received:** 4/16/09  
**Units:** µg/L  
**Basis:** NA

## Volatile Organic Compounds by GC/MS

**Analytical Method:** 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Acetone	500	U	500	25	NA	4/23/09 14:20		151103	
Benzene	130	U	130	25	NA	4/23/09 14:20		151103	
Bromodichloromethane	130	U	130	25	NA	4/23/09 14:20		151103	
Bromoform	130	U	130	25	NA	4/23/09 14:20		151103	
Bromomethane	130	U	130	25	NA	4/23/09 14:20		151103	
2-Butanone (MEK)	250	U	250	25	NA	4/23/09 14:20		151103	
Carbon Disulfide	250	U	250	25	NA	4/23/09 14:20		151103	
Carbon Tetrachloride	130	U	130	25	NA	4/23/09 14:20		151103	
Chlorobenzene	130	U	130	25	NA	4/23/09 14:20		151103	
Chloroethane	130	U	130	25	NA	4/23/09 14:20		151103	
Chloroform	130	U	130	25	NA	4/23/09 14:20		151103	
Chloromethane	130	U	130	25	NA	4/23/09 14:20		151103	
Dibromochloromethane	130	U	130	25	NA	4/23/09 14:20		151103	
1,1-Dichloroethane	350		130	25	NA	4/23/09 14:20		151103	
1,2-Dichloroethane	130	U	130	25	NA	4/23/09 14:20		151103	
1,1-Dichloroethene	130	U	130	25	NA	4/23/09 14:20		151103	
cis-1,2-Dichloroethene	3200		130	25	NA	4/23/09 14:20		151103	
trans-1,2-Dichloroethene	130	U	130	25	NA	4/23/09 14:20		151103	
1,2-Dichloropropane	130	U	130	25	NA	4/23/09 14:20		151103	
cis-1,3-Dichloropropene	130	U	130	25	NA	4/23/09 14:20		151103	
trans-1,3-Dichloropropene	130	U	130	25	NA	4/23/09 14:20		151103	
Ethylbenzene	130	U	130	25	NA	4/23/09 14:20		151103	
2-Hexanone	250	U	250	25	NA	4/23/09 14:20		151103	
Methylene Chloride	130	U	130	25	NA	4/23/09 14:20		151103	
4-Methyl-2-pentanone (MIBK)	250	U	250	25	NA	4/23/09 14:20		151103	
Styrene	130	U	130	25	NA	4/23/09 14:20		151103	
1,1,2,2-Tetrachloroethane	130	U	130	25	NA	4/23/09 14:20		151103	
Tetrachloroethene	130	U	130	25	NA	4/23/09 14:20		151103	
Toluene	130	U	130	25	NA	4/23/09 14:20		151103	
1,1,1-Trichloroethane	130	U	130	25	NA	4/23/09 14:20		151103	
1,1,2-Trichloroethane	130	U	130	25	NA	4/23/09 14:20		151103	
Trichloroethene	370		130	25	NA	4/23/09 14:20		151103	
Vinyl Chloride	1800		130	25	NA	4/23/09 14:20		151103	

**Comments:** \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica Wells 4/15/09  
**Sample Matrix:** Water  
**Sample Name:** MW-24  
**Lab Code:** R0902104-003

**Service Request:** R0902104  
**Date Collected:** 4/15/09 1040  
**Date Received:** 4/16/09  
**Units:** µg/L  
**Basis:** NA

## Volatile Organic Compounds by GC/MS

**Analytical Method:** 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
o-Xylene	130	U	130	25	NA	4/23/09 14:20		151103	
m,p-Xylenes	130	U	130	25	NA	4/23/09 14:20		151103	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	99	80-123	4/23/09 14:20		
Toluene-d8	102	88-124	4/23/09 14:20		
Dibromofluoromethane	110	89-115	4/23/09 14:20		

**Comments:** \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica Wells 4/15/09  
**Sample Matrix:** Water  
**Sample Name:** MW-24A  
**Lab Code:** R0902104-004

**Service Request:** R0902104  
**Date Collected:** 4/15/09 1055  
**Date Received:** 4/16/09

**Basis:** NA

## General Chemistry Parameters

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Carbon, Total Organic (TOC)	SM20 5310 C	5.9	mg/L	2.0	2	NA	4/23/09 06:22
Chloride	300.0	231	mg/L	8.0	40	NA	4/16/09 20:20
Iron, Divalent (Ferrous Iron)	SM 3500-Fe B.4.c	2.85	mg/L	0.20	2	NA	4/15/09 16:45
Nitrate as Nitrogen	300.0	0.50 U	mg/L	0.50	10	NA	4/16/09 12:12
Sulfate	300.0	26.2	mg/L	2.0	10	NA	4/16/09 12:12

Comments:

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**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Report

**Client:** Energy Solutions  
**Project:** Leica Wells 4/15/09  
**Sample Matrix:** Water  
**Sample Name:** MW-24A Soluble  
**Lab Code:** R0902104-012

**Service Request:** R0902104  
**Date Collected:** 4/15/09 1055  
**Date Received:** 4/16/09

**Basis:** NA

**Iron, Divalent, Phenanthroline Method 20th Ed.**

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Iron, Divalent (Ferrous Iron)	SM 3500-Fe B.4.c	2.63	mg/L	0.20	2	NA	4/15/09 16:45

Comments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica Wells 4/15/09  
**Sample Matrix:** Water  
**Sample Name:** MW-24A  
**Lab Code:** R0902104-004

**Service Request:** R0902104  
**Date Collected:** 4/15/09 1055  
**Date Received:** 4/16/09

**Basis:** NA

**Manganese, Total, by Inductively Coupled Plasma-Atomic Emission Spectrometry**

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Total	6010B	186	µg/L	10	1	4/21/09	4/28/09 19:37

Comments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica Wells 4/15/09  
**Sample Matrix:** Water  
**Sample Name:** MW-24A Soluble  
**Lab Code:** R0902104-012

**Service Request:** R0902104  
**Date Collected:** 4/15/09 1055  
**Date Received:** 4/16/09

**Basis:** NA

**Manganese, Dissolved, by Inductively Coupled Plasma-Atomic Emission Spectrometry**

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Dissolved	6010B	176	µg/L	10	1	4/21/09	4/28/09 20:29

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica Wells 4/15/09  
**Sample Matrix:** Water  
**Sample Name:** MW-24A  
**Lab Code:** R0902104-004

**Service Request:** R0902104  
**Date Collected:** 4/15/09 1055  
**Date Received:** 4/16/09  
**Units:** µg/L  
**Basis:** NA

## Volatile Organic Compounds by GC/MS

**Analytical Method:** 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Acetone	100	U	100	5	NA	4/24/09 20:45		151352	
Benzene	25	U	25	5	NA	4/24/09 20:45		151352	
Bromodichloromethane	25	U	25	5	NA	4/24/09 20:45		151352	
Bromoform	25	U	25	5	NA	4/24/09 20:45		151352	
Bromomethane	25	U	25	5	NA	4/24/09 20:45		151352	
2-Butanone (MEK)	50	U	50	5	NA	4/24/09 20:45		151352	
Carbon Disulfide	50	U	50	5	NA	4/24/09 20:45		151352	
Carbon Tetrachloride	25	U	25	5	NA	4/24/09 20:45		151352	
Chlorobenzene	25	U	25	5	NA	4/24/09 20:45		151352	
Chloroethane	25	U	25	5	NA	4/24/09 20:45		151352	
Chloroform	25	U	25	5	NA	4/24/09 20:45		151352	
Chloromethane	25	U	25	5	NA	4/24/09 20:45		151352	
Dibromochloromethane	25	U	25	5	NA	4/24/09 20:45		151352	
1,1-Dichloroethane	84		25	5	NA	4/24/09 20:45		151352	
1,2-Dichloroethane	25	U	25	5	NA	4/24/09 20:45		151352	
1,1-Dichloroethene	25	U	25	5	NA	4/24/09 20:45		151352	
cis-1,2-Dichloroethene	540		25	5	NA	4/24/09 20:45		151352	
trans-1,2-Dichloroethene	25	U	25	5	NA	4/24/09 20:45		151352	
1,2-Dichloropropane	25	U	25	5	NA	4/24/09 20:45		151352	
cis-1,3-Dichloropropene	25	U	25	5	NA	4/24/09 20:45		151352	
trans-1,3-Dichloropropene	25	U	25	5	NA	4/24/09 20:45		151352	
Ethylbenzene	25	U	25	5	NA	4/24/09 20:45		151352	
2-Hexanone	50	U	50	5	NA	4/24/09 20:45		151352	
Methylene Chloride	25	U	25	5	NA	4/24/09 20:45		151352	
4-Methyl-2-pentanone (MIBK)	50	U	50	5	NA	4/24/09 20:45		151352	
Styrene	25	U	25	5	NA	4/24/09 20:45		151352	
1,1,2,2-Tetrachloroethane	25	U	25	5	NA	4/24/09 20:45		151352	
Tetrachloroethene	25	U	25	5	NA	4/24/09 20:45		151352	
Toluene	25	U	25	5	NA	4/24/09 20:45		151352	
1,1,1-Trichloroethane	25	U	25	5	NA	4/24/09 20:45		151352	
1,1,2-Trichloroethane	25	U	25	5	NA	4/24/09 20:45		151352	
Trichloroethene	26		25	5	NA	4/24/09 20:45		151352	
Vinyl Chloride	320		25	5	NA	4/24/09 20:45		151352	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica Wells 4/15/09  
**Sample Matrix:** Water  
**Sample Name:** MW-24A  
**Lab Code:** R0902104-004

**Service Request:** R0902104  
**Date Collected:** 4/15/09 1055  
**Date Received:** 4/16/09  
**Units:** µg/L  
**Basis:** NA

## Volatile Organic Compounds by GC/MS

**Analytical Method:** 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
o-Xylene	25	U	25	5	NA	4/24/09 20:45		151352	
m,p-Xylenes	25	U	25	5	NA	4/24/09 20:45		151352	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	99	80-123	4/24/09 20:45		
Toluene-d8	99	88-124	4/24/09 20:45		
Dibromofluoromethane	109	89-115	4/24/09 20:45		

**Comments:**

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica Wells 4/15/09  
**Sample Matrix:** Water  
**Sample Name:** MW-16R  
**Lab Code:** R0902104-005

**Service Request:** R0902104  
**Date Collected:** 4/15/09 1130  
**Date Received:** 4/16/09

**Basis:** NA

## General Chemistry Parameters

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Carbon, Total Organic (TOC)	SM20 5310 C	65.7	mg/L	4.0	4	NA	4/23/09 06:40
Chloride	300.0	652	mg/L	20	100	NA	4/16/09 20:36
Iron, Divalent (Ferrous Iron)	SM 3500-Fe B.4.c	0.38	mg/L	0.10	1	NA	4/15/09 16:45
Nitrate as Nitrogen	300.0	0.50 U	mg/L	0.50	10	NA	4/16/09 12:28
Sulfate	300.0	2.7	mg/L	2.0	10	NA	4/16/09 12:28

Comments:

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**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica Wells 4/15/09  
**Sample Matrix:** Water  
**Sample Name:** MW-16R Soluble  
**Lab Code:** R0902104-013

**Service Request:** R0902104  
**Date Collected:** 4/15/09 1130  
**Date Received:** 4/16/09

**Basis:** NA

**Iron, Divalent, Phenanthroline Method 20th Ed.**

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Iron, Divalent (Ferrous Iron)	SM 3500-Fe B.4.c	0.28	mg/L	0.10	1	NA	4/15/09 16:45

Comments: \_\_\_\_\_

**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica Wells 4/15/09  
**Sample Matrix:** Water  
**Sample Name:** MW-16R  
**Lab Code:** R0902104-005

**Service Request:** R0902104  
**Date Collected:** 4/15/09 1130  
**Date Received:** 4/16/09

**Basis:** NA

**Manganese, Total, by Inductively Coupled Plasma-Atomic Emission Spectrometry**

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Total	6010B	184	µg/L	10	1	4/21/09	4/28/09 19:43

Comments: \_\_\_\_\_

**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica Wells 4/15/09  
**Sample Matrix:** Water  
**Sample Name:** MW-16R Soluble  
**Lab Code:** R0902104-013

**Service Request:** R0902104  
**Date Collected:** 4/15/09 1130  
**Date Received:** 4/16/09

**Basis:** NA

**Manganese, Dissolved, by Inductively Coupled Plasma-Atomic Emission Spectrometry**

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Dissolved	6010B	123	µg/L	10	1	4/21/09	4/28/09 20:35

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica Wells 4/15/09  
**Sample Matrix:** Water  
**Sample Name:** MW-16R  
**Lab Code:** R0902104-005

**Service Request:** R0902104  
**Date Collected:** 4/15/09 1130  
**Date Received:** 4/16/09  
**Units:** µg/L  
**Basis:** NA

## Volatile Organic Compounds by GC/MS

**Analytical Method:** 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Acetone	100	U	100	5	NA	4/24/09 21:14		151352	
Benzene	25	U	25	5	NA	4/24/09 21:14		151352	
Bromodichloromethane	25	U	25	5	NA	4/24/09 21:14		151352	
Bromoform	25	U	25	5	NA	4/24/09 21:14		151352	
Bromomethane	25	U	25	5	NA	4/24/09 21:14		151352	
2-Butanone (MEK)	50	U	50	5	NA	4/24/09 21:14		151352	
Carbon Disulfide	50	U	50	5	NA	4/24/09 21:14		151352	
Carbon Tetrachloride	25	U	25	5	NA	4/24/09 21:14		151352	
Chlorobenzene	25	U	25	5	NA	4/24/09 21:14		151352	
Chloroethane	520		25	5	NA	4/24/09 21:14		151352	
Chloroform	25	U	25	5	NA	4/24/09 21:14		151352	
Chloromethane	25	U	25	5	NA	4/24/09 21:14		151352	
Dibromochloromethane	25	U	25	5	NA	4/24/09 21:14		151352	
1,1-Dichloroethane	170		25	5	NA	4/24/09 21:14		151352	
1,2-Dichloroethane	25	U	25	5	NA	4/24/09 21:14		151352	
1,1-Dichloroethene	25	U	25	5	NA	4/24/09 21:14		151352	
cis-1,2-Dichloroethene	25	U	25	5	NA	4/24/09 21:14		151352	
trans-1,2-Dichloroethene	25	U	25	5	NA	4/24/09 21:14		151352	
1,2-Dichloropropane	25	U	25	5	NA	4/24/09 21:14		151352	
cis-1,3-Dichloropropene	25	U	25	5	NA	4/24/09 21:14		151352	
trans-1,3-Dichloropropene	25	U	25	5	NA	4/24/09 21:14		151352	
Ethylbenzene	25	U	25	5	NA	4/24/09 21:14		151352	
2-Hexanone	50	U	50	5	NA	4/24/09 21:14		151352	
Methylene Chloride	25	U	25	5	NA	4/24/09 21:14		151352	
4-Methyl-2-pentanone (MIBK)	50	U	50	5	NA	4/24/09 21:14		151352	
Styrene	25	U	25	5	NA	4/24/09 21:14		151352	
1,1,2,2-Tetrachloroethane	25	U	25	5	NA	4/24/09 21:14		151352	
Tetrachloroethene	25	U	25	5	NA	4/24/09 21:14		151352	
Toluene	25	U	25	5	NA	4/24/09 21:14		151352	
1,1,1-Trichloroethane	25	U	25	5	NA	4/24/09 21:14		151352	
1,1,2-Trichloroethane	25	U	25	5	NA	4/24/09 21:14		151352	
Trichloroethene	25	U	25	5	NA	4/24/09 21:14		151352	
Vinyl Chloride	25	U	25	5	NA	4/24/09 21:14		151352	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica Wells 4/15/09  
**Sample Matrix:** Water  
**Sample Name:** MW-16R  
**Lab Code:** R0902104-005

**Service Request:** R0902104  
**Date Collected:** 4/15/09 1130  
**Date Received:** 4/16/09  
**Units:** µg/L  
**Basis:** NA

## Volatile Organic Compounds by GC/MS

**Analytical Method:** 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
o-Xylene	25	U	25	5	NA	4/24/09 21:14		151352	
m,p-Xylenes	25	U	25	5	NA	4/24/09 21:14		151352	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	98	80-123	4/24/09 21:14		
Toluene-d8	102	88-124	4/24/09 21:14		
Dibromofluoromethane	110	89-115	4/24/09 21:14		

**Comments:**

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica Wells 4/15/09  
**Sample Matrix:** Water  
**Sample Name:** MW-16A  
**Lab Code:** R0902104-006

**Service Request:** R0902104  
**Date Collected:** 4/15/09 1145  
**Date Received:** 4/16/09

**Basis:** NA

## General Chemistry Parameters

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Carbon, Total Organic (TOC)	SM20 5310 C	5.0	mg/L	1.0	1	NA	4/21/09 20:21
Chloride	300.0	225	mg/L	8.0	40	NA	4/16/09 20:52
Iron, Divalent (Ferrous Iron)	SM 3500-Fe B.4.c	0.30	mg/L	0.10	1	NA	4/15/09 16:45
Nitrate as Nitrogen	300.0	0.50 U	mg/L	0.50	10	NA	4/16/09 12:44
Sulfate	300.0	66.9	mg/L	2.0	10	NA	4/16/09 12:44

Comments:

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**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica Wells 4/15/09  
**Sample Matrix:** Water  
**Sample Name:** MW-16A Soluble  
**Lab Code:** R0902104-014

**Service Request:** R0902104  
**Date Collected:** 4/15/09 1145  
**Date Received:** 4/16/09

**Basis:** NA

**Iron, Divalent, Phenanthroline Method 20th Ed.**

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Iron, Divalent (Ferrous Iron)	SM 3500-Fe B.4.c	0.24	mg/L	0.10	1	NA	4/15/09 16:45

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica Wells 4/15/09  
**Sample Matrix:** Water  
**Sample Name:** MW-16A  
**Lab Code:** R0902104-006

**Service Request:** R0902104  
**Date Collected:** 4/15/09 1145  
**Date Received:** 4/16/09

**Basis:** NA

## Manganese, Total, by Inductively Coupled Plasma-Atomic Emission Spectrometry

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Total	6010B	79	µg/L	10	1	4/21/09	4/28/09 19:49

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

**Client:** Energy Solutions  
**Project:** Leica Wells 4/15/09  
**Sample Matrix:** Water  
**Sample Name:** MW-16A Soluble  
**Lab Code:** R0902104-014

**Service Request:** R0902104  
**Date Collected:** 4/15/09 1145  
**Date Received:** 4/16/09

**Basis:** NA

Manganese, Dissolved, by Inductively Coupled Plasma-Atomic Emission Spectrometry

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Dissolved	6010B	71	µg/L	10	1	4/21/09	4/28/09 20:41

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica Wells 4/15/09  
**Sample Matrix:** Water  
**Sample Name:** MW-16A  
**Lab Code:** R0902104-006

**Service Request:** R0902104  
**Date Collected:** 4/15/09 1145  
**Date Received:** 4/16/09  
**Units:** µg/L  
**Basis:** NA

## Volatile Organic Compounds by GC/MS

**Analytical Method:** 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Acetone	200	U	200	10	NA	4/23/09 15:50		151103	
Benzene	50	U	50	10	NA	4/23/09 15:50		151103	
Bromodichloromethane	50	U	50	10	NA	4/23/09 15:50		151103	
Bromoform	50	U	50	10	NA	4/23/09 15:50		151103	
Bromomethane	50	U	50	10	NA	4/23/09 15:50		151103	
2-Butanone (MEK)	100	U	100	10	NA	4/23/09 15:50		151103	
Carbon Disulfide	100	U	100	10	NA	4/23/09 15:50		151103	
Carbon Tetrachloride	50	U	50	10	NA	4/23/09 15:50		151103	
Chlorobenzene	50	U	50	10	NA	4/23/09 15:50		151103	
Chloroethane	50	U	50	10	NA	4/23/09 15:50		151103	
Chloroform	50	U	50	10	NA	4/23/09 15:50		151103	
Chloromethane	50	U	50	10	NA	4/23/09 15:50		151103	
Dibromochloromethane	50	U	50	10	NA	4/23/09 15:50		151103	
1,1-Dichloroethane	130		50	10	NA	4/23/09 15:50		151103	
1,2-Dichloroethane	50	U	50	10	NA	4/23/09 15:50		151103	
1,1-Dichloroethene	50	U	50	10	NA	4/23/09 15:50		151103	
cis-1,2-Dichloroethene	950		50	10	NA	4/23/09 15:50		151103	
trans-1,2-Dichloroethene	50	U	50	10	NA	4/23/09 15:50		151103	
1,2-Dichloropropane	50	U	50	10	NA	4/23/09 15:50		151103	
cis-1,3-Dichloropropene	50	U	50	10	NA	4/23/09 15:50		151103	
trans-1,3-Dichloropropene	50	U	50	10	NA	4/23/09 15:50		151103	
Ethylbenzene	50	U	50	10	NA	4/23/09 15:50		151103	
2-Hexanone	100	U	100	10	NA	4/23/09 15:50		151103	
Methylene Chloride	50	U	50	10	NA	4/23/09 15:50		151103	
4-Methyl-2-pentanone (MIBK)	100	U	100	10	NA	4/23/09 15:50		151103	
Styrene	50	U	50	10	NA	4/23/09 15:50		151103	
1,1,2,2-Tetrachloroethane	50	U	50	10	NA	4/23/09 15:50		151103	
Tetrachloroethene	50	U	50	10	NA	4/23/09 15:50		151103	
Toluene	50	U	50	10	NA	4/23/09 15:50		151103	
1,1,1-Trichloroethane	370		50	10	NA	4/23/09 15:50		151103	
1,1,2-Trichloroethane	50	U	50	10	NA	4/23/09 15:50		151103	
Trichloroethene	300		50	10	NA	4/23/09 15:50		151103	
Vinyl Chloride	260		50	10	NA	4/23/09 15:50		151103	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica Wells 4/15/09  
**Sample Matrix:** Water  
**Sample Name:** MW-16A  
**Lab Code:** R0902104-006

**Service Request:** R0902104  
**Date Collected:** 4/15/09 1145  
**Date Received:** 4/16/09  
**Units:** µg/L  
**Basis:** NA

## Volatile Organic Compounds by GC/MS

**Analytical Method:** 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
o-Xylene	50	U	50	10	NA	4/23/09 15:50		151103	
m,p-Xylenes	50	U	50	10	NA	4/23/09 15:50		151103	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	98	80-123	4/23/09 15:50		
Toluene-d8	102	88-124	4/23/09 15:50		
Dibromofluoromethane	110	89-115	4/23/09 15:50		

**Comments:** \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica Wells 4/15/09  
**Sample Matrix:** Water  
**Sample Name:** MW-1A  
**Lab Code:** R0902104-007

**Service Request:** R0902104  
**Date Collected:** 4/15/09 1020  
**Date Received:** 4/16/09

**Basis:** NA

## General Chemistry Parameters

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Carbon, Total Organic (TOC)	SM20 5310 C	4.9	mg/L	1.0	1	NA	4/21/09 20:39
Chloride	300.0	46.6	mg/L	2.0	10	NA	4/16/09 13:00
Iron, Divalent (Ferrous Iron)	SM 3500-Fe B.4.c	0.28	mg/L	0.10	1	NA	4/15/09 16:45
Nitrate as Nitrogen	300.0	0.50 U	mg/L	0.50	10	NA	4/16/09 13:00
Sulfate	300.0	39.7	mg/L	2.0	10	NA	4/16/09 13:00

Comments:

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**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica Wells 4/15/09  
**Sample Matrix:** Water  
**Sample Name:** MW-1A Soluble  
**Lab Code:** R0902104-015

**Service Request:** R0902104  
**Date Collected:** 4/15/09 1020  
**Date Received:** 4/16/09

**Basis:** NA

**Iron, Divalent, Phenanthroline Method 20th Ed.**

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Iron, Divalent (Ferrous Iron)	SM 3500-Fe B.4.c	0.26	mg/L	0.10	1	NA	4/15/09 16:45

Comments:

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**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica Wells 4/15/09  
**Sample Matrix:** Water  
**Sample Name:** MW-1A  
**Lab Code:** R0902104-007

**Service Request:** R0902104  
**Date Collected:** 4/15/09 1020  
**Date Received:** 4/16/09  
**Basis:** NA

**Manganese, Total, by Inductively Coupled Plasma-Atomic Emission Spectrometry**

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Total	6010B	66	µg/L	10	1	4/21/09	4/28/09 19:54

Comments: \_\_\_\_\_

**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica Wells 4/15/09  
**Sample Matrix:** Water  
**Sample Name:** MW-1A Soluble  
**Lab Code:** R0902104-015

**Service Request:** R0902104  
**Date Collected:** 4/15/09 1020  
**Date Received:** 4/16/09

**Basis:** NA

**Manganese, Dissolved, by Inductively Coupled Plasma-Atomic Emission Spectrometry**

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Dissolved	6010B	56	µg/L	10	1	4/21/09	4/28/09 20:46

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica Wells 4/15/09  
**Sample Matrix:** Water  
**Sample Name:** MW-1A  
**Lab Code:** R0902104-007

**Service Request:** R0902104  
**Date Collected:** 4/15/09 1020  
**Date Received:** 4/16/09  
**Units:** µg/L  
**Basis:** NA

## Volatile Organic Compounds by GC/MS

**Analytical Method:** 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Acetone	20	U	20	1	NA	4/23/09 16:20		151103	
Benzene	5.0	U	5.0	1	NA	4/23/09 16:20		151103	
Bromodichloromethane	5.0	U	5.0	1	NA	4/23/09 16:20		151103	
Bromoform	5.0	U	5.0	1	NA	4/23/09 16:20		151103	
Bromomethane	5.0	U	5.0	1	NA	4/23/09 16:20		151103	
2-Butanone (MEK)	10	U	10	1	NA	4/23/09 16:20		151103	
Carbon Disulfide	10	U	10	1	NA	4/23/09 16:20		151103	
Carbon Tetrachloride	5.0	U	5.0	1	NA	4/23/09 16:20		151103	
Chlorobenzene	5.0	U	5.0	1	NA	4/23/09 16:20		151103	
Chloroethane	5.0	U	5.0	1	NA	4/23/09 16:20		151103	
Chloroform	5.0	U	5.0	1	NA	4/23/09 16:20		151103	
Chloromethane	5.0	U	5.0	1	NA	4/23/09 16:20		151103	
Dibromochloromethane	5.0	U	5.0	1	NA	4/23/09 16:20		151103	
1,1-Dichloroethane	5.0	U	5.0	1	NA	4/23/09 16:20		151103	
1,2-Dichloroethane	5.0	U	5.0	1	NA	4/23/09 16:20		151103	
1,1-Dichloroethene	5.0	U	5.0	1	NA	4/23/09 16:20		151103	
cis-1,2-Dichloroethene	5.0	U	5.0	1	NA	4/23/09 16:20		151103	
trans-1,2-Dichloroethene	5.0	U	5.0	1	NA	4/23/09 16:20		151103	
1,2-Dichloropropane	5.0	U	5.0	1	NA	4/23/09 16:20		151103	
cis-1,3-Dichloropropene	5.0	U	5.0	1	NA	4/23/09 16:20		151103	
trans-1,3-Dichloropropene	5.0	U	5.0	1	NA	4/23/09 16:20		151103	
Ethylbenzene	5.0	U	5.0	1	NA	4/23/09 16:20		151103	
2-Hexanone	10	U	10	1	NA	4/23/09 16:20		151103	
Methylene Chloride	5.0	U	5.0	1	NA	4/23/09 16:20		151103	
4-Methyl-2-pentanone (MIBK)	10	U	10	1	NA	4/23/09 16:20		151103	
Styrene	5.0	U	5.0	1	NA	4/23/09 16:20		151103	
1,1,2,2-Tetrachloroethane	5.0	U	5.0	1	NA	4/23/09 16:20		151103	
Tetrachloroethene	5.0	U	5.0	1	NA	4/23/09 16:20		151103	
Toluene	5.0	U	5.0	1	NA	4/23/09 16:20		151103	
1,1,1-Trichloroethane	5.0	U	5.0	1	NA	4/23/09 16:20		151103	
1,1,2-Trichloroethane	5.0	U	5.0	1	NA	4/23/09 16:20		151103	
Trichloroethene	5.0	U	5.0	1	NA	4/23/09 16:20		151103	
Vinyl Chloride	5.0	U	5.0	1	NA	4/23/09 16:20		151103	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica Wells 4/15/09  
**Sample Matrix:** Water  
**Sample Name:** MW-1A  
**Lab Code:** R0902104-007

**Service Request:** R0902104  
**Date Collected:** 4/15/09 1020  
**Date Received:** 4/16/09  
**Units:** µg/L  
**Basis:** NA

## Volatile Organic Compounds by GC/MS

**Analytical Method:** 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
o-Xylene	5.0	U	5.0	1	NA	4/23/09 16:20		151103	
m,p-Xylenes	5.0	U	5.0	1	NA	4/23/09 16:20		151103	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	99	80-123	4/23/09 16:20		
Toluene-d8	96	88-124	4/23/09 16:20		
Dibromofluoromethane	110	89-115	4/23/09 16:20		

**Comments:** \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica Wells 4/15/09  
**Sample Matrix:** Water  
**Sample Name:** TRIP BLANK  
**Lab Code:** R0902104-016

**Service Request:** R0902104  
**Date Collected:** 4/15/09  
**Date Received:** 4/16/09  
**Units:** µg/L  
**Basis:** NA

## Volatile Organic Compounds by GC/MS

**Analytical Method:** 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Acetone	20	U	20	1	NA	4/23/09 16:50		151103	
Benzene	5.0	U	5.0	1	NA	4/23/09 16:50		151103	
Bromodichloromethane	5.0	U	5.0	1	NA	4/23/09 16:50		151103	
Bromoform	5.0	U	5.0	1	NA	4/23/09 16:50		151103	
Bromomethane	5.0	U	5.0	1	NA	4/23/09 16:50		151103	
2-Butanone (MEK)	10	U	10	1	NA	4/23/09 16:50		151103	
Carbon Disulfide	10	U	10	1	NA	4/23/09 16:50		151103	
Carbon Tetrachloride	5.0	U	5.0	1	NA	4/23/09 16:50		151103	
Chlorobenzene	5.0	U	5.0	1	NA	4/23/09 16:50		151103	
Chloroethane	5.0	U	5.0	1	NA	4/23/09 16:50		151103	
Chloroform	5.0	U	5.0	1	NA	4/23/09 16:50		151103	
Chloromethane	5.0	U	5.0	1	NA	4/23/09 16:50		151103	
Dibromochloromethane	5.0	U	5.0	1	NA	4/23/09 16:50		151103	
1,1-Dichloroethane	5.0	U	5.0	1	NA	4/23/09 16:50		151103	
1,2-Dichloroethane	5.0	U	5.0	1	NA	4/23/09 16:50		151103	
1,1-Dichloroethene	5.0	U	5.0	1	NA	4/23/09 16:50		151103	
cis-1,2-Dichloroethene	5.0	U	5.0	1	NA	4/23/09 16:50		151103	
trans-1,2-Dichloroethene	5.0	U	5.0	1	NA	4/23/09 16:50		151103	
1,2-Dichloropropane	5.0	U	5.0	1	NA	4/23/09 16:50		151103	
cis-1,3-Dichloropropene	5.0	U	5.0	1	NA	4/23/09 16:50		151103	
trans-1,3-Dichloropropene	5.0	U	5.0	1	NA	4/23/09 16:50		151103	
Ethylbenzene	5.0	U	5.0	1	NA	4/23/09 16:50		151103	
2-Hexanone	10	U	10	1	NA	4/23/09 16:50		151103	
Methylene Chloride	5.0	U	5.0	1	NA	4/23/09 16:50		151103	
4-Methyl-2-pentanone (MIBK)	10	U	10	1	NA	4/23/09 16:50		151103	
Styrene	5.0	U	5.0	1	NA	4/23/09 16:50		151103	
1,1,2,2-Tetrachloroethane	5.0	U	5.0	1	NA	4/23/09 16:50		151103	
Tetrachloroethene	5.0	U	5.0	1	NA	4/23/09 16:50		151103	
Toluene	5.0	U	5.0	1	NA	4/23/09 16:50		151103	
1,1,1-Trichloroethane	5.0	U	5.0	1	NA	4/23/09 16:50		151103	
1,1,2-Trichloroethane	5.0	U	5.0	1	NA	4/23/09 16:50		151103	
Trichloroethene	5.0	U	5.0	1	NA	4/23/09 16:50		151103	
Vinyl Chloride	5.0	U	5.0	1	NA	4/23/09 16:50		151103	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica Wells 4/15/09  
**Sample Matrix:** Water  
**Sample Name:** TRIP BLANK  
**Lab Code:** R0902104-016

**Service Request:** R0902104  
**Date Collected:** 4/15/09  
**Date Received:** 4/16/09  
**Units:** µg/L  
**Basis:** NA

## Volatile Organic Compounds by GC/MS

**Analytical Method:** 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
o-Xylene	5.0	U	5.0	1	NA	4/23/09 16:50		151103	
m,p-Xylenes	5.0	U	5.0	1	NA	4/23/09 16:50		151103	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	99	80-123	4/23/09 16:50		
Toluene-d8	101	88-124	4/23/09 16:50		
Dibromofluoromethane	110	89-115	4/23/09 16:50		

**Comments:** \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica Wells 4/15/09  
**Sample Matrix:** Water  
**Sample Name:** Method Blank  
**Lab Code:** R0902104-MB1

**Service Request:** R0902104  
**Date Collected:** NA  
**Date Received:** NA

**Basis:** NA

## General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Carbon, Total Organic (TOC)	SM20 5310 C	1.0	U	mg/L	1.0	1	NA	4/21/09 16:45
Chloride	300.0	0.20	U	mg/L	0.20	1	NA	4/16/09 10:01
Iron, Divalent (Ferrous Iron)	SM 3500-Fe B.4.c	0.10	U	mg/L	0.10	1	NA	4/15/09 16:45
Nitrate as Nitrogen	300.0	0.050	U	mg/L	0.050	1	NA	4/16/09 10:01
Sulfate	300.0	0.20	U	mg/L	0.20	1	NA	4/16/09 10:01

Comments:

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## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica Wells 4/15/09  
**Sample Matrix:** Water  
**Sample Name:** Method Blank  
**Lab Code:** R0902104-MB2

**Service Request:** R0902104  
**Date Collected:** NA  
**Date Received:** NA  
**Basis:** NA

## General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Carbon, Total Organic (TOC)	SM20 5310 C	1.0	U	mg/L	1.0	1	NA	4/22/09 17:19
Chloride	300.0	0.20	U	mg/L	0.20	1	NA	4/16/09 18:58
Sulfate	300.0	0.20	U	mg/L	0.20	1	NA	4/16/09 18:58

Comments:

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**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica Wells 4/15/09  
**Sample Matrix:** Water  
**Sample Name:** Method Blank  
**Lab Code:** R0902104-MB1

**Service Request:** R0902104  
**Date Collected:** NA  
**Date Received:** NA  
**Basis:** NA

**Inorganic Parameters**

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Dissolved	6010B	10	U	µg/L	10	1	4/21/09	4/28/09 17:59
Manganese, Total	6010B	10	U	µg/L	10	1	4/21/09	4/28/09 17:59

Comments: \_\_\_\_\_

**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica Wells 4/15/09  
**Sample Matrix:** Water  
**Sample Name:** Method Blank  
**Lab Code:** R0902104-MB2

**Service Request:** R0902104  
**Date Collected:** NA  
**Date Received:** NA  
**Basis:** NA

**Manganese, Dissolved, by Inductively Coupled Plasma-Atomic Emission Spectrometry**

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Dissolved	6010B	10 U	µg/L	10	1	4/21/09	4/28/09 18:10

Comments:

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## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica Wells 4/15/09  
**Sample Matrix:** Water  
**Sample Name:** Method Blank  
**Lab Code:** RQ0903154-01

**Service Request:** R0902104  
**Date Collected:** NA  
**Date Received:** NA  
**Units:** µg/L  
**Basis:** NA

## Volatile Organic Compounds by GC/MS

**Analytical Method:** 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Acetone	20	U	20	1	NA	4/23/09 12:50		151103	
Benzene	5.0	U	5.0	1	NA	4/23/09 12:50		151103	
Bromodichloromethane	5.0	U	5.0	1	NA	4/23/09 12:50		151103	
Bromoform	5.0	U	5.0	1	NA	4/23/09 12:50		151103	
Bromomethane	5.0	U	5.0	1	NA	4/23/09 12:50		151103	
2-Butanone (MEK)	10	U	10	1	NA	4/23/09 12:50		151103	
Carbon Disulfide	10	U	10	1	NA	4/23/09 12:50		151103	
Carbon Tetrachloride	5.0	U	5.0	1	NA	4/23/09 12:50		151103	
Chlorobenzene	5.0	U	5.0	1	NA	4/23/09 12:50		151103	
Chloroethane	5.0	U	5.0	1	NA	4/23/09 12:50		151103	
Chloroform	5.0	U	5.0	1	NA	4/23/09 12:50		151103	
Chloromethane	5.0	U	5.0	1	NA	4/23/09 12:50		151103	
Dibromochloromethane	5.0	U	5.0	1	NA	4/23/09 12:50		151103	
1,1-Dichloroethane	5.0	U	5.0	1	NA	4/23/09 12:50		151103	
1,2-Dichloroethane	5.0	U	5.0	1	NA	4/23/09 12:50		151103	
1,1-Dichloroethene	5.0	U	5.0	1	NA	4/23/09 12:50		151103	
cis-1,2-Dichloroethene	5.0	U	5.0	1	NA	4/23/09 12:50		151103	
trans-1,2-Dichloroethene	5.0	U	5.0	1	NA	4/23/09 12:50		151103	
1,2-Dichloropropane	5.0	U	5.0	1	NA	4/23/09 12:50		151103	
cis-1,3-Dichloropropene	5.0	U	5.0	1	NA	4/23/09 12:50		151103	
trans-1,3-Dichloropropene	5.0	U	5.0	1	NA	4/23/09 12:50		151103	
Ethylbenzene	5.0	U	5.0	1	NA	4/23/09 12:50		151103	
2-Hexanone	10	U	10	1	NA	4/23/09 12:50		151103	
Methylene Chloride	5.0	U	5.0	1	NA	4/23/09 12:50		151103	
4-Methyl-2-pentanone (MIBK)	10	U	10	1	NA	4/23/09 12:50		151103	
Styrene	5.0	U	5.0	1	NA	4/23/09 12:50		151103	
1,1,2,2-Tetrachloroethane	5.0	U	5.0	1	NA	4/23/09 12:50		151103	
Tetrachloroethene	5.0	U	5.0	1	NA	4/23/09 12:50		151103	
Toluene	5.0	U	5.0	1	NA	4/23/09 12:50		151103	
1,1,1-Trichloroethane	5.0	U	5.0	1	NA	4/23/09 12:50		151103	
1,1,2-Trichloroethane	5.0	U	5.0	1	NA	4/23/09 12:50		151103	
Trichloroethene	5.0	U	5.0	1	NA	4/23/09 12:50		151103	
Vinyl Chloride	5.0	U	5.0	1	NA	4/23/09 12:50		151103	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica Wells 4/15/09  
**Sample Matrix:** Water  
**Sample Name:** Method Blank  
**Lab Code:** RQ0903154-01

**Service Request:** R0902104  
**Date Collected:** NA  
**Date Received:** NA  
**Units:** µg/L  
**Basis:** NA

## Volatile Organic Compounds by GC/MS

**Analytical Method:** 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
o-Xylene	5.0	U	5.0	1	NA	4/23/09 12:50		151103	
m,p-Xylenes	5.0	U	5.0	1	NA	4/23/09 12:50		151103	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	100	80-123	4/23/09 12:50		
Toluene-d8	102	88-124	4/23/09 12:50		
Dibromofluoromethane	103	89-115	4/23/09 12:50		

**Comments:** \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica Wells 4/15/09  
**Sample Matrix:** Water  
**Sample Name:** Method Blank  
**Lab Code:** RQ0903176-01

**Service Request:** R0902104  
**Date Collected:** NA  
**Date Received:** NA  
**Units:** µg/L  
**Basis:** NA

## Volatile Organic Compounds by GC/MS

**Analytical Method:** 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Acetone	20	U	20	1	NA	4/24/09 13:11		151352	
Benzene	5.0	U	5.0	1	NA	4/24/09 13:11		151352	
Bromodichloromethane	5.0	U	5.0	1	NA	4/24/09 13:11		151352	
Bromoform	5.0	U	5.0	1	NA	4/24/09 13:11		151352	
Bromomethane	5.0	U	5.0	1	NA	4/24/09 13:11		151352	
2-Butanone (MEK)	10	U	10	1	NA	4/24/09 13:11		151352	
Carbon Disulfide	10	U	10	1	NA	4/24/09 13:11		151352	
Carbon Tetrachloride	5.0	U	5.0	1	NA	4/24/09 13:11		151352	
Chlorobenzene	5.0	U	5.0	1	NA	4/24/09 13:11		151352	
Chloroethane	5.0	U	5.0	1	NA	4/24/09 13:11		151352	
Chloroform	5.0	U	5.0	1	NA	4/24/09 13:11		151352	
Chloromethane	5.0	U	5.0	1	NA	4/24/09 13:11		151352	
Dibromochloromethane	5.0	U	5.0	1	NA	4/24/09 13:11		151352	
1,1-Dichloroethane	5.0	U	5.0	1	NA	4/24/09 13:11		151352	
1,2-Dichloroethane	5.0	U	5.0	1	NA	4/24/09 13:11		151352	
1,1-Dichloroethene	5.0	U	5.0	1	NA	4/24/09 13:11		151352	
cis-1,2-Dichloroethene	5.0	U	5.0	1	NA	4/24/09 13:11		151352	
trans-1,2-Dichloroethene	5.0	U	5.0	1	NA	4/24/09 13:11		151352	
1,2-Dichloropropane	5.0	U	5.0	1	NA	4/24/09 13:11		151352	
cis-1,3-Dichloropropene	5.0	U	5.0	1	NA	4/24/09 13:11		151352	
trans-1,3-Dichloropropene	5.0	U	5.0	1	NA	4/24/09 13:11		151352	
Ethylbenzene	5.0	U	5.0	1	NA	4/24/09 13:11		151352	
2-Hexanone	10	U	10	1	NA	4/24/09 13:11		151352	
Methylene Chloride	5.0	U	5.0	1	NA	4/24/09 13:11		151352	
4-Methyl-2-pentanone (MIBK)	10	U	10	1	NA	4/24/09 13:11		151352	
Styrene	5.0	U	5.0	1	NA	4/24/09 13:11		151352	
1,1,2,2-Tetrachloroethane	5.0	U	5.0	1	NA	4/24/09 13:11		151352	
Tetrachloroethene	5.0	U	5.0	1	NA	4/24/09 13:11		151352	
Toluene	5.0	U	5.0	1	NA	4/24/09 13:11		151352	
1,1,1-Trichloroethane	5.0	U	5.0	1	NA	4/24/09 13:11		151352	
1,1,2-Trichloroethane	5.0	U	5.0	1	NA	4/24/09 13:11		151352	
Trichloroethene	5.0	U	5.0	1	NA	4/24/09 13:11		151352	
Vinyl Chloride	5.0	U	5.0	1	NA	4/24/09 13:11		151352	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica Wells 4/15/09  
**Sample Matrix:** Water  
**Sample Name:** Method Blank  
**Lab Code:** RQ0903176-01

**Service Request:** R0902104  
**Date Collected:** NA  
**Date Received:** NA  
**Units:** µg/L  
**Basis:** NA

## Volatile Organic Compounds by GC/MS

**Analytical Method:** 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
o-Xylene	5.0	U	5.0	1	NA	4/24/09 13:11		151352	
m,p-Xylenes	5.0	U	5.0	1	NA	4/24/09 13:11		151352	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	98	80-123	4/24/09 13:11		
Toluene-d8	103	88-124	4/24/09 13:11		
Dibromofluoromethane	108	89-115	4/24/09 13:11		

**Comments:** \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Report

**Client:** Energy Solutions  
**Project:** Leica Wells 4/15/09  
**Sample Matrix:** Water

**Service Request:** R0902104  
**Date Analyzed:** 4/15/09 -  
4/21/09

**Lab Control Sample Summary**  
**General Chemistry Parameters**

**Units:** mg/L

**Basis:** NA

Analyte Name	Method	Lab Control Sample R0902104-LCS1			% Rec Limits
		Result	Expected	% Rec	
Carbon, Total Organic (TOC)	SM20 5310 C	9.13	10.0	91	87 - 120
Chloride	300.0	1.93	2.00	96	90 - 110
Iron, Divalent (Ferrous Iron)	SM 3500-Fe B.4.c	0.418	0.40	104	86 - 114
Nitrate as Nitrogen	300.0	0.962	1.00	96	90 - 110
Sulfate	300.0	2.00	2.00	100	90 - 110

**Comments:** \_\_\_\_\_

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client:** Energy Solutions  
**Project:** Leica Wells 4/15/09  
**Sample Matrix:** Water

**Service Request:** R0902104  
**Date Analyzed:** 4/16/09 -  
4/22/09

**Lab Control Sample Summary**  
**General Chemistry Parameters**

**Units:** mg/L

**Basis:** NA

Analyte Name	Method	Lab Control Sample R0902104-LCS2			% Rec Limits
		Result	Expected	% Rec	
Carbon, Total Organic (TOC)	SM20 5310 C	9.10	10.0	91	87 - 120
Chloride	300.0	1.94	2.00	97	90 - 110
Sulfate	300.0	1.98	2.00	99	90 - 110

Comments:

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COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client:** Energy Solutions  
**Project:** Leica Wells 4/15/09  
**Sample Matrix:** Water

**Service Request:** R0902104  
**Date Analyzed:** 4/28/09

**Lab Control Sample Summary  
Inorganic Parameters**

**Units:** µg/L  
**Basis:** NA

Analyte Name	Method	Lab Control Sample R0902104-LCS			% Rec Limits
		Result	Expected	% Rec	
Manganese, Dissolved	6010B	490	500	98	80 - 120
Manganese, Total	6010B	490	500	98	80 - 120

**Comments:** \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client:** Energy Solutions  
**Project:** Leica Wells 4/15/09  
**Sample Matrix:** Water

**Service Request:** R0902104  
**Date Analyzed:** 4/23/09

**Lab Control Sample Summary  
Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260B

**Units:** µg/L

**Basis:** NA

**Analysis Lot:** 151103

Analyte Name	Lab Control Sample RQ0903154-02			% Rec Limits
	Result	Expected	% Rec	
Acetone	17.7	20.0	89	50 - 150
Benzene	17.5	20.0	88	70 - 130
Bromodichloromethane	20.4	20.0	102	70 - 130
Bromoform	20.9	20.0	104	70 - 130
Bromomethane	19.4	20.0	97	50 - 150
2-Butanone (MEK)	20.4	20.0	102	50 - 150
Carbon Disulfide	19.3	20.0	97	70 - 130
Carbon Tetrachloride	18.8	20.0	94	70 - 130
Chlorobenzene	19.1	20.0	95	70 - 130
Chloroethane	19.4	20.0	97	70 - 130
Chloroform	19.1	20.0	95	70 - 130
Chloromethane	20.5	20.0	103	70 - 130
Dibromochloromethane	21.0	20.0	105	70 - 130
1,1-Dichloroethane	18.4	20.0	92	70 - 130
1,2-Dichloroethane	20.6	20.0	103	70 - 130
1,1-Dichloroethene	18.0	20.0	90	70 - 130
cis-1,2-Dichloroethene	17.9	20.0	90	70 - 130
trans-1,2-Dichloroethene	17.1	20.0	86	70 - 130
1,2-Dichloropropane	18.9	20.0	95	70 - 130
cis-1,3-Dichloropropene	18.2	20.0	91	70 - 130
trans-1,3-Dichloropropene	17.9	20.0	89	70 - 130
Ethylbenzene	18.8	20.0	94	70 - 130
2-Hexanone	20.1	20.0	101	70 - 130
Methylene Chloride	17.9	20.0	90	70 - 130
4-Methyl-2-pentanone (MIBK)	19.4	20.0	97	70 - 130
Styrene	21.1	20.0	106	70 - 130
1,1,2,2-Tetrachloroethane	22.1	20.0	111	70 - 130
Tetrachloroethene	18.7	20.0	94	70 - 130
Toluene	17.6	20.0	88	70 - 130
1,1,1-Trichloroethane	18.5	20.0	92	70 - 130
1,1,2-Trichloroethane	18.9	20.0	95	70 - 130
Trichloroethene	16.9	20.0	84	70 - 130
Vinyl Chloride	19.3	20.0	97	70 - 130
o-Xylene	18.4	20.0	92	70 - 130
m,p-Xylenes	38.1	40.0	95	70 - 130

**Comments:** \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Energy Solutions  
 Project: Leica Wells 4/15/09  
 Sample Matrix: Water

Service Request: R0902104  
 Date Analyzed: 4/24/09

Lab Control Sample Summary  
 Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Units: µg/L

Basis: NA

Analysis Lot: 151352

Analyte Name	Lab Control Sample RQ0903176-02			% Rec Limits
	Result	Expected	% Rec	
Acetone	16.9	20.0	85	50 - 150
Benzene	17.4	20.0	87	70 - 130
Bromodichloromethane	20.8	20.0	104	70 - 130
Bromoform	21.0	20.0	105	70 - 130
Bromomethane	19.5	20.0	98	50 - 150
2-Butanone (MEK)	17.0	20.0	85	50 - 150
Carbon Disulfide	17.4	20.0	87	70 - 130
Carbon Tetrachloride	19.1	20.0	95	70 - 130
Chlorobenzene	19.2	20.0	96	70 - 130
Chloroethane	20.9	20.0	104	70 - 130
Chloroform	18.8	20.0	94	70 - 130
Chloromethane	21.4	20.0	107	70 - 130
Dibromochloromethane	21.7	20.0	109	70 - 130
1,1-Dichloroethane	18.7	20.0	94	70 - 130
1,2-Dichloroethane	20.1	20.0	100	70 - 130
1,1-Dichloroethene	17.4	20.0	87	70 - 130
cis-1,2-Dichloroethene	17.8	20.0	89	70 - 130
trans-1,2-Dichloroethene	17.3	20.0	87	70 - 130
1,2-Dichloropropane	18.9	20.0	94	70 - 130
cis-1,3-Dichloropropene	18.2	20.0	91	70 - 130
trans-1,3-Dichloropropene	17.5	20.0	87	70 - 130
Ethylbenzene	18.6	20.0	93	70 - 130
2-Hexanone	15.5	20.0	78	70 - 130
Methylene Chloride	17.7	20.0	88	70 - 130
4-Methyl-2-pentanone (MIBK)	15.0	20.0	75	70 - 130
Styrene	21.0	20.0	105	70 - 130
1,1,2,2-Tetrachloroethane	19.8	20.0	99	70 - 130
Tetrachloroethene	18.6	20.0	93	70 - 130
Toluene	17.5	20.0	87	70 - 130
1,1,1-Trichloroethane	18.2	20.0	91	70 - 130
1,1,2-Trichloroethane	17.6	20.0	88	70 - 130
Trichloroethene	16.8	20.0	84	70 - 130
Vinyl Chloride	20.2	20.0	101	70 - 130
o-Xylene	18.9	20.0	94	70 - 130
m,p-Xylenes	38.1	40.0	95	70 - 130

Comments: \_\_\_\_\_

**Columbia Analytical Services<sup>®</sup>**  
An Employee-Owned Company  
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CAS Contact

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CAS Contact

[illegible]

White - Return to Originator: Yellow - Lab Copy: Pink - Retained by Client

SEC-000-1102-08

## Cooler Receipt And Preservation Check Form

Project/Client 10102 Submission Number R0902104Cooler received on 4/15/09 by: JP COURIER: CAS UPS FEDEX VELOCITY CLIENT

1. Were custody seals on outside of cooler? YES NO
2. Were custody papers properly filled out (ink, signed, etc.)? YES NO
3. Did all bottles arrive in good condition (unbroken)? YES NO
4. Did any VOA vials have significant\* air bubbles? YES NO N/A
5. Were Ice or Ice packs present? YES NO
6. Where did the bottles originate? CAS/ROC, CLIENT
7. Temperature of cooler(s) upon receipt: 6°

Is the temperature within 0° - 6° C?: Yes Yes Yes Yes Yes

If No, Explain Below

No No No No No

Date/Time Temperatures Taken: 4/15/09 1545Thermometer ID: 161 / IR GUN#2 / IR GUN#3 Reading From: Temp Blank / Sample Bottle

If out of Temperature, note packing/ice condition, Client Approval to Run Samples: \_\_\_\_\_

PC Secondary Review: CB 4/16/09Cooler Breakdown: Date: 4/16/09 by: MRP

1. Were all bottle labels complete (i.e. analysis, preservation, etc.)? YES NO
2. Did all bottle labels and tags agree with custody papers? YES NO
3. Were correct containers used for the tests indicated? YES NO
4. Air Samples: Cassettes / Tubes Intact Canisters Pressurized Tedlar® Bags Inflated N/A

Explain any discrepancies: \_\_\_\_\_

pH	Reagent	YES	NO	Lot Received	Exp	Sample ID	Vol. Added	Lot Added	Final pH
≥12	NaOH								
≤2	HNO <sub>3</sub>	✓		BDB2689A	10/09				
≤2	H <sub>2</sub> SO <sub>4</sub>								
Residual Chlorine (-)	For TCN and Phenol			If present, contact PM to add ascorbic acid					
	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	-	-			*Not to be tested before analysis – pH tested and recorded by VOAs or GenChem on a separate worksheet			
	Zn Aceta	-	-						
	HCl	*	*	E50A11	10/09				

Yes = All samples OK

No = Samples were preserved at lab as listed

PM OK to Adjust: \_\_\_\_\_

Bottle lot numbers: 034505, 8-260-001, 8-212-003

Other Comments: \_\_\_\_\_

PC Secondary Review: CB 5/7/09

\*significant air bubbles are greater than 5-6 mm

00063

May 06, 2009

Service Request No: R0902131

Mr. Robert McPeak  
Energy Solutions  
143 West Street  
New Milford, CT 06776

**Laboratory Results for: Leica/Wells 4/09**

Dear Mr. McPeak:

Enclosed are the results of the sample(s) submitted to our laboratory on April 17, 2009. For your reference, these analyses have been assigned our service request number **R0902131**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 134. You may also contact me via email at KBunker@caslab.com.

Respectfully submitted,

**Columbia Analytical Services, Inc.**



Karen Bunker  
Project Manager

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COLUMBIA ANALYTICAL SERVICES, INC.

Client: Energy Solutions  
Project: Leica Wells 4/09  
Sample Matrix: Water

Service Request No.: R0902131  
Date Received: 4/17/09

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier II data deliverables. When appropriate to the method, method blank results have been reported with each analytical test. Surrogate recoveries have been reported for all applicable organic analyses.

**Sample Receipt**

Eleven (11) groundwater samples were collected by the client on 4/16-17/09 and received for analysis at Columbia Analytical Services on the 4/17/09 via CAS Courier. The samples were received in good condition and consistent with the accompanying chain of custody form. The cooler receipt temperatures were 6°C, within the guidelines of 0-6°C.

**Volatile Organics**

Thirteen (13) water samples including two (2) Trip Blanks were analyzed for Volatile Organic compounds by GC/MS method 8260B.

The Initial and Continuing Calibration Criteria were met.

Batch QC is included in the report. All Laboratory Control Sample (LCS) recoveries for target compounds were within QC limits.

All Surrogate recoveries are within acceptance limits.

All Laboratory Method Blanks were free from contamination.

The samples were analyzed within the 14 day holding time for the method. All vials are checked for preservation after the analysis in order to maintain the integrity of the sample. All vials were found to be preserved to a pH of <2.

No problems were encountered during the analysis of these samples.

**Inorganics**

Nine (9) water samples were analyzed for TOC, Total and Soluble Ferrous Iron and Manganese and IC compounds: Chloride, Nitrate, and Sulfate. All Method numbers are noted on the Data Form 1's of the report.

All Initial and Continuing Calibration Criteria was met for these analyses.

Batch QC is included in the report. All Laboratory Control Sample recoveries were within QC acceptance limits.

All Laboratory Method Blanks were free from contamination.

All holding times were met for these analyses including the 24 hour holding time for Ferrous Iron and the 48 hr holding time for Nitrate.

No problems were encountered with these analyses.

Approved by Xavier Bunker Date 5/6/09

00002

## CASE NARRATIVE

This report contains analytical results for the following samples:  
Service Request Number: R0902131

<u>Lab ID</u>	<u>Client ID</u>
R0902131-001	MW 3
R0902131-002	MW 23
R0902131-003	MW 10
R0902131-004	MW 22
R0902131-005	MW 22A
R0902131-006	MW 14
R0902131-007	MW 14A
R0902131-008	MW 5
R0902131-009	MW 5A
R0902131-010	TRIP BLANK
R0902131-011	MW 6A
R0902131-012	MW 6
R0902131-013	MW 11A
R0902131-014	TRIP BLANK
R0902131-015	MW 22 DISS
R0902131-016	MW 22A DISS
R0902131-017	MW 14 DISS
R0902131-018	MW 14A DISS
R0902131-019	MW 5 DISS
R0902131-020	MW 5A DISS
R0902131-021	MW 6A DISS
R0902131-022	MW 6 DISS
R0902131-023	MW 11A DISS



## REPORT QUALIFIERS

- U - Indicates compound was analyzed for but not detected. The sample quantitation limit must be corrected for dilution and for percent moisture.
- J - Indicates an estimated value. The flag is used either when estimating a concentration for tentatively identified compounds, or when the concentration is less than the reporting limit and greater than the MDL (concentrations are not verified within the initial calibration range).
- For DoD reports, the J-flag may also be used to indicate that the concentration between two columns for pesticides/Aroclors is greater than 40% difference.
- B - Indicates this compound was also detected in the associated method blank at a concentration that may have contributed to the sample result.
- B- Metals - Indicates an estimated value. The concentration is less than the reporting limit and greater than the MDL (concentrations are not verified within the initial calibration range).
- E - Indicates that the sample concentration had exceeded the calibration range for that specific analysis.
- D - Indicates the sample concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range.
- \* - Indicates that a quality control parameter has exceeded laboratory limits.
- X - See Case Narrative for discussion.
- P - This flag is used for a pesticide/Aroclor target concentration when there is a greater than 40% (25% for CLP) difference for detected concentrations between the two GC columns.
- For DoD reports, the J-flag is used instead of "P".
- N - Inorganics- Indicates the matrix spike recovery was outside laboratory limits.
- N- Organics- Indicates presumptive evidence of a compound (reported as a tentatively identified compound) based on the mass spectral library search.



### **CAS/Rochester Lab ID # for State Certifications<sup>1</sup>**

NELAP Accredited  
Delaware Accredited  
Connecticut ID # PH0556  
Florida ID # E87674  
Illinois ID #200047  
Maine ID #NY0032  
Nebraska Accredited  
Navy Facilities Engineering Service Center Approved

Nevada ID # NY-00032  
New Jersey ID # NY004  
New York ID # 10145  
New Hampshire ID # 294100 A/B  
Pennsylvania ID# 68-786  
Rhode Island ID # 158  
West Virginia ID # 292

<sup>1</sup> Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable, except as noted in the laboratory case narrative provided. For a specific list of accredited analytes, refer to the certifications section at [www.caslab.com](http://www.caslab.com).

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
 Project: Leica/Wells 4/09  
 Sample Matrix: Water  
 Sample Name: MW 3  
 Lab Code: R0902131-001

Service Request: R0902131  
 Date Collected: 4/16/09 1700  
 Date Received: 4/17/09

Units: µg/L  
 Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Acetone	20	U	20	1	NA	4/23/09 17:20		151103	
Benzene	5.0	U	5.0	1	NA	4/23/09 17:20		151103	
Bromodichloromethane	5.0	U	5.0	1	NA	4/23/09 17:20		151103	
Bromoform	5.0	U	5.0	1	NA	4/23/09 17:20		151103	
Bromomethane	5.0	U	5.0	1	NA	4/23/09 17:20		151103	
2-Butanone (MEK)	10	U	10	1	NA	4/23/09 17:20		151103	
Carbon Disulfide	10	U	10	1	NA	4/23/09 17:20		151103	
Carbon Tetrachloride	5.0	U	5.0	1	NA	4/23/09 17:20		151103	
Chlorobenzene	5.0	U	5.0	1	NA	4/23/09 17:20		151103	
Chloroethane	5.0	U	5.0	1	NA	4/23/09 17:20		151103	
Chloroform	5.0	U	5.0	1	NA	4/23/09 17:20		151103	
Chloromethane	5.0	U	5.0	1	NA	4/23/09 17:20		151103	
Dibromochloromethane	5.0	U	5.0	1	NA	4/23/09 17:20		151103	
1,1-Dichloroethane	5.0	U	5.0	1	NA	4/23/09 17:20		151103	
1,2-Dichloroethane	5.0	U	5.0	1	NA	4/23/09 17:20		151103	
1,1-Dichloroethene	5.0	U	5.0	1	NA	4/23/09 17:20		151103	
cis-1,2-Dichloroethene	5.0	U	5.0	1	NA	4/23/09 17:20		151103	
trans-1,2-Dichloroethene	5.0	U	5.0	1	NA	4/23/09 17:20		151103	
1,2-Dichloropropane	5.0	U	5.0	1	NA	4/23/09 17:20		151103	
cis-1,3-Dichloropropene	5.0	U	5.0	1	NA	4/23/09 17:20		151103	
trans-1,3-Dichloropropene	5.0	U	5.0	1	NA	4/23/09 17:20		151103	
Ethylbenzene	5.0	U	5.0	1	NA	4/23/09 17:20		151103	
2-Hexanone	10	U	10	1	NA	4/23/09 17:20		151103	
Methylene Chloride	5.0	U	5.0	1	NA	4/23/09 17:20		151103	
4-Methyl-2-pentanone (MIBK)	10	U	10	1	NA	4/23/09 17:20		151103	
Styrene	5.0	U	5.0	1	NA	4/23/09 17:20		151103	
1,1,2,2-Tetrachloroethane	5.0	U	5.0	1	NA	4/23/09 17:20		151103	
Tetrachloroethene	5.0	U	5.0	1	NA	4/23/09 17:20		151103	
Toluene	5.0	U	5.0	1	NA	4/23/09 17:20		151103	
1,1,1-Trichloroethane	5.0	U	5.0	1	NA	4/23/09 17:20		151103	
1,1,2-Trichloroethane	5.0	U	5.0	1	NA	4/23/09 17:20		151103	
Trichloroethene	5.0	U	5.0	1	NA	4/23/09 17:20		151103	
Vinyl Chloride	5.0	U	5.0	1	NA	4/23/09 17:20		151103	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
Project: Leica/Wells 4/09  
Sample Matrix: Water  
Sample Name: MW 3  
Lab Code: R0902131-001

Service Request: R0902131  
Date Collected: 4/16/09 1700  
Date Received: 4/17/09  
Units: µg/L  
Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
o-Xylene	5.0	U	5.0	1	NA	4/23/09 17:20		151103	
m,p-Xylenes	5.0	U	5.0	1	NA	4/23/09 17:20		151103	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	99	80-123	4/23/09 17:20		
Toluene-d8	100	88-124	4/23/09 17:20		
Dibromofluoromethane	109	89-115	4/23/09 17:20		

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
 Project: Leica/Wells 4/09  
 Sample Matrix: Water  
 Sample Name: MW 23  
 Lab Code: R0902131-002

Service Request: R0902131  
 Date Collected: 4/16/09 1730  
 Date Received: 4/17/09  
 Units: µg/L  
 Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Acetone	20	U	20	1	NA	4/24/09 13:52		151352	
Benzene	5.0	U	5.0	1	NA	4/24/09 13:52		151352	
Bromodichloromethane	5.0	U	5.0	1	NA	4/24/09 13:52		151352	
Bromoform	5.0	U	5.0	1	NA	4/24/09 13:52		151352	
Bromomethane	5.0	U	5.0	1	NA	4/24/09 13:52		151352	
2-Butanone (MEK)	10	U	10	1	NA	4/24/09 13:52		151352	
Carbon Disulfide	24		10	1	NA	4/24/09 13:52		151352	
Carbon Tetrachloride	5.0	U	5.0	1	NA	4/24/09 13:52		151352	
Chlorobenzene	5.0	U	5.0	1	NA	4/24/09 13:52		151352	
Chloroethane	5.0	U	5.0	1	NA	4/24/09 13:52		151352	
Chloroform	5.0	U	5.0	1	NA	4/24/09 13:52		151352	
Chloromethane	5.0	U	5.0	1	NA	4/24/09 13:52		151352	
Dibromochloromethane	5.0	U	5.0	1	NA	4/24/09 13:52		151352	
1,1-Dichloroethane	5.0	U	5.0	1	NA	4/24/09 13:52		151352	
1,2-Dichloroethane	5.0	U	5.0	1	NA	4/24/09 13:52		151352	
1,1-Dichloroethene	5.0	U	5.0	1	NA	4/24/09 13:52		151352	
cis-1,2-Dichloroethene	5.0	U	5.0	1	NA	4/24/09 13:52		151352	
trans-1,2-Dichloroethene	5.0	U	5.0	1	NA	4/24/09 13:52		151352	
1,2-Dichloropropane	5.0	U	5.0	1	NA	4/24/09 13:52		151352	
cis-1,3-Dichloropropene	5.0	U	5.0	1	NA	4/24/09 13:52		151352	
trans-1,3-Dichloropropene	5.0	U	5.0	1	NA	4/24/09 13:52		151352	
Ethylbenzene	5.0	U	5.0	1	NA	4/24/09 13:52		151352	
2-Hexanone	10	U	10	1	NA	4/24/09 13:52		151352	
Methylene Chloride	5.0	U	5.0	1	NA	4/24/09 13:52		151352	
4-Methyl-2-pentanone (MIBK)	10	U	10	1	NA	4/24/09 13:52		151352	
Styrene	5.0	U	5.0	1	NA	4/24/09 13:52		151352	
1,1,2,2-Tetrachloroethane	5.0	U	5.0	1	NA	4/24/09 13:52		151352	
Tetrachloroethene	5.0	U	5.0	1	NA	4/24/09 13:52		151352	
Toluene	5.0	U	5.0	1	NA	4/24/09 13:52		151352	
1,1,1-Trichloroethane	5.0	U	5.0	1	NA	4/24/09 13:52		151352	
1,1,2-Trichloroethane	5.0	U	5.0	1	NA	4/24/09 13:52		151352	
Trichloroethene	5.0	U	5.0	1	NA	4/24/09 13:52		151352	
Vinyl Chloride	5.0	U	5.0	1	NA	4/24/09 13:52		151352	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 4/09  
**Sample Matrix:** Water  
**Sample Name:** MW 23  
**Lab Code:** R0902131-002

**Service Request:** R0902131  
**Date Collected:** 4/16/09 1730  
**Date Received:** 4/17/09

**Units:** µg/L  
**Basis:** NA

## Volatile Organic Compounds by GC/MS

**Analytical Method:** 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
o-Xylene	5.0	U	5.0	1	NA	4/24/09 13:52		151352	
m,p-Xylenes	5.0	U	5.0	1	NA	4/24/09 13:52		151352	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	97	80-123	4/24/09 13:52		
Toluene-d8	101	88-124	4/24/09 13:52		
Dibromofluoromethane	108	89-115	4/24/09 13:52		

**Comments:**

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
 Project: Leica/Wells 4/09  
 Sample Matrix: Water  
 Sample Name: MW 10  
 Lab Code: R0902131-003

Service Request: R0902131  
 Date Collected: 4/16/09 1800  
 Date Received: 4/17/09

Units: µg/L  
 Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Acetone	150		20	1	NA	4/24/09 14:22		151352	
Benzene	5.0	U	5.0	1	NA	4/24/09 14:22		151352	
Bromodichloromethane	5.0	U	5.0	1	NA	4/24/09 14:22		151352	
Bromoform	5.0	U	5.0	1	NA	4/24/09 14:22		151352	
Bromomethane	5.0	U	5.0	1	NA	4/24/09 14:22		151352	
2-Butanone (MEK)	180		10	1	NA	4/24/09 14:22		151352	
Carbon Disulfide	10	U	10	1	NA	4/24/09 14:22		151352	
Carbon Tetrachloride	5.0	U	5.0	1	NA	4/24/09 14:22		151352	
Chlorobenzene	5.0	U	5.0	1	NA	4/24/09 14:22		151352	
Chloroethane	5.0	U	5.0	1	NA	4/24/09 14:22		151352	
Chloroform	5.0	U	5.0	1	NA	4/24/09 14:22		151352	
Chloromethane	5.0	U	5.0	1	NA	4/24/09 14:22		151352	
Dibromochloromethane	5.0	U	5.0	1	NA	4/24/09 14:22		151352	
1,1-Dichloroethane	5.0	U	5.0	1	NA	4/24/09 14:22		151352	
1,2-Dichloroethane	5.0	U	5.0	1	NA	4/24/09 14:22		151352	
1,1-Dichloroethene	5.0	U	5.0	1	NA	4/24/09 14:22		151352	
cis-1,2-Dichloroethene	120		5.0	1	NA	4/24/09 14:22		151352	
trans-1,2-Dichloroethene	5.0	U	5.0	1	NA	4/24/09 14:22		151352	
1,2-Dichloropropane	5.0	U	5.0	1	NA	4/24/09 14:22		151352	
cis-1,3-Dichloropropene	5.0	U	5.0	1	NA	4/24/09 14:22		151352	
trans-1,3-Dichloropropene	5.0	U	5.0	1	NA	4/24/09 14:22		151352	
Ethylbenzene	5.0	U	5.0	1	NA	4/24/09 14:22		151352	
2-Hexanone	10	U	10	1	NA	4/24/09 14:22		151352	
Methylene Chloride	5.0	U	5.0	1	NA	4/24/09 14:22		151352	
4-Methyl-2-pentanone (MIBK)	10	U	10	1	NA	4/24/09 14:22		151352	
Styrene	5.0	U	5.0	1	NA	4/24/09 14:22		151352	
1,1,2,2-Tetrachloroethane	5.0	U	5.0	1	NA	4/24/09 14:22		151352	
Tetrachloroethene	5.0	U	5.0	1	NA	4/24/09 14:22		151352	
Toluene	5.0	U	5.0	1	NA	4/24/09 14:22		151352	
1,1,1-Trichloroethane	5.0	U	5.0	1	NA	4/24/09 14:22		151352	
1,1,2-Trichloroethane	5.0	U	5.0	1	NA	4/24/09 14:22		151352	
Trichloroethene	5.0	U	5.0	1	NA	4/24/09 14:22		151352	
Vinyl Chloride	38		5.0	1	NA	4/24/09 14:22		151352	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
Project: Leica/Wells 4/09  
Sample Matrix: Water  
Sample Name: MW 10  
Lab Code: R0902131-003

Service Request: R0902131  
Date Collected: 4/16/09 1800  
Date Received: 4/17/09  
Units: µg/L  
Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
o-Xylene	5.0	U	5.0	1	NA	4/24/09 14:22		151352	
m,p-Xylenes	5.0	U	5.0	1	NA	4/24/09 14:22		151352	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	100	80-123	4/24/09 14:22		
Toluene-d8	101	88-124	4/24/09 14:22		
Dibromofluoromethane	109	89-115	4/24/09 14:22		

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
Project: Leica/Wells 4/09  
Sample Matrix: Water  
Sample Name: MW 22  
Lab Code: R0902131-004

Service Request: R0902131  
Date Collected: 4/17/09 0930  
Date Received: 4/17/09

Basis: NA

## General Chemistry Parameters

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Carbon, Total Organic (TOC)	SM20 5310 C	4.5	mg/L	2.0	2	NA	4/23/09 06:58
Chloride	300.0	71.7	mg/L	2.0	10	NA	4/17/09 20:00
Iron, Divalent (Ferrous Iron)	SM 3500-Fe B.4.c	2.47	mg/L	0.50	5	NA	4/17/09 17:10
Nitrate as Nitrogen	300.0	0.50 U	mg/L	0.50	10	NA	4/17/09 20:00
Sulfate	300.0	514	mg/L	20	100	NA	4/20/09 22:33

Comments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 4/09  
**Sample Matrix:** Water  
**Sample Name:** MW 22 DISS  
**Lab Code:** R0902131-015

**Service Request:** R0902131  
**Date Collected:** 4/17/09 0930  
**Date Received:** 4/17/09

**Basis:** NA

**Iron, Divalent, Phenanthroline Method 20th Ed.**

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Iron, Divalent (Ferrous Iron)	SM 3500-Fe B.4.c	1.29	mg/L	0.50	5	NA	4/17/09 17:10

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 4/09  
**Sample Matrix:** Water  
**Sample Name:** MW 22  
**Lab Code:** R0902131-004

**Service Request:** R0902131  
**Date Collected:** 4/17/09 0930  
**Date Received:** 4/17/09

**Basis:** NA

## Manganese, Total, by Inductively Coupled Plasma-Atomic Emission Spectrometry

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Total	6010B	328	µg/L	10	1	4/22/09	4/28/09 21:50

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 4/09  
**Sample Matrix:** Water  
**Sample Name:** MW 22 DISS  
**Lab Code:** R0902131-015

**Service Request:** R0902131  
**Date Collected:** 4/17/09 0930  
**Date Received:** 4/17/09

**Basis:** NA

## Manganese, Dissolved, by Inductively Coupled Plasma-Atomic Emission Spectrometry

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Dissolved	6010B	273	µg/L	10	1	4/22/09	4/28/09 23:17

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 4/09  
**Sample Matrix:** Water  
**Sample Name:** MW 22  
**Lab Code:** R0902131-004

**Service Request:** R0902131  
**Date Collected:** 4/17/09 0930  
**Date Received:** 4/17/09

**Units:** µg/L  
**Basis:** NA

## Volatile Organic Compounds by GC/MS

**Analytical Method:** 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Acetone	20	U	20	1	NA	4/23/09 18:49		151103	
Benzene	5.0	U	5.0	1	NA	4/23/09 18:49		151103	
Bromodichloromethane	5.0	U	5.0	1	NA	4/23/09 18:49		151103	
Bromoform	5.0	U	5.0	1	NA	4/23/09 18:49		151103	
Bromomethane	5.0	U	5.0	1	NA	4/23/09 18:49		151103	
2-Butanone (MEK)	10	U	10	1	NA	4/23/09 18:49		151103	
Carbon Disulfide	10	U	10	1	NA	4/23/09 18:49		151103	
Carbon Tetrachloride	5.0	U	5.0	1	NA	4/23/09 18:49		151103	
Chlorobenzene	5.0	U	5.0	1	NA	4/23/09 18:49		151103	
Chloroethane	5.0	U	5.0	1	NA	4/23/09 18:49		151103	
Chloroform	5.0	U	5.0	1	NA	4/23/09 18:49		151103	
Chloromethane	5.0	U	5.0	1	NA	4/23/09 18:49		151103	
Dibromochloromethane	5.0	U	5.0	1	NA	4/23/09 18:49		151103	
1,1-Dichloroethane	5.0	U	5.0	1	NA	4/23/09 18:49		151103	
1,2-Dichloroethane	5.0	U	5.0	1	NA	4/23/09 18:49		151103	
1,1-Dichloroethene	5.0	U	5.0	1	NA	4/23/09 18:49		151103	
cis-1,2-Dichloroethene	5.0	U	5.0	1	NA	4/23/09 18:49		151103	
trans-1,2-Dichloroethene	5.0	U	5.0	1	NA	4/23/09 18:49		151103	
1,2-Dichloropropane	5.0	U	5.0	1	NA	4/23/09 18:49		151103	
cis-1,3-Dichloropropene	5.0	U	5.0	1	NA	4/23/09 18:49		151103	
trans-1,3-Dichloropropene	5.0	U	5.0	1	NA	4/23/09 18:49		151103	
Ethylbenzene	5.0	U	5.0	1	NA	4/23/09 18:49		151103	
2-Hexanone	10	U	10	1	NA	4/23/09 18:49		151103	
Methylene Chloride	5.0	U	5.0	1	NA	4/23/09 18:49		151103	
4-Methyl-2-pentanone (MIBK)	10	U	10	1	NA	4/23/09 18:49		151103	
Styrene	5.0	U	5.0	1	NA	4/23/09 18:49		151103	
1,1,2,2-Tetrachloroethane	5.0	U	5.0	1	NA	4/23/09 18:49		151103	
Tetrachloroethene	5.0	U	5.0	1	NA	4/23/09 18:49		151103	
Toluene	5.0	U	5.0	1	NA	4/23/09 18:49		151103	
1,1,1-Trichloroethane	5.0	U	5.0	1	NA	4/23/09 18:49		151103	
1,1,2-Trichloroethane	5.0	U	5.0	1	NA	4/23/09 18:49		151103	
Trichloroethene	5.0	U	5.0	1	NA	4/23/09 18:49		151103	
Vinyl Chloride	5.0	U	5.0	1	NA	4/23/09 18:49		151103	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
Project: Leica/Wells 4/09  
Sample Matrix: Water  
Sample Name: MW 22  
Lab Code: R0902131-004

Service Request: R0902131  
Date Collected: 4/17/09 0930  
Date Received: 4/17/09  
Units: µg/L  
Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
o-Xylene	5.0	U	5.0	1	NA	4/23/09 18:49		151103	
m,p-Xylenes	5.0	U	5.0	1	NA	4/23/09 18:49		151103	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	100	80-123	4/23/09 18:49		
Toluene-d8	100	88-124	4/23/09 18:49		
Dibromofluoromethane	111	89-115	4/23/09 18:49		

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 4/09  
**Sample Matrix:** Water  
**Sample Name:** MW 22A  
**Lab Code:** R0902131-005

**Service Request:** R0902131  
**Date Collected:** 4/17/09 0945  
**Date Received:** 4/17/09

**Basis:** NA

## General Chemistry Parameters

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Carbon, Total Organic (TOC)	SM20 5310 C	3.8	mg/L	2.0	2	NA	4/23/09 07:16
Chloride	300.0	10.1	mg/L	2.0	10	NA	4/17/09 20:17
Iron, Divalent (Ferrous Iron)	SM 3500-Fe B.4.c	0.13	mg/L	0.10	1	NA	4/17/09 17:10
Nitrate as Nitrogen	300.0	0.50 U	mg/L	0.50	10	NA	4/17/09 20:17
Sulfate	300.0	15.2	mg/L	2.0	10	NA	4/17/09 20:17

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 4/09  
**Sample Matrix:** Water  
**Sample Name:** MW 22A DISS  
**Lab Code:** R0902131-016

**Service Request:** R0902131  
**Date Collected:** 4/17/09 0945  
**Date Received:** 4/17/09

**Basis:** NA

## Iron, Divalent, Phenanthroline Method 20th Ed.

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Iron, Divalent (Ferrous Iron)	SM 3500-Fe B.4.c	0.10	U	mg/L	0.10	1	NA	4/17/09 17:10

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 4/09  
**Sample Matrix:** Water  
**Sample Name:** MW 22A  
**Lab Code:** R0902131-005

**Service Request:** R0902131  
**Date Collected:** 4/17/09 0945  
**Date Received:** 4/17/09

**Basis:** NA

## Manganese, Total, by Inductively Coupled Plasma-Atomic Emission Spectrometry

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Total	6010B	67	µg/L	10	1	4/22/09	4/28/09 22:19

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
Project: Leica/Wells 4/09  
Sample Matrix: Water  
Sample Name: MW 22A DISS  
Lab Code: R0902131-016

Service Request: R0902131  
Date Collected: 4/17/09 0945  
Date Received: 4/17/09

Basis: NA

## Manganese, Dissolved, by Inductively Coupled Plasma-Atomic Emission Spectrometry

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Dissolved	6010B	64	µg/L	10	1	4/22/09	4/28/09 23:23

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 4/09  
**Sample Matrix:** Water  
  
**Sample Name:** MW 22A  
**Lab Code:** R0902131-005

**Service Request:** R0902131  
**Date Collected:** 4/17/09 0945  
**Date Received:** 4/17/09

**Units:** µg/L  
**Basis:** NA

## Volatile Organic Compounds by GC/MS

**Analytical Method:** 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Acetone	46		20	1	NA	4/24/09 14:51		151352	
Benzene	5.0	U	5.0	1	NA	4/24/09 14:51		151352	
Bromodichloromethane	5.0	U	5.0	1	NA	4/24/09 14:51		151352	
Bromoform	5.0	U	5.0	1	NA	4/24/09 14:51		151352	
Bromomethane	5.0	U	5.0	1	NA	4/24/09 14:51		151352	
2-Butanone (MEK)	10	U	10	1	NA	4/24/09 14:51		151352	
Carbon Disulfide	10	U	10	1	NA	4/24/09 14:51		151352	
Carbon Tetrachloride	5.0	U	5.0	1	NA	4/24/09 14:51		151352	
Chlorobenzene	5.0	U	5.0	1	NA	4/24/09 14:51		151352	
Chloroethane	5.0	U	5.0	1	NA	4/24/09 14:51		151352	
Chloroform	5.0	U	5.0	1	NA	4/24/09 14:51		151352	
Chloromethane	5.0	U	5.0	1	NA	4/24/09 14:51		151352	
Dibromochloromethane	5.0	U	5.0	1	NA	4/24/09 14:51		151352	
1,1-Dichloroethane	5.0	U	5.0	1	NA	4/24/09 14:51		151352	
1,2-Dichloroethane	5.0	U	5.0	1	NA	4/24/09 14:51		151352	
1,1-Dichloroethene	5.0	U	5.0	1	NA	4/24/09 14:51		151352	
cis-1,2-Dichloroethene	5.0	U	5.0	1	NA	4/24/09 14:51		151352	
trans-1,2-Dichloroethene	5.0	U	5.0	1	NA	4/24/09 14:51		151352	
1,2-Dichloropropane	5.0	U	5.0	1	NA	4/24/09 14:51		151352	
cis-1,3-Dichloropropene	5.0	U	5.0	1	NA	4/24/09 14:51		151352	
trans-1,3-Dichloropropene	5.0	U	5.0	1	NA	4/24/09 14:51		151352	
Ethylbenzene	5.0	U	5.0	1	NA	4/24/09 14:51		151352	
2-Hexanone	10	U	10	1	NA	4/24/09 14:51		151352	
Methylene Chloride	5.0	U	5.0	1	NA	4/24/09 14:51		151352	
4-Methyl-2-pentanone (MIBK)	10	U	10	1	NA	4/24/09 14:51		151352	
Styrene	5.0	U	5.0	1	NA	4/24/09 14:51		151352	
1,1,2,2-Tetrachloroethane	5.0	U	5.0	1	NA	4/24/09 14:51		151352	
Tetrachloroethene	5.0	U	5.0	1	NA	4/24/09 14:51		151352	
Toluene	5.0	U	5.0	1	NA	4/24/09 14:51		151352	
1,1,1-Trichloroethane	5.0	U	5.0	1	NA	4/24/09 14:51		151352	
1,1,2-Trichloroethane	5.0	U	5.0	1	NA	4/24/09 14:51		151352	
Trichloroethene	5.0	U	5.0	1	NA	4/24/09 14:51		151352	
Vinyl Chloride	5.0	U	5.0	1	NA	4/24/09 14:51		151352	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
Project: Leica/Wells 4/09  
Sample Matrix: Water  
Sample Name: MW 22A  
Lab Code: R0902131-005

Service Request: R0902131  
Date Collected: 4/17/09 0945  
Date Received: 4/17/09  
Units: µg/L  
Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
o-Xylene	5.0	U	5.0	1	NA	4/24/09 14:51		151352	
m,p-Xylenes	5.0	U	5.0	1	NA	4/24/09 14:51		151352	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	99	80-123	4/24/09 14:51		
Toluene-d8	103	88-124	4/24/09 14:51		
Dibromofluoromethane	109	89-115	4/24/09 14:51		

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 4/09  
**Sample Matrix:** Water  
**Sample Name:** MW 14  
**Lab Code:** R0902131-006

**Service Request:** R0902131  
**Date Collected:** 4/17/09 1000  
**Date Received:** 4/17/09

**Basis:** NA

## General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Carbon, Total Organic (TOC)	SM20 5310 C	3.1		mg/L	2.0	2	NA	4/23/09 09:16
Chloride	300.0	64.2		mg/L	2.0	10	NA	4/17/09 20:33
Iron, Divalent (Ferrous Iron)	SM 3500-Fe B.4.c	1.36		mg/L	0.10	1	NA	4/17/09 17:10
Nitrate as Nitrogen	300.0	0.50	U	mg/L	0.50	10	NA	4/17/09 20:33
Sulfate	300.0	314		mg/L	20	100	NA	4/21/09 13:10

Comments: \_\_\_\_\_

**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 4/09  
**Sample Matrix:** Water  
**Sample Name:** MW 14 DISS  
**Lab Code:** R0902131-017

**Service Request:** R0902131  
**Date Collected:** 4/17/09 1000  
**Date Received:** 4/17/09

**Basis:** NA

**Iron, Divalent, Phenanthroline Method 20th Ed.**

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Iron, Divalent (Ferrous Iron)	SM 3500-Fe B.4.c	1.67	mg/L	0.10	1	NA	4/17/09 17:10

Comments: \_\_\_\_\_

**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 4/09  
**Sample Matrix:** Water  
**Sample Name:** MW 14  
**Lab Code:** R0902131-006

**Service Request:** R0902131  
**Date Collected:** 4/17/09 1000  
**Date Received:** 4/17/09

**Basis:** NA

**Manganese, Total, by Inductively Coupled Plasma-Atomic Emission Spectrometry**

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Total	6010B	110	µg/L	10	1	4/22/09	4/28/09 22:25

Comments: \_\_\_\_\_

**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 4/09  
**Sample Matrix:** Water  
**Sample Name:** MW 14 DISS  
**Lab Code:** R0902131-017

**Service Request:** R0902131  
**Date Collected:** 4/17/09 1000  
**Date Received:** 4/17/09

**Basis:** NA

**Manganese, Dissolved, by Inductively Coupled Plasma-Atomic Emission Spectrometry**

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Dissolved	6010B	112	µg/L	10	1	4/22/09	4/28/09 23:29

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
 Project: Leica/Wells 4/09  
 Sample Matrix: Water  
 Sample Name: MW 14  
 Lab Code: R0902131-006

Service Request: R0902131  
 Date Collected: 4/17/09 1000  
 Date Received: 4/17/09  
 Units: µg/L  
 Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Acetone	20	U	20	1	NA	4/24/09 15:20		151352	
Benzene	5.0	U	5.0	1	NA	4/24/09 15:20		151352	
Bromodichloromethane	5.0	U	5.0	1	NA	4/24/09 15:20		151352	
Bromoform	5.0	U	5.0	1	NA	4/24/09 15:20		151352	
Bromomethane	5.0	U	5.0	1	NA	4/24/09 15:20		151352	
2-Butanone (MEK)	10	U	10	1	NA	4/24/09 15:20		151352	
Carbon Disulfide	10	U	10	1	NA	4/24/09 15:20		151352	
Carbon Tetrachloride	5.0	U	5.0	1	NA	4/24/09 15:20		151352	
Chlorobenzene	5.0	U	5.0	1	NA	4/24/09 15:20		151352	
Chloroethane	5.0	U	5.0	1	NA	4/24/09 15:20		151352	
Chloroform	5.0	U	5.0	1	NA	4/24/09 15:20		151352	
Chloromethane	5.0	U	5.0	1	NA	4/24/09 15:20		151352	
Dibromochloromethane	5.0	U	5.0	1	NA	4/24/09 15:20		151352	
1,1-Dichloroethane	5.0	U	5.0	1	NA	4/24/09 15:20		151352	
1,2-Dichloroethane	5.0	U	5.0	1	NA	4/24/09 15:20		151352	
1,1-Dichloroethene	5.0	U	5.0	1	NA	4/24/09 15:20		151352	
cis-1,2-Dichloroethene	190		5.0	1	NA	4/24/09 15:20		151352	
trans-1,2-Dichloroethene	6.9		5.0	1	NA	4/24/09 15:20		151352	
1,2-Dichloropropane	5.0	U	5.0	1	NA	4/24/09 15:20		151352	
cis-1,3-Dichloropropene	5.0	U	5.0	1	NA	4/24/09 15:20		151352	
trans-1,3-Dichloropropene	5.0	U	5.0	1	NA	4/24/09 15:20		151352	
Ethylbenzene	5.0	U	5.0	1	NA	4/24/09 15:20		151352	
2-Hexanone	10	U	10	1	NA	4/24/09 15:20		151352	
Methylene Chloride	5.0	U	5.0	1	NA	4/24/09 15:20		151352	
4-Methyl-2-pentanone (MIBK)	10	U	10	1	NA	4/24/09 15:20		151352	
Styrene	5.0	U	5.0	1	NA	4/24/09 15:20		151352	
1,1,2,2-Tetrachloroethane	5.0	U	5.0	1	NA	4/24/09 15:20		151352	
Tetrachloroethene	5.0	U	5.0	1	NA	4/24/09 15:20		151352	
Toluene	5.0	U	5.0	1	NA	4/24/09 15:20		151352	
1,1,1-Trichloroethane	5.0	U	5.0	1	NA	4/24/09 15:20		151352	
1,1,2-Trichloroethane	5.0	U	5.0	1	NA	4/24/09 15:20		151352	
Trichloroethene	5.0	U	5.0	1	NA	4/24/09 15:20		151352	
Vinyl Chloride	38		5.0	1	NA	4/24/09 15:20		151352	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 4/09  
**Sample Matrix:** Water  
**Sample Name:** MW 14  
**Lab Code:** R0902131-006

**Service Request:** R0902131  
**Date Collected:** 4/17/09 1000  
**Date Received:** 4/17/09  
**Units:** µg/L  
**Basis:** NA

## Volatile Organic Compounds by GC/MS

**Analytical Method:** 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
o-Xylene	5.0	U	5.0	1	NA	4/24/09 15:20		151352	
m,p-Xylenes	5.0	U	5.0	1	NA	4/24/09 15:20		151352	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	100	80-123	4/24/09 15:20		
Toluene-d8	100	88-124	4/24/09 15:20		
Dibromofluoromethane	109	89-115	4/24/09 15:20		

**Comments:**

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 4/09  
**Sample Matrix:** Water  
**Sample Name:** MW 14A  
**Lab Code:** R0902131-007

**Service Request:** R0902131  
**Date Collected:** 4/17/09 1015  
**Date Received:** 4/17/09

**Basis:** NA

## General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Carbon, Total Organic (TOC)	SM20 5310 C	2.9		mg/L	2.0	2	NA	4/23/09 09:34
Chloride	300.0	27.8		mg/L	2.0	10	NA	4/17/09 20:49
Iron, Divalent (Ferrous Iron)	SM 3500-Fe B.4.c	2.74		mg/L	0.20	2	NA	4/17/09 17:10
Nitrate as Nitrogen	300.0	0.50	U	mg/L	0.50	10	NA	4/17/09 20:49
Sulfate	300.0	210		mg/L	8.0	40	NA	4/21/09 14:16

Comments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 4/09  
**Sample Matrix:** Water  
**Sample Name:** MW 14A DISS  
**Lab Code:** R0902131-018

**Service Request:** R0902131  
**Date Collected:** 4/17/09 1015  
**Date Received:** 4/17/09

**Basis:** NA

**Iron, Divalent, Phenanthroline Method 20th Ed.**

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Iron, Divalent (Ferrous Iron)	SM 3500-Fe B.4.c	4.17	mg/L	0.20	2	NA	4/17/09 17:10

Comments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 4/09  
**Sample Matrix:** Water  
**Sample Name:** MW 14A  
**Lab Code:** R0902131-007

**Service Request:** R0902131  
**Date Collected:** 4/17/09 1015  
**Date Received:** 4/17/09

**Basis:** NA

**Manganese, Total, by Inductively Coupled Plasma-Atomic Emission Spectrometry**

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Total	6010B	113	µg/L	10	1	4/22/09	4/28/09 22:42

Comments: \_\_\_\_\_

**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 4/09  
**Sample Matrix:** Water  
**Sample Name:** MW 14A DISS  
**Lab Code:** R0902131-018

**Service Request:** R0902131  
**Date Collected:** 4/17/09 1015  
**Date Received:** 4/17/09

**Basis:** NA

**Manganese, Dissolved, by Inductively Coupled Plasma-Atomic Emission Spectrometry**

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Dissolved	6010B	108	µg/L	10	1	4/22/09	4/28/09 23:35

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
 Project: Leica/Wells 4/09  
 Sample Matrix: Water  
 Sample Name: MW 14A  
 Lab Code: R0902131-007

Service Request: R0902131  
 Date Collected: 4/17/09 1015  
 Date Received: 4/17/09  
 Units: µg/L  
 Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Acetone	20	U	20	1	NA	4/24/09 15:50		151352	
Benzene	5.0	U	5.0	1	NA	4/24/09 15:50		151352	
Bromodichloromethane	5.0	U	5.0	1	NA	4/24/09 15:50		151352	
Bromoform	5.0	U	5.0	1	NA	4/24/09 15:50		151352	
Bromomethane	5.0	U	5.0	1	NA	4/24/09 15:50		151352	
2-Butanone (MEK)	10	U	10	1	NA	4/24/09 15:50		151352	
Carbon Disulfide	10	U	10	1	NA	4/24/09 15:50		151352	
Carbon Tetrachloride	5.0	U	5.0	1	NA	4/24/09 15:50		151352	
Chlorobenzene	5.0	U	5.0	1	NA	4/24/09 15:50		151352	
Chloroethane	5.0	U	5.0	1	NA	4/24/09 15:50		151352	
Chloroform	5.0	U	5.0	1	NA	4/24/09 15:50		151352	
Chloromethane	5.0	U	5.0	1	NA	4/24/09 15:50		151352	
Dibromochloromethane	5.0	U	5.0	1	NA	4/24/09 15:50		151352	
1,1-Dichloroethane	5.0	U	5.0	1	NA	4/24/09 15:50		151352	
1,2-Dichloroethane	5.0	U	5.0	1	NA	4/24/09 15:50		151352	
1,1-Dichloroethene	5.0	U	5.0	1	NA	4/24/09 15:50		151352	
cis-1,2-Dichloroethene	100		5.0	1	NA	4/24/09 15:50		151352	
trans-1,2-Dichloroethene	5.0	U	5.0	1	NA	4/24/09 15:50		151352	
1,2-Dichloropropane	5.0	U	5.0	1	NA	4/24/09 15:50		151352	
cis-1,3-Dichloropropene	5.0	U	5.0	1	NA	4/24/09 15:50		151352	
trans-1,3-Dichloropropene	5.0	U	5.0	1	NA	4/24/09 15:50		151352	
Ethylbenzene	5.0	U	5.0	1	NA	4/24/09 15:50		151352	
2-Hexanone	10	U	10	1	NA	4/24/09 15:50		151352	
Methylene Chloride	5.0	U	5.0	1	NA	4/24/09 15:50		151352	
4-Methyl-2-pentanone (MIBK)	10	U	10	1	NA	4/24/09 15:50		151352	
Styrene	5.0	U	5.0	1	NA	4/24/09 15:50		151352	
1,1,2,2-Tetrachloroethane	5.0	U	5.0	1	NA	4/24/09 15:50		151352	
Tetrachloroethene	5.0	U	5.0	1	NA	4/24/09 15:50		151352	
Toluene	5.0	U	5.0	1	NA	4/24/09 15:50		151352	
1,1,1-Trichloroethane	5.0	U	5.0	1	NA	4/24/09 15:50		151352	
1,1,2-Trichloroethane	5.0	U	5.0	1	NA	4/24/09 15:50		151352	
Trichloroethene	5.0	U	5.0	1	NA	4/24/09 15:50		151352	
Vinyl Chloride	57		5.0	1	NA	4/24/09 15:50		151352	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
Project: Leica/Wells 4/09  
Sample Matrix: Water  
Sample Name: MW 14A  
Lab Code: R0902131-007

Service Request: R0902131  
Date Collected: 4/17/09 1015  
Date Received: 4/17/09  
Units: µg/L  
Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
o-Xylene	5.0	U	5.0	1	NA	4/24/09 15:50		151352	
m,p-Xylenes	5.0	U	5.0	1	NA	4/24/09 15:50		151352	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	100	80-123	4/24/09 15:50		
Toluene-d8	100	88-124	4/24/09 15:50		
Dibromofluoromethane	110	89-115	4/24/09 15:50		

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
Project: Leica/Wells 4/09  
Sample Matrix: Water  
Sample Name: MW 5  
Lab Code: R0902131-008

Service Request: R0902131  
Date Collected: 4/17/09 1035  
Date Received: 4/17/09

Basis: NA

## General Chemistry Parameters

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Carbon, Total Organic (TOC)	SM20 5310 C	2.7	mg/L	2.0	2	NA	4/23/09 09:52
Chloride	300.0	3.7	mg/L	2.0	10	NA	4/17/09 21:06
Iron, Divalent (Ferrous Iron)	SM 3500-Fe B.4.c	0.10 U	mg/L	0.10	1	NA	4/17/09 17:10
Nitrate as Nitrogen	300.0	0.50 U	mg/L	0.50	10	NA	4/17/09 21:06
Sulfate	300.0	19.9	mg/L	2.0	10	NA	4/17/09 21:06

Comments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 4/09  
**Sample Matrix:** Water  
**Sample Name:** MW 5 DISS  
**Lab Code:** R0902131-019

**Service Request:** R0902131  
**Date Collected:** 4/17/09 1035  
**Date Received:** 4/17/09

**Basis:** NA

**Iron, Divalent, Phenanthroline Method 20th Ed.**

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Iron, Divalent (Ferrous Iron)	SM 3500-Fe B.4.c	0.10 U	mg/L	0.10	1	NA	4/17/09 17:10

Comments: \_\_\_\_\_

**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 4/09  
**Sample Matrix:** Water  
**Sample Name:** MW 5  
**Lab Code:** R0902131-008

**Service Request:** R0902131  
**Date Collected:** 4/17/09 1035  
**Date Received:** 4/17/09

**Basis:** NA

**Manganese, Total, by Inductively Coupled Plasma-Atomic Emission Spectrometry**

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Total	6010B	65	µg/L	10	1	4/22/09	4/28/09 22:48

Comments: \_\_\_\_\_

**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 4/09  
**Sample Matrix:** Water  
**Sample Name:** MW 5 DISS  
**Lab Code:** R0902131-019

**Service Request:** R0902131  
**Date Collected:** 4/17/09 1035  
**Date Received:** 4/17/09

**Basis:** NA

**Manganese, Dissolved, by Inductively Coupled Plasma-Atomic Emission Spectrometry**

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Dissolved	6010B	10 U	µg/L	10	1	4/22/09	4/28/09 23:52

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
 Project: Leica/Wells 4/09  
 Sample Matrix: Water  
 Sample Name: MW 5  
 Lab Code: R0902131-008

Service Request: R0902131  
 Date Collected: 4/17/09 1035  
 Date Received: 4/17/09  
 Units: µg/L  
 Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Acetone	20	U	20	1	NA	4/24/09 16:19		151352	
Benzene	5.0	U	5.0	1	NA	4/24/09 16:19		151352	
Bromodichloromethane	5.0	U	5.0	1	NA	4/24/09 16:19		151352	
Bromoform	5.0	U	5.0	1	NA	4/24/09 16:19		151352	
Bromomethane	5.0	U	5.0	1	NA	4/24/09 16:19		151352	
2-Butanone (MEK)	10	U	10	1	NA	4/24/09 16:19		151352	
Carbon Disulfide	10	U	10	1	NA	4/24/09 16:19		151352	
Carbon Tetrachloride	5.0	U	5.0	1	NA	4/24/09 16:19		151352	
Chlorobenzene	5.0	U	5.0	1	NA	4/24/09 16:19		151352	
Chloroethane	5.0	U	5.0	1	NA	4/24/09 16:19		151352	
Chloroform	5.0	U	5.0	1	NA	4/24/09 16:19		151352	
Chloromethane	5.0	U	5.0	1	NA	4/24/09 16:19		151352	
Dibromochloromethane	5.0	U	5.0	1	NA	4/24/09 16:19		151352	
1,1-Dichloroethane	5.0	U	5.0	1	NA	4/24/09 16:19		151352	
1,2-Dichloroethane	5.0	U	5.0	1	NA	4/24/09 16:19		151352	
1,1-Dichloroethene	5.0	U	5.0	1	NA	4/24/09 16:19		151352	
cis-1,2-Dichloroethene	5.0	U	5.0	1	NA	4/24/09 16:19		151352	
trans-1,2-Dichloroethene	5.0	U	5.0	1	NA	4/24/09 16:19		151352	
1,2-Dichloropropane	5.0	U	5.0	1	NA	4/24/09 16:19		151352	
cis-1,3-Dichloropropene	5.0	U	5.0	1	NA	4/24/09 16:19		151352	
trans-1,3-Dichloropropene	5.0	U	5.0	1	NA	4/24/09 16:19		151352	
Ethylbenzene	5.0	U	5.0	1	NA	4/24/09 16:19		151352	
2-Hexanone	10	U	10	1	NA	4/24/09 16:19		151352	
Methylene Chloride	5.0	U	5.0	1	NA	4/24/09 16:19		151352	
4-Methyl-2-pentanone (MIBK)	10	U	10	1	NA	4/24/09 16:19		151352	
Styrene	5.0	U	5.0	1	NA	4/24/09 16:19		151352	
1,1,2,2-Tetrachloroethane	5.0	U	5.0	1	NA	4/24/09 16:19		151352	
Tetrachloroethene	5.0	U	5.0	1	NA	4/24/09 16:19		151352	
Toluene	5.0	U	5.0	1	NA	4/24/09 16:19		151352	
1,1,1-Trichloroethane	5.0	U	5.0	1	NA	4/24/09 16:19		151352	
1,1,2-Trichloroethane	5.0	U	5.0	1	NA	4/24/09 16:19		151352	
Trichloroethene	5.0	U	5.0	1	NA	4/24/09 16:19		151352	
Vinyl Chloride	5.0	U	5.0	1	NA	4/24/09 16:19		151352	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
Project: Leica/Wells 4/09  
Sample Matrix: Water  
Sample Name: MW 5  
Lab Code: R0902131-008

Service Request: R0902131  
Date Collected: 4/17/09 1035  
Date Received: 4/17/09  
Units: µg/L  
Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
o-Xylene	5.0	U	5.0	1	NA	4/24/09 16:19		151352	
m,p-Xylenes	5.0	U	5.0	1	NA	4/24/09 16:19		151352	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	99	80-123	4/24/09 16:19		
Toluene-d8	95	88-124	4/24/09 16:19		
Dibromofluoromethane	109	89-115	4/24/09 16:19		

Comments: \_\_\_\_\_

**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 4/09  
**Sample Matrix:** Water  
**Sample Name:** MW 5A  
**Lab Code:** R0902131-009

**Service Request:** R0902131  
**Date Collected:** 4/17/09 1050  
**Date Received:** 4/17/09

**Basis:** NA

**General Chemistry Parameters**

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Carbon, Total Organic (TOC)	SM20 5310 C	130		mg/L	10	10	NA	4/23/09 10:10
Chloride	300.0	150		mg/L	4.0	20	NA	4/27/09 20:12
Iron, Divalent (Ferrous Iron)	SM 3500-Fe B.4.c	2.67		mg/L	0.20	2	NA	4/17/09 17:10
Nitrate as Nitrogen	300.0	0.50	U	mg/L	0.50	10	NA	4/17/09 21:22
Sulfate	300.0	81.5		mg/L	2.0	10	NA	4/17/09 21:22

Comments:

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## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 4/09  
**Sample Matrix:** Water  
**Sample Name:** MW 5A DISS  
**Lab Code:** R0902131-020

**Service Request:** R0902131  
**Date Collected:** 4/17/09 1050  
**Date Received:** 4/17/09

**Basis:** NA

## Iron, Divalent, Phenanthroline Method 20th Ed.

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Iron, Divalent (Ferrous Iron)	SM 3500-Fe B.4.c	3.80	mg/L	0.20	2	NA	4/17/09 17:10

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 4/09  
**Sample Matrix:** Water  
**Sample Name:** MW 5A  
**Lab Code:** R0902131-009

**Service Request:** R0902131  
**Date Collected:** 4/17/09 1050  
**Date Received:** 4/17/09

**Basis:** NA

## Manganese, Total, by Inductively Coupled Plasma-Atomic Emission Spectrometry

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Total	6010B	195	µg/L	10	1	4/22/09	4/28/09 22:54

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Energy Solutions  
Project: Leica/Wells 4/09  
Sample Matrix: Water  
Sample Name: MW 5A DISS  
Lab Code: R0902131-020

Service Request: R0902131  
Date Collected: 4/17/09 1050  
Date Received: 4/17/09

Basis: NA

Manganese, Dissolved, by Inductively Coupled Plasma-Atomic Emission Spectrometry

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Dissolved	6010B	151	µg/L	10	1	4/22/09	4/28/09 23:58

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
 Project: Leica/Wells 4/09  
 Sample Matrix: Water  
 Sample Name: MW 5A  
 Lab Code: R0902131-009

Service Request: R0902131  
 Date Collected: 4/17/09 1050  
 Date Received: 4/17/09  
 Units: µg/L  
 Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Acetone	31		20	1	NA	4/24/09 16:49		151352	
Benzene	5.0	U	5.0	1	NA	4/24/09 16:49		151352	
Bromodichloromethane	5.0	U	5.0	1	NA	4/24/09 16:49		151352	
Bromoform	5.0	U	5.0	1	NA	4/24/09 16:49		151352	
Bromomethane	5.0	U	5.0	1	NA	4/24/09 16:49		151352	
2-Butanone (MEK)	24		10	1	NA	4/24/09 16:49		151352	
Carbon Disulfide	10	U	10	1	NA	4/24/09 16:49		151352	
Carbon Tetrachloride	5.0	U	5.0	1	NA	4/24/09 16:49		151352	
Chlorobenzene	5.0	U	5.0	1	NA	4/24/09 16:49		151352	
Chloroethane	5.0	U	5.0	1	NA	4/24/09 16:49		151352	
Chloroform	5.0	U	5.0	1	NA	4/24/09 16:49		151352	
Chloromethane	5.0	U	5.0	1	NA	4/24/09 16:49		151352	
Dibromochloromethane	5.0	U	5.0	1	NA	4/24/09 16:49		151352	
1,1-Dichloroethane	5.0	U	5.0	1	NA	4/24/09 16:49		151352	
1,2-Dichloroethane	5.0	U	5.0	1	NA	4/24/09 16:49		151352	
1,1-Dichloroethene	5.0	U	5.0	1	NA	4/24/09 16:49		151352	
cis-1,2-Dichloroethene	5.0	U	5.0	1	NA	4/24/09 16:49		151352	
trans-1,2-Dichloroethene	5.0	U	5.0	1	NA	4/24/09 16:49		151352	
1,2-Dichloropropane	5.0	U	5.0	1	NA	4/24/09 16:49		151352	
cis-1,3-Dichloropropene	5.0	U	5.0	1	NA	4/24/09 16:49		151352	
trans-1,3-Dichloropropene	5.0	U	5.0	1	NA	4/24/09 16:49		151352	
Ethylbenzene	5.0	U	5.0	1	NA	4/24/09 16:49		151352	
2-Hexanone	10	U	10	1	NA	4/24/09 16:49		151352	
Methylene Chloride	5.0	U	5.0	1	NA	4/24/09 16:49		151352	
4-Methyl-2-pentanone (MIBK)	10	U	10	1	NA	4/24/09 16:49		151352	
Styrene	5.0	U	5.0	1	NA	4/24/09 16:49		151352	
1,1,2,2-Tetrachloroethane	5.0	U	5.0	1	NA	4/24/09 16:49		151352	
Tetrachloroethene	5.0	U	5.0	1	NA	4/24/09 16:49		151352	
Toluene	5.0	U	5.0	1	NA	4/24/09 16:49		151352	
1,1,1-Trichloroethane	5.0	U	5.0	1	NA	4/24/09 16:49		151352	
1,1,2-Trichloroethane	5.0	U	5.0	1	NA	4/24/09 16:49		151352	
Trichloroethene	5.0	U	5.0	1	NA	4/24/09 16:49		151352	
Vinyl Chloride	16		5.0	1	NA	4/24/09 16:49		151352	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
Project: Leica/Wells 4/09  
Sample Matrix: Water  
Sample Name: MW 5A  
Lab Code: R0902131-009

Service Request: R0902131  
Date Collected: 4/17/09 1050  
Date Received: 4/17/09

Units: µg/L  
Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
o-Xylene	5.0	U	5.0	1	NA	4/24/09 16:49		151352	
m,p-Xylenes	5.0	U	5.0	1	NA	4/24/09 16:49		151352	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	100	80-123	4/24/09 16:49		
Toluene-d8	101	88-124	4/24/09 16:49		
Dibromofluoromethane	110	89-115	4/24/09 16:49		

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
 Project: Leica/Wells 4/09  
 Sample Matrix: Water  
 Sample Name: TRIP BLANK  
 Lab Code: R0902131-010

Service Request: R0902131  
 Date Collected: 4/16/09  
 Date Received: 4/17/09  
 Units: µg/L  
 Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Acetone	20	U	20	1	NA	4/24/09 17:19		151352	
Benzene	5.0	U	5.0	1	NA	4/24/09 17:19		151352	
Bromodichloromethane	5.0	U	5.0	1	NA	4/24/09 17:19		151352	
Bromoform	5.0	U	5.0	1	NA	4/24/09 17:19		151352	
Bromomethane	5.0	U	5.0	1	NA	4/24/09 17:19		151352	
2-Butanone (MEK)	10	U	10	1	NA	4/24/09 17:19		151352	
Carbon Disulfide	10	U	10	1	NA	4/24/09 17:19		151352	
Carbon Tetrachloride	5.0	U	5.0	1	NA	4/24/09 17:19		151352	
Chlorobenzene	5.0	U	5.0	1	NA	4/24/09 17:19		151352	
Chloroethane	5.0	U	5.0	1	NA	4/24/09 17:19		151352	
Chloroform	5.0	U	5.0	1	NA	4/24/09 17:19		151352	
Chloromethane	5.0	U	5.0	1	NA	4/24/09 17:19		151352	
Dibromochloromethane	5.0	U	5.0	1	NA	4/24/09 17:19		151352	
1,1-Dichloroethane	5.0	U	5.0	1	NA	4/24/09 17:19		151352	
1,2-Dichloroethane	5.0	U	5.0	1	NA	4/24/09 17:19		151352	
1,1-Dichloroethene	5.0	U	5.0	1	NA	4/24/09 17:19		151352	
cis-1,2-Dichloroethene	5.0	U	5.0	1	NA	4/24/09 17:19		151352	
trans-1,2-Dichloroethene	5.0	U	5.0	1	NA	4/24/09 17:19		151352	
1,2-Dichloropropane	5.0	U	5.0	1	NA	4/24/09 17:19		151352	
cis-1,3-Dichloropropene	5.0	U	5.0	1	NA	4/24/09 17:19		151352	
trans-1,3-Dichloropropene	5.0	U	5.0	1	NA	4/24/09 17:19		151352	
Ethylbenzene	5.0	U	5.0	1	NA	4/24/09 17:19		151352	
2-Hexanone	10	U	10	1	NA	4/24/09 17:19		151352	
Methylene Chloride	5.0	U	5.0	1	NA	4/24/09 17:19		151352	
4-Methyl-2-pentanone (MIBK)	10	U	10	1	NA	4/24/09 17:19		151352	
Styrene	5.0	U	5.0	1	NA	4/24/09 17:19		151352	
1,1,2,2-Tetrachloroethane	5.0	U	5.0	1	NA	4/24/09 17:19		151352	
Tetrachloroethene	5.0	U	5.0	1	NA	4/24/09 17:19		151352	
Toluene	5.0	U	5.0	1	NA	4/24/09 17:19		151352	
1,1,1-Trichloroethane	5.0	U	5.0	1	NA	4/24/09 17:19		151352	
1,1,2-Trichloroethane	5.0	U	5.0	1	NA	4/24/09 17:19		151352	
Trichloroethene	5.0	U	5.0	1	NA	4/24/09 17:19		151352	
Vinyl Chloride	5.0	U	5.0	1	NA	4/24/09 17:19		151352	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
Project: Leica/Wells 4/09  
Sample Matrix: Water  
Sample Name: TRIP BLANK  
Lab Code: R0902131-010

Service Request: R0902131  
Date Collected: 4/16/09  
Date Received: 4/17/09  
Units: µg/L  
Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
o-Xylene	5.0	U	5.0	1	NA	4/24/09 17:19		151352	
m,p-Xylenes	5.0	U	5.0	1	NA	4/24/09 17:19		151352	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	99	80-123	4/24/09 17:19		
Toluene-d8	102	88-124	4/24/09 17:19		
Dibromofluoromethane	109	89-115	4/24/09 17:19		

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 4/09  
**Sample Matrix:** Water  
**Sample Name:** MW 6A  
**Lab Code:** R0902131-011

**Service Request:** R0902131  
**Date Collected:** 4/17/09  
**Date Received:** 4/17/09

**Basis:** NA

## General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Carbon, Total Organic (TOC)	SM20 5310 C	11.6		mg/L	1.0	1	NA	4/22/09 00:14
Chloride	300.0	13.2		mg/L	2.0	10	NA	4/17/09 22:43
Iron, Divalent (Ferrous Iron)	SM 3500-Fe B.4.c	2.38		mg/L	0.20	2	NA	4/17/09 17:10
Nitrate as Nitrogen	300.0	0.50	U	mg/L	0.50	10	NA	4/17/09 22:43
Sulfate	300.0	169		mg/L	4.0	20	NA	4/21/09 15:01

Comments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 4/09  
**Sample Matrix:** Water  
**Sample Name:** MW 6A DISS  
**Lab Code:** R0902131-021

**Service Request:** R0902131  
**Date Collected:** 4/17/09  
**Date Received:** 4/17/09

**Basis:** NA

**Iron, Divalent, Phenanthroline Method 20th Ed.**

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Iron, Divalent (Ferrous Iron)	SM 3500-Fe B.4.c	2.78	mg/L	0.20	2	NA	4/17/09 17:10

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 4/09  
**Sample Matrix:** Water  
**Sample Name:** MW 6A  
**Lab Code:** R0902131-011

**Service Request:** R0902131  
**Date Collected:** 4/17/09  
**Date Received:** 4/17/09

**Basis:** NA

## Manganese, Total, by Inductively Coupled Plasma-Atomic Emission Spectrometry

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Total	6010B	54		µg/L	10	1	4/22/09	4/28/09 23:00

Comments: \_\_\_\_\_

**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 4/09  
**Sample Matrix:** Water  
**Sample Name:** MW 6A DISS  
**Lab Code:** R0902131-021

**Service Request:** R0902131  
**Date Collected:** 4/17/09  
**Date Received:** 4/17/09

**Basis:** NA

**Manganese, Dissolved, by Inductively Coupled Plasma-Atomic Emission Spectrometry**

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Dissolved	6010B	104	µg/L	10	1	4/22/09	4/29/09 00:04

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
 Project: Leica/Wells 4/09  
 Sample Matrix: Water  
 Sample Name: MW 6A  
 Lab Code: R0902131-011

Service Request: R0902131  
 Date Collected: 4/17/09  
 Date Received: 4/17/09  
 Units: µg/L  
 Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Acetone	50	U	50	2.5	NA	4/24/09 17:48		151352	
Benzene	13	U	13	2.5	NA	4/24/09 17:48		151352	
Bromodichloromethane	13	U	13	2.5	NA	4/24/09 17:48		151352	
Bromoform	13	U	13	2.5	NA	4/24/09 17:48		151352	
Bromomethane	13	U	13	2.5	NA	4/24/09 17:48		151352	
2-Butanone (MEK)	25	U	25	2.5	NA	4/24/09 17:48		151352	
Carbon Disulfide	25	U	25	2.5	NA	4/24/09 17:48		151352	
Carbon Tetrachloride	13	U	13	2.5	NA	4/24/09 17:48		151352	
Chlorobenzene	13	U	13	2.5	NA	4/24/09 17:48		151352	
Chloroethane	13	U	13	2.5	NA	4/24/09 17:48		151352	
Chloroform	13	U	13	2.5	NA	4/24/09 17:48		151352	
Chloromethane	13	U	13	2.5	NA	4/24/09 17:48		151352	
Dibromochloromethane	13	U	13	2.5	NA	4/24/09 17:48		151352	
1,1-Dichloroethane	13	U	13	2.5	NA	4/24/09 17:48		151352	
1,2-Dichloroethane	13	U	13	2.5	NA	4/24/09 17:48		151352	
1,1-Dichloroethene	13	U	13	2.5	NA	4/24/09 17:48		151352	
cis-1,2-Dichloroethene	370		13	2.5	NA	4/24/09 17:48		151352	
trans-1,2-Dichloroethene	13	U	13	2.5	NA	4/24/09 17:48		151352	
1,2-Dichloropropane	13	U	13	2.5	NA	4/24/09 17:48		151352	
cis-1,3-Dichloropropene	13	U	13	2.5	NA	4/24/09 17:48		151352	
trans-1,3-Dichloropropene	13	U	13	2.5	NA	4/24/09 17:48		151352	
Ethylbenzene	13	U	13	2.5	NA	4/24/09 17:48		151352	
2-Hexanone	25	U	25	2.5	NA	4/24/09 17:48		151352	
Methylene Chloride	13	U	13	2.5	NA	4/24/09 17:48		151352	
4-Methyl-2-pentanone (MIBK)	25	U	25	2.5	NA	4/24/09 17:48		151352	
Styrene	13	U	13	2.5	NA	4/24/09 17:48		151352	
1,1,2,2-Tetrachloroethane	13	U	13	2.5	NA	4/24/09 17:48		151352	
Tetrachloroethene	13	U	13	2.5	NA	4/24/09 17:48		151352	
Toluene	13	U	13	2.5	NA	4/24/09 17:48		151352	
1,1,1-Trichloroethane	13	U	13	2.5	NA	4/24/09 17:48		151352	
1,1,2-Trichloroethane	13	U	13	2.5	NA	4/24/09 17:48		151352	
Trichloroethene	13	U	13	2.5	NA	4/24/09 17:48		151352	
Vinyl Chloride	350		13	2.5	NA	4/24/09 17:48		151352	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
Project: Leica/Wells 4/09  
Sample Matrix: Water  
Sample Name: MW 6A  
Lab Code: R0902131-011

Service Request: R0902131  
Date Collected: 4/17/09  
Date Received: 4/17/09  
Units: µg/L  
Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
o-Xylene	13	U	13	2.5	NA	4/24/09 17:48		151352	
m,p-Xylenes	13	U	13	2.5	NA	4/24/09 17:48		151352	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	98	80-123	4/24/09 17:48		
Toluene-d8	94	88-124	4/24/09 17:48		
Dibromofluoromethane	109	89-115	4/24/09 17:48		

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 4/09  
**Sample Matrix:** Water  
**Sample Name:** MW 6  
**Lab Code:** R0902131-012

**Service Request:** R0902131  
**Date Collected:** 4/17/09  
**Date Received:** 4/17/09

**Basis:** NA

## General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Carbon, Total Organic (TOC)	SM20 5310 C	6.2		mg/L	2.0	2	NA	4/23/09 11:04
Chloride	300.0	8.0		mg/L	2.0	10	NA	4/17/09 23:32
Iron, Divalent (Ferrous Iron)	SM 3500-Fe B.4.c	0.10	U	mg/L	0.10	1	NA	4/17/09 17:10
Nitrate as Nitrogen	300.0	0.50	U	mg/L	0.50	10	NA	4/17/09 23:32
Sulfate	300.0	203		mg/L	8.0	40	NA	4/21/09 15:23

Comments:

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**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 4/09  
**Sample Matrix:** Water  
**Sample Name:** MW 6 DISS  
**Lab Code:** R0902131-022

**Service Request:** R0902131  
**Date Collected:** 4/17/09  
**Date Received:** 4/17/09

**Basis:** NA

**Iron, Divalent, Phenanthroline Method 20th Ed.**

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Iron, Divalent (Ferrous Iron)	SM 3500-Fe B.4.c	0.10 U	mg/L	0.10	1	NA	4/17/09 17:10

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 4/09  
**Sample Matrix:** Water  
**Sample Name:** MW 6  
**Lab Code:** R0902131-012

**Service Request:** R0902131  
**Date Collected:** 4/17/09  
**Date Received:** 4/17/09

**Basis:** NA

## Manganese, Total, by Inductively Coupled Plasma-Atomic Emission Spectrometry

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Total	6010B	34	µg/L	10	1	4/22/09	4/28/09 23:06

Comments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 4/09  
**Sample Matrix:** Water  
**Sample Name:** MW 6 DISS  
**Lab Code:** R0902131-022

**Service Request:** R0902131  
**Date Collected:** 4/17/09  
**Date Received:** 4/17/09

**Basis:** NA

**Manganese, Dissolved, by Inductively Coupled Plasma-Atomic Emission Spectrometry**

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Dissolved	6010B	27	µg/L	10	1	4/22/09	4/29/09 00:10

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
 Project: Leica/Wells 4/09  
 Sample Matrix: Water  
 Sample Name: MW 6  
 Lab Code: R0902131-012

Service Request: R0902131  
 Date Collected: 4/17/09  
 Date Received: 4/17/09

Units: µg/L  
 Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Acetone	20	U	20	1	NA	4/24/09 18:18		151352	
Benzene	5.0	U	5.0	1	NA	4/24/09 18:18		151352	
Bromodichloromethane	5.0	U	5.0	1	NA	4/24/09 18:18		151352	
Bromoform	5.0	U	5.0	1	NA	4/24/09 18:18		151352	
Bromomethane	5.0	U	5.0	1	NA	4/24/09 18:18		151352	
2-Butanone (MEK)	10	U	10	1	NA	4/24/09 18:18		151352	
Carbon Disulfide	10	U	10	1	NA	4/24/09 18:18		151352	
Carbon Tetrachloride	5.0	U	5.0	1	NA	4/24/09 18:18		151352	
Chlorobenzene	5.0	U	5.0	1	NA	4/24/09 18:18		151352	
Chloroethane	5.0	U	5.0	1	NA	4/24/09 18:18		151352	
Chloroform	5.0	U	5.0	1	NA	4/24/09 18:18		151352	
Chloromethane	5.0	U	5.0	1	NA	4/24/09 18:18		151352	
Dibromochloromethane	5.0	U	5.0	1	NA	4/24/09 18:18		151352	
1,1-Dichloroethane	5.0	U	5.0	1	NA	4/24/09 18:18		151352	
1,2-Dichloroethane	5.0	U	5.0	1	NA	4/24/09 18:18		151352	
1,1-Dichloroethene	5.0	U	5.0	1	NA	4/24/09 18:18		151352	
cis-1,2-Dichloroethene	110		5.0	1	NA	4/24/09 18:18		151352	
trans-1,2-Dichloroethene	5.0	U	5.0	1	NA	4/24/09 18:18		151352	
1,2-Dichloropropane	5.0	U	5.0	1	NA	4/24/09 18:18		151352	
cis-1,3-Dichloropropene	5.0	U	5.0	1	NA	4/24/09 18:18		151352	
trans-1,3-Dichloropropene	5.0	U	5.0	1	NA	4/24/09 18:18		151352	
Ethylbenzene	5.0	U	5.0	1	NA	4/24/09 18:18		151352	
2-Hexanone	10	U	10	1	NA	4/24/09 18:18		151352	
Methylene Chloride	5.0	U	5.0	1	NA	4/24/09 18:18		151352	
4-Methyl-2-pentanone (MIBK)	10	U	10	1	NA	4/24/09 18:18		151352	
Styrene	5.0	U	5.0	1	NA	4/24/09 18:18		151352	
1,1,2,2-Tetrachloroethane	5.0	U	5.0	1	NA	4/24/09 18:18		151352	
Tetrachloroethene	5.0	U	5.0	1	NA	4/24/09 18:18		151352	
Toluene	5.0	U	5.0	1	NA	4/24/09 18:18		151352	
1,1,1-Trichloroethane	5.0	U	5.0	1	NA	4/24/09 18:18		151352	
1,1,2-Trichloroethane	5.0	U	5.0	1	NA	4/24/09 18:18		151352	
Trichloroethene	18		5.0	1	NA	4/24/09 18:18		151352	
Vinyl Chloride	13		5.0	1	NA	4/24/09 18:18		151352	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
Project: Leica/Wells 4/09  
Sample Matrix: Water  
Sample Name: MW 6  
Lab Code: R0902131-012

Service Request: R0902131  
Date Collected: 4/17/09  
Date Received: 4/17/09  
Units: µg/L  
Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
o-Xylene	5.0	U	5.0	1	NA	4/24/09 18:18		151352	
m,p-Xylenes	5.0	U	5.0	1	NA	4/24/09 18:18		151352	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	99	80-123	4/24/09 18:18		
Toluene-d8	103	88-124	4/24/09 18:18		
Dibromofluoromethane	110	89-115	4/24/09 18:18		

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 4/09  
**Sample Matrix:** Water  
**Sample Name:** MW 11A  
**Lab Code:** R0902131-013

**Service Request:** R0902131  
**Date Collected:** 4/17/09  
**Date Received:** 4/17/09

**Basis:** NA

## General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Carbon, Total Organic (TOC)	SM20 5310 C	3.9		mg/L	2.0	2	NA	4/23/09 11:22
Chloride	300.0	120		mg/L	4.0	20	NA	4/21/09 15:45
Iron, Divalent (Ferrous Iron)	SM 3500-Fe B.4.c	0.13		mg/L	0.10	1	NA	4/17/09 17:10
Nitrate as Nitrogen	300.0	0.50	U	mg/L	0.50	10	NA	4/17/09 23:48
Sulfate	300.0	91.1		mg/L	2.0	10	NA	4/17/09 23:48

Comments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 4/09  
**Sample Matrix:** Water  
**Sample Name:** MW 11A DISS  
**Lab Code:** R0902131-023

**Service Request:** R0902131  
**Date Collected:** 4/17/09  
**Date Received:** 4/17/09

**Basis:** NA

**Iron, Divalent, Phenanthroline Method 20th Ed.**

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Iron, Divalent (Ferrous Iron)	SM 3500-Fe B.4.c	0.12	mg/L	0.10	1	NA	4/17/09 17:10

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 4/09  
**Sample Matrix:** Water  
**Sample Name:** MW 11A  
**Lab Code:** R0902131-013

**Service Request:** R0902131  
**Date Collected:** 4/17/09  
**Date Received:** 4/17/09  
**Basis:** NA

## Manganese, Total, by Inductively Coupled Plasma-Atomic Emission Spectrometry

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Total	6010B	73	µg/L	10	1	4/22/09	4/28/09 23:11

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 4/09  
**Sample Matrix:** Water  
**Sample Name:** MW 11A DISS  
**Lab Code:** R0902131-023

**Service Request:** R0902131  
**Date Collected:** 4/17/09  
**Date Received:** 4/17/09

**Basis:** NA

Manganese, Dissolved, by Inductively Coupled Plasma-Atomic Emission Spectrometry

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Dissolved	6010B	74		µg/L	10	1	4/22/09	4/29/09 00:15

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
 Project: Leica/Wells 4/09  
 Sample Matrix: Water  
 Sample Name: MW 11A  
 Lab Code: R0902131-013

Service Request: R0902131  
 Date Collected: 4/17/09  
 Date Received: 4/17/09  
 Units: µg/L  
 Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Acetone	50	U	50	2.5	NA	4/24/09 18:47		151352	
Benzene	13	U	13	2.5	NA	4/24/09 18:47		151352	
Bromodichloromethane	13	U	13	2.5	NA	4/24/09 18:47		151352	
Bromoform	13	U	13	2.5	NA	4/24/09 18:47		151352	
Bromomethane	13	U	13	2.5	NA	4/24/09 18:47		151352	
2-Butanone (MEK)	25	U	25	2.5	NA	4/24/09 18:47		151352	
Carbon Disulfide	25	U	25	2.5	NA	4/24/09 18:47		151352	
Carbon Tetrachloride	13	U	13	2.5	NA	4/24/09 18:47		151352	
Chlorobenzene	13	U	13	2.5	NA	4/24/09 18:47		151352	
Chloroethane	13	U	13	2.5	NA	4/24/09 18:47		151352	
Chloroform	13	U	13	2.5	NA	4/24/09 18:47		151352	
Chloromethane	13	U	13	2.5	NA	4/24/09 18:47		151352	
Dibromochloromethane	13	U	13	2.5	NA	4/24/09 18:47		151352	
1,1-Dichloroethane	13	U	13	2.5	NA	4/24/09 18:47		151352	
1,2-Dichloroethane	13	U	13	2.5	NA	4/24/09 18:47		151352	
1,1-Dichloroethene	13	U	13	2.5	NA	4/24/09 18:47		151352	
cis-1,2-Dichloroethene	250		13	2.5	NA	4/24/09 18:47		151352	
trans-1,2-Dichloroethene	13	U	13	2.5	NA	4/24/09 18:47		151352	
1,2-Dichloropropane	13	U	13	2.5	NA	4/24/09 18:47		151352	
cis-1,3-Dichloropropene	13	U	13	2.5	NA	4/24/09 18:47		151352	
trans-1,3-Dichloropropene	13	U	13	2.5	NA	4/24/09 18:47		151352	
Ethylbenzene	13	U	13	2.5	NA	4/24/09 18:47		151352	
2-Hexanone	25	U	25	2.5	NA	4/24/09 18:47		151352	
Methylene Chloride	13	U	13	2.5	NA	4/24/09 18:47		151352	
4-Methyl-2-pentanone (MIBK)	25	U	25	2.5	NA	4/24/09 18:47		151352	
Styrene	13	U	13	2.5	NA	4/24/09 18:47		151352	
1,1,2,2-Tetrachloroethane	13	U	13	2.5	NA	4/24/09 18:47		151352	
Tetrachloroethene	13	U	13	2.5	NA	4/24/09 18:47		151352	
Toluene	13	U	13	2.5	NA	4/24/09 18:47		151352	
1,1,1-Trichloroethane	13	U	13	2.5	NA	4/24/09 18:47		151352	
1,1,2-Trichloroethane	13	U	13	2.5	NA	4/24/09 18:47		151352	
Trichloroethene	13	U	13	2.5	NA	4/24/09 18:47		151352	
Vinyl Chloride	260		13	2.5	NA	4/24/09 18:47		151352	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
Project: Leica/Wells 4/09  
Sample Matrix: Water  
Sample Name: MW 11A  
Lab Code: R0902131-013

Service Request: R0902131  
Date Collected: 4/17/09  
Date Received: 4/17/09  
Units: µg/L  
Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
o-Xylene	13	U	13	2.5	NA	4/24/09 18:47		151352	
m,p-Xylenes	13	U	13	2.5	NA	4/24/09 18:47		151352	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	99	80-123	4/24/09 18:47		
Toluene-d8	101	88-124	4/24/09 18:47		
Dibromofluoromethane	109	89-115	4/24/09 18:47		

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
 Project: Leica/Wells 4/09  
 Sample Matrix: Water  
 Sample Name: TRIP BLANK  
 Lab Code: R0902131-014

Service Request: R0902131  
 Date Collected: 4/16/09  
 Date Received: 4/17/09  
 Units: µg/L  
 Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Acetone	20	U	20	1	NA	4/24/09 19:16		151352	
Benzene	5.0	U	5.0	1	NA	4/24/09 19:16		151352	
Bromodichloromethane	5.0	U	5.0	1	NA	4/24/09 19:16		151352	
Bromoform	5.0	U	5.0	1	NA	4/24/09 19:16		151352	
Bromomethane	5.0	U	5.0	1	NA	4/24/09 19:16		151352	
2-Butanone (MEK)	10	U	10	1	NA	4/24/09 19:16		151352	
Carbon Disulfide	10	U	10	1	NA	4/24/09 19:16		151352	
Carbon Tetrachloride	5.0	U	5.0	1	NA	4/24/09 19:16		151352	
Chlorobenzene	5.0	U	5.0	1	NA	4/24/09 19:16		151352	
Chloroethane	5.0	U	5.0	1	NA	4/24/09 19:16		151352	
Chloroform	5.0	U	5.0	1	NA	4/24/09 19:16		151352	
Chloromethane	5.0	U	5.0	1	NA	4/24/09 19:16		151352	
Dibromochloromethane	5.0	U	5.0	1	NA	4/24/09 19:16		151352	
1,1-Dichloroethane	5.0	U	5.0	1	NA	4/24/09 19:16		151352	
1,2-Dichloroethane	5.0	U	5.0	1	NA	4/24/09 19:16		151352	
1,1-Dichloroethene	5.0	U	5.0	1	NA	4/24/09 19:16		151352	
cis-1,2-Dichloroethene	5.0	U	5.0	1	NA	4/24/09 19:16		151352	
trans-1,2-Dichloroethene	5.0	U	5.0	1	NA	4/24/09 19:16		151352	
1,2-Dichloropropane	5.0	U	5.0	1	NA	4/24/09 19:16		151352	
cis-1,3-Dichloropropene	5.0	U	5.0	1	NA	4/24/09 19:16		151352	
trans-1,3-Dichloropropene	5.0	U	5.0	1	NA	4/24/09 19:16		151352	
Ethylbenzene	5.0	U	5.0	1	NA	4/24/09 19:16		151352	
2-Hexanone	10	U	10	1	NA	4/24/09 19:16		151352	
Methylene Chloride	5.0	U	5.0	1	NA	4/24/09 19:16		151352	
4-Methyl-2-pentanone (MIBK)	10	U	10	1	NA	4/24/09 19:16		151352	
Styrene	5.0	U	5.0	1	NA	4/24/09 19:16		151352	
1,1,2,2-Tetrachloroethane	5.0	U	5.0	1	NA	4/24/09 19:16		151352	
Tetrachloroethene	5.0	U	5.0	1	NA	4/24/09 19:16		151352	
Toluene	5.0	U	5.0	1	NA	4/24/09 19:16		151352	
1,1,1-Trichloroethane	5.0	U	5.0	1	NA	4/24/09 19:16		151352	
1,1,2-Trichloroethane	5.0	U	5.0	1	NA	4/24/09 19:16		151352	
Trichloroethene	5.0	U	5.0	1	NA	4/24/09 19:16		151352	
Vinyl Chloride	5.0	U	5.0	1	NA	4/24/09 19:16		151352	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 4/09  
**Sample Matrix:** Water  
**Sample Name:** TRIP BLANK  
**Lab Code:** R0902131-014

**Service Request:** R0902131  
**Date Collected:** 4/16/09  
**Date Received:** 4/17/09  
**Units:** µg/L  
**Basis:** NA

## Volatile Organic Compounds by GC/MS

**Analytical Method:** 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
o-Xylene	5.0	U	5.0	1	NA	4/24/09 19:16		151352	
m,p-Xylenes	5.0	U	5.0	1	NA	4/24/09 19:16		151352	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	99	80-123	4/24/09 19:16		
Toluene-d8	102	88-124	4/24/09 19:16		
Dibromofluoromethane	108	89-115	4/24/09 19:16		

**Comments:**

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 4/09  
**Sample Matrix:** Water  
**Sample Name:** Method Blank  
**Lab Code:** R0902131-MB1

**Service Request:** R0902131  
**Date Collected:** NA  
**Date Received:** NA

**Basis:** NA

## General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Carbon, Total Organic (TOC)	SM20 5310 C	1.0	U	mg/L	1.0	1	NA	4/21/09 16:45
Chloride	300.0	0.20	U	mg/L	0.20	1	NA	4/17/09 18:23
Iron, Divalent (Ferrous Iron)	SM 3500-Fe B.4.c	0.10	U	mg/L	0.10	1	NA	4/17/09 17:10
Nitrate as Nitrogen	300.0	0.050	U	mg/L	0.050	1	NA	4/17/09 18:23
Sulfate	300.0	0.20	U	mg/L	0.20	1	NA	4/17/09 18:23

Comments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 4/09  
**Sample Matrix:** Water  
**Sample Name:** Method Blank  
**Lab Code:** R0902131-MB2

**Service Request:** R0902131  
**Date Collected:** NA  
**Date Received:** NA  
**Basis:** NA

**General Chemistry Parameters**

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Carbon, Total Organic (TOC)	SM20 5310 C	1.0	U	mg/L	1.0	1	NA	4/22/09 17:19
Chloride	300.0	0.20	U	mg/L	0.20	1	NA	4/21/09 10:14
Sulfate	300.0	0.20	U	mg/L	0.20	1	NA	4/20/09 15:14

Comments: \_\_\_\_\_

**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 4/09  
**Sample Matrix:** Water  
**Sample Name:** Method Blank  
**Lab Code:** R0902131-MB3

**Service Request:** R0902131  
**Date Collected:** NA  
**Date Received:** NA

**Basis:** NA

**General Chemistry Parameters**

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Carbon, Total Organic (TOC)	SM20 5310 C	1.0 U	mg/L	1.0	1	NA	4/23/09 08:08
Chloride	300.0	0.20 U	mg/L	0.20	1	NA	4/27/09 11:45
Sulfate	300.0	0.20 U	mg/L	0.20	1	NA	4/21/09 10:14

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 4/09  
**Sample Matrix:** Water  
**Sample Name:** Method Blank  
**Lab Code:** R0902131-MB1

**Service Request:** R0902131  
**Date Collected:** NA  
**Date Received:** NA  
**Basis:** NA

## Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Dissolved	6010B	10	U	µg/L	10	1	4/22/09	4/28/09 21:33
Manganese, Total	6010B	10	U	µg/L	10	1	4/22/09	4/28/09 21:33

Comments:

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## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 4/09  
**Sample Matrix:** Water  
**Sample Name:** Method Blank  
**Lab Code:** R0902131-MB2

**Service Request:** R0902131  
**Date Collected:** NA  
**Date Received:** NA

**Basis:** NA

## Manganese, Dissolved, by Inductively Coupled Plasma-Atomic Emission Spectrometry

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Dissolved	6010B	10 U	µg/L	10	1	4/22/09	4/28/09 21:44

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
 Project: Leica/Wells 4/09  
 Sample Matrix: Water  
 Sample Name: Method Blank  
 Lab Code: RQ0903154-01

Service Request: R0902131  
 Date Collected: NA  
 Date Received: NA  
 Units: µg/L  
 Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Acetone	20	U	20	1	NA	4/23/09 12:50		151103	
Benzene	5.0	U	5.0	1	NA	4/23/09 12:50		151103	
Bromodichloromethane	5.0	U	5.0	1	NA	4/23/09 12:50		151103	
Bromoform	5.0	U	5.0	1	NA	4/23/09 12:50		151103	
Bromomethane	5.0	U	5.0	1	NA	4/23/09 12:50		151103	
2-Butanone (MEK)	10	U	10	1	NA	4/23/09 12:50		151103	
Carbon Disulfide	10	U	10	1	NA	4/23/09 12:50		151103	
Carbon Tetrachloride	5.0	U	5.0	1	NA	4/23/09 12:50		151103	
Chlorobenzene	5.0	U	5.0	1	NA	4/23/09 12:50		151103	
Chloroethane	5.0	U	5.0	1	NA	4/23/09 12:50		151103	
Chloroform	5.0	U	5.0	1	NA	4/23/09 12:50		151103	
Chloromethane	5.0	U	5.0	1	NA	4/23/09 12:50		151103	
Dibromochloromethane	5.0	U	5.0	1	NA	4/23/09 12:50		151103	
1,1-Dichloroethane	5.0	U	5.0	1	NA	4/23/09 12:50		151103	
1,2-Dichloroethane	5.0	U	5.0	1	NA	4/23/09 12:50		151103	
1,1-Dichloroethene	5.0	U	5.0	1	NA	4/23/09 12:50		151103	
cis-1,2-Dichloroethene	5.0	U	5.0	1	NA	4/23/09 12:50		151103	
trans-1,2-Dichloroethene	5.0	U	5.0	1	NA	4/23/09 12:50		151103	
1,2-Dichloropropane	5.0	U	5.0	1	NA	4/23/09 12:50		151103	
cis-1,3-Dichloropropene	5.0	U	5.0	1	NA	4/23/09 12:50		151103	
trans-1,3-Dichloropropene	5.0	U	5.0	1	NA	4/23/09 12:50		151103	
Ethylbenzene	5.0	U	5.0	1	NA	4/23/09 12:50		151103	
2-Hexanone	10	U	10	1	NA	4/23/09 12:50		151103	
Methylene Chloride	5.0	U	5.0	1	NA	4/23/09 12:50		151103	
4-Methyl-2-pentanone (MIBK)	10	U	10	1	NA	4/23/09 12:50		151103	
Styrene	5.0	U	5.0	1	NA	4/23/09 12:50		151103	
1,1,2,2-Tetrachloroethane	5.0	U	5.0	1	NA	4/23/09 12:50		151103	
Tetrachloroethene	5.0	U	5.0	1	NA	4/23/09 12:50		151103	
Toluene	5.0	U	5.0	1	NA	4/23/09 12:50		151103	
1,1,1-Trichloroethane	5.0	U	5.0	1	NA	4/23/09 12:50		151103	
1,1,2-Trichloroethane	5.0	U	5.0	1	NA	4/23/09 12:50		151103	
Trichloroethene	5.0	U	5.0	1	NA	4/23/09 12:50		151103	
Vinyl Chloride	5.0	U	5.0	1	NA	4/23/09 12:50		151103	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
Project: Leica/Wells 4/09  
Sample Matrix: Water  
Sample Name: Method Blank  
Lab Code: RQ0903154-01

Service Request: R0902131  
Date Collected: NA  
Date Received: NA  
Units: µg/L  
Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
o-Xylene	5.0	U	5.0	1	NA	4/23/09 12:50		151103	
m,p-Xylenes	5.0	U	5.0	1	NA	4/23/09 12:50		151103	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	100	80-123	4/23/09 12:50		
Toluene-d8	102	88-124	4/23/09 12:50		
Dibromofluoromethane	103	89-115	4/23/09 12:50		

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
 Project: Leica/Wells 4/09  
 Sample Matrix: Water  
 Sample Name: Method Blank  
 Lab Code: RQ0903176-01

Service Request: R0902131  
 Date Collected: NA  
 Date Received: NA  
 Units: µg/L  
 Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Acetone	20	U	20	1	NA	4/24/09 13:11		151352	
Benzene	5.0	U	5.0	1	NA	4/24/09 13:11		151352	
Bromodichloromethane	5.0	U	5.0	1	NA	4/24/09 13:11		151352	
Bromoform	5.0	U	5.0	1	NA	4/24/09 13:11		151352	
Bromomethane	5.0	U	5.0	1	NA	4/24/09 13:11		151352	
2-Butanone (MEK)	10	U	10	1	NA	4/24/09 13:11		151352	
Carbon Disulfide	10	U	10	1	NA	4/24/09 13:11		151352	
Carbon Tetrachloride	5.0	U	5.0	1	NA	4/24/09 13:11		151352	
Chlorobenzene	5.0	U	5.0	1	NA	4/24/09 13:11		151352	
Chloroethane	5.0	U	5.0	1	NA	4/24/09 13:11		151352	
Chloroform	5.0	U	5.0	1	NA	4/24/09 13:11		151352	
Chloromethane	5.0	U	5.0	1	NA	4/24/09 13:11		151352	
Dibromochloromethane	5.0	U	5.0	1	NA	4/24/09 13:11		151352	
1,1-Dichloroethane	5.0	U	5.0	1	NA	4/24/09 13:11		151352	
1,2-Dichloroethane	5.0	U	5.0	1	NA	4/24/09 13:11		151352	
1,1-Dichloroethene	5.0	U	5.0	1	NA	4/24/09 13:11		151352	
cis-1,2-Dichloroethene	5.0	U	5.0	1	NA	4/24/09 13:11		151352	
trans-1,2-Dichloroethene	5.0	U	5.0	1	NA	4/24/09 13:11		151352	
1,2-Dichloropropane	5.0	U	5.0	1	NA	4/24/09 13:11		151352	
cis-1,3-Dichloropropene	5.0	U	5.0	1	NA	4/24/09 13:11		151352	
trans-1,3-Dichloropropene	5.0	U	5.0	1	NA	4/24/09 13:11		151352	
Ethylbenzene	5.0	U	5.0	1	NA	4/24/09 13:11		151352	
2-Hexanone	10	U	10	1	NA	4/24/09 13:11		151352	
Methylene Chloride	5.0	U	5.0	1	NA	4/24/09 13:11		151352	
4-Methyl-2-pentanone (MIBK)	10	U	10	1	NA	4/24/09 13:11		151352	
Styrene	5.0	U	5.0	1	NA	4/24/09 13:11		151352	
1,1,2,2-Tetrachloroethane	5.0	U	5.0	1	NA	4/24/09 13:11		151352	
Tetrachloroethene	5.0	U	5.0	1	NA	4/24/09 13:11		151352	
Toluene	5.0	U	5.0	1	NA	4/24/09 13:11		151352	
1,1,1-Trichloroethane	5.0	U	5.0	1	NA	4/24/09 13:11		151352	
1,1,2-Trichloroethane	5.0	U	5.0	1	NA	4/24/09 13:11		151352	
Trichloroethene	5.0	U	5.0	1	NA	4/24/09 13:11		151352	
Vinyl Chloride	5.0	U	5.0	1	NA	4/24/09 13:11		151352	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 4/09  
**Sample Matrix:** Water  
**Sample Name:** Method Blank  
**Lab Code:** RQ0903176-01

**Service Request:** R0902131  
**Date Collected:** NA  
**Date Received:** NA  
**Units:** µg/L  
**Basis:** NA

## Volatile Organic Compounds by GC/MS

**Analytical Method:** 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
o-Xylene	5.0	U	5.0	1	NA	4/24/09 13:11		151352	
m,p-Xylenes	5.0	U	5.0	1	NA	4/24/09 13:11		151352	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	98	80-123	4/24/09 13:11		
Toluene-d8	103	88-124	4/24/09 13:11		
Dibromofluoromethane	108	89-115	4/24/09 13:11		

**Comments:**

## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Energy Solutions  
Project: Leica/Wells 4/09  
Sample Matrix: Water

Service Request: R0902131  
Date Analyzed: 4/17/09 -  
4/21/09

Lab Control Sample Summary  
General Chemistry Parameters

Units: mg/L  
Basis: NA

Analyte Name	Method	Lab Control Sample R0902131-LCS1			% Rec Limits
		Result	Expected	% Rec	
Carbon, Total Organic (TOC)	SM20 5310 C	9.13	10.0	91	87 - 120
Chloride	300.0	1.94	2.00	97	90 - 110
Iron, Divalent (Ferrous Iron)	SM 3500-Fe B.4.c	0.380	0.40	95	86 - 114
Nitrate as Nitrogen	300.0	0.976	1.00	98	90 - 110
Sulfate	300.0	1.97	2.00	99	90 - 110

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 4/09  
**Sample Matrix:** Water

**Service Request:** R0902131  
**Date Analyzed:** 4/20/09 -  
4/22/09

**Lab Control Sample Summary**  
**General Chemistry Parameters**

**Units:** mg/L  
**Basis:** NA

Analyte Name	Method	Lab Control Sample R0902131-LCS2			% Rec Limits
		Result	Expected	% Rec	
Carbon, Total Organic (TOC)	SM20 5310 C	9.10	10.0	91	87 - 120
Chloride	300.0	1.95	2.00	97	90 - 110
Sulfate	300.0	1.94	2.00	97	90 - 110

Comments: \_\_\_\_\_

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 4/09  
**Sample Matrix:** Water

**Service Request:** R0902131  
**Date Analyzed:** 4/21/09 -  
4/27/09

**Lab Control Sample Summary**  
**General Chemistry Parameters**

**Units:** mg/L  
**Basis:** NA

Analyte Name	Method	Lab Control Sample R0902131-LCS3			% Rec Limits
		Result	Expected	% Rec	
Carbon, Total Organic (TOC)	SM20 5310 C	8.83	10.0	88	87 - 120
Chloride	300.0	1.95	2.00	97	90 - 110
Sulfate	300.0	1.82	2.00	91	90 - 110

Comments: \_\_\_\_\_

\_\_\_\_\_

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Energy Solutions  
Project: Leica/Wells 4/09  
Sample Matrix: Water

Service Request: R0902131  
Date Analyzed: 4/28/09

Lab Control Sample Summary  
Inorganic Parameters

Units: µg/L  
Basis: NA

Analyte Name	Method	Lab Control Sample R0902131-LCS			% Rec Limits
		Result	Expected	% Rec	
Manganese, Dissolved	6010B	489	500	98	80 - 120
Manganese, Total	6010B	489	500	98	80 - 120

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Energy Solutions  
 Project: Leica/Wells 4/09  
 Sample Matrix: Water

Service Request: R0902131  
 Date Analyzed: 4/23/09

Lab Control Sample Summary  
 Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Units: µg/L

Basis: NA

Analysis Lot: 151103

Analyte Name	Lab Control Sample RQ0903154-02			% Rec Limits
	Result	Expected	% Rec	
Acetone	17.7	20.0	89	50 - 150
Benzene	17.5	20.0	88	70 - 130
Bromodichloromethane	20.4	20.0	102	70 - 130
Bromoform	20.9	20.0	104	70 - 130
Bromomethane	19.4	20.0	97	50 - 150
2-Butanone (MEK)	20.4	20.0	102	50 - 150
Carbon Disulfide	19.3	20.0	97	70 - 130
Carbon Tetrachloride	18.8	20.0	94	70 - 130
Chlorobenzene	19.1	20.0	95	70 - 130
Chloroethane	19.4	20.0	97	70 - 130
Chloroform	19.1	20.0	95	70 - 130
Chloromethane	20.5	20.0	103	70 - 130
Dibromochloromethane	21.0	20.0	105	70 - 130
1,1-Dichloroethane	18.4	20.0	92	70 - 130
1,2-Dichloroethane	20.6	20.0	103	70 - 130
1,1-Dichloroethene	18.0	20.0	90	70 - 130
cis-1,2-Dichloroethene	17.9	20.0	90	70 - 130
trans-1,2-Dichloroethene	17.1	20.0	86	70 - 130
1,2-Dichloropropane	18.9	20.0	95	70 - 130
cis-1,3-Dichloropropene	18.2	20.0	91	70 - 130
trans-1,3-Dichloropropene	17.9	20.0	89	70 - 130
Ethylbenzene	18.8	20.0	94	70 - 130
2-Hexanone	20.1	20.0	101	70 - 130
Methylene Chloride	17.9	20.0	90	70 - 130
4-Methyl-2-pentanone (MIBK)	19.4	20.0	97	70 - 130
Styrene	21.1	20.0	106	70 - 130
1,1,2,2-Tetrachloroethane	22.1	20.0	111	70 - 130
Tetrachloroethene	18.7	20.0	94	70 - 130
Toluene	17.6	20.0	88	70 - 130
1,1,1-Trichloroethane	18.5	20.0	92	70 - 130
1,1,2-Trichloroethane	18.9	20.0	95	70 - 130
Trichloroethene	16.9	20.0	84	70 - 130
Vinyl Chloride	19.3	20.0	97	70 - 130
o-Xylene	18.4	20.0	92	70 - 130
m,p-Xylenes	38.1	40.0	95	70 - 130

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Energy Solutions  
 Project: Leica/Wells 4/09  
 Sample Matrix: Water

Service Request: R0902131  
 Date Analyzed: 4/24/09

Lab Control Sample Summary  
 Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Units: µg/L

Basis: NA

Analysis Lot: 151352

Analyte Name	Lab Control Sample RQ0903176-02			% Rec Limits
	Result	Expected	% Rec	
Acetone	16.9	20.0	85	50 - 150
Benzene	17.4	20.0	87	70 - 130
Bromodichloromethane	20.8	20.0	104	70 - 130
Bromoform	21.0	20.0	105	70 - 130
Bromomethane	19.5	20.0	98	50 - 150
2-Butanone (MEK)	17.0	20.0	85	50 - 150
Carbon Disulfide	17.4	20.0	87	70 - 130
Carbon Tetrachloride	19.1	20.0	95	70 - 130
Chlorobenzene	19.2	20.0	96	70 - 130
Chloroethane	20.9	20.0	104	70 - 130
Chloroform	18.8	20.0	94	70 - 130
Chloromethane	21.4	20.0	107	70 - 130
Dibromochloromethane	21.7	20.0	109	70 - 130
1,1-Dichloroethane	18.7	20.0	94	70 - 130
1,2-Dichloroethane	20.1	20.0	100	70 - 130
1,1-Dichloroethene	17.4	20.0	87	70 - 130
cis-1,2-Dichloroethene	17.8	20.0	89	70 - 130
trans-1,2-Dichloroethene	17.3	20.0	87	70 - 130
1,2-Dichloropropane	18.9	20.0	94	70 - 130
cis-1,3-Dichloropropene	18.2	20.0	91	70 - 130
trans-1,3-Dichloropropene	17.5	20.0	87	70 - 130
Ethylbenzene	18.6	20.0	93	70 - 130
2-Hexanone	15.5	20.0	78	70 - 130
Methylene Chloride	17.7	20.0	88	70 - 130
4-Methyl-2-pentanone (MIBK)	15.0	20.0	75	70 - 130
Styrene	21.0	20.0	105	70 - 130
1,1,2,2-Tetrachloroethane	19.8	20.0	99	70 - 130
Tetrachloroethene	18.6	20.0	93	70 - 130
Toluene	17.5	20.0	87	70 - 130
1,1,1-Trichloroethane	18.2	20.0	91	70 - 130
1,1,2-Trichloroethane	17.6	20.0	88	70 - 130
Trichloroethene	16.8	20.0	84	70 - 130
Vinyl Chloride	20.2	20.0	101	70 - 130
o-Xylene	18.9	20.0	94	70 - 130
m,p-Xylenes	38.1	40.0	95	70 - 130

Comments:

**Columbia Analytical Services**  
An Employee-Owned Company  
[www.caslab.com](http://www.caslab.com)

CAS Contact

[illegible]

# CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

One Mustard St., Suite 250 • Rochester, NY 14609-0959 • (585) 288-5380 • 800-695-7222 x11 • FAX (585) 288-8475

# SP

CAS Contact

ANALYSIS REQUESTED (Include Method Number and Container Preservative)									
Project Name		Project Number		Project Manager		Report CC		PRESERVATIVE	
Leica		801-303-1092		Bob McPeak		860-355-8294		NONE	
Energy Solutions LLC		143 West St.		New Milford, CT		06776		1. HCl	
Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		2. HNO <sub>3</sub>	
Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		3. H <sub>2</sub> SO <sub>4</sub>	
Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		4. NaOH	
Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		5. Zn Acetate	
Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		6. MeOH	
Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		7. NaHSO <sub>4</sub>	
Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		8. Other	
Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		9. Other	
Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		10. Other	
Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		11. Other	
Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		12. Other	
Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		13. Other	
Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		14. Other	
Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		15. Other	
Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		16. Other	
Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		17. Other	
Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		18. Other	
Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		19. Other	
Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		20. Other	
Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		21. Other	
Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		22. Other	
Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		23. Other	
Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		24. Other	
Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		25. Other	
Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		26. Other	
Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		27. Other	
Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		28. Other	
Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		29. Other	
Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		30. Other	
Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		31. Other	
Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		32. Other	
Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		33. Other	
Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		34. Other	
Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		35. Other	
Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		36. Other	
Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		37. Other	
Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		38. Other	
Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		39. Other	
Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		40. Other	
Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		41. Other	
Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		42. Other	
Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		43. Other	
Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		44. Other	
Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		45. Other	
Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		46. Other	
Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		47. Other	
Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		48. Other	
Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		49. Other	
Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		50. Other	
Wayne DeGaller		Wayne DeGaller		Wayne DeGaller		Wayne DeGaller</			

# Cooler Receipt And Preservation Check Form

Project/Client Luca Submission Number 209-2131

Cooler received on 4/17/09 by: JP COURIER: CAS UPS FEDEX VELOCITY CLIENT

1. Were custody seals on outside of cooler? YES NO
2. Were custody papers properly filled out (ink, signed, etc.)? YES NO
3. Did all bottles arrive in good condition (unbroken)? YES NO
4. Did any VOA vials have significant\* air bubbles? YES NO N/A
5. Were Ice or Ice packs present? YES NO
6. Where did the bottles originate? CAS/ROC, CLIENT
7. Temperature of cooler(s) upon receipt: 6° 6° \_\_\_\_\_

Is the temperature within 0° - 6° C?: Yes Yes Yes Yes Yes

If No, Explain Below No No No No No

Date/Time Temperatures Taken: 4/17/09 1415

Thermometer ID: 161 / IR GUN#2 / IR GUN#3 Reading From: Temp Blank / Sample Bottle

If out of Temperature, note packing/ice condition, Client Approval to Run Samples: \_\_\_\_\_

PC Secondary Review: KB 4/27/09

Cooler Breakdown: Date: 4/17/09 by: JP

1. Were all bottle labels complete (i.e. analysis, preservation, etc.)? YES NO
2. Did all bottle labels and tags agree with custody papers? YES NO
3. Were correct containers used for the tests indicated? YES NO
4. Air Samples: Cassettes / Tubes Intact Canisters Pressurized Tedlar® Bags Inflated N/A

Explain any discrepancies: \_\_\_\_\_

pH	Reagent	YES	NO	Lot Received	Exp	Sample ID	Vol. Added	Lot Added	Final pH
≥12	NaOH								
<u>2</u>	HNO <sub>3</sub>	✓		<u>BDBZVCE91A</u>	<u>10/09</u>				
<u>2</u>	H <sub>2</sub> SO <sub>4</sub>			<u>WLAS29AC</u>	<u>9/09</u>				
Residual Chlorine (-)	For TCN and Phenol			If present, contact PM to add ascorbic acid					
	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	-	-			*Not to be tested before analysis - pH tested and recorded by VOAs or GenChem on a separate worksheet			
	Zn Aceta	-	-						
	HCl	*	*	<u>ESDA11</u>					

Yes = All samples OK

No = Samples were preserved at lab as listed

PM OK to Adjust: \_\_\_\_\_

Bottle lot numbers: 034505 8-212-005 8-260-001

Other Comments:

PC Secondary Review: KB 5/7/09

\*significant air bubbles are greater than 5-6 mm

October 23, 2009

Service Request No: R0905596

Mr. Robert McPeak  
Energy Solutions  
143 West Street  
New Milford, CT 06776

**Laboratory Results for: Leica/Wells**

Dear Mr. McPeak:

Enclosed are the results of the sample(s) submitted to our laboratory on October 1, 2009. For your reference, these analyses have been assigned our service request number **R0905596**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 134. You may also contact me via email at [KBunker@caslab.com](mailto:KBunker@caslab.com).

Respectfully submitted,

**Columbia Analytical Services, Inc.**



Karen Bunker  
Project Manager

Page 1 of 608

## CASE NARRATIVE

This report contains analytical results for the following samples:  
Service Request Number: R0905596

<u>Lab ID</u>	<u>Client ID</u>
R0905596-001	MW 11A
R0905596-002	MW 11A Dissolved
R0905596-003	MW 16A
R0905596-004	MW 16A Dissolved
R0905596-005	MW 24
R0905596-006	MW 24 Dissolved
R0905596-007	MW 24A
R0905596-008	MW 24A Dissolved
R0905596-009	MW 1A
R0905596-010	MW 1A Dissolved
R0905596-011	MW 16R
R0905596-012	MW 16R Dissolved
R0905596-013	MW 18
R0905596-014	MW 18 Dissolved
R0905596-015	MW 18A
R0905596-016	MW 18A Dissolved
R0905596-017	Trip Blank

All samples were received in good condition unless otherwise noted on the cooler receipt and preservation check form located at the end of this report.

All samples were preserved in accordance with approved analytical methods.

All samples have been analyzed by the approved methods cited on the analytical results pages.

All holding times and associated QC were within limits.

No analytical or QC problems were encountered.

All sampling activities performed by CAS personnel have been in accordance with "CAS Field Procedures and Measurements Manual" or by client specifications.

## REPORT QUALIFIERS

- U Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.
- J Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Aroclors).
- B Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.
- E Inorganics- Concentration is estimated due to the serial dilution was outside control limits.
- E Organics- Concentration has exceeded the calibration range for that specific analysis.
- D Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.
- \* Indicates that a quality control parameter has exceeded laboratory limits.
- # Spike was diluted out.
- + Correlation coefficient for MSA is <0.995.
- N Inorganics- Matrix spike recovery was outside laboratory limits.
- N Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.
- S Concentration has been determined using Method of Standard Additions (MSA).
- W Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.
- P Pesticide/Aroclors: Concentration >40% (25% for CLP) difference between the two GC columns.
- C Confirmed by GC/MS
- Q DoD reports: indicates a pesticide/Aroclor is not confirmed ( $\geq 100\%$  Difference between two GC columns).
- X See Case Narrative for discussion.



### CAS/Rochester Lab ID # for State Certifications<sup>1</sup>

NELAP Accredited	Nevada ID # NY-00032
Delaware Accredited	New Jersey ID # NY004
Connecticut ID # PH0556	New York ID # 10145
Florida ID # E87674	New Hampshire ID # 294100 A/B
Illinois ID #200047	Pennsylvania ID# 68-786
Maine ID #NY0032	Rhode Island ID # 158
Nebraska Accredited	West Virginia ID # 292
Navy Facilities Engineering Service Center Approved	

<sup>1</sup> Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable, except as noted in the laboratory case narrative provided. For a specific list of accredited analytes, refer to the certifications section at [www.caslab.com](http://www.caslab.com).

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells  
**Sample Matrix:** Water  
**Sample Name:** MW 11A  
**Lab Code:** R0905596-001

**Service Request:** R0905596  
**Date Collected:** 10/ 1/09 0900  
**Date Received:** 10/ 1/09

**Basis:** NA

## General Chemistry Parameters

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Carbon, Total Organic (TOC)	SM20 5310 C	3.3	mg/L	2.0	2	NA	10/7/09 00:49
Chloride	300.0	87.4	mg/L	2.0	10	NA	10/1/09 20:25
Iron, Divalent (Ferrous Iron)	SM 3500-Fe B.4.c	0.10	mg/L	0.10	1	NA	10/1/09 17:50
Nitrate as Nitrogen	300.0	0.50 U	mg/L	0.50	10	NA	10/1/09 20:25
Sulfate	300.0	87.8	mg/L	2.0	10	NA	10/1/09 20:25

Comments:

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## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells  
**Sample Matrix:** Water  
**Sample Name:** MW 11A Dissolved  
**Lab Code:** R0905596-002

**Service Request:** R0905596  
**Date Collected:** 10/ 1/09 0900  
**Date Received:** 10/ 1/09

**Basis:** NA

## Iron, Divalent, Dissolved Phenanthroline Method 20th Ed.

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Iron, Divalent (Ferrous Iron), Dissolved	SM 3500-Fe B.4.c	0.10 U	mg/L	0.10	1	NA	10/1/09 17:50

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells  
**Sample Matrix:** Water  
**Sample Name:** MW 11A  
**Lab Code:** R0905596-001

**Service Request:** R0905596  
**Date Collected:** 10/ 1/09 0900  
**Date Received:** 10/ 1/09

**Basis:** NA

## Manganese, Total, by Inductively Coupled Plasma-Atomic Emission Spectrometry

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Total	6010B	74	µg/L	10	1	10/ 7/09	10/9/09 21:47

Comments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells  
**Sample Matrix:** Water  
**Sample Name:** MW 11A Dissolved  
**Lab Code:** R0905596-002

**Service Request:** R0905596  
**Date Collected:** 10/ 1/09 0900  
**Date Received:** 10/ 1/09

**Basis:** NA

**Manganese, Dissolved, by Inductively Coupled Plasma-Atomic Emission Spectrometry**

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Dissolved	6010B	69	µg/L	10	1	10/ 7/09	10/9/09 22:30

**Comments:** \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
 Project: Leica/Wells  
 Sample Matrix: Water  
 Sample Name: MW 11A  
 Lab Code: R0905596-001

Service Request: R0905596  
 Date Collected: 10/ 1/09 0900  
 Date Received: 10/ 1/09  
 Units: µg/L  
 Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Acetone	50	U	50	2.5	NA	10/10/09 04:49		174095	
Benzene	13	U	13	2.5	NA	10/10/09 04:49		174095	
Bromodichloromethane	13	U	13	2.5	NA	10/10/09 04:49		174095	
Bromoform	13	U	13	2.5	NA	10/10/09 04:49		174095	
Bromomethane	13	U	13	2.5	NA	10/10/09 04:49		174095	
2-Butanone (MEK)	25	U	25	2.5	NA	10/10/09 04:49		174095	
Carbon Disulfide	25	U	25	2.5	NA	10/10/09 04:49		174095	
Carbon Tetrachloride	13	U	13	2.5	NA	10/10/09 04:49		174095	
Chlorobenzene	13	U	13	2.5	NA	10/10/09 04:49		174095	
Chloroethane	13	U	13	2.5	NA	10/10/09 04:49		174095	
Chloroform	13	U	13	2.5	NA	10/10/09 04:49		174095	
Chloromethane	13	U	13	2.5	NA	10/10/09 04:49		174095	
Dibromochloromethane	13	U	13	2.5	NA	10/10/09 04:49		174095	
1,1-Dichloroethane	13	U	13	2.5	NA	10/10/09 04:49		174095	
1,2-Dichloroethane	13	U	13	2.5	NA	10/10/09 04:49		174095	
1,1-Dichloroethene	13	U	13	2.5	NA	10/10/09 04:49		174095	
cis-1,2-Dichloroethene	210		13	2.5	NA	10/10/09 04:49		174095	
trans-1,2-Dichloroethene	13	U	13	2.5	NA	10/10/09 04:49		174095	
1,2-Dichloropropane	13	U	13	2.5	NA	10/10/09 04:49		174095	
cis-1,3-Dichloropropene	13	U	13	2.5	NA	10/10/09 04:49		174095	
trans-1,3-Dichloropropene	13	U	13	2.5	NA	10/10/09 04:49		174095	
Ethylbenzene	13	U	13	2.5	NA	10/10/09 04:49		174095	
2-Hexanone	25	U	25	2.5	NA	10/10/09 04:49		174095	
Methylene Chloride	13	U	13	2.5	NA	10/10/09 04:49		174095	
4-Methyl-2-pentanone (MIBK)	25	U	25	2.5	NA	10/10/09 04:49		174095	
Styrene	13	U	13	2.5	NA	10/10/09 04:49		174095	
1,1,2,2-Tetrachloroethane	13	U	13	2.5	NA	10/10/09 04:49		174095	
Tetrachloroethene	13	U	13	2.5	NA	10/10/09 04:49		174095	
Toluene	13	U	13	2.5	NA	10/10/09 04:49		174095	
1,1,1-Trichloroethane	13	U	13	2.5	NA	10/10/09 04:49		174095	
1,1,2-Trichloroethane	13	U	13	2.5	NA	10/10/09 04:49		174095	
Trichloroethene	13	U	13	2.5	NA	10/10/09 04:49		174095	
Vinyl Chloride	290		13	2.5	NA	10/10/09 04:49		174095	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
Project: Leica/Wells  
Sample Matrix: Water  
Sample Name: MW 11A  
Lab Code: R0905596-001

Service Request: R0905596  
Date Collected: 10/ 1/09 0900  
Date Received: 10/ 1/09  
Units: µg/L  
Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
o-Xylene	13	U	13	2.5	NA	10/10/09 04:49		174095	
m,p-Xylenes	13	U	13	2.5	NA	10/10/09 04:49		174095	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	102	85-122	10/10/09 04:49		
Toluene-d8	103	87-121	10/10/09 04:49		
Dibromofluoromethane	109	89-119	10/10/09 04:49		

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells  
**Sample Matrix:** Water  
**Sample Name:** MW 16A  
**Lab Code:** R0905596-003

**Service Request:** R0905596  
**Date Collected:** 10/ 1/09 0920  
**Date Received:** 10/ 1/09

**Basis:** NA

## General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Carbon, Total Organic (TOC)	SM20 5310 C	4.5		mg/L	2.0	2	NA	10/7/09 01:07
Chloride	300.0	197		mg/L	8.0	40	NA	10/7/09 03:34
Iron, Divalent (Ferrous Iron)	SM 3500-Fe B.4.c	0.34		mg/L	0.10	1	NA	10/1/09 17:50
Nitrate as Nitrogen	300.0	0.50	U	mg/L	0.50	10	NA	10/1/09 21:39
Sulfate	300.0	80.0		mg/L	2.0	10	NA	10/1/09 21:39

Comments:

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## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells  
**Sample Matrix:** Water  
**Sample Name:** MW 16A Dissolved  
**Lab Code:** R0905596-004

**Service Request:** R0905596  
**Date Collected:** 10/ 1/09 0920  
**Date Received:** 10/ 1/09

**Basis:** NA

## Iron, Divalent, Dissolved Phenanthroline Method 20th Ed.

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Iron, Divalent (Ferrous Iron), Dissolved	SM 3500-Fe B.4.c	0.23	mg/L	0.10	1	NA	10/1/09 17:50

Comments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells  
**Sample Matrix:** Water  
**Sample Name:** MW 16A  
**Lab Code:** R0905596-003

**Service Request:** R0905596  
**Date Collected:** 10/ 1/09 0920  
**Date Received:** 10/ 1/09

**Basis:** NA

**Manganese, Total, by Inductively Coupled Plasma-Atomic Emission Spectrometry**

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Total	6010B	84	µg/L	10	1	10/ 7/09	10/9/09 22:36

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells  
**Sample Matrix:** Water  
**Sample Name:** MW 16A Dissolved  
**Lab Code:** R0905596-004

**Service Request:** R0905596  
**Date Collected:** 10/ 1/09 0920  
**Date Received:** 10/ 1/09

**Basis:** NA

## Manganese, Dissolved, by Inductively Coupled Plasma-Atomic Emission Spectrometry

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Dissolved	6010B	79	µg/L	10	1	10/ 7/09	10/9/09 22:43

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
 Project: Leica/Wells  
 Sample Matrix: Water  
 Sample Name: MW 16A  
 Lab Code: R0905596-003

Service Request: R0905596  
 Date Collected: 10/ 1/09 0920  
 Date Received: 10/ 1/09  
 Units: µg/L  
 Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Acetone	200	U	200	10	NA	10/10/09 06:22		174095	
Benzene	50	U	50	10	NA	10/10/09 06:22		174095	
Bromodichloromethane	50	U	50	10	NA	10/10/09 06:22		174095	
Bromoform	50	U	50	10	NA	10/10/09 06:22		174095	
Bromomethane	50	U	50	10	NA	10/10/09 06:22		174095	
2-Butanone (MEK)	100	U	100	10	NA	10/10/09 06:22		174095	
Carbon Disulfide	100	U	100	10	NA	10/10/09 06:22		174095	
Carbon Tetrachloride	50	U	50	10	NA	10/10/09 06:22		174095	
Chlorobenzene	50	U	50	10	NA	10/10/09 06:22		174095	
Chloroethane	50	U	50	10	NA	10/10/09 06:22		174095	
Chloroform	50	U	50	10	NA	10/10/09 06:22		174095	
Chloromethane	50	U	50	10	NA	10/10/09 06:22		174095	
Dibromochloromethane	50	U	50	10	NA	10/10/09 06:22		174095	
1,1-Dichloroethane	220		50	10	NA	10/10/09 06:22		174095	
1,2-Dichloroethane	50	U	50	10	NA	10/10/09 06:22		174095	
1,1-Dichloroethene	50	U	50	10	NA	10/10/09 06:22		174095	
cis-1,2-Dichloroethene	1300		50	10	NA	10/10/09 06:22		174095	
trans-1,2-Dichloroethene	50	U	50	10	NA	10/10/09 06:22		174095	
1,2-Dichloropropane	50	U	50	10	NA	10/10/09 06:22		174095	
cis-1,3-Dichloropropene	50	U	50	10	NA	10/10/09 06:22		174095	
trans-1,3-Dichloropropene	50	U	50	10	NA	10/10/09 06:22		174095	
Ethylbenzene	50	U	50	10	NA	10/10/09 06:22		174095	
2-Hexanone	100	U	100	10	NA	10/10/09 06:22		174095	
Methylene Chloride	50	U	50	10	NA	10/10/09 06:22		174095	
4-Methyl-2-pentanone (MIBK)	100	U	100	10	NA	10/10/09 06:22		174095	
Styrene	50	U	50	10	NA	10/10/09 06:22		174095	
1,1,2,2-Tetrachloroethane	50	U	50	10	NA	10/10/09 06:22		174095	
Tetrachloroethene	50	U	50	10	NA	10/10/09 06:22		174095	
Toluene	50	U	50	10	NA	10/10/09 06:22		174095	
1,1,1-Trichloroethane	420		50	10	NA	10/10/09 06:22		174095	
1,1,2-Trichloroethane	50	U	50	10	NA	10/10/09 06:22		174095	
Trichloroethene	420		50	10	NA	10/10/09 06:22		174095	
Vinyl Chloride	290		50	10	NA	10/10/09 06:22		174095	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
Project: Leica/Wells  
Sample Matrix: Water  
Sample Name: MW 16A  
Lab Code: R0905596-003

Service Request: R0905596  
Date Collected: 10/ 1/09 0920  
Date Received: 10/ 1/09  
Units: µg/L  
Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
o-Xylene	50	U	50	10	NA	10/10/09 06:22		174095	
m,p-Xylenes	50	U	50	10	NA	10/10/09 06:22		174095	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	102	85-122	10/10/09 06:22		
Toluene-d8	105	87-121	10/10/09 06:22		
Dibromofluoromethane	108	89-119	10/10/09 06:22		

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells  
**Sample Matrix:** Water  
**Sample Name:** MW 24  
**Lab Code:** R0905596-005

**Service Request:** R0905596  
**Date Collected:** 10/ 1/09 1000  
**Date Received:** 10/ 1/09

**Basis:** NA

## General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Carbon, Total Organic (TOC)	SM20 5310 C	249		mg/L	20	20	NA	10/7/09 01:25
Chloride	300.0	191		mg/L	8.0	40	NA	10/7/09 03:49
Iron, Divalent (Ferrous Iron)	SM 3500-Fe B.4.c	0.38		mg/L	0.10	1	NA	10/1/09 17:50
Nitrate as Nitrogen	300.0	0.50	U	mg/L	0.50	10	NA	10/1/09 21:54
Sulfate	300.0	12.8		mg/L	2.0	10	NA	10/1/09 21:54

Comments:

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**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells  
**Sample Matrix:** Water  
**Sample Name:** MW 24 Dissolved  
**Lab Code:** R0905596-006

**Service Request:** R0905596  
**Date Collected:** 10/ 1/09 1000  
**Date Received:** 10/ 1/09

**Basis:** NA

**Iron, Divalent, Dissolved Phenanthroline Method 20th Ed.**

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Iron, Divalent (Ferrous Iron), Dissolved	SM 3500-Fe B.4.c	0.25	mg/L	0.10	1	NA	10/1/09 17:50

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells  
**Sample Matrix:** Water  
**Sample Name:** MW 24  
**Lab Code:** R0905596-005

**Service Request:** R0905596  
**Date Collected:** 10/ 1/09 1000  
**Date Received:** 10/ 1/09

**Basis:** NA

**Manganese, Total, by Inductively Coupled Plasma-Atomic Emission Spectrometry**

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Total	6010B	81	µg/L	10	1	10/ 7/09	10/9/09 22:49

Comments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells  
**Sample Matrix:** Water  
**Sample Name:** MW 24 Dissolved  
**Lab Code:** R0905596-006

**Service Request:** R0905596  
**Date Collected:** 10/ 1/09 1000  
**Date Received:** 10/ 1/09

**Basis:** NA

**Manganese, Dissolved, by Inductively Coupled Plasma-Atomic Emission Spectrometry**

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Dissolved	6010B	78	µg/L	10	1	10/ 7/09	10/9/09 22:55

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
 Project: Leica/Wells  
 Sample Matrix: Water  
 Sample Name: MW 24  
 Lab Code: R0905596-005

Service Request: R0905596  
 Date Collected: 10/ 1/09 1000  
 Date Received: 10/ 1/09  
 Units: µg/L  
 Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Acetone	500	U	500	25	NA	10/10/09 06:54		174095	
Benzene	130	U	130	25	NA	10/10/09 06:54		174095	
Bromodichloromethane	130	U	130	25	NA	10/10/09 06:54		174095	
Bromoform	130	U	130	25	NA	10/10/09 06:54		174095	
Bromomethane	130	U	130	25	NA	10/10/09 06:54		174095	
2-Butanone (MEK)	1100		250	25	NA	10/10/09 06:54		174095	
Carbon Disulfide	250	U	250	25	NA	10/10/09 06:54		174095	
Carbon Tetrachloride	130	U	130	25	NA	10/10/09 06:54		174095	
Chlorobenzene	130	U	130	25	NA	10/10/09 06:54		174095	
Chloroethane	130	U	130	25	NA	10/10/09 06:54		174095	
Chloroform	130	U	130	25	NA	10/10/09 06:54		174095	
Chloromethane	130	U	130	25	NA	10/10/09 06:54		174095	
Dibromochloromethane	130	U	130	25	NA	10/10/09 06:54		174095	
1,1-Dichloroethane	370		130	25	NA	10/10/09 06:54		174095	
1,2-Dichloroethane	130	U	130	25	NA	10/10/09 06:54		174095	
1,1-Dichloroethene	130	U	130	25	NA	10/10/09 06:54		174095	
cis-1,2-Dichloroethene	2600		130	25	NA	10/10/09 06:54		174095	
trans-1,2-Dichloroethene	130	U	130	25	NA	10/10/09 06:54		174095	
1,2-Dichloropropane	130	U	130	25	NA	10/10/09 06:54		174095	
cis-1,3-Dichloropropene	130	U	130	25	NA	10/10/09 06:54		174095	
trans-1,3-Dichloropropene	130	U	130	25	NA	10/10/09 06:54		174095	
Ethylbenzene	130	U	130	25	NA	10/10/09 06:54		174095	
2-Hexanone	250	U	250	25	NA	10/10/09 06:54		174095	
Methylene Chloride	130	U	130	25	NA	10/10/09 06:54		174095	
4-Methyl-2-pentanone (MIBK)	250	U	250	25	NA	10/10/09 06:54		174095	
Styrene	130	U	130	25	NA	10/10/09 06:54		174095	
1,1,2,2-Tetrachloroethane	130	U	130	25	NA	10/10/09 06:54		174095	
Tetrachloroethene	130	U	130	25	NA	10/10/09 06:54		174095	
Toluene	130	U	130	25	NA	10/10/09 06:54		174095	
1,1,1-Trichloroethane	130	U	130	25	NA	10/10/09 06:54		174095	
1,1,2-Trichloroethane	130	U	130	25	NA	10/10/09 06:54		174095	
Trichloroethene	130	U	130	25	NA	10/10/09 06:54		174095	
Vinyl Chloride	2600		130	25	NA	10/10/09 06:54		174095	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
Project: Leica/Wells  
Sample Matrix: Water  
Sample Name: MW 24  
Lab Code: R0905596-005

Service Request: R0905596  
Date Collected: 10/ 1/09 1000  
Date Received: 10/ 1/09  
Units: µg/L  
Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
o-Xylene	130	U	130	25	NA	10/10/09 06:54		174095	
m,p-Xylenes	130	U	130	25	NA	10/10/09 06:54		174095	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	100	85-122	10/10/09 06:54		
Toluene-d8	105	87-121	10/10/09 06:54		
Dibromofluoromethane	107	89-119	10/10/09 06:54		

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
Project: Leica/Wells  
Sample Matrix: Water  
Sample Name: MW 24A  
Lab Code: R0905596-007

Service Request: R0905596  
Date Collected: 10/ 1/09 1015  
Date Received: 10/ 1/09

Basis: NA

## General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Carbon, Total Organic (TOC)	SM20 5310 C	19.6		mg/L	1.0	1	NA	10/5/09 23:35
Chloride	300.0	186		mg/L	8.0	40	NA	10/7/09 04:03
Iron, Divalent (Ferrous Iron)	SM 3500-Fe B.4.c	2.67		mg/L	0.50	5	NA	10/1/09 17:50
Nitrate as Nitrogen	300.0	0.50	U	mg/L	0.50	10	NA	10/1/09 22:08
Sulfate	300.0	51.7		mg/L	2.0	10	NA	10/1/09 22:08

Comments:

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## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells  
**Sample Matrix:** Water  
**Sample Name:** MW 24A Dissolved  
**Lab Code:** R0905596-008

**Service Request:** R0905596  
**Date Collected:** 10/ 1/09 1015  
**Date Received:** 10/ 1/09

**Basis:** NA

## Iron, Divalent, Dissolved Phenanthroline Method 20th Ed.

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Iron, Divalent (Ferrous Iron), Dissolved	SM 3500-Fe B.4.c	1.78	mg/L	0.20	2	NA	10/1/09 17:50

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells  
**Sample Matrix:** Water  
**Sample Name:** MW 24A  
**Lab Code:** R0905596-007

**Service Request:** R0905596  
**Date Collected:** 10/ 1/09 1015  
**Date Received:** 10/ 1/09

**Basis:** NA

## Manganese, Total, by Inductively Coupled Plasma-Atomic Emission Spectrometry

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Total	6010B	254	µg/L	10	1	10/ 7/09	10/9/09 23:01

Comments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells  
**Sample Matrix:** Water  
**Sample Name:** MW 24A Dissolved  
**Lab Code:** R0905596-008

**Service Request:** R0905596  
**Date Collected:** 10/ 1/09 1015  
**Date Received:** 10/ 1/09

**Basis:** NA

**Manganese, Dissolved, by Inductively Coupled Plasma-Atomic Emission Spectrometry**

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Dissolved	6010B	247	µg/L	10	1	10/ 7/09	10/9/09 23:08

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
 Project: Leica/Wells  
 Sample Matrix: Water  
 Sample Name: MW 24A  
 Lab Code: R0905596-007

Service Request: R0905596  
 Date Collected: 10/ 1/09 1015  
 Date Received: 10/ 1/09  
 Units: µg/L  
 Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Acetone	40	U	40	2	NA	10/12/09 16:45		174383	
Benzene	10	U	10	2	NA	10/12/09 16:45		174383	
Bromodichloromethane	10	U	10	2	NA	10/12/09 16:45		174383	
Bromoform	10	U	10	2	NA	10/12/09 16:45		174383	
Bromomethane	10	U	10	2	NA	10/12/09 16:45		174383	
2-Butanone (MEK)	20	U	20	2	NA	10/12/09 16:45		174383	
Carbon Disulfide	20	U	20	2	NA	10/12/09 16:45		174383	
Carbon Tetrachloride	10	U	10	2	NA	10/12/09 16:45		174383	
Chlorobenzene	10	U	10	2	NA	10/12/09 16:45		174383	
Chloroethane	280		10	2	NA	10/12/09 16:45		174383	
Chloroform	10	U	10	2	NA	10/12/09 16:45		174383	
Chloromethane	10	U	10	2	NA	10/12/09 16:45		174383	
Dibromochloromethane	10	U	10	2	NA	10/12/09 16:45		174383	
1,1-Dichloroethane	130		10	2	NA	10/12/09 16:45		174383	
1,2-Dichloroethane	10	U	10	2	NA	10/12/09 16:45		174383	
1,1-Dichloroethene	10	U	10	2	NA	10/12/09 16:45		174383	
cis-1,2-Dichloroethene	10	U	10	2	NA	10/12/09 16:45		174383	
trans-1,2-Dichloroethene	10	U	10	2	NA	10/12/09 16:45		174383	
1,2-Dichloropropane	10	U	10	2	NA	10/12/09 16:45		174383	
cis-1,3-Dichloropropene	10	U	10	2	NA	10/12/09 16:45		174383	
trans-1,3-Dichloropropene	10	U	10	2	NA	10/12/09 16:45		174383	
Ethylbenzene	26		10	2	NA	10/12/09 16:45		174383	
2-Hexanone	20	U	20	2	NA	10/12/09 16:45		174383	
Methylene Chloride	10	U	10	2	NA	10/12/09 16:45		174383	
4-Methyl-2-pentanone (MIBK)	20	U	20	2	NA	10/12/09 16:45		174383	
Styrene	10	U	10	2	NA	10/12/09 16:45		174383	
1,1,2,2-Tetrachloroethane	10	U	10	2	NA	10/12/09 16:45		174383	
Tetrachloroethene	10	U	10	2	NA	10/12/09 16:45		174383	
Toluene	10	U	10	2	NA	10/12/09 16:45		174383	
1,1,1-Trichloroethane	10	U	10	2	NA	10/12/09 16:45		174383	
1,1,2-Trichloroethane	10	U	10	2	NA	10/12/09 16:45		174383	
Trichloroethene	10	U	10	2	NA	10/12/09 16:45		174383	
Vinyl Chloride	10	U	10	2	NA	10/12/09 16:45		174383	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells  
**Sample Matrix:** Water  
**Sample Name:** MW 24A  
**Lab Code:** R0905596-007

**Service Request:** R0905596  
**Date Collected:** 10/ 1/09 1015  
**Date Received:** 10/ 1/09  
**Units:** µg/L  
**Basis:** NA

## Volatile Organic Compounds by GC/MS

**Analytical Method:** 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
o-Xylene	12		10	2	NA	10/12/09 16:45		174383	
m,p-Xylenes	28		10	2	NA	10/12/09 16:45		174383	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	106	85-122	10/12/09 16:45		
Toluene-d8	104	87-121	10/12/09 16:45		
Dibromofluoromethane	108	89-119	10/12/09 16:45		

**Comments:**

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells  
**Sample Matrix:** Water  
**Sample Name:** MW 1A  
**Lab Code:** R0905596-009

**Service Request:** R0905596  
**Date Collected:** 10/ 1/09 1045  
**Date Received:** 10/ 1/09

**Basis:** NA

## General Chemistry Parameters

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Carbon, Total Organic (TOC)	SM20 5310 C	5.4	mg/L	1.0	1	NA	10/5/09 23:54
Chloride	300.0	99.8	mg/L	2.0	10	NA	10/1/09 22:23
Iron, Divalent (Ferrous Iron)	SM 3500-Fe B.4.c	0.61	mg/L	0.10	1	NA	10/1/09 17:50
Nitrate as Nitrogen	300.0	0.74	mg/L	0.50	10	NA	10/1/09 22:23
Sulfate	300.0	41.4	mg/L	2.0	10	NA	10/1/09 22:23

Comments:

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## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells  
**Sample Matrix:** Water  
**Sample Name:** MW 1A Dissolved  
**Lab Code:** R0905596-010

**Service Request:** R0905596  
**Date Collected:** 10/ 1/09 1045  
**Date Received:** 10/ 1/09

**Basis:** NA

## Iron, Divalent, Dissolved Phenanthroline Method 20th Ed.

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Iron, Divalent (Ferrous Iron), Dissolved	SM 3500-Fe B.4.c	0.35	mg/L	0.10	1	NA	10/1/09 17:50

Comments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells  
**Sample Matrix:** Water  
**Sample Name:** MW 1A  
**Lab Code:** R0905596-009

**Service Request:** R0905596  
**Date Collected:** 10/ 1/09 1045  
**Date Received:** 10/ 1/09

**Basis:** NA

**Manganese, Total, by Inductively Coupled Plasma-Atomic Emission Spectrometry**

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Total	6010B	278	µg/L	10	1	10/ 7/09	10/9/09 23:14

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
Project: Leica/Wells  
Sample Matrix: Water  
Sample Name: MW 1A Dissolved  
Lab Code: R0905596-010

Service Request: R0905596  
Date Collected: 10/ 1/09 1045  
Date Received: 10/ 1/09

Basis: NA

## Manganese, Dissolved, by Inductively Coupled Plasma-Atomic Emission Spectrometry

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Dissolved	6010B	201	µg/L	10	1	10/ 7/09	10/9/09 23:33

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
 Project: Leica/Wells  
 Sample Matrix: Water  
 Sample Name: MW 1A  
 Lab Code: R0905596-009

Service Request: R0905596  
 Date Collected: 10/ 1/09 1045  
 Date Received: 10/ 1/09  
 Units: µg/L  
 Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Acetone	20	U	20	1	NA	10/10/09 03:15		174095	
Benzene	5.0	U	5.0	1	NA	10/10/09 03:15		174095	
Bromodichloromethane	5.0	U	5.0	1	NA	10/10/09 03:15		174095	
Bromoform	5.0	U	5.0	1	NA	10/10/09 03:15		174095	
Bromomethane	5.0	U	5.0	1	NA	10/10/09 03:15		174095	
2-Butanone (MEK)	10	U	10	1	NA	10/10/09 03:15		174095	
Carbon Disulfide	10	U	10	1	NA	10/10/09 03:15		174095	
Carbon Tetrachloride	5.0	U	5.0	1	NA	10/10/09 03:15		174095	
Chlorobenzene	5.0	U	5.0	1	NA	10/10/09 03:15		174095	
Chloroethane	5.0	U	5.0	1	NA	10/10/09 03:15		174095	
Chloroform	5.0	U	5.0	1	NA	10/10/09 03:15		174095	
Chloromethane	5.0	U	5.0	1	NA	10/10/09 03:15		174095	
Dibromochloromethane	5.0	U	5.0	1	NA	10/10/09 03:15		174095	
1,1-Dichloroethane	5.0	U	5.0	1	NA	10/10/09 03:15		174095	
1,2-Dichloroethane	5.0	U	5.0	1	NA	10/10/09 03:15		174095	
1,1-Dichloroethene	5.0	U	5.0	1	NA	10/10/09 03:15		174095	
cis-1,2-Dichloroethene	5.0	U	5.0	1	NA	10/10/09 03:15		174095	
trans-1,2-Dichloroethene	5.0	U	5.0	1	NA	10/10/09 03:15		174095	
1,2-Dichloropropane	5.0	U	5.0	1	NA	10/10/09 03:15		174095	
cis-1,3-Dichloropropene	5.0	U	5.0	1	NA	10/10/09 03:15		174095	
trans-1,3-Dichloropropene	5.0	U	5.0	1	NA	10/10/09 03:15		174095	
Ethylbenzene	5.0	U	5.0	1	NA	10/10/09 03:15		174095	
2-Hexanone	10	U	10	1	NA	10/10/09 03:15		174095	
Methylene Chloride	5.0	U	5.0	1	NA	10/10/09 03:15		174095	
4-Methyl-2-pentanone (MIBK)	10	U	10	1	NA	10/10/09 03:15		174095	
Styrene	5.0	U	5.0	1	NA	10/10/09 03:15		174095	
1,1,2,2-Tetrachloroethane	5.0	U	5.0	1	NA	10/10/09 03:15		174095	
Tetrachloroethene	5.0	U	5.0	1	NA	10/10/09 03:15		174095	
Toluene	5.0	U	5.0	1	NA	10/10/09 03:15		174095	
1,1,1-Trichloroethane	5.0	U	5.0	1	NA	10/10/09 03:15		174095	
1,1,2-Trichloroethane	5.0	U	5.0	1	NA	10/10/09 03:15		174095	
Trichloroethene	5.0	U	5.0	1	NA	10/10/09 03:15		174095	
Vinyl Chloride	5.0	U	5.0	1	NA	10/10/09 03:15		174095	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
Project: Leica/Wells  
Sample Matrix: Water  
Sample Name: MW 1A  
Lab Code: R0905596-009

Service Request: R0905596  
Date Collected: 10/ 1/09 1045  
Date Received: 10/ 1/09  
Units: µg/L  
Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
o-Xylene	5.0	U	5.0	1	NA	10/10/09 03:15		174095	
m,p-Xylenes	5.0	U	5.0	1	NA	10/10/09 03:15		174095	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	102	85-122	10/10/09 03:15		
Toluene-d8	100	87-121	10/10/09 03:15		
Dibromofluoromethane	109	89-119	10/10/09 03:15		

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells  
**Sample Matrix:** Water  
**Sample Name:** MW 16R  
**Lab Code:** R0905596-011

**Service Request:** R0905596  
**Date Collected:** 10/ 1/09 1100  
**Date Received:** 10/ 1/09

**Basis:** NA

## General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Carbon, Total Organic (TOC)	SM20 5310 C	39.8		mg/L	2.0	2	NA	10/7/09 01:43
Chloride	300.0	983		mg/L	40	200	NA	10/7/09 04:17
Iron, Divalent (Ferrous Iron)	SM 3500-Fe B.4.c	2.85		mg/L	0.10	1	NA	10/1/09 17:50
Nitrate as Nitrogen	300.0	0.50	U	mg/L	0.50	10	NA	10/1/09 22:38
Sulfate	300.0	7.8		mg/L	2.0	10	NA	10/1/09 22:38

Comments:

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## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells  
**Sample Matrix:** Water  
**Sample Name:** MW 16R Dissolved  
**Lab Code:** R0905596-012

**Service Request:** R0905596  
**Date Collected:** 10/ 1/09 1100  
**Date Received:** 10/ 1/09

**Basis:** NA

## Iron, Divalent, Dissolved Phenanthroline Method 20th Ed.

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Iron, Divalent (Ferrous Iron), Dissolved	SM 3500-Fe B.4.c	2.35	mg/L	0.10	1	NA	10/1/09 17:50

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
Project: Leica/Wells  
Sample Matrix: Water  
Sample Name: MW 16R  
Lab Code: R0905596-011

Service Request: R0905596  
Date Collected: 10/ 1/09 1100  
Date Received: 10/ 1/09

Basis: NA

## Manganese, Total, by Inductively Coupled Plasma-Atomic Emission Spectrometry

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Total	6010B	175	µg/L	10	1	10/ 7/09	10/9/09 23:39

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells  
**Sample Matrix:** Water  
**Sample Name:** MW 16R Dissolved  
**Lab Code:** R0905596-012

**Service Request:** R0905596  
**Date Collected:** 10/ 1/09 1100  
**Date Received:** 10/ 1/09

**Basis:** NA

## Manganese, Dissolved, by Inductively Coupled Plasma-Atomic Emission Spectrometry

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Dissolved	6010B	167	µg/L	10	1	10/ 7/09	10/9/09 23:45

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
 Project: Leica/Wells  
 Sample Matrix: Water  
 Sample Name: MW 16R  
 Lab Code: R0905596-011

Service Request: R0905596  
 Date Collected: 10/ 1/09 1100  
 Date Received: 10/ 1/09  
 Units: µg/L  
 Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Acetone	40	U	40	2	NA	10/12/09 16:45		174383	
Benzene	10	U	10	2	NA	10/12/09 16:45		174383	
Bromodichloromethane	10	U	10	2	NA	10/12/09 16:45		174383	
Bromoform	10	U	10	2	NA	10/12/09 16:45		174383	
Bromomethane	10	U	10	2	NA	10/12/09 16:45		174383	
2-Butanone (MEK)	20	U	20	2	NA	10/12/09 16:45		174383	
Carbon Disulfide	20	U	20	2	NA	10/12/09 16:45		174383	
Carbon Tetrachloride	10	U	10	2	NA	10/12/09 16:45		174383	
Chlorobenzene	10	U	10	2	NA	10/12/09 16:45		174383	
Chloroethane	280		10	2	NA	10/12/09 16:45		174383	
Chloroform	10	U	10	2	NA	10/12/09 16:45		174383	
Chloromethane	10	U	10	2	NA	10/12/09 16:45		174383	
Dibromochloromethane	10	U	10	2	NA	10/12/09 16:45		174383	
1,1-Dichloroethane	130		10	2	NA	10/12/09 16:45		174383	
1,2-Dichloroethane	10	U	10	2	NA	10/12/09 16:45		174383	
1,1-Dichloroethene	10	U	10	2	NA	10/12/09 16:45		174383	
cis-1,2-Dichloroethene	10	U	10	2	NA	10/12/09 16:45		174383	
trans-1,2-Dichloroethene	10	U	10	2	NA	10/12/09 16:45		174383	
1,2-Dichloropropane	10	U	10	2	NA	10/12/09 16:45		174383	
cis-1,3-Dichloropropene	10	U	10	2	NA	10/12/09 16:45		174383	
trans-1,3-Dichloropropene	10	U	10	2	NA	10/12/09 16:45		174383	
Ethylbenzene	26		10	2	NA	10/12/09 16:45		174383	
2-Hexanone	20	U	20	2	NA	10/12/09 16:45		174383	
Methylene Chloride	10	U	10	2	NA	10/12/09 16:45		174383	
4-Methyl-2-pentanone (MIBK)	20	U	20	2	NA	10/12/09 16:45		174383	
Styrene	10	U	10	2	NA	10/12/09 16:45		174383	
1,1,2,2-Tetrachloroethane	10	U	10	2	NA	10/12/09 16:45		174383	
Tetrachloroethene	10	U	10	2	NA	10/12/09 16:45		174383	
Toluene	10	U	10	2	NA	10/12/09 16:45		174383	
1,1,1-Trichloroethane	10	U	10	2	NA	10/12/09 16:45		174383	
1,1,2-Trichloroethane	10	U	10	2	NA	10/12/09 16:45		174383	
Trichloroethene	10	U	10	2	NA	10/12/09 16:45		174383	
Vinyl Chloride	10	U	10	2	NA	10/12/09 16:45		174383	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
Project: Leica/Wells  
Sample Matrix: Water  
Sample Name: MW 16R  
Lab Code: R0905596-011

Service Request: R0905596  
Date Collected: 10/ 1/09 1100  
Date Received: 10/ 1/09  
Units: µg/L  
Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
o-Xylene	12		10	2	NA	10/12/09 16:45		174383	
m,p-Xylenes	28		10	2	NA	10/12/09 16:45		174383	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	106	85-122	10/12/09 16:45		
Toluene-d8	104	87-121	10/12/09 16:45		
Dibromofluoromethane	108	89-119	10/12/09 16:45		

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
Project: Leica/Wells  
Sample Matrix: Water  
Sample Name: MW 18  
Lab Code: R0905596-013

Service Request: R0905596  
Date Collected: 10/ 1/09 1115  
Date Received: 10/ 1/09

Basis: NA

## General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Carbon, Total Organic (TOC)	SM20 5310 C	4.0		mg/L	2.0	2	NA	10/7/09 02:01
Chloride	300.0	19.1		mg/L	2.0	10	NA	10/1/09 22:53
Iron, Divalent (Ferrous Iron)	SM 3500-Fe B.4.c	0.64		mg/L	0.10	1	NA	10/1/09 17:50
Nitrate as Nitrogen	300.0	0.50	U	mg/L	0.50	10	NA	10/1/09 22:53
Sulfate	300.0	73.9		mg/L	2.0	10	NA	10/1/09 22:53

Comments:

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## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells  
**Sample Matrix:** Water  
**Sample Name:** MW 18 Dissolved  
**Lab Code:** R0905596-014

**Service Request:** R0905596  
**Date Collected:** 10/ 1/09 1115  
**Date Received:** 10/ 1/09

**Basis:** NA

## Iron, Divalent, Dissolved Phenanthroline Method 20th Ed.

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Iron, Divalent (Ferrous Iron), Dissolved	SM 3500-Fe B.4.c	0.38	mg/L	0.10	1	NA	10/1/09 17:50

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells  
**Sample Matrix:** Water  
**Sample Name:** MW 18  
**Lab Code:** R0905596-013

**Service Request:** R0905596  
**Date Collected:** 10/ 1/09 1115  
**Date Received:** 10/ 1/09

**Basis:** NA

## Manganese, Total, by Inductively Coupled Plasma-Atomic Emission Spectrometry

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Total	6010B	163	µg/L	10	1	10/ 7/09	10/9/09 23:51

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells  
**Sample Matrix:** Water  
**Sample Name:** MW 18 Dissolved  
**Lab Code:** R0905596-014

**Service Request:** R0905596  
**Date Collected:** 10/ 1/09 1115  
**Date Received:** 10/ 1/09

**Basis:** NA

## Manganese, Dissolved, by Inductively Coupled Plasma-Atomic Emission Spectrometry

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Dissolved	6010B	164	µg/L	10	1	10/ 7/09	10/9/09 23:57

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
 Project: Leica/Wells  
 Sample Matrix: Water  
 Sample Name: MW 18  
 Lab Code: R0905596-013

Service Request: R0905596  
 Date Collected: 10/ 1/09 1115  
 Date Received: 10/ 1/09  
 Units: µg/L  
 Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B.

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Acetone	20	U	20	1	NA	10/10/09 03:46		174095	
Benzene	5.0	U	5.0	1	NA	10/10/09 03:46		174095	
Bromodichloromethane	5.0	U	5.0	1	NA	10/10/09 03:46		174095	
Bromoform	5.0	U	5.0	1	NA	10/10/09 03:46		174095	
Bromomethane	5.0	U	5.0	1	NA	10/10/09 03:46		174095	
2-Butanone (MEK)	10	U	10	1	NA	10/10/09 03:46		174095	
Carbon Disulfide	10	U	10	1	NA	10/10/09 03:46		174095	
Carbon Tetrachloride	5.0	U	5.0	1	NA	10/10/09 03:46		174095	
Chlorobenzene	5.0	U	5.0	1	NA	10/10/09 03:46		174095	
Chloroethane	5.0	U	5.0	1	NA	10/10/09 03:46		174095	
Chloroform	5.0	U	5.0	1	NA	10/10/09 03:46		174095	
Chloromethane	5.0	U	5.0	1	NA	10/10/09 03:46		174095	
Dibromochloromethane	5.0	U	5.0	1	NA	10/10/09 03:46		174095	
1,1-Dichloroethane	5.0	U	5.0	1	NA	10/10/09 03:46		174095	
1,2-Dichloroethane	5.0	U	5.0	1	NA	10/10/09 03:46		174095	
1,1-Dichloroethene	5.0	U	5.0	1	NA	10/10/09 03:46		174095	
cis-1,2-Dichloroethene	5.0	U	5.0	1	NA	10/10/09 03:46		174095	
trans-1,2-Dichloroethene	5.0	U	5.0	1	NA	10/10/09 03:46		174095	
1,2-Dichloropropane	5.0	U	5.0	1	NA	10/10/09 03:46		174095	
cis-1,3-Dichloropropene	5.0	U	5.0	1	NA	10/10/09 03:46		174095	
trans-1,3-Dichloropropene	5.0	U	5.0	1	NA	10/10/09 03:46		174095	
Ethylbenzene	5.0	U	5.0	1	NA	10/10/09 03:46		174095	
2-Hexanone	10	U	10	1	NA	10/10/09 03:46		174095	
Methylene Chloride	5.0	U	5.0	1	NA	10/10/09 03:46		174095	
4-Methyl-2-pentanone (MIBK)	10	U	10	1	NA	10/10/09 03:46		174095	
Styrene	5.0	U	5.0	1	NA	10/10/09 03:46		174095	
1,1,2,2-Tetrachloroethane	5.0	U	5.0	1	NA	10/10/09 03:46		174095	
Tetrachloroethene	5.0	U	5.0	1	NA	10/10/09 03:46		174095	
Toluene	5.0	U	5.0	1	NA	10/10/09 03:46		174095	
1,1,1-Trichloroethane	5.0	U	5.0	1	NA	10/10/09 03:46		174095	
1,1,2-Trichloroethane	5.0	U	5.0	1	NA	10/10/09 03:46		174095	
Trichloroethene	5.0	U	5.0	1	NA	10/10/09 03:46		174095	
Vinyl Chloride	5.0	U	5.0	1	NA	10/10/09 03:46		174095	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
Project: Leica/Wells  
Sample Matrix: Water  
Sample Name: MW 18  
Lab Code: R0905596-013

Service Request: R0905596  
Date Collected: 10/ 1/09 1115  
Date Received: 10/ 1/09  
Units: µg/L  
Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
o-Xylene	5.0	U	5.0	1	NA	10/10/09 03:46		174095	
m,p-Xylenes	5.0	U	5.0	1	NA	10/10/09 03:46		174095	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	101	85-122	10/10/09 03:46		
Toluene-d8	104	87-121	10/10/09 03:46		
Dibromofluoromethane	108	89-119	10/10/09 03:46		

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells  
**Sample Matrix:** Water  
**Sample Name:** MW 18A  
**Lab Code:** R0905596-015

**Service Request:** R0905596  
**Date Collected:** 10/ 1/09 1130  
**Date Received:** 10/ 1/09

**Basis:** NA

## General Chemistry Parameters

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Carbon, Total Organic (TOC)	SM20 5310 C	5.0	mg/L	1.0	1	NA	10/6/09 00:48
Chloride	300.0	46.2	mg/L	2.0	10	NA	10/1/09 23:08
Iron, Divalent (Ferrous Iron)	SM 3500-Fe B.4.c	0.49	mg/L	0.10	1	NA	10/1/09 17:50
Nitrate as Nitrogen	300.0	0.79	mg/L	0.50	10	NA	10/1/09 23:08
Sulfate	300.0	95.5	mg/L	2.0	10	NA	10/1/09 23:08

Comments:

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**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells  
**Sample Matrix:** Water  
**Sample Name:** MW 18A Dissolved  
**Lab Code:** R0905596-016

**Service Request:** R0905596  
**Date Collected:** 10/ 1/09 1130  
**Date Received:** 10/ 1/09

**Basis:** NA

**Iron, Divalent, Dissolved Phenanthroline Method 20th Ed.**

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Iron, Divalent (Ferrous Iron), Dissolved	SM 3500-Fe B.4.c	0.25	mg/L	0.10	1	NA	10/1/09 17:50

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells  
**Sample Matrix:** Water  
**Sample Name:** MW 18A  
**Lab Code:** R0905596-015

**Service Request:** R0905596  
**Date Collected:** 10/ 1/09 1130  
**Date Received:** 10/ 1/09

**Basis:** NA

**Manganese, Total, by Inductively Coupled Plasma-Atomic Emission Spectrometry**

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Total	6010B	273	µg/L	10	1	10/ 7/09	10/10/09 00:03

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells  
**Sample Matrix:** Water  
**Sample Name:** MW 18A Dissolved  
**Lab Code:** R0905596-016

**Service Request:** R0905596  
**Date Collected:** 10/ 1/09 1130  
**Date Received:** 10/ 1/09

**Basis:** NA

**Manganese, Dissolved, by Inductively Coupled Plasma-Atomic Emission Spectrometry**

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Dissolved	6010B	235	µg/L	10	1	10/ 7/09	10/10/09 00:10

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
 Project: Leica/Wells  
 Sample Matrix: Water  
 Sample Name: MW 18A  
 Lab Code: R0905596-015

Service Request: R0905596  
 Date Collected: 10/ 1/09 1130  
 Date Received: 10/ 1/09  
 Units: µg/L  
 Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Acetone	20	U	20	1	NA	10/10/09 04:17		174095	
Benzene	5.0	U	5.0	1	NA	10/10/09 04:17		174095	
Bromodichloromethane	5.0	U	5.0	1	NA	10/10/09 04:17		174095	
Bromoform	5.0	U	5.0	1	NA	10/10/09 04:17		174095	
Bromomethane	5.0	U	5.0	1	NA	10/10/09 04:17		174095	
2-Butanone (MEK)	10	U	10	1	NA	10/10/09 04:17		174095	
Carbon Disulfide	10	U	10	1	NA	10/10/09 04:17		174095	
Carbon Tetrachloride	5.0	U	5.0	1	NA	10/10/09 04:17		174095	
Chlorobenzene	5.0	U	5.0	1	NA	10/10/09 04:17		174095	
Chloroethane	5.0	U	5.0	1	NA	10/10/09 04:17		174095	
Chloroform	5.0	U	5.0	1	NA	10/10/09 04:17		174095	
Chloromethane	5.0	U	5.0	1	NA	10/10/09 04:17		174095	
Dibromochloromethane	5.0	U	5.0	1	NA	10/10/09 04:17		174095	
1,1-Dichloroethane	5.0	U	5.0	1	NA	10/10/09 04:17		174095	
1,2-Dichloroethane	5.0	U	5.0	1	NA	10/10/09 04:17		174095	
1,1-Dichloroethene	5.0	U	5.0	1	NA	10/10/09 04:17		174095	
cis-1,2-Dichloroethene	33		5.0	1	NA	10/10/09 04:17		174095	
trans-1,2-Dichloroethene	5.0	U	5.0	1	NA	10/10/09 04:17		174095	
1,2-Dichloropropane	5.0	U	5.0	1	NA	10/10/09 04:17		174095	
cis-1,3-Dichloropropene	5.0	U	5.0	1	NA	10/10/09 04:17		174095	
trans-1,3-Dichloropropene	5.0	U	5.0	1	NA	10/10/09 04:17		174095	
Ethylbenzene	5.0	U	5.0	1	NA	10/10/09 04:17		174095	
2-Hexanone	10	U	10	1	NA	10/10/09 04:17		174095	
Methylene Chloride	5.0	U	5.0	1	NA	10/10/09 04:17		174095	
4-Methyl-2-pentanone (MIBK)	10	U	10	1	NA	10/10/09 04:17		174095	
Styrene	5.0	U	5.0	1	NA	10/10/09 04:17		174095	
1,1,2,2-Tetrachloroethane	5.0	U	5.0	1	NA	10/10/09 04:17		174095	
Tetrachloroethene	5.0	U	5.0	1	NA	10/10/09 04:17		174095	
Toluene	5.0	U	5.0	1	NA	10/10/09 04:17		174095	
1,1,1-Trichloroethane	5.0	U	5.0	1	NA	10/10/09 04:17		174095	
1,1,2-Trichloroethane	5.0	U	5.0	1	NA	10/10/09 04:17		174095	
Trichloroethene	44		5.0	1	NA	10/10/09 04:17		174095	
Vinyl Chloride	6.2		5.0	1	NA	10/10/09 04:17		174095	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
Project: Leica/Wells  
Sample Matrix: Water  
Sample Name: MW 18A  
Lab Code: R0905596-015

Service Request: R0905596  
Date Collected: 10/ 1/09 1130  
Date Received: 10/ 1/09  
Units: µg/L  
Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
o-Xylene	5.0	U	5.0	1	NA	10/10/09 04:17		174095	
m,p-Xylenes	5.0	U	5.0	1	NA	10/10/09 04:17		174095	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	101	85-122	10/10/09 04:17		
Toluene-d8	97	87-121	10/10/09 04:17		
Dibromofluoromethane	110	89-119	10/10/09 04:17		

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells  
**Sample Matrix:** Water  
**Sample Name:** Trip Blank  
**Lab Code:** R0905596-017

**Service Request:** R0905596  
**Date Collected:** 10/ 1/09  
**Date Received:** 10/ 1/09  
**Units:** µg/L  
**Basis:** NA

## Volatile Organic Compounds by GC/MS

**Analytical Method:** 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Acetone	20	U	20	1	NA	10/10/09 02:44		174095	
Benzene	5.0	U	5.0	1	NA	10/10/09 02:44		174095	
Bromodichloromethane	5.0	U	5.0	1	NA	10/10/09 02:44		174095	
Bromoform	5.0	U	5.0	1	NA	10/10/09 02:44		174095	
Bromomethane	5.0	U	5.0	1	NA	10/10/09 02:44		174095	
2-Butanone (MEK)	10	U	10	1	NA	10/10/09 02:44		174095	
Carbon Disulfide	10	U	10	1	NA	10/10/09 02:44		174095	
Carbon Tetrachloride	5.0	U	5.0	1	NA	10/10/09 02:44		174095	
Chlorobenzene	5.0	U	5.0	1	NA	10/10/09 02:44		174095	
Chloroethane	5.0	U	5.0	1	NA	10/10/09 02:44		174095	
Chloroform	5.0	U	5.0	1	NA	10/10/09 02:44		174095	
Chloromethane	5.0	U	5.0	1	NA	10/10/09 02:44		174095	
Dibromochloromethane	5.0	U	5.0	1	NA	10/10/09 02:44		174095	
1,1-Dichloroethane	5.0	U	5.0	1	NA	10/10/09 02:44		174095	
1,2-Dichloroethane	5.0	U	5.0	1	NA	10/10/09 02:44		174095	
1,1-Dichloroethene	5.0	U	5.0	1	NA	10/10/09 02:44		174095	
cis-1,2-Dichloroethene	5.0	U	5.0	1	NA	10/10/09 02:44		174095	
trans-1,2-Dichloroethene	5.0	U	5.0	1	NA	10/10/09 02:44		174095	
1,2-Dichloropropane	5.0	U	5.0	1	NA	10/10/09 02:44		174095	
cis-1,3-Dichloropropene	5.0	U	5.0	1	NA	10/10/09 02:44		174095	
trans-1,3-Dichloropropene	5.0	U	5.0	1	NA	10/10/09 02:44		174095	
Ethylbenzene	5.0	U	5.0	1	NA	10/10/09 02:44		174095	
2-Hexanone	10	U	10	1	NA	10/10/09 02:44		174095	
Methylene Chloride	5.0	U	5.0	1	NA	10/10/09 02:44		174095	
4-Methyl-2-pentanone (MIBK)	10	U	10	1	NA	10/10/09 02:44		174095	
Styrene	5.0	U	5.0	1	NA	10/10/09 02:44		174095	
1,1,2,2-Tetrachloroethane	5.0	U	5.0	1	NA	10/10/09 02:44		174095	
Tetrachloroethene	5.0	U	5.0	1	NA	10/10/09 02:44		174095	
Toluene	5.0	U	5.0	1	NA	10/10/09 02:44		174095	
1,1,1-Trichloroethane	5.0	U	5.0	1	NA	10/10/09 02:44		174095	
1,1,2-Trichloroethane	5.0	U	5.0	1	NA	10/10/09 02:44		174095	
Trichloroethene	5.0	U	5.0	1	NA	10/10/09 02:44		174095	
Vinyl Chloride	5.0	U	5.0	1	NA	10/10/09 02:44		174095	

**Comments:**

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells  
**Sample Matrix:** Water  
**Sample Name:** Trip Blank  
**Lab Code:** R0905596-017

**Service Request:** R0905596  
**Date Collected:** 10/ 1/09  
**Date Received:** 10/ 1/09  
**Units:** µg/L  
**Basis:** NA

## Volatile Organic Compounds by GC/MS

**Analytical Method:** 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
o-Xylene	5.0	U	5.0	1	NA	10/10/09 02:44		174095	
m,p-Xylenes	5.0	U	5.0	1	NA	10/10/09 02:44		174095	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	101	85-122	10/10/09 02:44		
Toluene-d8	105	87-121	10/10/09 02:44		
Dibromofluoromethane	108	89-119	10/10/09 02:44		

**Comments:**

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells  
**Sample Matrix:** Water  
**Sample Name:** Method Blank  
**Lab Code:** R0905596-MB1

**Service Request:** R0905596  
**Date Collected:** NA  
**Date Received:** NA

**Basis:** NA

## General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Carbon, Total Organic (TOC)	SM20 5310 C	1.0	U	mg/L	1.0	1	NA	10/5/09 22:05
Chloride	300.0	0.20	U	mg/L	0.20	1	NA	10/1/09 18:26
Iron, Divalent (Ferrous Iron)	SM 3500-Fe B.4.c	0.10	U	mg/L	0.10	1	NA	10/1/09 17:50
Iron, Divalent (Ferrous Iron), Dissolved	SM 3500-Fe B.4.c	0.10	U	mg/L	0.10	1	NA	10/1/09 17:50
Nitrate as Nitrogen	300.0	0.050	U	mg/L	0.050	1	NA	10/1/09 18:26
Sulfate	300.0	0.20	U	mg/L	0.20	1	NA	10/1/09 18:26

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells  
**Sample Matrix:** Water  
**Sample Name:** Method Blank  
**Lab Code:** R0905596-MB2

**Service Request:** R0905596  
**Date Collected:** NA  
**Date Received:** NA  
**Basis:** NA

## General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Carbon, Total Organic (TOC)	SM20 5310 C	1.0	U	mg/L	1.0	1	NA	10/6/09 19:59
Chloride	300.0	0.20	U	mg/L	0.20	1	NA	10/6/09 23:17

Comments:

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## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells  
**Sample Matrix:** Water  
**Sample Name:** Method Blank  
**Lab Code:** R0905596-MB1

**Service Request:** R0905596  
**Date Collected:** NA  
**Date Received:** NA

**Basis:** NA

## Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Dissolved	6010B	10	U	µg/L	10	1	10/ 7/09	10/9/09 21:02
Manganese, Total	6010B	10	U	µg/L	10	1	10/ 7/09	10/9/09 21:02

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells  
**Sample Matrix:** Water  
**Sample Name:** Method Blank  
**Lab Code:** R0905596-MB2

**Service Request:** R0905596  
**Date Collected:** NA  
**Date Received:** NA  
**Basis:** NA

## Manganese, Dissolved, by Inductively Coupled Plasma-Atomic Emission Spectrometry

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Dissolved	6010B	10 U	µg/L	10	1	10/ 7/09	10/9/09 21:15

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells  
**Sample Matrix:** Water  
**Sample Name:** Method Blank  
**Lab Code:** RQ0909741-01

**Service Request:** R0905596  
**Date Collected:** NA  
**Date Received:** NA  
**Units:** µg/L  
**Basis:** NA

## Volatile Organic Compounds by GC/MS

**Analytical Method:** 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Acetone	20	U	20	1	NA	10/10/09 02:13		174095	
Benzene	5.0	U	5.0	1	NA	10/10/09 02:13		174095	
Bromodichloromethane	5.0	U	5.0	1	NA	10/10/09 02:13		174095	
Bromoform	5.0	U	5.0	1	NA	10/10/09 02:13		174095	
Bromomethane	5.0	U	5.0	1	NA	10/10/09 02:13		174095	
2-Butanone (MEK)	10	U	10	1	NA	10/10/09 02:13		174095	
Carbon Disulfide	10	U	10	1	NA	10/10/09 02:13		174095	
Carbon Tetrachloride	5.0	U	5.0	1	NA	10/10/09 02:13		174095	
Chlorobenzene	5.0	U	5.0	1	NA	10/10/09 02:13		174095	
Chloroethane	5.0	U	5.0	1	NA	10/10/09 02:13		174095	
Chloroform	5.0	U	5.0	1	NA	10/10/09 02:13		174095	
Chloromethane	5.0	U	5.0	1	NA	10/10/09 02:13		174095	
Dibromochloromethane	5.0	U	5.0	1	NA	10/10/09 02:13		174095	
1,1-Dichloroethane	5.0	U	5.0	1	NA	10/10/09 02:13		174095	
1,2-Dichloroethane	5.0	U	5.0	1	NA	10/10/09 02:13		174095	
1,1-Dichloroethene	5.0	U	5.0	1	NA	10/10/09 02:13		174095	
cis-1,2-Dichloroethene	5.0	U	5.0	1	NA	10/10/09 02:13		174095	
trans-1,2-Dichloroethene	5.0	U	5.0	1	NA	10/10/09 02:13		174095	
1,2-Dichloropropane	5.0	U	5.0	1	NA	10/10/09 02:13		174095	
cis-1,3-Dichloropropene	5.0	U	5.0	1	NA	10/10/09 02:13		174095	
trans-1,3-Dichloropropene	5.0	U	5.0	1	NA	10/10/09 02:13		174095	
Ethylbenzene	5.0	U	5.0	1	NA	10/10/09 02:13		174095	
2-Hexanone	10	U	10	1	NA	10/10/09 02:13		174095	
Methylene Chloride	5.0	U	5.0	1	NA	10/10/09 02:13		174095	
4-Methyl-2-pentanone (MIBK)	10	U	10	1	NA	10/10/09 02:13		174095	
Styrene	5.0	U	5.0	1	NA	10/10/09 02:13		174095	
1,1,2,2-Tetrachloroethane	5.0	U	5.0	1	NA	10/10/09 02:13		174095	
Tetrachloroethene	5.0	U	5.0	1	NA	10/10/09 02:13		174095	
Toluene	5.0	U	5.0	1	NA	10/10/09 02:13		174095	
1,1,1-Trichloroethane	5.0	U	5.0	1	NA	10/10/09 02:13		174095	
1,1,2-Trichloroethane	5.0	U	5.0	1	NA	10/10/09 02:13		174095	
Trichloroethene	5.0	U	5.0	1	NA	10/10/09 02:13		174095	
Vinyl Chloride	5.0	U	5.0	1	NA	10/10/09 02:13		174095	

**Comments:**

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells  
**Sample Matrix:** Water  
**Sample Name:** Method Blank  
**Lab Code:** RQ0909741-01

**Service Request:** R0905596  
**Date Collected:** NA  
**Date Received:** NA  
**Units:** µg/L  
**Basis:** NA

## Volatile Organic Compounds by GC/MS

**Analytical Method:** 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
o-Xylene	5.0	U	5.0	1	NA	10/10/09 02:13		174095	
m,p-Xylenes	5.0	U	5.0	1	NA	10/10/09 02:13		174095	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	103	85-122	10/10/09 02:13		
Toluene-d8	104	87-121	10/10/09 02:13		
Dibromofluoromethane	107	89-119	10/10/09 02:13		

**Comments:**

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells  
**Sample Matrix:** Water  
  
**Sample Name:** Method Blank  
**Lab Code:** RQ0909815-01

**Service Request:** R0905596  
**Date Collected:** NA  
**Date Received:** NA  
  
**Units:** µg/L  
**Basis:** NA

## Volatile Organic Compounds by GC/MS

**Analytical Method:** 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Acetone	20	U	20	1	NA	10/12/09 14:10		174383	
Benzene	5.0	U	5.0	1	NA	10/12/09 14:10		174383	
Bromodichloromethane	5.0	U	5.0	1	NA	10/12/09 14:10		174383	
Bromoform	5.0	U	5.0	1	NA	10/12/09 14:10		174383	
Bromomethane	5.0	U	5.0	1	NA	10/12/09 14:10		174383	
2-Butanone (MEK)	10	U	10	1	NA	10/12/09 14:10		174383	
Carbon Disulfide	10	U	10	1	NA	10/12/09 14:10		174383	
Carbon Tetrachloride	5.0	U	5.0	1	NA	10/12/09 14:10		174383	
Chlorobenzene	5.0	U	5.0	1	NA	10/12/09 14:10		174383	
Chloroethane	5.0	U	5.0	1	NA	10/12/09 14:10		174383	
Chloroform	5.0	U	5.0	1	NA	10/12/09 14:10		174383	
Chloromethane	5.0	U	5.0	1	NA	10/12/09 14:10		174383	
Dibromochloromethane	5.0	U	5.0	1	NA	10/12/09 14:10		174383	
1,1-Dichloroethane	5.0	U	5.0	1	NA	10/12/09 14:10		174383	
1,2-Dichloroethane	5.0	U	5.0	1	NA	10/12/09 14:10		174383	
1,1-Dichloroethene	5.0	U	5.0	1	NA	10/12/09 14:10		174383	
cis-1,2-Dichloroethene	5.0	U	5.0	1	NA	10/12/09 14:10		174383	
trans-1,2-Dichloroethene	5.0	U	5.0	1	NA	10/12/09 14:10		174383	
1,2-Dichloropropane	5.0	U	5.0	1	NA	10/12/09 14:10		174383	
cis-1,3-Dichloropropene	5.0	U	5.0	1	NA	10/12/09 14:10		174383	
trans-1,3-Dichloropropene	5.0	U	5.0	1	NA	10/12/09 14:10		174383	
Ethylbenzene	5.0	U	5.0	1	NA	10/12/09 14:10		174383	
2-Hexanone	10	U	10	1	NA	10/12/09 14:10		174383	
Methylene Chloride	5.0	U	5.0	1	NA	10/12/09 14:10		174383	
4-Methyl-2-pentanone (MIBK)	10	U	10	1	NA	10/12/09 14:10		174383	
Styrene	5.0	U	5.0	1	NA	10/12/09 14:10		174383	
1,1,2,2-Tetrachloroethane	5.0	U	5.0	1	NA	10/12/09 14:10		174383	
Tetrachloroethene	5.0	U	5.0	1	NA	10/12/09 14:10		174383	
Toluene	5.0	U	5.0	1	NA	10/12/09 14:10		174383	
1,1,1-Trichloroethane	5.0	U	5.0	1	NA	10/12/09 14:10		174383	
1,1,2-Trichloroethane	5.0	U	5.0	1	NA	10/12/09 14:10		174383	
Trichloroethene	5.0	U	5.0	1	NA	10/12/09 14:10		174383	
Vinyl Chloride	5.0	U	5.0	1	NA	10/12/09 14:10		174383	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells  
**Sample Matrix:** Water  
**Sample Name:** Method Blank  
**Lab Code:** RQ0909815-01

**Service Request:** R0905596  
**Date Collected:** NA  
**Date Received:** NA  
**Units:** µg/L  
**Basis:** NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
o-Xylene	5.0	U	5.0	1	NA	10/12/09 14:10		174383	
m,p-Xylenes	5.0	U	5.0	1	NA	10/12/09 14:10		174383	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	104	85-122	10/12/09 14:10		
Toluene-d8	105	87-121	10/12/09 14:10		
Dibromofluoromethane	106	89-119	10/12/09 14:10		

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client:** Energy Solutions  
**Project:** Leica/Wells  
**Sample Matrix:** Water

**Service Request:** R0905596  
**Date Analyzed:** 10/ 1/09 -  
10/ 5/09

**Lab Control Sample Summary**  
**General Chemistry Parameters**

**Units:** mg/L  
**Basis:** NA

Analyte Name	Method	Lab Control Sample R0905596-LCS1			% Rec Limits
		Result	Expected	% Rec	
Carbon, Total Organic (TOC)	SM20 5310 C	9.63	10.0	96	86 - 117
Chloride	300.0	1.89	2.00	94	90 - 110
Iron, Divalent (Ferrous Iron)	SM 3500-Fe	0.399	0.40	100	77 - 129
	B.4.c				
Iron, Divalent (Ferrous Iron), Dissolved	SM 3500-Fe	0.399	0.40	100	77 - 129
	B.4.c				
Nitrate as Nitrogen	300.0	0.977	1.00	98	90 - 110
Sulfate	300.0	2.11	2.00	105	90 - 110

Comments: \_\_\_\_\_

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client:** Energy Solutions  
**Project:** Leica/Wells  
**Sample Matrix:** Water

**Service Request:** R0905596  
**Date Analyzed:** 10/ 6/09

**Lab Control Sample Summary**  
**General Chemistry Parameters**

**Units:** mg/L  
**Basis:** NA

Analyte Name	Method	Lab Control Sample R0905596-LCS2			% Rec Limits
		Result	Expected	% Rec	
Carbon, Total Organic (TOC)	SM20 5310 C	9.84	10.0	98	86 - 117
Chloride	300.0	1.86	2.00	93	90 - 110

Comments: \_\_\_\_\_

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client:** Energy Solutions  
**Project:** Leica/Wells  
**Sample Matrix:** Water

**Service Request:** R0905596  
**Date Analyzed:** 10/ 9/09

**Lab Control Sample Summary**  
**Inorganic Parameters**

**Units:** µg/L  
**Basis:** NA

Analyte Name	Method	Lab Control Sample R0905596-LCS			% Rec Limits
		Result	Expected	% Rec	
Manganese, Dissolved	6010B	506	500	101	80 - 120
Manganese, Total	6010B	506	500	101	80 - 120

**Comments:** \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Energy Solutions  
 Project: Leica/Wells  
 Sample Matrix: Water

Service Request: R0905596  
 Date Analyzed: 10/10/09

Lab Control Sample Summary  
 Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Units: µg/L

Basis: NA

Analysis Lot: 174095

Analyte Name	Lab Control Sample RQ0909741-02			% Rec Limits
	Result	Expected	% Rec	
Acetone	23.1	20.0	116	50 - 150
Benzene	18.9	20.0	95	70 - 130
Bromodichloromethane	20.4	20.0	102	70 - 130
Bromoform	20.3	20.0	102	70 - 130
Bromomethane	22.5	20.0	113	50 - 150
2-Butanone (MEK)	18.3	20.0	92	50 - 150
Carbon Disulfide	16.6	20.0	83	70 - 130
Carbon Tetrachloride	21.5	20.0	108	70 - 130
Chlorobenzene	20.4	20.0	102	70 - 130
Chloroethane	20.3	20.0	101	70 - 130
Chloroform	19.7	20.0	98	70 - 130
Chloromethane	20.3	20.0	101	70 - 130
Dibromochloromethane	20.8	20.0	104	70 - 130
1,1-Dichloroethane	18.9	20.0	95	70 - 130
1,2-Dichloroethane	20.1	20.0	100	70 - 130
1,1-Dichloroethene	22.1	20.0	110	70 - 130
cis-1,2-Dichloroethene	19.1	20.0	95	70 - 130
trans-1,2-Dichloroethene	19.4	20.0	97	70 - 130
1,2-Dichloropropane	20.2	20.0	101	70 - 130
cis-1,3-Dichloropropene	19.4	20.0	97	70 - 130
trans-1,3-Dichloropropene	20.2	20.0	101	70 - 130
Ethylbenzene	19.8	20.0	99	70 - 130
2-Hexanone	19.0	20.0	95	70 - 130
Methylene Chloride	18.5	20.0	93	70 - 130
4-Methyl-2-pentanone (MIBK)	19.3	20.0	96	70 - 130
Styrene	20.7	20.0	103	70 - 130
1,1,2,2-Tetrachloroethane	16.7	20.0	84	70 - 130
Tetrachloroethene	20.2	20.0	101	70 - 130
Toluene	19.7	20.0	98	70 - 130
1,1,1-Trichloroethane	21.3	20.0	107	70 - 130
1,1,2-Trichloroethane	19.8	20.0	99	70 - 130
Trichloroethene	20.8	20.0	104	70 - 130
Vinyl Chloride	21.9	20.0	109	70 - 130
o-Xylene	20.7	20.0	103	70 - 130
m,p-Xylenes	41.4	40.0	104	70 - 130

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Energy Solutions  
 Project: Leica/Wells  
 Sample Matrix: Water

Service Request: R0905596  
 Date Analyzed: 10/12/09

Lab Control Sample Summary  
 Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Units: µg/L

Basis: NA

Analysis Lot: 174383

Analyte Name	Lab Control Sample RQ0909815-02			% Rec Limits
	Result	Expected	% Rec	
Acetone	20.6	20.0	103	50 - 150
Benzene	19.5	20.0	98	70 - 130
Bromodichloromethane	20.6	20.0	103	70 - 130
Bromoform	20.8	20.0	104	70 - 130
Bromomethane	23.9	20.0	119	50 - 150
2-Butanone (MEK)	16.8	20.0	84	50 - 150
Carbon Disulfide	16.1	20.0	81	70 - 130
Carbon Tetrachloride	23.8	20.0	119	70 - 130
Chlorobenzene	20.6	20.0	103	70 - 130
Chloroethane	21.8	20.0	109	70 - 130
Chloroform	20.4	20.0	102	70 - 130
Chloromethane	21.4	20.0	107	70 - 130
Dibromochloromethane	20.9	20.0	105	70 - 130
1,1-Dichloroethane	19.5	20.0	97	70 - 130
1,2-Dichloroethane	20.1	20.0	101	70 - 130
1,1-Dichloroethene	24.4	20.0	122	70 - 130
cis-1,2-Dichloroethene	19.8	20.0	99	70 - 130
trans-1,2-Dichloroethene	20.4	20.0	102	70 - 130
1,2-Dichloropropane	20.1	20.0	100	70 - 130
cis-1,3-Dichloropropene	20.5	20.0	102	70 - 130
trans-1,3-Dichloropropene	21.1	20.0	106	70 - 130
Ethylbenzene	20.3	20.0	102	70 - 130
2-Hexanone	16.9	20.0	84	70 - 130
Methylene Chloride	14.8	20.0	74	70 - 130
4-Methyl-2-pentanone (MIBK)	18.4	20.0	92	70 - 130
Styrene	20.8	20.0	104	70 - 130
1,1,2,2-Tetrachloroethane	17.3	20.0	87	70 - 130
Tetrachloroethene	21.6	20.0	108	70 - 130
Toluene	20.6	20.0	103	70 - 130
1,1,1-Trichloroethane	22.5	20.0	112	70 - 130
1,1,2-Trichloroethane	19.6	20.0	98	70 - 130
Trichloroethene	20.2	20.0	101	70 - 130
Vinyl Chloride	22.7	20.0	113	70 - 130
o-Xylene	20.8	20.0	104	70 - 130
m,p-Xylenes	42.9	40.0	107	70 - 130

Comments:



## Cooler Receipt And Preservation Check Form

Project/Client Leica Submission Number R09-5596Cooler received on 10/11/09 by: mw COURIER: CAS UPS FEDEX VELOCITY CLIENT

1. Were custody seals on outside of cooler? YES NO
2. Were custody papers properly filled out (ink, signed, etc.)? YES NO
3. Did all bottles arrive in good condition (unbroken)? YES NO
4. Did any VOA vials have significant\* air bubbles? YES NO N/A
5. Were Ice or Ice packs present? YES NO
6. Where did the bottles originate? CAS/ROC CLIENT
7. Temperature of cooler(s) upon receipt: 1° 3°

Is the temperature within 0° - 6° C?: Yes Yes Yes Yes Yes

If No, Explain Below No No No No No

Date/Time Temperatures Taken: 10/11/09 1545Thermometer ID: 161 / IR GUN#2 IR GUN#3 Reading From: Temp Blank / Sample Bottle

If out of Temperature, note packing/ice condition, Client Approval to Run Samples: \_\_\_\_\_

PC Secondary Review: KB 10/22/09Cooler Breakdown: Date: 10/21/09 by: mw

1. Were all bottle labels complete (i.e. analysis, preservation, etc.)? YES NO
2. Did all bottle labels and tags agree with custody papers? YES NO
3. Were correct containers used for the tests indicated? YES NO
4. Air Samples: Cassettes / Tubes Intact Canisters Pressurized Tedlar® Bags Inflated N/A

Explain any discrepancies: \_\_\_\_\_

pH	Reagent	YES	NO	Lot Received	Exp	Sample ID	Vol. Added	Lot Added	Final pH
≥12	NaOH								
≤2	HNO <sub>3</sub>	<input checked="" type="checkbox"/>		B0 B 26954	9/10				
≤2	H <sub>2</sub> SO <sub>4</sub>			L 922903	7/10				
Residual Chlorine (-)	For TCN and Phenol			If present, contact PM to add ascorbic acid					
	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	-	-			*Not to be tested before analysis - pH tested and recorded by VOAs or GenChem on a separate worksheet			
	Zn Aceta	-	-						
	HCl	*	*	G43A00	8/10				

Yes = All samples OK

No = Samples were preserved at lab as listed

PM OK to Adjust: \_\_\_\_\_

Bottle lot numbers: 9-084-002 037955  
Other Comments: \_\_\_\_\_

Location 013 had an unlabeled metal bottle. Through process of elimination it was matched up.

PC Secondary Review: KB 10/22/09

\*significant air bubbles are greater than 5-6 mm

October 30, 2009

Service Request No: R0905679

Mr. Robert McPeak  
Energy Solutions  
143 West Street  
New Milford, CT 06776

**Laboratory Results for: Leica/Wells**

Dear Mr. McPeak:

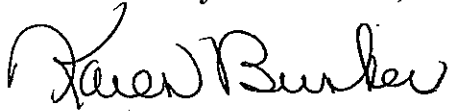
Enclosed are the results of the sample(s) submitted to our laboratory on October 6, 2009. For your reference, these analyses have been assigned our service request number **R0905679**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 134. You may also contact me via email at [KBunker@caslab.com](mailto:KBunker@caslab.com).

Respectfully submitted,

**Columbia Analytical Services, Inc.**



Karen Bunker  
Project Manager

Page 1 of 71

**COLUMBIA ANALYTICAL SERVICES, INC.**

**Client:** Energy Solutions  
**Project:** Leica Wells 10/09  
**Sample Matrix:** Water

**Service Request No.:** R0905679  
**Date Received:** 10/6/09

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier II data deliverables. When appropriate to the method, method blank results have been reported with each analytical test. Surrogate recoveries have been reported for all applicable organic analyses.

**Sample Receipt**

Eight (8) groundwater samples were collected by the client on 10/6/09 and received for analysis at Columbia Analytical Services on the same day via CAS Courier. The samples were received in good condition. The Trip Blank was noted on the Chain of Custody, however, no sample was received for this location. The cooler receipt temperature range was 2-5°C, within the guidelines of 0-6°C.

**Volatile Organics**

Eight (8) water samples were analyzed for Volatile Organic compounds by GC/MS method 8260B.

The Initial and Continuing Calibration Criteria were met.

Batch QC is included in the report. All Laboratory Control Sample (LCS) recoveries for target compounds were within QC limits.

All Surrogate recoveries are within acceptance limits.

All Laboratory Method Blanks were free from contamination.

Hits above the calibration range of the standards are flagged as "E", estimated. The sample is then repeated at the appropriate dilution for the hit. Both sets of data are included in the report. The subsequent dilution data hits are flagged as "D".

The samples were analyzed within the 14 day holding time for the method. All vials are checked for preservation after the analysis in order to maintain the integrity of the sample. All vials were found to be preserved to a pH of <2.

No problems were encountered during the analysis of these samples.

**Inorganics**

Seven (7) water samples were analyzed for TOC, Total and Soluble Ferrous Iron and Manganese and IC compounds: Chloride, Nitrate, and Sulfate. All Method numbers are noted on the Data Form 1's of the report. The soluble locations were filtered in the laboratory.

All Initial and Continuing Calibration Criteria was met for these analyses.

Batch QC is included in the report. All Laboratory Control Sample recoveries were within QC acceptance limits.

All Laboratory Method Blanks were free from contamination.

All holding times were met for these analyses including the 24 hour holding time for Ferrous Iron and the 48 hr holding time for Nitrate.

No problems were encountered with these analyses.

Approved by

*Taren Bender*

Date

*10/30/09*

000002

## CASE NARRATIVE

This report contains analytical results for the following samples:  
Service Request Number: R0905679

<u>Lab ID</u>	<u>Client ID</u>
R0905679-001	MW6
R0905679-002	MW6A
R0905679-003	MW14
R0905679-004	MW14A
R0905679-005	MW22
R0905679-006	MW22A
R0905679-007	MW5
R0905679-008	MW5A
R0905679-009	MW6 Dissolved
R0905679-010	MW6A Dissolved
R0905679-011	MW14 Dissolved
R0905679-012	MW14A Dissolved
R0905679-013	MW22 Dissolved
R0905679-014	MW22A Dissolved
R0905679-015	MW5 Dissolved
R0905679-016	MW5A Dissolved

## REPORT QUALIFIERS

- U Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.
- J Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Aroclors).
- B Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.
- E Inorganics- Concentration is estimated due to the serial dilution was outside control limits.
- E Organics- Concentration has exceeded the calibration range for that specific analysis.
- D Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.
- \* Indicates that a quality control parameter has exceeded laboratory limits.
- # Spike was diluted out.
- + Correlation coefficient for MSA is <0.995.
- N Inorganics- Matrix spike recovery was outside laboratory limits.
- N Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.
- S Concentration has been determined using Method of Standard Additions (MSA).
- W Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.
- P Pesticide/Aroclors: Concentration >40% (25% for CLP) difference between the two GC columns.
- C Confirmed by GC/MS
- Q DoD reports: indicates a pesticide/Aroclor is not confirmed ( $\geq 100\%$  Difference between two GC columns).
- X See Case Narrative for discussion.



### CAS/Rochester Lab ID # for State Certifications<sup>1</sup>

NELAP Accredited	Nevada ID # NY-00032
Delaware Accredited	New Jersey ID # NY004
Connecticut ID # PH0556	New York ID # 10145
Florida ID # E87674	New Hampshire ID # 294100 A/B
Illinois ID #200047	Pennsylvania ID# 68-786
Maine ID #NY0032	Rhode Island ID # 158
Nebraska Accredited	West Virginia ID # 292
Navy Facilities Engineering Service Center Approved	

<sup>1</sup> Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable, except as noted in the laboratory case narrative provided. For a specific list of accredited analytes, refer to the certifications section at [www.caslab.com](http://www.caslab.com).

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells  
**Sample Matrix:** Water  
**Sample Name:** MW6  
**Lab Code:** R0905679-001

**Service Request:** R0905679  
**Date Collected:** 10/ 6/09 0900  
**Date Received:** 10/ 6/09

**Basis:** NA

## General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Carbon, Total Organic (TOC)	SM20 5310 C	5.6		mg/L	1.0	1	NA	10/13/09 02:31
Chloride	300.0	8.0		mg/L	2.0	10	NA	10/7/09 08:20
Iron, Divalent (Ferrous Iron)	SM 3500-Fe B.4.c	0.10	U	mg/L	0.10	1	NA	10/6/09 23:45
Nitrate as Nitrogen	300.0	0.70		mg/L	0.50	10	NA	10/7/09 08:20
Sulfate	300.0	222		mg/L	8.0	40	NA	10/19/09 19:21

Comments:

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## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
Project: Leica/Wells  
Sample Matrix: Water  
Sample Name: MW6 Dissolved  
Lab Code: R0905679-009

Service Request: R0905679  
Date Collected: 10/ 6/09 0900  
Date Received: 10/ 6/09

Basis: NA

## Iron, Divalent, Dissolved Phenanthroline Method 20th Ed.

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Iron, Divalent (Ferrous Iron), Dissolved	SM 3500-Fe B.4.c	0.10	U	mg/L	0.10	1	NA	10/6/09 23:45

Comments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells  
**Sample Matrix:** Water  
**Sample Name:** MW6  
**Lab Code:** R0905679-001

**Service Request:** R0905679  
**Date Collected:** 10/ 6/09 0900  
**Date Received:** 10/ 6/09

**Basis:** NA

**Manganese, Total, by Inductively Coupled Plasma-Atomic Emission Spectrometry**

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Total	6010B	20	µg/L	10	1	10/ 8/09	10/13/09 00:34

Comments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells  
**Sample Matrix:** Water  
**Sample Name:** MW6 Dissolved  
**Lab Code:** R0905679-009

**Service Request:** R0905679  
**Date Collected:** 10/ 6/09 0900  
**Date Received:** 10/ 6/09

**Basis:** NA

**Manganese, Dissolved, by Inductively Coupled Plasma-Atomic Emission Spectrometry**

<b>Analyte Name</b>	<b>Method</b>	<b>Result Q</b>	<b>Units</b>	<b>MRL</b>	<b>Dilution Factor</b>	<b>Date Extracted</b>	<b>Date Analyzed</b>
Manganese, Dissolved	6010B	13	µg/L	10	1	10/ 8/09	10/13/09 02:02

**Comments:**

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## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells  
**Sample Matrix:** Water  
**Sample Name:** MW6  
**Lab Code:** R0905679-001

**Service Request:** R0905679  
**Date Collected:** 10/ 6/09 0900  
**Date Received:** 10/ 6/09  
**Units:** µg/L  
**Basis:** NA

## Volatile Organic Compounds by GC/MS

**Analytical Method:** 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Acetone	20	U	20	1	NA	10/13/09 20:45		174548	
Benzene	5.0	U	5.0	1	NA	10/13/09 20:45		174548	
Bromodichloromethane	5.0	U	5.0	1	NA	10/13/09 20:45		174548	
Bromoform	5.0	U	5.0	1	NA	10/13/09 20:45		174548	
Bromomethane	5.0	U	5.0	1	NA	10/13/09 20:45		174548	
2-Butanone (MEK)	10	U	10	1	NA	10/13/09 20:45		174548	
Carbon Disulfide	10	U	10	1	NA	10/13/09 20:45		174548	
Carbon Tetrachloride	5.0	U	5.0	1	NA	10/13/09 20:45		174548	
Chlorobenzene	5.0	U	5.0	1	NA	10/13/09 20:45		174548	
Chloroethane	5.0	U	5.0	1	NA	10/13/09 20:45		174548	
Chloroform	5.0	U	5.0	1	NA	10/13/09 20:45		174548	
Chloromethane	5.0	U	5.0	1	NA	10/13/09 20:45		174548	
Dibromochloromethane	5.0	U	5.0	1	NA	10/13/09 20:45		174548	
1,1-Dichloroethane	5.0	U	5.0	1	NA	10/13/09 20:45		174548	
1,2-Dichloroethane	5.0	U	5.0	1	NA	10/13/09 20:45		174548	
1,1-Dichloroethene	5.0	U	5.0	1	NA	10/13/09 20:45		174548	
cis-1,2-Dichloroethene	110		5.0	1	NA	10/13/09 20:45		174548	
trans-1,2-Dichloroethene	5.0	U	5.0	1	NA	10/13/09 20:45		174548	
1,2-Dichloropropane	5.0	U	5.0	1	NA	10/13/09 20:45		174548	
cis-1,3-Dichloropropene	5.0	U	5.0	1	NA	10/13/09 20:45		174548	
trans-1,3-Dichloropropene	5.0	U	5.0	1	NA	10/13/09 20:45		174548	
Ethylbenzene	5.0	U	5.0	1	NA	10/13/09 20:45		174548	
2-Hexanone	10	U	10	1	NA	10/13/09 20:45		174548	
Methylene Chloride	5.0	U	5.0	1	NA	10/13/09 20:45		174548	
4-Methyl-2-pentanone (MIBK)	10	U	10	1	NA	10/13/09 20:45		174548	
Styrene	5.0	U	5.0	1	NA	10/13/09 20:45		174548	
1,1,2,2-Tetrachloroethane	5.0	U	5.0	1	NA	10/13/09 20:45		174548	
Tetrachloroethene	5.0	U	5.0	1	NA	10/13/09 20:45		174548	
Toluene	5.0	U	5.0	1	NA	10/13/09 20:45		174548	
1,1,1-Trichloroethane	5.0	U	5.0	1	NA	10/13/09 20:45		174548	
1,1,2-Trichloroethane	5.0	U	5.0	1	NA	10/13/09 20:45		174548	
Trichloroethene	21		5.0	1	NA	10/13/09 20:45		174548	
Vinyl Chloride	14		5.0	1	NA	10/13/09 20:45		174548	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells  
**Sample Matrix:** Water  
**Sample Name:** MW6  
**Lab Code:** R0905679-001

**Service Request:** R0905679  
**Date Collected:** 10/ 6/09 0900  
**Date Received:** 10/ 6/09  
**Units:** µg/L  
**Basis:** NA

## Volatile Organic Compounds by GC/MS

**Analytical Method:** 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
o-Xylene	5.0	U	5.0	1	NA	10/13/09 20:45		174548	
m,p-Xylenes	5.0	U	5.0	1	NA	10/13/09 20:45		174548	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	106	85-122	10/13/09 20:45		
Toluene-d8	106	87-121	10/13/09 20:45		
Dibromofluoromethane	106	89-119	10/13/09 20:45		

**Comments:**

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
Project: Leica/Wells  
Sample Matrix: Water  
Sample Name: MW6A  
Lab Code: R0905679-002

Service Request: R0905679  
Date Collected: 10/ 6/09 0915  
Date Received: 10/ 6/09

Basis: NA

## General Chemistry Parameters

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Carbon, Total Organic (TOC)	SM20 5310 C	5.6	mg/L	1.0	1	NA	10/13/09 02:49
Chloride	300.0	9.1	mg/L	2.0	10	NA	10/7/09 09:03
Iron, Divalent (Ferrous Iron)	SM 3500-Fe B.4.c	0.39	mg/L	0.10	1	NA	10/6/09 23:45
Nitrate as Nitrogen	300.0	0.85	mg/L	0.50	10	NA	10/7/09 09:03
Sulfate	300.0	95.1	mg/L	4.0	20	NA	10/27/09 19:06

Comments:

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**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells  
**Sample Matrix:** Water  
**Sample Name:** MW6A Dissolved  
**Lab Code:** R0905679-010

**Service Request:** R0905679  
**Date Collected:** 10/ 6/09 0915  
**Date Received:** 10/ 6/09

**Basis:** NA

**Iron, Divalent, Dissolved Phenanthroline Method 20th Ed.**

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Iron, Divalent (Ferrous Iron), Dissolved	SM 3500-Fe B.4.c	0.24	mg/L	0.10	1	NA	10/6/09 23:45

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells  
**Sample Matrix:** Water  
**Sample Name:** MW6A  
**Lab Code:** R0905679-002

**Service Request:** R0905679  
**Date Collected:** 10/ 6/09 0915  
**Date Received:** 10/ 6/09

**Basis:** NA

## Manganese, Total, by Inductively Coupled Plasma-Atomic Emission Spectrometry

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Total	6010B	434	µg/L	10	1	10/ 8/09	10/13/09 01:06

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells  
**Sample Matrix:** Water  
**Sample Name:** MW6A Dissolved  
**Lab Code:** R0905679-010

**Service Request:** R0905679  
**Date Collected:** 10/ 6/09 0915  
**Date Received:** 10/ 6/09

**Basis:** NA

## Manganese, Dissolved, by Inductively Coupled Plasma-Atomic Emission Spectrometry

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Dissolved	6010B	423	µg/L	10	1	10/ 8/09	10/13/09 02:08

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
 Project: Leica/Wells  
 Sample Matrix: Water  
 Sample Name: MW6A  
 Lab Code: R0905679-002

Service Request: R0905679  
 Date Collected: 10/ 6/09 0915  
 Date Received: 10/ 6/09  
 Units: µg/L  
 Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Acetone	22		20	1	NA	10/14/09 14:04		174707	
Benzene	5.0	U	5.0	1	NA	10/14/09 14:04		174707	
Bromodichloromethane	5.0	U	5.0	1	NA	10/14/09 14:04		174707	
Bromoform	5.0	U	5.0	1	NA	10/14/09 14:04		174707	
Bromomethane	5.0	U	5.0	1	NA	10/14/09 14:04		174707	
2-Butanone (MEK)	10	U	10	1	NA	10/14/09 14:04		174707	
Carbon Disulfide	10	U	10	1	NA	10/14/09 14:04		174707	
Carbon Tetrachloride	5.0	U	5.0	1	NA	10/14/09 14:04		174707	
Chlorobenzene	5.0	U	5.0	1	NA	10/14/09 14:04		174707	
Chloroethane	5.0	U	5.0	1	NA	10/14/09 14:04		174707	
Chloroform	5.0	U	5.0	1	NA	10/14/09 14:04		174707	
Chloromethane	5.0	U	5.0	1	NA	10/14/09 14:04		174707	
Dibromochloromethane	5.0	U	5.0	1	NA	10/14/09 14:04		174707	
1,1-Dichloroethane	5.0	U	5.0	1	NA	10/14/09 14:04		174707	
1,2-Dichloroethane	5.0	U	5.0	1	NA	10/14/09 14:04		174707	
1,1-Dichloroethene	5.0	U	5.0	1	NA	10/14/09 14:04		174707	
cis-1,2-Dichloroethene	110		5.0	1	NA	10/14/09 14:04		174707	
trans-1,2-Dichloroethene	5.0	U	5.0	1	NA	10/14/09 14:04		174707	
1,2-Dichloropropane	5.0	U	5.0	1	NA	10/14/09 14:04		174707	
cis-1,3-Dichloropropene	5.0	U	5.0	1	NA	10/14/09 14:04		174707	
trans-1,3-Dichloropropene	5.0	U	5.0	1	NA	10/14/09 14:04		174707	
Ethylbenzene	5.0	U	5.0	1	NA	10/14/09 14:04		174707	
2-Hexanone	10	U	10	1	NA	10/14/09 14:04		174707	
Methylene Chloride	5.0	U	5.0	1	NA	10/14/09 14:04		174707	
4-Methyl-2-pentanone (MIBK)	10	U	10	1	NA	10/14/09 14:04		174707	
Styrene	5.0	U	5.0	1	NA	10/14/09 14:04		174707	
1,1,2,2-Tetrachloroethane	5.0	U	5.0	1	NA	10/14/09 14:04		174707	
Tetrachloroethene	5.0	U	5.0	1	NA	10/14/09 14:04		174707	
Toluene	5.0	U	5.0	1	NA	10/14/09 14:04		174707	
1,1,1-Trichloroethane	5.0	U	5.0	1	NA	10/14/09 14:04		174707	
1,1,2-Trichloroethane	5.0	U	5.0	1	NA	10/14/09 14:04		174707	
Trichloroethene	5.0	U	5.0	1	NA	10/14/09 14:04		174707	
Vinyl Chloride	170		5.0	1	NA	10/14/09 14:04		174707	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
Project: Leica/Wells  
Sample Matrix: Water  
Sample Name: MW6A  
Lab Code: R0905679-002

Service Request: R0905679  
Date Collected: 10/ 6/09 0915  
Date Received: 10/ 6/09  
Units: µg/L  
Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
o-Xylene	5.0	U	5.0	1	NA	10/14/09 14:04		174707	
m,p-Xylenes	5.0	U	5.0	1	NA	10/14/09 14:04		174707	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	106	85-122	10/14/09 14:04		
Toluene-d8	104	87-121	10/14/09 14:04		
Dibromofluoromethane	109	89-119	10/14/09 14:04		

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
Project: Leica/Wells  
Sample Matrix: Water  
Sample Name: MW14  
Lab Code: R0905679-003

Service Request: R0905679  
Date Collected: 10/ 6/09 0930  
Date Received: 10/ 6/09

Basis: NA

## General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Carbon, Total Organic (TOC)	SM20 5310 C	7.3		mg/L	2.0	2	NA	10/13/09 16:36
Chloride	300.0	39.0		mg/L	2.0	10	NA	10/7/09 09:17
Iron, Divalent (Ferrous Iron)	SM 3500-Fe B.4.c	0.10	U	mg/L	0.10	1	NA	10/6/09 23:45
Nitrate as Nitrogen	300.0	0.50	U	mg/L	0.50	10	NA	10/7/09 09:17
Sulfate	300.0	71.1		mg/L	2.0	10	NA	10/19/09 19:49

Comments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells  
**Sample Matrix:** Water  
**Sample Name:** MW14 Dissolved  
**Lab Code:** R0905679-011

**Service Request:** R0905679  
**Date Collected:** 10/ 6/09 0930  
**Date Received:** 10/ 6/09

**Basis:** NA

**Iron, Divalent, Dissolved Phenanthroline Method 20th Ed.**

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Iron, Divalent (Ferrous Iron), Dissolved	SM 3500-Fe B.4.c	0.10	U	mg/L	0.10	1	NA	10/6/09 23:45

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
Project: Leica/Wells  
Sample Matrix: Water  
Sample Name: MW14  
Lab Code: R0905679-003

Service Request: R0905679  
Date Collected: 10/ 6/09 0930  
Date Received: 10/ 6/09

Basis: NA

## Manganese, Total, by Inductively Coupled Plasma-Atomic Emission Spectrometry

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Total	6010B	57	µg/L	10	1	10/ 8/09	10/13/09 01:12

Comments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells  
**Sample Matrix:** Water  
**Sample Name:** MW14 Dissolved  
**Lab Code:** R0905679-011

**Service Request:** R0905679  
**Date Collected:** 10/ 6/09 0930  
**Date Received:** 10/ 6/09

**Basis:** NA

**Manganese, Dissolved, by Inductively Coupled Plasma-Atomic Emission Spectrometry**

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Dissolved	6010B	51	µg/L	10	1	10/ 8/09	10/13/09 02:14

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
 Project: Leica/Wells  
 Sample Matrix: Water  
 Sample Name: MW14  
 Lab Code: R0905679-003

Service Request: R0905679  
 Date Collected: 10/ 6/09 0930  
 Date Received: 10/ 6/09  
 Units: µg/L  
 Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Acetone	20	U	20	1	NA	10/13/09 21:47		174548	
Benzene	5.0	U	5.0	1	NA	10/13/09 21:47		174548	
Bromodichloromethane	5.0	U	5.0	1	NA	10/13/09 21:47		174548	
Bromoform	5.0	U	5.0	1	NA	10/13/09 21:47		174548	
Bromomethane	5.0	U	5.0	1	NA	10/13/09 21:47		174548	
2-Butanone (MEK)	10	U	10	1	NA	10/13/09 21:47		174548	
Carbon Disulfide	10	U	10	1	NA	10/13/09 21:47		174548	
Carbon Tetrachloride	5.0	U	5.0	1	NA	10/13/09 21:47		174548	
Chlorobenzene	5.0	U	5.0	1	NA	10/13/09 21:47		174548	
Chloroethane	5.0	U	5.0	1	NA	10/13/09 21:47		174548	
Chloroform	5.0	U	5.0	1	NA	10/13/09 21:47		174548	
Chloromethane	5.0	U	5.0	1	NA	10/13/09 21:47		174548	
Dibromochloromethane	5.0	U	5.0	1	NA	10/13/09 21:47		174548	
1,1-Dichloroethane	5.0	U	5.0	1	NA	10/13/09 21:47		174548	
1,2-Dichloroethane	5.0	U	5.0	1	NA	10/13/09 21:47		174548	
1,1-Dichloroethene	5.0	U	5.0	1	NA	10/13/09 21:47		174548	
cis-1,2-Dichloroethene	230	E	5.0	1	NA	10/13/09 21:47		174548	
trans-1,2-Dichloroethene	5.0	U	5.0	1	NA	10/13/09 21:47		174548	
1,2-Dichloropropane	5.0	U	5.0	1	NA	10/13/09 21:47		174548	
cis-1,3-Dichloropropene	5.0	U	5.0	1	NA	10/13/09 21:47		174548	
trans-1,3-Dichloropropene	5.0	U	5.0	1	NA	10/13/09 21:47		174548	
Ethylbenzene	5.0	U	5.0	1	NA	10/13/09 21:47		174548	
2-Hexanone	10	U	10	1	NA	10/13/09 21:47		174548	
Methylene Chloride	5.0	U	5.0	1	NA	10/13/09 21:47		174548	
4-Methyl-2-pentanone (MIBK)	10	U	10	1	NA	10/13/09 21:47		174548	
Styrene	5.0	U	5.0	1	NA	10/13/09 21:47		174548	
1,1,2,2-Tetrachloroethane	5.0	U	5.0	1	NA	10/13/09 21:47		174548	
Tetrachloroethene	5.0	U	5.0	1	NA	10/13/09 21:47		174548	
Toluene	5.0	U	5.0	1	NA	10/13/09 21:47		174548	
1,1,1-Trichloroethane	5.0	U	5.0	1	NA	10/13/09 21:47		174548	
1,1,2-Trichloroethane	5.0	U	5.0	1	NA	10/13/09 21:47		174548	
Trichloroethene	5.0	U	5.0	1	NA	10/13/09 21:47		174548	
Vinyl Chloride	280	E	5.0	1	NA	10/13/09 21:47		174548	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
Project: Leica/Wells  
Sample Matrix: Water  
Sample Name: MW14  
Lab Code: R0905679-003

Service Request: R0905679  
Date Collected: 10/ 6/09 0930  
Date Received: 10/ 6/09  
Units: µg/L  
Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
o-Xylene	5.0	U	5.0	1	NA	10/13/09 21:47		174548	
m,p-Xylenes	5.0	U	5.0	1	NA	10/13/09 21:47		174548	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	107	85-122	10/13/09 21:47		
Toluene-d8	104	87-121	10/13/09 21:47		
Dibromofluoromethane	111	89-119	10/13/09 21:47		

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
 Project: Leica/Wells  
 Sample Matrix: Water  
 Sample Name: MW14  
 Lab Code: R0905679-003  
 Run Type: Dilution

Service Request: R0905679  
 Date Collected: 10/ 6/09 0930  
 Date Received: 10/ 6/09  
 Units: µg/L  
 Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Acetone	40	U	40	2	NA	10/14/09 14:35		174707	
Benzene	10	U	10	2	NA	10/14/09 14:35		174707	
Bromodichloromethane	10	U	10	2	NA	10/14/09 14:35		174707	
Bromoform	10	U	10	2	NA	10/14/09 14:35		174707	
Bromomethane	10	U	10	2	NA	10/14/09 14:35		174707	
2-Butanone (MEK)	20	U	20	2	NA	10/14/09 14:35		174707	
Carbon Disulfide	20	U	20	2	NA	10/14/09 14:35		174707	
Carbon Tetrachloride	10	U	10	2	NA	10/14/09 14:35		174707	
Chlorobenzene	10	U	10	2	NA	10/14/09 14:35		174707	
Chloroethane	10	U	10	2	NA	10/14/09 14:35		174707	
Chloroform	10	U	10	2	NA	10/14/09 14:35		174707	
Chloromethane	10	U	10	2	NA	10/14/09 14:35		174707	
Dibromochloromethane	10	U	10	2	NA	10/14/09 14:35		174707	
1,1-Dichloroethane	10	U	10	2	NA	10/14/09 14:35		174707	
1,2-Dichloroethane	10	U	10	2	NA	10/14/09 14:35		174707	
1,1-Dichloroethene	10	U	10	2	NA	10/14/09 14:35		174707	
cis-1,2-Dichloroethene	230	D	10	2	NA	10/14/09 14:35		174707	
trans-1,2-Dichloroethene	10	U	10	2	NA	10/14/09 14:35		174707	
1,2-Dichloropropane	10	U	10	2	NA	10/14/09 14:35		174707	
cis-1,3-Dichloropropene	10	U	10	2	NA	10/14/09 14:35		174707	
trans-1,3-Dichloropropene	10	U	10	2	NA	10/14/09 14:35		174707	
Ethylbenzene	10	U	10	2	NA	10/14/09 14:35		174707	
2-Hexanone	20	U	20	2	NA	10/14/09 14:35		174707	
Methylene Chloride	10	U	10	2	NA	10/14/09 14:35		174707	
4-Methyl-2-pentanone (MIBK)	20	U	20	2	NA	10/14/09 14:35		174707	
Styrene	10	U	10	2	NA	10/14/09 14:35		174707	
1,1,2,2-Tetrachloroethane	10	U	10	2	NA	10/14/09 14:35		174707	
Tetrachloroethene	10	U	10	2	NA	10/14/09 14:35		174707	
Toluene	10	U	10	2	NA	10/14/09 14:35		174707	
1,1,1-Trichloroethane	10	U	10	2	NA	10/14/09 14:35		174707	
1,1,2-Trichloroethane	10	U	10	2	NA	10/14/09 14:35		174707	
Trichloroethene	10	U	10	2	NA	10/14/09 14:35		174707	
Vinyl Chloride	270	D	10	2	NA	10/14/09 14:35		174707	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells  
**Sample Matrix:** Water  
**Sample Name:** MW14  
**Lab Code:** R0905679-003  
**Run Type:** Dilution

**Service Request:** R0905679  
**Date Collected:** 10/ 6/09 0930  
**Date Received:** 10/ 6/09  
**Units:** µg/L  
**Basis:** NA

## Volatile Organic Compounds by GC/MS

**Analytical Method:** 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Analysis		
							Lot	Lot	Note
o-Xylene	10	U	10	2	NA	10/14/09 14:35		174707	
m,p-Xylenes	10	U	10	2	NA	10/14/09 14:35		174707	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	105	85-122	10/14/09 14:35		
Toluene-d8	99	87-121	10/14/09 14:35		
Dibromofluoromethane	108	89-119	10/14/09 14:35		

**Comments:**

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells  
**Sample Matrix:** Water  
**Sample Name:** MW14A  
**Lab Code:** R0905679-004

**Service Request:** R0905679  
**Date Collected:** 10/ 6/09 0945  
**Date Received:** 10/ 6/09

**Basis:** NA

## General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Carbon, Total Organic (TOC)	SM20 5310 C	2.6		mg/L	2.0	2	NA	10/13/09 16:54
Chloride	300.0	15.1		mg/L	2.0	10	NA	10/7/09 09:32
Iron, Divalent (Ferrous Iron)	SM 3500-Fe B.4.c	0.10	U	mg/L	0.10	1	NA	10/6/09 23:45
Nitrate as Nitrogen	300.0	0.71		mg/L	0.50	10	NA	10/7/09 09:32
Sulfate	300.0	41.6		mg/L	2.0	10	NA	10/19/09 20:45

Comments:

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**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells  
**Sample Matrix:** Water  
**Sample Name:** MW14A Dissolved  
**Lab Code:** R0905679-012

**Service Request:** R0905679  
**Date Collected:** 10/ 6/09 0945  
**Date Received:** 10/ 6/09

**Basis:** NA

**Iron, Divalent, Dissolved Phenanthroline Method 20th Ed.**

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Iron, Divalent (Ferrous Iron), Dissolved	SM 3500-Fe B.4.c	0.10 U	mg/L	0.10	1	NA	10/6/09 23:45

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
Project: Leica/Wells  
Sample Matrix: Water  
Sample Name: MW14A  
Lab Code: R0905679-004

Service Request: R0905679  
Date Collected: 10/ 6/09 0945  
Date Received: 10/ 6/09

Basis: NA

## Manganese, Total, by Inductively Coupled Plasma-Atomic Emission Spectrometry

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Total	6010B	79		µg/L	10	1	10/ 8/09	10/13/09 01:31

Comments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells  
**Sample Matrix:** Water  
**Sample Name:** MW14A Dissolved  
**Lab Code:** R0905679-012

**Service Request:** R0905679  
**Date Collected:** 10/ 6/09 0945  
**Date Received:** 10/ 6/09

**Basis:** NA

**Manganese, Dissolved, by Inductively Coupled Plasma-Atomic Emission Spectrometry**

<b>Analyte Name</b>	<b>Method</b>	<b>Result Q</b>	<b>Units</b>	<b>MRL</b>	<b>Dilution Factor</b>	<b>Date Extracted</b>	<b>Date Analyzed</b>
Manganese, Dissolved	6010B	63	µg/L	10	1	10/ 8/09	10/13/09 02:20

**Comments:**

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
 Project: Leica/Wells  
 Sample Matrix: Water  
 Sample Name: MW14A  
 Lab Code: R0905679-004

Service Request: R0905679  
 Date Collected: 10/ 6/09 0945  
 Date Received: 10/ 6/09  
 Units: µg/L  
 Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Acetone	20	U	20	1	NA	10/13/09 22:17		174548	
Benzene	5.0	U	5.0	1	NA	10/13/09 22:17		174548	
Bromodichloromethane	5.0	U	5.0	1	NA	10/13/09 22:17		174548	
Bromoform	5.0	U	5.0	1	NA	10/13/09 22:17		174548	
Bromomethane	5.0	U	5.0	1	NA	10/13/09 22:17		174548	
2-Butanone (MEK)	10	U	10	1	NA	10/13/09 22:17		174548	
Carbon Disulfide	10	U	10	1	NA	10/13/09 22:17		174548	
Carbon Tetrachloride	5.0	U	5.0	1	NA	10/13/09 22:17		174548	
Chlorobenzene	5.0	U	5.0	1	NA	10/13/09 22:17		174548	
Chloroethane	5.0	U	5.0	1	NA	10/13/09 22:17		174548	
Chloroform	5.0	U	5.0	1	NA	10/13/09 22:17		174548	
Chloromethane	5.0	U	5.0	1	NA	10/13/09 22:17		174548	
Dibromochloromethane	5.0	U	5.0	1	NA	10/13/09 22:17		174548	
1,1-Dichloroethane	5.0	U	5.0	1	NA	10/13/09 22:17		174548	
1,2-Dichloroethane	5.0	U	5.0	1	NA	10/13/09 22:17		174548	
1,1-Dichloroethene	5.0	U	5.0	1	NA	10/13/09 22:17		174548	
cis-1,2-Dichloroethene	12		5.0	1	NA	10/13/09 22:17		174548	
trans-1,2-Dichloroethene	5.0	U	5.0	1	NA	10/13/09 22:17		174548	
1,2-Dichloropropane	5.0	U	5.0	1	NA	10/13/09 22:17		174548	
cis-1,3-Dichloropropene	5.0	U	5.0	1	NA	10/13/09 22:17		174548	
trans-1,3-Dichloropropene	5.0	U	5.0	1	NA	10/13/09 22:17		174548	
Ethylbenzene	5.0	U	5.0	1	NA	10/13/09 22:17		174548	
2-Hexanone	10	U	10	1	NA	10/13/09 22:17		174548	
Methylene Chloride	5.0	U	5.0	1	NA	10/13/09 22:17		174548	
4-Methyl-2-pentanone (MIBK)	10	U	10	1	NA	10/13/09 22:17		174548	
Styrene	5.0	U	5.0	1	NA	10/13/09 22:17		174548	
1,1,2,2-Tetrachloroethane	5.0	U	5.0	1	NA	10/13/09 22:17		174548	
Tetrachloroethene	5.0	U	5.0	1	NA	10/13/09 22:17		174548	
Toluene	5.0	U	5.0	1	NA	10/13/09 22:17		174548	
1,1,1-Trichloroethane	5.0	U	5.0	1	NA	10/13/09 22:17		174548	
1,1,2-Trichloroethane	5.0	U	5.0	1	NA	10/13/09 22:17		174548	
Trichloroethene	5.0	U	5.0	1	NA	10/13/09 22:17		174548	
Vinyl Chloride	16		5.0	1	NA	10/13/09 22:17		174548	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells  
**Sample Matrix:** Water  
**Sample Name:** MW14A  
**Lab Code:** R0905679-004

**Service Request:** R0905679  
**Date Collected:** 10/ 6/09 0945  
**Date Received:** 10/ 6/09  
**Units:** µg/L  
**Basis:** NA

## Volatile Organic Compounds by GC/MS

**Analytical Method:** 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
o-Xylene	5.0	U	5.0	1	NA	10/13/09 22:17		174548	
m,p-Xylenes	5.0	U	5.0	1	NA	10/13/09 22:17		174548	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	106	85-122	10/13/09 22:17		
Toluene-d8	106	87-121	10/13/09 22:17		
Dibromofluoromethane	108	89-119	10/13/09 22:17		

**Comments:**

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells  
**Sample Matrix:** Water  
**Sample Name:** MW22  
**Lab Code:** R0905679-005

**Service Request:** R0905679  
**Date Collected:** 10/ 6/09 1015  
**Date Received:** 10/ 6/09

**Basis:** NA

## General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Carbon, Total Organic (TOC)	SM20 5310 C	5.0		mg/L	2.0	2	NA	10/13/09 17:12
Chloride	300.0	32.1		mg/L	2.0	10	NA	10/7/09 09:46
Iron, Divalent (Ferrous Iron)	SM 3500-Fe B.4.c	0.55		mg/L	0.10	1	NA	10/6/09 23:45
Nitrate as Nitrogen	300.0	0.50	U	mg/L	0.50	10	NA	10/7/09 09:46
Sulfate	300.0	276		mg/L	8.0	40	NA	10/19/09 21:27

Comments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells  
**Sample Matrix:** Water  
**Sample Name:** MW22 Dissolved  
**Lab Code:** R0905679-013

**Service Request:** R0905679  
**Date Collected:** 10/ 6/09 1015  
**Date Received:** 10/ 6/09

**Basis:** NA

**Iron, Divalent, Dissolved Phenanthroline Method 20th Ed.**

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Iron, Divalent (Ferrous Iron), Dissolved	SM 3500-Fe B.4.c	0.48	mg/L	0.10	1	NA	10/6/09 23:45

Comments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells  
**Sample Matrix:** Water  
**Sample Name:** MW22  
**Lab Code:** R0905679-005

**Service Request:** R0905679  
**Date Collected:** 10/ 6/09 1015  
**Date Received:** 10/ 6/09

**Basis:** NA

**Manganese, Total, by Inductively Coupled Plasma-Atomic Emission Spectrometry**

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Total	6010B	208		µg/L	10	1	10/ 8/09	10/13/09 01:37

Comments: \_\_\_\_\_

**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells  
**Sample Matrix:** Water  
**Sample Name:** MW22 Dissolved  
**Lab Code:** R0905679-013

**Service Request:** R0905679  
**Date Collected:** 10/ 6/09 1015  
**Date Received:** 10/ 6/09

**Basis:** NA

**Manganese, Dissolved, by Inductively Coupled Plasma-Atomic Emission Spectrometry**

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Dissolved	6010B	156	µg/L	10	1	10/ 8/09	10/13/09 02:27

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
 Project: Leica/Wells  
 Sample Matrix: Water  
 Sample Name: MW22  
 Lab Code: R0905679-005

Service Request: R0905679  
 Date Collected: 10/ 6/09 1015  
 Date Received: 10/ 6/09  
 Units: µg/L  
 Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Acetone	20	U	20	1	NA	10/13/09 22:48		174548	
Benzene	5.0	U	5.0	1	NA	10/13/09 22:48		174548	
Bromodichloromethane	5.0	U	5.0	1	NA	10/13/09 22:48		174548	
Bromoform	5.0	U	5.0	1	NA	10/13/09 22:48		174548	
Bromomethane	5.0	U	5.0	1	NA	10/13/09 22:48		174548	
2-Butanone (MEK)	10	U	10	1	NA	10/13/09 22:48		174548	
Carbon Disulfide	10	U	10	1	NA	10/13/09 22:48		174548	
Carbon Tetrachloride	5.0	U	5.0	1	NA	10/13/09 22:48		174548	
Chlorobenzene	5.0	U	5.0	1	NA	10/13/09 22:48		174548	
Chloroethane	5.0	U	5.0	1	NA	10/13/09 22:48		174548	
Chloroform	5.0	U	5.0	1	NA	10/13/09 22:48		174548	
Chloromethane	5.0	U	5.0	1	NA	10/13/09 22:48		174548	
Dibromochloromethane	5.0	U	5.0	1	NA	10/13/09 22:48		174548	
1,1-Dichloroethane	5.0	U	5.0	1	NA	10/13/09 22:48		174548	
1,2-Dichloroethane	5.0	U	5.0	1	NA	10/13/09 22:48		174548	
1,1-Dichloroethene	5.0	U	5.0	1	NA	10/13/09 22:48		174548	
cis-1,2-Dichloroethene	24		5.0	1	NA	10/13/09 22:48		174548	
trans-1,2-Dichloroethene	5.0	U	5.0	1	NA	10/13/09 22:48		174548	
1,2-Dichloropropane	5.0	U	5.0	1	NA	10/13/09 22:48		174548	
cis-1,3-Dichloropropene	5.0	U	5.0	1	NA	10/13/09 22:48		174548	
trans-1,3-Dichloropropene	5.0	U	5.0	1	NA	10/13/09 22:48		174548	
Ethylbenzene	5.0	U	5.0	1	NA	10/13/09 22:48		174548	
2-Hexanone	10	U	10	1	NA	10/13/09 22:48		174548	
Methylene Chloride	5.0	U	5.0	1	NA	10/13/09 22:48		174548	
4-Methyl-2-pentanone (MIBK)	10	U	10	1	NA	10/13/09 22:48		174548	
Styrene	5.0	U	5.0	1	NA	10/13/09 22:48		174548	
1,1,2,2-Tetrachloroethane	5.0	U	5.0	1	NA	10/13/09 22:48		174548	
Tetrachloroethene	5.0	U	5.0	1	NA	10/13/09 22:48		174548	
Toluene	5.0	U	5.0	1	NA	10/13/09 22:48		174548	
1,1,1-Trichloroethane	5.0	U	5.0	1	NA	10/13/09 22:48		174548	
1,1,2-Trichloroethane	5.0	U	5.0	1	NA	10/13/09 22:48		174548	
Trichloroethene	5.0	U	5.0	1	NA	10/13/09 22:48		174548	
Vinyl Chloride	96		5.0	1	NA	10/13/09 22:48		174548	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
Project: Leica/Wells  
Sample Matrix: Water  
Sample Name: MW22  
Lab Code: R0905679-005

Service Request: R0905679  
Date Collected: 10/ 6/09 1015  
Date Received: 10/ 6/09  
Units: µg/L  
Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
o-Xylene	5.0	U	5.0	1	NA	10/13/09 22:48		174548	
m,p-Xylenes	5.0	U	5.0	1	NA	10/13/09 22:48		174548	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	105	85-122	10/13/09 22:48		
Toluene-d8	99	87-121	10/13/09 22:48		
Dibromofluoromethane	110	89-119	10/13/09 22:48		

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells  
**Sample Matrix:** Water  
**Sample Name:** MW22A  
**Lab Code:** R0905679-006

**Service Request:** R0905679  
**Date Collected:** 10/ 6/09 1030  
**Date Received:** 10/ 6/09

**Basis:** NA

## General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Carbon, Total Organic (TOC)	SM20 5310 C	3.3		mg/L	2.0	2	NA	10/13/09 17:30
Chloride	300.0	25.4		mg/L	2.0	10	NA	10/7/09 10:00
Iron, Divalent (Ferrous Iron)	SM 3500-Fe B.4.c	0.12		mg/L	0.10	1	NA	10/6/09 23:45
Nitrate as Nitrogen	300.0	0.50	U	mg/L	0.50	10	NA	10/7/09 10:00
Sulfate	300.0	74.0		mg/L	2.0	10	NA	10/19/09 21:41

Comments:

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**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells  
**Sample Matrix:** Water  
**Sample Name:** MW22A Dissolved  
**Lab Code:** R0905679-014

**Service Request:** R0905679  
**Date Collected:** 10/ 6/09 1030  
**Date Received:** 10/ 6/09

**Basis:** NA

**Iron, Divalent, Dissolved Phenanthroline Method 20th Ed.**

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Iron, Divalent (Ferrous Iron), Dissolved	SM 3500-Fe B.4.c	0.10 U	mg/L	0.10	1	NA	10/6/09 23:45

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
Project: Leica/Wells  
Sample Matrix: Water  
Sample Name: MW22A  
Lab Code: R0905679-006

Service Request: R0905679  
Date Collected: 10/ 6/09 1030  
Date Received: 10/ 6/09

Basis: NA

## Manganese, Total, by Inductively Coupled Plasma-Atomic Emission Spectrometry

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Total	6010B	55		µg/L	10	1	10/ 8/09	10/13/09 01:43

Comments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells  
**Sample Matrix:** Water  
**Sample Name:** MW22A Dissolved  
**Lab Code:** R0905679-014

**Service Request:** R0905679  
**Date Collected:** 10/ 6/09 1030  
**Date Received:** 10/ 6/09

**Basis:** NA

**Manganese, Dissolved, by Inductively Coupled Plasma-Atomic Emission Spectrometry**

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Dissolved	6010B	52		µg/L	10	1	10/ 8/09	10/13/09 02:45

**Comments:**

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
 Project: Leica/Wells  
 Sample Matrix: Water  
 Sample Name: MW22A  
 Lab Code: R0905679-006

Service Request: R0905679  
 Date Collected: 10/ 6/09 1030  
 Date Received: 10/ 6/09  
 Units: µg/L  
 Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Acetone	20	U	20	1	NA	10/13/09 23:19		174548	
Benzene	5.0	U	5.0	1	NA	10/13/09 23:19		174548	
Bromodichloromethane	5.0	U	5.0	1	NA	10/13/09 23:19		174548	
Bromoform	5.0	U	5.0	1	NA	10/13/09 23:19		174548	
Bromomethane	5.0	U	5.0	1	NA	10/13/09 23:19		174548	
2-Butanone (MEK)	10	U	10	1	NA	10/13/09 23:19		174548	
Carbon Disulfide	10	U	10	1	NA	10/13/09 23:19		174548	
Carbon Tetrachloride	5.0	U	5.0	1	NA	10/13/09 23:19		174548	
Chlorobenzene	5.0	U	5.0	1	NA	10/13/09 23:19		174548	
Chloroethane	5.0	U	5.0	1	NA	10/13/09 23:19		174548	
Chloroform	5.0	U	5.0	1	NA	10/13/09 23:19		174548	
Chloromethane	5.0	U	5.0	1	NA	10/13/09 23:19		174548	
Dibromochloromethane	5.0	U	5.0	1	NA	10/13/09 23:19		174548	
1,1-Dichloroethane	5.0	U	5.0	1	NA	10/13/09 23:19		174548	
1,2-Dichloroethane	5.0	U	5.0	1	NA	10/13/09 23:19		174548	
1,1-Dichloroethene	5.0	U	5.0	1	NA	10/13/09 23:19		174548	
cis-1,2-Dichloroethene	5.1		5.0	1	NA	10/13/09 23:19		174548	
trans-1,2-Dichloroethene	5.0	U	5.0	1	NA	10/13/09 23:19		174548	
1,2-Dichloropropane	5.0	U	5.0	1	NA	10/13/09 23:19		174548	
cis-1,3-Dichloropropene	5.0	U	5.0	1	NA	10/13/09 23:19		174548	
trans-1,3-Dichloropropene	5.0	U	5.0	1	NA	10/13/09 23:19		174548	
Ethylbenzene	5.0	U	5.0	1	NA	10/13/09 23:19		174548	
2-Hexanone	10	U	10	1	NA	10/13/09 23:19		174548	
Methylene Chloride	5.0	U	5.0	1	NA	10/13/09 23:19		174548	
4-Methyl-2-pentanone (MIBK)	10	U	10	1	NA	10/13/09 23:19		174548	
Styrene	5.0	U	5.0	1	NA	10/13/09 23:19		174548	
1,1,2,2-Tetrachloroethane	5.0	U	5.0	1	NA	10/13/09 23:19		174548	
Tetrachloroethene	5.0	U	5.0	1	NA	10/13/09 23:19		174548	
Toluene	5.0	U	5.0	1	NA	10/13/09 23:19		174548	
1,1,1-Trichloroethane	5.0	U	5.0	1	NA	10/13/09 23:19		174548	
1,1,2-Trichloroethane	5.0	U	5.0	1	NA	10/13/09 23:19		174548	
Trichloroethene	5.0	U	5.0	1	NA	10/13/09 23:19		174548	
Vinyl Chloride	17		5.0	1	NA	10/13/09 23:19		174548	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
Project: Leica/Wells  
Sample Matrix: Water  
Sample Name: MW22A  
Lab Code: R0905679-006

Service Request: R0905679  
Date Collected: 10/ 6/09 1030  
Date Received: 10/ 6/09  
Units: µg/L  
Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
o-Xylene	5.0	U	5.0	1	NA	10/13/09 23:19		174548	
m,p-Xylenes	5.0	U	5.0	1	NA	10/13/09 23:19		174548	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	106	85-122	10/13/09 23:19		
Toluene-d8	107	87-121	10/13/09 23:19		
Dibromofluoromethane	109	89-119	10/13/09 23:19		

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
Project: Leica/Wells  
Sample Matrix: Water  
Sample Name: MW5  
Lab Code: R0905679-007

Service Request: R0905679  
Date Collected: 10/ 6/09 1100  
Date Received: 10/ 6/09

Basis: NA

## General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Carbon, Total Organic (TOC)	SM20 5310 C	2.3		mg/L	1.0	1	NA	10/13/09 04:56
Chloride	300.0	2.0	U	mg/L	2.0	10	NA	10/7/09 10:14
Iron, Divalent (Ferrous Iron)	SM 3500-Fe B.4.c	0.10	U	mg/L	0.10	1	NA	10/6/09 23:45
Nitrate as Nitrogen	300.0	0.88		mg/L	0.50	10	NA	10/7/09 10:14
Sulfate	300.0	15.0		mg/L	2.0	10	NA	10/19/09 21:56

Comments:

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**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells  
**Sample Matrix:** Water  
**Sample Name:** MW5 Dissolved  
**Lab Code:** R0905679-015

**Service Request:** R0905679  
**Date Collected:** 10/ 6/09 1100  
**Date Received:** 10/ 6/09

**Basis:** NA

**Iron, Divalent, Dissolved Phenanthroline Method 20th Ed.**

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Iron, Divalent (Ferrous Iron), Dissolved	SM 3500-Fe B.4.c	0.50 U	mg/L	0.50	1	NA	10/6/09 23:45

Comments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells  
**Sample Matrix:** Water  
**Sample Name:** MW5  
**Lab Code:** R0905679-007

**Service Request:** R0905679  
**Date Collected:** 10/ 6/09 1100  
**Date Received:** 10/ 6/09

**Basis:** NA

**Manganese, Total, by Inductively Coupled Plasma-Atomic Emission Spectrometry**

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Total	6010B	39	µg/L	10	1	10/ 8/09	10/13/09 01:49

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells  
**Sample Matrix:** Water  
**Sample Name:** MW5 Dissolved  
**Lab Code:** R0905679-015

**Service Request:** R0905679  
**Date Collected:** 10/ 6/09 1100  
**Date Received:** 10/ 6/09

**Basis:** NA

**Manganese, Dissolved, by Inductively Coupled Plasma-Atomic Emission Spectrometry**

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Dissolved	6010B	10		µg/L	10	1	10/ 8/09	10/13/09 02:51

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
 Project: Leica/Wells  
 Sample Matrix: Water  
 Sample Name: MW5  
 Lab Code: R0905679-007

Service Request: R0905679  
 Date Collected: 10/ 6/09 1100  
 Date Received: 10/ 6/09  
 Units: µg/L  
 Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Acetone	20	U	20	1	NA	10/13/09 23:50		174548	
Benzene	5.0	U	5.0	1	NA	10/13/09 23:50		174548	
Bromodichloromethane	5.0	U	5.0	1	NA	10/13/09 23:50		174548	
Bromoform	5.0	U	5.0	1	NA	10/13/09 23:50		174548	
Bromomethane	5.0	U	5.0	1	NA	10/13/09 23:50		174548	
2-Butanone (MEK)	10	U	10	1	NA	10/13/09 23:50		174548	
Carbon Disulfide	10	U	10	1	NA	10/13/09 23:50		174548	
Carbon Tetrachloride	5.0	U	5.0	1	NA	10/13/09 23:50		174548	
Chlorobenzene	5.0	U	5.0	1	NA	10/13/09 23:50		174548	
Chloroethane	5.0	U	5.0	1	NA	10/13/09 23:50		174548	
Chloroform	5.0	U	5.0	1	NA	10/13/09 23:50		174548	
Chloromethane	5.0	U	5.0	1	NA	10/13/09 23:50		174548	
Dibromochloromethane	5.0	U	5.0	1	NA	10/13/09 23:50		174548	
1,1-Dichloroethane	5.0	U	5.0	1	NA	10/13/09 23:50		174548	
1,2-Dichloroethane	5.0	U	5.0	1	NA	10/13/09 23:50		174548	
1,1-Dichloroethene	5.0	U	5.0	1	NA	10/13/09 23:50		174548	
cis-1,2-Dichloroethene	5.0	U	5.0	1	NA	10/13/09 23:50		174548	
trans-1,2-Dichloroethene	5.0	U	5.0	1	NA	10/13/09 23:50		174548	
1,2-Dichloropropane	5.0	U	5.0	1	NA	10/13/09 23:50		174548	
cis-1,3-Dichloropropene	5.0	U	5.0	1	NA	10/13/09 23:50		174548	
trans-1,3-Dichloropropene	5.0	U	5.0	1	NA	10/13/09 23:50		174548	
Ethylbenzene	5.0	U	5.0	1	NA	10/13/09 23:50		174548	
2-Hexanone	10	U	10	1	NA	10/13/09 23:50		174548	
Methylene Chloride	5.0	U	5.0	1	NA	10/13/09 23:50		174548	
4-Methyl-2-pentanone (MIBK)	10	U	10	1	NA	10/13/09 23:50		174548	
Styrene	5.0	U	5.0	1	NA	10/13/09 23:50		174548	
1,1,2,2-Tetrachloroethane	5.0	U	5.0	1	NA	10/13/09 23:50		174548	
Tetrachloroethene	5.0	U	5.0	1	NA	10/13/09 23:50		174548	
Toluene	5.0	U	5.0	1	NA	10/13/09 23:50		174548	
1,1,1-Trichloroethane	5.0	U	5.0	1	NA	10/13/09 23:50		174548	
1,1,2-Trichloroethane	5.0	U	5.0	1	NA	10/13/09 23:50		174548	
Trichloroethene	5.0	U	5.0	1	NA	10/13/09 23:50		174548	
Vinyl Chloride	5.0	U	5.0	1	NA	10/13/09 23:50		174548	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
Project: Leica/Wells  
Sample Matrix: Water  
Sample Name: MW5  
Lab Code: R0905679-007

Service Request: R0905679  
Date Collected: 10/ 6/09 1100  
Date Received: 10/ 6/09  
Units: µg/L  
Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
o-Xylene	5.0	U	5.0	1	NA	10/13/09 23:50		174548	
m,p-Xylenes	5.0	U	5.0	1	NA	10/13/09 23:50		174548	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	105	85-122	10/13/09 23:50		
Toluene-d8	104	87-121	10/13/09 23:50		
Dibromofluoromethane	109	89-119	10/13/09 23:50		

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells  
**Sample Matrix:** Water  
**Sample Name:** MW5A  
**Lab Code:** R0905679-008

**Service Request:** R0905679  
**Date Collected:** 10/ 6/09 1115  
**Date Received:** 10/ 6/09

**Basis:** NA

## General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Carbon, Total Organic (TOC)	SM20 5310 C	280		mg/L	20	20	NA	10/13/09 17:48
Chloride	300.0	138		mg/L	4.0	20	NA	10/9/09 07:53
Iron, Divalent (Ferrous Iron)	SM 3500-Fe B.4.c	1.03		mg/L	0.50	5	NA	10/6/09 23:45
Nitrate as Nitrogen	300.0	0.50	U	mg/L	0.50	10	NA	10/7/09 11:12
Sulfate	300.0	55.2		mg/L	2.0	10	NA	10/19/09 22:10

Comments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells  
**Sample Matrix:** Water  
**Sample Name:** MW5A Dissolved  
**Lab Code:** R0905679-016

**Service Request:** R0905679  
**Date Collected:** 10/ 6/09 1115  
**Date Received:** 10/ 6/09

**Basis:** NA

**Iron, Divalent, Dissolved Phenanthroline Method 20th Ed.**

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Iron, Divalent (Ferrous Iron), Dissolved	SM 3500-Fe B.4.c	0.84	mg/L	0.50	5	NA	10/6/09 23:45

Comments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells  
**Sample Matrix:** Water  
**Sample Name:** MW5A  
**Lab Code:** R0905679-008

**Service Request:** R0905679  
**Date Collected:** 10/ 6/09 1115  
**Date Received:** 10/ 6/09

**Basis:** NA

**Manganese, Total, by Inductively Coupled Plasma-Atomic Emission Spectrometry**

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Total	6010B	512		µg/L	10	1	10/ 8/09	10/13/09 01:55

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
Project: Leica/Wells  
Sample Matrix: Water  
Sample Name: MW5A Dissolved  
Lab Code: R0905679-016

Service Request: R0905679  
Date Collected: 10/ 6/09 1115  
Date Received: 10/ 6/09

Basis: NA

## Manganese, Dissolved, by Inductively Coupled Plasma-Atomic Emission Spectrometry

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Dissolved	6010B	502		µg/L	10	1	10/ 8/09	10/13/09 02:57

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
 Project: Leica/Wells  
 Sample Matrix: Water  
 Sample Name: MW5A  
 Lab Code: R0905679-008

Service Request: R0905679  
 Date Collected: 10/ 6/09 1115  
 Date Received: 10/ 6/09

Units: µg/L  
 Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Acetone	85		20	1	NA	10/14/09 00:21		174548	
Benzene	5.0	U	5.0	1	NA	10/14/09 00:21		174548	
Bromodichloromethane	5.0	U	5.0	1	NA	10/14/09 00:21		174548	
Bromoform	5.0	U	5.0	1	NA	10/14/09 00:21		174548	
Bromomethane	5.0	U	5.0	1	NA	10/14/09 00:21		174548	
2-Butanone (MEK)	81		10	1	NA	10/14/09 00:21		174548	
Carbon Disulfide	10	U	10	1	NA	10/14/09 00:21		174548	
Carbon Tetrachloride	5.0	U	5.0	1	NA	10/14/09 00:21		174548	
Chlorobenzene	5.0	U	5.0	1	NA	10/14/09 00:21		174548	
Chloroethane	5.0	U	5.0	1	NA	10/14/09 00:21		174548	
Chloroform	5.0	U	5.0	1	NA	10/14/09 00:21		174548	
Chloromethane	5.0	U	5.0	1	NA	10/14/09 00:21		174548	
Dibromochloromethane	5.0	U	5.0	1	NA	10/14/09 00:21		174548	
1,1-Dichloroethane	5.0	U	5.0	1	NA	10/14/09 00:21		174548	
1,2-Dichloroethane	5.0	U	5.0	1	NA	10/14/09 00:21		174548	
1,1-Dichloroethene	5.0	U	5.0	1	NA	10/14/09 00:21		174548	
cis-1,2-Dichloroethene	5.0	U	5.0	1	NA	10/14/09 00:21		174548	
trans-1,2-Dichloroethene	5.0	U	5.0	1	NA	10/14/09 00:21		174548	
1,2-Dichloropropane	5.0	U	5.0	1	NA	10/14/09 00:21		174548	
cis-1,3-Dichloropropene	5.0	U	5.0	1	NA	10/14/09 00:21		174548	
trans-1,3-Dichloropropene	5.0	U	5.0	1	NA	10/14/09 00:21		174548	
Ethylbenzene	5.0	U	5.0	1	NA	10/14/09 00:21		174548	
2-Hexanone	10	U	10	1	NA	10/14/09 00:21		174548	
Methylene Chloride	5.0	U	5.0	1	NA	10/14/09 00:21		174548	
4-Methyl-2-pentanone (MIBK)	10	U	10	1	NA	10/14/09 00:21		174548	
Styrene	5.0	U	5.0	1	NA	10/14/09 00:21		174548	
1,1,2,2-Tetrachloroethane	5.0	U	5.0	1	NA	10/14/09 00:21		174548	
Tetrachloroethene	5.0	U	5.0	1	NA	10/14/09 00:21		174548	
Toluene	5.0	U	5.0	1	NA	10/14/09 00:21		174548	
1,1,1-Trichloroethane	5.0	U	5.0	1	NA	10/14/09 00:21		174548	
1,1,2-Trichloroethane	5.0	U	5.0	1	NA	10/14/09 00:21		174548	
Trichloroethene	5.0	U	5.0	1	NA	10/14/09 00:21		174548	
Vinyl Chloride	18		5.0	1	NA	10/14/09 00:21		174548	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
Project: Leica/Wells  
Sample Matrix: Water  
Sample Name: MW5A  
Lab Code: R0905679-008

Service Request: R0905679  
Date Collected: 10/ 6/09 1115  
Date Received: 10/ 6/09  
Units: µg/L  
Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
o-Xylene	5.0	U	5.0	1	NA	10/14/09 00:21		174548	
m,p-Xylenes	5.0	U	5.0	1	NA	10/14/09 00:21		174548	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	109	85-122	10/14/09 00:21		
Toluene-d8	106	87-121	10/14/09 00:21		
Dibromofluoromethane	112	89-119	10/14/09 00:21		

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
Project: Leica/Wells  
Sample Matrix: Water  
Sample Name: Method Blank  
Lab Code: R0905679-MB1

Service Request: R0905679  
Date Collected: NA  
Date Received: NA

Basis: NA

## General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Carbon, Total Organic (TOC)	SM20 5310 C	1.0	U	mg/L	1.0	1	NA	10/13/09 00:06
Chloride	300.0	0.20	U	mg/L	0.20	1	NA	10/7/09 05:00
Iron, Divalent (Ferrous Iron)	SM 3500-Fe B.4.c	0.10	U	mg/L	0.10	1	NA	10/6/09 23:45
Iron, Divalent (Ferrous Iron), Dissolved	SM 3500-Fe B.4.c	0.10	U	mg/L	0.10	1	NA	10/6/09 23:45
Nitrate as Nitrogen	300.0	0.050	U	mg/L	0.050	1	NA	10/7/09 05:00
Sulfate	300.0	0.20	U	mg/L	0.20	1	NA	10/19/09 14:06

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells  
**Sample Matrix:** Water  
**Sample Name:** Method Blank  
**Lab Code:** R0905679-MB2

**Service Request:** R0905679  
**Date Collected:** NA  
**Date Received:** NA

**Basis:** NA

## General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Carbon, Total Organic (TOC)	SM20 5310 C	1.0	U	mg/L	1.0	1	NA	10/13/09 15:41
Chloride	300.0	0.20	U	mg/L	0.20	1	NA	10/9/09 03:07
Nitrate as Nitrogen	300.0	0.050	U	mg/L	0.050	1	NA	10/7/09 10:43
Sulfate	300.0	0.20	U	mg/L	0.20	1	NA	10/19/09 20:17

Comments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells  
**Sample Matrix:** Water  
**Sample Name:** Method Blank  
**Lab Code:** R0905679-MB3

**Service Request:** R0905679  
**Date Collected:** NA  
**Date Received:** NA  
**Basis:** NA

## Sulfate Anion by Ion Chromatography

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Sulfate	300.0	0.20	U	mg/L	0.20	1	NA	10/27/09 17:41

Comments: \_\_\_\_\_

**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells  
**Sample Matrix:** Water  
**Sample Name:** Method Blank  
**Lab Code:** R0905679-MB1

**Service Request:** R0905679  
**Date Collected:** NA  
**Date Received:** NA  
**Basis:** NA

## Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Dissolved	6010B	10	U	µg/L	10	1	10/ 8/09	10/13/09 00:15
Manganese, Total	6010B	10	U	µg/L	10	1	10/ 8/09	10/13/09 00:15

Comments:

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## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells  
**Sample Matrix:** Water  
**Sample Name:** Method Blank  
**Lab Code:** R0905679-MB2

**Service Request:** R0905679  
**Date Collected:** NA  
**Date Received:** NA  
**Basis:** NA

## Manganese, Dissolved, by Inductively Coupled Plasma-Atomic Emission Spectrometry

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Dissolved	6010B	10	U	µg/L	10	1	10/ 8/09	10/13/09 00:28

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
 Project: Leica/Wells  
 Sample Matrix: Water  
 Sample Name: Method Blank  
 Lab Code: RQ0909884-01

Service Request: R0905679  
 Date Collected: NA  
 Date Received: NA  
 Units: µg/L  
 Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Acetone	20	U	20	1	NA	10/13/09 15:03		174548	
Benzene	5.0	U	5.0	1	NA	10/13/09 15:03		174548	
Bromodichloromethane	5.0	U	5.0	1	NA	10/13/09 15:03		174548	
Bromoform	5.0	U	5.0	1	NA	10/13/09 15:03		174548	
Bromomethane	5.0	U	5.0	1	NA	10/13/09 15:03		174548	
2-Butanone (MEK)	10	U	10	1	NA	10/13/09 15:03		174548	
Carbon Disulfide	10	U	10	1	NA	10/13/09 15:03		174548	
Carbon Tetrachloride	5.0	U	5.0	1	NA	10/13/09 15:03		174548	
Chlorobenzene	5.0	U	5.0	1	NA	10/13/09 15:03		174548	
Chloroethane	5.0	U	5.0	1	NA	10/13/09 15:03		174548	
Chloroform	5.0	U	5.0	1	NA	10/13/09 15:03		174548	
Chloromethane	5.0	U	5.0	1	NA	10/13/09 15:03		174548	
Dibromochloromethane	5.0	U	5.0	1	NA	10/13/09 15:03		174548	
1,1-Dichloroethane	5.0	U	5.0	1	NA	10/13/09 15:03		174548	
1,2-Dichloroethane	5.0	U	5.0	1	NA	10/13/09 15:03		174548	
1,1-Dichloroethene	5.0	U	5.0	1	NA	10/13/09 15:03		174548	
cis-1,2-Dichloroethene	5.0	U	5.0	1	NA	10/13/09 15:03		174548	
trans-1,2-Dichloroethene	5.0	U	5.0	1	NA	10/13/09 15:03		174548	
1,2-Dichloropropane	5.0	U	5.0	1	NA	10/13/09 15:03		174548	
cis-1,3-Dichloropropene	5.0	U	5.0	1	NA	10/13/09 15:03		174548	
trans-1,3-Dichloropropene	5.0	U	5.0	1	NA	10/13/09 15:03		174548	
Ethylbenzene	5.0	U	5.0	1	NA	10/13/09 15:03		174548	
2-Hexanone	10	U	10	1	NA	10/13/09 15:03		174548	
Methylene Chloride	5.0	U	5.0	1	NA	10/13/09 15:03		174548	
4-Methyl-2-pentanone (MIBK)	10	U	10	1	NA	10/13/09 15:03		174548	
Styrene	5.0	U	5.0	1	NA	10/13/09 15:03		174548	
1,1,2,2-Tetrachloroethane	5.0	U	5.0	1	NA	10/13/09 15:03		174548	
Tetrachloroethene	5.0	U	5.0	1	NA	10/13/09 15:03		174548	
Toluene	5.0	U	5.0	1	NA	10/13/09 15:03		174548	
1,1,1-Trichloroethane	5.0	U	5.0	1	NA	10/13/09 15:03		174548	
1,1,2-Trichloroethane	5.0	U	5.0	1	NA	10/13/09 15:03		174548	
Trichloroethene	5.0	U	5.0	1	NA	10/13/09 15:03		174548	
Vinyl Chloride	5.0	U	5.0	1	NA	10/13/09 15:03		174548	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
Project: Leica/Wells  
Sample Matrix: Water  
Sample Name: Method Blank  
Lab Code: RQ0909884-01

Service Request: R0905679  
Date Collected: NA  
Date Received: NA  
Units: µg/L  
Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
o-Xylene	5.0	U	5.0	1	NA	10/13/09 15:03		174548	
m,p-Xylenes	5.0	U	5.0	1	NA	10/13/09 15:03		174548	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	105	85-122	10/13/09 15:03		
Toluene-d8	104	87-121	10/13/09 15:03		
Dibromofluoromethane	108	89-119	10/13/09 15:03		

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
 Project: Leica/Wells  
 Sample Matrix: Water  
 Sample Name: Method Blank  
 Lab Code: RQ0909921-01

Service Request: R0905679  
 Date Collected: NA  
 Date Received: NA  
 Units: µg/L  
 Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Acetone	20	U	20	1	NA	10/14/09 13:34		174707	
Benzene	5.0	U	5.0	1	NA	10/14/09 13:34		174707	
Bromodichloromethane	5.0	U	5.0	1	NA	10/14/09 13:34		174707	
Bromoform	5.0	U	5.0	1	NA	10/14/09 13:34		174707	
Bromomethane	5.0	U	5.0	1	NA	10/14/09 13:34		174707	
2-Butanone (MEK)	10	U	10	1	NA	10/14/09 13:34		174707	
Carbon Disulfide	10	U	10	1	NA	10/14/09 13:34		174707	
Carbon Tetrachloride	5.0	U	5.0	1	NA	10/14/09 13:34		174707	
Chlorobenzene	5.0	U	5.0	1	NA	10/14/09 13:34		174707	
Chloroethane	5.0	U	5.0	1	NA	10/14/09 13:34		174707	
Chloroform	5.0	U	5.0	1	NA	10/14/09 13:34		174707	
Chloromethane	5.0	U	5.0	1	NA	10/14/09 13:34		174707	
Dibromochloromethane	5.0	U	5.0	1	NA	10/14/09 13:34		174707	
1,1-Dichloroethane	5.0	U	5.0	1	NA	10/14/09 13:34		174707	
1,2-Dichloroethane	5.0	U	5.0	1	NA	10/14/09 13:34		174707	
1,1-Dichloroethene	5.0	U	5.0	1	NA	10/14/09 13:34		174707	
cis-1,2-Dichloroethene	5.0	U	5.0	1	NA	10/14/09 13:34		174707	
trans-1,2-Dichloroethene	5.0	U	5.0	1	NA	10/14/09 13:34		174707	
1,2-Dichloropropane	5.0	U	5.0	1	NA	10/14/09 13:34		174707	
cis-1,3-Dichloropropene	5.0	U	5.0	1	NA	10/14/09 13:34		174707	
trans-1,3-Dichloropropene	5.0	U	5.0	1	NA	10/14/09 13:34		174707	
Ethylbenzene	5.0	U	5.0	1	NA	10/14/09 13:34		174707	
2-Hexanone	10	U	10	1	NA	10/14/09 13:34		174707	
Methylene Chloride	5.0	U	5.0	1	NA	10/14/09 13:34		174707	
4-Methyl-2-pentanone (MIBK)	10	U	10	1	NA	10/14/09 13:34		174707	
Styrene	5.0	U	5.0	1	NA	10/14/09 13:34		174707	
1,1,2,2-Tetrachloroethane	5.0	U	5.0	1	NA	10/14/09 13:34		174707	
Tetrachloroethene	5.0	U	5.0	1	NA	10/14/09 13:34		174707	
Toluene	5.0	U	5.0	1	NA	10/14/09 13:34		174707	
1,1,1-Trichloroethane	5.0	U	5.0	1	NA	10/14/09 13:34		174707	
1,1,2-Trichloroethane	5.0	U	5.0	1	NA	10/14/09 13:34		174707	
Trichloroethene	5.0	U	5.0	1	NA	10/14/09 13:34		174707	
Vinyl Chloride	5.0	U	5.0	1	NA	10/14/09 13:34		174707	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
Project: Leica/Wells  
Sample Matrix: Water  
Sample Name: Method Blank  
Lab Code: RQ0909921-01

Service Request: R0905679  
Date Collected: NA  
Date Received: NA  
Units: µg/L  
Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
o-Xylene	5.0	U	5.0	1	NA	10/14/09 13:34		174707	
m,p-Xylenes	5.0	U	5.0	1	NA	10/14/09 13:34		174707	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	110	85-122	10/14/09 13:34		
Toluene-d8	106	87-121	10/14/09 13:34		
Dibromofluoromethane	108	89-119	10/14/09 13:34		

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Energy Solutions  
Project: Leica/Wells  
Sample Matrix: Water

Service Request: R0905679  
Date Analyzed: 10/ 6/09 -  
10/19/09

Lab Control Sample Summary  
General Chemistry Parameters

Units: mg/L  
Basis: NA

Analyte Name	Method	Lab Control Sample R0905679-LCS1			% Rec Limits
		Result	Expected	% Rec	
Carbon, Total Organic (TOC)	SM20 5310 C	10.1	10.0	101	86 - 117
Chloride	300.0	1.85	2.00	92	90 - 110
Iron, Divalent (Ferrous Iron)	SM 3500-Fe B.4.c	0.389	0.40	97	77 - 129
Iron, Divalent (Ferrous Iron), Dissolved	SM 3500-Fe B.4.c	0.389	0.40	97	77 - 129
Nitrate as Nitrogen	300.0	0.923	1.00	92	90 - 110
Sulfate	300.0	1.85	2.00	92	90 - 110

Comments: \_\_\_\_\_

\_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client:** Energy Solutions  
**Project:** Leica/Wells  
**Sample Matrix:** Water

**Service Request:** R0905679  
**Date Analyzed:** 10/ 7/09 -  
10/19/09

**Lab Control Sample Summary**  
**General Chemistry Parameters**

**Units:** mg/L**Basis:** NA

Analyte Name	Method	Lab Control Sample R0905679-LCS2			% Rec Limits
		Result	Expected	% Rec	
Carbon, Total Organic (TOC)	SM20 5310 C	10.2	10.0	102	86 - 117
Chloride	300.0	1.87	2.00	93	90 - 110
Nitrate as Nitrogen	300.0	0.923	1.00	92	90 - 110
Sulfate	300.0	1.85	2.00	92	90 - 110

**Comments:** \_\_\_\_\_

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Report

**Client:** Energy Solutions  
**Project:** Leica/Wells  
**Sample Matrix:** Water

**Service Request:** R0905679  
**Date Analyzed:** 10/27/09

**Lab Control Sample Summary**  
**Sulfate Anion by Ion Chromatography**

**Units:** mg/L

**Basis:** NA

Analyte Name	Method	Lab Control Sample R0905679-LCS3			% Rec Limits
		Result	Expected	% Rec	
Sulfate	300.0	1.87	2.00	93	90 - 110

**Comments:** \_\_\_\_\_

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Report

**Client:** Energy Solutions  
**Project:** Leica/Wells  
**Sample Matrix:** Water

**Service Request:** R0905679  
**Date Analyzed:** 10/13/09

**Lab Control Sample Summary  
Inorganic Parameters**

**Units:** µg/L  
**Basis:** NA

Analyte Name	Method	Lab Control Sample R0905679-LCS			% Rec Limits
		Result	Expected	% Rec	
Manganese, Dissolved	6010B	508	500	102	80 - 120
Manganese, Total	6010B	508	500	102	80 - 120

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Energy Solutions  
 Project: Leica/Wells  
 Sample Matrix: Water

Service Request: R0905679  
 Date Analyzed: 10/13/09

Lab Control Sample Summary  
 Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Units: µg/L

Basis: NA

Analysis Lot: 174548

Analyte Name	Lab Control Sample RQ0909884-02			% Rec Limits
	Result	Expected	% Rec	
Acetone	23.1	20.0	115	50 - 150
Benzene	20.5	20.0	102	70 - 130
Bromodichloromethane	21.7	20.0	108	70 - 130
Bromoform	21.9	20.0	109	70 - 130
Bromomethane	24.0	20.0	120	50 - 150
2-Butanone (MEK)	18.2	20.0	91	50 - 150
Carbon Disulfide	17.3	20.0	86	70 - 130
Carbon Tetrachloride	23.7	20.0	119	70 - 130
Chlorobenzene	21.2	20.0	106	70 - 130
Chloroethane	22.4	20.0	112	70 - 130
Chloroform	21.4	20.0	107	70 - 130
Chloromethane	22.1	20.0	110	70 - 130
Dibromochloromethane	22.1	20.0	111	70 - 130
1,1-Dichloroethane	20.5	20.0	102	70 - 130
1,2-Dichloroethane	21.1	20.0	106	70 - 130
1,1-Dichloroethene	24.8	20.0	124	70 - 130
cis-1,2-Dichloroethene	21.2	20.0	106	70 - 130
trans-1,2-Dichloroethene	21.8	20.0	109	70 - 130
1,2-Dichloropropane	20.6	20.0	103	70 - 130
cis-1,3-Dichloropropene	21.6	20.0	108	70 - 130
trans-1,3-Dichloropropene	22.7	20.0	113	70 - 130
Ethylbenzene	20.8	20.0	104	70 - 130
2-Hexanone	18.6	20.0	93	70 - 130
Methylene Chloride	15.7	20.0	79	70 - 130
4-Methyl-2-pentanone (MIBK)	19.4	20.0	97	70 - 130
Styrene	21.2	20.0	106	70 - 130
1,1,2,2-Tetrachloroethane	19.2	20.0	96	70 - 130
Tetrachloroethene	21.9	20.0	110	70 - 130
Toluene	21.4	20.0	107	70 - 130
1,1,1-Trichloroethane	23.6	20.0	118	70 - 130
1,1,2-Trichloroethane	20.9	20.0	105	70 - 130
Trichloroethene	21.1	20.0	105	70 - 130
Vinyl Chloride	23.6	20.0	118	70 - 130
o-Xylene	21.4	20.0	107	70 - 130
m,p-Xylenes	43.5	40.0	109	70 - 130

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Energy Solutions  
 Project: Leica/Wells  
 Sample Matrix: Water

Service Request: R0905679  
 Date Analyzed: 10/14/09

Lab Control Sample Summary  
 Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Units: µg/L

Basis: NA

Analysis Lot: 174707

Analyte Name	Lab Control Sample RQ0909921-02			% Rec Limits
	Result	Expected	% Rec	
Acetone	19.7	20.0	98	50 - 150
Benzene	18.5	20.0	92	70 - 130
Bromodichloromethane	20.0	20.0	100	70 - 130
Bromoform	19.5	20.0	98	70 - 130
Bromomethane	17.0	20.0	85	50 - 150
2-Butanone (MEK)	16.8	20.0	84	50 - 150
Carbon Disulfide	15.1	20.0	76	70 - 130
Carbon Tetrachloride	22.5	20.0	112	70 - 130
Chlorobenzene	19.1	20.0	95	70 - 130
Chloroethane	20.0	20.0	100	70 - 130
Chloroform	19.5	20.0	98	70 - 130
Chloromethane	19.1	20.0	95	70 - 130
Dibromochloromethane	19.3	20.0	97	70 - 130
1,1-Dichloroethane	18.1	20.0	91	70 - 130
1,2-Dichloroethane	18.9	20.0	94	70 - 130
1,1-Dichloroethene	22.1	20.0	110	70 - 130
cis-1,2-Dichloroethene	18.6	20.0	93	70 - 130
trans-1,2-Dichloroethene	19.2	20.0	96	70 - 130
1,2-Dichloropropane	19.2	20.0	96	70 - 130
cis-1,3-Dichloropropene	19.0	20.0	95	70 - 130
trans-1,3-Dichloropropene	19.7	20.0	99	70 - 130
Ethylbenzene	18.5	20.0	92	70 - 130
2-Hexanone	15.6	20.0	78	70 - 130
Methylene Chloride	18.2	20.0	91	70 - 130
4-Methyl-2-pentanone (MIBK)	16.7	20.0	84	70 - 130
Styrene	19.0	20.0	95	70 - 130
1,1,2,2-Tetrachloroethane	17.0	20.0	85	70 - 130
Tetrachloroethene	19.5	20.0	98	70 - 130
Toluene	19.1	20.0	96	70 - 130
1,1,1-Trichloroethane	20.9	20.0	104	70 - 130
1,1,2-Trichloroethane	19.2	20.0	96	70 - 130
Trichloroethene	19.5	20.0	97	70 - 130
Vinyl Chloride	20.9	20.0	105	70 - 130
o-Xylene	19.1	20.0	95	70 - 130
m,p-Xylenes	38.3	40.0	96	70 - 130

Comments:



CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

SR # \_\_\_\_\_ CAS Contact \_\_\_\_\_

One Mustard St., Suite 250 • Rochester, NY 14609-0859(585) 288-5380 • 800-695-7222 x11 • FAX (585) 288-8475 PAGE 1 OF 2

Project Name		Project Number		ANALYSIS REQUESTED (Include Method Number and Container Preservative)										
Project Manager		Report CC		PRESERVATIVE										
Company/Address		Company/Address		PRESERVATIVE										
Leica		Energy Solutions Inc		PRESERVATIVE										
100 Mill Plain Rd, and Floor Box 106		Danbury, CT 06811		PRESERVATIVE										
Phone # 801-303-1092		FAX# 860-355-8294		PRESERVATIVE										
Sample's Signature Wayne DeGallier		Sample's Printed Name Wayne DeGallier		PRESERVATIVE										
CLIENT-SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	TIME	MATRIX	NUMBER OF CONTAINERS									
MW6	001 009	10/6/09	9:00	H <sub>2</sub> O	GC/MS VOAs <input checked="" type="checkbox"/> CLP	GC/MS SVOAs <input checked="" type="checkbox"/> CLP	GC VOAs <input checked="" type="checkbox"/> CLP	PESTICIDES <input checked="" type="checkbox"/> 8021 <input checked="" type="checkbox"/> 601/602	PCBs <input checked="" type="checkbox"/> 8081 <input checked="" type="checkbox"/> 608 <input checked="" type="checkbox"/> CLP	METALS, TOTAL <input checked="" type="checkbox"/> 8082 <input checked="" type="checkbox"/> 608 <input checked="" type="checkbox"/> CLP	METALS, DISSOLVED (List in comments below)	Nitrate <input checked="" type="checkbox"/> Nitrate <input checked="" type="checkbox"/> Chloride <input checked="" type="checkbox"/> TDC	Preservative Key	
MW6A	002 000		9:15											
MW14	003 011		9:30											
MW14A	004 012		9:45											
MW22	005 013		10:15											
MW22A	006 014		10:30											
MW5	007 015		11:00											
MW5A	008 016		11:15											
Trip Blank	009 017													
Temp Blank	010 018													
SPECIAL INSTRUCTIONS/COMMENTS				INVOICE INFORMATION										
Metals				PO#										
Total = Fe Mn				BILL TO:										
Dissolved = Fe Mn														
Some Samples Run on Arrival 10/6/09				SUBMISSION# 18105679										
See QAPP <input type="checkbox"/>				RECEIVED BY										
SAMPLE RECEIPT: CONDITION/COOLER TEMP: 2.5°C				RECEIVED BY										
RELINQUISHED BY				RELINQUISHED BY										
Signature Wayne DeGallier				Signature Rachel Jones										
Printed Name Wayne DeGallier				Printed Name Rachel Jones										
Firm Energy Solutions				Firm CAS										
Date/Time 10/6/09 12:00				Date/Time 10/6/09 1450										

# Cooler Receipt And Preservation Check Form

Project/Client Leica Submission Number 20905679

Cooler received on 10/6/09 by: MHC COURIER: CAS UPS FEDEX VELOCITY CLIENT

1. Were custody seals on outside of cooler? YES NO
2. Were custody papers properly filled out (ink, signed, etc.)? YES NO
3. Did all bottles arrive in good condition (unbroken)? YES NO
4. Did any VOA vials have significant\* air bubbles? YES NO N/A
5. Were Ice or Ice packs present? YES NO
6. Where did the bottles originate? CAS/ROC CLIENT
7. Temperature of cooler(s) upon receipt: 2° 5°

Is the temperature within 0° - 6° C?: Yes Yes Yes Yes Yes

If No, Explain Below No No No No No

Date/Time Temperatures Taken: 10/6/09 1525

Thermometer ID: 161 / IR GUN#2 / IR GUN#3 Reading From: Temp Blank / Sample Bottle

If out of Temperature, note packing/ice condition, Client Approval to Run Samples: \_\_\_\_\_

PC Secondary Review: VB 10/30/09

Cooler Breakdown: Date: 10/7/09 by: MRP

1. Were all bottle labels complete (i.e. analysis, preservation, etc.)? YES NO
2. Did all bottle labels and tags agree with custody papers? YES NO
3. Were correct containers used for the tests indicated? YES NO
4. Air Samples: Cassettes / Tubes Intact Canisters Pressurized Tedlar® Bags Inflated N/A

Explain any discrepancies: \_\_\_\_\_

pH	Reagent	YES	NO	Lot Received	Exp	Sample ID	Vol. Added	Lot Added	Final pH
≥12	NaOH								
≤2	HNO <sub>3</sub>								
≤2	H <sub>2</sub> SO <sub>4</sub>								
Residual Chlorine (-)	For TCN and Phenol			If present, contact PM to add ascorbic acid					
	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	-	-			*Not to be tested before analysis - pH tested and recorded by VOAs or GenChem on a separate worksheet			
	Zn Aceta	-	-						
	HCl	*	*						

Yes = All samples OK

No = Samples were preserved at lab as listed

PM OK to Adjust: \_\_\_\_\_

Bottle lot numbers: \_\_\_\_\_

Other Comments: TB on hold. Not received,

PC Secondary Review: VB 10/30/09

\*significant air bubbles are greater than 5-6 mm

November 02, 2009

Service Request No: R0905863

Mr. Robert McPeak  
Energy Solutions  
143 West Street  
New Milford, CT 06776

**Laboratory Results for: Leica/Wells**

Dear Mr. McPeak:

Enclosed are the results of the sample(s) submitted to our laboratory on October 6, 2009. For your reference, these analyses have been assigned our service request number **R0905863**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 134. You may also contact me via email at [KBunker@caslab.com](mailto:KBunker@caslab.com).

Respectfully submitted,

**Columbia Analytical Services, Inc.**



Karen Bunker  
Project Manager

Page 1 of 12

## CASE NARRATIVE

This report contains analytical results for the following samples:  
Service Request Number: R0905863

<u>Lab ID</u>	<u>Client ID</u>
R0905863-001	MW 10
R0905863-002	MW 23

All samples were received in good condition unless otherwise noted on the cooler receipt and preservation check form located at the end of this report.

All samples were preserved in accordance with approved analytical methods.

All samples have been analyzed by the approved methods cited on the analytical results pages.

All holding times and associated QC were within limits.

No analytical or QC problems were encountered.

All sampling activities performed by CAS personnel have been in accordance with "CAS Field Procedures and Measurements Manual" or by client specifications.

00002



## REPORT QUALIFIERS

- U Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.
- J Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Aroclors).
- B Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.
- E Inorganics- Concentration is estimated due to the serial dilution was outside control limits.
- E Organics- Concentration has exceeded the calibration range for that specific analysis.
- D Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.
- \* Indicates that a quality control parameter has exceeded laboratory limits.
- # Spike was diluted out.
- + Correlation coefficient for MSA is <0.995.
- N Inorganics- Matrix spike recovery was outside laboratory limits.
- N Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.
- S Concentration has been determined using Method of Standard Additions (MSA).
- W Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.
- P Pesticide/Aroclors: Concentration >40% (25% for CLP) difference between the two GC columns.
- C Confirmed by GC/MS
- Q DoD reports: indicates a pesticide/Aroclor is not confirmed ( $\geq 100\%$  Difference between two GC columns).
- X See Case Narrative for discussion.



### **CAS/Rochester Lab ID # for State Certifications<sup>1</sup>**

NELAP Accredited  
Delaware Accredited  
Connecticut ID # PH0556  
Florida ID # E87674  
Illinois ID #200047  
Maine ID #NY0032  
Nebraska Accredited  
Navy Facilities Engineering Service Center Approved

Nevada ID # NY-00032  
New Jersey ID # NY004  
New York ID # 10145  
New Hampshire ID # 294100 A/B  
Pennsylvania ID# 68-786  
Rhode Island ID # 158  
West Virginia ID # 292

<sup>1</sup> Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable, except as noted in the laboratory case narrative provided. For a specific list of accredited analytes, refer to the certifications section at [www.caslab.com](http://www.caslab.com).

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
 Project: Leica/Wells  
 Sample Matrix: Water  
 Sample Name: MW 10  
 Lab Code: R0905863-001

Service Request: R0905863  
 Date Collected: 10/ 6/09 1145  
 Date Received: 10/ 6/09  
 Units: µg/L  
 Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Acetone	160		40	2	NA	10/15/09 20:01		175030	
Benzene	10	U	10	2	NA	10/15/09 20:01		175030	
Bromodichloromethane	10	U	10	2	NA	10/15/09 20:01		175030	
Bromoform	10	U	10	2	NA	10/15/09 20:01		175030	
Bromomethane	10	U	10	2	NA	10/15/09 20:01		175030	
2-Butanone (MEK)	270		20	2	NA	10/15/09 20:01		175030	
Carbon Disulfide	20	U	20	2	NA	10/15/09 20:01		175030	
Carbon Tetrachloride	10	U	10	2	NA	10/15/09 20:01		175030	
Chlorobenzene	10	U	10	2	NA	10/15/09 20:01		175030	
Chloroethane	10	U	10	2	NA	10/15/09 20:01		175030	
Chloroform	10	U	10	2	NA	10/15/09 20:01		175030	
Chloromethane	10	U	10	2	NA	10/15/09 20:01		175030	
Dibromochloromethane	10	U	10	2	NA	10/15/09 20:01		175030	
1,1-Dichloroethane	10	U	10	2	NA	10/15/09 20:01		175030	
1,2-Dichloroethane	10	U	10	2	NA	10/15/09 20:01		175030	
1,1-Dichloroethene	10	U	10	2	NA	10/15/09 20:01		175030	
cis-1,2-Dichloroethene	10	U	10	2	NA	10/15/09 20:01		175030	
trans-1,2-Dichloroethene	10	U	10	2	NA	10/15/09 20:01		175030	
1,2-Dichloropropane	10	U	10	2	NA	10/15/09 20:01		175030	
cis-1,3-Dichloropropene	10	U	10	2	NA	10/15/09 20:01		175030	
trans-1,3-Dichloropropene	10	U	10	2	NA	10/15/09 20:01		175030	
Ethylbenzene	10	U	10	2	NA	10/15/09 20:01		175030	
2-Hexanone	20	U	20	2	NA	10/15/09 20:01		175030	
Methylene Chloride	10	U	10	2	NA	10/15/09 20:01		175030	
4-Methyl-2-pentanone (MIBK)	20	U	20	2	NA	10/15/09 20:01		175030	
Styrene	10	U	10	2	NA	10/15/09 20:01		175030	
1,1,2,2-Tetrachloroethane	10	U	10	2	NA	10/15/09 20:01		175030	
Tetrachloroethene	10	U	10	2	NA	10/15/09 20:01		175030	
Toluene	10	U	10	2	NA	10/15/09 20:01		175030	
1,1,1-Trichloroethane	10	U	10	2	NA	10/15/09 20:01		175030	
1,1,2-Trichloroethane	10	U	10	2	NA	10/15/09 20:01		175030	
Trichloroethene	10	U	10	2	NA	10/15/09 20:01		175030	
Vinyl Chloride	10	U	10	2	NA	10/15/09 20:01		175030	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
Project: Leica/Wells  
Sample Matrix: Water  
Sample Name: MW 10  
Lab Code: R0905863-001

Service Request: R0905863  
Date Collected: 10/ 6/09 1145  
Date Received: 10/ 6/09  
Units: µg/L  
Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
o-Xylene	10	U	10	2	NA	10/15/09 20:01		175030	
m,p-Xylenes	10	U	10	2	NA	10/15/09 20:01		175030	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	108	85-122	10/15/09 20:01		
Toluene-d8	104	87-121	10/15/09 20:01		
Dibromofluoromethane	109	89-119	10/15/09 20:01		

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
 Project: Leica/Wells  
 Sample Matrix: Water  
 Sample Name: MW 23  
 Lab Code: R0905863-002

Service Request: R0905863  
 Date Collected: 10/ 6/09 1130  
 Date Received: 10/ 6/09  
 Units: µg/L  
 Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Acetone	20	U	20	1	NA	10/15/09 20:30		175030	
Benzene	5.0	U	5.0	1	NA	10/15/09 20:30		175030	
Bromodichloromethane	5.0	U	5.0	1	NA	10/15/09 20:30		175030	
Bromoform	5.0	U	5.0	1	NA	10/15/09 20:30		175030	
Bromomethane	5.0	U	5.0	1	NA	10/15/09 20:30		175030	
2-Butanone (MEK)	10	U	10	1	NA	10/15/09 20:30		175030	
Carbon Disulfide	14		10	1	NA	10/15/09 20:30		175030	
Carbon Tetrachloride	5.0	U	5.0	1	NA	10/15/09 20:30		175030	
Chlorobenzene	5.0	U	5.0	1	NA	10/15/09 20:30		175030	
Chloroethane	5.0	U	5.0	1	NA	10/15/09 20:30		175030	
Chloroform	5.0	U	5.0	1	NA	10/15/09 20:30		175030	
Chloromethane	5.0	U	5.0	1	NA	10/15/09 20:30		175030	
Dibromochloromethane	5.0	U	5.0	1	NA	10/15/09 20:30		175030	
1,1-Dichloroethane	5.0	U	5.0	1	NA	10/15/09 20:30		175030	
1,2-Dichloroethane	5.0	U	5.0	1	NA	10/15/09 20:30		175030	
1,1-Dichloroethene	5.0	U	5.0	1	NA	10/15/09 20:30		175030	
cis-1,2-Dichloroethene	5.0	U	5.0	1	NA	10/15/09 20:30		175030	
trans-1,2-Dichloroethene	5.0	U	5.0	1	NA	10/15/09 20:30		175030	
1,2-Dichloropropane	5.0	U	5.0	1	NA	10/15/09 20:30		175030	
cis-1,3-Dichloropropene	5.0	U	5.0	1	NA	10/15/09 20:30		175030	
trans-1,3-Dichloropropene	5.0	U	5.0	1	NA	10/15/09 20:30		175030	
Ethylbenzene	5.0	U	5.0	1	NA	10/15/09 20:30		175030	
2-Hexanone	10	U	10	1	NA	10/15/09 20:30		175030	
Methylene Chloride	5.0	U	5.0	1	NA	10/15/09 20:30		175030	
4-Methyl-2-pentanone (MIBK)	10	U	10	1	NA	10/15/09 20:30		175030	
Styrene	5.0	U	5.0	1	NA	10/15/09 20:30		175030	
1,1,2,2-Tetrachloroethane	5.0	U	5.0	1	NA	10/15/09 20:30		175030	
Tetrachloroethene	5.0	U	5.0	1	NA	10/15/09 20:30		175030	
Toluene	5.0	U	5.0	1	NA	10/15/09 20:30		175030	
1,1,1-Trichloroethane	5.0	U	5.0	1	NA	10/15/09 20:30		175030	
1,1,2-Trichloroethane	5.0	U	5.0	1	NA	10/15/09 20:30		175030	
Trichloroethene	5.0	U	5.0	1	NA	10/15/09 20:30		175030	
Vinyl Chloride	5.0	U	5.0	1	NA	10/15/09 20:30		175030	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
Project: Leica/Wells  
Sample Matrix: Water  
Sample Name: MW 23  
Lab Code: R0905863-002

Service Request: R0905863  
Date Collected: 10/ 6/09 1130  
Date Received: 10/ 6/09  
Units: µg/L  
Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
o-Xylene	5.0	U	5.0	1	NA	10/15/09 20:30		175030	
m,p-Xylenes	5.0	U	5.0	1	NA	10/15/09 20:30		175030	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	106	85-122	10/15/09 20:30		
Toluene-d8	105	87-121	10/15/09 20:30		
Dibromofluoromethane	109	89-119	10/15/09 20:30		

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells  
**Sample Matrix:** Water  
**Sample Name:** Method Blank  
**Lab Code:** RQ0910451-01

**Service Request:** R0905863  
**Date Collected:** NA  
**Date Received:** NA  
**Units:** µg/L  
**Basis:** NA

## Volatile Organic Compounds by GC/MS

**Analytical Method:** 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Acetone	20	U	20	1	NA	10/15/09 13:34		175030	
Benzene	5.0	U	5.0	1	NA	10/15/09 13:34		175030	
Bromodichloromethane	5.0	U	5.0	1	NA	10/15/09 13:34		175030	
Bromoform	5.0	U	5.0	1	NA	10/15/09 13:34		175030	
Bromomethane	5.0	U	5.0	1	NA	10/15/09 13:34		175030	
2-Butanone (MEK)	10	U	10	1	NA	10/15/09 13:34		175030	
Carbon Disulfide	10	U	10	1	NA	10/15/09 13:34		175030	
Carbon Tetrachloride	5.0	U	5.0	1	NA	10/15/09 13:34		175030	
Chlorobenzene	5.0	U	5.0	1	NA	10/15/09 13:34		175030	
Chloroethane	5.0	U	5.0	1	NA	10/15/09 13:34		175030	
Chloroform	5.0	U	5.0	1	NA	10/15/09 13:34		175030	
Chloromethane	5.0	U	5.0	1	NA	10/15/09 13:34		175030	
Dibromochloromethane	5.0	U	5.0	1	NA	10/15/09 13:34		175030	
1,1-Dichloroethane	5.0	U	5.0	1	NA	10/15/09 13:34		175030	
1,2-Dichloroethane	5.0	U	5.0	1	NA	10/15/09 13:34		175030	
1,1-Dichloroethene	5.0	U	5.0	1	NA	10/15/09 13:34		175030	
cis-1,2-Dichloroethene	5.0	U	5.0	1	NA	10/15/09 13:34		175030	
trans-1,2-Dichloroethene	5.0	U	5.0	1	NA	10/15/09 13:34		175030	
1,2-Dichloropropane	5.0	U	5.0	1	NA	10/15/09 13:34		175030	
cis-1,3-Dichloropropene	5.0	U	5.0	1	NA	10/15/09 13:34		175030	
trans-1,3-Dichloropropene	5.0	U	5.0	1	NA	10/15/09 13:34		175030	
Ethylbenzene	5.0	U	5.0	1	NA	10/15/09 13:34		175030	
2-Hexanone	10	U	10	1	NA	10/15/09 13:34		175030	
Methylene Chloride	5.0	U	5.0	1	NA	10/15/09 13:34		175030	
4-Methyl-2-pentanone (MIBK)	10	U	10	1	NA	10/15/09 13:34		175030	
Styrene	5.0	U	5.0	1	NA	10/15/09 13:34		175030	
1,1,2,2-Tetrachloroethane	5.0	U	5.0	1	NA	10/15/09 13:34		175030	
Tetrachloroethene	5.0	U	5.0	1	NA	10/15/09 13:34		175030	
Toluene	5.0	U	5.0	1	NA	10/15/09 13:34		175030	
1,1,1-Trichloroethane	5.0	U	5.0	1	NA	10/15/09 13:34		175030	
1,1,2-Trichloroethane	5.0	U	5.0	1	NA	10/15/09 13:34		175030	
Trichloroethene	5.0	U	5.0	1	NA	10/15/09 13:34		175030	
Vinyl Chloride	5.0	U	5.0	1	NA	10/15/09 13:34		175030	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
Project: Leica/Wells  
Sample Matrix: Water  
Sample Name: Method Blank  
Lab Code: RQ0910451-01

Service Request: R0905863  
Date Collected: NA  
Date Received: NA  
Units: µg/L  
Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
o-Xylene	5.0	U	5.0	1	NA	10/15/09 13:34		175030	
m,p-Xylenes	5.0	U	5.0	1	NA	10/15/09 13:34		175030	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	107	85-122	10/15/09 13:34		
Toluene-d8	110	87-121	10/15/09 13:34		
Dibromofluoromethane	106	89-119	10/15/09 13:34		

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Energy Solutions  
 Project: Leica/Wells  
 Sample Matrix: Water

Service Request: R0905863  
 Date Analyzed: 10/15/09

Lab Control Sample Summary  
 Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Units: µg/L

Basis: NA

Analysis Lot: 175030

Analyte Name	Lab Control Sample RQ0910451-02			% Rec Limits
	Result	Expected	% Rec	
Acetone	16.8	20.0	84	50 - 150
Benzene	19.7	20.0	99	70 - 130
Bromodichloromethane	21.7	20.0	109	70 - 130
Bromoform	21.7	20.0	109	70 - 130
Bromomethane	18.8	20.0	94	50 - 150
2-Butanone (MEK)	16.3	20.0	81	50 - 150
Carbon Disulfide	20.8	20.0	104	70 - 130
Carbon Tetrachloride	23.2	20.0	116	70 - 130
Chlorobenzene	20.9	20.0	104	70 - 130
Chloroethane	19.6	20.0	98	70 - 130
Chloroform	20.8	20.0	104	70 - 130
Chloromethane	16.6	20.0	83	70 - 130
Dibromochloromethane	22.7	20.0	113	70 - 130
1,1-Dichloroethane	19.0	20.0	95	70 - 130
1,2-Dichloroethane	20.2	20.0	101	70 - 130
1,1-Dichloroethene	21.8	20.0	109	70 - 130
cis-1,2-Dichloroethene	20.1	20.0	101	70 - 130
trans-1,2-Dichloroethene	20.1	20.0	100	70 - 130
1,2-Dichloropropane	20.3	20.0	102	70 - 130
cis-1,3-Dichloropropene	20.8	20.0	104	70 - 130
trans-1,3-Dichloropropene	20.7	20.0	104	70 - 130
Ethylbenzene	21.5	20.0	108	70 - 130
2-Hexanone	15.6	20.0	78	70 - 130
Methylene Chloride	19.8	20.0	99	70 - 130
4-Methyl-2-pentanone (MIBK)	16.4	20.0	82	70 - 130
Styrene	22.5	20.0	112	70 - 130
1,1,2,2-Tetrachloroethane	21.1	20.0	105	70 - 130
Tetrachloroethene	22.4	20.0	112	70 - 130
Toluene	21.6	20.0	108	70 - 130
1,1,1-Trichloroethane	21.7	20.0	109	70 - 130
1,1,2-Trichloroethane	21.2	20.0	106	70 - 130
Trichloroethene	20.8	20.0	104	70 - 130
Vinyl Chloride	20.8	20.0	104	70 - 130
o-Xylene	22.3	20.0	111	70 - 130
m,p-Xylenes	45.2	40.0	113	70 - 130

Comments:

# CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

One Mustard St., Suite 250 • Rochester, NY 14609-0859 (585) 288-5380 • 800-695-7222 x11 • FAX (585) 288-8475

SRI #

[illegible]

000123

Disinfectant: White - Return to Originator: Yellow - Lab Copy: Pink - Retained by Client

SCQC-1102-08

## Cooler Receipt And Preservation C

R0905863

Energy Solutions  
LeicaProject/Client Leica Submission NumberCooler received on 10/16/09 by: MWC COURIER: CAS UPS FEDEX VELOCITY CLIENT

1. Were custody seals on outside of cooler? YES NO
2. Were custody papers properly filled out (ink, signed, etc.)? YES NO
3. Did all bottles arrive in good condition (unbroken)? YES NO
4. Did any VOA vials have significant\* air bubbles? YES NO N/A
5. Were Ice or Ice packs present? YES NO
6. Where did the bottles originate? CAS/ROC CLIENT
7. Temperature of cooler(s) upon receipt: 2° 5°

Is the temperature within 0° - 6° C?: Yes Yes Yes Yes Yes

If No, Explain Below No No No No No

Date/Time Temperatures Taken: 10/16/09 1525Thermometer ID: 161 / IR GUN#2 / IR GUN#3 Reading From: Temp Blank / Sample Bottle

If out of Temperature, note packing/ice condition, Client Approval to Run Samples:

PC Secondary Review: KB 10/13/09Cooler Breakdown: Date: 10/13/09 10/17/09 10/13/09 by: MWC

1. Were all bottle labels complete (i.e. analysis, preservation, etc.)? YES NO
2. Did all bottle labels and tags agree with custody papers? YES NO
3. Were correct containers used for the tests indicated? YES NO
4. Air Samples: Cassettes / Tubes Intact Canisters Pressurized Tedlar® Bags Inflated N/A

Explain any discrepancies:

pH	Reagent	YES	NO	Lot Received	Exp	Sample ID	Vol. Added	Lot Added	Final pH
≥12	NaOH								
≤2	HNO <sub>3</sub>								
≤2	H <sub>2</sub> SO <sub>4</sub>								
Residual Chlorine (-)	For TCN and Phenol			If present, contact PM to add ascorbic acid					
	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	-	-			*Not to be tested before analysis - pH tested and recorded by VOAs or GenChem on a separate worksheet			
	Zn Aceta	-	-						
	HCl	*	*	<u>G45AC1</u>	<u>9/10</u>				

Yes = All samples OK

No = Samples were preserved at lab as listed

PM OK to Adjust:

Bottle lot numbers:  
Other Comments:9-121-001 9-121-001, 3DB2695E, 001009-1FF  
MWC 10/17

1664 TPH: M17800985 Exp: 5/14

PC Secondary Review:

KB 11/3/09

\*significant air bubbles are greater than 5-6 mm

00012

February 04, 2010

Service Request No: R1000239

Mr. Robert McPeak  
Energy Solutions, Inc.  
100 Mill Plain Rd  
2nd Floor Mailbox 106  
Danbury, CT 06811

**Laboratory Results for: Leica/Wells 1/2010**

Dear Mr. McPeak:


Enclosed are the results of the sample(s) submitted to our laboratory between January 14, 2010 and January 15, 2010. For your reference, these analyses have been assigned our service request number **R1000239**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 134. You may also contact me via email at [KBunker@caslab.com](mailto:KBunker@caslab.com).

Respectfully submitted,

**Columbia Analytical Services, Inc.**



Karen Bunker  
Project Manager

Page 1 of 116

**COLUMBIA ANALYTICAL SERVICES, INC.**

**Client:** Energy Solutions  
**Project:** Leica Wells 1/2010  
**Sample Matrix:** Water

**Service Request No.:** R1000239  
**Date Received:** 1/14-1/15/2010

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier II data deliverables. When appropriate to the method, method blank results have been reported with each analytical test. Surrogate recoveries have been reported for all applicable organic analyses.

**Sample Receipt**

Fourteen (14) groundwater samples and one (1) Trip Blank were collected by the client between 1/14-1/15/2010 and received for analysis at Columbia Analytical Services on the same day via CAS Courier. The samples were received in good condition. The cooler receipt temperature range was 3-5.8°C, within the guidelines of 0-6°C.

**Volatile Organics**

Fourteen (14) water samples were analyzed for Volatile Organic compounds by GC/MS method 8260B.

The Initial and Continuing Calibration Criteria were met.

Batch QC is included in the report. All Laboratory Control Sample (LCS) recoveries for target compounds were within QC limits.

All Surrogate recoveries are within acceptance limits.

All Laboratory Method Blanks were free from contamination.

The samples were analyzed within the 14 day holding time for the method. All vials are checked for preservation after the analysis in order to maintain the integrity of the sample. All vials were found to be preserved to a pH of <2.

No problems were encountered during the analysis of these samples.

**Inorganics**

Fourteen (14) water samples were analyzed for TOC, Total and Soluble Ferrous Iron and Manganese and IC compounds: Chloride, Nitrate, and Sulfate. All Method numbers are noted on the Data Form 1's of the report. The soluble locations were filtered in the laboratory.

All Initial and Continuing Calibration Criteria was met for these analyses.

Batch QC is included in the report. All Laboratory Control Sample recoveries were within QC acceptance limits.

All Laboratory Method Blanks were free from contamination.

Samples MW5A (R1000239-004) and MW5A Dissolved (R1000239-005) did not confirm for Ferrous Iron due to the matrix of the sample. The result for the Dissolved Ferrous Iron was higher than the total due to the absorbance of the color blank. Samples MW24A (R1000239-026) and MW24A Dissolved (R1000239-027) did not confirm for Manganese. All sample bottles were checked by the lab. The samples appeared to be different samples. The client was notified and these samples may be resampled at a future date.

All holding times were met for these analyses including the 24 hour holding time for Ferrous Iron and the 48 hr holding time for Nitrate.

No problems were encountered with these analyses.

Approved by  Date 2/5/10

00002

## CASE NARRATIVE

This report contains analytical results for the following samples:  
Service Request Number: R1000239

<u>Lab ID</u>	<u>Client ID</u>
R1000239-001	Trip Blank
R1000239-002	MW5
R1000239-003	MW5 Dissolved
R1000239-004	MW5A
R1000239-005	MW5A Dissolved
R1000239-006	MW6A
R1000239-007	MW6A Dissolved
R1000239-008	MW6
R1000239-009	MW6 Dissolved
R1000239-010	MW18
R1000239-011	MW18 Dissolved
R1000239-012	MW18A
R1000239-013	MW18A Dissolved
R1000239-014	MW1A
R1000239-015	MW1A Dissolved
R1000239-016	MW16R
R1000239-017	MW16R Dissolved
R1000239-018	MW22
R1000239-019	MW22 Dissolved
R1000239-020	MW22A
R1000239-021	MW22A Dissolved
R1000239-022	MW14
R1000239-023	MW14 Dissolved
R1000239-024	MW14A
R1000239-025	MW14A Dissolved
R1000239-026	MW24A
R1000239-027	MW24A Dissolved
R1000239-028	MW24
R1000239-029	MW24 Dissolved

## REPORT QUALIFIERS

- U Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.
- J Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Aroclors).
- B Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.
- E Inorganics- Concentration is estimated due to the serial dilution was outside control limits.
- E Organics- Concentration has exceeded the calibration range for that specific analysis.
- D Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.
- \* Indicates that a quality control parameter has exceeded laboratory limits.
- # Spike was diluted out.
- + Correlation coefficient for MSA is <0.995.
- N Inorganics- Matrix spike recovery was outside laboratory limits.
- N Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.
- S Concentration has been determined using Method of Standard Additions (MSA).
- W Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.
- P Pesticide/Aroclors: Concentration >40% (25% for CLP) difference between the two GC columns.
- C Confirmed by GC/MS
- Q DoD reports: indicates a pesticide/Aroclor is not confirmed ( $\geq 100\%$  Difference between two GC columns).
- X See Case Narrative for discussion.



### CAS/Rochester Lab ID # for State Certifications<sup>1</sup>

NELAP Accredited	Nevada ID # NY-00032
Delaware Accredited	New Jersey ID # NY004
Connecticut ID # PH0556	New York ID # 10145
Florida ID # E87674	New Hampshire ID # 294100 A/B
Illinois ID #200047	Pennsylvania ID# 68-786
Maine ID #NY0032	Rhode Island ID # 158
Nebraska Accredited	West Virginia ID # 292
Navy Facilities Engineering Service Center Approved	

<sup>1</sup> Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable, except as noted in the laboratory case narrative provided. For a specific list of accredited analytes, refer to the certifications section at [www.caslab.com](http://www.caslab.com).

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
 Project: Leica/Wells 1/2010  
 Sample Matrix: Water  
 Sample Name: Trip Blank  
 Lab Code: R1000239-001

Service Request: R1000239  
 Date Collected: 1/14/10  
 Date Received: 1/14/10  
 Units: µg/L  
 Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Acetone	20	U	20	1	NA	1/22/10 23:41		187250	
Benzene	5.0	U	5.0	1	NA	1/22/10 23:41		187250	
Bromodichloromethane	5.0	U	5.0	1	NA	1/22/10 23:41		187250	
Bromoform	5.0	U	5.0	1	NA	1/22/10 23:41		187250	
Bromomethane	5.0	U	5.0	1	NA	1/22/10 23:41		187250	
2-Butanone (MEK)	10	U	10	1	NA	1/22/10 23:41		187250	
Carbon Disulfide	10	U	10	1	NA	1/22/10 23:41		187250	
Carbon Tetrachloride	5.0	U	5.0	1	NA	1/22/10 23:41		187250	
Chlorobenzene	5.0	U	5.0	1	NA	1/22/10 23:41		187250	
Chloroethane	5.0	U	5.0	1	NA	1/22/10 23:41		187250	
Chloroform	5.0	U	5.0	1	NA	1/22/10 23:41		187250	
Chloromethane	5.0	U	5.0	1	NA	1/22/10 23:41		187250	
Dibromochloromethane	5.0	U	5.0	1	NA	1/22/10 23:41		187250	
1,1-Dichloroethane	5.0	U	5.0	1	NA	1/22/10 23:41		187250	
1,2-Dichloroethane	5.0	U	5.0	1	NA	1/22/10 23:41		187250	
1,1-Dichloroethene	5.0	U	5.0	1	NA	1/22/10 23:41		187250	
cis-1,2-Dichloroethene	5.0	U	5.0	1	NA	1/22/10 23:41		187250	
trans-1,2-Dichloroethene	5.0	U	5.0	1	NA	1/22/10 23:41		187250	
1,2-Dichloropropane	5.0	U	5.0	1	NA	1/22/10 23:41		187250	
cis-1,3-Dichloropropene	5.0	U	5.0	1	NA	1/22/10 23:41		187250	
trans-1,3-Dichloropropene	5.0	U	5.0	1	NA	1/22/10 23:41		187250	
Ethylbenzene	5.0	U	5.0	1	NA	1/22/10 23:41		187250	
2-Hexanone	10	U	10	1	NA	1/22/10 23:41		187250	
Methylene Chloride	5.0	U	5.0	1	NA	1/22/10 23:41		187250	
4-Methyl-2-pentanone (MIBK)	10	U	10	1	NA	1/22/10 23:41		187250	
Styrene	5.0	U	5.0	1	NA	1/22/10 23:41		187250	
1,1,2,2-Tetrachloroethane	5.0	U	5.0	1	NA	1/22/10 23:41		187250	
Tetrachloroethene	5.0	U	5.0	1	NA	1/22/10 23:41		187250	
Toluene	5.0	U	5.0	1	NA	1/22/10 23:41		187250	
1,1,1-Trichloroethane	5.0	U	5.0	1	NA	1/22/10 23:41		187250	
1,1,2-Trichloroethane	5.0	U	5.0	1	NA	1/22/10 23:41		187250	
Trichloroethene	5.0	U	5.0	1	NA	1/22/10 23:41		187250	
Vinyl Chloride	5.0	U	5.0	1	NA	1/22/10 23:41		187250	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
Project: Leica/Wells 1/2010  
Sample Matrix: Water  
Sample Name: Trip Blank  
Lab Code: R1000239-001

Service Request: R1000239  
Date Collected: 1/14/10  
Date Received: 1/14/10  
Units: µg/L  
Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
o-Xylene	5.0	U	5.0	1	NA	1/22/10 23:41		187250	
m,p-Xylenes	5.0	U	5.0	1	NA	1/22/10 23:41		187250	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	104	85-122	1/22/10 23:41		
Toluene-d8	101	87-121	1/22/10 23:41		
Dibromofluoromethane	107	89-119	1/22/10 23:41		

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 1/2010  
**Sample Matrix:** Water  
**Sample Name:** MW5  
**Lab Code:** R1000239-002

**Service Request:** R1000239  
**Date Collected:** 1/14/10 0815  
**Date Received:** 1/14/10

**Basis:** NA

## General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Carbon, Total Organic (TOC)	SM20 5310 C	2.6		mg/L	1.0	1	NA	1/18/10 22:26
Chloride	300.0	4.0		mg/L	2.0	10	NA	1/14/10 16:24
Iron, Divalent (Ferrous Iron)	SM 3500-Fe B.4.c	0.10	U	mg/L	0.10	1	NA	1/14/10 15:10
Nitrate as Nitrogen	300.0	0.91		mg/L	0.50	10	NA	1/14/10 16:24
Sulfate	300.0	13.0		mg/L	2.0	10	NA	1/14/10 16:24

Comments:

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## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 1/2010  
**Sample Matrix:** Water  
**Sample Name:** MW5 Dissolved  
**Lab Code:** R1000239-003

**Service Request:** R1000239  
**Date Collected:** 1/14/10 0815  
**Date Received:** 1/14/10

**Basis:** NA

## Iron, Divalent, Dissolved Phenanthroline Method 20th Ed.

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Iron, Divalent (Ferrous Iron), Dissolved	SM 3500-Fe B.4.c	0.10	U	mg/L	0.10	1	NA	1/14/10 15:10

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 1/2010  
**Sample Matrix:** Water  
**Sample Name:** MW5  
**Lab Code:** R1000239-002

**Service Request:** R1000239  
**Date Collected:** 1/14/10 0815  
**Date Received:** 1/14/10

**Basis:** NA

## Manganese, Total, by Inductively Coupled Plasma-Atomic Emission Spectrometry

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Total	6010B	22	µg/L	10	1	1/18/10	1/19/10 15:19

Comments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 1/2010  
**Sample Matrix:** Water  
**Sample Name:** MW5 Dissolved  
**Lab Code:** R1000239-003

**Service Request:** R1000239  
**Date Collected:** 1/14/10 0815  
**Date Received:** 1/14/10

**Basis:** NA

**Manganese, Dissolved, by Inductively Coupled Plasma-Atomic Emission Spectrometry**

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Dissolved	6010B	10	µg/L	10	1	1/18/10	1/19/10 15:40

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
 Project: Leica/Wells 1/2010  
 Sample Matrix: Water  
 Sample Name: MW5  
 Lab Code: R1000239-002

Service Request: R1000239  
 Date Collected: 1/14/10 0815  
 Date Received: 1/14/10  
 Units: µg/L  
 Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Acetone	20	U	20	1	NA	1/23/10 00:09		187250	
Benzene	5.0	U	5.0	1	NA	1/23/10 00:09		187250	
Bromodichloromethane	5.0	U	5.0	1	NA	1/23/10 00:09		187250	
Bromoform	5.0	U	5.0	1	NA	1/23/10 00:09		187250	
Bromomethane	5.0	U	5.0	1	NA	1/23/10 00:09		187250	
2-Butanone (MEK)	10	U	10	1	NA	1/23/10 00:09		187250	
Carbon Disulfide	10	U	10	1	NA	1/23/10 00:09		187250	
Carbon Tetrachloride	5.0	U	5.0	1	NA	1/23/10 00:09		187250	
Chlorobenzene	5.0	U	5.0	1	NA	1/23/10 00:09		187250	
Chloroethane	5.0	U	5.0	1	NA	1/23/10 00:09		187250	
Chloroform	5.0	U	5.0	1	NA	1/23/10 00:09		187250	
Chloromethane	5.0	U	5.0	1	NA	1/23/10 00:09		187250	
Dibromochloromethane	5.0	U	5.0	1	NA	1/23/10 00:09		187250	
1,1-Dichloroethane	5.0	U	5.0	1	NA	1/23/10 00:09		187250	
1,2-Dichloroethane	5.0	U	5.0	1	NA	1/23/10 00:09		187250	
1,1-Dichloroethene	5.0	U	5.0	1	NA	1/23/10 00:09		187250	
cis-1,2-Dichloroethene	5.0	U	5.0	1	NA	1/23/10 00:09		187250	
trans-1,2-Dichloroethene	5.0	U	5.0	1	NA	1/23/10 00:09		187250	
1,2-Dichloropropane	5.0	U	5.0	1	NA	1/23/10 00:09		187250	
cis-1,3-Dichloropropene	5.0	U	5.0	1	NA	1/23/10 00:09		187250	
trans-1,3-Dichloropropene	5.0	U	5.0	1	NA	1/23/10 00:09		187250	
Ethylbenzene	5.0	U	5.0	1	NA	1/23/10 00:09		187250	
2-Hexanone	10	U	10	1	NA	1/23/10 00:09		187250	
Methylene Chloride	5.0	U	5.0	1	NA	1/23/10 00:09		187250	
4-Methyl-2-pentanone (MIBK)	10	U	10	1	NA	1/23/10 00:09		187250	
Styrene	5.0	U	5.0	1	NA	1/23/10 00:09		187250	
1,1,2,2-Tetrachloroethane	5.0	U	5.0	1	NA	1/23/10 00:09		187250	
Tetrachloroethene	5.0	U	5.0	1	NA	1/23/10 00:09		187250	
Toluene	5.0	U	5.0	1	NA	1/23/10 00:09		187250	
1,1,1-Trichloroethane	5.0	U	5.0	1	NA	1/23/10 00:09		187250	
1,1,2-Trichloroethane	5.0	U	5.0	1	NA	1/23/10 00:09		187250	
Trichloroethene	5.0	U	5.0	1	NA	1/23/10 00:09		187250	
Vinyl Chloride	5.0	U	5.0	1	NA	1/23/10 00:09		187250	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
Project: Leica/Wells 1/2010  
Sample Matrix: Water  
Sample Name: MW5  
Lab Code: R1000239-002

Service Request: R1000239  
Date Collected: 1/14/10 0815  
Date Received: 1/14/10  
Units: µg/L  
Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
o-Xylene	5.0	U	5.0	1	NA	1/23/10 00:09		187250	
m,p-Xylenes	5.0	U	5.0	1	NA	1/23/10 00:09		187250	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	104	85-122	1/23/10 00:09		
Toluene-d8	101	87-121	1/23/10 00:09		
Dibromofluoromethane	106	89-119	1/23/10 00:09		

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 1/2010  
**Sample Matrix:** Water  
**Sample Name:** MW5A  
**Lab Code:** R1000239-004

**Service Request:** R1000239  
**Date Collected:** 1/14/10 0830  
**Date Received:** 1/14/10

**Basis:** NA

## General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Carbon, Total Organic (TOC)	SM20 5310 C	476		mg/L	40	40	NA	1/25/10 19:18
Chloride	300.0	126		mg/L	4.0	20	NA	1/19/10 19:42
Iron, Divalent (Ferrous Iron)	SM 3500-Fe B.4.c	1.5		mg/L	1.0	10	NA	1/14/10 15:10
Nitrate as Nitrogen	300.0	0.50	U	mg/L	0.50	10	NA	1/14/10 16:39
Sulfate	300.0	44.9		mg/L	2.0	10	NA	1/14/10 16:39

Comments:

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## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 1/2010  
**Sample Matrix:** Water  
**Sample Name:** MW5A Dissolved  
**Lab Code:** R1000239-005

**Service Request:** R1000239  
**Date Collected:** 1/14/10 0830  
**Date Received:** 1/14/10

**Basis:** NA

## Iron, Divalent, Dissolved Phenanthroline Method 20th Ed.

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Iron, Divalent (Ferrous Iron), Dissolved	SM 3500-Fe B.4.c	14.9	mg/L	1.0	10	NA	1/14/10 15:10

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 1/2010  
**Sample Matrix:** Water  
**Sample Name:** MW5A  
**Lab Code:** R1000239-004

**Service Request:** R1000239  
**Date Collected:** 1/14/10 0830  
**Date Received:** 1/14/10

**Basis:** NA

## Manganese, Total, by Inductively Coupled Plasma-Atomic Emission Spectrometry

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Total	6010B	175	µg/L	10	1	1/18/10	1/19/10 15:44

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 1/2010  
**Sample Matrix:** Water  
**Sample Name:** MW5A Dissolved  
**Lab Code:** R1000239-005

**Service Request:** R1000239  
**Date Collected:** 1/14/10 0830  
**Date Received:** 1/14/10

**Basis:** NA

**Manganese, Dissolved, by Inductively Coupled Plasma-Atomic Emission Spectrometry**

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Dissolved	6010B	171	µg/L	10	1	1/18/10	1/19/10 15:57

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
 Project: Leica/Wells 1/2010  
 Sample Matrix: Water  
 Sample Name: MW5A  
 Lab Code: R1000239-004

Service Request: R1000239  
 Date Collected: 1/14/10 0830  
 Date Received: 1/14/10  
 Units: µg/L  
 Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Acetone	26		20	1	NA	1/23/10 00:36		187250	
Benzene	5.0	U	5.0	1	NA	1/23/10 00:36		187250	
Bromodichloromethane	5.0	U	5.0	1	NA	1/23/10 00:36		187250	
Bromoform	5.0	U	5.0	1	NA	1/23/10 00:36		187250	
Bromomethane	5.0	U	5.0	1	NA	1/23/10 00:36		187250	
2-Butanone (MEK)	72		10	1	NA	1/23/10 00:36		187250	
Carbon Disulfide	10	U	10	1	NA	1/23/10 00:36		187250	
Carbon Tetrachloride	5.0	U	5.0	1	NA	1/23/10 00:36		187250	
Chlorobenzene	5.0	U	5.0	1	NA	1/23/10 00:36		187250	
Chloroethane	5.0	U	5.0	1	NA	1/23/10 00:36		187250	
Chloroform	5.0	U	5.0	1	NA	1/23/10 00:36		187250	
Chloromethane	5.0	U	5.0	1	NA	1/23/10 00:36		187250	
Dibromochloromethane	5.0	U	5.0	1	NA	1/23/10 00:36		187250	
1,1-Dichloroethane	5.0	U	5.0	1	NA	1/23/10 00:36		187250	
1,2-Dichloroethane	5.0	U	5.0	1	NA	1/23/10 00:36		187250	
1,1-Dichloroethene	5.0	U	5.0	1	NA	1/23/10 00:36		187250	
cis-1,2-Dichloroethene	5.0	U	5.0	1	NA	1/23/10 00:36		187250	
trans-1,2-Dichloroethene	5.0	U	5.0	1	NA	1/23/10 00:36		187250	
1,2-Dichloropropane	5.0	U	5.0	1	NA	1/23/10 00:36		187250	
cis-1,3-Dichloropropene	5.0	U	5.0	1	NA	1/23/10 00:36		187250	
trans-1,3-Dichloropropene	5.0	U	5.0	1	NA	1/23/10 00:36		187250	
Ethylbenzene	5.0	U	5.0	1	NA	1/23/10 00:36		187250	
2-Hexanone	10	U	10	1	NA	1/23/10 00:36		187250	
Methylene Chloride	5.0	U	5.0	1	NA	1/23/10 00:36		187250	
4-Methyl-2-pentanone (MIBK)	10	U	10	1	NA	1/23/10 00:36		187250	
Styrene	5.0	U	5.0	1	NA	1/23/10 00:36		187250	
1,1,2,2-Tetrachloroethane	5.0	U	5.0	1	NA	1/23/10 00:36		187250	
Tetrachloroethene	5.0	U	5.0	1	NA	1/23/10 00:36		187250	
Toluene	5.0	U	5.0	1	NA	1/23/10 00:36		187250	
1,1,1-Trichloroethane	5.0	U	5.0	1	NA	1/23/10 00:36		187250	
1,1,2-Trichloroethane	5.0	U	5.0	1	NA	1/23/10 00:36		187250	
Trichloroethene	5.0	U	5.0	1	NA	1/23/10 00:36		187250	
Vinyl Chloride	19		5.0	1	NA	1/23/10 00:36		187250	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 1/2010  
**Sample Matrix:** Water  
**Sample Name:** MW5A  
**Lab Code:** R1000239-004

**Service Request:** R1000239  
**Date Collected:** 1/14/10 0830  
**Date Received:** 1/14/10  
**Units:** µg/L  
**Basis:** NA

## Volatile Organic Compounds by GC/MS

**Analytical Method:** 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
o-Xylene	5.0	U	5.0	1	NA	1/23/10 00:36		187250	
m,p-Xylenes	5.0	U	5.0	1	NA	1/23/10 00:36		187250	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	101	85-122	1/23/10 00:36		
Toluene-d8	98	87-121	1/23/10 00:36		
Dibromofluoromethane	103	89-119	1/23/10 00:36		

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 1/2010  
**Sample Matrix:** Water  
**Sample Name:** MW6A  
**Lab Code:** R1000239-006

**Service Request:** R1000239  
**Date Collected:** 1/14/10 0850  
**Date Received:** 1/14/10

**Basis:** NA

## General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Carbon, Total Organic (TOC)	SM20 5310 C	3.4		mg/L	1.0	1	NA	1/25/10 20:12
Chloride	300.0	6.4		mg/L	2.0	10	NA	1/14/10 16:54
Iron, Divalent (Ferrous Iron)	SM 3500-Fe B.4.c	0.25		mg/L	0.10	1	NA	1/14/10 15:10
Nitrate as Nitrogen	300.0	0.50	U	mg/L	0.50	10	NA	1/14/10 16:54
Sulfate	300.0	56.7		mg/L	2.0	10	NA	1/14/10 16:54

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 1/2010  
**Sample Matrix:** Water  
**Sample Name:** MW6A Dissolved  
**Lab Code:** R1000239-007

**Service Request:** R1000239  
**Date Collected:** 1/14/10 0850  
**Date Received:** 1/14/10

**Basis:** NA

## Iron, Divalent, Dissolved Phenanthroline Method 20th Ed.

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Iron, Divalent (Ferrous Iron), Dissolved	SM 3500-Fe B.4.c	0.10	mg/L	0.10	1	NA	1/14/10 15:10

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 1/2010  
**Sample Matrix:** Water  
**Sample Name:** MW6A  
**Lab Code:** R1000239-006

**Service Request:** R1000239  
**Date Collected:** 1/14/10 0850  
**Date Received:** 1/14/10

**Basis:** NA

## Manganese, Total, by Inductively Coupled Plasma-Atomic Emission Spectrometry

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Total	6010B	206	µg/L	10	1	1/18/10	1/19/10 16:01

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 1/2010  
**Sample Matrix:** Water  
**Sample Name:** MW6A Dissolved  
**Lab Code:** R1000239-007

**Service Request:** R1000239  
**Date Collected:** 1/14/10 0850  
**Date Received:** 1/14/10

**Basis:** NA

## Manganese, Dissolved, by Inductively Coupled Plasma-Atomic Emission Spectrometry

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Dissolved	6010B	96	µg/L	10	1	1/18/10	1/19/10 16:05

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
 Project: Leica/Wells 1/2010  
 Sample Matrix: Water  
 Sample Name: MW6A  
 Lab Code: R1000239-006

Service Request: R1000239  
 Date Collected: 1/14/10 0850  
 Date Received: 1/14/10  
 Units: µg/L  
 Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Acetone	20	U	20	1	NA	1/23/10 01:04		187250	
Benzene	5.0	U	5.0	1	NA	1/23/10 01:04		187250	
Bromodichloromethane	5.0	U	5.0	1	NA	1/23/10 01:04		187250	
Bromoform	5.0	U	5.0	1	NA	1/23/10 01:04		187250	
Bromomethane	5.0	U	5.0	1	NA	1/23/10 01:04		187250	
2-Butanone (MEK)	10	U	10	1	NA	1/23/10 01:04		187250	
Carbon Disulfide	10	U	10	1	NA	1/23/10 01:04		187250	
Carbon Tetrachloride	5.0	U	5.0	1	NA	1/23/10 01:04		187250	
Chlorobenzene	5.0	U	5.0	1	NA	1/23/10 01:04		187250	
Chloroethane	5.0	U	5.0	1	NA	1/23/10 01:04		187250	
Chloroform	5.0	U	5.0	1	NA	1/23/10 01:04		187250	
Chloromethane	5.0	U	5.0	1	NA	1/23/10 01:04		187250	
Dibromochloromethane	5.0	U	5.0	1	NA	1/23/10 01:04		187250	
1,1-Dichloroethane	5.0	U	5.0	1	NA	1/23/10 01:04		187250	
1,2-Dichloroethane	5.0	U	5.0	1	NA	1/23/10 01:04		187250	
1,1-Dichloroethene	5.0	U	5.0	1	NA	1/23/10 01:04		187250	
cis-1,2-Dichloroethene	130		5.0	1	NA	1/23/10 01:04		187250	
trans-1,2-Dichloroethene	5.0	U	5.0	1	NA	1/23/10 01:04		187250	
1,2-Dichloropropane	5.0	U	5.0	1	NA	1/23/10 01:04		187250	
cis-1,3-Dichloropropene	5.0	U	5.0	1	NA	1/23/10 01:04		187250	
trans-1,3-Dichloropropene	5.0	U	5.0	1	NA	1/23/10 01:04		187250	
Ethylbenzene	5.0	U	5.0	1	NA	1/23/10 01:04		187250	
2-Hexanone	10	U	10	1	NA	1/23/10 01:04		187250	
Methylene Chloride	5.0	U	5.0	1	NA	1/23/10 01:04		187250	
4-Methyl-2-pentanone (MIBK)	10	U	10	1	NA	1/23/10 01:04		187250	
Styrene	5.0	U	5.0	1	NA	1/23/10 01:04		187250	
1,1,2,2-Tetrachloroethane	5.0	U	5.0	1	NA	1/23/10 01:04		187250	
Tetrachloroethene	5.0	U	5.0	1	NA	1/23/10 01:04		187250	
Toluene	5.0	U	5.0	1	NA	1/23/10 01:04		187250	
1,1,1-Trichloroethane	5.0	U	5.0	1	NA	1/23/10 01:04		187250	
1,1,2-Trichloroethane	5.0	U	5.0	1	NA	1/23/10 01:04		187250	
Trichloroethene	5.0	U	5.0	1	NA	1/23/10 01:04		187250	
Vinyl Chloride	51		5.0	1	NA	1/23/10 01:04		187250	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 1/2010  
**Sample Matrix:** Water  
**Sample Name:** MW6A  
**Lab Code:** R1000239-006

**Service Request:** R1000239  
**Date Collected:** 1/14/10 0850  
**Date Received:** 1/14/10  
**Units:** µg/L  
**Basis:** NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
o-Xylene	5.0	U	5.0	1	NA	1/23/10 01:04		187250	
m,p-Xylenes	5.0	U	5.0	1	NA	1/23/10 01:04		187250	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	100	85-122	1/23/10 01:04		
Toluene-d8	98	87-121	1/23/10 01:04		
Dibromofluoromethane	104	89-119	1/23/10 01:04		

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
Project: Leica/Wells 1/2010  
Sample Matrix: Water  
Sample Name: MW6  
Lab Code: R1000239-008

Service Request: R1000239  
Date Collected: 1/14/10 0910  
Date Received: 1/14/10

Basis: NA

## General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Carbon, Total Organic (TOC)	SM20 5310 C	7.7		mg/L	1.0	1	NA	1/18/10 23:20
Chloride	300.0	8.1		mg/L	2.0	10	NA	1/14/10 17:09
Iron, Divalent (Ferrous Iron)	SM 3500-Fe B.4.c	0.10	U	mg/L	0.10	1	NA	1/14/10 15:10
Nitrate as Nitrogen	300.0	0.50	U	mg/L	0.50	10	NA	1/14/10 17:09
Sulfate	300.0	193		mg/L	8.0	40	NA	1/19/10 19:56

Comments:

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## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 1/2010  
**Sample Matrix:** Water  
**Sample Name:** MW6 Dissolved  
**Lab Code:** R1000239-009

**Service Request:** R1000239  
**Date Collected:** 1/14/10 0910  
**Date Received:** 1/14/10

**Basis:** NA

## Iron, Divalent, Dissolved Phenanthroline Method 20th Ed.

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Iron, Divalent (Ferrous Iron), Dissolved	SM 3500-Fe B.4.c	0.10	U	mg/L	0.10	1	NA	1/14/10 15:10

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 1/2010  
**Sample Matrix:** Water  
**Sample Name:** MW6  
**Lab Code:** R1000239-008

**Service Request:** R1000239  
**Date Collected:** 1/14/10 0910  
**Date Received:** 1/14/10

**Basis:** NA

## Manganese, Total, by Inductively Coupled Plasma-Atomic Emission Spectrometry

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Total	6010B	115	µg/L	10	1	1/18/10	1/19/10 16:10

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 1/2010  
**Sample Matrix:** Water  
**Sample Name:** MW6 Dissolved  
**Lab Code:** R1000239-009

**Service Request:** R1000239  
**Date Collected:** 1/14/10 0910  
**Date Received:** 1/14/10

**Basis:** NA

**Manganese, Dissolved, by Inductively Coupled Plasma-Atomic Emission Spectrometry**

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Dissolved	6010B	77	µg/L	10	1	1/18/10	1/19/10 16:14

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
 Project: Leica/Wells 1/2010  
 Sample Matrix: Water  
 Sample Name: MW6  
 Lab Code: R1000239-008

Service Request: R1000239  
 Date Collected: 1/14/10 0910  
 Date Received: 1/14/10  
 Units: µg/L  
 Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Acetone	20	U	20	1	NA	1/23/10 01:31		187250	
Benzene	5.0	U	5.0	1	NA	1/23/10 01:31		187250	
Bromodichloromethane	5.0	U	5.0	1	NA	1/23/10 01:31		187250	
Bromoform	5.0	U	5.0	1	NA	1/23/10 01:31		187250	
Bromomethane	5.0	U	5.0	1	NA	1/23/10 01:31		187250	
2-Butanone (MEK)	10	U	10	1	NA	1/23/10 01:31		187250	
Carbon Disulfide	10	U	10	1	NA	1/23/10 01:31		187250	
Carbon Tetrachloride	5.0	U	5.0	1	NA	1/23/10 01:31		187250	
Chlorobenzene	5.0	U	5.0	1	NA	1/23/10 01:31		187250	
Chloroethane	5.0	U	5.0	1	NA	1/23/10 01:31		187250	
Chloroform	5.0	U	5.0	1	NA	1/23/10 01:31		187250	
Chloromethane	5.0	U	5.0	1	NA	1/23/10 01:31		187250	
Dibromochloromethane	5.0	U	5.0	1	NA	1/23/10 01:31		187250	
1,1-Dichloroethane	5.0	U	5.0	1	NA	1/23/10 01:31		187250	
1,2-Dichloroethane	5.0	U	5.0	1	NA	1/23/10 01:31		187250	
1,1-Dichloroethene	5.0	U	5.0	1	NA	1/23/10 01:31		187250	
cis-1,2-Dichloroethene	120		5.0	1	NA	1/23/10 01:31		187250	
trans-1,2-Dichloroethene	5.0	U	5.0	1	NA	1/23/10 01:31		187250	
1,2-Dichloropropane	5.0	U	5.0	1	NA	1/23/10 01:31		187250	
cis-1,3-Dichloropropene	5.0	U	5.0	1	NA	1/23/10 01:31		187250	
trans-1,3-Dichloropropene	5.0	U	5.0	1	NA	1/23/10 01:31		187250	
Ethylbenzene	5.0	U	5.0	1	NA	1/23/10 01:31		187250	
2-Hexanone	10	U	10	1	NA	1/23/10 01:31		187250	
Methylene Chloride	5.0	U	5.0	1	NA	1/23/10 01:31		187250	
4-Methyl-2-pentanone (MIBK)	10	U	10	1	NA	1/23/10 01:31		187250	
Styrene	5.0	U	5.0	1	NA	1/23/10 01:31		187250	
1,1,2,2-Tetrachloroethane	5.0	U	5.0	1	NA	1/23/10 01:31		187250	
Tetrachloroethene	5.0	U	5.0	1	NA	1/23/10 01:31		187250	
Toluene	5.0	U	5.0	1	NA	1/23/10 01:31		187250	
1,1,1-Trichloroethane	5.0	U	5.0	1	NA	1/23/10 01:31		187250	
1,1,2-Trichloroethane	5.0	U	5.0	1	NA	1/23/10 01:31		187250	
Trichloroethene	20		5.0	1	NA	1/23/10 01:31		187250	
Vinyl Chloride	28		5.0	1	NA	1/23/10 01:31		187250	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 1/2010  
**Sample Matrix:** Water  
**Sample Name:** MW6  
**Lab Code:** R1000239-008

**Service Request:** R1000239  
**Date Collected:** 1/14/10 0910  
**Date Received:** 1/14/10  
**Units:** µg/L  
**Basis:** NA

## Volatile Organic Compounds by GC/MS

**Analytical Method:** 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
o-Xylene	5.0	U	5.0	1	NA	1/23/10 01:31		187250	
m,p-Xylenes	5.0	U	5.0	1	NA	1/23/10 01:31		187250	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	104	85-122	1/23/10 01:31		
Toluene-d8	101	87-121	1/23/10 01:31		
Dibromofluoromethane	107	89-119	1/23/10 01:31		

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 1/2010  
**Sample Matrix:** Water  
**Sample Name:** MW18  
**Lab Code:** R1000239-010

**Service Request:** R1000239  
**Date Collected:** 1/14/10 0930  
**Date Received:** 1/14/10

**Basis:** NA

## General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Carbon, Total Organic (TOC)	SM20 5310 C	5.8		mg/L	1.0	1	NA	1/23/10 02:55
Chloride	300.0	8.7		mg/L	2.0	10	NA	1/14/10 17:24
Iron, Divalent (Ferrous Iron)	SM 3500-Fe B.4.c	0.98		mg/L	0.10	1	NA	1/14/10 15:10
Nitrate as Nitrogen	300.0	0.50	U	mg/L	0.50	10	NA	1/14/10 17:24
Sulfate	300.0	64.8		mg/L	2.0	10	NA	1/14/10 17:24

Comments:

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## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 1/2010  
**Sample Matrix:** Water  
**Sample Name:** MW18 Dissolved  
**Lab Code:** R1000239-011

**Service Request:** R1000239  
**Date Collected:** 1/14/10 0930  
**Date Received:** 1/14/10

**Basis:** NA

## Iron, Divalent, Dissolved Phenanthroline Method 20th Ed.

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Iron, Divalent (Ferrous Iron), Dissolved	SM 3500-Fe B.4.c	0.78	mg/L	0.10	1	NA	1/14/10 15:10

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 1/2010  
**Sample Matrix:** Water  
**Sample Name:** MW18  
**Lab Code:** R1000239-010

**Service Request:** R1000239  
**Date Collected:** 1/14/10 0930  
**Date Received:** 1/14/10

**Basis:** NA

## Manganese, Total, by Inductively Coupled Plasma-Atomic Emission Spectrometry

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Total	6010B	164	µg/L	10	1	1/18/10	1/19/10 16:18

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 1/2010  
**Sample Matrix:** Water  
**Sample Name:** MW18 Dissolved  
**Lab Code:** R1000239-011

**Service Request:** R1000239  
**Date Collected:** 1/14/10 0930  
**Date Received:** 1/14/10

**Basis:** NA

**Manganese, Dissolved, by Inductively Coupled Plasma-Atomic Emission Spectrometry**

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Dissolved	6010B	169		µg/L	10	1	1/18/10	1/19/10 16:23

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 1/2010  
**Sample Matrix:** Water  
**Sample Name:** MW18  
**Lab Code:** R1000239-010

**Service Request:** R1000239  
**Date Collected:** 1/14/10 0930  
**Date Received:** 1/14/10  
**Units:** µg/L  
**Basis:** NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Acetone	20	U	20	1	NA	1/23/10 01:58		187250	
Benzene	5.0	U	5.0	1	NA	1/23/10 01:58		187250	
Bromodichloromethane	5.0	U	5.0	1	NA	1/23/10 01:58		187250	
Bromoform	5.0	U	5.0	1	NA	1/23/10 01:58		187250	
Bromomethane	5.0	U	5.0	1	NA	1/23/10 01:58		187250	
2-Butanone (MEK)	10	U	10	1	NA	1/23/10 01:58		187250	
Carbon Disulfide	10	U	10	1	NA	1/23/10 01:58		187250	
Carbon Tetrachloride	5.0	U	5.0	1	NA	1/23/10 01:58		187250	
Chlorobenzene	5.0	U	5.0	1	NA	1/23/10 01:58		187250	
Chloroethane	5.0	U	5.0	1	NA	1/23/10 01:58		187250	
Chloroform	5.0	U	5.0	1	NA	1/23/10 01:58		187250	
Chloromethane	5.0	U	5.0	1	NA	1/23/10 01:58		187250	
Dibromochloromethane	5.0	U	5.0	1	NA	1/23/10 01:58		187250	
1,1-Dichloroethane	5.0	U	5.0	1	NA	1/23/10 01:58		187250	
1,2-Dichloroethane	5.0	U	5.0	1	NA	1/23/10 01:58		187250	
1,1-Dichloroethene	5.0	U	5.0	1	NA	1/23/10 01:58		187250	
cis-1,2-Dichloroethene	5.0	U	5.0	1	NA	1/23/10 01:58		187250	
trans-1,2-Dichloroethene	5.0	U	5.0	1	NA	1/23/10 01:58		187250	
1,2-Dichloropropane	5.0	U	5.0	1	NA	1/23/10 01:58		187250	
cis-1,3-Dichloropropene	5.0	U	5.0	1	NA	1/23/10 01:58		187250	
trans-1,3-Dichloropropene	5.0	U	5.0	1	NA	1/23/10 01:58		187250	
Ethylbenzene	5.0	U	5.0	1	NA	1/23/10 01:58		187250	
2-Hexanone	10	U	10	1	NA	1/23/10 01:58		187250	
Methylene Chloride	5.0	U	5.0	1	NA	1/23/10 01:58		187250	
4-Methyl-2-pentanone (MIBK)	10	U	10	1	NA	1/23/10 01:58		187250	
Styrene	5.0	U	5.0	1	NA	1/23/10 01:58		187250	
1,1,2,2-Tetrachloroethane	5.0	U	5.0	1	NA	1/23/10 01:58		187250	
Tetrachloroethene	5.0	U	5.0	1	NA	1/23/10 01:58		187250	
Toluene	5.0	U	5.0	1	NA	1/23/10 01:58		187250	
1,1,1-Trichloroethane	5.0	U	5.0	1	NA	1/23/10 01:58		187250	
1,1,2-Trichloroethane	5.0	U	5.0	1	NA	1/23/10 01:58		187250	
Trichloroethene	5.0	U	5.0	1	NA	1/23/10 01:58		187250	
Vinyl Chloride	5.0	U	5.0	1	NA	1/23/10 01:58		187250	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
Project: Leica/Wells 1/2010  
Sample Matrix: Water  
Sample Name: MW18  
Lab Code: R1000239-010

Service Request: R1000239  
Date Collected: 1/14/10 0930  
Date Received: 1/14/10  
Units: µg/L  
Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
o-Xylene	5.0	U	5.0	1	NA	1/23/10 01:58		187250	
m,p-Xylenes	5.0	U	5.0	1	NA	1/23/10 01:58		187250	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	104	85-122	1/23/10 01:58		
Toluene-d8	102	87-121	1/23/10 01:58		
Dibromofluoromethane	108	89-119	1/23/10 01:58		

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 1/2010  
**Sample Matrix:** Water  
**Sample Name:** MW18A  
**Lab Code:** R1000239-012

**Service Request:** R1000239  
**Date Collected:** 1/14/10 0950  
**Date Received:** 1/14/10

**Basis:** NA

## General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Carbon, Total Organic (TOC)	SM20 5310 C	6.9		mg/L	1.0	1	NA	1/19/10 00:51
Chloride	300.0	20.7		mg/L	2.0	10	NA	1/14/10 17:39
Iron, Divalent (Ferrous Iron)	SM 3500-Fe B.4.c	0.12		mg/L	0.10	1	NA	1/14/10 15:10
Nitrate as Nitrogen	300.0	0.50	U	mg/L	0.50	10	NA	1/14/10 17:39
Sulfate	300.0	119		mg/L	4.0	20	NA	1/19/10 20:38

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 1/2010  
**Sample Matrix:** Water  
**Sample Name:** MW18A Dissolved  
**Lab Code:** R1000239-013

**Service Request:** R1000239  
**Date Collected:** 1/14/10 0950  
**Date Received:** 1/14/10

**Basis:** NA

## Iron, Divalent, Dissolved Phenanthroline Method 20th Ed.

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Iron, Divalent (Ferrous Iron), Dissolved	SM 3500-Fe B.4.c	0.10 U	mg/L	0.10	1	NA	1/14/10 15:10

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 1/2010  
**Sample Matrix:** Water  
**Sample Name:** MW18A  
**Lab Code:** R1000239-012

**Service Request:** R1000239  
**Date Collected:** 1/14/10 0950  
**Date Received:** 1/14/10

**Basis:** NA

## Manganese, Total, by Inductively Coupled Plasma-Atomic Emission Spectrometry

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Total	6010B	66		µg/L	10	1	1/18/10	1/19/10 16:27

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 1/2010  
**Sample Matrix:** Water  
**Sample Name:** MW18A Dissolved  
**Lab Code:** R1000239-013

**Service Request:** R1000239  
**Date Collected:** 1/14/10 0950  
**Date Received:** 1/14/10

**Basis:** NA

**Manganese, Dissolved, by Inductively Coupled Plasma-Atomic Emission Spectrometry**

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Dissolved	6010B	63	µg/L	10	1	1/18/10	1/19/10 16:31

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
 Project: Leica/Wells 1/2010  
 Sample Matrix: Water  
 Sample Name: MW18A  
 Lab Code: R1000239-012

Service Request: R1000239  
 Date Collected: 1/14/10 0950  
 Date Received: 1/14/10

Units: µg/L  
 Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Acetone	20	U	20	1	NA	1/23/10 02:26		187250	
Benzene	5.0	U	5.0	1	NA	1/23/10 02:26		187250	
Bromodichloromethane	5.0	U	5.0	1	NA	1/23/10 02:26		187250	
Bromoform	5.0	U	5.0	1	NA	1/23/10 02:26		187250	
Bromomethane	5.0	U	5.0	1	NA	1/23/10 02:26		187250	
2-Butanone (MEK)	10	U	10	1	NA	1/23/10 02:26		187250	
Carbon Disulfide	10	U	10	1	NA	1/23/10 02:26		187250	
Carbon Tetrachloride	5.0	U	5.0	1	NA	1/23/10 02:26		187250	
Chlorobenzene	5.0	U	5.0	1	NA	1/23/10 02:26		187250	
Chloroethane	5.0	U	5.0	1	NA	1/23/10 02:26		187250	
Chloroform	5.0	U	5.0	1	NA	1/23/10 02:26		187250	
Chloromethane	5.0	U	5.0	1	NA	1/23/10 02:26		187250	
Dibromochloromethane	5.0	U	5.0	1	NA	1/23/10 02:26		187250	
1,1-Dichloroethane	5.0	U	5.0	1	NA	1/23/10 02:26		187250	
1,2-Dichloroethane	5.0	U	5.0	1	NA	1/23/10 02:26		187250	
1,1-Dichloroethene	5.0	U	5.0	1	NA	1/23/10 02:26		187250	
cis-1,2-Dichloroethene	57		5.0	1	NA	1/23/10 02:26		187250	
trans-1,2-Dichloroethene	5.0	U	5.0	1	NA	1/23/10 02:26		187250	
1,2-Dichloropropane	5.0	U	5.0	1	NA	1/23/10 02:26		187250	
cis-1,3-Dichloropropene	5.0	U	5.0	1	NA	1/23/10 02:26		187250	
trans-1,3-Dichloropropene	5.0	U	5.0	1	NA	1/23/10 02:26		187250	
Ethylbenzene	5.0	U	5.0	1	NA	1/23/10 02:26		187250	
2-Hexanone	10	U	10	1	NA	1/23/10 02:26		187250	
Methylene Chloride	5.0	U	5.0	1	NA	1/23/10 02:26		187250	
4-Methyl-2-pentanone (MIBK)	10	U	10	1	NA	1/23/10 02:26		187250	
Styrene	5.0	U	5.0	1	NA	1/23/10 02:26		187250	
1,1,2,2-Tetrachloroethane	5.0	U	5.0	1	NA	1/23/10 02:26		187250	
Tetrachloroethene	5.0	U	5.0	1	NA	1/23/10 02:26		187250	
Toluene	5.0	U	5.0	1	NA	1/23/10 02:26		187250	
1,1,1-Trichloroethane	5.0	U	5.0	1	NA	1/23/10 02:26		187250	
1,1,2-Trichloroethane	5.0	U	5.0	1	NA	1/23/10 02:26		187250	
Trichloroethene	8.8		5.0	1	NA	1/23/10 02:26		187250	
Vinyl Chloride	44		5.0	1	NA	1/23/10 02:26		187250	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
Project: Leica/Wells 1/2010  
Sample Matrix: Water  
Sample Name: MW18A  
Lab Code: R1000239-012

Service Request: R1000239  
Date Collected: 1/14/10 0950  
Date Received: 1/14/10  
Units: µg/L  
Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
o-Xylene	5.0	U	5.0	1	NA	1/23/10 02:26		187250	
m,p-Xylenes	5.0	U	5.0	1	NA	1/23/10 02:26		187250	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	103	85-122	1/23/10 02:26		
Toluene-d8	99	87-121	1/23/10 02:26		
Dibromofluoromethane	105	89-119	1/23/10 02:26		

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 1/2010  
**Sample Matrix:** Water  
**Sample Name:** MW1A  
**Lab Code:** R1000239-014

**Service Request:** R1000239  
**Date Collected:** 1/14/10 1020  
**Date Received:** 1/14/10

**Basis:** NA

## General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Carbon, Total Organic (TOC)	SM20 5310 C	8.1		mg/L	1.0	1	NA	1/19/10 01:09
Chloride	300.0	82.1		mg/L	2.0	10	NA	1/14/10 18:24
Iron, Divalent (Ferrous Iron)	SM 3500-Fe B.4.c	0.41		mg/L	0.10	1	NA	1/14/10 15:10
Nitrate as Nitrogen	300.0	0.50	U	mg/L	0.50	10	NA	1/14/10 18:24
Sulfate	300.0	46.7		mg/L	2.0	10	NA	1/14/10 18:24

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 1/2010  
**Sample Matrix:** Water  
**Sample Name:** MW1A Dissolved  
**Lab Code:** R1000239-015

**Service Request:** R1000239  
**Date Collected:** 1/14/10 1020  
**Date Received:** 1/14/10

**Basis:** NA

## Iron, Divalent, Dissolved Phenanthroline Method 20th Ed.

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Iron, Divalent (Ferrous Iron), Dissolved	SM 3500-Fe B.4.c	0.29	mg/L	0.10	1	NA	1/14/10 15:10

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 1/2010  
**Sample Matrix:** Water  
**Sample Name:** MW1A  
**Lab Code:** R1000239-014

**Service Request:** R1000239  
**Date Collected:** 1/14/10 1020  
**Date Received:** 1/14/10

**Basis:** NA

## Manganese, Total, by Inductively Coupled Plasma-Atomic Emission Spectrometry

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Total	6010B	61	µg/L	10	1	1/18/10	1/19/10 16:35

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 1/2010  
**Sample Matrix:** Water  
**Sample Name:** MW1A Dissolved  
**Lab Code:** R1000239-015

**Service Request:** R1000239  
**Date Collected:** 1/14/10 1020  
**Date Received:** 1/14/10

**Basis:** NA

## Manganese, Dissolved, by Inductively Coupled Plasma-Atomic Emission Spectrometry

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Dissolved	6010B	63	µg/L	10	1	1/18/10	1/19/10 16:48

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
 Project: Leica/Wells 1/2010  
 Sample Matrix: Water  
 Sample Name: MW1A  
 Lab Code: R1000239-014

Service Request: R1000239  
 Date Collected: 1/14/10 1020  
 Date Received: 1/14/10  
 Units: µg/L  
 Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Acetone	20	U	20	1	NA	1/23/10 02:53		187250	
Benzene	5.0	U	5.0	1	NA	1/23/10 02:53		187250	
Bromodichloromethane	5.0	U	5.0	1	NA	1/23/10 02:53		187250	
Bromoform	5.0	U	5.0	1	NA	1/23/10 02:53		187250	
Bromomethane	5.0	U	5.0	1	NA	1/23/10 02:53		187250	
2-Butanone (MEK)	10	U	10	1	NA	1/23/10 02:53		187250	
Carbon Disulfide	10	U	10	1	NA	1/23/10 02:53		187250	
Carbon Tetrachloride	5.0	U	5.0	1	NA	1/23/10 02:53		187250	
Chlorobenzene	5.0	U	5.0	1	NA	1/23/10 02:53		187250	
Chloroethane	5.0	U	5.0	1	NA	1/23/10 02:53		187250	
Chloroform	5.0	U	5.0	1	NA	1/23/10 02:53		187250	
Chloromethane	5.0	U	5.0	1	NA	1/23/10 02:53		187250	
Dibromochloromethane	5.0	U	5.0	1	NA	1/23/10 02:53		187250	
1,1-Dichloroethane	5.0	U	5.0	1	NA	1/23/10 02:53		187250	
1,2-Dichloroethane	5.0	U	5.0	1	NA	1/23/10 02:53		187250	
1,1-Dichloroethene	5.0	U	5.0	1	NA	1/23/10 02:53		187250	
cis-1,2-Dichloroethene	8.3		5.0	1	NA	1/23/10 02:53		187250	
trans-1,2-Dichloroethene	5.0	U	5.0	1	NA	1/23/10 02:53		187250	
1,2-Dichloropropane	5.0	U	5.0	1	NA	1/23/10 02:53		187250	
cis-1,3-Dichloropropene	5.0	U	5.0	1	NA	1/23/10 02:53		187250	
trans-1,3-Dichloropropene	5.0	U	5.0	1	NA	1/23/10 02:53		187250	
Ethylbenzene	5.0	U	5.0	1	NA	1/23/10 02:53		187250	
2-Hexanone	10	U	10	1	NA	1/23/10 02:53		187250	
Methylene Chloride	5.0	U	5.0	1	NA	1/23/10 02:53		187250	
4-Methyl-2-pentanone (MIBK)	10	U	10	1	NA	1/23/10 02:53		187250	
Styrene	5.0	U	5.0	1	NA	1/23/10 02:53		187250	
1,1,1,2-Tetrachloroethane	5.0	U	5.0	1	NA	1/23/10 02:53		187250	
Tetrachloroethene	5.0	U	5.0	1	NA	1/23/10 02:53		187250	
Toluene	5.0	U	5.0	1	NA	1/23/10 02:53		187250	
1,1,1-Trichloroethane	5.0	U	5.0	1	NA	1/23/10 02:53		187250	
1,1,2-Trichloroethane	5.0	U	5.0	1	NA	1/23/10 02:53		187250	
Trichloroethene	5.0	U	5.0	1	NA	1/23/10 02:53		187250	
Vinyl Chloride	5.0	U	5.0	1	NA	1/23/10 02:53		187250	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 1/2010  
**Sample Matrix:** Water  
**Sample Name:** MW1A  
**Lab Code:** R1000239-014

**Service Request:** R1000239  
**Date Collected:** 1/14/10 1020  
**Date Received:** 1/14/10  
**Units:** µg/L  
**Basis:** NA

## Volatile Organic Compounds by GC/MS

**Analytical Method:** 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
o-Xylene	5.0	U	5.0	1	NA	1/23/10 02:53		187250	
m,p-Xylenes	5.0	U	5.0	1	NA	1/23/10 02:53		187250	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	100	85-122	1/23/10 02:53		
Toluene-d8	98	87-121	1/23/10 02:53		
Dibromofluoromethane	103	89-119	1/23/10 02:53		

**Comments:**

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 1/2010  
**Sample Matrix:** Water  
**Sample Name:** MW16R  
**Lab Code:** R1000239-016

**Service Request:** R1000239  
**Date Collected:** 1/14/10 1050  
**Date Received:** 1/14/10

**Basis:** NA

## General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Carbon, Total Organic (TOC)	SM20 5310 C	71.9		mg/L	4.0	4	NA	1/25/10 20:30
Chloride	300.0	503		mg/L	20	100	NA	1/19/10 20:52
Iron, Divalent (Ferrous Iron)	SM 3500-Fe B.4.c	1.49		mg/L	0.10	1	NA	1/14/10 15:10
Nitrate as Nitrogen	300.0	0.50	U	mg/L	0.50	10	NA	1/14/10 18:39
Sulfate	300.0	6.3		mg/L	2.0	10	NA	1/14/10 18:39

Comments:

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## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 1/2010  
**Sample Matrix:** Water  
**Sample Name:** MW16R Dissolved  
**Lab Code:** R1000239-017

**Service Request:** R1000239  
**Date Collected:** 1/14/10 1050  
**Date Received:** 1/14/10

**Basis:** NA

**Iron, Divalent, Dissolved Phenanthroline Method 20th Ed.**

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Iron, Divalent (Ferrous Iron), Dissolved	SM 3500-Fe B.4.c	1.52	mg/L	0.10	1	NA	1/14/10 15:10

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 1/2010  
**Sample Matrix:** Water  
**Sample Name:** MW16R  
**Lab Code:** R1000239-016

**Service Request:** R1000239  
**Date Collected:** 1/14/10 1050  
**Date Received:** 1/14/10

**Basis:** NA

## Manganese, Total, by Inductively Coupled Plasma-Atomic Emission Spectrometry

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Total	6010B	156	µg/L	10	1	1/18/10	1/19/10 16:52

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 1/2010  
**Sample Matrix:** Water  
**Sample Name:** MW16R Dissolved  
**Lab Code:** R1000239-017

**Service Request:** R1000239  
**Date Collected:** 1/14/10 1050  
**Date Received:** 1/14/10

**Basis:** NA

**Manganese, Dissolved, by Inductively Coupled Plasma-Atomic Emission Spectrometry**

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Dissolved	6010B	73		µg/L	10	1	1/18/10	1/19/10 16:56

Comments:

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## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
 Project: Leica/Wells 1/2010  
 Sample Matrix: Water  
 Sample Name: MW16R  
 Lab Code: R1000239-016

Service Request: R1000239  
 Date Collected: 1/14/10 1050  
 Date Received: 1/14/10  
 Units: µg/L  
 Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Acetone	40	U	40	2	NA	1/25/10 12:08		187432	
Benzene	10	U	10	2	NA	1/25/10 12:08		187432	
Bromodichloromethane	10	U	10	2	NA	1/25/10 12:08		187432	
Bromoform	10	U	10	2	NA	1/25/10 12:08		187432	
Bromomethane	10	U	10	2	NA	1/25/10 12:08		187432	
2-Butanone (MEK)	20	U	20	2	NA	1/25/10 12:08		187432	
Carbon Disulfide	20	U	20	2	NA	1/25/10 12:08		187432	
Carbon Tetrachloride	10	U	10	2	NA	1/25/10 12:08		187432	
Chlorobenzene	10	U	10	2	NA	1/25/10 12:08		187432	
Chloroethane	290		10	2	NA	1/25/10 12:08		187432	
Chloroform	10	U	10	2	NA	1/25/10 12:08		187432	
Chloromethane	10	U	10	2	NA	1/25/10 12:08		187432	
Dibromochloromethane	10	U	10	2	NA	1/25/10 12:08		187432	
1,1-Dichloroethane	140		10	2	NA	1/25/10 12:08		187432	
1,2-Dichloroethane	10	U	10	2	NA	1/25/10 12:08		187432	
1,1-Dichloroethene	10	U	10	2	NA	1/25/10 12:08		187432	
cis-1,2-Dichloroethene	10	U	10	2	NA	1/25/10 12:08		187432	
trans-1,2-Dichloroethene	10	U	10	2	NA	1/25/10 12:08		187432	
1,2-Dichloropropane	10	U	10	2	NA	1/25/10 12:08		187432	
cis-1,3-Dichloropropene	10	U	10	2	NA	1/25/10 12:08		187432	
trans-1,3-Dichloropropene	10	U	10	2	NA	1/25/10 12:08		187432	
Ethylbenzene	31		10	2	NA	1/25/10 12:08		187432	
2-Hexanone	20	U	20	2	NA	1/25/10 12:08		187432	
Methylene Chloride	10	U	10	2	NA	1/25/10 12:08		187432	
4-Methyl-2-pentanone (MIBK)	20	U	20	2	NA	1/25/10 12:08		187432	
Styrene	10	U	10	2	NA	1/25/10 12:08		187432	
1,1,2,2-Tetrachloroethane	10	U	10	2	NA	1/25/10 12:08		187432	
Tetrachloroethene	10	U	10	2	NA	1/25/10 12:08		187432	
Toluene	10	U	10	2	NA	1/25/10 12:08		187432	
1,1,1-Trichloroethane	10	U	10	2	NA	1/25/10 12:08		187432	
1,1,2-Trichloroethane	10	U	10	2	NA	1/25/10 12:08		187432	
Trichloroethene	10	U	10	2	NA	1/25/10 12:08		187432	
Vinyl Chloride	10	U	10	2	NA	1/25/10 12:08		187432	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
Project: Leica/Wells 1/2010  
Sample Matrix: Water  
Sample Name: MW16R  
Lab Code: R1000239-016

Service Request: R1000239  
Date Collected: 1/14/10 1050  
Date Received: 1/14/10  
Units: µg/L  
Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
o-Xylene	35		10	2	NA	1/25/10 12:08		187432	
m,p-Xylenes	45		10	2	NA	1/25/10 12:08		187432	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	101	85-122	1/25/10 12:08		
Toluene-d8	98	87-121	1/25/10 12:08		
Dibromofluoromethane	104	89-119	1/25/10 12:08		

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 1/2010  
**Sample Matrix:** Water  
**Sample Name:** MW22  
**Lab Code:** R1000239-018

**Service Request:** R1000239  
**Date Collected:** 1/15/10 0900  
**Date Received:** 1/15/10

**Basis:** NA

## General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Carbon, Total Organic (TOC)	SM20 5310 C	4.1		mg/L	2.0	2	NA	1/25/10 20:48
Chloride	300.0	64.8		mg/L	2.0	10	NA	1/15/10 20:21
Iron, Divalent (Ferrous Iron)	SM 3500-Fe B.4.c	5.12		mg/L	0.20	2	NA	1/15/10 15:40
Nitrate as Nitrogen	300.0	0.50	U	mg/L	0.50	10	NA	1/15/10 20:21
Sulfate	300.0	454		mg/L	20	100	NA	1/19/10 21:48

Comments:

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## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 1/2010  
**Sample Matrix:** Water  
**Sample Name:** MW22 Dissolved  
**Lab Code:** R1000239-019

**Service Request:** R1000239  
**Date Collected:** 1/15/10 0900  
**Date Received:** 1/15/10

**Basis:** NA

**Iron, Divalent, Dissolved Phenanthroline Method 20th Ed.**

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Iron, Divalent (Ferrous Iron), Dissolved	SM 3500-Fe B.4.c	4.18	mg/L	0.20	2	NA	1/15/10 15:40

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 1/2010  
**Sample Matrix:** Water  
**Sample Name:** MW22  
**Lab Code:** R1000239-018

**Service Request:** R1000239  
**Date Collected:** 1/15/10 0900  
**Date Received:** 1/15/10

**Basis:** NA

## Manganese, Total, by Inductively Coupled Plasma-Atomic Emission Spectrometry

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Total	6010B	231	µg/L	10	1	1/18/10	1/19/10 17:00

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 1/2010  
**Sample Matrix:** Water  
**Sample Name:** MW22 Dissolved  
**Lab Code:** R1000239-019

**Service Request:** R1000239  
**Date Collected:** 1/15/10 0900  
**Date Received:** 1/15/10

**Basis:** NA

## Manganese, Dissolved, by Inductively Coupled Plasma-Atomic Emission Spectrometry

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Dissolved	6010B	241	µg/L	10	1	1/18/10	1/20/10 00:27

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
 Project: Leica/Wells 1/2010  
 Sample Matrix: Water  
 Sample Name: MW22  
 Lab Code: R1000239-018

Service Request: R1000239  
 Date Collected: 1/15/10 0900  
 Date Received: 1/15/10  
 Units: µg/L  
 Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Acetone	20	U	20	1	NA	1/23/10 03:48		187250	
Benzene	5.0	U	5.0	1	NA	1/23/10 03:48		187250	
Bromodichloromethane	5.0	U	5.0	1	NA	1/23/10 03:48		187250	
Bromoform	5.0	U	5.0	1	NA	1/23/10 03:48		187250	
Bromomethane	5.0	U	5.0	1	NA	1/23/10 03:48		187250	
2-Butanone (MEK)	10	U	10	1	NA	1/23/10 03:48		187250	
Carbon Disulfide	10	U	10	1	NA	1/23/10 03:48		187250	
Carbon Tetrachloride	5.0	U	5.0	1	NA	1/23/10 03:48		187250	
Chlorobenzene	5.0	U	5.0	1	NA	1/23/10 03:48		187250	
Chloroethane	5.0	U	5.0	1	NA	1/23/10 03:48		187250	
Chloroform	5.0	U	5.0	1	NA	1/23/10 03:48		187250	
Chloromethane	5.0	U	5.0	1	NA	1/23/10 03:48		187250	
Dibromochloromethane	5.0	U	5.0	1	NA	1/23/10 03:48		187250	
1,1-Dichloroethane	5.0	U	5.0	1	NA	1/23/10 03:48		187250	
1,2-Dichloroethane	5.0	U	5.0	1	NA	1/23/10 03:48		187250	
1,1-Dichloroethene	5.0	U	5.0	1	NA	1/23/10 03:48		187250	
cis-1,2-Dichloroethene	5.0	U	5.0	1	NA	1/23/10 03:48		187250	
trans-1,2-Dichloroethene	5.0	U	5.0	1	NA	1/23/10 03:48		187250	
1,2-Dichloropropane	5.0	U	5.0	1	NA	1/23/10 03:48		187250	
cis-1,3-Dichloropropene	5.0	U	5.0	1	NA	1/23/10 03:48		187250	
trans-1,3-Dichloropropene	5.0	U	5.0	1	NA	1/23/10 03:48		187250	
Ethylbenzene	5.0	U	5.0	1	NA	1/23/10 03:48		187250	
2-Hexanone	10	U	10	1	NA	1/23/10 03:48		187250	
Methylene Chloride	5.0	U	5.0	1	NA	1/23/10 03:48		187250	
4-Methyl-2-pentanone (MIBK)	10	U	10	1	NA	1/23/10 03:48		187250	
Styrene	5.0	U	5.0	1	NA	1/23/10 03:48		187250	
1,1,2,2-Tetrachloroethane	5.0	U	5.0	1	NA	1/23/10 03:48		187250	
Tetrachloroethene	5.0	U	5.0	1	NA	1/23/10 03:48		187250	
Toluene	5.0	U	5.0	1	NA	1/23/10 03:48		187250	
1,1,1-Trichloroethane	5.0	U	5.0	1	NA	1/23/10 03:48		187250	
1,1,2-Trichloroethane	5.0	U	5.0	1	NA	1/23/10 03:48		187250	
Trichloroethene	5.0	U	5.0	1	NA	1/23/10 03:48		187250	
Vinyl Chloride	5.0	U	5.0	1	NA	1/23/10 03:48		187250	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 1/2010  
**Sample Matrix:** Water  
**Sample Name:** MW22  
**Lab Code:** R1000239-018

**Service Request:** R1000239  
**Date Collected:** 1/15/10 0900  
**Date Received:** 1/15/10  
**Units:** µg/L  
**Basis:** NA

## Volatile Organic Compounds by GC/MS

**Analytical Method:** 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
o-Xylene	5.0	U	5.0	1	NA	1/23/10 03:48		187250	
m,p-Xylenes	5.0	U	5.0	1	NA	1/23/10 03:48		187250	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	102	85-122	1/23/10 03:48		
Toluene-d8	99	87-121	1/23/10 03:48		
Dibromofluoromethane	106	89-119	1/23/10 03:48		

**Comments:** \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 1/2010  
**Sample Matrix:** Water  
**Sample Name:** MW22A  
**Lab Code:** R1000239-020

**Service Request:** R1000239  
**Date Collected:** 1/15/10 0920  
**Date Received:** 1/15/10

**Basis:** NA

## General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Carbon, Total Organic (TOC)	SM20 5310 C	4.1		mg/L	2.0	2	NA	1/25/10 21:06
Chloride	300.0	12.8		mg/L	2.0	10	NA	1/15/10 21:06
Iron, Divalent (Ferrous Iron)	SM 3500-Fe B.4.c	0.10	U	mg/L	0.10	1	NA	1/15/10 15:40
Nitrate as Nitrogen	300.0	0.50	U	mg/L	0.50	10	NA	1/15/10 21:06
Sulfate	300.0	27.8		mg/L	2.0	10	NA	1/15/10 21:06

Comments:

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**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 1/2010  
**Sample Matrix:** Water  
**Sample Name:** MW22A Dissolved  
**Lab Code:** R1000239-021

**Service Request:** R1000239  
**Date Collected:** 1/15/10 0920  
**Date Received:** 1/15/10

**Basis:** NA

**Iron, Divalent, Dissolved Phenanthroline Method 20th Ed.**

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Iron, Divalent (Ferrous Iron), Dissolved	SM 3500-Fe B.4.c	0.10	U	mg/L	0.10	1	NA	1/15/10 15:40

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 1/2010  
**Sample Matrix:** Water  
**Sample Name:** MW22A  
**Lab Code:** R1000239-020

**Service Request:** R1000239  
**Date Collected:** 1/15/10 0920  
**Date Received:** 1/15/10

**Basis:** NA

## Manganese, Total, by Inductively Coupled Plasma-Atomic Emission Spectrometry

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Total	6010B	70	µg/L	10	1	1/18/10	1/19/10 17:05

Comments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 1/2010  
**Sample Matrix:** Water  
**Sample Name:** MW22A Dissolved  
**Lab Code:** R1000239-021

**Service Request:** R1000239  
**Date Collected:** 1/15/10 0920  
**Date Received:** 1/15/10

**Basis:** NA

**Manganese, Dissolved, by Inductively Coupled Plasma-Atomic Emission Spectrometry**

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Dissolved	6010B	66	µg/L	10	1	1/18/10	1/20/10 00:57

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
 Project: Leica/Wells 1/2010  
 Sample Matrix: Water  
 Sample Name: MW22A  
 Lab Code: R1000239-020

Service Request: R1000239  
 Date Collected: 1/15/10 0920  
 Date Received: 1/15/10  
 Units: µg/L  
 Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Acetone	20	U	20	1	NA	1/23/10 04:16		187250	
Benzene	5.0	U	5.0	1	NA	1/23/10 04:16		187250	
Bromodichloromethane	5.0	U	5.0	1	NA	1/23/10 04:16		187250	
Bromoform	5.0	U	5.0	1	NA	1/23/10 04:16		187250	
Bromomethane	5.0	U	5.0	1	NA	1/23/10 04:16		187250	
2-Butanone (MEK)	10	U	10	1	NA	1/23/10 04:16		187250	
Carbon Disulfide	10	U	10	1	NA	1/23/10 04:16		187250	
Carbon Tetrachloride	5.0	U	5.0	1	NA	1/23/10 04:16		187250	
Chlorobenzene	5.0	U	5.0	1	NA	1/23/10 04:16		187250	
Chloroethane	5.0	U	5.0	1	NA	1/23/10 04:16		187250	
Chloroform	5.0	U	5.0	1	NA	1/23/10 04:16		187250	
Chloromethane	5.0	U	5.0	1	NA	1/23/10 04:16		187250	
Dibromochloromethane	5.0	U	5.0	1	NA	1/23/10 04:16		187250	
1,1-Dichloroethane	5.0	U	5.0	1	NA	1/23/10 04:16		187250	
1,2-Dichloroethane	5.0	U	5.0	1	NA	1/23/10 04:16		187250	
1,1-Dichloroethene	5.0	U	5.0	1	NA	1/23/10 04:16		187250	
cis-1,2-Dichloroethene	5.0	U	5.0	1	NA	1/23/10 04:16		187250	
trans-1,2-Dichloroethene	5.0	U	5.0	1	NA	1/23/10 04:16		187250	
1,2-Dichloropropane	5.0	U	5.0	1	NA	1/23/10 04:16		187250	
cis-1,3-Dichloropropene	5.0	U	5.0	1	NA	1/23/10 04:16		187250	
trans-1,3-Dichloropropene	5.0	U	5.0	1	NA	1/23/10 04:16		187250	
Ethylbenzene	5.0	U	5.0	1	NA	1/23/10 04:16		187250	
2-Hexanone	10	U	10	1	NA	1/23/10 04:16		187250	
Methylene Chloride	5.0	U	5.0	1	NA	1/23/10 04:16		187250	
4-Methyl-2-pentanone (MIBK)	10	U	10	1	NA	1/23/10 04:16		187250	
Styrene	5.0	U	5.0	1	NA	1/23/10 04:16		187250	
1,1,2,2-Tetrachloroethane	5.0	U	5.0	1	NA	1/23/10 04:16		187250	
Tetrachloroethene	5.0	U	5.0	1	NA	1/23/10 04:16		187250	
Toluene	5.0	U	5.0	1	NA	1/23/10 04:16		187250	
1,1,1-Trichloroethane	5.0	U	5.0	1	NA	1/23/10 04:16		187250	
1,1,2-Trichloroethane	5.0	U	5.0	1	NA	1/23/10 04:16		187250	
Trichloroethene	5.0	U	5.0	1	NA	1/23/10 04:16		187250	
Vinyl Chloride	7.7		5.0	1	NA	1/23/10 04:16		187250	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 1/2010  
**Sample Matrix:** Water  
**Sample Name:** MW22A  
**Lab Code:** R1000239-020

**Service Request:** R1000239  
**Date Collected:** 1/15/10 0920  
**Date Received:** 1/15/10  
**Units:** µg/L  
**Basis:** NA

## Volatile Organic Compounds by GC/MS

**Analytical Method:** 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
o-Xylene	5.0	U	5.0	1	NA	1/23/10 04:16		187250	
m,p-Xylenes	5.0	U	5.0	1	NA	1/23/10 04:16		187250	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	102	85-122	1/23/10 04:16		
Toluene-d8	98	87-121	1/23/10 04:16		
Dibromofluoromethane	105	89-119	1/23/10 04:16		

**Comments:**

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 1/2010  
**Sample Matrix:** Water  
**Sample Name:** MW14  
**Lab Code:** R1000239-022

**Service Request:** R1000239  
**Date Collected:** 1/15/10 0950  
**Date Received:** 1/15/10

**Basis:** NA

## General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Carbon, Total Organic (TOC)	SM20 5310 C	3.3		mg/L	2.0	2	NA	1/25/10 22:33
Chloride	300.0	26.4		mg/L	2.0	10	NA	1/15/10 21:21
Iron, Divalent (Ferrous Iron)	SM 3500-Fe B.4.c	0.86		mg/L	0.10	1	NA	1/15/10 15:40
Nitrate as Nitrogen	300.0	0.50	U	mg/L	0.50	10	NA	1/15/10 21:21
Sulfate	300.0	152		mg/L	4.0	20	NA	1/19/10 22:31

Comments:

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## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 1/2010  
**Sample Matrix:** Water  
**Sample Name:** MW14 Dissolved  
**Lab Code:** R1000239-023

**Service Request:** R1000239  
**Date Collected:** 1/15/10 0950  
**Date Received:** 1/15/10

**Basis:** NA

## Iron, Divalent, Dissolved Phenanthroline Method 20th Ed.

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Iron, Divalent (Ferrous Iron), Dissolved	SM 3500-Fe B.4.c	0.74	mg/L	0.10	1	NA	1/15/10 15:40

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 1/2010  
**Sample Matrix:** Water  
**Sample Name:** MW14  
**Lab Code:** R1000239-022

**Service Request:** R1000239  
**Date Collected:** 1/15/10 0950  
**Date Received:** 1/15/10

**Basis:** NA

## Manganese, Total, by Inductively Coupled Plasma-Atomic Emission Spectrometry

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Total	6010B	76	µg/L	10	1	1/18/10	1/19/10 17:09

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 1/2010  
**Sample Matrix:** Water  
**Sample Name:** MW14 Dissolved  
**Lab Code:** R1000239-023

**Service Request:** R1000239  
**Date Collected:** 1/15/10 0950  
**Date Received:** 1/15/10

**Basis:** NA

## Manganese, Dissolved, by Inductively Coupled Plasma-Atomic Emission Spectrometry

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Dissolved	6010B	68	µg/L	10	1	1/18/10	1/20/10 01:03

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
 Project: Leica/Wells 1/2010  
 Sample Matrix: Water  
 Sample Name: MW14  
 Lab Code: R1000239-022

Service Request: R1000239  
 Date Collected: 1/15/10 0950  
 Date Received: 1/15/10  
 Units: µg/L  
 Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Acetone	20	U	20	1	NA	1/25/10 12:36		187432	
Benzene	5.0	U	5.0	1	NA	1/25/10 12:36		187432	
Bromodichloromethane	5.0	U	5.0	1	NA	1/25/10 12:36		187432	
Bromoform	5.0	U	5.0	1	NA	1/25/10 12:36		187432	
Bromomethane	5.0	U	5.0	1	NA	1/25/10 12:36		187432	
2-Butanone (MEK)	10	U	10	1	NA	1/25/10 12:36		187432	
Carbon Disulfide	10	U	10	1	NA	1/25/10 12:36		187432	
Carbon Tetrachloride	5.0	U	5.0	1	NA	1/25/10 12:36		187432	
Chlorobenzene	5.0	U	5.0	1	NA	1/25/10 12:36		187432	
Chloroethane	5.0	U	5.0	1	NA	1/25/10 12:36		187432	
Chloroform	5.0	U	5.0	1	NA	1/25/10 12:36		187432	
Chloromethane	5.0	U	5.0	1	NA	1/25/10 12:36		187432	
Dibromochloromethane	5.0	U	5.0	1	NA	1/25/10 12:36		187432	
1,1-Dichloroethane	5.0	U	5.0	1	NA	1/25/10 12:36		187432	
1,2-Dichloroethane	5.0	U	5.0	1	NA	1/25/10 12:36		187432	
1,1-Dichloroethene	5.0	U	5.0	1	NA	1/25/10 12:36		187432	
cis-1,2-Dichloroethene	200		5.0	1	NA	1/25/10 12:36		187432	
trans-1,2-Dichloroethene	5.0	U	5.0	1	NA	1/25/10 12:36		187432	
1,2-Dichloropropane	5.0	U	5.0	1	NA	1/25/10 12:36		187432	
cis-1,3-Dichloropropene	5.0	U	5.0	1	NA	1/25/10 12:36		187432	
trans-1,3-Dichloropropene	5.0	U	5.0	1	NA	1/25/10 12:36		187432	
Ethylbenzene	5.0	U	5.0	1	NA	1/25/10 12:36		187432	
2-Hexanone	10	U	10	1	NA	1/25/10 12:36		187432	
Methylene Chloride	5.0	U	5.0	1	NA	1/25/10 12:36		187432	
4-Methyl-2-pentanone (MIBK)	10	U	10	1	NA	1/25/10 12:36		187432	
Styrene	5.0	U	5.0	1	NA	1/25/10 12:36		187432	
1,1,2,2-Tetrachloroethane	5.0	U	5.0	1	NA	1/25/10 12:36		187432	
Tetrachloroethene	5.0	U	5.0	1	NA	1/25/10 12:36		187432	
Toluene	5.0	U	5.0	1	NA	1/25/10 12:36		187432	
1,1,1-Trichloroethane	5.0	U	5.0	1	NA	1/25/10 12:36		187432	
1,1,2-Trichloroethane	5.0	U	5.0	1	NA	1/25/10 12:36		187432	
Trichloroethene	5.0	U	5.0	1	NA	1/25/10 12:36		187432	
Vinyl Chloride	20		5.0	1	NA	1/25/10 12:36		187432	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
Project: Leica/Wells 1/2010  
Sample Matrix: Water  
Sample Name: MW14  
Lab Code: R1000239-022

Service Request: R1000239  
Date Collected: 1/15/10 0950  
Date Received: 1/15/10  
Units: µg/L  
Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
o-Xylene	5.0	U	5.0	1	NA	1/25/10 12:36		187432	
m,p-Xylenes	5.0	U	5.0	1	NA	1/25/10 12:36		187432	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	102	85-122	1/25/10 12:36		
Toluene-d8	98	87-121	1/25/10 12:36		
Dibromofluoromethane	103	89-119	1/25/10 12:36		

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 1/2010  
**Sample Matrix:** Water  
**Sample Name:** MW14A  
**Lab Code:** R1000239-024

**Service Request:** R1000239  
**Date Collected:** 1/15/10 1010  
**Date Received:** 1/15/10

**Basis:** NA

## General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Carbon, Total Organic (TOC)	SM20 5310 C	3.4		mg/L	2.0	2	NA	1/27/10 01:53
Chloride	300.0	15.9		mg/L	2.0	10	NA	1/15/10 21:36
Iron, Divalent (Ferrous Iron)	SM 3500-Fe B.4.c	0.10	U	mg/L	0.10	1	NA	1/15/10 15:40
Nitrate as Nitrogen	300.0	0.50	U	mg/L	0.50	10	NA	1/15/10 21:36
Sulfate	300.0	82.5		mg/L	2.0	10	NA	1/15/10 21:36

Comments:

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**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 1/2010  
**Sample Matrix:** Water  
**Sample Name:** MW14A Dissolved  
**Lab Code:** R1000239-025

**Service Request:** R1000239  
**Date Collected:** 1/15/10 1010  
**Date Received:** 1/15/10

**Basis:** NA

**Iron, Divalent, Dissolved Phenanthroline Method 20th Ed.**

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Iron, Divalent (Ferrous Iron), Dissolved	SM 3500-Fe B.4.c	0.10	U	mg/L	0.10	1	NA	1/15/10 15:40

Comments:

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## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 1/2010  
**Sample Matrix:** Water  
**Sample Name:** MW14A  
**Lab Code:** R1000239-024

**Service Request:** R1000239  
**Date Collected:** 1/15/10 1010  
**Date Received:** 1/15/10

**Basis:** NA

## Manganese, Total, by Inductively Coupled Plasma-Atomic Emission Spectrometry

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Total	6010B	39	µg/L	10	1	1/18/10	1/20/10 01:20

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 1/2010  
**Sample Matrix:** Water  
**Sample Name:** MW14A Dissolved  
**Lab Code:** R1000239-025

**Service Request:** R1000239  
**Date Collected:** 1/15/10 1010  
**Date Received:** 1/15/10

**Basis:** NA

**Manganese, Dissolved, by Inductively Coupled Plasma-Atomic Emission Spectrometry**

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Dissolved	6010B	37	µg/L	10	1	1/18/10	1/20/10 01:26

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
 Project: Leica/Wells 1/2010  
 Sample Matrix: Water  
 Sample Name: MW14A  
 Lab Code: R1000239-024

Service Request: R1000239  
 Date Collected: 1/15/10 1010  
 Date Received: 1/15/10  
 Units: µg/L  
 Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Acetone	20	U	20	1	NA	1/23/10 05:11		187250	
Benzene	5.0	U	5.0	1	NA	1/23/10 05:11		187250	
Bromodichloromethane	5.0	U	5.0	1	NA	1/23/10 05:11		187250	
Bromoform	5.0	U	5.0	1	NA	1/23/10 05:11		187250	
Bromomethane	5.0	U	5.0	1	NA	1/23/10 05:11		187250	
2-Butanone (MEK)	10	U	10	1	NA	1/23/10 05:11		187250	
Carbon Disulfide	10	U	10	1	NA	1/23/10 05:11		187250	
Carbon Tetrachloride	5.0	U	5.0	1	NA	1/23/10 05:11		187250	
Chlorobenzene	5.0	U	5.0	1	NA	1/23/10 05:11		187250	
Chloroethane	5.0	U	5.0	1	NA	1/23/10 05:11		187250	
Chloroform	5.0	U	5.0	1	NA	1/23/10 05:11		187250	
Chloromethane	5.0	U	5.0	1	NA	1/23/10 05:11		187250	
Dibromochloromethane	5.0	U	5.0	1	NA	1/23/10 05:11		187250	
1,1-Dichloroethane	5.0	U	5.0	1	NA	1/23/10 05:11		187250	
1,2-Dichloroethane	5.0	U	5.0	1	NA	1/23/10 05:11		187250	
1,1-Dichloroethene	5.0	U	5.0	1	NA	1/23/10 05:11		187250	
cis-1,2-Dichloroethene	38		5.0	1	NA	1/23/10 05:11		187250	
trans-1,2-Dichloroethene	5.0	U	5.0	1	NA	1/23/10 05:11		187250	
1,2-Dichloropropane	5.0	U	5.0	1	NA	1/23/10 05:11		187250	
cis-1,3-Dichloropropene	5.0	U	5.0	1	NA	1/23/10 05:11		187250	
trans-1,3-Dichloropropene	5.0	U	5.0	1	NA	1/23/10 05:11		187250	
Ethylbenzene	5.0	U	5.0	1	NA	1/23/10 05:11		187250	
2-Hexanone	10	U	10	1	NA	1/23/10 05:11		187250	
Methylene Chloride	5.0	U	5.0	1	NA	1/23/10 05:11		187250	
4-Methyl-2-pentanone (MIBK)	10	U	10	1	NA	1/23/10 05:11		187250	
Styrene	5.0	U	5.0	1	NA	1/23/10 05:11		187250	
1,1,2,2-Tetrachloroethane	5.0	U	5.0	1	NA	1/23/10 05:11		187250	
Tetrachloroethene	5.0	U	5.0	1	NA	1/23/10 05:11		187250	
Toluene	5.0	U	5.0	1	NA	1/23/10 05:11		187250	
1,1,1-Trichloroethane	5.0	U	5.0	1	NA	1/23/10 05:11		187250	
1,1,2-Trichloroethane	5.0	U	5.0	1	NA	1/23/10 05:11		187250	
Trichloroethene	5.0	U	5.0	1	NA	1/23/10 05:11		187250	
Vinyl Chloride	5.0	U	5.0	1	NA	1/23/10 05:11		187250	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 1/2010  
**Sample Matrix:** Water  
**Sample Name:** MW14A  
**Lab Code:** R1000239-024

**Service Request:** R1000239  
**Date Collected:** 1/15/10 1010  
**Date Received:** 1/15/10  
**Units:** µg/L  
**Basis:** NA

## Volatile Organic Compounds by GC/MS

**Analytical Method:** 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
o-Xylene	5.0	U	5.0	1	NA	1/23/10 05:11		187250	
m,p-Xylenes	5.0	U	5.0	1	NA	1/23/10 05:11		187250	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	102	85-122	1/23/10 05:11		
Toluene-d8	99	87-121	1/23/10 05:11		
Dibromofluoromethane	105	89-119	1/23/10 05:11		

**Comments:**

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 1/2010  
**Sample Matrix:** Water  
**Sample Name:** MW24A  
**Lab Code:** R1000239-026

**Service Request:** R1000239  
**Date Collected:** 1/15/10 1100  
**Date Received:** 1/15/10

**Basis:** NA

## General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Carbon, Total Organic (TOC)	SM20 5310 C	10		mg/L	1.0	1	NA	1/25/10 23:09
Chloride	300.0	183		mg/L	8.0	40	NA	1/19/10 22:45
Iron, Divalent (Ferrous Iron)	SM 3500-Fe B.4.c	4.97		mg/L	0.20	2	NA	1/15/10 15:40
Nitrate as Nitrogen	300.0	0.50	U	mg/L	0.50	10	NA	1/15/10 21:51
Sulfate	300.0	28.5		mg/L	2.0	10	NA	1/15/10 21:51

Comments:

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**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 1/2010  
**Sample Matrix:** Water  
**Sample Name:** MW24A Dissolved  
**Lab Code:** R1000239-027

**Service Request:** R1000239  
**Date Collected:** 1/15/10 1100  
**Date Received:** 1/15/10

**Basis:** NA

**Iron, Divalent, Dissolved Phenanthroline Method 20th Ed.**

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Iron, Divalent (Ferrous Iron), Dissolved	SM 3500-Fe B.4.c	3.60	mg/L	0.20	2	NA	1/15/10 15:40

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 1/2010  
**Sample Matrix:** Water  
**Sample Name:** MW24A  
**Lab Code:** R1000239-026

**Service Request:** R1000239  
**Date Collected:** 1/15/10 1100  
**Date Received:** 1/15/10

**Basis:** NA

## Manganese, Total, by Inductively Coupled Plasma-Atomic Emission Spectrometry

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Total	6010B	129	µg/L	10	1	1/18/10	1/20/10 01:32

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 1/2010  
**Sample Matrix:** Water  
**Sample Name:** MW24A Dissolved  
**Lab Code:** R1000239-027

**Service Request:** R1000239  
**Date Collected:** 1/15/10 1100  
**Date Received:** 1/15/10

**Basis:** NA

## Manganese, Dissolved, by Inductively Coupled Plasma-Atomic Emission Spectrometry

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Dissolved	6010B	254	µg/L	10	1	1/18/10	1/20/10 01:38

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 1/2010  
**Sample Matrix:** Water  
**Sample Name:** MW24A  
**Lab Code:** R1000239-026

**Service Request:** R1000239  
**Date Collected:** 1/15/10 1100  
**Date Received:** 1/15/10  
**Units:** µg/L  
**Basis:** NA

## Volatile Organic Compounds by GC/MS

**Analytical Method:** 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Acetone	20	U	20	1	NA	1/25/10 13:03		187432	
Benzene	5.0	U	5.0	1	NA	1/25/10 13:03		187432	
Bromodichloromethane	5.0	U	5.0	1	NA	1/25/10 13:03		187432	
Bromoform	5.0	U	5.0	1	NA	1/25/10 13:03		187432	
Bromomethane	5.0	U	5.0	1	NA	1/25/10 13:03		187432	
2-Butanone (MEK)	10	U	10	1	NA	1/25/10 13:03		187432	
Carbon Disulfide	10	U	10	1	NA	1/25/10 13:03		187432	
Carbon Tetrachloride	5.0	U	5.0	1	NA	1/25/10 13:03		187432	
Chlorobenzene	5.0	U	5.0	1	NA	1/25/10 13:03		187432	
Chloroethane	5.0	U	5.0	1	NA	1/25/10 13:03		187432	
Chloroform	5.0	U	5.0	1	NA	1/25/10 13:03		187432	
Chloromethane	5.0	U	5.0	1	NA	1/25/10 13:03		187432	
Dibromochloromethane	5.0	U	5.0	1	NA	1/25/10 13:03		187432	
1,1-Dichloroethane	67		5.0	1	NA	1/25/10 13:03		187432	
1,2-Dichloroethane	5.0	U	5.0	1	NA	1/25/10 13:03		187432	
1,1-Dichloroethene	5.0	U	5.0	1	NA	1/25/10 13:03		187432	
cis-1,2-Dichloroethene	140		5.0	1	NA	1/25/10 13:03		187432	
trans-1,2-Dichloroethene	5.0	U	5.0	1	NA	1/25/10 13:03		187432	
1,2-Dichloropropane	5.0	U	5.0	1	NA	1/25/10 13:03		187432	
cis-1,3-Dichloropropene	5.0	U	5.0	1	NA	1/25/10 13:03		187432	
trans-1,3-Dichloropropene	5.0	U	5.0	1	NA	1/25/10 13:03		187432	
Ethylbenzene	5.0	U	5.0	1	NA	1/25/10 13:03		187432	
2-Hexanone	10	U	10	1	NA	1/25/10 13:03		187432	
Methylene Chloride	5.0	U	5.0	1	NA	1/25/10 13:03		187432	
4-Methyl-2-pentanone (MIBK)	10	U	10	1	NA	1/25/10 13:03		187432	
Styrene	5.0	U	5.0	1	NA	1/25/10 13:03		187432	
1,1,2,2-Tetrachloroethane	5.0	U	5.0	1	NA	1/25/10 13:03		187432	
Tetrachloroethene	5.0	U	5.0	1	NA	1/25/10 13:03		187432	
Toluene	5.0	U	5.0	1	NA	1/25/10 13:03		187432	
1,1,1-Trichloroethane	5.0	U	5.0	1	NA	1/25/10 13:03		187432	
1,1,2-Trichloroethane	5.0	U	5.0	1	NA	1/25/10 13:03		187432	
Trichloroethene	5.0	U	5.0	1	NA	1/25/10 13:03		187432	
Vinyl Chloride	190		5.0	1	NA	1/25/10 13:03		187432	

**Comments:**

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 1/2010  
**Sample Matrix:** Water  
**Sample Name:** MW24A  
**Lab Code:** R1000239-026

**Service Request:** R1000239  
**Date Collected:** 1/15/10 1100  
**Date Received:** 1/15/10  
**Units:** µg/L  
**Basis:** NA

## Volatile Organic Compounds by GC/MS

**Analytical Method:** 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
o-Xylene	5.0	U	5.0	1	NA	1/25/10 13:03		187432	
m,p-Xylenes	5.0	U	5.0	1	NA	1/25/10 13:03		187432	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	103	85-122	1/25/10 13:03		
Toluene-d8	99	87-121	1/25/10 13:03		
Dibromofluoromethane	104	89-119	1/25/10 13:03		

**Comments:**

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 1/2010  
**Sample Matrix:** Water  
**Sample Name:** MW24  
**Lab Code:** R1000239-028

**Service Request:** R1000239  
**Date Collected:** 1/15/10 1130  
**Date Received:** 1/15/10

**Basis:** NA

## General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Carbon, Total Organic (TOC)	SM20 5310 C	1370		mg/L	100	100	NA	1/27/10 02:11
Chloride	300.0	200		mg/L	8.0	40	NA	1/19/10 22:59
Iron, Divalent (Ferrous Iron)	SM 3500-Fe B.4.c	1.0	U	mg/L	1.0	10	NA	1/15/10 15:40
Nitrate as Nitrogen	300.0	0.50	U	mg/L	0.50	10	NA	1/15/10 22:06
Sulfate	300.0	5.7		mg/L	2.0	10	NA	1/15/10 22:06

Comments:

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## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 1/2010  
**Sample Matrix:** Water  
**Sample Name:** MW24 Dissolved  
**Lab Code:** R1000239-029

**Service Request:** R1000239  
**Date Collected:** 1/15/10 1130  
**Date Received:** 1/15/10

**Basis:** NA

## Iron, Divalent, Dissolved Phenanthroline Method 20th Ed.

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Iron, Divalent (Ferrous Iron), Dissolved	SM 3500-Fe B.4.c	12.9	mg/L	1.0	10	NA	1/15/10 15:40

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 1/2010  
**Sample Matrix:** Water  
**Sample Name:** MW24  
**Lab Code:** R1000239-028

**Service Request:** R1000239  
**Date Collected:** 1/15/10 1130  
**Date Received:** 1/15/10

**Basis:** NA

**Manganese, Total, by Inductively Coupled Plasma-Atomic Emission Spectrometry**

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Total	6010B	213	µg/L	10	1	1/18/10	1/20/10 01:44

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 1/2010  
**Sample Matrix:** Water  
**Sample Name:** MW24 Dissolved  
**Lab Code:** R1000239-029

**Service Request:** R1000239  
**Date Collected:** 1/15/10 1130  
**Date Received:** 1/15/10

**Basis:** NA

**Manganese, Dissolved, by Inductively Coupled Plasma-Atomic Emission Spectrometry**

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Dissolved	6010B	159		µg/L	10	1	1/18/10	1/20/10 01:50

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
 Project: Leica/Wells 1/2010  
 Sample Matrix: Water  
 Sample Name: MW24  
 Lab Code: R1000239-028

Service Request: R1000239  
 Date Collected: 1/15/10 1130  
 Date Received: 1/15/10  
 Units: µg/L  
 Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Acetone	650		500	25	NA	1/23/10 06:06		187250	
Benzene	130	U	130	25	NA	1/23/10 06:06		187250	
Bromodichloromethane	130	U	130	25	NA	1/23/10 06:06		187250	
Bromoform	130	U	130	25	NA	1/23/10 06:06		187250	
Bromomethane	130	U	130	25	NA	1/23/10 06:06		187250	
2-Butanone (MEK)	3700		250	25	NA	1/23/10 06:06		187250	
Carbon Disulfide	250	U	250	25	NA	1/23/10 06:06		187250	
Carbon Tetrachloride	130	U	130	25	NA	1/23/10 06:06		187250	
Chlorobenzene	130	U	130	25	NA	1/23/10 06:06		187250	
Chloroethane	130	U	130	25	NA	1/23/10 06:06		187250	
Chloroform	130	U	130	25	NA	1/23/10 06:06		187250	
Chloromethane	130	U	130	25	NA	1/23/10 06:06		187250	
Dibromochloromethane	130	U	130	25	NA	1/23/10 06:06		187250	
1,1-Dichloroethane	470		130	25	NA	1/23/10 06:06		187250	
1,2-Dichloroethane	130	U	130	25	NA	1/23/10 06:06		187250	
1,1-Dichloroethene	130	U	130	25	NA	1/23/10 06:06		187250	
cis-1,2-Dichloroethene	200		130	25	NA	1/23/10 06:06		187250	
trans-1,2-Dichloroethene	130	U	130	25	NA	1/23/10 06:06		187250	
1,2-Dichloropropane	130	U	130	25	NA	1/23/10 06:06		187250	
cis-1,3-Dichloropropene	130	U	130	25	NA	1/23/10 06:06		187250	
trans-1,3-Dichloropropene	130	U	130	25	NA	1/23/10 06:06		187250	
Ethylbenzene	130	U	130	25	NA	1/23/10 06:06		187250	
2-Hexanone	250	U	250	25	NA	1/23/10 06:06		187250	
Methylene Chloride	130	U	130	25	NA	1/23/10 06:06		187250	
4-Methyl-2-pentanone (MIBK)	250	U	250	25	NA	1/23/10 06:06		187250	
Styrene	130	U	130	25	NA	1/23/10 06:06		187250	
1,1,2,2-Tetrachloroethane	130	U	130	25	NA	1/23/10 06:06		187250	
Tetrachloroethene	130	U	130	25	NA	1/23/10 06:06		187250	
Toluene	130	U	130	25	NA	1/23/10 06:06		187250	
1,1,1-Trichloroethane	130	U	130	25	NA	1/23/10 06:06		187250	
1,1,2-Trichloroethane	130	U	130	25	NA	1/23/10 06:06		187250	
Trichloroethene	130	U	130	25	NA	1/23/10 06:06		187250	
Vinyl Chloride	1500		130	25	NA	1/23/10 06:06		187250	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
Project: Leica/Wells 1/2010  
Sample Matrix: Water  
Sample Name: MW24  
Lab Code: R1000239-028

Service Request: R1000239  
Date Collected: 1/15/10 1130  
Date Received: 1/15/10  
Units: µg/L  
Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
o-Xylene	130	U	130	25	NA	1/23/10 06:06		187250	
m,p-Xylenes	130	U	130	25	NA	1/23/10 06:06		187250	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	105	85-122	1/23/10 06:06		
Toluene-d8	104	87-121	1/23/10 06:06		
Dibromofluoromethane	108	89-119	1/23/10 06:06		

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 1/2010  
**Sample Matrix:** Water  
**Sample Name:** Method Blank  
**Lab Code:** R1000239-MB1

**Service Request:** R1000239  
**Date Collected:** NA  
**Date Received:** NA

**Basis:** NA

## General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Carbon, Total Organic (TOC)	SM20 5310 C	1.0	U	mg/L	1.0	1	NA	1/18/10 16:42
Chloride	300.0	0.20	U	mg/L	0.20	1	NA	1/14/10 15:08
Iron, Divalent (Ferrous Iron)	SM 3500-Fe B.4.c	0.10	U	mg/L	0.10	1	NA	1/14/10 15:10
Iron, Divalent (Ferrous Iron), Dissolved	SM 3500-Fe B.4.c	0.10	U	mg/L	0.10	1	NA	1/14/10 15:10
Nitrate as Nitrogen	300.0	0.050	U	mg/L	0.050	1	NA	1/14/10 15:08
Sulfate	300.0	0.20	U	mg/L	0.20	1	NA	1/14/10 15:08

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
Project: Leica/Wells 1/2010  
Sample Matrix: Water  
Sample Name: Method Blank  
Lab Code: R1000239-MB2

Service Request: R1000239  
Date Collected: NA  
Date Received: NA  
Basis: NA

## General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Carbon, Total Organic (TOC)	SM20 5310 C	1.0	U	mg/L	1.0	1	NA	1/18/10 23:57
Chloride	300.0	0.20	U	mg/L	0.20	1	NA	1/15/10 19:51
Iron, Divalent (Ferrous Iron)	SM 3500-Fe B.4.c	0.10	U	mg/L	0.10	1	NA	1/15/10 15:40
Iron, Divalent (Ferrous Iron), Dissolved	SM 3500-Fe B.4.c	0.10	U	mg/L	0.10	1	NA	1/15/10 15:40
Nitrate as Nitrogen	300.0	0.050	U	mg/L	0.050	1	NA	1/15/10 19:51
Sulfate	300.0	0.20	U	mg/L	0.20	1	NA	1/15/10 19:51

Comments:

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## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 1/2010  
**Sample Matrix:** Water  
**Sample Name:** Method Blank  
**Lab Code:** R1000239-MB3

**Service Request:** R1000239  
**Date Collected:** NA  
**Date Received:** NA

**Basis:** NA

## General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Carbon, Total Organic (TOC)	SM20 5310 C	1.0	U	mg/L	1.0	1	NA	1/22/10 17:02
Chloride	300.0	0.20	U	mg/L	0.20	1	NA	1/19/10 15:41
Sulfate	300.0	0.20	U	mg/L	0.20	1	NA	1/19/10 15:41

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 1/2010  
**Sample Matrix:** Water  
**Sample Name:** Method Blank  
**Lab Code:** R1000239-MB4

**Service Request:** R1000239  
**Date Collected:** NA  
**Date Received:** NA

**Basis:** NA

## General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Carbon, Total Organic (TOC)	SM20 5310 C	1.0	U	mg/L	1.0	1	NA	1/25/10 17:00
Chloride	300.0	0.20	U	mg/L	0.20	1	NA	1/19/10 21:20
Sulfate	300.0	0.20	U	mg/L	0.20	1	NA	1/19/10 21:20

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 1/2010  
**Sample Matrix:** Water  
**Sample Name:** Method Blank  
**Lab Code:** R1000239-MB5

**Service Request:** R1000239  
**Date Collected:** NA  
**Date Received:** NA  
**Basis:** NA

## Total Organic Carbon (TOC), Persulfate-Ultraviolet or Heated-Persulfate Oxidation 20th Ed.

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Carbon, Total Organic (TOC)	SM20 5310 C	1.0 U	mg/L	1.0	1	NA	1/26/10 17:18

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 1/2010  
**Sample Matrix:** Water  
**Sample Name:** Method Blank  
**Lab Code:** R1000239-MB1

**Service Request:** R1000239  
**Date Collected:** NA  
**Date Received:** NA  
**Basis:** NA

## Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Dissolved	6010B	10	U	µg/L	10	1	1/18/10	1/19/10 15:07
Manganese, Total	6010B	10	U	µg/L	10	1	1/18/10	1/19/10 15:07

Comments:

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## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 1/2010  
**Sample Matrix:** Water  
**Sample Name:** Method Blank  
**Lab Code:** R1000239-MB2

**Service Request:** R1000239  
**Date Collected:** NA  
**Date Received:** NA  
**Basis:** NA

## Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Dissolved	6010B	10	U	µg/L	10	1	1/18/10	1/19/10 15:11
Manganese, Total	6010B	10	U	µg/L	10	1	1/18/10	1/19/10 15:11

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 1/2010  
**Sample Matrix:** Water  
**Sample Name:** Method Blank  
**Lab Code:** R1000239-MB3

**Service Request:** R1000239  
**Date Collected:** NA  
**Date Received:** NA  
**Basis:** NA

## Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Dissolved	6010B	10	U	µg/L	10	1	1/18/10	1/20/10 00:09
Manganese, Total	6010B	10	U	µg/L	10	1	1/18/10	1/20/10 00:09

Comments:

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## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 1/2010  
**Sample Matrix:** Water  
**Sample Name:** Method Blank  
**Lab Code:** R1000239-MB4

**Service Request:** R1000239  
**Date Collected:** NA  
**Date Received:** NA  
**Basis:** NA

## Manganese, Dissolved, by Inductively Coupled Plasma-Atomic Emission Spectrometry

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Dissolved	6010B	10 U	µg/L	10	1	1/18/10	1/20/10 00:15

Comments:

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## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 1/2010  
**Sample Matrix:** Water  
**Sample Name:** Method Blank  
**Lab Code:** RQ1000493-01

**Service Request:** R1000239  
**Date Collected:** NA  
**Date Received:** NA  
**Units:** µg/L  
**Basis:** NA

## Volatile Organic Compounds by GC/MS

**Analytical Method:** 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Acetone	20	U	20	1	NA	1/22/10 23:13		187250	
Benzene	5.0	U	5.0	1	NA	1/22/10 23:13		187250	
Bromodichloromethane	5.0	U	5.0	1	NA	1/22/10 23:13		187250	
Bromoform	5.0	U	5.0	1	NA	1/22/10 23:13		187250	
Bromomethane	5.0	U	5.0	1	NA	1/22/10 23:13		187250	
2-Butanone (MEK)	10	U	10	1	NA	1/22/10 23:13		187250	
Carbon Disulfide	10	U	10	1	NA	1/22/10 23:13		187250	
Carbon Tetrachloride	5.0	U	5.0	1	NA	1/22/10 23:13		187250	
Chlorobenzene	5.0	U	5.0	1	NA	1/22/10 23:13		187250	
Chloroethane	5.0	U	5.0	1	NA	1/22/10 23:13		187250	
Chloroform	5.0	U	5.0	1	NA	1/22/10 23:13		187250	
Chloromethane	5.0	U	5.0	1	NA	1/22/10 23:13		187250	
Dibromochloromethane	5.0	U	5.0	1	NA	1/22/10 23:13		187250	
1,1-Dichloroethane	5.0	U	5.0	1	NA	1/22/10 23:13		187250	
1,2-Dichloroethane	5.0	U	5.0	1	NA	1/22/10 23:13		187250	
1,1-Dichloroethene	5.0	U	5.0	1	NA	1/22/10 23:13		187250	
cis-1,2-Dichloroethene	5.0	U	5.0	1	NA	1/22/10 23:13		187250	
trans-1,2-Dichloroethene	5.0	U	5.0	1	NA	1/22/10 23:13		187250	
1,2-Dichloropropane	5.0	U	5.0	1	NA	1/22/10 23:13		187250	
cis-1,3-Dichloropropene	5.0	U	5.0	1	NA	1/22/10 23:13		187250	
trans-1,3-Dichloropropene	5.0	U	5.0	1	NA	1/22/10 23:13		187250	
Ethylbenzene	5.0	U	5.0	1	NA	1/22/10 23:13		187250	
2-Hexanone	10	U	10	1	NA	1/22/10 23:13		187250	
Methylene Chloride	5.0	U	5.0	1	NA	1/22/10 23:13		187250	
4-Methyl-2-pentanone (MIBK)	10	U	10	1	NA	1/22/10 23:13		187250	
Styrene	5.0	U	5.0	1	NA	1/22/10 23:13		187250	
1,1,2,2-Tetrachloroethane	5.0	U	5.0	1	NA	1/22/10 23:13		187250	
Tetrachloroethene	5.0	U	5.0	1	NA	1/22/10 23:13		187250	
Toluene	5.0	U	5.0	1	NA	1/22/10 23:13		187250	
1,1,1-Trichloroethane	5.0	U	5.0	1	NA	1/22/10 23:13		187250	
1,1,2-Trichloroethane	5.0	U	5.0	1	NA	1/22/10 23:13		187250	
Trichloroethene	5.0	U	5.0	1	NA	1/22/10 23:13		187250	
Vinyl Chloride	5.0	U	5.0	1	NA	1/22/10 23:13		187250	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 1/2010  
**Sample Matrix:** Water  
**Sample Name:** Method Blank  
**Lab Code:** RQ1000493-01

**Service Request:** R1000239  
**Date Collected:** NA  
**Date Received:** NA  
**Units:** µg/L  
**Basis:** NA

## Volatile Organic Compounds by GC/MS

**Analytical Method:** 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
o-Xylene	5.0	U	5.0	1	NA	1/22/10 23:13		187250	
m,p-Xylenes	5.0	U	5.0	1	NA	1/22/10 23:13		187250	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	99	85-122	1/22/10 23:13		
Toluene-d8	99	87-121	1/22/10 23:13		
Dibromofluoromethane	104	89-119	1/22/10 23:13		

**Comments:**

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## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
 Project: Leica/Wells 1/2010  
 Sample Matrix: Water  
 Sample Name: Method Blank  
 Lab Code: RQ1000544-01

Service Request: R1000239  
 Date Collected: NA  
 Date Received: NA  
 Units: µg/L  
 Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Acetone	20	U	20	1	NA	1/25/10 11:41		187432	
Benzene	5.0	U	5.0	1	NA	1/25/10 11:41		187432	
Bromodichloromethane	5.0	U	5.0	1	NA	1/25/10 11:41		187432	
Bromoform	5.0	U	5.0	1	NA	1/25/10 11:41		187432	
Bromomethane	5.0	U	5.0	1	NA	1/25/10 11:41		187432	
2-Butanone (MEK)	10	U	10	1	NA	1/25/10 11:41		187432	
Carbon Disulfide	10	U	10	1	NA	1/25/10 11:41		187432	
Carbon Tetrachloride	5.0	U	5.0	1	NA	1/25/10 11:41		187432	
Chlorobenzene	5.0	U	5.0	1	NA	1/25/10 11:41		187432	
Chloroethane	5.0	U	5.0	1	NA	1/25/10 11:41		187432	
Chloroform	5.0	U	5.0	1	NA	1/25/10 11:41		187432	
Chloromethane	5.0	U	5.0	1	NA	1/25/10 11:41		187432	
Dibromochloromethane	5.0	U	5.0	1	NA	1/25/10 11:41		187432	
1,1-Dichloroethane	5.0	U	5.0	1	NA	1/25/10 11:41		187432	
1,2-Dichloroethane	5.0	U	5.0	1	NA	1/25/10 11:41		187432	
1,1-Dichloroethene	5.0	U	5.0	1	NA	1/25/10 11:41		187432	
cis-1,2-Dichloroethene	5.0	U	5.0	1	NA	1/25/10 11:41		187432	
trans-1,2-Dichloroethene	5.0	U	5.0	1	NA	1/25/10 11:41		187432	
1,2-Dichloropropane	5.0	U	5.0	1	NA	1/25/10 11:41		187432	
cis-1,3-Dichloropropene	5.0	U	5.0	1	NA	1/25/10 11:41		187432	
trans-1,3-Dichloropropene	5.0	U	5.0	1	NA	1/25/10 11:41		187432	
Ethylbenzene	5.0	U	5.0	1	NA	1/25/10 11:41		187432	
2-Hexanone	10	U	10	1	NA	1/25/10 11:41		187432	
Methylene Chloride	5.0	U	5.0	1	NA	1/25/10 11:41		187432	
4-Methyl-2-pentanone (MIBK)	10	U	10	1	NA	1/25/10 11:41		187432	
Styrene	5.0	U	5.0	1	NA	1/25/10 11:41		187432	
1,1,2,2-Tetrachloroethane	5.0	U	5.0	1	NA	1/25/10 11:41		187432	
Tetrachloroethene	5.0	U	5.0	1	NA	1/25/10 11:41		187432	
Toluene	5.0	U	5.0	1	NA	1/25/10 11:41		187432	
1,1,1-Trichloroethane	5.0	U	5.0	1	NA	1/25/10 11:41		187432	
1,1,2-Trichloroethane	5.0	U	5.0	1	NA	1/25/10 11:41		187432	
Trichloroethene	5.0	U	5.0	1	NA	1/25/10 11:41		187432	
Vinyl Chloride	5.0	U	5.0	1	NA	1/25/10 11:41		187432	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Energy Solutions  
Project: Leica/Wells 1/2010  
Sample Matrix: Water  
Sample Name: Method Blank  
Lab Code: RQ1000544-01

Service Request: R1000239  
Date Collected: NA  
Date Received: NA  
Units: µg/L  
Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
o-Xylene	5.0	U	5.0	1	NA	1/25/10 11:41		187432	
m,p-Xylenes	5.0	U	5.0	1	NA	1/25/10 11:41		187432	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	101	85-122	1/25/10 11:41		
Toluene-d8	98	87-121	1/25/10 11:41		
Dibromofluoromethane	103	89-119	1/25/10 11:41		

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 1/2010  
**Sample Matrix:** Water

**Service Request:** R1000239  
**Date Analyzed:** 1/14/10 -  
1/18/10

**Lab Control Sample Summary**  
**General Chemistry Parameters**

**Units:** mg/L**Basis:** NA

Analyte Name	Method	Lab Control Sample R1000239-LCS1			% Rec Limits
		Result	Expected	% Rec	
Carbon, Total Organic (TOC)	SM20 5310 C	10.4	10.0	104	86 - 117
Chloride	300.0	1.90	2.00	95	90 - 110
Iron, Divalent (Ferrous Iron)	SM 3500-Fe	0.389	0.40	97	77 - 129
	B.4.c				
Iron, Divalent (Ferrous Iron), Dissolved	SM 3500-Fe	0.389	0.40	97	77 - 129
	B.4.c				
Nitrate as Nitrogen	300.0	0.950	1.00	95	90 - 110
Sulfate	300.0	1.98	2.00	99	90 - 110

**Comments:**

## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Energy Solutions  
Project: Leica/Wells 1/2010  
Sample Matrix: Water

Service Request: R1000239  
Date Analyzed: 1/15/10 -  
1/19/10

Lab Control Sample Summary  
General Chemistry Parameters

Units: mg/L  
Basis: NA

Analyte Name	Method	Lab Control Sample R1000239-LCS2			% Rec Limits
		Result	Expected	% Rec	
Carbon, Total Organic (TOC)	SM20 5310 C	9.72	10.0	97	86 - 117
Chloride	300.0	1.87	2.00	93	90 - 110
Iron, Divalent (Ferrous Iron)	SM 3500-Fe B.4.c	0.389	0.40	97	77 - 129
Iron, Divalent (Ferrous Iron), Dissolved	SM 3500-Fe B.4.c	0.389	0.40	97	77 - 129
Nitrate as Nitrogen	300.0	0.944	1.00	94	90 - 110
Sulfate	300.0	1.96	2.00	98	90 - 110

Comments: \_\_\_\_\_

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 1/2010  
**Sample Matrix:** Water

**Service Request:** R1000239  
**Date Analyzed:** 1/19/10 -  
1/22/10

**Lab Control Sample Summary  
General Chemistry Parameters**

**Units:** mg/L

**Basis:** NA

Analyte Name	Method	Lab Control Sample R1000239-LCS3			% Rec Limits
		Result	Expected	% Rec	
Carbon, Total Organic (TOC)	SM20 5310 C	9.96	10.0	100	86 - 117
Chloride	300.0	1.92	2.00	96	90 - 110
Sulfate	300.0	1.84	2.00	92	90 - 110

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 1/2010  
**Sample Matrix:** Water

**Service Request:** R1000239  
**Date Analyzed:** 1/19/10 -  
1/25/10

**Lab Control Sample Summary**  
**General Chemistry Parameters**

**Units:** mg/L  
**Basis:** NA

Analyte Name	Method	Lab Control Sample R1000239-LCS4			% Rec Limits
		Result	Expected	% Rec	
Carbon, Total Organic (TOC)	SM20 5310 C	8.81	10.0	88	86 - 117
Chloride	300.0	1.91	2.00	95	90 - 110
Sulfate	300.0	1.83	2.00	92	90 - 110

Comments: \_\_\_\_\_

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Energy Solutions  
Project: Leica/Wells 1/2010  
Sample Matrix: Water

Service Request: R1000239  
Date Analyzed: 1/26/10

Lab Control Sample Summary

Total Organic Carbon (TOC), Persulfate-Ultraviolet or Heated-Persulfate Oxidation 20th Ed.

Units: mg/L

Basis: NA

Analyte Name	Method	Lab Control Sample R1000239-LCS5			% Rec Limits
		Result	Expected	% Rec	
Carbon, Total Organic (TOC)	SM20 5310 C	9.71	10.0	97	86 - 117

Comments:

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**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 1/2010  
**Sample Matrix:** Water

**Service Request:** R1000239  
**Date Analyzed:** 1/19/10

**Lab Control Sample Summary**  
**Inorganic Parameters**

**Units:** µg/L  
**Basis:** NA

Analyte Name	Method	Lab Control Sample R1000239-LCS1			% Rec Limits
		Result	Expected	% Rec	
Manganese, Dissolved	6010B	499	500	100	80 - 120
Manganese, Total	6010B	499	500	100	80 - 120

Comments: \_\_\_\_\_

\_\_\_\_\_

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client:** Energy Solutions  
**Project:** Leica/Wells 1/2010  
**Sample Matrix:** Water

**Service Request:** R1000239  
**Date Analyzed:** 1/20/10

**Lab Control Sample Summary**  
**Inorganic Parameters**

**Units:** µg/L  
**Basis:** NA

Analyte Name	Method	Lab Control Sample R1000239-LCS2			% Rec Limits
		Result	Expected	% Rec	
Manganese, Dissolved	6010B	492	500	98	80 - 120
Manganese, Total	6010B	492	500	98	80 - 120

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Energy Solutions  
 Project: Leica/Wells 1/2010  
 Sample Matrix: Water

Service Request: R1000239  
 Date Analyzed: 1/22/10

Lab Control Sample Summary  
 Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Units: µg/L

Basis: NA

Analysis Lot: 187250

Analyte Name	Lab Control Sample RQ1000493-02			% Rec Limits
	Result	Expected	% Rec	
Acetone	21.4	20.0	107	50 - 150
Benzene	20.5	20.0	102	70 - 130
Bromodichloromethane	20.9	20.0	104	70 - 130
Bromoform	19.9	20.0	99	70 - 130
Bromomethane	17.2	20.0	86	50 - 150
2-Butanone (MEK)	19.3	20.0	97	50 - 150
Carbon Disulfide	18.5	20.0	92	70 - 130
Carbon Tetrachloride	20.3	20.0	101	70 - 130
Chlorobenzene	20.9	20.0	105	70 - 130
Chloroethane	19.5	20.0	98	70 - 130
Chloroform	21.1	20.0	106	70 - 130
Chloromethane	17.8	20.0	89	70 - 130
Dibromochloromethane	20.7	20.0	103	70 - 130
1,1-Dichloroethane	21.0	20.0	105	70 - 130
1,2-Dichloroethane	20.6	20.0	103	70 - 130
1,1-Dichloroethene	20.3	20.0	102	70 - 130
cis-1,2-Dichloroethene	20.5	20.0	103	70 - 130
trans-1,2-Dichloroethene	19.7	20.0	98	70 - 130
1,2-Dichloropropane	21.6	20.0	108	70 - 130
cis-1,3-Dichloropropene	19.6	20.0	98	70 - 130
trans-1,3-Dichloropropene	19.0	20.0	95	70 - 130
Ethylbenzene	20.6	20.0	103	70 - 130
2-Hexanone	18.7	20.0	94	70 - 130
Methylene Chloride	19.7	20.0	99	70 - 130
4-Methyl-2-pentanone (MIBK)	20.1	20.0	101	70 - 130
Styrene	20.3	20.0	101	70 - 130
1,1,2,2-Tetrachloroethane	19.0	20.0	95	70 - 130
Tetrachloroethene	21.8	20.0	109	70 - 130
Toluene	20.4	20.0	102	70 - 130
1,1,1-Trichloroethane	20.6	20.0	103	70 - 130
1,1,2-Trichloroethane	20.1	20.0	100	70 - 130
Trichloroethene	21.5	20.0	107	70 - 130
Vinyl Chloride	21.3	20.0	107	70 - 130
o-Xylene	20.2	20.0	101	70 - 130
m,p-Xylenes	42.0	40.0	105	70 - 130

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Energy Solutions  
Project: Leica/Wells 1/2010  
Sample Matrix: Water

Service Request: R1000239  
Date Analyzed: 1/25/10

Lab Control Sample Summary  
Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Units: µg/L  
Basis: NA

Analysis Lot: 187432

Lab Control Sample  
RQ1000544-02

Analyte Name	Result	Expected	% Rec	% Rec Limits
Acetone	18.8	20.0	94	50 - 150
Benzene	20.1	20.0	100	70 - 130
Bromodichloromethane	20.8	20.0	104	70 - 130
Bromoform	20.0	20.0	100	70 - 130
Bromomethane	16.9	20.0	85	50 - 150
2-Butanone (MEK)	18.6	20.0	93	50 - 150
Carbon Disulfide	17.5	20.0	87	70 - 130
Carbon Tetrachloride	20.1	20.0	101	70 - 130
Chlorobenzene	20.5	20.0	103	70 - 130
Chloroethane	19.4	20.0	97	70 - 130
Chloroform	20.2	20.0	101	70 - 130
Chloromethane	16.4	20.0	82	70 - 130
Dibromochloromethane	21.0	20.0	105	70 - 130
1,1-Dichloroethane	20.4	20.0	102	70 - 130
1,2-Dichloroethane	20.0	20.0	100	70 - 130
1,1-Dichloroethene	19.5	20.0	97	70 - 130
cis-1,2-Dichloroethene	20.3	20.0	102	70 - 130
trans-1,2-Dichloroethene	19.4	20.0	97	70 - 130
1,2-Dichloropropane	21.4	20.0	107	70 - 130
cis-1,3-Dichloropropene	19.6	20.0	98	70 - 130
trans-1,3-Dichloropropene	19.5	20.0	98	70 - 130
Ethylbenzene	20.4	20.0	102	70 - 130
2-Hexanone	18.2	20.0	91	70 - 130
Methylene Chloride	19.5	20.0	98	70 - 130
4-Methyl-2-pentanone (MIBK)	19.2	20.0	96	70 - 130
Styrene	20.0	20.0	100	70 - 130
1,1,2,2-Tetrachloroethane	19.6	20.0	98	70 - 130
Tetrachloroethene	21.6	20.0	108	70 - 130
Toluene	20.1	20.0	101	70 - 130
1,1,1-Trichloroethane	19.8	20.0	99	70 - 130
1,1,2-Trichloroethane	20.4	20.0	102	70 - 130
Trichloroethene	20.4	20.0	102	70 - 130
Vinyl Chloride	20.1	20.0	101	70 - 130
o-Xylene	20.0	20.0	100	70 - 130
m,p-Xylenes	41.0	40.0	103	70 - 130

Comments:



# CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

SR #

CAS Contact

PAGE 1 OF 1

One Mustard St., Suite 250 • Rochester, NY 14609-0859 (585) 288-5380 • 800-695-7222 x11 • FAX (585) 288-8475

www.caslab.com

Project Name		Project Number		ANALYSIS REQUESTED (Include Method Number and Container Preservative)																			
Project Manager		Report CC		PRESERVATIVE		NUMBER OF CONTAINERS		PREPARED		REMARKS/ALTERNATE DESCRIPTION													
Leica		Bob McPeak		Energy Solutions Inc.		100 Mill Plain Rd., 2nd Floor Box 106		Danbury, CT. 06811		Preservative Key 0. NONE 1. HCl 2. HNO <sub>3</sub> 3. H <sub>2</sub> SO <sub>4</sub> 4. NaOH 5. Zn Acetate 6. MeOH 7. NaHSO <sub>4</sub> 8. Other													
Phone #		FAX #		GCMs VOAs		GCMs SVOAs		Pesticides		PCBs		METALS, TOTAL		METALS, DISSOLVED		NITRATE		Sulfate		Chloride		TOC	
801-303-1092		860-355-8294		8260 □ 624 □ CLP		8270 □ 625 □ CLP		8021 □ 601/602		8081 □ 608 □ CLP		8082 □ 608 □ CLP		(List in comments below)		(List in comments below)							
Wayne DeGallier		Wayne DeGallier		FOR OFFICE USE ONLY		LAB ID		SAMPLING DATE		TIME		MATRIX											
Trip Blank		-001		1/14/10		8:15		H <sub>2</sub> O															
MW 5		-002		003		8:15																	
MW 5 A		004		005		8:30																	
MW 6 A		006		007		8:50																	
MW 6		008		009		9:10																	
MW 18		010		011		9:30																	
MW 18 A		012		013		9:50																	
MW 1 A		014		015		10:20																	
MW 16 R		016		017		10:50																	
Temp Blank																							
Total = Fe, Mn																							
Dissolved = Fe, Mn																							
Special Instructions/Comments																							
Metals																							
See QAPP																							
SAMPLE RECEIPT: CONDITION/COOLER TEMP:		58°C																					
RELINQUISHED BY		RECEIVED BY		RELINQUISHED BY		CUSTODY SEALS: Y (Y)																	
Wayne DeGallier		Wayne DeGallier		Wayne DeGallier		Wayne DeGallier		Wayne DeGallier		Wayne DeGallier		Wayne DeGallier		Wayne DeGallier		Wayne DeGallier		Wayne DeGallier		Wayne DeGallier		Wayne DeGallier	
Signature		Signature		Signature		Signature		Signature		Signature		Signature		Signature		Signature		Signature		Signature		Signature	
Printed Name		Printed Name		Printed Name		Printed Name		Printed Name		Printed Name		Printed Name		Printed Name		Printed Name		Printed Name		Printed Name		Printed Name	
Firm		Firm		Firm		Firm		Firm		Firm		Firm		Firm		Firm		Firm		Firm		Firm	
1/14/10		1/14/10		1/14/10		1/14/10		1/14/10		1/14/10		1/14/10		1/14/10		1/14/10		1/14/10		1/14/10		1/14/10	
Date/Time		Date/Time		Date/Time		Date/Time		Date/Time		Date/Time		Date/Time		Date/Time		Date/Time		Date/Time		Date/Time		Date/Time	

001110

R1000239

Energy Solutions, Inc.

Leica

RELINQUISHED BY

RECEIVED BY

RELINQUISHED BY

RECEIVED BY

RELINQUISHED BY

RECEIVED BY

## Cooler Receipt And Preservation C

R1000239

Energy Solutions, Inc.  
LeicaProject/Client Emergency Solution Submission NumberCooler received on 1/14/10 by: CP COURIER: CAS UPS FEDEX VELOCITY CLIENT

1. Were custody seals on outside of cooler? YES NO
2. Were custody papers properly filled out (ink, signed, etc.)? YES NO
3. Did all bottles arrive in good condition (unbroken)? YES NO
4. Did any VOA vials have significant\* air bubbles? YES NO N/A
5. Were **Ice** or **Ice packs** present? YES NO
6. Where did the bottles originate? CAS/ROC CLIENT
7. Temperature of cooler(s) upon receipt: 5.8

Is the temperature within 0° - 6° C?: Yes Yes Yes Yes Yes

If No, Explain Below

No No No No No

Date/Time Temperatures Taken: 1/14/10 1455Thermometer ID: IR GUN#3 / IR GUN#4 Reading From: Temp Blank / Sample Bottle

If out of Temperature, note packing/ice condition, Client Approval to Run Samples:

PC Secondary Review: KB 1/15/10Cooler Breakdown: Date: 1/15/10 by: dh

1. Were all bottle labels complete (i.e. analysis, preservation, etc.)? YES NO
2. Did all bottle labels and tags agree with custody papers? YES NO
3. Were correct containers used for the tests indicated? YES NO
4. Air Samples: Cassettes / Tubes Intact Canisters Pressurized Tedlar® Bags Inflated N/A

Explain any discrepancies:

pH	Reagent	YES	NO	Lot Received	Exp	Sample ID	Vol. Added	Lot Added	Final pH
≥12	NaOH								
≤2	HNO <sub>3</sub>	X		BDB2698C	11/10				
≤2	H <sub>2</sub> SO <sub>4</sub>			WC9211SL	12/10				
Residual Chlorine (-)	For TCN and Phenol			If present, contact PM to add ascorbic acid					
	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	-	-			*Not to be tested before analysis - pH tested and recorded by VOAs or GenChem on a separate worksheet			
	Zn Aceta	-	-						
	HCl	*	*	4109030	12/10				

Yes = All samples OK

No = Samples were preserved at lab as listed

PM OK to Adjust:

Bottle lot numbers: 100509-2ND, 9-121-001, 9-308-001,

Other Comments:

PC Secondary Review: Raton

\*significant air bubbles are greater than 5-6 mm


**Analytical Services™**

**IGAS Contact**

PAGE 1 OF 1

• FAX (585) 288-8475

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Distribution: White - Return to Originator; Yellow - Lab Copy; Pink - Retained by Client

SCOC-1102-08

Project Name		Project Number		ANALYSIS REQUESTED (Include Method Number and Container Preservative)	
Project Manager		Report CC		PRESERVATIVE	
Company/Address				NUMBER OF CONTAINERS	
LEICA					
Bob McPeak					
Energy Solutions					
100 Mill Plain Rd and Floor Box 106					
Danbury, CT 06811					
Phone # 801-303-1092					
FAX# 860-355-8294					
Sample's Printed Name Wayne DeGallier					
Wayne DeGallier					
CLIENT SAMPLE ID	FOR OFFICE USE ONLY	LAB ID	SAMPLING DATE	TIME	MATRIX
Temp Blank					
MW 22	-018-019		11/15/10	9:00	W
MW 23 A	-020-021		9:20		
MW 14	-022-023		9:50		
MW 14 A	024-025		10:10		
MW 24 A	026-027		11:00		
MW 24	028-029		11:30		
SPECIAL INSTRUCTIONS/COMMENTS Metals Total = Fe, Mn Dissolved = Fe, Mn Some Samples Run on Arrival 1/15/10					
See QAPP <input type="checkbox"/> SAMPLE RECEIPT: CONDITION/Cooler Temp: 5.0 RELINQUISHED BY: Wayne DeGallier Signature: Wayne DeGallier Printed Name: Wayne DeGallier Firm: Energy Solutions Date/Time: 11/15/10 12:00					
RECEIVED BY: [Signature] Signature: [Signature] Printed Name: Wayne DeGallier Firm: Energy Solutions Date/Time: 11/15/10 12:00					
CUSTODY SEALS: Y N RELINQUISHED BY: [Signature] Signature: [Signature] Printed Name: Wayne DeGallier Firm: Energy Solutions Date/Time: 11/15/10 12:00					
SPECIAL INSTRUCTIONS/COMMENTS Metals Total = Fe, Mn Dissolved = Fe, Mn Some Samples Run on Arrival 1/15/10					
Turnaround Requirements RUSH (SURCHARGES APPLY) 24 hr 48 hr 5 day STANDARD REQUESTED FAX DATE REQUESTED REPORT DATE					
Report Requirements I. Results Only II. Results + QC Summaries (LCS, DUP, MSMSD as required) III. Results + QC and Calibration Summaries IV. Data Validation Report with Raw Data V. Specialized Forms / Custom Report Ecata Yes No					
Invoice Information PO# BILL TO: R1000239 Energy Solutions, Inc. Leica					
RELINQUISHED BY: [Signature] Signature: [Signature] Printed Name: Wayne DeGallier Firm: Energy Solutions Date/Time: 11/15/10 12:00					

## Cooler Receipt And Preservation

R1000239

Energy Solutions, Inc.  
LeicaProject/Client Energy Solutions Submission NumtCooler received on 1/15/10 by: DPN COURIER: CAS UPS FEDEX VELOCITY CLIENT

1. Were custody seals on outside of cooler? YES NO
2. Were custody papers properly filled out (ink, signed, etc.)? YES NO → no sampling time on C.O.C
3. Did all bottles arrive in good condition (unbroken)? YES NO
4. Did any VOA vials have significant\* air bubbles? YES NO N/A
5. Were ice or Ice packs present? YES NO
6. Where did the bottles originate? CAS/ROC, CLIENT
7. Temperature of cooler(s) upon receipt: 5.0

Is the temperature within 0° - 6° C?: Yes Yes Yes Yes Yes

If No, Explain Below No No No No No

Date/Time Temperatures Taken: 1/15/10 / 1451Thermometer ID: IR GUN#3 / IR GUN#4 Reading From: Temp Blank / Sample Bottle

If out of Temperature, note packing/ice condition, Client Approval to Run Samples:

PC Secondary Review: DPN 1/15/10Cooler Breakdown: Date: 1-15-10 by: DPN

1. Were all bottle labels complete (i.e. analysis, preservation, etc.)? YES NO
2. Did all bottle labels and tags agree with custody papers? YES NO
3. Were correct containers used for the tests indicated? YES NO
4. Air Samples: Cassettes / Tubes Intact Canisters Pressurized Tedlar® Bags Inflated N/A

Explain any discrepancies:

pH	Reagent	YES	NO	Lot Received	Exp	Sample ID	Vol. Added	Lot Added	Final pH
≥12	NaOH								
≤2	HNO <sub>3</sub>			<u>BD62698C</u>	<u>11/10</u>				
≤2	H <sub>2</sub> SO <sub>4</sub>			<u>WLG2115L</u>	<u>12/10</u>				
Residual Chlorine (-)	For TCN and Phenol			If present, contact PM to add ascorbic acid					
	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	-	-			*Not to be tested before analysis – pH tested and recorded by VOAs or GenChem on a separate worksheet			
	Zn Aceta	-	-						
	HCl	*	*	<u>4109030</u>	<u>12/10</u>				

Yes = All samples OK

No = Samples were preserved at lab as listed

PM OK to Adjust:

Bottle lot numbers: 9-121-001, 9-308-001, 100509-2111

Other Comments:

PC Secondary Review: DPN

\*significant air bubbles are greater than 5-6 mm

February 11, 2010

Service Request No: R1000483

Mr. Eric Lovenduski  
Enviro Group Limited  
46 Lake Ave.  
Suite 102  
Saratoga Springs, NY 12866

**Laboratory Results for: LEICA LE-0614**

Dear Mr. Lovenduski:

Enclosed are the results of the sample(s) submitted to our laboratory on January 27, 2010. For your reference, these analyses have been assigned our service request number **R1000483**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 134. You may also contact me via email at [KBunker@caslab.com](mailto:KBunker@caslab.com).

Respectfully submitted,

**Columbia Analytical Services, Inc.**



Karen Bunker  
Project Manager

Page 1 of 50

## CASE NARRATIVE

This report contains analytical results for the following samples:  
Service Request Number: R1000483

<u>Lab ID</u>	<u>Client ID</u>
R1000483-001	Trip Blank
R1000483-002	MW-26
R1000483-003	MW-26 Dissolved
R1000483-004	MW-25A
R1000483-005	MW-25A Dissolved
R1000483-006	MW-25
R1000483-007	MW-25 Dissolved
R1000483-008	MW-26A
R1000483-009	MW-26A Dissolved
R1000483-010	Dup 01/27/10
R1000483-011	Dup 01/27/10 Dissolved

All samples were received in good condition unless otherwise noted on the cooler receipt and preservation check form located at the end of this report.

All samples were preserved in accordance with approved analytical methods.

All samples have been analyzed by the approved methods cited on the analytical results pages.

All holding times and associated QC were within limits.

No analytical or QC problems were encountered.

All sampling activities performed by CAS personnel have been in accordance with "CAS Field Procedures and Measurements Manual" or by client specifications.

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## REPORT QUALIFIERS

- U Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.
- J Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Aroclors).
- B Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.
- E Inorganics- Concentration is estimated due to the serial dilution was outside control limits.
- E Organics- Concentration has exceeded the calibration range for that specific analysis.
- D Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.
- \* Indicates that a quality control parameter has exceeded laboratory limits.
- # Spike was diluted out.
- + Correlation coefficient for MSA is <0.995.
- N Inorganics- Matrix spike recovery was outside laboratory limits.
- N Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.
- S Concentration has been determined using Method of Standard Additions (MSA).
- W Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.
- P Pesticide/Aroclors: Concentration >40% (25% for CLP) difference between the two GC columns.
- C Confirmed by GC/MS
- Q DoD reports: indicates a pesticide/Aroclor is not confirmed ( $\geq 100\%$  Difference between two GC columns).
- X See Case Narrative for discussion.



### CAS/Rochester Lab ID # for State Certifications<sup>1</sup>

NELAP Accredited	Nevada ID # NY-00032
Delaware Accredited	New Jersey ID # NY004
Connecticut ID # PH0556	New York ID # 10145
Florida ID # E87674	New Hampshire ID # 294100 A/B
Illinois ID #200047	Pennsylvania ID# 68-786
Maine ID #NY0032	Rhode Island ID # 158
Nebraska Accredited	West Virginia ID # 292
Navy Facilities Engineering Service Center Approved	

<sup>1</sup> Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable, except as noted in the laboratory case narrative provided. For a specific list of accredited analytes, refer to the certifications section at [www.caslab.com](http://www.caslab.com).

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Enviro Group Limited  
 Project: LEICA LE-0614  
 Sample Matrix: Water  
 Sample Name: Trip Blank  
 Lab Code: R1000483-001

Service Request: R1000483  
 Date Collected: 1/27/10  
 Date Received: 1/27/10  
 Units: µg/L  
 Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Acetone	20	U	20	1	NA	2/4/10 17:34		188649	
Benzene	5.0	U	5.0	1	NA	2/4/10 17:34		188649	
Bromodichloromethane	5.0	U	5.0	1	NA	2/4/10 17:34		188649	
Bromoform	5.0	U	5.0	1	NA	2/4/10 17:34		188649	
Bromomethane	5.0	U	5.0	1	NA	2/4/10 17:34		188649	
2-Butanone (MEK)	10	U	10	1	NA	2/4/10 17:34		188649	
Carbon Disulfide	10	U	10	1	NA	2/4/10 17:34		188649	
Carbon Tetrachloride	5.0	U	5.0	1	NA	2/4/10 17:34		188649	
Chlorobenzene	5.0	U	5.0	1	NA	2/4/10 17:34		188649	
Chloroethane	5.0	U	5.0	1	NA	2/4/10 17:34		188649	
Chloroform	5.0	U	5.0	1	NA	2/4/10 17:34		188649	
Chloromethane	5.0	U	5.0	1	NA	2/4/10 17:34		188649	
Dibromochloromethane	5.0	U	5.0	1	NA	2/4/10 17:34		188649	
1,1-Dichloroethane	5.0	U	5.0	1	NA	2/4/10 17:34		188649	
1,2-Dichloroethane	5.0	U	5.0	1	NA	2/4/10 17:34		188649	
1,1-Dichloroethene	5.0	U	5.0	1	NA	2/4/10 17:34		188649	
cis-1,2-Dichloroethene	5.0	U	5.0	1	NA	2/4/10 17:34		188649	
trans-1,2-Dichloroethene	5.0	U	5.0	1	NA	2/4/10 17:34		188649	
1,2-Dichloropropane	5.0	U	5.0	1	NA	2/4/10 17:34		188649	
cis-1,3-Dichloropropene	5.0	U	5.0	1	NA	2/4/10 17:34		188649	
trans-1,3-Dichloropropene	5.0	U	5.0	1	NA	2/4/10 17:34		188649	
Ethylbenzene	5.0	U	5.0	1	NA	2/4/10 17:34		188649	
2-Hexanone	10	U	10	1	NA	2/4/10 17:34		188649	
Methylene Chloride	5.0	U	5.0	1	NA	2/4/10 17:34		188649	
4-Methyl-2-pentanone (MIBK)	10	U	10	1	NA	2/4/10 17:34		188649	
Styrene	5.0	U	5.0	1	NA	2/4/10 17:34		188649	
1,1,2,2-Tetrachloroethane	5.0	U	5.0	1	NA	2/4/10 17:34		188649	
Tetrachloroethene	5.0	U	5.0	1	NA	2/4/10 17:34		188649	
Toluene	5.0	U	5.0	1	NA	2/4/10 17:34		188649	
1,1,1-Trichloroethane	5.0	U	5.0	1	NA	2/4/10 17:34		188649	
1,1,2-Trichloroethane	5.0	U	5.0	1	NA	2/4/10 17:34		188649	
Trichloroethene	5.0	U	5.0	1	NA	2/4/10 17:34		188649	
Vinyl Chloride	5.0	U	5.0	1	NA	2/4/10 17:34		188649	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Enviro Group Limited  
**Project:** LEICA LE-0614  
**Sample Matrix:** Water  
**Sample Name:** Trip Blank  
**Lab Code:** R1000483-001

**Service Request:** R1000483  
**Date Collected:** 1/27/10  
**Date Received:** 1/27/10  
**Units:** µg/L  
**Basis:** NA

## Volatile Organic Compounds by GC/MS

**Analytical Method:** 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
o-Xylene	5.0	U	5.0	1	NA	2/4/10 17:34		188649	
m,p-Xylenes	5.0	U	5.0	1	NA	2/4/10 17:34		188649	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	95	85-122	2/4/10 17:34		
Toluene-d8	102	87-121	2/4/10 17:34		
Dibromofluoromethane	104	89-119	2/4/10 17:34		

**Comments:**

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Enviro Group Limited  
**Project:** LEICA LE-0614  
**Sample Matrix:** Water  
**Sample Name:** MW-26  
**Lab Code:** R1000483-002

**Service Request:** R1000483  
**Date Collected:** 1/27/10 0925  
**Date Received:** 1/27/10

**Basis:** NA

## General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Carbon, Total Organic (TOC)	SM20 5310 C	6.3		mg/L	3.0	3	NA	2/5/10 17:01
Chloride	300.0	532		mg/L	20	100	NA	2/3/10 02:24
Iron, Divalent (Ferrous Iron)	SM 3500-Fe B.4.c	0.59		mg/L	0.10	1	NA	1/27/10 16:10
Nitrate as Nitrogen	300.0	0.50	U	mg/L	0.50	10	NA	1/28/10 02:30
pH	SM 4500-H+ B	7.22		pH Units		1	NA	1/27/10 15:45
Sulfate	300.0	57.5		mg/L	2.0	10	NA	1/28/10 02:30

Comments:

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**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Report

**Client:** Enviro Group Limited  
**Project:** LEICA LE-0614  
**Sample Matrix:** Water  
**Sample Name:** MW-26 Dissolved  
**Lab Code:** R1000483-003

**Service Request:** R1000483  
**Date Collected:** 1/27/10 0925  
**Date Received:** 1/27/10

**Basis:** NA

**Iron, Divalent, Dissolved Phenanthroline Method 20th Ed.**

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Iron, Divalent (Ferrous Iron), Dissolved	SM 3500-Fe B.4.c	0.20	mg/L	0.10	1	NA	1/27/10 16:10

**Comments:**

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## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Enviro Group Limited  
**Project:** LEICA LE-0614  
**Sample Matrix:** Water  
**Sample Name:** MW-26  
**Lab Code:** R1000483-002

**Service Request:** R1000483  
**Date Collected:** 1/27/10 0925  
**Date Received:** 1/27/10

**Basis:** NA

## Manganese, Total, by Inductively Coupled Plasma-Atomic Emission Spectrometry

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Total	6010B	1110	µg/L	10	1	2/ 1/10	2/4/10 19:35

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Enviro Group Limited  
**Project:** LEICA LE-0614  
**Sample Matrix:** Water  
**Sample Name:** MW-26 Dissolved  
**Lab Code:** R1000483-003

**Service Request:** R1000483  
**Date Collected:** 1/27/10 0925  
**Date Received:** 1/27/10

**Basis:** NA

**Manganese, Dissolved, by Inductively Coupled Plasma-Atomic Emission Spectrometry**

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Dissolved	6010B	164		µg/L	10	1	2/ 1/10	2/4/10 19:41

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Enviro Group Limited  
 Project: LEICA LE-0614  
 Sample Matrix: Water  
 Sample Name: MW-26  
 Lab Code: R1000483-002

Service Request: R1000483  
 Date Collected: 1/27/10 0925  
 Date Received: 1/27/10  
 Units: µg/L  
 Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Acetone	20	U	20	1	NA	2/4/10 18:01		188649	
Benzene	5.0	U	5.0	1	NA	2/4/10 18:01		188649	
Bromodichloromethane	5.0	U	5.0	1	NA	2/4/10 18:01		188649	
Bromoform	5.0	U	5.0	1	NA	2/4/10 18:01		188649	
Bromomethane	5.0	U	5.0	1	NA	2/4/10 18:01		188649	
2-Butanone (MEK)	10	U	10	1	NA	2/4/10 18:01		188649	
Carbon Disulfide	10	U	10	1	NA	2/4/10 18:01		188649	
Carbon Tetrachloride	5.0	U	5.0	1	NA	2/4/10 18:01		188649	
Chlorobenzene	5.0	U	5.0	1	NA	2/4/10 18:01		188649	
Chloroethane	5.0	U	5.0	1	NA	2/4/10 18:01		188649	
Chloroform	5.0	U	5.0	1	NA	2/4/10 18:01		188649	
Chloromethane	5.0	U	5.0	1	NA	2/4/10 18:01		188649	
Dibromochloromethane	5.0	U	5.0	1	NA	2/4/10 18:01		188649	
1,1-Dichloroethane	5.0	U	5.0	1	NA	2/4/10 18:01		188649	
1,2-Dichloroethane	5.0	U	5.0	1	NA	2/4/10 18:01		188649	
1,1-Dichloroethene	5.0	U	5.0	1	NA	2/4/10 18:01		188649	
cis-1,2-Dichloroethene	5.2		5.0	1	NA	2/4/10 18:01		188649	
trans-1,2-Dichloroethene	5.0	U	5.0	1	NA	2/4/10 18:01		188649	
1,2-Dichloropropane	5.0	U	5.0	1	NA	2/4/10 18:01		188649	
cis-1,3-Dichloropropene	5.0	U	5.0	1	NA	2/4/10 18:01		188649	
trans-1,3-Dichloropropene	5.0	U	5.0	1	NA	2/4/10 18:01		188649	
Ethylbenzene	5.0	U	5.0	1	NA	2/4/10 18:01		188649	
2-Hexanone	10	U	10	1	NA	2/4/10 18:01		188649	
Methylene Chloride	5.0	U	5.0	1	NA	2/4/10 18:01		188649	
4-Methyl-2-pentanone (MIBK)	10	U	10	1	NA	2/4/10 18:01		188649	
Styrene	5.0	U	5.0	1	NA	2/4/10 18:01		188649	
1,1,2,2-Tetrachloroethane	5.0	U	5.0	1	NA	2/4/10 18:01		188649	
Tetrachloroethene	5.0	U	5.0	1	NA	2/4/10 18:01		188649	
Toluene	5.0	U	5.0	1	NA	2/4/10 18:01		188649	
1,1,1-Trichloroethane	5.0	U	5.0	1	NA	2/4/10 18:01		188649	
1,1,2-Trichloroethane	5.0	U	5.0	1	NA	2/4/10 18:01		188649	
Trichloroethene	5.0	U	5.0	1	NA	2/4/10 18:01		188649	
Vinyl Chloride	5.0	U	5.0	1	NA	2/4/10 18:01		188649	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Enviro Group Limited  
**Project:** LEICA LE-0614  
**Sample Matrix:** Water  
**Sample Name:** MW-26  
**Lab Code:** R1000483-002

**Service Request:** R1000483  
**Date Collected:** 1/27/10 0925  
**Date Received:** 1/27/10  
**Units:** µg/L  
**Basis:** NA

## Volatile Organic Compounds by GC/MS

**Analytical Method:** 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
o-Xylene	5.0	U	5.0	1	NA	2/4/10 18:01		188649	
m,p-Xylenes	5.0	U	5.0	1	NA	2/4/10 18:01		188649	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	97	85-122	2/4/10 18:01		
Toluene-d8	104	87-121	2/4/10 18:01		
Dibromofluoromethane	105	89-119	2/4/10 18:01		

**Comments:**

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Enviro Group Limited  
**Project:** LEICA LE-0614  
**Sample Matrix:** Water  
**Sample Name:** MW-25A  
**Lab Code:** R1000483-004

**Service Request:** R1000483  
**Date Collected:** 1/27/10 1050  
**Date Received:** 1/27/10

**Basis:** NA

## General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Carbon, Total Organic (TOC)	SM20 5310 C	3.4		mg/L	1.0	1	NA	2/2/10 04:47
Chloride	300.0	53.9		mg/L	2.0	10	NA	1/28/10 03:15
Iron, Divalent (Ferrous Iron)	SM 3500-Fe B.4.c	0.13		mg/L	0.10	1	NA	1/27/10 16:10
Nitrate as Nitrogen	300.0	0.50	U	mg/L	0.50	10	NA	1/28/10 03:15
pH	SM 4500-H+ B	9.26		pH Units		1	NA	1/27/10 15:45
Sulfate	300.0	41.3		mg/L	2.0	10	NA	1/28/10 03:15

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Enviro Group Limited  
Project: LEICA LE-0614  
Sample Matrix: Water  
Sample Name: MW-25A Dissolved  
Lab Code: R1000483-005

Service Request: R1000483  
Date Collected: 1/27/10 1050  
Date Received: 1/27/10

Basis: NA

## Iron, Divalent, Dissolved Phenanthroline Method 20th Ed.

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Iron, Divalent (Ferrous Iron), Dissolved	SM 3500-Fe B.4.c	0.10 U	mg/L	0.10	1	NA	1/27/10 16:10

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Enviro Group Limited  
**Project:** LEICA LE-0614  
**Sample Matrix:** Water  
**Sample Name:** MW-25A  
**Lab Code:** R1000483-004

**Service Request:** R1000483  
**Date Collected:** 1/27/10 1050  
**Date Received:** 1/27/10

**Basis:** NA

## Manganese, Total, by Inductively Coupled Plasma-Atomic Emission Spectrometry

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Total	6010B	215	µg/L	10	1	2/ 1/10	2/4/10 19:47

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Enviro Group Limited  
**Project:** LEICA LE-0614  
**Sample Matrix:** Water  
**Sample Name:** MW-25A Dissolved  
**Lab Code:** R1000483-005

**Service Request:** R1000483  
**Date Collected:** 1/27/10 1050  
**Date Received:** 1/27/10

**Basis:** NA

## Manganese, Dissolved, by Inductively Coupled Plasma-Atomic Emission Spectrometry

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Dissolved	6010B	10	U	µg/L	10	1	2/ 1/10	2/4/10 20:04

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Enviro Group Limited  
 Project: LEICA LE-0614  
 Sample Matrix: Water  
 Sample Name: MW-25A  
 Lab Code: R1000483-004

Service Request: R1000483  
 Date Collected: 1/27/10 1050  
 Date Received: 1/27/10  
 Units: µg/L  
 Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Acetone	20	U	20	1	NA	2/4/10 18:29		188649	
Benzene	5.0	U	5.0	1	NA	2/4/10 18:29		188649	
Bromodichloromethane	5.0	U	5.0	1	NA	2/4/10 18:29		188649	
Bromoform	5.0	U	5.0	1	NA	2/4/10 18:29		188649	
Bromomethane	5.0	U	5.0	1	NA	2/4/10 18:29		188649	
2-Butanone (MEK)	10	U	10	1	NA	2/4/10 18:29		188649	
Carbon Disulfide	10	U	10	1	NA	2/4/10 18:29		188649	
Carbon Tetrachloride	5.0	U	5.0	1	NA	2/4/10 18:29		188649	
Chlorobenzene	5.0	U	5.0	1	NA	2/4/10 18:29		188649	
Chloroethane	5.0	U	5.0	1	NA	2/4/10 18:29		188649	
Chloroform	6.1		5.0	1	NA	2/4/10 18:29		188649	
Chloromethane	5.0	U	5.0	1	NA	2/4/10 18:29		188649	
Dibromochloromethane	5.0	U	5.0	1	NA	2/4/10 18:29		188649	
1,1-Dichloroethane	5.0	U	5.0	1	NA	2/4/10 18:29		188649	
1,2-Dichloroethane	5.0	U	5.0	1	NA	2/4/10 18:29		188649	
1,1-Dichloroethene	5.0	U	5.0	1	NA	2/4/10 18:29		188649	
cis-1,2-Dichloroethene	6.4		5.0	1	NA	2/4/10 18:29		188649	
trans-1,2-Dichloroethene	5.0	U	5.0	1	NA	2/4/10 18:29		188649	
1,2-Dichloropropane	5.0	U	5.0	1	NA	2/4/10 18:29		188649	
cis-1,3-Dichloropropene	5.0	U	5.0	1	NA	2/4/10 18:29		188649	
trans-1,3-Dichloropropene	5.0	U	5.0	1	NA	2/4/10 18:29		188649	
Ethylbenzene	5.0	U	5.0	1	NA	2/4/10 18:29		188649	
2-Hexanone	10	U	10	1	NA	2/4/10 18:29		188649	
Methylene Chloride	5.0	U	5.0	1	NA	2/4/10 18:29		188649	
4-Methyl-2-pentanone (MIBK)	10	U	10	1	NA	2/4/10 18:29		188649	
Styrene	5.0	U	5.0	1	NA	2/4/10 18:29		188649	
1,1,2,2-Tetrachloroethane	5.0	U	5.0	1	NA	2/4/10 18:29		188649	
Tetrachloroethene	5.0	U	5.0	1	NA	2/4/10 18:29		188649	
Toluene	5.0	U	5.0	1	NA	2/4/10 18:29		188649	
1,1,1-Trichloroethane	5.0	U	5.0	1	NA	2/4/10 18:29		188649	
1,1,2-Trichloroethane	5.0	U	5.0	1	NA	2/4/10 18:29		188649	
Trichloroethene	5.0	U	5.0	1	NA	2/4/10 18:29		188649	
Vinyl Chloride	23		5.0	1	NA	2/4/10 18:29		188649	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Enviro Group Limited  
Project: LEICA LE-0614  
Sample Matrix: Water  
Sample Name: MW-25A  
Lab Code: R1000483-004

Service Request: R1000483  
Date Collected: 1/27/10 1050  
Date Received: 1/27/10  
Units: µg/L  
Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
o-Xylene	5.0	U	5.0	1	NA	2/4/10 18:29		188649	
m,p-Xylenes	5.0	U	5.0	1	NA	2/4/10 18:29		188649	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	99	85-122	2/4/10 18:29		
Toluene-d8	105	87-121	2/4/10 18:29		
Dibromofluoromethane	105	89-119	2/4/10 18:29		

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Enviro Group Limited  
**Project:** LEICA LE-0614  
**Sample Matrix:** Water  
**Sample Name:** MW-25  
**Lab Code:** R1000483-006

**Service Request:** R1000483  
**Date Collected:** 1/27/10 1105  
**Date Received:** 1/27/10

**Basis:** NA

## General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Carbon, Total Organic (TOC)	SM20 5310 C	4.8		mg/L	1.0	1	NA	2/2/10 05:05
Chloride	300.0	33.0		mg/L	2.0	10	NA	1/28/10 03:30
Iron, Divalent (Ferrous Iron)	SM 3500-Fe B.4.c	2.99		mg/L	0.20	2	NA	1/27/10 16:10
Nitrate as Nitrogen	300.0	0.50	U	mg/L	0.50	10	NA	1/28/10 03:30
pH	SM 4500-H+ B	7.15		pH Units		1	NA	1/27/10 15:45
Sulfate	300.0	94.1		mg/L	2.0	10	NA	1/28/10 03:30

Comments:

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**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Report

**Client:** Enviro Group Limited  
**Project:** LEICA LE-0614  
**Sample Matrix:** Water  
**Sample Name:** MW-25 Dissolved  
**Lab Code:** R1000483-007

**Service Request:** R1000483  
**Date Collected:** 1/27/10 1105  
**Date Received:** 1/27/10

**Basis:** NA

**Iron, Divalent, Dissolved Phenanthroline Method 20th Ed.**

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Iron, Divalent (Ferrous Iron), Dissolved	SM 3500-Fe B.4.c	0.19	mg/L	0.10	1	NA	1/27/10 16:10

Comments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Report

**Client:** Enviro Group Limited  
**Project:** LEICA LE-0614  
**Sample Matrix:** Water  
**Sample Name:** MW-25  
**Lab Code:** R1000483-006

**Service Request:** R1000483  
**Date Collected:** 1/27/10 1105  
**Date Received:** 1/27/10

**Basis:** NA

**Manganese, Total, by Inductively Coupled Plasma-Atomic Emission Spectrometry**

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Total	6010B	153	µg/L	10	1	2/ 1/10	2/4/10 20:10

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Enviro Group Limited  
**Project:** LEICA LE-0614  
**Sample Matrix:** Water  
**Sample Name:** MW-25 Dissolved  
**Lab Code:** R1000483-007

**Service Request:** R1000483  
**Date Collected:** 1/27/10 1105  
**Date Received:** 1/27/10

**Basis:** NA

**Manganese, Dissolved, by Inductively Coupled Plasma-Atomic Emission Spectrometry**

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Dissolved	6010B	124	µg/L	10	1	2/ 1/10	2/4/10 20:17

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Enviro Group Limited  
 Project: LEICA LE-0614  
 Sample Matrix: Water  
 Sample Name: MW-25  
 Lab Code: R1000483-006

Service Request: R1000483  
 Date Collected: 1/27/10 1105  
 Date Received: 1/27/10  
 Units: µg/L  
 Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Acetone	20	U	20	1	NA	2/4/10 18:56		188649	
Benzene	5.0	U	5.0	1	NA	2/4/10 18:56		188649	
Bromodichloromethane	5.0	U	5.0	1	NA	2/4/10 18:56		188649	
Bromoform	5.0	U	5.0	1	NA	2/4/10 18:56		188649	
Bromomethane	5.0	U	5.0	1	NA	2/4/10 18:56		188649	
2-Butanone (MEK)	10	U	10	1	NA	2/4/10 18:56		188649	
Carbon Disulfide	10	U	10	1	NA	2/4/10 18:56		188649	
Carbon Tetrachloride	5.0	U	5.0	1	NA	2/4/10 18:56		188649	
Chlorobenzene	5.0	U	5.0	1	NA	2/4/10 18:56		188649	
Chloroethane	5.0	U	5.0	1	NA	2/4/10 18:56		188649	
Chloroform	5.0	U	5.0	1	NA	2/4/10 18:56		188649	
Chloromethane	5.0	U	5.0	1	NA	2/4/10 18:56		188649	
Dibromochloromethane	5.0	U	5.0	1	NA	2/4/10 18:56		188649	
1,1-Dichloroethane	5.0	U	5.0	1	NA	2/4/10 18:56		188649	
1,2-Dichloroethane	5.0	U	5.0	1	NA	2/4/10 18:56		188649	
1,1-Dichloroethene	5.0	U	5.0	1	NA	2/4/10 18:56		188649	
cis-1,2-Dichloroethene	5.0	U	5.0	1	NA	2/4/10 18:56		188649	
trans-1,2-Dichloroethene	5.0	U	5.0	1	NA	2/4/10 18:56		188649	
1,2-Dichloropropane	5.0	U	5.0	1	NA	2/4/10 18:56		188649	
cis-1,3-Dichloropropene	5.0	U	5.0	1	NA	2/4/10 18:56		188649	
trans-1,3-Dichloropropene	5.0	U	5.0	1	NA	2/4/10 18:56		188649	
Ethylbenzene	5.0	U	5.0	1	NA	2/4/10 18:56		188649	
2-Hexanone	10	U	10	1	NA	2/4/10 18:56		188649	
Methylene Chloride	5.0	U	5.0	1	NA	2/4/10 18:56		188649	
4-Methyl-2-pentanone (MIBK)	10	U	10	1	NA	2/4/10 18:56		188649	
Styrene	5.0	U	5.0	1	NA	2/4/10 18:56		188649	
1,1,2,2-Tetrachloroethane	5.0	U	5.0	1	NA	2/4/10 18:56		188649	
Tetrachloroethene	5.0	U	5.0	1	NA	2/4/10 18:56		188649	
Toluene	5.0	U	5.0	1	NA	2/4/10 18:56		188649	
1,1,1-Trichloroethane	5.0	U	5.0	1	NA	2/4/10 18:56		188649	
1,1,2-Trichloroethane	5.0	U	5.0	1	NA	2/4/10 18:56		188649	
Trichloroethene	5.0	U	5.0	1	NA	2/4/10 18:56		188649	
Vinyl Chloride	5.0	U	5.0	1	NA	2/4/10 18:56		188649	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Enviro Group Limited  
**Project:** LEICA LE-0614  
**Sample Matrix:** Water  
**Sample Name:** MW-25  
**Lab Code:** R1000483-006

**Service Request:** R1000483  
**Date Collected:** 1/27/10 1105  
**Date Received:** 1/27/10  
**Units:** µg/L  
**Basis:** NA

## Volatile Organic Compounds by GC/MS

**Analytical Method:** 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
o-Xylene	5.0	U	5.0	1	NA	2/4/10 18:56		188649	
m,p-Xylenes	5.0	U	5.0	1	NA	2/4/10 18:56		188649	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	99	85-122	2/4/10 18:56		
Toluene-d8	106	87-121	2/4/10 18:56		
Dibromofluoromethane	109	89-119	2/4/10 18:56		

**Comments:**

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Enviro Group Limited  
**Project:** LEICA LE-0614  
**Sample Matrix:** Water  
**Sample Name:** MW-26A  
**Lab Code:** R1000483-008

**Service Request:** R1000483  
**Date Collected:** 1/27/10 1240  
**Date Received:** 1/27/10

**Basis:** NA

## General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Carbon, Total Organic (TOC)	SM20 5310 C	7.3		mg/L	1.0	1	NA	2/2/10 05:23
Chloride	300.0	85.5		mg/L	2.0	10	NA	1/28/10 03:45
Iron, Divalent (Ferrous Iron)	SM 3500-Fe B.4.c	0.37		mg/L	0.10	1	NA	1/27/10 16:10
Nitrate as Nitrogen	300.0	0.50	U	mg/L	0.50	10	NA	1/28/10 03:45
pH	SM 4500-H+ B	8.02		pH Units		1	NA	1/27/10 15:45
Sulfate	300.0	76.1		mg/L	2.0	10	NA	1/28/10 03:45

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Enviro Group Limited  
**Project:** LEICA LE-0614  
**Sample Matrix:** Water  
**Sample Name:** MW-26A Dissolved  
**Lab Code:** R1000483-009

**Service Request:** R1000483  
**Date Collected:** 1/27/10 1240  
**Date Received:** 1/27/10

**Basis:** NA

## Iron, Divalent, Dissolved Phenanthroline Method 20th Ed.

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Iron, Divalent (Ferrous Iron), Dissolved	SM 3500-Fe B.4.c	0.10 U	mg/L	0.10	1	NA	1/27/10 16:10

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Enviro Group Limited  
**Project:** LEICA LE-0614  
**Sample Matrix:** Water  
**Sample Name:** MW-26A  
**Lab Code:** R1000483-008

**Service Request:** R1000483  
**Date Collected:** 1/27/10 1240  
**Date Received:** 1/27/10

**Basis:** NA

## Manganese, Total, by Inductively Coupled Plasma-Atomic Emission Spectrometry

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Total	6010B	257	µg/L	10	1	2/ 1/10	2/4/10 20:23

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Enviro Group Limited  
**Project:** LEICA LE-0614  
**Sample Matrix:** Water  
**Sample Name:** MW-26A Dissolved  
**Lab Code:** R1000483-009

**Service Request:** R1000483  
**Date Collected:** 1/27/10 1240  
**Date Received:** 1/27/10

**Basis:** NA

## Manganese, Dissolved, by Inductively Coupled Plasma-Atomic Emission Spectrometry

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Dissolved	6010B	38	µg/L	10	1	2/ 1/10	2/4/10 20:28

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Enviro Group Limited  
 Project: LEICA LE-0614  
 Sample Matrix: Water  
 Sample Name: MW-26A  
 Lab Code: R1000483-008

Service Request: R1000483  
 Date Collected: 1/27/10 1240  
 Date Received: 1/27/10  
 Units: µg/L  
 Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Acetone	100	U	100	5	NA	2/5/10 12:24		188813	
Benzene	25	U	25	5	NA	2/5/10 12:24		188813	
Bromodichloromethane	25	U	25	5	NA	2/5/10 12:24		188813	
Bromoform	25	U	25	5	NA	2/5/10 12:24		188813	
Bromomethane	25	U	25	5	NA	2/5/10 12:24		188813	
2-Butanone (MEK)	50	U	50	5	NA	2/5/10 12:24		188813	
Carbon Disulfide	50	U	50	5	NA	2/5/10 12:24		188813	
Carbon Tetrachloride	25	U	25	5	NA	2/5/10 12:24		188813	
Chlorobenzene	25	U	25	5	NA	2/5/10 12:24		188813	
Chloroethane	25	U	25	5	NA	2/5/10 12:24		188813	
Chloroform	25	U	25	5	NA	2/5/10 12:24		188813	
Chloromethane	25	U	25	5	NA	2/5/10 12:24		188813	
Dibromochloromethane	25	U	25	5	NA	2/5/10 12:24		188813	
1,1-Dichloroethane	25	U	25	5	NA	2/5/10 12:24		188813	
1,2-Dichloroethane	25	U	25	5	NA	2/5/10 12:24		188813	
1,1-Dichloroethene	25	U	25	5	NA	2/5/10 12:24		188813	
cis-1,2-Dichloroethene	490		25	5	NA	2/5/10 12:24		188813	
trans-1,2-Dichloroethene	25	U	25	5	NA	2/5/10 12:24		188813	
1,2-Dichloropropane	25	U	25	5	NA	2/5/10 12:24		188813	
cis-1,3-Dichloropropene	25	U	25	5	NA	2/5/10 12:24		188813	
trans-1,3-Dichloropropene	25	U	25	5	NA	2/5/10 12:24		188813	
Ethylbenzene	25	U	25	5	NA	2/5/10 12:24		188813	
2-Hexanone	50	U	50	5	NA	2/5/10 12:24		188813	
Methylene Chloride	25	U	25	5	NA	2/5/10 12:24		188813	
4-Methyl-2-pentanone (MIBK)	50	U	50	5	NA	2/5/10 12:24		188813	
Styrene	25	U	25	5	NA	2/5/10 12:24		188813	
1,1,2,2-Tetrachloroethane	25	U	25	5	NA	2/5/10 12:24		188813	
Tetrachloroethene	25	U	25	5	NA	2/5/10 12:24		188813	
Toluene	25	U	25	5	NA	2/5/10 12:24		188813	
1,1,1-Trichloroethane	25	U	25	5	NA	2/5/10 12:24		188813	
1,1,2-Trichloroethane	25	U	25	5	NA	2/5/10 12:24		188813	
Trichloroethene	25	U	25	5	NA	2/5/10 12:24		188813	
Vinyl Chloride	270		25	5	NA	2/5/10 12:24		188813	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Enviro Group Limited  
Project: LEICA LE-0614  
Sample Matrix: Water  
Sample Name: MW-26A  
Lab Code: R1000483-008

Service Request: R1000483  
Date Collected: 1/27/10 1240  
Date Received: 1/27/10  
Units: µg/L  
Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
o-Xylene	25	U	25	5	NA	2/5/10 12:24		188813	
m,p-Xylenes	25	U	25	5	NA	2/5/10 12:24		188813	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	101	85-122	2/5/10 12:24		
Toluene-d8	109	87-121	2/5/10 12:24		
Dibromofluoromethane	107	89-119	2/5/10 12:24		

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Enviro Group Limited  
**Project:** LEICA LE-0614  
**Sample Matrix:** Water  
**Sample Name:** Dup 01/27/10  
**Lab Code:** R1000483-010

**Service Request:** R1000483  
**Date Collected:** 1/27/10  
**Date Received:** 1/27/10

**Basis:** NA

## General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Carbon, Total Organic (TOC)	SM20 5310 C	5.4		mg/L	3.0	3	NA	2/5/10 17:56
Chloride	300.0	523		mg/L	20	100	NA	2/3/10 03:13
Iron, Divalent (Ferrous Iron)	SM 3500-Fe B.4.c	0.68		mg/L	0.10	1	NA	1/27/10 16:10
Nitrate as Nitrogen	300.0	0.50	U	mg/L	0.50	10	NA	1/28/10 04:00
pH	SM 4500-H+ B	7.28		pH Units		1	NA	1/27/10 15:45
Sulfate	300.0	57.8		mg/L	2.0	10	NA	1/28/10 04:00

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Enviro Group Limited  
**Project:** LEICA LE-0614  
**Sample Matrix:** Water  
**Sample Name:** Dup 01/27/10 Dissolved  
**Lab Code:** R1000483-011

**Service Request:** R1000483  
**Date Collected:** 1/27/10  
**Date Received:** 1/27/10

**Basis:** NA

## Iron, Divalent, Dissolved Phenanthroline Method 20th Ed.

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Iron, Divalent (Ferrous Iron), Dissolved	SM 3500-Fe B.4.c	0.32	mg/L	0.10	1	NA	1/27/10 16:10

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Enviro Group Limited  
**Project:** LEICA LE-0614  
**Sample Matrix:** Water  
**Sample Name:** Dup 01/27/10  
**Lab Code:** R1000483-010

**Service Request:** R1000483  
**Date Collected:** 1/27/10  
**Date Received:** 1/27/10

**Basis:** NA

## Manganese, Total, by Inductively Coupled Plasma-Atomic Emission Spectrometry

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Total	6010B	1110	µg/L	10	1	2/ 1/10	2/4/10 20:34

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Enviro Group Limited  
**Project:** LEICA LE-0614  
**Sample Matrix:** Water  
**Sample Name:** Dup 01/27/10 Dissolved  
**Lab Code:** R1000483-011

**Service Request:** R1000483  
**Date Collected:** 1/27/10  
**Date Received:** 1/27/10

**Basis:** NA

## Manganese, Dissolved, by Inductively Coupled Plasma-Atomic Emission Spectrometry

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Dissolved	6010B	159	µg/L	10	1	2/ 1/10	2/4/10 20:40

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Enviro Group Limited  
 Project: LEICA LE-0614  
 Sample Matrix: Water  
 Sample Name: Dup 01/27/10  
 Lab Code: R1000483-010

Service Request: R1000483  
 Date Collected: 1/27/10  
 Date Received: 1/27/10  
 Units: µg/L  
 Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Acetone	20	U	20	1	NA	2/5/10 11:56		188813	
Benzene	5.0	U	5.0	1	NA	2/5/10 11:56		188813	
Bromodichloromethane	5.0	U	5.0	1	NA	2/5/10 11:56		188813	
Bromoform	5.0	U	5.0	1	NA	2/5/10 11:56		188813	
Bromomethane	5.0	U	5.0	1	NA	2/5/10 11:56		188813	
2-Butanone (MEK)	10	U	10	1	NA	2/5/10 11:56		188813	
Carbon Disulfide	10	U	10	1	NA	2/5/10 11:56		188813	
Carbon Tetrachloride	5.0	U	5.0	1	NA	2/5/10 11:56		188813	
Chlorobenzene	5.0	U	5.0	1	NA	2/5/10 11:56		188813	
Chloroethane	5.0	U	5.0	1	NA	2/5/10 11:56		188813	
Chloroform	5.0	U	5.0	1	NA	2/5/10 11:56		188813	
Chloromethane	5.0	U	5.0	1	NA	2/5/10 11:56		188813	
Dibromochloromethane	5.0	U	5.0	1	NA	2/5/10 11:56		188813	
1,1-Dichloroethane	5.0	U	5.0	1	NA	2/5/10 11:56		188813	
1,2-Dichloroethane	5.0	U	5.0	1	NA	2/5/10 11:56		188813	
1,1-Dichloroethene	5.0	U	5.0	1	NA	2/5/10 11:56		188813	
cis-1,2-Dichloroethene	5.4		5.0	1	NA	2/5/10 11:56		188813	
trans-1,2-Dichloroethene	5.0	U	5.0	1	NA	2/5/10 11:56		188813	
1,2-Dichloropropane	5.0	U	5.0	1	NA	2/5/10 11:56		188813	
cis-1,3-Dichloropropene	5.0	U	5.0	1	NA	2/5/10 11:56		188813	
trans-1,3-Dichloropropene	5.0	U	5.0	1	NA	2/5/10 11:56		188813	
Ethylbenzene	5.0	U	5.0	1	NA	2/5/10 11:56		188813	
2-Hexanone	10	U	10	1	NA	2/5/10 11:56		188813	
Methylene Chloride	5.0	U	5.0	1	NA	2/5/10 11:56		188813	
4-Methyl-2-pentanone (MIBK)	10	U	10	1	NA	2/5/10 11:56		188813	
Styrene	5.0	U	5.0	1	NA	2/5/10 11:56		188813	
1,1,2,2-Tetrachloroethane	5.0	U	5.0	1	NA	2/5/10 11:56		188813	
Tetrachloroethene	5.0	U	5.0	1	NA	2/5/10 11:56		188813	
Toluene	5.0	U	5.0	1	NA	2/5/10 11:56		188813	
1,1,1-Trichloroethane	5.0	U	5.0	1	NA	2/5/10 11:56		188813	
1,1,2-Trichloroethane	5.0	U	5.0	1	NA	2/5/10 11:56		188813	
Trichloroethene	5.0	U	5.0	1	NA	2/5/10 11:56		188813	
Vinyl Chloride	5.0	U	5.0	1	NA	2/5/10 11:56		188813	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Enviro Group Limited  
**Project:** LEICA LE-0614  
**Sample Matrix:** Water  
**Sample Name:** Dup 01/27/10  
**Lab Code:** R1000483-010

**Service Request:** R1000483  
**Date Collected:** 1/27/10  
**Date Received:** 1/27/10  
**Units:** µg/L  
**Basis:** NA

## Volatile Organic Compounds by GC/MS

**Analytical Method:** 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
o-Xylene	5.0	U	5.0	1	NA	2/5/10 11:56		188813	
m,p-Xylenes	5.0	U	5.0	1	NA	2/5/10 11:56		188813	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	101	85-122	2/5/10 11:56		
Toluene-d8	110	87-121	2/5/10 11:56		
Dibromofluoromethane	107	89-119	2/5/10 11:56		

**Comments:**

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Enviro Group Limited  
**Project:** LEICA LE-0614  
**Sample Matrix:** Water  
**Sample Name:** Method Blank  
**Lab Code:** R1000483-MB1

**Service Request:** R1000483  
**Date Collected:** NA  
**Date Received:** NA  
**Basis:** NA

## General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Carbon, Total Organic (TOC)	SM20 5310 C	1.0	U	mg/L	1.0	1	NA	2/2/10 02:58
Chloride	300.0	0.20	U	mg/L	0.20	1	NA	1/27/10 23:14
Iron, Divalent (Ferrous Iron)	SM 3500-Fe B.4.c	0.10	U	mg/L	0.10	1	NA	1/27/10 16:10
Iron, Divalent (Ferrous Iron), Dissolved	SM 3500-Fe B.4.c	0.10	U	mg/L	0.10	1	NA	1/27/10 16:10
Nitrate as Nitrogen	300.0	0.050	U	mg/L	0.050	1	NA	1/27/10 23:14
Sulfate	300.0	0.20	U	mg/L	0.20	1	NA	1/27/10 23:14

Comments:

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## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Enviro Group Limited  
**Project:** LEICA LE-0614  
**Sample Matrix:** Water  
**Sample Name:** Method Blank  
**Lab Code:** R1000483-MB2

**Service Request:** R1000483  
**Date Collected:** NA  
**Date Received:** NA  
**Basis:** NA

## General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Carbon, Total Organic (TOC)	SM20 5310 C	1.0	U	mg/L	1.0	1	NA	2/5/10 16:25
Chloride	300.0	0.20	U	mg/L	0.20	1	NA	2/3/10 01:35

Comments:

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## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Enviro Group Limited  
**Project:** LEICA LE-0614  
**Sample Matrix:** Water  
**Sample Name:** Method Blank  
**Lab Code:** R1000483-MB1

**Service Request:** R1000483  
**Date Collected:** NA  
**Date Received:** NA  
**Basis:** NA

## Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Dissolved	6010B	10	U	µg/L	10	1	2/ 1/10	2/4/10 17:50
Manganese, Total	6010B	10	U	µg/L	10	1	2/ 1/10	2/4/10 17:50

Comments:

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## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Enviro Group Limited  
**Project:** LEICA LE-0614  
**Sample Matrix:** Water  
**Sample Name:** Method Blank  
**Lab Code:** R1000483-MB2

**Service Request:** R1000483  
**Date Collected:** NA  
**Date Received:** NA  
**Basis:** NA

## Manganese, Dissolved, by Inductively Coupled Plasma-Atomic Emission Spectrometry

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed
Manganese, Dissolved	6010B	10	U	µg/L	10	1	2/ 1/10	2/4/10 17:56

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Enviro Group Limited  
 Project: LEICA LE-0614  
 Sample Matrix: Water  
 Sample Name: Method Blank  
 Lab Code: RQ1000868-03

Service Request: R1000483  
 Date Collected: NA  
 Date Received: NA  
 Units: µg/L  
 Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Acetone	20	U	20	1	NA	2/4/10 12:30		188649	
Benzene	5.0	U	5.0	1	NA	2/4/10 12:30		188649	
Bromodichloromethane	5.0	U	5.0	1	NA	2/4/10 12:30		188649	
Bromoform	5.0	U	5.0	1	NA	2/4/10 12:30		188649	
Bromomethane	5.0	U	5.0	1	NA	2/4/10 12:30		188649	
2-Butanone (MEK)	10	U	10	1	NA	2/4/10 12:30		188649	
Carbon Disulfide	10	U	10	1	NA	2/4/10 12:30		188649	
Carbon Tetrachloride	5.0	U	5.0	1	NA	2/4/10 12:30		188649	
Chlorobenzene	5.0	U	5.0	1	NA	2/4/10 12:30		188649	
Chloroethane	5.0	U	5.0	1	NA	2/4/10 12:30		188649	
Chloroform	5.0	U	5.0	1	NA	2/4/10 12:30		188649	
Chloromethane	5.0	U	5.0	1	NA	2/4/10 12:30		188649	
Dibromochloromethane	5.0	U	5.0	1	NA	2/4/10 12:30		188649	
1,1-Dichloroethane	5.0	U	5.0	1	NA	2/4/10 12:30		188649	
1,2-Dichloroethane	5.0	U	5.0	1	NA	2/4/10 12:30		188649	
1,1-Dichloroethene	5.0	U	5.0	1	NA	2/4/10 12:30		188649	
cis-1,2-Dichloroethene	5.0	U	5.0	1	NA	2/4/10 12:30		188649	
trans-1,2-Dichloroethene	5.0	U	5.0	1	NA	2/4/10 12:30		188649	
1,2-Dichloropropane	5.0	U	5.0	1	NA	2/4/10 12:30		188649	
cis-1,3-Dichloropropene	5.0	U	5.0	1	NA	2/4/10 12:30		188649	
trans-1,3-Dichloropropene	5.0	U	5.0	1	NA	2/4/10 12:30		188649	
Ethylbenzene	5.0	U	5.0	1	NA	2/4/10 12:30		188649	
2-Hexanone	10	U	10	1	NA	2/4/10 12:30		188649	
Methylene Chloride	5.0	U	5.0	1	NA	2/4/10 12:30		188649	
4-Methyl-2-pentanone (MIBK)	10	U	10	1	NA	2/4/10 12:30		188649	
Styrene	5.0	U	5.0	1	NA	2/4/10 12:30		188649	
1,1,2,2-Tetrachloroethane	5.0	U	5.0	1	NA	2/4/10 12:30		188649	
Tetrachloroethene	5.0	U	5.0	1	NA	2/4/10 12:30		188649	
Toluene	5.0	U	5.0	1	NA	2/4/10 12:30		188649	
1,1,1-Trichloroethane	5.0	U	5.0	1	NA	2/4/10 12:30		188649	
1,1,2-Trichloroethane	5.0	U	5.0	1	NA	2/4/10 12:30		188649	
Trichloroethene	5.0	U	5.0	1	NA	2/4/10 12:30		188649	
Vinyl Chloride	5.0	U	5.0	1	NA	2/4/10 12:30		188649	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Enviro Group Limited  
**Project:** LEICA LE-0614  
**Sample Matrix:** Water  
**Sample Name:** Method Blank  
**Lab Code:** RQ1000868-03

**Service Request:** R1000483  
**Date Collected:** NA  
**Date Received:** NA  
**Units:** µg/L  
**Basis:** NA

## Volatile Organic Compounds by GC/MS

**Analytical Method:** 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
o-Xylene	5.0	U	5.0	1	NA	2/4/10 12:30		188649	
m,p-Xylenes	5.0	U	5.0	1	NA	2/4/10 12:30		188649	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	96	85-122	2/4/10 12:30		
Toluene-d8	104	87-121	2/4/10 12:30		
Dibromofluoromethane	104	89-119	2/4/10 12:30		

**Comments:**

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Enviro Group Limited  
 Project: LEICA LE-0614  
 Sample Matrix: Water  
 Sample Name: Method Blank  
 Lab Code: RQ1000898-01

Service Request: R1000483  
 Date Collected: NA  
 Date Received: NA  
 Units: µg/L  
 Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Acetone	20	U	20	1	NA	2/5/10 11:29		188813	
Benzene	5.0	U	5.0	1	NA	2/5/10 11:29		188813	
Bromodichloromethane	5.0	U	5.0	1	NA	2/5/10 11:29		188813	
Bromoform	5.0	U	5.0	1	NA	2/5/10 11:29		188813	
Bromomethane	5.0	U	5.0	1	NA	2/5/10 11:29		188813	
2-Butanone (MEK)	10	U	10	1	NA	2/5/10 11:29		188813	
Carbon Disulfide	10	U	10	1	NA	2/5/10 11:29		188813	
Carbon Tetrachloride	5.0	U	5.0	1	NA	2/5/10 11:29		188813	
Chlorobenzene	5.0	U	5.0	1	NA	2/5/10 11:29		188813	
Chloroethane	5.0	U	5.0	1	NA	2/5/10 11:29		188813	
Chloroform	5.0	U	5.0	1	NA	2/5/10 11:29		188813	
Chloromethane	5.0	U	5.0	1	NA	2/5/10 11:29		188813	
Dibromochloromethane	5.0	U	5.0	1	NA	2/5/10 11:29		188813	
1,1-Dichloroethane	5.0	U	5.0	1	NA	2/5/10 11:29		188813	
1,2-Dichloroethane	5.0	U	5.0	1	NA	2/5/10 11:29		188813	
1,1-Dichloroethene	5.0	U	5.0	1	NA	2/5/10 11:29		188813	
cis-1,2-Dichloroethene	5.0	U	5.0	1	NA	2/5/10 11:29		188813	
trans-1,2-Dichloroethene	5.0	U	5.0	1	NA	2/5/10 11:29		188813	
1,2-Dichloropropane	5.0	U	5.0	1	NA	2/5/10 11:29		188813	
cis-1,3-Dichloropropene	5.0	U	5.0	1	NA	2/5/10 11:29		188813	
trans-1,3-Dichloropropene	5.0	U	5.0	1	NA	2/5/10 11:29		188813	
Ethylbenzene	5.0	U	5.0	1	NA	2/5/10 11:29		188813	
2-Hexanone	10	U	10	1	NA	2/5/10 11:29		188813	
Methylene Chloride	5.0	U	5.0	1	NA	2/5/10 11:29		188813	
4-Methyl-2-pentanone (MIBK)	10	U	10	1	NA	2/5/10 11:29		188813	
Styrene	5.0	U	5.0	1	NA	2/5/10 11:29		188813	
1,1,2,2-Tetrachloroethane	5.0	U	5.0	1	NA	2/5/10 11:29		188813	
Tetrachloroethene	5.0	U	5.0	1	NA	2/5/10 11:29		188813	
Toluene	5.0	U	5.0	1	NA	2/5/10 11:29		188813	
1,1,1-Trichloroethane	5.0	U	5.0	1	NA	2/5/10 11:29		188813	
1,1,2-Trichloroethane	5.0	U	5.0	1	NA	2/5/10 11:29		188813	
Trichloroethene	5.0	U	5.0	1	NA	2/5/10 11:29		188813	
Vinyl Chloride	5.0	U	5.0	1	NA	2/5/10 11:29		188813	

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

Client: Enviro Group Limited  
Project: LEICA LE-0614  
Sample Matrix: Water  
Sample Name: Method Blank  
Lab Code: RQ1000898-01

Service Request: R1000483  
Date Collected: NA  
Date Received: NA  
Units: µg/L  
Basis: NA

## Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
o-Xylene	5.0	U	5.0	1	NA	2/5/10 11:29		188813	
m,p-Xylenes	5.0	U	5.0	1	NA	2/5/10 11:29		188813	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
4-Bromofluorobenzene	101	85-122	2/5/10 11:29		
Toluene-d8	109	87-121	2/5/10 11:29		
Dibromofluoromethane	107	89-119	2/5/10 11:29		

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Enviro Group Limited  
Project: LEICA LE-0614  
Sample Matrix: Water

Service Request: R1000483  
Date Analyzed: 1/27/10 -  
2/ 2/10

Lab Control Sample Summary  
General Chemistry Parameters

Units: mg/L

Basis: NA

Analyte Name	Method	Lab Control Sample R1000483-LCS1			% Rec Limits
		Result	Expected	% Rec	
Carbon, Total Organic (TOC)	SM20 5310 C	9.64	10.0	96	86 - 117
Chloride	300.0	1.97	2.00	98	90 - 110
Iron, Divalent (Ferrous Iron)	SM 3500-Fe B.4.c	0.380	0.40	95	77 - 129
Iron, Divalent (Ferrous Iron), Dissolved	SM 3500-Fe B.4.c	0.380	0.40	95	77 - 129
Nitrate as Nitrogen	300.0	0.964	1.00	96	90 - 110
Sulfate	300.0	2.08	2.00	104	90 - 110

Comments: 

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COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Enviro Group Limited  
Project: LEICA LE-0614  
Sample Matrix: Water

Service Request: R1000483  
Date Analyzed: 2/ 3/10 -  
2/ 5/10

Lab Control Sample Summary  
General Chemistry Parameters

Units: mg/L  
Basis: NA

Analyte Name	Method	Lab Control Sample R1000483-LCS2			% Rec Limits
		Result	Expected	% Rec	
Carbon, Total Organic (TOC)	SM20 5310 C	9.75	10.0	97	86 - 117
Chloride	300.0	1.90	2.00	95	90 - 110

Comments:

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COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Enviro Group Limited  
Project: LEICA LE-0614  
Sample Matrix: Water

Service Request: R1000483  
Date Analyzed: 2/ 4/10

Lab Control Sample Summary  
Inorganic Parameters

Units: µg/L  
Basis: NA

Analyte Name	Method	Lab Control Sample R1000483-LCS			% Rec Limits
		Result	Expected	% Rec	
Manganese, Dissolved	6010B	485	500	97	80 - 120
Manganese, Total	6010B	485	500	97	80 - 120

Comments:

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## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Enviro Group Limited  
 Project: LEICA LE-0614  
 Sample Matrix: Water

Service Request: R1000483  
 Date Analyzed: 2/ 4/10

Lab Control Sample Summary  
 Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Units: µg/L

Basis: NA

Analysis Lot: 188649

Analyte Name	Lab Control Sample RQ1000868-04			% Rec Limits
	Result	Expected	% Rec	
Acetone	19.0	20.0	95	50 - 150
Benzene	20.0	20.0	100	70 - 130
Bromodichloromethane	19.7	20.0	99	70 - 130
Bromoform	21.0	20.0	105	70 - 130
Bromomethane	18.6	20.0	93	50 - 150
2-Butanone (MEK)	18.7	20.0	94	50 - 150
Carbon Disulfide	18.1	20.0	90	70 - 130
Carbon Tetrachloride	18.8	20.0	94	70 - 130
Chlorobenzene	20.8	20.0	104	70 - 130
Chloroethane	18.2	20.0	91	70 - 130
Chloroform	18.8	20.0	94	70 - 130
Chloromethane	19.6	20.0	98	70 - 130
Dibromochloromethane	21.6	20.0	108	70 - 130
1,1-Dichloroethane	18.9	20.0	95	70 - 130
1,2-Dichloroethane	18.3	20.0	91	70 - 130
1,1-Dichloroethene	19.4	20.0	97	70 - 130
cis-1,2-Dichloroethene	18.6	20.0	93	70 - 130
trans-1,2-Dichloroethene	18.7	20.0	93	70 - 130
1,2-Dichloropropane	20.2	20.0	101	70 - 130
cis-1,3-Dichloropropene	19.6	20.0	98	70 - 130
trans-1,3-Dichloropropene	20.1	20.0	101	70 - 130
Ethylbenzene	20.9	20.0	105	70 - 130
2-Hexanone	19.3	20.0	97	70 - 130
Methylene Chloride	19.1	20.0	95	70 - 130
4-Methyl-2-pentanone (MIBK)	19.7	20.0	99	70 - 130
Styrene	20.5	20.0	103	70 - 130
1,1,2,2-Tetrachloroethane	20.4	20.0	102	70 - 130
Tetrachloroethene	22.9	20.0	114	70 - 130
Toluene	20.8	20.0	104	70 - 130
1,1,1-Trichloroethane	17.7	20.0	89	70 - 130
1,1,2-Trichloroethane	21.1	20.0	106	70 - 130
Trichloroethene	19.2	20.0	96	70 - 130
Vinyl Chloride	21.6	20.0	108	70 - 130
o-Xylene	20.1	20.0	100	70 - 130
m,p-Xylenes	41.6	40.0	104	70 - 130

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Enviro Group Limited  
 Project: LEICA LE-0614  
 Sample Matrix: Water

Service Request: R1000483  
 Date Analyzed: 2/ 5/10

Lab Control Sample Summary  
 Volatile Organic Compounds by GC/MS

Analytical Method: 8260B

Units: µg/L

Basis: NA

Analysis Lot: 188813

Analyte Name	Lab Control Sample RQ1000898-02			% Rec Limits
	Result	Expected	% Rec	
Acetone	17.3	20.0	86	50 - 150
Benzene	20.3	20.0	102	70 - 130
Bromodichloromethane	19.8	20.0	99	70 - 130
Bromoform	20.4	20.0	102	70 - 130
Bromomethane	16.0	20.0	80	50 - 150
2-Butanone (MEK)	17.9	20.0	89	50 - 150
Carbon Disulfide	18.8	20.0	94	70 - 130
Carbon Tetrachloride	18.2	20.0	91	70 - 130
Chlorobenzene	20.9	20.0	104	70 - 130
Chloroethane	18.6	20.0	93	70 - 130
Chloroform	18.6	20.0	93	70 - 130
Chloromethane	17.0	20.0	85	70 - 130
Dibromochloromethane	21.3	20.0	107	70 - 130
1,1-Dichloroethane	18.4	20.0	92	70 - 130
1,2-Dichloroethane	18.0	20.0	90	70 - 130
1,1-Dichloroethene	19.0	20.0	95	70 - 130
cis-1,2-Dichloroethene	18.7	20.0	94	70 - 130
trans-1,2-Dichloroethene	18.5	20.0	93	70 - 130
1,2-Dichloropropane	20.8	20.0	104	70 - 130
cis-1,3-Dichloropropene	19.5	20.0	97	70 - 130
trans-1,3-Dichloropropene	19.8	20.0	99	70 - 130
Ethylbenzene	20.7	20.0	104	70 - 130
2-Hexanone	19.4	20.0	97	70 - 130
Methylene Chloride	19.0	20.0	95	70 - 130
4-Methyl-2-pentanone (MIBK)	20.8	20.0	104	70 - 130
Styrene	20.4	20.0	102	70 - 130
1,1,2,2-Tetrachloroethane	20.2	20.0	101	70 - 130
Tetrachloroethene	23.3	20.0	117	70 - 130
Toluene	20.7	20.0	103	70 - 130
1,1,1-Trichloroethane	17.5	20.0	88	70 - 130
1,1,2-Trichloroethane	21.6	20.0	108	70 - 130
Trichloroethene	19.4	20.0	97	70 - 130
Vinyl Chloride	21.6	20.0	108	70 - 130
o-Xylene	20.3	20.0	101	70 - 130
m,p-Xylenes	41.3	40.0	103	70 - 130

Comments:



# CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

SR # \_\_\_\_\_  
CAS Contact \_\_\_\_\_

One Mustard St., Suite 250 • Rochester, NY 14609-0859(585) 288-5380 • 800-695-7222 x11 • FAX (585) 288-8475 PAGE 1 OF 1

Project Name <b>Leica</b>		Project Number <b>LF-0614</b>		ANALYSIS REQUESTED (Include Method Number and Container Preservative)																																																			
Project Manager <b>Eric Lovenduski</b>		Report CC		PRESERVATIVE																																																			
Company/Address <b>EnviroGroup LTD</b> <b>46 Lake Avenue Suite 102</b> <b>Saratoga Springs, NY 12866</b>		FAX# <b>518-258-3859</b>		0 2 0 0 0 3 0 0																																																			
Phone # <b>518-258-3859</b>		Sampler's Printed Name <b>Eric Lovenduski</b>		Preservative Key 0. NONE 1. HCL 2. HNO3 3. H2SO4 4. NaOH 5. Zn. Acetate 6. MeOH 7. NaHSO4 8. Other _____																																																			
Sampler's Signature <i>[Signature]</i>		Sampler's Printed Name <b>Eric Lovenduski</b>		REMARKS/ ALTERNATE DESCRIPTION <b>Soluble Fe + 2</b> <b>Fe + 2</b> <b>Toc</b> <b>SO4</b> <b>NO3</b> <b>CL</b> <b>PH</b>																																																			
CLIENT SAMPLE ID		FOR OFFICE USE ONLY LAB ID		SAMPLING DATE		TIME		MATRIX		NUMBER OF CONTAINERS																																													
TRIP BLANK 01/27/10		-001		1/27/10		---		T13		3																																													
MW-26		002, 003		1/27/10		0925		GW		11																																													
MW-25A		004, 005		1/27/10		1050		GW		11																																													
MW-25		006, 007		1/27/10		1105		GW		11																																													
MW-26A		008, 009		1/27/10		1240		GW		11																																													
DUP 01/27/10		010, 011		1/27/10		---		GW		11																																													
SPECIAL INSTRUCTIONS/COMMENTS <b>Metals</b> <b>Fer Mn In lab filter for dissolved</b>  <b>See quote # 14587</b> <b>Leica Site</b> <b>*Report as for Samples from Energy Solutions</b> <b>for Leica site. c. 11 518-258-3859 w/ questions</b>														TURNAROUND REQUIREMENTS RUSH (SURCHARGES APPLY) 24 hr 48 hr 5 day <input checked="" type="checkbox"/> STANDARD REQUESTED FAX DATE _____ REQUESTED REPORT DATE _____														REPORT REQUIREMENTS <input type="checkbox"/> I. Results Only <input checked="" type="checkbox"/> II. Results + QC Summaries (LCS, DUP, MS/MSD as required) <input type="checkbox"/> III. Results + QC and Calibration Summaries <input type="checkbox"/> IV. Data Validation Report with Raw Data <input type="checkbox"/> V. Specialized Forms / Custom Report Edala <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No														INVOICE INFORMATION FO# _____ BILL TO: _____													
SAMPLE RECEIPT: CONDITION/COOLER TEMP: <b>5.1°C</b>														CUSTODY SEALS (J N)														RECEIVED BY														RECEIVED BY													
Signature <i>[Signature]</i>														Signature <i>[Signature]</i>														Signature <i>[Signature]</i>														Signature <i>[Signature]</i>													
Printed Name <b>Eric Lovenduski</b>														Printed Name <b>Eric Lovenduski</b>														Printed Name <b>Eric Lovenduski</b>														Printed Name <b>Eric Lovenduski</b>													
Firm <b>EnviroGroup LTD</b>														Firm <b>EnviroGroup LTD</b>														Firm <b>EnviroGroup LTD</b>														Firm <b>EnviroGroup LTD</b>													
Date/Time <b>1/27/10 1300</b>														Date/Time <b>1/27/10 1300</b>														Date/Time <b>1/27/10 1500</b>														Date/Time <b>1/27/10 1500</b>													

## Cooler Receipt And Preservation Check Form

R1000483

Enviro Group Limited  
LEICA LE-0614Project/Client Leica Submission Number R10-483Cooler received on 1/27/10 by: AP COURIER: CAS UPS FEDEX VELOCITY CLIENT

1. Were custody seals on outside of cooler? YES NO
2. Were custody papers properly filled out (ink, signed, etc.)? YES NO
3. Did all bottles arrive in good condition (unbroken)? YES NO
4. Did any VOA vials have significant\* air bubbles? YES NO N/A
5. Were **Ice** or **Ice packs** present? YES NO
6. Where did the bottles originate? CAS/ROO, CLIENT
7. Temperature of cooler(s) upon receipt: 5.1°

Is the temperature within 0° - 6° C?: Yes Yes Yes Yes Yes

If No, Explain Below No No No No No

Date/Time Temperatures Taken: 1/27/10 1533Thermometer ID: IR GUN#3 / IR GUN#4 Reading From: Temp Blank / Sample Bottle

If out of Temperature, note packing/ice condition, Client Approval to Run Samples:

PC Secondary Review: KB 2/11/10Cooler Breakdown: Date: 1/28/10 by: AP

1. Were all bottle labels complete (i.e. analysis, preservation, etc.)? YES NO
2. Did all bottle labels and tags agree with custody papers? YES NO
3. Were correct containers used for the tests indicated? YES NO
4. Air Samples: Cassettes / Tubes Intact Canisters Pressurized Tedlar® Bags Inflated N/A

Explain any discrepancies:

pH	Reagent	YES	NO	Lot Received	Exp	Sample ID	Vol. Added	Lot Added	Final pH
≥12	NaOH								
≤2	HNO <sub>3</sub>	✓		BDB2697C	11/10				
≤2	H <sub>2</sub> SO <sub>4</sub>								
Residual Chlorine (-)	For TCN and Phenol			If present, contact PM to add ascorbic acid					
	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	-	-			*Not to be tested before analysis – pH tested and recorded by VOAs or GenChem on a separate worksheet			
	Zn Aceta	-	-						
	HCl	*	*	4109080	01/11				

Yes = All samples OK

No = Samples were preserved at lab as listed

PM OK to Adjust:

Bottle lot numbers: 9-308-001, BDB2697D, 011110-2B, 01410-2A

Other Comments:

PC Secondary Review: KB 2/11/10

\*significant air bubbles are greater than 5-6 mm