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March 10, 2016

Mr. Brian Sadowski
New York State Department of Environmental Conservation, Region 9
Division of Environmental Remediation
270 Michigan Avenue
Buffalo, New York 14203-2999

Subject: 2015 PERIODIC REVIEW REPORT
Chem-Trol Site, Registry No. 9-15-015,
Blasdell, Erie County

Dear Mr. Sadowski:

AECOM Technical Services, Inc. (AECOM), on behalf of SC Holdings, Inc. (SC Holdings), is submitting this Periodic Review Report (PRR) along with a completed Institutional Controls and Engineering Controls (IC/EC) Certification Form (Attachment A) for the Chem-Trol site. This report is being submitted as requested by the New York State Department of Environmental Conservation (NYSDEC) in its letter dated January 21, 2016 to Mr. Dave Moreira. The letter provides guidance for preparing the PRR and IC/EC forms and requires that they be submitted to NYSDEC no later than March 16, 2016.

## I. INTRODUCTION

The Chem-Trol site is located at 4818 Lake Avenue, Town of Hamburg, in Erie County, New York. Chem-Trol Pollution Services purchased the property in 1969 and operated the site as a waste chemical processing facility that included chemical recovery, storage and neutralization. Wastes, including capacitors, pesticides, oil sludges, paint sludges, spent solvents and pickle liquors, were accepted at the facility for processing. The facility ceased operations in 1972.

As a result of historic waste processing activities, on-site soil and groundwater were impacted with heavy metals and volatile organic compounds (VOCs). In 1977, as part of the facility closure activities, Chem-Trol removed approximately 95 cubic yards of contaminated soils, placed clean soil cover and established vegetative cover over the area.

Investigative studies led to a Record of Decision (ROD) in 1996 that specified additional remedial activities. These included removal of additional soils, and construction of a soil vapor extraction (SVE) system and groundwater collection and treatment system. The SVE system includes a header pipe and eight subsurface laterals installed in a linear array within the area of remediated soils. The groundwater collection and treatment system includes a blast-fractured bedrock trench in which three groundwater collection wells are installed, conveyance piping, and a shallow tray air stripper that

removes VOCs from the collected groundwater. The treated groundwater is discharged through a pipe to the South Branch of Smokes Creek.

The SVE system and the groundwater collection system continue to operate. During 2010, McMahon & Mann Consulting Engineers, PC (MMCE) evaluated the effectiveness of passive operation of the SVE system in removing soil vapors. Subsequently, the SVE system was converted from active to passive operation in 2010. A copy of the SVE system evaluation letter report was included as Attachment B in the 2010 PRR.

## II. SITE OVERVIEW

The Chem-Trol site is situated in an urban setting with industrial/commercial areas to the north and east, commercial development along Lake Avenue to the south, and residential areas to the west, across the South Branch of Smokes Creek. Figure 1 shows the Chem-Trol site location and features.

Investigations completed between 1991 and 1994 showed contaminated soils generally located in the former operations and surface lagoon areas. Additional soil contamination was found in the on-site tributary of Smokes Creek as well as the flood plain along the western edge of the site. Contaminated groundwater was found in the shallow overburden as well as the deeper bedrock beneath the site. Groundwater contours developed as part of the investigations show that groundwater flows in a northwesterly direction beneath the site toward the South Branch of Smokes Creek.

Because of the on-site contamination, the Chem-Trol site was assigned a hazardous waste site classification of 2 by NYSDEC. This classification indicates that the site poses a significant threat to public health and/or the environment and that action in the form of further investigations and remediation is required.

NYSDEC selected a remedial design based upon the results of the Remedial Investigation/Feasibility Study (RI/FS) for the Chem-Trol site. The March 1996 ROD selected a remedy that included:

- Excavation of soils and sediments from selected areas of the site,
- Installation of a groundwater collection trench along the western edge of the site,
- Improvement of the existing soil cover over the former chemical processing area, and,
- Installation of a SVE system within the former waste chemical processing area.

Pre-design investigations and remedial design were completed between 1997 and 2000. Construction of the ROD-required remedial components was completed between 1999 and 2001. Operation, maintenance and monitoring of the remedial components began in 2001. In December 2004, the Chem-Trol site was re-classified to a class 4 site by NYSDEC. This classification indicates that remedial actions taken at the site to eliminate significant threats to public health and the environment have been properly constructed and implemented, and long-term operation, maintenance and monitoring of the in-place remedial systems is necessary to assure remedy effectiveness.

Goals for the remedial program were established through the remediation selection process given in 6 NYCRR 375-1.10. The remediation goals established for this site include:

- Reduce and remove chemical contamination in the soils, sediments and groundwater at the site,
- Eliminate the potential for direct human or animal contact with the contaminated soils, sediments and groundwaters at the site,
- Prevent migration of contaminants in the on-site soils into the groundwater,
- Prevent off-site migration of contaminated groundwater and mitigate the impacts of contaminated groundwater to the environment, and
- Provide for attainment of Soil Cleanup Guidelines (SCG) for groundwater quality to the extent practical.

## III. REMEDY PERFORMANCE, EFFECTIVENESS AND PROTECTIVENESS

SC Holdings continues to monitor the performance of the SVE and groundwater collection and treatment system.

### SVE System

SC Holdings submitted a work plan to NYSDEC on October 22, 2009 proposing conversion of the active system to a passive venting system and monitoring the performance of the passive system for a year. NYSDEC authorized the conversion to a passive system along with monthly monitoring. The SVE treatment system was converted from active to passive operation in January 2010.

After a year of monitoring, SC Holdings submitted a report describing the monitoring results as indicating that passive operation of the SVE system provides similar and possibly improved effectiveness as active operation of the SVE system in venting soil vapors. Water level data in the passive vent risers indicated that passive venting might also contribute to generally lower water levels in the laterals for a longer period of time over the course of the year and therefore provide a greater opportunity to vent soil vapors.

It was recommended that active operation of the SVE system permanently cease and that passive operation of the SVE system laterals continue. In addition, it was recommended that continued monitoring of the SVE system laterals be eliminated. NYSDEC agreed with these recommendations in a letter to Mr. Mark Snyder dated May 29, 2011.

During this reporting period, the SVE system continued to operate passively. The lateral riser pipes were visually examined for damage during quarterly site visits. No damage was observed during these site visits.

**Groundwater Collection and Treatment System**

SC Holdings has the following actions performed by AECOM (items 1 through 5) and TestAmerica Laboratories, Inc. (Amherst, NY) (item 6) in order to monitor the performance of the groundwater collection system as required in the ROD:

1. Perform monthly operation and maintenance tasks on the system,
2. Perform quarterly acid wash of the air stripper, including a once-per-year dismantling of the air stripper to check seals and remove mineral accumulation in air stripper trays using mechanical means (scrubbing, re-drilling holes to full diameter, etc.),
3. Sample and analyze the groundwater collection and treatment system influent and effluent on a monthly basis for a site-specific list of 10 VOCs, Total Iron, Total Suspended Solids (TSS), and pH,
4. Measure and record water levels in groundwater extraction wells and groundwater monitoring wells on a quarterly basis,
5. Prepare bedrock groundwater contours based on quarterly water level measurements collected during the year, and
6. Obtain annual groundwater samples for VOCs from six groundwater monitoring wells.

Effluent from the groundwater collection and treatment system (air stripper) discharges into the South Branch of Smokes Creek. Monthly aqueous effluent samples taken from the air stripper surface water discharge pipe are analyzed for surface water discharge parameter limit concentrations. Analytical test results show that discharge parameter concentrations in the stripper effluent for 2015 were below the concentration and mass loading discharge limits established by NYSDEC for 12 of 12 months.

Analytical test results for the 2015 monthly aqueous effluent samples are included in the Operation and Maintenance (O&M) reports submitted by AECOM to NYSDEC on a quarterly basis.

Monthly testing of the air stripper exhaust discharge (vapor phase) samples ceased after April 2011. Monthly testing was eliminated based upon a letter from Al Zylinski, NYSDEC Division of Air Resources, to MMCE (consultant to SC Holdings) dated April 6, 2011. The letter approved elimination of sampling and testing of the air stripper exhaust.

A summary of groundwater elevations measured in the groundwater monitoring wells and piezometers is included in Table 1 - Summary of Groundwater Elevation Measurements 2015. Quarterly groundwater elevation contours are plotted on Figures 2 through 5.

The contours show that the three extraction wells depress water levels in the trench below natural groundwater levels in that area of the site. The resulting depression in the groundwater table creates groundwater flow toward the collection trench. The measurements demonstrate that the collection trench is functioning as designed to restrict offsite flow and limit groundwater discharge to the South Branch of Smokes Creek.

VOC analytical test results of groundwater treatment system influent samples have historically shown o-chlorotoluene levels in higher concentrations than other organic compounds. Therefore,

concentrations of o-chlorotoluene detected in groundwater treatment influent samples have been used to assess the performance of the treatment system in reducing organic compound concentrations in the groundwater. The o-chlorotoluene concentration data for influent groundwater samples was plotted versus time for the July 2002 through December 2015 sampling events (see Figure 6). The plot shows that the concentration of o-chlorotoluene in the influent groundwater samples has been reduced since initiation of treatment system operation. This indicates that the treatment system is meeting the remedial goal of reducing organic compound concentrations in the groundwater.

A comparison of the influent and effluent sample analytical results shows that the air stripper is effectively removing VOCs from the groundwater collected by the treatment system.

A summary of VOC detections for the annual 2015 groundwater-sampling event is included as Table 2, Detection Summary. The complete 2015 groundwater sample analytical laboratory report is included as Attachment B. Historical concentration versus time trend plots for monitoring wells MW3S, MW-8R, MW-9R, and MW-13R are included as Attachment C.

## IV. O&M PLAN COMPLIANCE

SC Holdings performed the following activities as part of the O&M Plan requirements:

### Soil Vapor Extraction System

AECOM performed the following activities in 2015 as part of quarterly visits to the site:

- Visually observed each SVE passive vent riser for damage.

### Groundwater Collection and Treatment System

AECOM performed the following activities in 2015 as part of routine monthly O&M visits:

- Verified that each extraction well was running and performing as designed,
- Observed that each pump was operating, documented pumping rates, total gallons pumped and insured that high and low water controls are functioning as designed,
- Performed monthly influent and effluent sample analytical testing,
- Observed that the air stripper was performing as designed,
- Performed monthly inspections of air stripper trays. Performed acid washes quarterly or more often if necessary to promote optimum removal of VOCs, and
- Prepared and submitted O&M reports on a quarterly basis to NYSDEC.

The quarterly O&M reports submitted to NYSDEC provide further details on specific activities performed, analytical testing results, and observations made during the routine monthly O&M visits. Routine activities include general inspection and maintenance work performed on pumps, equipment, and sensors, as described in the monthly O&M reports. In addition, the following non-routine

maintenance activities were performed and reported in the respective quarterly O&M reports this reporting period:

- January 2015 – Replaced air stripper blower motor; failed bearing seal identified January 15, 2015, motor replaced January 23, 2015 and system restarted.
- September 2015 – Unscheduled cleaning of air stripper trays between routine quarterly cleanings to remove iron mineralization buildup on lower trays.

Results of the treatment system performance are discussed in Section III.

## V. CONCLUSIONS AND RECOMMENDATIONS

**Groundwater Collection and Treatment**

A comparison of the monthly influent vs. effluent analytical test results shows that the groundwater collection and treatment system continues to remove contaminants from groundwater at the Chem-Trol site. A plot of the influent o-chlorotoluene concentration versus time (see Figure 6) indicates that the source contributing to groundwater VOC concentrations has been reduced to where its influence on groundwater has decreased and appears to continue approaching an asymptotic curve.

The quarterly groundwater elevation data show that the groundwater collection system continues to contain groundwater contaminants and creates a gradient toward the groundwater collection wells and away from the South Branch of Smokes Creek.

No changes to the activities currently being performed at the Chem-Trol site are recommended.

Please call the undersigned at AECOM (716-836-4506) or Mr. Dave Moreira (603-929-5446) if you have any questions or require any additional information after reviewing this report.

Sincerely yours,

James L. Kaczor

James L. Kaczor, P.G.
Project Manager
james.kaczor@aecom.com

Enclosures (Tables, Figures)

Attachments (IC/EC Form, 2015 Annual Groundwater Data Report, Historical Trend Plots)

cc. Dave Moreira (SC Holdings, Inc.) w/attachments
Daniel Servetas, P.E. (AECOM), w/attachments
60336580 Project File

# TABLES

# Table 1
# Chem-Trol Site, Blasdell, NY
# Summary of Groundwater Elevation Measurements 2015

| Pumping Wells | | 1Q Date 3/13/2015 | | 2Q Date 6/4/2015 | | 3Q Date 9/28/2015 | | 4Q Date 12/17/2015 | |
|---|---|---|---|---|---|---|---|---|---|
| Well ID | Monitoring Point (TIC) | Depth To Water (ft) | 1st Quarter Elevation (ft) | Depth To Water (ft) | 2nd Quarter Elevation (ft) | Depth To Water (ft) | 3rd Quarter Elevation (ft) | Depth To Water (ft) | 4th Quarter Elevation (ft) |
| EW-1 | 624.07 | 19.48 | 604.59 | 18.40 | 605.67 | 24.55 | 599.52 | 20.75 | 603.32 |
| EW-2 | 622.16 | 13.56 | 608.60 | 14.85 | 607.31 | 15.80 | 606.36 | 15.60 | 606.56 |
| EW-3 | 621.10 | 12.20 | 608.90 | 14.71 | 606.39 | 17.06 | 604.04 | 16.45 | 604.65 |

East of Cap (North to South)

| Well ID | Monitoring Point (TIC) | Depth To Water (ft) | 1st Quarter Elevation (ft) | Depth To Water (ft) | 2nd Quarter Elevation (ft) | Depth To Water (ft) | 3rd Quarter Elevation (ft) | Depth To Water (ft) | 4th Quarter Elevation (ft) |
|---|---|---|---|---|---|---|---|---|---|
| MW-6S | 638.54 | 7.76 | 630.78 | 8.87 | 629.67 | 12.49 | 626.05 | 9.38 | 629.16 |
| MW-6R | 638.64 | 17.05 | 621.59 | 17.45 | 621.19 | 18.54 | 620.10 | 17.68 | 620.96 |
| P-1S | 642.80 | 4.70 | 638.10 | 5.47 | 637.33 | 9.30 | 633.50 | 5.96 | 636.84 |
| MW-1R | 645.36 | 6.60 | 638.76 | 7.34 | 638.02 | 11.12 | 634.24 | 7.85 | 637.51 |
| MW-1S | 645.40 | 4.78 | 640.62 | 5.79 | 639.61 | 10.74 | 634.66 | 6.74 | 638.66 |
| MW-7S | 642.85 | 3.10 | 639.75 | 5.09 | 637.76 | 11.03 | 631.82 | 5.75 | 637.10 |
| MW-7R | 642.28 | 3.95 | 638.33 | 5.00 | 637.28 | 8.74 | 633.54 | 6.02 | 636.26 |

Center of Cap (North to South)

| Well ID | Monitoring Point (TIC) | Depth To Water (ft) | 1st Quarter Elevation (ft) | Depth To Water (ft) | 2nd Quarter Elevation (ft) | Depth To Water (ft) | 3rd Quarter Elevation (ft) | Depth To Water (ft) | 4th Quarter Elevation (ft) |
|---|---|---|---|---|---|---|---|---|---|
| P-5S | 637.54 | 9.31 | 628.23 | 11.63 | 625.91 | >13.5 | <624.04 | 12.94 | 624.60 |
| P-5R | 637.88 | 18.97 | 618.91 | >19.14 | <618.73 | >20.24 | <617.64 | 19.81 | 618.07 |
| MW-5S | 636.28 | 11.71 | 624.57 | 13.03 | 623.25 | 14.00 | 622.28 | 12.95 | 623.33 |
| P-2R | 646.96 | 10.79 | 636.17 | 10.27 | 636.69 | 13.15 | 633.81 | 11.94 | 635.02 |
| P-2S | 646.44 | 8.28 | 638.16 | 8.70 | 637.74 | 12.25 | 634.19 | 9.41 | 637.03 |
| MW-2S | 644.85 | 5.85 | 639.00 | 6.58 | 638.27 | 10.53 | 634.32 | 7.09 | 637.76 |

West of Cap (North to South)

| Well ID | Monitoring Point (TIC) | Depth To Water (ft) | 1st Quarter Elevation (ft) | Depth To Water (ft) | 2nd Quarter Elevation (ft) | Depth To Water (ft) | 3rd Quarter Elevation (ft) | Depth To Water (ft) | 4th Quarter Elevation (ft) |
|---|---|---|---|---|---|---|---|---|---|
| MW-4S | 637.18 | 13.79 | 623.39 | 15.13 | 622.05 | >15.36 | <621.82 | 14.90 | 622.28 |
| MW-4R | 637.02 | 25.70 | 611.32 | 27.37 | 609.65 | 30.02 | 607.00 | 28.62 | 608.40 |
| P-4S | 636.54 | 15.25 | 621.29 | 15.92 | 620.62 | 15.95 | 620.59 | 15.87 | 620.67 |
| MW-3S | 637.64 | 17.53 | 620.11 | 17.82 | 619.82 | 18.56 | 619.08 | 17.90 | 619.74 |
| P-3R | 639.92 | 20.46 | 619.46 | 20.35 | 619.57 | 20.32 | 619.60 | 20.33 | 619.59 |
| P-3S | 639.46 | 19.23 | 620.23 | 19.42 | 620.04 | 20.01 | 619.45 | 19.52 | 619.94 |
| OW-3R | 638.78 | 24.44 | 614.34 | 24.20 | 614.58 | 24.53 | 614.25 | 24.35 | 614.43 |

West of Trench (North to South)

| Well ID | Monitoring Point (TIC) | Depth To Water (ft) | 1st Quarter Elevation (ft) | Depth To Water (ft) | 2nd Quarter Elevation (ft) | Depth To Water (ft) | 3rd Quarter Elevation (ft) | Depth To Water (ft) | 4th Quarter Elevation (ft) |
|---|---|---|---|---|---|---|---|---|---|
| OW-1FR | 620.42 | 8.89 | 611.53 | 10.56 | 609.86 | 13.21 | 607.21 | 11.80 | 608.62 |
| P97-5 | 613.65 | 1.80 | 611.85 | 4.20 | 609.45 | 6.70 | 606.95 | 5.34 | 608.31 |
| MW-10S | 615.15 | 3.43 | 611.72 | 5.06 | 610.09 | >5.55 | <609.6 | >5.55 | <609.6 |
| MW-10R | 615.47 | 4.04 | 611.43 | 5.24 | 610.23 | 8.02 | 607.45 | 6.93 | 608.54 |
| P97-4 | 614.8 | 3.51 | 611.29 | 5.22 | 609.58 | 7.79 | 607.01 | 6.40 | 608.40 |
| MW-8S | 617.28 | 6.90 | 610.38 | >7.2 | <610.08 | 7.30 | 609.98 | >7.25 | <610.03 |
| MW-8R | 617.38 | 5.58 | 611.80 | 7.63 | 609.75 | 10.17 | 607.21 | 8.90 | 608.48 |
| P97-3 | 617.66 | 6.08 | 611.58 | 7.85 | 609.81 | 10.56 | 607.10 | 9.17 | 608.49 |
| MW-9RD | 619.13 | 7.75 | 611.38 | 7.61 | 611.52 | 7.77 | 611.36 | 6.82 | 612.31 |
| MW-9R | 619.17 | 7.41 | 611.76 | 9.30 | 609.87 | 12.10 | 607.07 | 10.70 | 608.47 |
| MW-9S | 619.91 | 7.70 | 612.21 | 9.40 | 610.51 | >10.35 | <609.56 | 10.23 | 609.68 |
| OW-2FR | 624.14 | 12.32 | 611.82 | 14.21 | 609.93 | 17.02 | 607.12 | 15.60 | 608.54 |
| P97-2 | 619.07 | 6.66 | 612.41 | 7.84 | 611.23 | 9.80 | 609.27 | 8.91 | 610.16 |
| P97-1 | 619.97 | 6.80 | 613.17 | 7.77 | 612.20 | 9.11 | 610.86 | 8.65 | 611.32 |
| MW-12R | 621.59 | 10.32 | 611.27 | 9.86 | 611.73 | 12.16 | 609.43 | 11.23 | 610.36 |
| MW-12S | 621.17 | 3.36 | 617.81 | 6.02 | 615.15 | >9.4 | <611.77 | 7.27 | 613.90 |

West of Smokes Creek (North to South)

| Well ID | Monitoring Point (TIC) | Depth To Water (ft) | 1st Quarter Elevation (ft) | Depth To Water (ft) | 2nd Quarter Elevation (ft) | Depth To Water (ft) | 3rd Quarter Elevation (ft) | Depth To Water (ft) | 4th Quarter Elevation (ft) |
|---|---|---|---|---|---|---|---|---|---|
| MW-13R | 615.14 | 4.35 | 610.79 | 6.00 | 609.14 | 8.35 | 606.79 | 7.15 | 607.99 |
| MW-14R | 618.55 | 6.24 | 612.31 | 6.22 | 612.33 | 6.50 | 612.05 | 6.85 | 611.70 |

TABLE 2

# Detection Summary

Client: Waste Management
Project/Site: ChemTrol Site - Annual GW

TestAmerica Job ID: 480-87767-1

## Client Sample ID: DUP — Lab Sample ID: 480-87767-1

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | 15 | | 5.0 | | ug/L | 4 | | 8260C | Total/NA |
| Chloroethane | 19 | | 5.0 | | ug/L | 4 | | 8260C | Total/NA |
| o-Chlorotoluene - DL | 2600 | | 34 | | ug/L | 40 | | 8260C | Total/NA |

## Client Sample ID: MW-13R — Lab Sample ID: 480-87767-2

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | 22 | | 15 | | ug/L | 40 | | 8260C | Total/NA |
| o-Chlorotoluene | 3200 | | 34 | | ug/L | 40 | | 8260C | Total/NA |
| Chloroethane | 25 | | 13 | | ug/L | 40 | | 8260C | Total/NA |

## Client Sample ID: MW-15R — Lab Sample ID: 480-87767-3

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | 68 | | 25 | | ug/L | 1 | | 8260C | Total/NA |
| Benzene | 15 | | 5.0 | | ug/L | 1 | | 8260C | Total/NA |
| Cyclohexane | 98 | | 5.0 | | ug/L | 1 | | 8260C | Total/NA |
| Ethylbenzene | 6.8 | | 5.0 | | ug/L | 1 | | 8260C | Total/NA |
| Methylcyclohexane | 51 | | 5.0 | | ug/L | 1 | | 8260C | Total/NA |
| Xylenes, Total | 62 | | 15 | | ug/L | 1 | | 8260C | Total/NA |

## Client Sample ID: MW-3S — Lab Sample ID: 480-87767-4

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| o-Chlorotoluene - DL | 75000 | | 1700 | | ug/L | 2000 | | 8260C | Total/NA |

## Client Sample ID: MW-7R — Lab Sample ID: 480-87767-5

No Detections.

## Client Sample ID: MW-8R — Lab Sample ID: 480-87767-6

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| o-Chlorotoluene | 59 | | 5.0 | | ug/L | 2 | | 8260C | Total/NA |

## Client Sample ID: MW-9R — Lab Sample ID: 480-87767-7

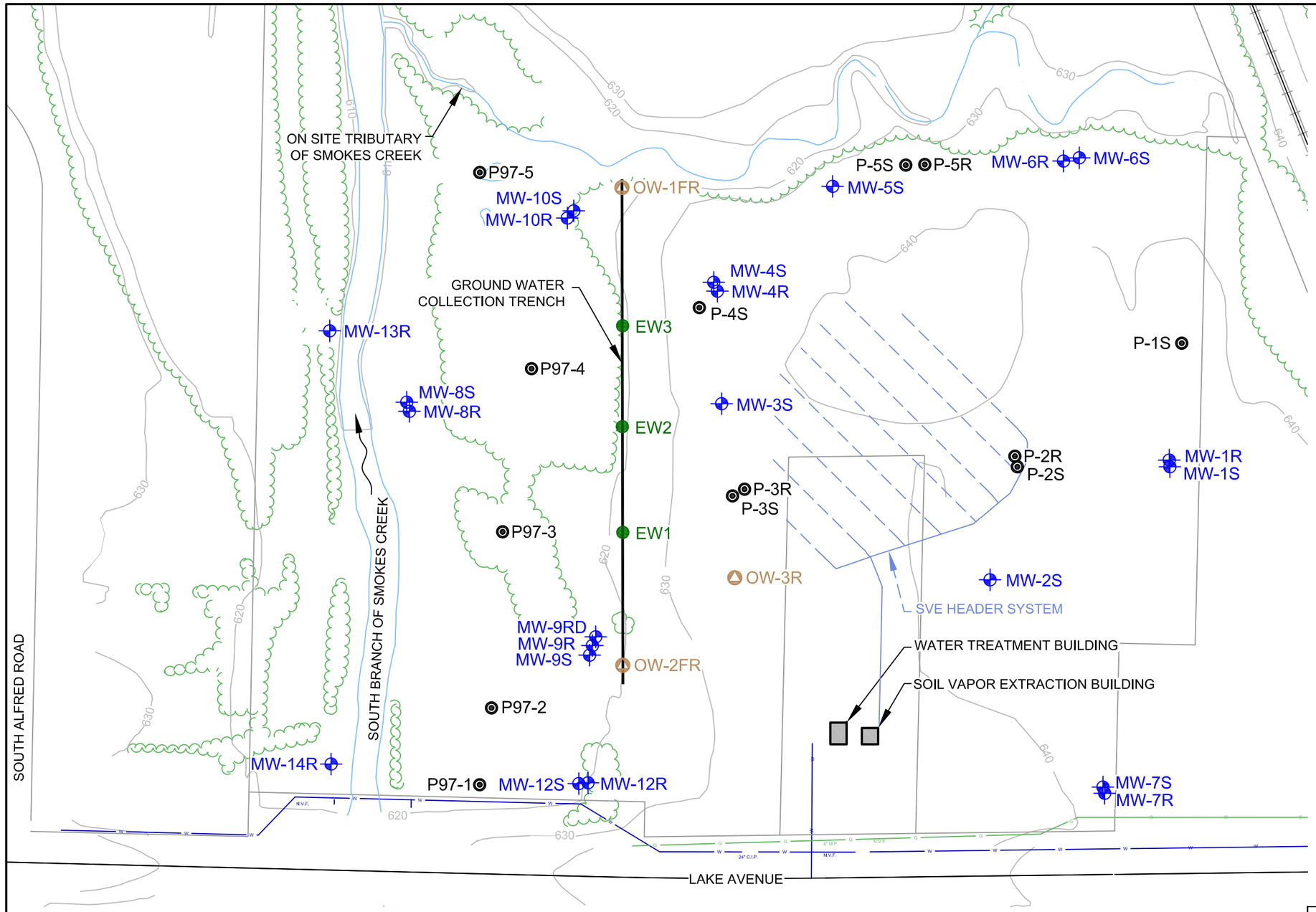
| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | 350 | | 5.0 | | ug/L | 5 | | 8260C | Total/NA |
| Chloroethane | 34 | | 5.0 | | ug/L | 5 | | 8260C | Total/NA |
| cis-1,2-Dichloroethene | 5.5 | | 5.0 | | ug/L | 5 | | 8260C | Total/NA |
| 1,1,1-Trichloroethane - DL | 530 | | 16 | | ug/L | 20 | | 8260C | Total/NA |
| o-Chlorotoluene - DL | 1900 | | 17 | | ug/L | 20 | | 8260C | Total/NA |

## Client Sample ID: TB — Lab Sample ID: 480-87767-8

No Detections.

This Detection Summary does not include radiochemical test results.

# FIGURES




*SOURCE: BASEMAP AND DATA SHOWN PROVIDED BY McMahon & Mann Consulting Engineers, P.C., MARCH 2011.*


AECOM
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Amherst, New York 14226
T: 716.836.4506


# FIGURE 1
# SITE PLAN

CHEM-TROL
ERIE COUNTY, NEW YORK

FEBRUARY 2013 60164822

L:\Group\earth\Chem-Trol\60164822_001 Site Plan.dwg, 2/25/2013 11:46:57 AM, Splawnm

N

SOUTH ALFRED ROAD

SOUTH BRANCH OF SMOKES CREEK

ON SITE TRIBUTARY OF SMOKES CREEK

GROUNDWATER COLLECTION TRENCH

P97-5, 611.85
MW-10R, 611.43
MW-13R, 610.79
P97-4, 611.29
MW-8R, 611.80
P97-3, 611.58
MW-9R, 611.76
P97-2, 612.41
P97-1, 613.17
MW-14R, 612.31
MW-12R, 611.27
OW-1FR, 611.53
EW3, 608.90
EW2, 608.60
EW1, 604.59
OW-2FR, 611.82
MW-4R, 611.32
OW-3R, 614.34
P-5R, 618.91
MW-6R, 621.59
P-3R, 619.46
P-2R, 636.17
MW-1R, 638.76
MW-7R, 638.33

WATER TREATMENT BUILDING
SOIL VAPOR EXTRACTION BUILDING

LAKE AVENUE

## Legend

- Extraction Well
- Monitoring Well
- Observation Well
- Piezometer
- Property Line
- Edge of Water
- Groundwater Elevation Contour
- Existing Ground Elevation Contour

MW-6R, 621.59
Location ID — Groundwater Elevation

100 0 100 Feet

# CHEM-TROL
# BEDROCK GROUNDWATER CONTOURS
# MARCH 13, 2015

AECOM

FIGURE 2

J:\Resources\RDMS\Projects\Chem-Trol\Arcmap\FIRST QUARTER 2015 GW CONTOURS.mxd 6/18/2015

N

SOUTH ALFRED ROAD

SOUTH BRANCH OF SMOKES CREEK

ON SITE TRIBUTARY OF SMOKES CREEK

GROUNDWATER COLLECTION TRENCH

P97-5, 609.45

MW-10R, 610.23

OW-1FR, 609.86

P-5R, 618.73

MW-6R, 621.19

MW-4R, 609.65

EW3, 606.39

MW-13R, 609.14

P97-4, 609.58

MW-8R, 609.75

EW2, 607.31

P-2R, 636.69

MW-1R, 638.02

P-3R, 619.57

P97-3, 609.81

EW1, 605.67

OW-3R, 614.58

MW-9R, 609.87

OW-2FR, 609.93

WATER TREATMENT BUILDING

SOIL VAPOR EXTRACTION BUILDING

P97-2, 611.23

MW-14R, 612.33

P97-1, 612.20

MW-12R, 611.73

MW-7R, 637.28

LAKE AVENUE

## Legend

- Extraction Well
- Monitoring Well
- Observation Well
- Piezometer
- Property Line
- Edge of Water
- Groundwater Elevation Contour
- Existing Ground Elevation Contour

MW-6R, 621.19
Location ID — Groundwater Elevation

100 0 100 Feet

# CHEM-TROL
# BEDROCK GROUNDWATER CONTOURS
# JUNE 4, 2015

AECOM

FIGURE 3

J:\Resources\RDMS\Projects\Chem-Trol\Arcmap\SECOND QUARTER 2015 GW CONTOURS.mxd 6/18/2015

N

ON SITE TRIBUTARY OF SMOKES CREEK

SOUTH BRANCH OF SMOKES CREEK

GROUNDWATER COLLECTION TRENCH

WATER TREATMENT BUILDING

SOIL VAPOR EXTRACTION BUILDING

SOUTH ALFRED ROAD

LAKE AVENUE

P97-5, 606.95
OW-1FR, 607.21
P-5R, DRY
MW-6R, 620.10
MW-10R, 607.45
MW-4R, 607.00
EW3, 604.04
MW-13R, 606.79
P97-4, 607.01
MW-8R, 607.21
EW2, 606.36
P-2R, 633.81
MW-1R, 634.24
P-3R, 619.60
P97-3, 607.10
EW1, 599.52
OW-3R, 614.25
MW-9R, 607.07
OW-2FR, 607.12
P97-2, 609.27
MW-14R, 612.05
P97-1, 610.86
MW-12R, 609.43
MW-7R, 633.54

606 608 610 612 614 616 618 620 622 624 626 628 630 632 634

606 604 602 600 610 612

610 620 630 640

100 0 100 Feet

## Legend

- Extraction Well
- Monitoring Well
- Observation Well
- Piezometer
- Property Line
- Edge of Water
- Groundwater Elevation Contour
- Existing Ground Elevation Contour

MW-6R, 620.10
Location ID — Groundwater Elevation

# CHEM-TROL
# BEDROCK GROUNDWATER CONTOURS
# SEPTEMBER 28, 2015

AECOM

FIGURE 4

J:\Resources\RDMS\Projects\Chem-Trol\Arcmap\THIRD QUARTER 2015 GW CONTOURS.mxd 10/28/2015

N

ON SITE TRIBUTARY OF SMOKES CREEK

SOUTH BRANCH OF SMOKES CREEK

GROUNDWATER COLLECTION TRENCH

SOUTH ALFRED ROAD

LAKE AVENUE

WATER TREATMENT BUILDING

SOIL VAPOR EXTRACTION BUILDING

P97-5, 608.31

OW-1FR, 608.62

MW-10R, 608.54

P-5R, 618.07

MW-6R, 620.96

MW-4R, 608.40

MW-13R, 607.99

EW3, 604.65

P97-4, 608.40

MW-8R, 608.48

EW2, 606.56

P-2R, 635.02

MW-1R, 637.51

P-3R, 619.59

P97-3, 608.49

EW1, 603.32

OW-3R, 614.43

MW-9R, 608.47

OW-2FR, 608.54

P97-2, 610.16

MW-14R, 611.70

P97-1, 611.32

MW-12R, 610.36

MW-7R, 636.26

606 608 610 612 614 616 618 620 622 624 626 628 630 632 634 636

606 604

620 630 640

## Legend

- Extraction Well
- Monitoring Well
- Observation Well
- Piezometer
- Property Line
- Edge of Water
- Groundwater Elevation Contour
- Existing Ground Elevation Contour

MW-6R, 620.96
Location ID — Groundwater Elevation

100 0 100 Feet

CHEM-TROL
BEDROCK GROUNDWATER CONTOURS
DECEMBER 17, 2015

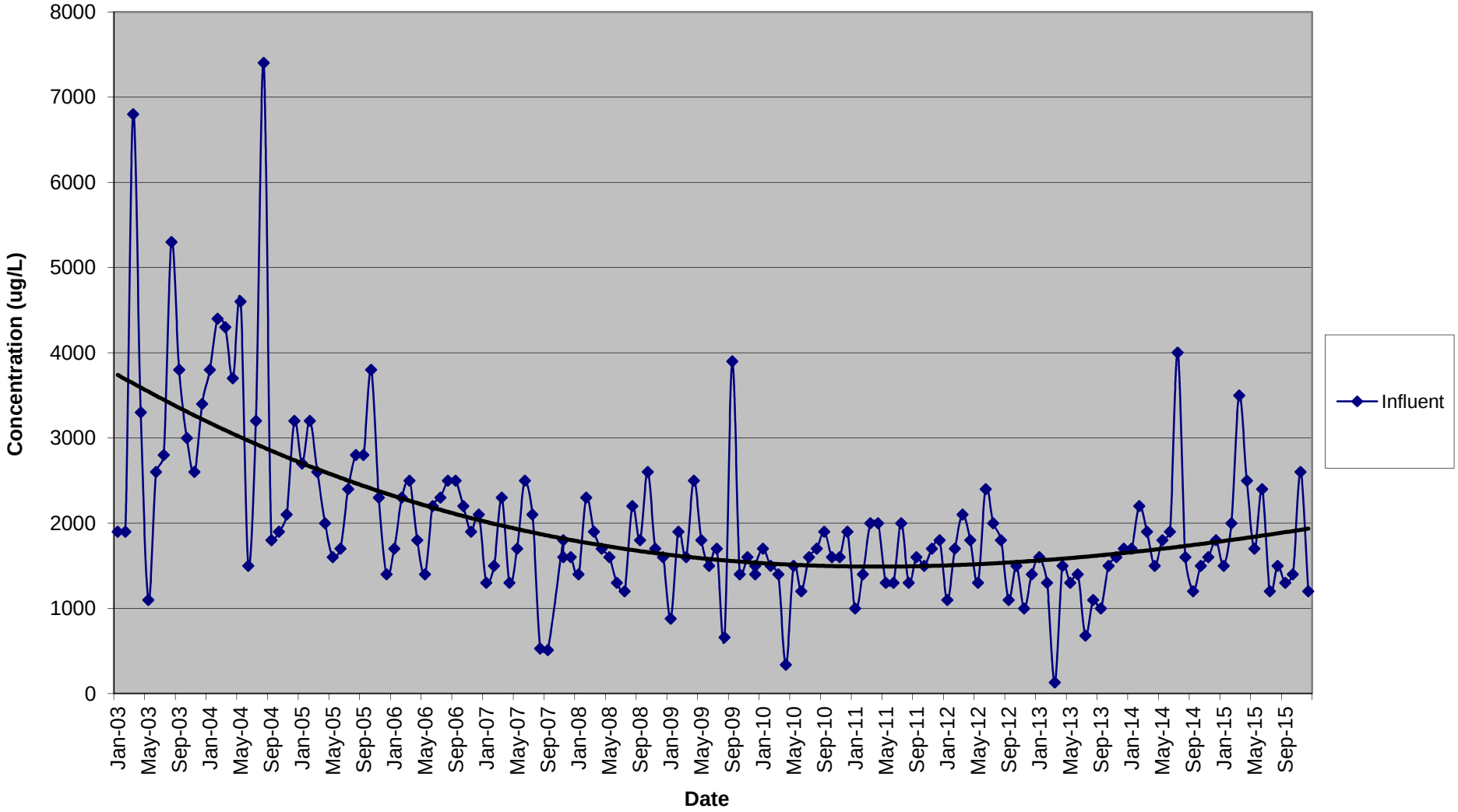
AECOM

FIGURE 5

J:\Resources\RDMS\Projects\Chem-Trol\Arcmap\FOURTH QUARTER 2015 GW CONTOURS.mxd 1/25/2016

FIGURE 6

Chem-Trol Groundwater Treatment System
Influent o-Chlorotoluene Concentration
2003-2015



# ATTACHMENT A

## Completed IC/EC Form

**Enclosure 2**
**NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION**
**Site Management Periodic Review Report Notice**
**Institutional and Engineering Controls Certification Form**

**Site Details** **Box 1**

**Site No. 915015**

**Site Name Chem-Trol**

Site Address: Lake Avenue Zip Code: 14107
City/Town: Hamburg
County: Erie
Site Acreage: 17.5

Reporting Period: February 15, 2015 to February 15, 2016

| | YES | NO |
|---|---|---|
| 1. Is the information above correct? | ☒ | ☐ |
| If NO, include handwritten above or on a separate sheet. | | |
| 2. Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period? | ☐ | ☒ |
| 3. Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))? | ☐ | ☒ |
| 4. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period? | ☐ | ☒ |
| **If you answered YES to questions 2 thru 4, include documentation or evidence that documentation has been previously submitted with this certification form.** | | |
| 5. Is the site currently undergoing development? | ☐ | ☒ |

**Box 2**

| | YES | NO |
|---|---|---|
| 6. Is the current site use consistent with the use(s) listed below? Closed Landfill | ☒ | ☐ |
| 7. Are all ICs/ECs in place and functioning as designed? | ☒ | ☐ |

**IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.**

**A Corrective Measures Work Plan must be submitted along with this form to address these issues.**

_____ _____
Signature of Owner, Remedial Party or Designated Representative Date

**SITE NO. 915015** **Box 3**

**Description of Institutional Controls**

| Parcel | Owner | Institutional Control |
|---|---|---|
| **151.02-1-14.1** | Waste Management | Ground Water Use Restriction<br>Monitoring Plan<br>O&M Plan<br>Landuse Restriction<br>Building Use Restriction |

The controls identified in the Declaration of Covenants and Restrictions, recorded with Erie County on March 25, 2004, include but are not limited to the following: the owner of the Property shall maintain the cap covering the Property by maintaining its grass cover, or after obtaining written approval from the Relevant Agency, by capping the Property with another material; the property is prohibited from being used for purposes other than for industrial or commercial use, excluding use for day care, child care and medical care; the use of groundwater underlying the property is prohibited without treatment to render it safe for drinking water or industrial purposes, except that the groundwater may be reasonably used as necessary to conduct tests to monitor contamination levels of the groundwater. These restrictive covenants are binding and shall run with the land.

**Box 4**

**Description of Engineering Controls**

| Parcel | Engineering Control |
|---|---|
| **151.02-1-14.1** | Groundwater Treatment System<br>Cover System<br>Groundwater Containment<br>Fencing/Access Control<br>Leachate Collection |

Remediation was completed in two phases consisting of “Source Control Elements” and “Groundwater Control Elements”. These elements are summarized as follows:

Source Control Elements:

1. “Hot Spot” Soils Removal.
2. Tributary Sediment Excavation/Disposal.
3. Site Soils Cover.
4. Soil Vapor Extraction (passive state with one year evaluation starting January 2010; passive state permanently approved on May 29, 2011).

Groundwater Control Elements:

1. Groundwater extraction from three extraction wells.
2. On-site groundwater treatment with discharge compliance monitoring.
3. Groundwater quality monitoring.

Groundwater intercept, extraction and discharge compliance monitoring with groundwater elevations, contouring and groundwater quality monitoring are completed to confirm that the remedy remains protective of public health and the environment.

**Box 5**

**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 compete.

| 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 |
|---|---|
| ☒ | ☐ |

**IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.**

**A Corrective Measures Work Plan must be submitted along with this form to address these issues.**

_____ _____

Signature of Owner, Remedial Party or Designated Representative Date

**IC CERTIFICATIONS**
**SITE NO. 915015**

**Box 6**

**SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE**

I certify that all information and statements in Boxes 1,2, and 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 David Moreira (print name) at 4 Liberty Lane West, Hampton NH 03842 (print business address)

am certifying as Owner (Owner or Remedial Party)

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

Signature of Owner, Remedial Party, or Designated Representative Rendering Certification

Date 3/7/16

## IC/EC CERTIFICATIONS

**Box 7**

### Professional Engineer 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 Daniel Servetas (print name) at 40 British American Blvd., Latham, NY 12110 (print business address)

am certifying as a Professional Engineer for the Owner (Owner or Remedial Party)


March 7, 2016

| Signature of Professional Engineer, for the Owner or Remedial Party, Rendering Certification | Stamp (Required for PE) | Date |
|---|---|---|

# ATTACHMENT B

## 2015 Annual Groundwater Sample Laboratory Report

# ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Tel: (716)691-2600

TestAmerica Job ID: 480-87767-1
Client Project/Site: ChemTrol Site - Annual GW
Sampling Event: ChemTrol Annual Groundwater

For:
Waste Management
4 Liberty Lane West
Hampton, New Hampshire 03842

Attn: Dave Moreira

*Authorized for release by:*
*10/8/2015 12:40:04 PM*
Anne Pridgeon, Project Management Assistant I
anne.pridgeon@testamericainc.com

Designee for

Ryan VanDette, Project Manager II
(716)504-9830
ryan.vandette@testamericainc.com

# Table of Contents

# Definitions/Glossary

Client: Waste Management
Project/Site: ChemTrol Site - Annual GW

TestAmerica Job ID: 480-87767-1

## Qualifiers

### GC/MS VOA

| Qualifier | Qualifier Description |
|---|---|
| * | LCS or LCSD is outside acceptance limits. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CNF | Contains no Free Liquid |
| DER | Duplicate error ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision level concentration |
| MDA | Minimum detectable activity |
| EDL | Estimated Detection Limit |
| MDC | Minimum detectable concentration |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| NC | Not Calculated |
| ND | Not detected at the reporting limit (or MDL or EDL if shown) |
| PQL | Practical Quantitation Limit |
| QC | Quality Control |
| RER | Relative error ratio |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |

# Case Narrative

Client: Waste Management
Project/Site: ChemTrol Site - Annual GW

TestAmerica Job ID: 480-87767-1

## Job ID: 480-87767-1

### Laboratory: TestAmerica Buffalo

**Narrative**

**Job Narrative**
**480-87767-1**

**Comments**
No additional comments.

**Receipt**
The samples were received on 9/23/2015 2:45 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.0º C.

**GC/MS VOA**
Method(s) 8260C: The following samples were diluted to bring the concentration of target analytes within the calibration range: DUP (480-87767-1), MW-13R (480-87767-2), MW-3S (480-87767-4) and MW-9R (480-87767-7). Elevated reporting limits (RLs) are provided.

Method(s) 8260C: The results reported for the following sample does not concur with results previously reported for this site: MW-13R (480-87767-2). Reanalysis of a duplicate sample was performed, and the results confirmed.

Method(s) 8260C: The continuing calibration verification (CCV) associated with batch 480-266887 recovered above the upper control limit for Bromomethane. The samples associated with this CCV were non-detects for the affected analyte; therefore, the data have been reported. The following samples are impacted: MW-8R (480-87767-6) and TB (480-87767-8).

Method(s) 8260C: The laboratory control sample (LCS) analytical batch 480-266887 recovered outside control limits for the following analyte: Bromomethane. This analyte was biased high in the LCS and was not detected in the associated samples; therefore, the data have been reported.

Method(s) 8260C: The following samples were diluted to bring the concentration of target analytes within the calibration range: DUP (480-87767-1), MW-3S (480-87767-4), MW-8R (480-87767-6) and MW-9R (480-87767-7). Elevated reporting limits (RLs) are provided.

Method(s) 8260C: The results reported for the following sample does not concur with results previously reported for this site: MW-15R (480-87767-3). Reanalysis was performed, and the results confirmed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

# Detection Summary

Client: Waste Management
Project/Site: ChemTrol Site - Annual GW

TestAmerica Job ID: 480-87767-1

## Client Sample ID: DUP — Lab Sample ID: 480-87767-1

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | 15 | | 5.0 | | ug/L | 4 | | 8260C | Total/NA |
| Chloroethane | 19 | | 5.0 | | ug/L | 4 | | 8260C | Total/NA |
| o-Chlorotoluene - DL | 2600 | | 34 | | ug/L | 40 | | 8260C | Total/NA |

## Client Sample ID: MW-13R — Lab Sample ID: 480-87767-2

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | 22 | | 15 | | ug/L | 40 | | 8260C | Total/NA |
| o-Chlorotoluene | 3200 | | 34 | | ug/L | 40 | | 8260C | Total/NA |
| Chloroethane | 25 | | 13 | | ug/L | 40 | | 8260C | Total/NA |

## Client Sample ID: MW-15R — Lab Sample ID: 480-87767-3

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | 68 | | 25 | | ug/L | 1 | | 8260C | Total/NA |
| Benzene | 15 | | 5.0 | | ug/L | 1 | | 8260C | Total/NA |
| Cyclohexane | 98 | | 5.0 | | ug/L | 1 | | 8260C | Total/NA |
| Ethylbenzene | 6.8 | | 5.0 | | ug/L | 1 | | 8260C | Total/NA |
| Methylcyclohexane | 51 | | 5.0 | | ug/L | 1 | | 8260C | Total/NA |
| Xylenes, Total | 62 | | 15 | | ug/L | 1 | | 8260C | Total/NA |

## Client Sample ID: MW-3S — Lab Sample ID: 480-87767-4

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| o-Chlorotoluene - DL | 75000 | | 1700 | | ug/L | 2000 | | 8260C | Total/NA |

## Client Sample ID: MW-7R — Lab Sample ID: 480-87767-5

No Detections.

## Client Sample ID: MW-8R — Lab Sample ID: 480-87767-6

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| o-Chlorotoluene | 59 | | 5.0 | | ug/L | 2 | | 8260C | Total/NA |

## Client Sample ID: MW-9R — Lab Sample ID: 480-87767-7

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | 350 | | 5.0 | | ug/L | 5 | | 8260C | Total/NA |
| Chloroethane | 34 | | 5.0 | | ug/L | 5 | | 8260C | Total/NA |
| cis-1,2-Dichloroethene | 5.5 | | 5.0 | | ug/L | 5 | | 8260C | Total/NA |
| 1,1,1-Trichloroethane - DL | 530 | | 16 | | ug/L | 20 | | 8260C | Total/NA |
| o-Chlorotoluene - DL | 1900 | | 17 | | ug/L | 20 | | 8260C | Total/NA |

## Client Sample ID: TB — Lab Sample ID: 480-87767-8

No Detections.

This Detection Summary does not include radiochemical test results.

**Client Sample ID: DUP**
**Date Collected: 09/23/15 13:08**
**Date Received: 09/23/15 14:45**

**Lab Sample ID: 480-87767-1**
**Matrix: Water**

## Method: 8260C - Volatile Organic Compounds by GC/MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ND | | 5.0 | | ug/L | | | 10/03/15 12:50 | 4 |
| 1,1,2,2-Tetrachloroethane | ND | | 5.0 | | ug/L | | | 10/03/15 12:50 | 4 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 5.0 | | ug/L | | | 10/03/15 12:50 | 4 |
| 1,1,2-Trichloroethane | ND | | 5.0 | | ug/L | | | 10/03/15 12:50 | 4 |
| **1,1-Dichloroethane** | **15** | | 5.0 | | ug/L | | | 10/03/15 12:50 | 4 |
| 1,2,4-Trichlorobenzene | ND | | 5.0 | | ug/L | | | 10/03/15 12:50 | 4 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 10/03/15 12:50 | 4 |
| 1,2-Dibromoethane | ND | | 5.0 | | ug/L | | | 10/03/15 12:50 | 4 |
| 1,2-Dichlorobenzene | ND | | 5.0 | | ug/L | | | 10/03/15 12:50 | 4 |
| 1,2-Dichloroethane | ND | | 5.0 | | ug/L | | | 10/03/15 12:50 | 4 |
| 1,2-Dichloropropane | ND | | 5.0 | | ug/L | | | 10/03/15 12:50 | 4 |
| 1,3-Dichlorobenzene | ND | | 5.0 | | ug/L | | | 10/03/15 12:50 | 4 |
| 1,4-Dichlorobenzene | ND | | 5.0 | | ug/L | | | 10/03/15 12:50 | 4 |
| 2-Butanone (MEK) | ND | | 25 | | ug/L | | | 10/03/15 12:50 | 4 |
| 2-Hexanone | ND | | 25 | | ug/L | | | 10/03/15 12:50 | 4 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 25 | | ug/L | | | 10/03/15 12:50 | 4 |
| Acetone | ND | | 25 | | ug/L | | | 10/03/15 12:50 | 4 |
| Benzene | ND | | 5.0 | | ug/L | | | 10/03/15 12:50 | 4 |
| Bromoform | ND | | 5.0 | | ug/L | | | 10/03/15 12:50 | 4 |
| Bromomethane | ND | | 5.0 | | ug/L | | | 10/03/15 12:50 | 4 |
| Carbon disulfide | ND | | 5.0 | | ug/L | | | 10/03/15 12:50 | 4 |
| Carbon tetrachloride | ND | | 5.0 | | ug/L | | | 10/03/15 12:50 | 4 |
| Chlorobenzene | ND | | 5.0 | | ug/L | | | 10/03/15 12:50 | 4 |
| Chlorodibromomethane | ND | | 5.0 | | ug/L | | | 10/03/15 12:50 | 4 |
| **Chloroethane** | **19** | | 5.0 | | ug/L | | | 10/03/15 12:50 | 4 |
| Chloroform | ND | | 5.0 | | ug/L | | | 10/03/15 12:50 | 4 |
| Chloromethane | ND | | 5.0 | | ug/L | | | 10/03/15 12:50 | 4 |
| cis-1,2-Dichloroethene | ND | | 5.0 | | ug/L | | | 10/03/15 12:50 | 4 |
| cis-1,3-Dichloropropene | ND | | 5.0 | | ug/L | | | 10/03/15 12:50 | 4 |
| Cyclohexane | ND | | 5.0 | | ug/L | | | 10/03/15 12:50 | 4 |
| Bromodichloromethane | ND | | 5.0 | | ug/L | | | 10/03/15 12:50 | 4 |
| Dichlorofluoromethane | ND | | 5.0 | | ug/L | | | 10/03/15 12:50 | 4 |
| Ethylbenzene | ND | | 5.0 | | ug/L | | | 10/03/15 12:50 | 4 |
| Isopropylbenzene | ND | | 5.0 | | ug/L | | | 10/03/15 12:50 | 4 |
| Methyl acetate | ND | | 5.2 | | ug/L | | | 10/03/15 12:50 | 4 |
| Methyl tert-butyl ether | ND | | 5.0 | | ug/L | | | 10/03/15 12:50 | 4 |
| Methylcyclohexane | ND | | 5.0 | | ug/L | | | 10/03/15 12:50 | 4 |
| Methylene Chloride | ND | | 5.0 | | ug/L | | | 10/03/15 12:50 | 4 |
| Styrene | ND | | 5.0 | | ug/L | | | 10/03/15 12:50 | 4 |
| Tetrachloroethene | ND | | 5.0 | | ug/L | | | 10/03/15 12:50 | 4 |
| Toluene | ND | | 5.0 | | ug/L | | | 10/03/15 12:50 | 4 |
| trans-1,2-Dichloroethene | ND | | 5.0 | | ug/L | | | 10/03/15 12:50 | 4 |
| trans-1,3-Dichloropropene | ND | | 5.0 | | ug/L | | | 10/03/15 12:50 | 4 |
| Trichloroethene | ND | | 5.0 | | ug/L | | | 10/03/15 12:50 | 4 |
| Trichlorofluoromethane | ND | | 5.0 | | ug/L | | | 10/03/15 12:50 | 4 |
| Vinyl chloride | ND | | 5.0 | | ug/L | | | 10/03/15 12:50 | 4 |
| Xylenes, Total | ND | | 15 | | ug/L | | | 10/03/15 12:50 | 4 |

## Client Sample ID: DUP

**Date Collected: 09/23/15 13:08**
**Date Received: 09/23/15 14:45**

**Lab Sample ID: 480-87767-1**
**Matrix: Water**

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *116* | | *66 - 137* | | *10/03/15 12:50* | *4* |
| *Toluene-d8 (Surr)* | *120* | | *71 - 126* | | *10/03/15 12:50* | *4* |
| *4-Bromofluorobenzene (Surr)* | *101* | | *73 - 120* | | *10/03/15 12:50* | *4* |
| *Dibromofluoromethane (Surr)* | *108* | | *60 - 140* | | *10/03/15 12:50* | *4* |

### Method: 8260C - Volatile Organic Compounds by GC/MS - DL

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **o-Chlorotoluene** | **2600** | | 34 | | ug/L | | | 10/05/15 12:32 | 40 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *111* | | *66 - 137* | | *10/05/15 12:32* | *40* |
| *Toluene-d8 (Surr)* | *115* | | *71 - 126* | | *10/05/15 12:32* | *40* |
| *4-Bromofluorobenzene (Surr)* | *94* | | *73 - 120* | | *10/05/15 12:32* | *40* |
| *Dibromofluoromethane (Surr)* | *103* | | *60 - 140* | | *10/05/15 12:32* | *40* |

## Client Sample ID: MW-13R

**Date Collected: 09/23/15 13:08**
**Date Received: 09/23/15 14:45**

**Lab Sample ID: 480-87767-2**
**Matrix: Water**

### Method: 8260C - Volatile Organic Compounds by GC/MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ND | | 33 | | ug/L | | | 10/03/15 13:12 | 40 |
| 1,1,2,2-Tetrachloroethane | ND | | 8.4 | | ug/L | | | 10/03/15 13:12 | 40 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 12 | | ug/L | | | 10/03/15 13:12 | 40 |
| 1,1,2-Trichloroethane | ND | | 9.2 | | ug/L | | | 10/03/15 13:12 | 40 |
| **1,1-Dichloroethane** | **22** | | 15 | | ug/L | | | 10/03/15 13:12 | 40 |
| 1,2,4-Trichlorobenzene | ND | | 16 | | ug/L | | | 10/03/15 13:12 | 40 |
| 1,2-Dibromo-3-Chloropropane | ND | | 16 | | ug/L | | | 10/03/15 13:12 | 40 |
| 1,2-Dibromoethane | ND | | 29 | | ug/L | | | 10/03/15 13:12 | 40 |
| 1,2-Dichlorobenzene | ND | | 32 | | ug/L | | | 10/03/15 13:12 | 40 |
| 1,2-Dichloroethane | ND | | 8.4 | | ug/L | | | 10/03/15 13:12 | 40 |
| 1,2-Dichloropropane | ND | | 29 | | ug/L | | | 10/03/15 13:12 | 40 |
| 1,3-Dichlorobenzene | ND | | 31 | | ug/L | | | 10/03/15 13:12 | 40 |
| 1,4-Dichlorobenzene | ND | | 34 | | ug/L | | | 10/03/15 13:12 | 40 |
| 2-Butanone (MEK) | ND | | 53 | | ug/L | | | 10/03/15 13:12 | 40 |
| **o-Chlorotoluene** | **3200** | | 34 | | ug/L | | | 10/03/15 13:12 | 40 |
| 2-Hexanone | ND | | 50 | | ug/L | | | 10/03/15 13:12 | 40 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 84 | | ug/L | | | 10/03/15 13:12 | 40 |
| Acetone | ND | | 120 | | ug/L | | | 10/03/15 13:12 | 40 |
| Benzene | ND | | 16 | | ug/L | | | 10/03/15 13:12 | 40 |
| Bromoform | ND | | 10 | | ug/L | | | 10/03/15 13:12 | 40 |
| Bromomethane | ND | | 28 | | ug/L | | | 10/03/15 13:12 | 40 |
| Carbon disulfide | ND | | 7.6 | | ug/L | | | 10/03/15 13:12 | 40 |
| Carbon tetrachloride | ND | | 11 | | ug/L | | | 10/03/15 13:12 | 40 |
| Chlorobenzene | ND | | 30 | | ug/L | | | 10/03/15 13:12 | 40 |
| Chlorodibromomethane | ND | | 13 | | ug/L | | | 10/03/15 13:12 | 40 |
| **Chloroethane** | **25** | | 13 | | ug/L | | | 10/03/15 13:12 | 40 |
| Chloroform | ND | | 14 | | ug/L | | | 10/03/15 13:12 | 40 |
| Chloromethane | ND | | 14 | | ug/L | | | 10/03/15 13:12 | 40 |
| cis-1,2-Dichloroethene | ND | | 32 | | ug/L | | | 10/03/15 13:12 | 40 |
| cis-1,3-Dichloropropene | ND | | 14 | | ug/L | | | 10/03/15 13:12 | 40 |

## Client Sample ID: MW-13R

**Date Collected: 09/23/15 13:08**
**Date Received: 09/23/15 14:45**

**Lab Sample ID: 480-87767-2**
**Matrix: Water**

### Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Cyclohexane | ND | | 7.2 | | ug/L | | | 10/03/15 13:12 | 40 |
| Bromodichloromethane | ND | | 16 | | ug/L | | | 10/03/15 13:12 | 40 |
| Dichlorofluoromethane | ND | | 14 | | ug/L | | | 10/03/15 13:12 | 40 |
| Ethylbenzene | ND | | 30 | | ug/L | | | 10/03/15 13:12 | 40 |
| Isopropylbenzene | ND | | 32 | | ug/L | | | 10/03/15 13:12 | 40 |
| Methyl acetate | ND | | 52 | | ug/L | | | 10/03/15 13:12 | 40 |
| Methyl tert-butyl ether | ND | | 6.4 | | ug/L | | | 10/03/15 13:12 | 40 |
| Methylcyclohexane | ND | | 6.4 | | ug/L | | | 10/03/15 13:12 | 40 |
| Methylene Chloride | ND | | 18 | | ug/L | | | 10/03/15 13:12 | 40 |
| Styrene | ND | | 29 | | ug/L | | | 10/03/15 13:12 | 40 |
| Tetrachloroethene | ND | | 14 | | ug/L | | | 10/03/15 13:12 | 40 |
| Toluene | ND | | 20 | | ug/L | | | 10/03/15 13:12 | 40 |
| trans-1,2-Dichloroethene | ND | | 36 | | ug/L | | | 10/03/15 13:12 | 40 |
| trans-1,3-Dichloropropene | ND | | 15 | | ug/L | | | 10/03/15 13:12 | 40 |
| Trichloroethene | ND | | 18 | | ug/L | | | 10/03/15 13:12 | 40 |
| Trichlorofluoromethane | ND | | 35 | | ug/L | | | 10/03/15 13:12 | 40 |
| Vinyl chloride | ND | | 36 | | ug/L | | | 10/03/15 13:12 | 40 |
| Xylenes, Total | ND | | 26 | | ug/L | | | 10/03/15 13:12 | 40 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *120* | | *66 - 137* | | *10/03/15 13:12* | *40* |
| *Toluene-d8 (Surr)* | *125* | | *71 - 126* | | *10/03/15 13:12* | *40* |
| *4-Bromofluorobenzene (Surr)* | *103* | | *73 - 120* | | *10/03/15 13:12* | *40* |
| *Dibromofluoromethane (Surr)* | *110* | | *60 - 140* | | *10/03/15 13:12* | *40* |

## Client Sample ID: MW-15R

**Date Collected: 09/23/15 13:05**
**Date Received: 09/23/15 14:45**

**Lab Sample ID: 480-87767-3**
**Matrix: Water**

### Method: 8260C - Volatile Organic Compounds by GC/MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ND | | 5.0 | | ug/L | | | 10/03/15 13:34 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 5.0 | | ug/L | | | 10/03/15 13:34 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 5.0 | | ug/L | | | 10/03/15 13:34 | 1 |
| 1,1,2-Trichloroethane | ND | | 5.0 | | ug/L | | | 10/03/15 13:34 | 1 |
| 1,1-Dichloroethane | ND | | 5.0 | | ug/L | | | 10/03/15 13:34 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 5.0 | | ug/L | | | 10/03/15 13:34 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 10/03/15 13:34 | 1 |
| 1,2-Dibromoethane | ND | | 5.0 | | ug/L | | | 10/03/15 13:34 | 1 |
| 1,2-Dichlorobenzene | ND | | 5.0 | | ug/L | | | 10/03/15 13:34 | 1 |
| 1,2-Dichloroethane | ND | | 5.0 | | ug/L | | | 10/03/15 13:34 | 1 |
| 1,2-Dichloropropane | ND | | 5.0 | | ug/L | | | 10/03/15 13:34 | 1 |
| 1,3-Dichlorobenzene | ND | | 5.0 | | ug/L | | | 10/03/15 13:34 | 1 |
| 1,4-Dichlorobenzene | ND | | 5.0 | | ug/L | | | 10/03/15 13:34 | 1 |
| 2-Butanone (MEK) | ND | | 25 | | ug/L | | | 10/03/15 13:34 | 1 |
| o-Chlorotoluene | ND | | 5.0 | | ug/L | | | 10/03/15 13:34 | 1 |
| 2-Hexanone | ND | | 25 | | ug/L | | | 10/03/15 13:34 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 25 | | ug/L | | | 10/03/15 13:34 | 1 |
| **Acetone** | **68** | | 25 | | ug/L | | | 10/03/15 13:34 | 1 |
| **Benzene** | **15** | | 5.0 | | ug/L | | | 10/03/15 13:34 | 1 |

## Client Sample ID: MW-15R

**Date Collected: 09/23/15 13:05**
**Date Received: 09/23/15 14:45**

**Lab Sample ID: 480-87767-3**
**Matrix: Water**

### Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Bromoform | ND | | 5.0 | | ug/L | | | 10/03/15 13:34 | 1 |
| Bromomethane | ND | | 5.0 | | ug/L | | | 10/03/15 13:34 | 1 |
| Carbon disulfide | ND | | 5.0 | | ug/L | | | 10/03/15 13:34 | 1 |
| Carbon tetrachloride | ND | | 5.0 | | ug/L | | | 10/03/15 13:34 | 1 |
| Chlorobenzene | ND | | 5.0 | | ug/L | | | 10/03/15 13:34 | 1 |
| Chlorodibromomethane | ND | | 5.0 | | ug/L | | | 10/03/15 13:34 | 1 |
| Chloroethane | ND | | 5.0 | | ug/L | | | 10/03/15 13:34 | 1 |
| Chloroform | ND | | 5.0 | | ug/L | | | 10/03/15 13:34 | 1 |
| Chloromethane | ND | | 5.0 | | ug/L | | | 10/03/15 13:34 | 1 |
| cis-1,2-Dichloroethene | ND | | 5.0 | | ug/L | | | 10/03/15 13:34 | 1 |
| cis-1,3-Dichloropropene | ND | | 5.0 | | ug/L | | | 10/03/15 13:34 | 1 |
| **Cyclohexane** | **98** | | 5.0 | | ug/L | | | 10/03/15 13:34 | 1 |
| Bromodichloromethane | ND | | 5.0 | | ug/L | | | 10/03/15 13:34 | 1 |
| Dichlorofluoromethane | ND | | 5.0 | | ug/L | | | 10/03/15 13:34 | 1 |
| **Ethylbenzene** | **6.8** | | 5.0 | | ug/L | | | 10/03/15 13:34 | 1 |
| Isopropylbenzene | ND | | 5.0 | | ug/L | | | 10/03/15 13:34 | 1 |
| Methyl acetate | ND | | 5.0 | | ug/L | | | 10/03/15 13:34 | 1 |
| Methyl tert-butyl ether | ND | | 5.0 | | ug/L | | | 10/03/15 13:34 | 1 |
| **Methylcyclohexane** | **51** | | 5.0 | | ug/L | | | 10/03/15 13:34 | 1 |
| Methylene Chloride | ND | | 5.0 | | ug/L | | | 10/03/15 13:34 | 1 |
| Styrene | ND | | 5.0 | | ug/L | | | 10/03/15 13:34 | 1 |
| Tetrachloroethene | ND | | 5.0 | | ug/L | | | 10/03/15 13:34 | 1 |
| Toluene | ND | | 5.0 | | ug/L | | | 10/03/15 13:34 | 1 |
| trans-1,2-Dichloroethene | ND | | 5.0 | | ug/L | | | 10/03/15 13:34 | 1 |
| trans-1,3-Dichloropropene | ND | | 5.0 | | ug/L | | | 10/03/15 13:34 | 1 |
| Trichloroethene | ND | | 5.0 | | ug/L | | | 10/03/15 13:34 | 1 |
| Trichlorofluoromethane | ND | | 5.0 | | ug/L | | | 10/03/15 13:34 | 1 |
| Vinyl chloride | ND | | 5.0 | | ug/L | | | 10/03/15 13:34 | 1 |
| **Xylenes, Total** | **62** | | 15 | | ug/L | | | 10/03/15 13:34 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *120* | | *66 - 137* | | *10/03/15 13:34* | *1* |
| *Toluene-d8 (Surr)* | *117* | | *71 - 126* | | *10/03/15 13:34* | *1* |
| *4-Bromofluorobenzene (Surr)* | *96* | | *73 - 120* | | *10/03/15 13:34* | *1* |
| *Dibromofluoromethane (Surr)* | *110* | | *60 - 140* | | *10/03/15 13:34* | *1* |

## Client Sample ID: MW-3S

**Date Collected: 09/23/15 13:30**
**Date Received: 09/23/15 14:45**

**Lab Sample ID: 480-87767-4**
**Matrix: Water**

### Method: 8260C - Volatile Organic Compounds by GC/MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ND | | 410 | | ug/L | | | 10/03/15 13:57 | 500 |
| 1,1,2,2-Tetrachloroethane | ND | | 110 | | ug/L | | | 10/03/15 13:57 | 500 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 160 | | ug/L | | | 10/03/15 13:57 | 500 |
| 1,1,2-Trichloroethane | ND | | 120 | | ug/L | | | 10/03/15 13:57 | 500 |
| 1,1-Dichloroethane | ND | | 190 | | ug/L | | | 10/03/15 13:57 | 500 |
| 1,2,4-Trichlorobenzene | ND | | 210 | | ug/L | | | 10/03/15 13:57 | 500 |
| 1,2-Dibromo-3-Chloropropane | ND | | 200 | | ug/L | | | 10/03/15 13:57 | 500 |
| 1,2-Dibromoethane | ND | | 370 | | ug/L | | | 10/03/15 13:57 | 500 |

**Client Sample ID: MW-3S**
**Date Collected: 09/23/15 13:30**
**Date Received: 09/23/15 14:45**

**Lab Sample ID: 480-87767-4**
**Matrix: Water**

## Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dichlorobenzene | ND | | 400 | | ug/L | | | 10/03/15 13:57 | 500 |
| 1,2-Dichloroethane | ND | | 110 | | ug/L | | | 10/03/15 13:57 | 500 |
| 1,2-Dichloropropane | ND | | 360 | | ug/L | | | 10/03/15 13:57 | 500 |
| 1,3-Dichlorobenzene | ND | | 390 | | ug/L | | | 10/03/15 13:57 | 500 |
| 1,4-Dichlorobenzene | ND | | 420 | | ug/L | | | 10/03/15 13:57 | 500 |
| 2-Butanone (MEK) | ND | | 660 | | ug/L | | | 10/03/15 13:57 | 500 |
| 2-Hexanone | ND | | 620 | | ug/L | | | 10/03/15 13:57 | 500 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 1100 | | ug/L | | | 10/03/15 13:57 | 500 |
| Acetone | ND | | 1500 | | ug/L | | | 10/03/15 13:57 | 500 |
| Benzene | ND | | 210 | | ug/L | | | 10/03/15 13:57 | 500 |
| Bromoform | ND | | 130 | | ug/L | | | 10/03/15 13:57 | 500 |
| Bromomethane | ND | | 350 | | ug/L | | | 10/03/15 13:57 | 500 |
| Carbon disulfide | ND | | 95 | | ug/L | | | 10/03/15 13:57 | 500 |
| Carbon tetrachloride | ND | | 140 | | ug/L | | | 10/03/15 13:57 | 500 |
| Chlorobenzene | ND | | 380 | | ug/L | | | 10/03/15 13:57 | 500 |
| Chlorodibromomethane | ND | | 160 | | ug/L | | | 10/03/15 13:57 | 500 |
| Chloroethane | ND | | 160 | | ug/L | | | 10/03/15 13:57 | 500 |
| Chloroform | ND | | 170 | | ug/L | | | 10/03/15 13:57 | 500 |
| Chloromethane | ND | | 180 | | ug/L | | | 10/03/15 13:57 | 500 |
| cis-1,2-Dichloroethene | ND | | 410 | | ug/L | | | 10/03/15 13:57 | 500 |
| cis-1,3-Dichloropropene | ND | | 180 | | ug/L | | | 10/03/15 13:57 | 500 |
| Cyclohexane | ND | | 90 | | ug/L | | | 10/03/15 13:57 | 500 |
| Bromodichloromethane | ND | | 200 | | ug/L | | | 10/03/15 13:57 | 500 |
| Dichlorofluoromethane | ND | | 170 | | ug/L | | | 10/03/15 13:57 | 500 |
| Ethylbenzene | ND | | 370 | | ug/L | | | 10/03/15 13:57 | 500 |
| Isopropylbenzene | ND | | 400 | | ug/L | | | 10/03/15 13:57 | 500 |
| Methyl acetate | ND | | 650 | | ug/L | | | 10/03/15 13:57 | 500 |
| Methyl tert-butyl ether | ND | | 80 | | ug/L | | | 10/03/15 13:57 | 500 |
| Methylcyclohexane | ND | | 80 | | ug/L | | | 10/03/15 13:57 | 500 |
| Methylene Chloride | ND | | 220 | | ug/L | | | 10/03/15 13:57 | 500 |
| Styrene | ND | | 370 | | ug/L | | | 10/03/15 13:57 | 500 |
| Tetrachloroethene | ND | | 180 | | ug/L | | | 10/03/15 13:57 | 500 |
| Toluene | ND | | 260 | | ug/L | | | 10/03/15 13:57 | 500 |
| trans-1,2-Dichloroethene | ND | | 450 | | ug/L | | | 10/03/15 13:57 | 500 |
| trans-1,3-Dichloropropene | ND | | 190 | | ug/L | | | 10/03/15 13:57 | 500 |
| Trichloroethene | ND | | 230 | | ug/L | | | 10/03/15 13:57 | 500 |
| Trichlorofluoromethane | ND | | 440 | | ug/L | | | 10/03/15 13:57 | 500 |
| Vinyl chloride | ND | | 450 | | ug/L | | | 10/03/15 13:57 | 500 |
| Xylenes, Total | ND | | 330 | | ug/L | | | 10/03/15 13:57 | 500 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *121* | | *66 - 137* | | *10/03/15 13:57* | *500* |
| *Toluene-d8 (Surr)* | *123* | | *71 - 126* | | *10/03/15 13:57* | *500* |
| *4-Bromofluorobenzene (Surr)* | *101* | | *73 - 120* | | *10/03/15 13:57* | *500* |
| *Dibromofluoromethane (Surr)* | *113* | | *60 - 140* | | *10/03/15 13:57* | *500* |

## Method: 8260C - Volatile Organic Compounds by GC/MS - DL

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **o-Chlorotoluene** | **75000** | | 1700 | | ug/L | | | 10/05/15 12:54 | 2000 |

## Client Sample ID: MW-3S

**Date Collected: 09/23/15 13:30**
**Date Received: 09/23/15 14:45**

**Lab Sample ID: 480-87767-4**
**Matrix: Water**

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *111* | | *66 - 137* | | *10/05/15 12:54* | *2000* |
| *Toluene-d8 (Surr)* | *114* | | *71 - 126* | | *10/05/15 12:54* | *2000* |
| *4-Bromofluorobenzene (Surr)* | *93* | | *73 - 120* | | *10/05/15 12:54* | *2000* |
| *Dibromofluoromethane (Surr)* | *107* | | *60 - 140* | | *10/05/15 12:54* | *2000* |

## Client Sample ID: MW-7R

**Date Collected: 09/23/15 13:40**
**Date Received: 09/23/15 14:45**

**Lab Sample ID: 480-87767-5**
**Matrix: Water**

### Method: 8260C - Volatile Organic Compounds by GC/MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ND | | 5.0 | | ug/L | | | 10/03/15 14:19 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 5.0 | | ug/L | | | 10/03/15 14:19 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 5.0 | | ug/L | | | 10/03/15 14:19 | 1 |
| 1,1,2-Trichloroethane | ND | | 5.0 | | ug/L | | | 10/03/15 14:19 | 1 |
| 1,1-Dichloroethane | ND | | 5.0 | | ug/L | | | 10/03/15 14:19 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 5.0 | | ug/L | | | 10/03/15 14:19 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 10/03/15 14:19 | 1 |
| 1,2-Dibromoethane | ND | | 5.0 | | ug/L | | | 10/03/15 14:19 | 1 |
| 1,2-Dichlorobenzene | ND | | 5.0 | | ug/L | | | 10/03/15 14:19 | 1 |
| 1,2-Dichloroethane | ND | | 5.0 | | ug/L | | | 10/03/15 14:19 | 1 |
| 1,2-Dichloropropane | ND | | 5.0 | | ug/L | | | 10/03/15 14:19 | 1 |
| 1,3-Dichlorobenzene | ND | | 5.0 | | ug/L | | | 10/03/15 14:19 | 1 |
| 1,4-Dichlorobenzene | ND | | 5.0 | | ug/L | | | 10/03/15 14:19 | 1 |
| 2-Butanone (MEK) | ND | | 25 | | ug/L | | | 10/03/15 14:19 | 1 |
| o-Chlorotoluene | ND | | 5.0 | | ug/L | | | 10/03/15 14:19 | 1 |
| 2-Hexanone | ND | | 25 | | ug/L | | | 10/03/15 14:19 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 25 | | ug/L | | | 10/03/15 14:19 | 1 |
| Acetone | ND | | 25 | | ug/L | | | 10/03/15 14:19 | 1 |
| Benzene | ND | | 5.0 | | ug/L | | | 10/03/15 14:19 | 1 |
| Bromoform | ND | | 5.0 | | ug/L | | | 10/03/15 14:19 | 1 |
| Bromomethane | ND | | 5.0 | | ug/L | | | 10/03/15 14:19 | 1 |
| Carbon disulfide | ND | | 5.0 | | ug/L | | | 10/03/15 14:19 | 1 |
| Carbon tetrachloride | ND | | 5.0 | | ug/L | | | 10/03/15 14:19 | 1 |
| Chlorobenzene | ND | | 5.0 | | ug/L | | | 10/03/15 14:19 | 1 |
| Chlorodibromomethane | ND | | 5.0 | | ug/L | | | 10/03/15 14:19 | 1 |
| Chloroethane | ND | | 5.0 | | ug/L | | | 10/03/15 14:19 | 1 |
| Chloroform | ND | | 5.0 | | ug/L | | | 10/03/15 14:19 | 1 |
| Chloromethane | ND | | 5.0 | | ug/L | | | 10/03/15 14:19 | 1 |
| cis-1,2-Dichloroethene | ND | | 5.0 | | ug/L | | | 10/03/15 14:19 | 1 |
| cis-1,3-Dichloropropene | ND | | 5.0 | | ug/L | | | 10/03/15 14:19 | 1 |
| Cyclohexane | ND | | 5.0 | | ug/L | | | 10/03/15 14:19 | 1 |
| Bromodichloromethane | ND | | 5.0 | | ug/L | | | 10/03/15 14:19 | 1 |
| Dichlorofluoromethane | ND | | 5.0 | | ug/L | | | 10/03/15 14:19 | 1 |
| Ethylbenzene | ND | | 5.0 | | ug/L | | | 10/03/15 14:19 | 1 |
| Isopropylbenzene | ND | | 5.0 | | ug/L | | | 10/03/15 14:19 | 1 |
| Methyl acetate | ND | | 5.0 | | ug/L | | | 10/03/15 14:19 | 1 |
| Methyl tert-butyl ether | ND | | 5.0 | | ug/L | | | 10/03/15 14:19 | 1 |
| Methylcyclohexane | ND | | 5.0 | | ug/L | | | 10/03/15 14:19 | 1 |
| Methylene Chloride | ND | | 5.0 | | ug/L | | | 10/03/15 14:19 | 1 |

## Client Sample ID: MW-7R

**Date Collected: 09/23/15 13:40**
**Date Received: 09/23/15 14:45**

**Lab Sample ID: 480-87767-5**
**Matrix: Water**

### Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Styrene | ND | | 5.0 | | ug/L | | | 10/03/15 14:19 | 1 |
| Tetrachloroethene | ND | | 5.0 | | ug/L | | | 10/03/15 14:19 | 1 |
| Toluene | ND | | 5.0 | | ug/L | | | 10/03/15 14:19 | 1 |
| trans-1,2-Dichloroethene | ND | | 5.0 | | ug/L | | | 10/03/15 14:19 | 1 |
| trans-1,3-Dichloropropene | ND | | 5.0 | | ug/L | | | 10/03/15 14:19 | 1 |
| Trichloroethene | ND | | 5.0 | | ug/L | | | 10/03/15 14:19 | 1 |
| Trichlorofluoromethane | ND | | 5.0 | | ug/L | | | 10/03/15 14:19 | 1 |
| Vinyl chloride | ND | | 5.0 | | ug/L | | | 10/03/15 14:19 | 1 |
| Xylenes, Total | ND | | 15 | | ug/L | | | 10/03/15 14:19 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *117* | | *66 - 137* | | *10/03/15 14:19* | *1* |
| *Toluene-d8 (Surr)* | *119* | | *71 - 126* | | *10/03/15 14:19* | *1* |
| *4-Bromofluorobenzene (Surr)* | *98* | | *73 - 120* | | *10/03/15 14:19* | *1* |
| *Dibromofluoromethane (Surr)* | *109* | | *60 - 140* | | *10/03/15 14:19* | *1* |

## Client Sample ID: MW-8R

**Date Collected: 09/23/15 13:20**
**Date Received: 09/23/15 14:45**

**Lab Sample ID: 480-87767-6**
**Matrix: Water**

### Method: 8260C - Volatile Organic Compounds by GC/MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ND | | 5.0 | | ug/L | | | 10/05/15 13:16 | 2 |
| 1,1,2,2-Tetrachloroethane | ND | | 5.0 | | ug/L | | | 10/05/15 13:16 | 2 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 5.0 | | ug/L | | | 10/05/15 13:16 | 2 |
| 1,1,2-Trichloroethane | ND | | 5.0 | | ug/L | | | 10/05/15 13:16 | 2 |
| 1,1-Dichloroethane | ND | | 5.0 | | ug/L | | | 10/05/15 13:16 | 2 |
| 1,2,4-Trichlorobenzene | ND | | 5.0 | | ug/L | | | 10/05/15 13:16 | 2 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 10/05/15 13:16 | 2 |
| 1,2-Dibromoethane | ND | | 5.0 | | ug/L | | | 10/05/15 13:16 | 2 |
| 1,2-Dichlorobenzene | ND | | 5.0 | | ug/L | | | 10/05/15 13:16 | 2 |
| 1,2-Dichloroethane | ND | | 5.0 | | ug/L | | | 10/05/15 13:16 | 2 |
| 1,2-Dichloropropane | ND | | 5.0 | | ug/L | | | 10/05/15 13:16 | 2 |
| 1,3-Dichlorobenzene | ND | | 5.0 | | ug/L | | | 10/05/15 13:16 | 2 |
| 1,4-Dichlorobenzene | ND | | 5.0 | | ug/L | | | 10/05/15 13:16 | 2 |
| 2-Butanone (MEK) | ND | | 25 | | ug/L | | | 10/05/15 13:16 | 2 |
| **o-Chlorotoluene** | **59** | | 5.0 | | ug/L | | | 10/05/15 13:16 | 2 |
| 2-Hexanone | ND | | 25 | | ug/L | | | 10/05/15 13:16 | 2 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 25 | | ug/L | | | 10/05/15 13:16 | 2 |
| Acetone | ND | | 25 | | ug/L | | | 10/05/15 13:16 | 2 |
| Benzene | ND | | 5.0 | | ug/L | | | 10/05/15 13:16 | 2 |
| Bromoform | ND | | 5.0 | | ug/L | | | 10/05/15 13:16 | 2 |
| Bromomethane | ND | * | 5.0 | | ug/L | | | 10/05/15 13:16 | 2 |
| Carbon disulfide | ND | | 5.0 | | ug/L | | | 10/05/15 13:16 | 2 |
| Carbon tetrachloride | ND | | 5.0 | | ug/L | | | 10/05/15 13:16 | 2 |
| Chlorobenzene | ND | | 5.0 | | ug/L | | | 10/05/15 13:16 | 2 |
| Chlorodibromomethane | ND | | 5.0 | | ug/L | | | 10/05/15 13:16 | 2 |
| Chloroethane | ND | | 5.0 | | ug/L | | | 10/05/15 13:16 | 2 |
| Chloroform | ND | | 5.0 | | ug/L | | | 10/05/15 13:16 | 2 |
| Chloromethane | ND | | 5.0 | | ug/L | | | 10/05/15 13:16 | 2 |

## Client Sample ID: MW-8R

**Date Collected: 09/23/15 13:20**
**Date Received: 09/23/15 14:45**

**Lab Sample ID: 480-87767-6**
**Matrix: Water**

### Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| cis-1,2-Dichloroethene | ND | | 5.0 | | ug/L | | | 10/05/15 13:16 | 2 |
| cis-1,3-Dichloropropene | ND | | 5.0 | | ug/L | | | 10/05/15 13:16 | 2 |
| Cyclohexane | ND | | 5.0 | | ug/L | | | 10/05/15 13:16 | 2 |
| Bromodichloromethane | ND | | 5.0 | | ug/L | | | 10/05/15 13:16 | 2 |
| Dichlorofluoromethane | ND | | 5.0 | | ug/L | | | 10/05/15 13:16 | 2 |
| Ethylbenzene | ND | | 5.0 | | ug/L | | | 10/05/15 13:16 | 2 |
| Isopropylbenzene | ND | | 5.0 | | ug/L | | | 10/05/15 13:16 | 2 |
| Methyl acetate | ND | | 5.0 | | ug/L | | | 10/05/15 13:16 | 2 |
| Methyl tert-butyl ether | ND | | 5.0 | | ug/L | | | 10/05/15 13:16 | 2 |
| Methylcyclohexane | ND | | 5.0 | | ug/L | | | 10/05/15 13:16 | 2 |
| Methylene Chloride | ND | | 5.0 | | ug/L | | | 10/05/15 13:16 | 2 |
| Styrene | ND | | 5.0 | | ug/L | | | 10/05/15 13:16 | 2 |
| Tetrachloroethene | ND | | 5.0 | | ug/L | | | 10/05/15 13:16 | 2 |
| Toluene | ND | | 5.0 | | ug/L | | | 10/05/15 13:16 | 2 |
| trans-1,2-Dichloroethene | ND | | 5.0 | | ug/L | | | 10/05/15 13:16 | 2 |
| trans-1,3-Dichloropropene | ND | | 5.0 | | ug/L | | | 10/05/15 13:16 | 2 |
| Trichloroethene | ND | | 5.0 | | ug/L | | | 10/05/15 13:16 | 2 |
| Trichlorofluoromethane | ND | | 5.0 | | ug/L | | | 10/05/15 13:16 | 2 |
| Vinyl chloride | ND | | 5.0 | | ug/L | | | 10/05/15 13:16 | 2 |
| Xylenes, Total | ND | | 15 | | ug/L | | | 10/05/15 13:16 | 2 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *112* | | *66 - 137* | | *10/05/15 13:16* | *2* |
| *Toluene-d8 (Surr)* | *114* | | *71 - 126* | | *10/05/15 13:16* | *2* |
| *4-Bromofluorobenzene (Surr)* | *94* | | *73 - 120* | | *10/05/15 13:16* | *2* |
| *Dibromofluoromethane (Surr)* | *107* | | *60 - 140* | | *10/05/15 13:16* | *2* |

## Client Sample ID: MW-9R

**Date Collected: 09/23/15 13:35**
**Date Received: 09/23/15 14:45**

**Lab Sample ID: 480-87767-7**
**Matrix: Water**

### Method: 8260C - Volatile Organic Compounds by GC/MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,2,2-Tetrachloroethane | ND | | 5.0 | | ug/L | | | 10/03/15 15:04 | 5 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 5.0 | | ug/L | | | 10/03/15 15:04 | 5 |
| 1,1,2-Trichloroethane | ND | | 5.0 | | ug/L | | | 10/03/15 15:04 | 5 |
| **1,1-Dichloroethane** | **350** | | 5.0 | | ug/L | | | 10/03/15 15:04 | 5 |
| 1,2,4-Trichlorobenzene | ND | | 5.0 | | ug/L | | | 10/03/15 15:04 | 5 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 10/03/15 15:04 | 5 |
| 1,2-Dibromoethane | ND | | 5.0 | | ug/L | | | 10/03/15 15:04 | 5 |
| 1,2-Dichlorobenzene | ND | | 5.0 | | ug/L | | | 10/03/15 15:04 | 5 |
| 1,2-Dichloroethane | ND | | 5.0 | | ug/L | | | 10/03/15 15:04 | 5 |
| 1,2-Dichloropropane | ND | | 5.0 | | ug/L | | | 10/03/15 15:04 | 5 |
| 1,3-Dichlorobenzene | ND | | 5.0 | | ug/L | | | 10/03/15 15:04 | 5 |
| 1,4-Dichlorobenzene | ND | | 5.0 | | ug/L | | | 10/03/15 15:04 | 5 |
| 2-Butanone (MEK) | ND | | 25 | | ug/L | | | 10/03/15 15:04 | 5 |
| 2-Hexanone | ND | | 25 | | ug/L | | | 10/03/15 15:04 | 5 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 25 | | ug/L | | | 10/03/15 15:04 | 5 |
| Acetone | ND | | 25 | | ug/L | | | 10/03/15 15:04 | 5 |
| Benzene | ND | | 5.0 | | ug/L | | | 10/03/15 15:04 | 5 |

**Client Sample ID: MW-9R**
**Date Collected: 09/23/15 13:35**
**Date Received: 09/23/15 14:45**

**Lab Sample ID: 480-87767-7**
**Matrix: Water**

## Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Bromoform | ND | | 5.0 | | ug/L | | | 10/03/15 15:04 | 5 |
| Bromomethane | ND | | 5.0 | | ug/L | | | 10/03/15 15:04 | 5 |
| Carbon disulfide | ND | | 5.0 | | ug/L | | | 10/03/15 15:04 | 5 |
| Carbon tetrachloride | ND | | 5.0 | | ug/L | | | 10/03/15 15:04 | 5 |
| Chlorobenzene | ND | | 5.0 | | ug/L | | | 10/03/15 15:04 | 5 |
| Chlorodibromomethane | ND | | 5.0 | | ug/L | | | 10/03/15 15:04 | 5 |
| **Chloroethane** | **34** | | 5.0 | | ug/L | | | 10/03/15 15:04 | 5 |
| Chloroform | ND | | 5.0 | | ug/L | | | 10/03/15 15:04 | 5 |
| Chloromethane | ND | | 5.0 | | ug/L | | | 10/03/15 15:04 | 5 |
| **cis-1,2-Dichloroethene** | **5.5** | | 5.0 | | ug/L | | | 10/03/15 15:04 | 5 |
| cis-1,3-Dichloropropene | ND | | 5.0 | | ug/L | | | 10/03/15 15:04 | 5 |
| Cyclohexane | ND | | 5.0 | | ug/L | | | 10/03/15 15:04 | 5 |
| Bromodichloromethane | ND | | 5.0 | | ug/L | | | 10/03/15 15:04 | 5 |
| Dichlorofluoromethane | ND | | 5.0 | | ug/L | | | 10/03/15 15:04 | 5 |
| Ethylbenzene | ND | | 5.0 | | ug/L | | | 10/03/15 15:04 | 5 |
| Isopropylbenzene | ND | | 5.0 | | ug/L | | | 10/03/15 15:04 | 5 |
| Methyl acetate | ND | | 6.5 | | ug/L | | | 10/03/15 15:04 | 5 |
| Methyl tert-butyl ether | ND | | 5.0 | | ug/L | | | 10/03/15 15:04 | 5 |
| Methylcyclohexane | ND | | 5.0 | | ug/L | | | 10/03/15 15:04 | 5 |
| Methylene Chloride | ND | | 5.0 | | ug/L | | | 10/03/15 15:04 | 5 |
| Styrene | ND | | 5.0 | | ug/L | | | 10/03/15 15:04 | 5 |
| Tetrachloroethene | ND | | 5.0 | | ug/L | | | 10/03/15 15:04 | 5 |
| Toluene | ND | | 5.0 | | ug/L | | | 10/03/15 15:04 | 5 |
| trans-1,2-Dichloroethene | ND | | 5.0 | | ug/L | | | 10/03/15 15:04 | 5 |
| trans-1,3-Dichloropropene | ND | | 5.0 | | ug/L | | | 10/03/15 15:04 | 5 |
| Trichloroethene | ND | | 5.0 | | ug/L | | | 10/03/15 15:04 | 5 |
| Trichlorofluoromethane | ND | | 5.0 | | ug/L | | | 10/03/15 15:04 | 5 |
| Vinyl chloride | ND | | 5.0 | | ug/L | | | 10/03/15 15:04 | 5 |
| Xylenes, Total | ND | | 15 | | ug/L | | | 10/03/15 15:04 | 5 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *112* | | *66 - 137* | | *10/03/15 15:04* | *5* |
| *Toluene-d8 (Surr)* | *117* | | *71 - 126* | | *10/03/15 15:04* | *5* |
| *4-Bromofluorobenzene (Surr)* | *95* | | *73 - 120* | | *10/03/15 15:04* | *5* |
| *Dibromofluoromethane (Surr)* | *109* | | *60 - 140* | | *10/03/15 15:04* | *5* |

## Method: 8260C - Volatile Organic Compounds by GC/MS - DL

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **1,1,1-Trichloroethane** | **530** | | 16 | | ug/L | | | 10/05/15 13:38 | 20 |
| **o-Chlorotoluene** | **1900** | | 17 | | ug/L | | | 10/05/15 13:38 | 20 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *117* | | *66 - 137* | | *10/05/15 13:38* | *20* |
| *Toluene-d8 (Surr)* | *119* | | *71 - 126* | | *10/05/15 13:38* | *20* |
| *4-Bromofluorobenzene (Surr)* | *98* | | *73 - 120* | | *10/05/15 13:38* | *20* |
| *Dibromofluoromethane (Surr)* | *111* | | *60 - 140* | | *10/05/15 13:38* | *20* |

Client: Waste Management
Project/Site: ChemTrol Site - Annual GW

TestAmerica Job ID: 480-87767-1

**Client Sample ID: TB**
**Date Collected: 09/23/15 09:00**
**Date Received: 09/23/15 14:45**

**Lab Sample ID: 480-87767-8**
**Matrix: Water**

## Method: 8260C - Volatile Organic Compounds by GC/MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ND | | 5.0 | | ug/L | | | 10/05/15 14:01 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 5.0 | | ug/L | | | 10/05/15 14:01 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 5.0 | | ug/L | | | 10/05/15 14:01 | 1 |
| 1,1,2-Trichloroethane | ND | | 5.0 | | ug/L | | | 10/05/15 14:01 | 1 |
| 1,1-Dichloroethane | ND | | 5.0 | | ug/L | | | 10/05/15 14:01 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 5.0 | | ug/L | | | 10/05/15 14:01 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 10/05/15 14:01 | 1 |
| 1,2-Dibromoethane | ND | | 5.0 | | ug/L | | | 10/05/15 14:01 | 1 |
| 1,2-Dichlorobenzene | ND | | 5.0 | | ug/L | | | 10/05/15 14:01 | 1 |
| 1,2-Dichloroethane | ND | | 5.0 | | ug/L | | | 10/05/15 14:01 | 1 |
| 1,2-Dichloropropane | ND | | 5.0 | | ug/L | | | 10/05/15 14:01 | 1 |
| 1,3-Dichlorobenzene | ND | | 5.0 | | ug/L | | | 10/05/15 14:01 | 1 |
| 1,4-Dichlorobenzene | ND | | 5.0 | | ug/L | | | 10/05/15 14:01 | 1 |
| 2-Butanone (MEK) | ND | | 25 | | ug/L | | | 10/05/15 14:01 | 1 |
| o-Chlorotoluene | ND | | 5.0 | | ug/L | | | 10/05/15 14:01 | 1 |
| 2-Hexanone | ND | | 25 | | ug/L | | | 10/05/15 14:01 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 25 | | ug/L | | | 10/05/15 14:01 | 1 |
| Acetone | ND | | 25 | | ug/L | | | 10/05/15 14:01 | 1 |
| Benzene | ND | | 5.0 | | ug/L | | | 10/05/15 14:01 | 1 |
| Bromoform | ND | | 5.0 | | ug/L | | | 10/05/15 14:01 | 1 |
| Bromomethane | ND | * | 5.0 | | ug/L | | | 10/05/15 14:01 | 1 |
| Carbon disulfide | ND | | 5.0 | | ug/L | | | 10/05/15 14:01 | 1 |
| Carbon tetrachloride | ND | | 5.0 | | ug/L | | | 10/05/15 14:01 | 1 |
| Chlorobenzene | ND | | 5.0 | | ug/L | | | 10/05/15 14:01 | 1 |
| Chlorodibromomethane | ND | | 5.0 | | ug/L | | | 10/05/15 14:01 | 1 |
| Chloroethane | ND | | 5.0 | | ug/L | | | 10/05/15 14:01 | 1 |
| Chloroform | ND | | 5.0 | | ug/L | | | 10/05/15 14:01 | 1 |
| Chloromethane | ND | | 5.0 | | ug/L | | | 10/05/15 14:01 | 1 |
| cis-1,2-Dichloroethene | ND | | 5.0 | | ug/L | | | 10/05/15 14:01 | 1 |
| cis-1,3-Dichloropropene | ND | | 5.0 | | ug/L | | | 10/05/15 14:01 | 1 |
| Cyclohexane | ND | | 5.0 | | ug/L | | | 10/05/15 14:01 | 1 |
| Bromodichloromethane | ND | | 5.0 | | ug/L | | | 10/05/15 14:01 | 1 |
| Dichlorofluoromethane | ND | | 5.0 | | ug/L | | | 10/05/15 14:01 | 1 |
| Ethylbenzene | ND | | 5.0 | | ug/L | | | 10/05/15 14:01 | 1 |
| Isopropylbenzene | ND | | 5.0 | | ug/L | | | 10/05/15 14:01 | 1 |
| Methyl acetate | ND | | 5.0 | | ug/L | | | 10/05/15 14:01 | 1 |
| Methyl tert-butyl ether | ND | | 5.0 | | ug/L | | | 10/05/15 14:01 | 1 |
| Methylcyclohexane | ND | | 5.0 | | ug/L | | | 10/05/15 14:01 | 1 |
| Methylene Chloride | ND | | 5.0 | | ug/L | | | 10/05/15 14:01 | 1 |
| Styrene | ND | | 5.0 | | ug/L | | | 10/05/15 14:01 | 1 |
| Tetrachloroethene | ND | | 5.0 | | ug/L | | | 10/05/15 14:01 | 1 |
| Toluene | ND | | 5.0 | | ug/L | | | 10/05/15 14:01 | 1 |
| trans-1,2-Dichloroethene | ND | | 5.0 | | ug/L | | | 10/05/15 14:01 | 1 |
| trans-1,3-Dichloropropene | ND | | 5.0 | | ug/L | | | 10/05/15 14:01 | 1 |
| Trichloroethene | ND | | 5.0 | | ug/L | | | 10/05/15 14:01 | 1 |
| Trichlorofluoromethane | ND | | 5.0 | | ug/L | | | 10/05/15 14:01 | 1 |
| Vinyl chloride | ND | | 5.0 | | ug/L | | | 10/05/15 14:01 | 1 |
| Xylenes, Total | ND | | 15 | | ug/L | | | 10/05/15 14:01 | 1 |

# Client Sample Results

Client: Waste Management
Project/Site: ChemTrol Site - Annual GW

TestAmerica Job ID: 480-87767-1

**Client Sample ID: TB**
**Date Collected: 09/23/15 09:00**
**Date Received: 09/23/15 14:45**

**Lab Sample ID: 480-87767-8**
**Matrix: Water**

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 (Surr) | 112 | | 66 - 137 | | 10/05/15 14:01 | 1 |
| Toluene-d8 (Surr) | 114 | | 71 - 126 | | 10/05/15 14:01 | 1 |
| 4-Bromofluorobenzene (Surr) | 93 | | 73 - 120 | | 10/05/15 14:01 | 1 |
| Dibromofluoromethane (Surr) | 106 | | 60 - 140 | | 10/05/15 14:01 | 1 |

## Method: 8260C - Volatile Organic Compounds by GC/MS

**Lab Sample ID: MB 480-266770/7**
**Matrix: Water**
**Analysis Batch: 266770**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ND | | 5.0 | | ug/L | | | 10/03/15 10:16 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 5.0 | | ug/L | | | 10/03/15 10:16 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 5.0 | | ug/L | | | 10/03/15 10:16 | 1 |
| 1,1,2-Trichloroethane | ND | | 5.0 | | ug/L | | | 10/03/15 10:16 | 1 |
| 1,1-Dichloroethane | ND | | 5.0 | | ug/L | | | 10/03/15 10:16 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 5.0 | | ug/L | | | 10/03/15 10:16 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 10/03/15 10:16 | 1 |
| 1,2-Dibromoethane | ND | | 5.0 | | ug/L | | | 10/03/15 10:16 | 1 |
| 1,2-Dichlorobenzene | ND | | 5.0 | | ug/L | | | 10/03/15 10:16 | 1 |
| 1,2-Dichloroethane | ND | | 5.0 | | ug/L | | | 10/03/15 10:16 | 1 |
| 1,2-Dichloropropane | ND | | 5.0 | | ug/L | | | 10/03/15 10:16 | 1 |
| 1,3-Dichlorobenzene | ND | | 5.0 | | ug/L | | | 10/03/15 10:16 | 1 |
| 1,4-Dichlorobenzene | ND | | 5.0 | | ug/L | | | 10/03/15 10:16 | 1 |
| 2-Butanone (MEK) | ND | | 25 | | ug/L | | | 10/03/15 10:16 | 1 |
| o-Chlorotoluene | ND | | 5.0 | | ug/L | | | 10/03/15 10:16 | 1 |
| 2-Hexanone | ND | | 25 | | ug/L | | | 10/03/15 10:16 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 25 | | ug/L | | | 10/03/15 10:16 | 1 |
| Acetone | ND | | 25 | | ug/L | | | 10/03/15 10:16 | 1 |
| Benzene | ND | | 5.0 | | ug/L | | | 10/03/15 10:16 | 1 |
| Bromoform | ND | | 5.0 | | ug/L | | | 10/03/15 10:16 | 1 |
| Bromomethane | ND | | 5.0 | | ug/L | | | 10/03/15 10:16 | 1 |
| Carbon disulfide | ND | | 5.0 | | ug/L | | | 10/03/15 10:16 | 1 |
| Carbon tetrachloride | ND | | 5.0 | | ug/L | | | 10/03/15 10:16 | 1 |
| Chlorobenzene | ND | | 5.0 | | ug/L | | | 10/03/15 10:16 | 1 |
| Chlorodibromomethane | ND | | 5.0 | | ug/L | | | 10/03/15 10:16 | 1 |
| Chloroethane | ND | | 5.0 | | ug/L | | | 10/03/15 10:16 | 1 |
| Chloroform | ND | | 5.0 | | ug/L | | | 10/03/15 10:16 | 1 |
| Chloromethane | ND | | 5.0 | | ug/L | | | 10/03/15 10:16 | 1 |
| cis-1,2-Dichloroethene | ND | | 5.0 | | ug/L | | | 10/03/15 10:16 | 1 |
| cis-1,3-Dichloropropene | ND | | 5.0 | | ug/L | | | 10/03/15 10:16 | 1 |
| Cyclohexane | ND | | 5.0 | | ug/L | | | 10/03/15 10:16 | 1 |
| Bromodichloromethane | ND | | 5.0 | | ug/L | | | 10/03/15 10:16 | 1 |
| Dichlorofluoromethane | ND | | 5.0 | | ug/L | | | 10/03/15 10:16 | 1 |
| Ethylbenzene | ND | | 5.0 | | ug/L | | | 10/03/15 10:16 | 1 |
| Isopropylbenzene | ND | | 5.0 | | ug/L | | | 10/03/15 10:16 | 1 |
| Methyl acetate | ND | | 5.0 | | ug/L | | | 10/03/15 10:16 | 1 |
| Methyl tert-butyl ether | ND | | 5.0 | | ug/L | | | 10/03/15 10:16 | 1 |
| Methylcyclohexane | ND | | 5.0 | | ug/L | | | 10/03/15 10:16 | 1 |
| Methylene Chloride | ND | | 5.0 | | ug/L | | | 10/03/15 10:16 | 1 |
| Styrene | ND | | 5.0 | | ug/L | | | 10/03/15 10:16 | 1 |
| Tetrachloroethene | ND | | 5.0 | | ug/L | | | 10/03/15 10:16 | 1 |
| Toluene | ND | | 5.0 | | ug/L | | | 10/03/15 10:16 | 1 |
| trans-1,2-Dichloroethene | ND | | 5.0 | | ug/L | | | 10/03/15 10:16 | 1 |
| trans-1,3-Dichloropropene | ND | | 5.0 | | ug/L | | | 10/03/15 10:16 | 1 |
| Trichloroethene | ND | | 5.0 | | ug/L | | | 10/03/15 10:16 | 1 |
| Trichlorofluoromethane | ND | | 5.0 | | ug/L | | | 10/03/15 10:16 | 1 |
| Vinyl chloride | ND | | 5.0 | | ug/L | | | 10/03/15 10:16 | 1 |
| Xylenes, Total | ND | | 15 | | ug/L | | | 10/03/15 10:16 | 1 |

| Surrogate | MB %Recovery | MB Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *119* | | *66 - 137* | | *10/03/15 10:16* | *1* |
| *Toluene-d8 (Surr)* | *120* | | *71 - 126* | | *10/03/15 10:16* | *1* |
| *4-Bromofluorobenzene (Surr)* | *98* | | *73 - 120* | | *10/03/15 10:16* | *1* |
| *Dibromofluoromethane (Surr)* | *108* | | *60 - 140* | | *10/03/15 10:16* | *1* |

**Lab Sample ID: LCS 480-266770/5**
**Matrix: Water**
**Analysis Batch: 266770**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | 25.0 | 23.3 | | ug/L | | 93 | 71 - 129 |
| 1,2-Dichlorobenzene | 25.0 | 25.1 | | ug/L | | 100 | 80 - 124 |
| 1,2-Dichloroethane | 25.0 | 24.1 | | ug/L | | 97 | 75 - 127 |
| Benzene | 25.0 | 25.1 | | ug/L | | 100 | 71 - 124 |
| Chlorobenzene | 25.0 | 23.7 | | ug/L | | 95 | 72 - 120 |
| cis-1,2-Dichloroethene | 25.0 | 25.3 | | ug/L | | 101 | 74 - 124 |
| Ethylbenzene | 25.0 | 24.4 | | ug/L | | 98 | 77 - 123 |
| Methyl tert-butyl ether | 25.0 | 25.0 | | ug/L | | 100 | 64 - 127 |
| Tetrachloroethene | 25.0 | 23.4 | | ug/L | | 94 | 74 - 122 |
| Toluene | 25.0 | 24.7 | | ug/L | | 99 | 80 - 122 |
| trans-1,2-Dichloroethene | 25.0 | 24.0 | | ug/L | | 96 | 73 - 127 |
| Trichloroethene | 25.0 | 25.2 | | ug/L | | 101 | 74 - 123 |

| Surrogate | LCS %Recovery | LCS Qualifier | Limits |
|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *119* | | *66 - 137* |
| *Toluene-d8 (Surr)* | *121* | | *71 - 126* |
| *4-Bromofluorobenzene (Surr)* | *101* | | *73 - 120* |
| *Dibromofluoromethane (Surr)* | *113* | | *60 - 140* |

**Lab Sample ID: MB 480-266887/7**
**Matrix: Water**
**Analysis Batch: 266887**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ND | | 5.0 | | ug/L | | | 10/05/15 11:49 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 5.0 | | ug/L | | | 10/05/15 11:49 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 5.0 | | ug/L | | | 10/05/15 11:49 | 1 |
| 1,1,2-Trichloroethane | ND | | 5.0 | | ug/L | | | 10/05/15 11:49 | 1 |
| 1,1-Dichloroethane | ND | | 5.0 | | ug/L | | | 10/05/15 11:49 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 5.0 | | ug/L | | | 10/05/15 11:49 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.0 | | ug/L | | | 10/05/15 11:49 | 1 |
| 1,2-Dibromoethane | ND | | 5.0 | | ug/L | | | 10/05/15 11:49 | 1 |
| 1,2-Dichlorobenzene | ND | | 5.0 | | ug/L | | | 10/05/15 11:49 | 1 |
| 1,2-Dichloroethane | ND | | 5.0 | | ug/L | | | 10/05/15 11:49 | 1 |
| 1,2-Dichloropropane | ND | | 5.0 | | ug/L | | | 10/05/15 11:49 | 1 |
| 1,3-Dichlorobenzene | ND | | 5.0 | | ug/L | | | 10/05/15 11:49 | 1 |
| 1,4-Dichlorobenzene | ND | | 5.0 | | ug/L | | | 10/05/15 11:49 | 1 |
| 2-Butanone (MEK) | ND | | 25 | | ug/L | | | 10/05/15 11:49 | 1 |
| o-Chlorotoluene | ND | | 5.0 | | ug/L | | | 10/05/15 11:49 | 1 |
| 2-Hexanone | ND | | 25 | | ug/L | | | 10/05/15 11:49 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 25 | | ug/L | | | 10/05/15 11:49 | 1 |
| Acetone | ND | | 25 | | ug/L | | | 10/05/15 11:49 | 1 |
| Benzene | ND | | 5.0 | | ug/L | | | 10/05/15 11:49 | 1 |

## Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

**Lab Sample ID: MB 480-266887/7**
**Matrix: Water**
**Analysis Batch: 266887**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Bromoform | ND | | 5.0 | | ug/L | | | 10/05/15 11:49 | 1 |
| Bromomethane | ND | | 5.0 | | ug/L | | | 10/05/15 11:49 | 1 |
| Carbon disulfide | ND | | 5.0 | | ug/L | | | 10/05/15 11:49 | 1 |
| Carbon tetrachloride | ND | | 5.0 | | ug/L | | | 10/05/15 11:49 | 1 |
| Chlorobenzene | ND | | 5.0 | | ug/L | | | 10/05/15 11:49 | 1 |
| Chlorodibromomethane | ND | | 5.0 | | ug/L | | | 10/05/15 11:49 | 1 |
| Chloroethane | ND | | 5.0 | | ug/L | | | 10/05/15 11:49 | 1 |
| Chloroform | ND | | 5.0 | | ug/L | | | 10/05/15 11:49 | 1 |
| Chloromethane | ND | | 5.0 | | ug/L | | | 10/05/15 11:49 | 1 |
| cis-1,2-Dichloroethene | ND | | 5.0 | | ug/L | | | 10/05/15 11:49 | 1 |
| cis-1,3-Dichloropropene | ND | | 5.0 | | ug/L | | | 10/05/15 11:49 | 1 |
| Cyclohexane | ND | | 5.0 | | ug/L | | | 10/05/15 11:49 | 1 |
| Bromodichloromethane | ND | | 5.0 | | ug/L | | | 10/05/15 11:49 | 1 |
| Dichlorofluoromethane | ND | | 5.0 | | ug/L | | | 10/05/15 11:49 | 1 |
| Ethylbenzene | ND | | 5.0 | | ug/L | | | 10/05/15 11:49 | 1 |
| Isopropylbenzene | ND | | 5.0 | | ug/L | | | 10/05/15 11:49 | 1 |
| Methyl acetate | ND | | 5.0 | | ug/L | | | 10/05/15 11:49 | 1 |
| Methyl tert-butyl ether | ND | | 5.0 | | ug/L | | | 10/05/15 11:49 | 1 |
| Methylcyclohexane | ND | | 5.0 | | ug/L | | | 10/05/15 11:49 | 1 |
| Methylene Chloride | ND | | 5.0 | | ug/L | | | 10/05/15 11:49 | 1 |
| Styrene | ND | | 5.0 | | ug/L | | | 10/05/15 11:49 | 1 |
| Tetrachloroethene | ND | | 5.0 | | ug/L | | | 10/05/15 11:49 | 1 |
| Toluene | ND | | 5.0 | | ug/L | | | 10/05/15 11:49 | 1 |
| trans-1,2-Dichloroethene | ND | | 5.0 | | ug/L | | | 10/05/15 11:49 | 1 |
| trans-1,3-Dichloropropene | ND | | 5.0 | | ug/L | | | 10/05/15 11:49 | 1 |
| Trichloroethene | ND | | 5.0 | | ug/L | | | 10/05/15 11:49 | 1 |
| Trichlorofluoromethane | ND | | 5.0 | | ug/L | | | 10/05/15 11:49 | 1 |
| Vinyl chloride | ND | | 5.0 | | ug/L | | | 10/05/15 11:49 | 1 |
| Xylenes, Total | ND | | 15 | | ug/L | | | 10/05/15 11:49 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *114* | | *66 - 137* | | *10/05/15 11:49* | *1* |
| *Toluene-d8 (Surr)* | *117* | | *71 - 126* | | *10/05/15 11:49* | *1* |
| *4-Bromofluorobenzene (Surr)* | *95* | | *73 - 120* | | *10/05/15 11:49* | *1* |
| *Dibromofluoromethane (Surr)* | *107* | | *60 - 140* | | *10/05/15 11:49* | *1* |

**Lab Sample ID: LCS 480-266887/5**
**Matrix: Water**
**Analysis Batch: 266887**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | 25.0 | 23.0 | | ug/L | | 92 | 71 - 129 |
| 1,2-Dichlorobenzene | 25.0 | 24.4 | | ug/L | | 98 | 80 - 124 |
| 1,2-Dichloroethane | 25.0 | 22.8 | | ug/L | | 91 | 75 - 127 |
| Benzene | 25.0 | 24.7 | | ug/L | | 99 | 71 - 124 |
| Chlorobenzene | 25.0 | 23.7 | | ug/L | | 95 | 72 - 120 |
| cis-1,2-Dichloroethene | 25.0 | 25.0 | | ug/L | | 100 | 74 - 124 |
| Ethylbenzene | 25.0 | 24.3 | | ug/L | | 97 | 77 - 123 |

## Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

**Lab Sample ID: LCS 480-266887/5**
**Matrix: Water**
**Analysis Batch: 266887**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Methyl tert-butyl ether | | | 25.0 | 23.1 | | ug/L | | 92 | 64 - 127 | | |
| Tetrachloroethene | | | 25.0 | 23.2 | | ug/L | | 93 | 74 - 122 | | |
| Toluene | | | 25.0 | 24.3 | | ug/L | | 97 | 80 - 122 | | |
| trans-1,2-Dichloroethene | | | 25.0 | 22.4 | | ug/L | | 90 | 73 - 127 | | |
| Trichloroethene | | | 25.0 | 24.3 | | ug/L | | 97 | 74 - 123 | | |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *108* | | *66 - 137* |
| *Toluene-d8 (Surr)* | *115* | | *71 - 126* |
| *4-Bromofluorobenzene (Surr)* | *94* | | *73 - 120* |
| *Dibromofluoromethane (Surr)* | *106* | | *60 - 140* |

# Certification Summary

Client: Waste Management
Project/Site: ChemTrol Site - Annual GW

TestAmerica Job ID: 480-87767-1

## Laboratory: TestAmerica Buffalo

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

| Authority | Program | EPA Region | Certification ID | Expiration Date |
|---|---|---|---|---|
| New York | NELAP | 2 | 10026 | 03-31-16 |

The following analytes are included in this report, but certification is not offered by the governing authority:

| Analysis Method | Prep Method | Matrix | Analyte |
|---|---|---|---|
| 8260C | | Water | Dichlorofluoromethane |

# Method Summary

Client: Waste Management
Project/Site: ChemTrol Site - Annual GW

TestAmerica Job ID: 480-87767-1

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 8260C | Volatile Organic Compounds by GC/MS | SW846 | TAL BUF |

**Protocol References:**

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

# Sample Summary

Client: Waste Management
Project/Site: ChemTrol Site - Annual GW

TestAmerica Job ID: 480-87767-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 480-87767-1 | DUP | Water | 09/23/15 13:08 | 09/23/15 14:45 |
| 480-87767-2 | MW-13R | Water | 09/23/15 13:08 | 09/23/15 14:45 |
| 480-87767-3 | MW-15R | Water | 09/23/15 13:05 | 09/23/15 14:45 |
| 480-87767-4 | MW-3S | Water | 09/23/15 13:30 | 09/23/15 14:45 |
| 480-87767-5 | MW-7R | Water | 09/23/15 13:40 | 09/23/15 14:45 |
| 480-87767-6 | MW-8R | Water | 09/23/15 13:20 | 09/23/15 14:45 |
| 480-87767-7 | MW-9R | Water | 09/23/15 13:35 | 09/23/15 14:45 |
| 480-87767-8 | TB | Water | 09/23/15 09:00 | 09/23/15 14:45 |

**TestAmerica Buffalo**
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone (716) 691-2600 Fax (716) 691-7991

# Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

| Client Information | Sampler: ZR, TW | Lab PM: VanDette, Ryan T | Carrier Tracking No(s): | COC No: 480-69629-4273.1 |
|---|---|---|---|---|
| Client Contact: Mr. Mark Snyder | Phone: 716-704-4153 | E-Mail: ryan.vandette@testamericainc.com | | Page: Page 1 of 1 |
| Company: Waste Management | | | | Job #: |

**Analysis Requested**

| | | | |
|---|---|---|---|
| Address: 425 Perinton Parkway | Due Date Requested: | | |
| City: Fairport | TAT Requested (days): | | |
| State, Zip: NY, 14450 | | | |
| Phone: 603-9295446(Tel) 603-929-3115(Fax) | PO #: Purchase Order not requir | | |
| Email: msnyder@wm.com | WO #: | | |
| Project Name: ChemTrol Site/NY22 Event Desc: ChemTrol Annual Groundwater | Project #: 48002447 | | |
| Site: New Hampshire | SSOW#: | | |

**Preservation Codes:**
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3

480-87767 Chain of Custody

| Sample Identification | Sample Date | Sample Time | Sample Type (C=comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | 8260B - (MOD) Local Method | Total Number of | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | A | | |
| DUP | 9-23-15 | 1308 | G | Water | N | N | 3 | 3 | |
| MW-13R | " | 1308 | G | Water | " | " | 3 | 3 | |
| MW-15R | " | 1305 | G | Water | " | " | 3 | 3 | |
| MW-3S | " | 1330 | G | Water | " | " | 3 | 3 | |
| MW-7R | " | 1340 | G | Water | " | " | 3 | 3 | |
| MW-8R | " | 1320 | G | Water | " | " | 3 | 3 | |
| MW-9R | " | 1335 | G | Water | " | " | 3 | 3 | |
| TB | ↓ | 0900 | — | Water | ↓ | ↓ | 3 | 3 | |

***Possible Hazard Identification***
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

***Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)***
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|---|
| 1 | | 9-23-15 1445 | TA Buff | | 9/23/15 1445 | |
| 2 | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
| 3 | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

| Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 3.0 #1 |
|---|---|---|



10/8/2015

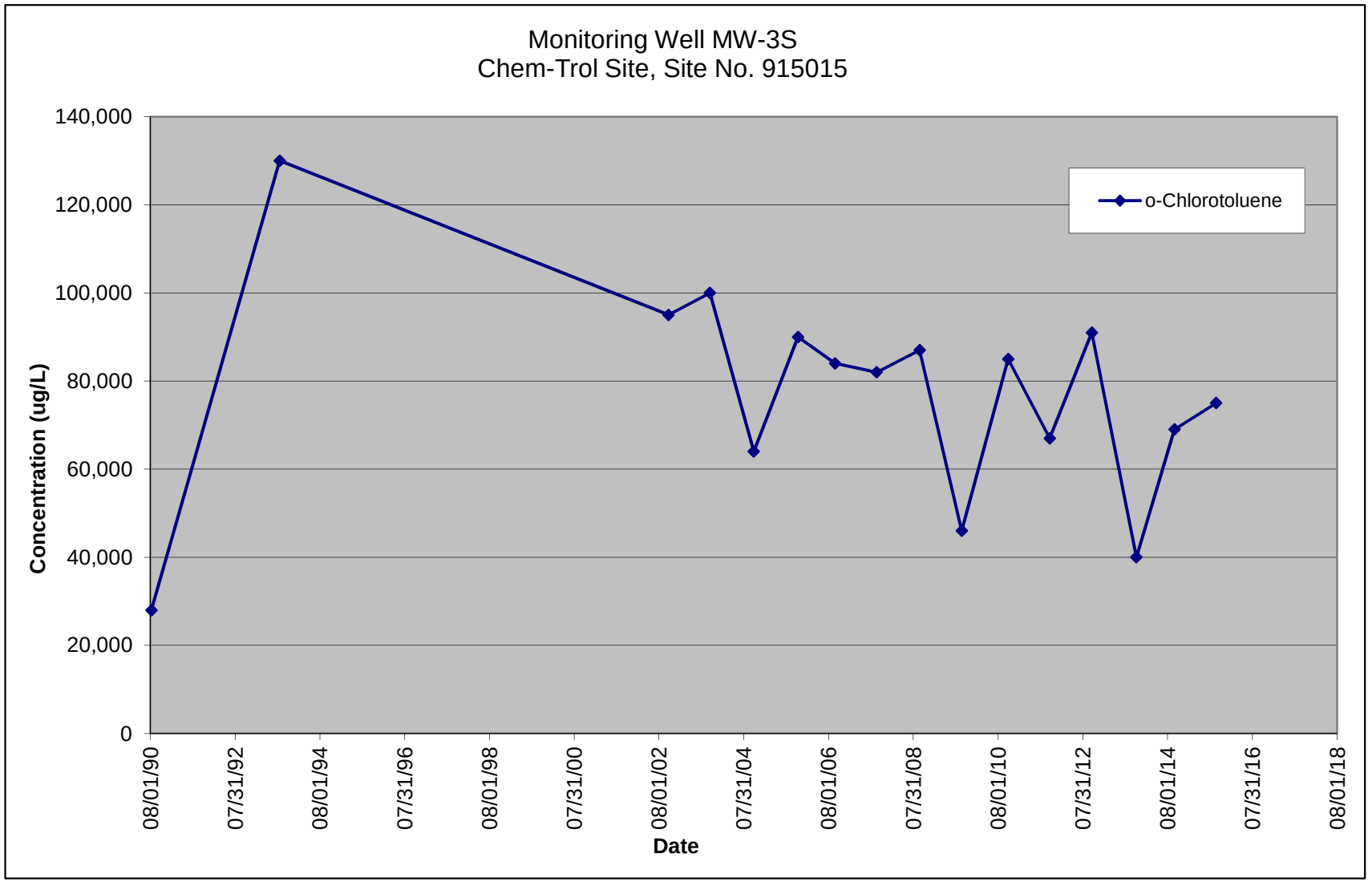
# ATTACHMENT C

## Historical Data Trend Plots

## CHEM-TROL SITE

### Groundwater Analytical Data for Well MW-3S (ug/L)

| Date | o-Chlorotoluene |
|---|---|
| 08/09/90 | 28,000 |
| 08/19/93 | 130,000 |
| 10/23/02 | 95,000 |
| 10/13/03 | 100,000 |
| 10/26/04 | 64,000 |
| 11/11/05 | 90,000 |
| 09/27/06 | 84,000 |
| 09/20/07 | 82,000 |
| 09/24/08 | 87,000 |
| 09/22/09 | 46,000 |
| 10/27/10 | 85,000 |
| 10/20/11 | 67,000 |
| 10/17/12 | 91,000 |
| 11/05/13 | 40,000 |
| 09/29/14 | 69,000 |
| 09/23/15 | 75,000 |

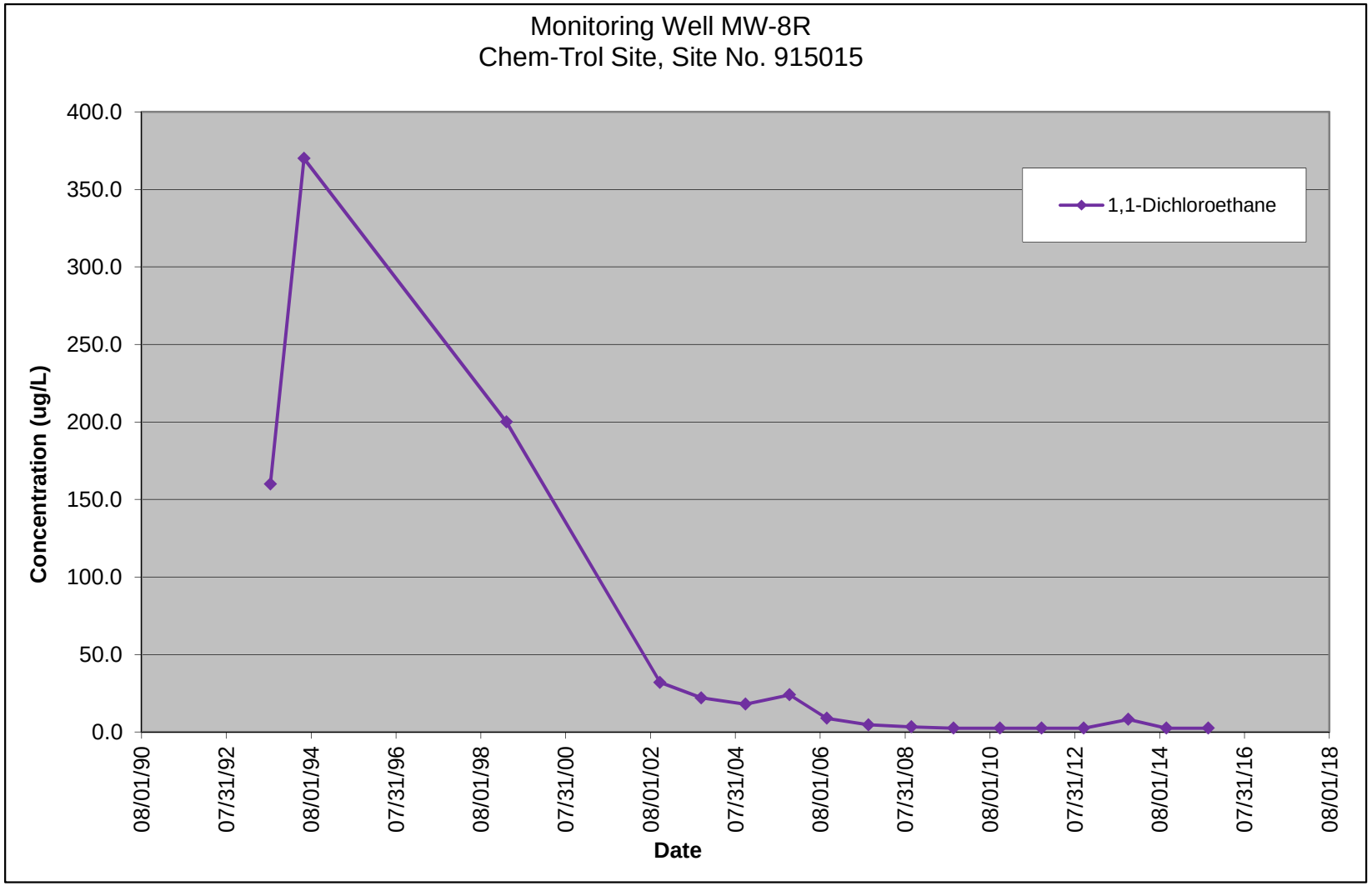

Monitoring Well MW-3S
Chem-Trol Site, Site No. 915015
140,000
120,000
100,000
80,000
60,000
40,000
20,000
0
Concentration (ug/L)
o-Chlorotoluene
08/01/90
07/31/92
08/01/94
07/31/96
08/01/98
07/31/00
08/01/02
07/31/04
08/01/06
07/31/08
08/01/10
07/31/12
08/01/14
07/31/16
08/01/18
Date

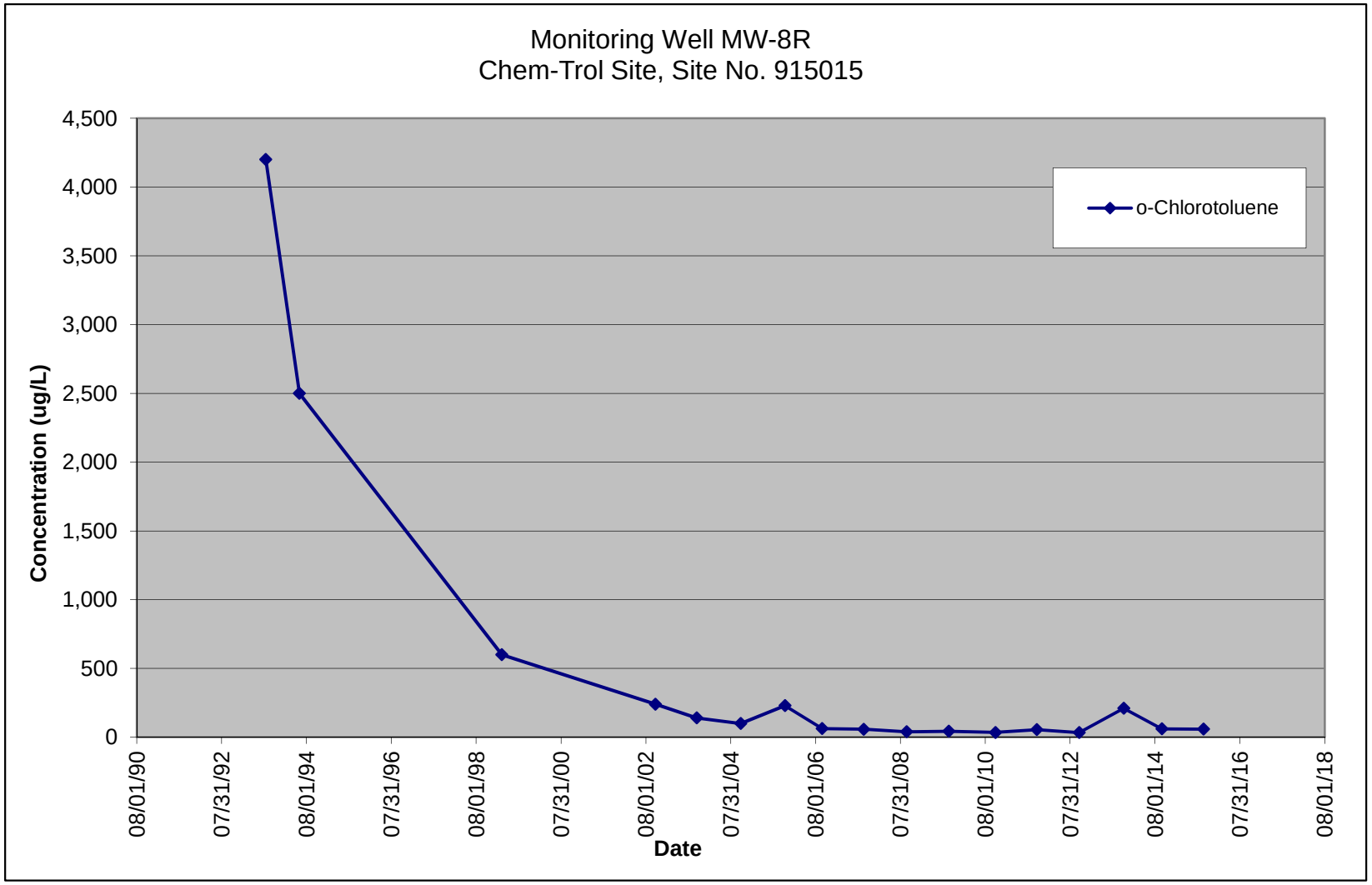
## CHEM-TROL SITE

### Groundwater Analytical Data for Well MW-8R (ug/L)

| Date | 1,1-Dichloroethane | o-Chlorotoluene |
|---|---|---|
| 08/16/93 | 160.0 | 4,200 |
| 06/01/94 | 370.0 | 2,500 |
| 03/10/99 | 200.0 | 600.0 |
| 10/22/02 | 32.0 | 240.0 |
| 10/13/03 | 22.0 | 140.0 |
| 10/26/04 | 18.0 | 100.0 |
| 11/11/05 | 24.0 | 230.0 |
| 09/27/06 | 8.9 | 63.0 |
| 09/20/07 | 4.7 | 58.0 |
| 09/24/08 | 3.4 | 40.0 |
| 09/22/09 | 2.5 | 43.0 |
| 10/27/10 | 2.5 | 35.0 |
| 10/20/11 | 2.5 | 55.0 |
| 10/17/12 | 2.5 | 34.0 |
| 11/05/13 | 8.2 | 210.0 |
| 09/29/14 | 2.5 | 61.0 |
| 09/23/15 | 2.5 | 59.0 |

Value is equal to 1/2 the detection limit.


Monitoring Well MW-8R
Chem-Trol Site, Site No. 915015
400.0
350.0
300.0
250.0
200.0
150.0
100.0
50.0
0.0
Concentration (ug/L)
1,1-Dichloroethane
08/01/90
07/31/92
08/01/94
07/31/96
08/01/98
07/31/00
08/01/02
07/31/04
08/01/06
07/31/08
08/01/10
07/31/12
08/01/14
07/31/16
08/01/18
Date


Monitoring Well MW-8R
Chem-Trol Site, Site No. 915015
Concentration (ug/L)
4,500
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
o-Chlorotoluene
08/01/90
07/31/92
08/01/94
07/31/96
08/01/98
07/31/00
08/01/02
07/31/04
08/01/06
07/31/08
08/01/10
07/31/12
08/01/14
07/31/16
08/01/18
Date

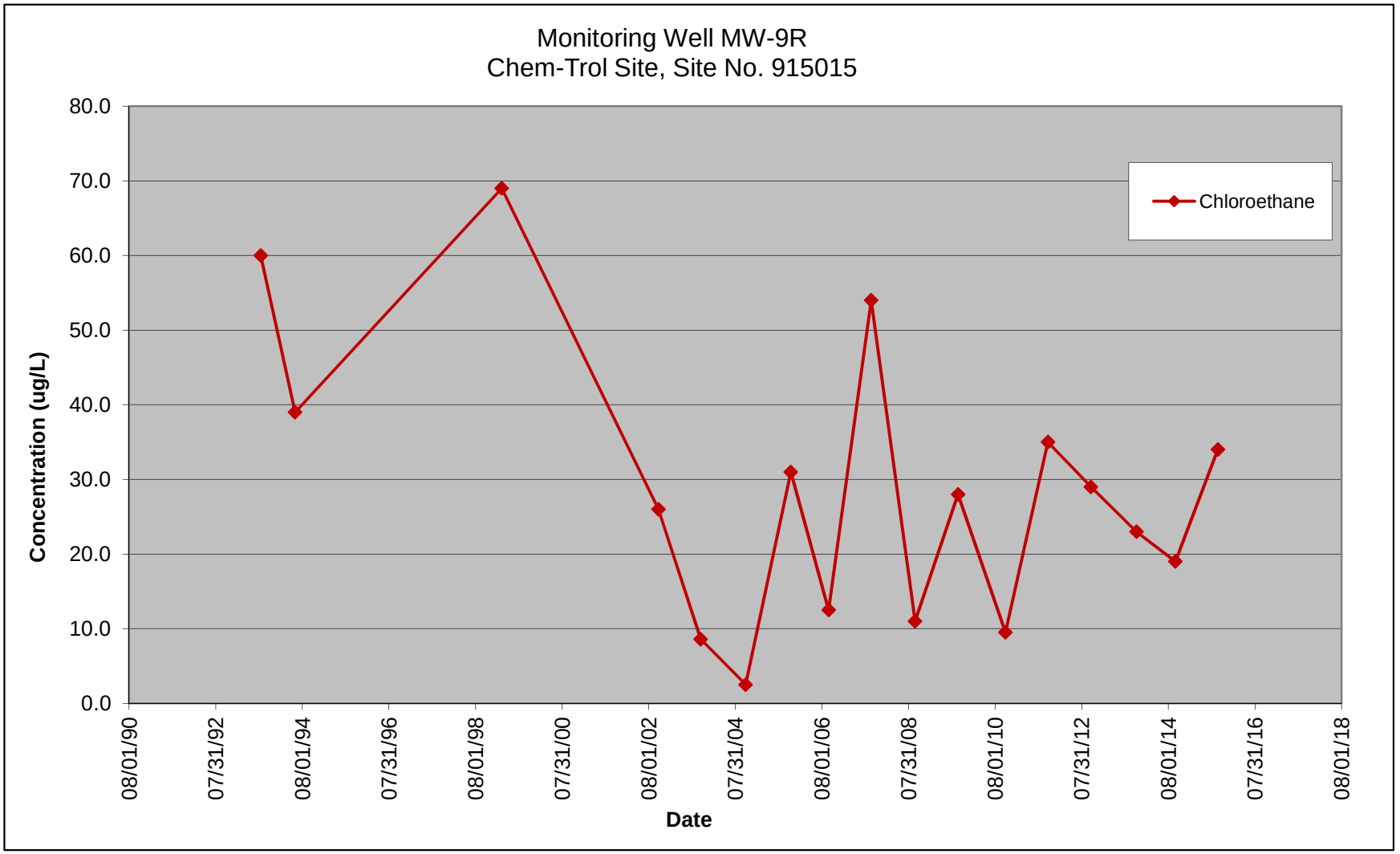
## CHEM-TROL SITE

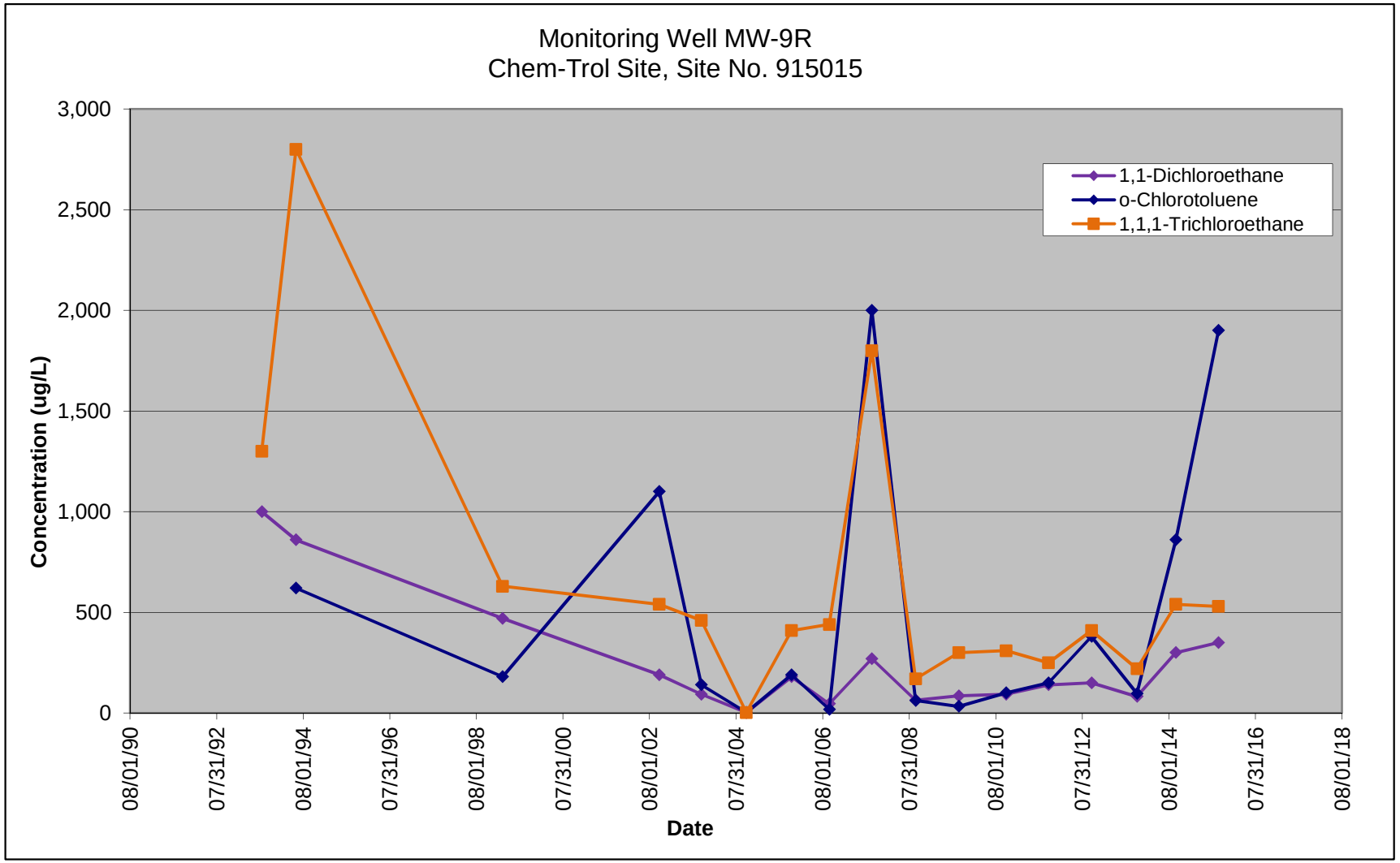
### Groundwater Analytical Data for Well MW-9R (ug/L)

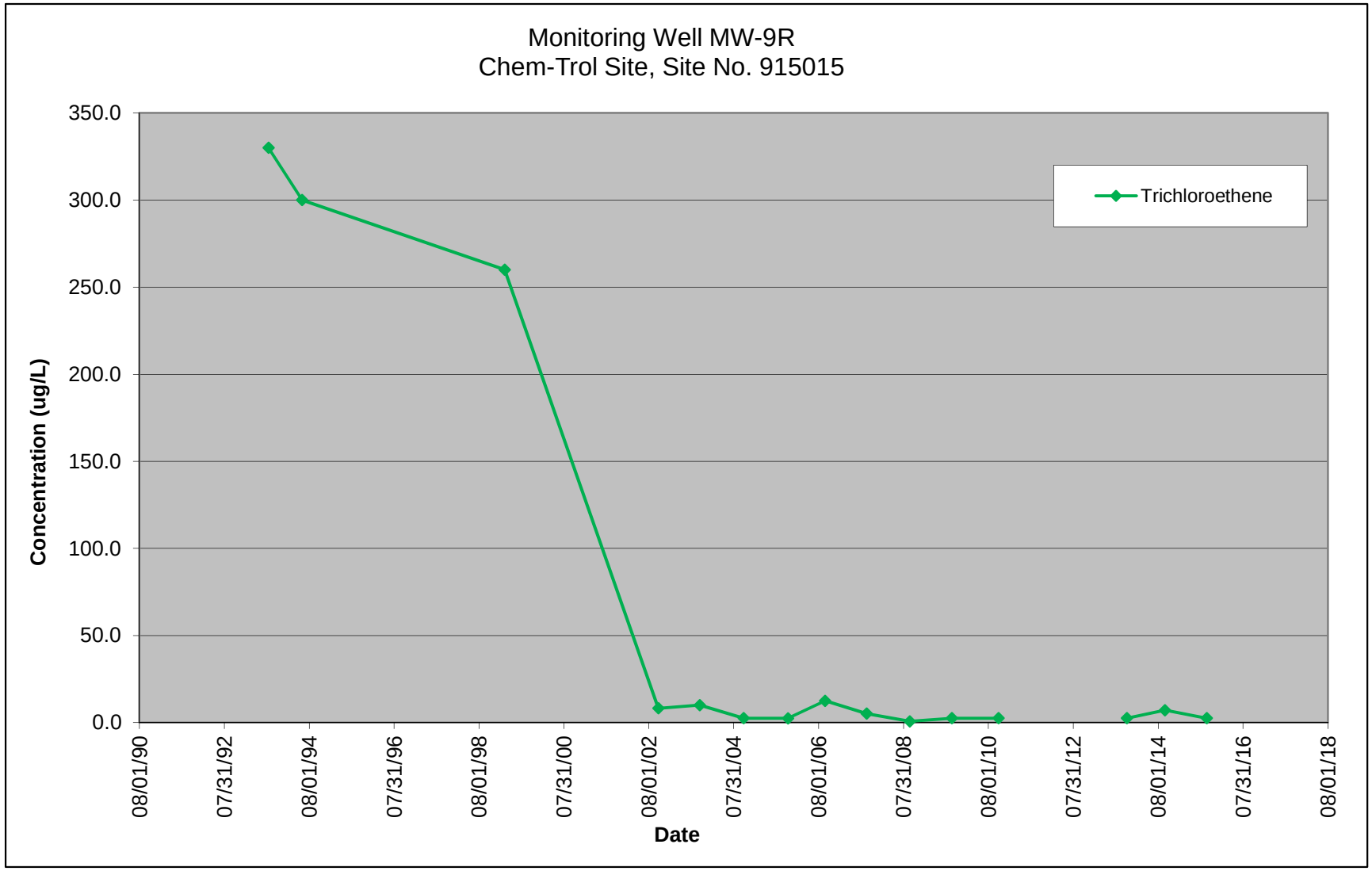
| Date | Chloroethane | 1,1-Dichloroethane | o-Chlorotoluene | 1,1,1-Trichloroethane | Trichloroethene |
|---|---|---|---|---|---|
| 08/16/93 | 60.0 | 1,000 | | 1,300 | 330.0 |
| 06/01/94 | 39.0 | 860.0 | 620.0 | 2,800 | 300.0 |
| 03/10/99 | 69.0 | 470.0 | 180.0 | 630.0 | 260.0 |
| 10/22/02 | 26.0 | 190.0 | 1,100 | 540.0 | 8.2 |
| 10/13/03 | 8.6 | 93.0 | 140.0 | 460.0 | 10.0 |
| 10/26/04 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 |
| 11/11/05 | 31.0 | 180.0 | 190.0 | 410.0 | 2.4 |
| 09/27/06 | 12.5 | 46.0 | 18.0 | 440.0 | 12.5 |
| 09/20/07 | 54.0 | 270.0 | 2,000 | 1,800 | 5.1 |
| 09/24/08 | 11.0 | 64.0 | 62.0 | 170.0 | 0.68 |
| 09/22/09 | 28.0 | 85.0 | 33.0 | 300.0 | 2.5 |
| 10/27/10 | 9.5 | 93.0 | 100.0 | 310.0 | 2.5 |
| 10/20/11 | 35.0 | 140.0 | 150.0 | 250.0 | |
| 10/17/12 | 29.0 | 150.0 | 380.0 | 410.0 | |
| 11/05/13 | 23.0 | 82.0 | 97.0 | 220.0 | 2.5 |
| 09/29/14 | 19.0 | 300.0 | 860.0 | 540.0 | 7.1 |
| 09/23/15 | 34.0 | 350.0 | 1900.0 | 530.0 | 2.5 |

Data not included due to 1/2 the detection limit being higher than the previous 3 years of positive results.

Value is equal to 1/2 the detection limit.


Monitoring Well MW-9R
Chem-Trol Site, Site No. 915015
Concentration (ug/L)
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
08/01/90
07/31/92
08/01/94
07/31/96
08/01/98
07/31/00
08/01/02
07/31/04
08/01/06
07/31/08
08/01/10
07/31/12
08/01/14
07/31/16
08/01/18
Date
Chloroethane


Monitoring Well MW-9R
Chem-Trol Site, Site No. 915015
Concentration (ug/L)
3,000
2,500
2,000
1,500
1,000
500
0
08/01/90
07/31/92
08/01/94
07/31/96
08/01/98
07/31/00
08/01/02
07/31/04
08/01/06
07/31/08
08/01/10
07/31/12
08/01/14
07/31/16
08/01/18
Date
1,1-Dichloroethane
o-Chlorotoluene
1,1,1-Trichloroethane


Monitoring Well MW-9R
Chem-Trol Site, Site No. 915015
Concentration (ug/L)
350.0
300.0
250.0
200.0
150.0
100.0
50.0
0.0
Trichloroethene
08/01/90
07/31/92
08/01/94
07/31/96
08/01/98
07/31/00
08/01/02
07/31/04
08/01/06
07/31/08
08/01/10
07/31/12
08/01/14
07/31/16
08/01/18
Date

## CHEM-TROL SITE

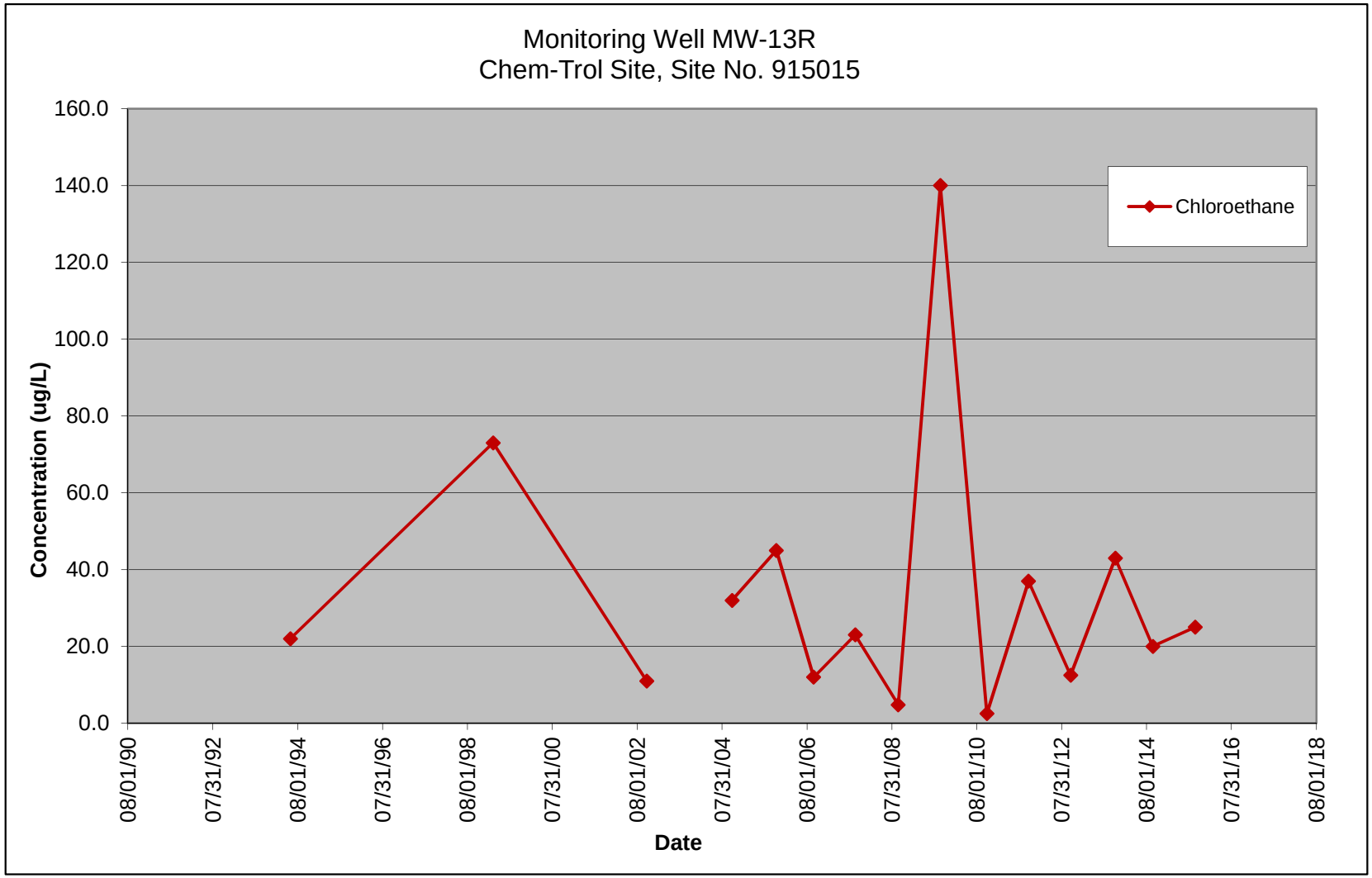
### Groundwater Analytical Data for Well MW-13R (ug/L)

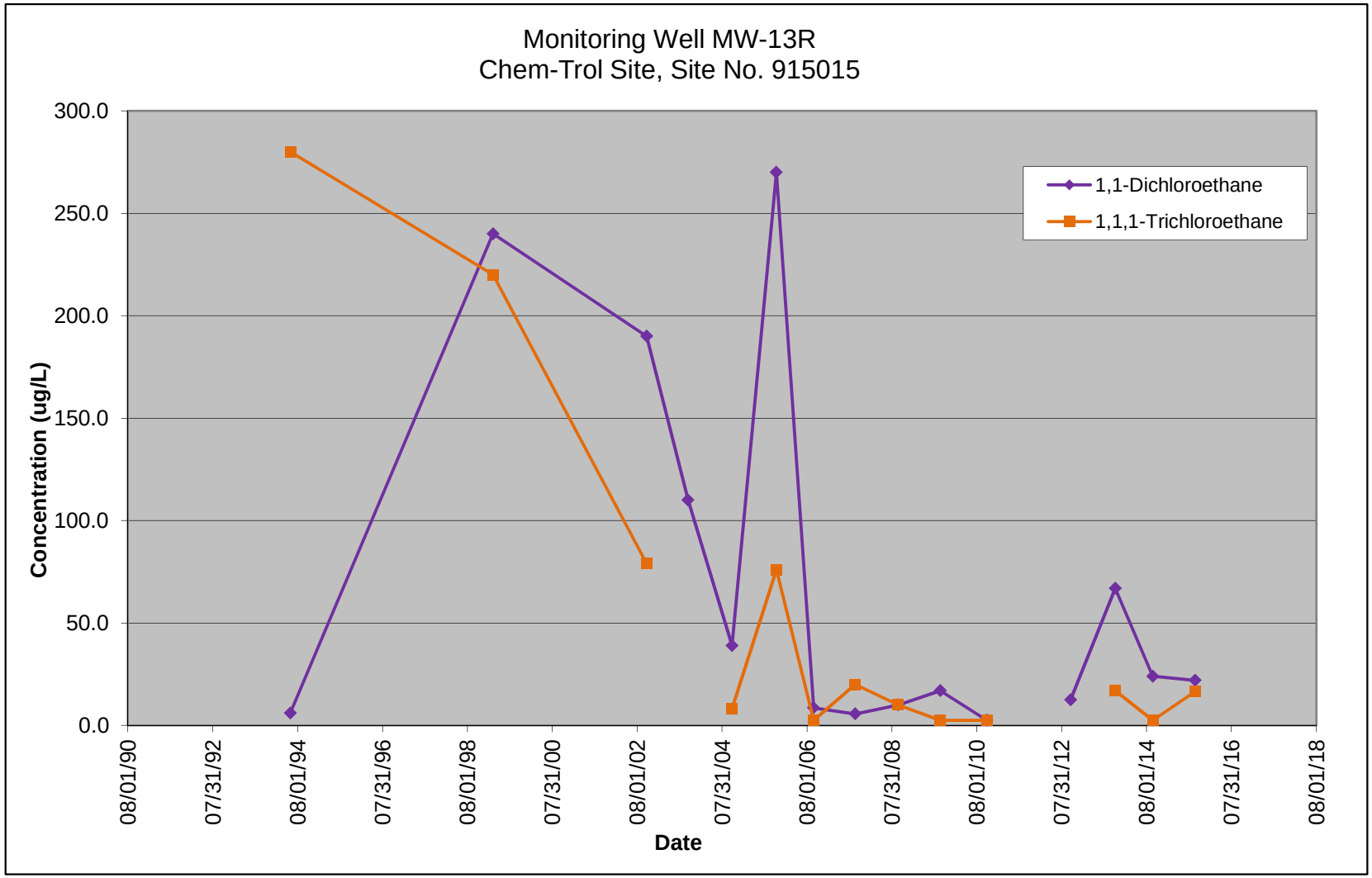
| Date | Chloroethane | 1,1-Dichloroethane | 1,1,1-Trichloroethane | o-Chlorotoluene |
|---|---|---|---|---|
| 05/31/94 | 22.0 | 6.0 | 280.0 | 1,700 |
| 03/11/99 | 73.0 | 240.0 | 220.0 | |
| 10/22/02 | 11.0 | 190.0 | 79.0 | 4,200 |
| 10/13/03 | | 110.0 | | 4,500 |
| 10/26/04 | 32.0 | 39.0 | 8.2 | 1,900 |
| 11/11/05 | 45.0 | 270.0 | 76.0 | 4,900 |
| 09/27/06 | 12.0 | 8.6 | 2.5 | 680.0 |
| 09/20/07 | 23.0 | 5.6 | 20.0 | 440.0 |
| 09/24/08 | 4.8 | 10.0 | 10.0 | 250.0 |
| 09/22/09 | 140.0 | 17.0 | 2.5 | 600.0 |
| 10/27/10 | 2.5 | 2.5 | 2.5 | 210.0 |
| 10/20/11 | 37.0 | | | 820.0 |
| 10/17/12 | 12.5 | 12.5 | | 410.0 |
| 11/05/13 | 43.0 | 67.0 | 17.0 | 2,500 |
| 09/24/14 | 20.0 | 24.0 | 2.5 | 2,000 |
| 09/23/15 | 25.0 | 22.0 | 16.5 | 3200.0 |

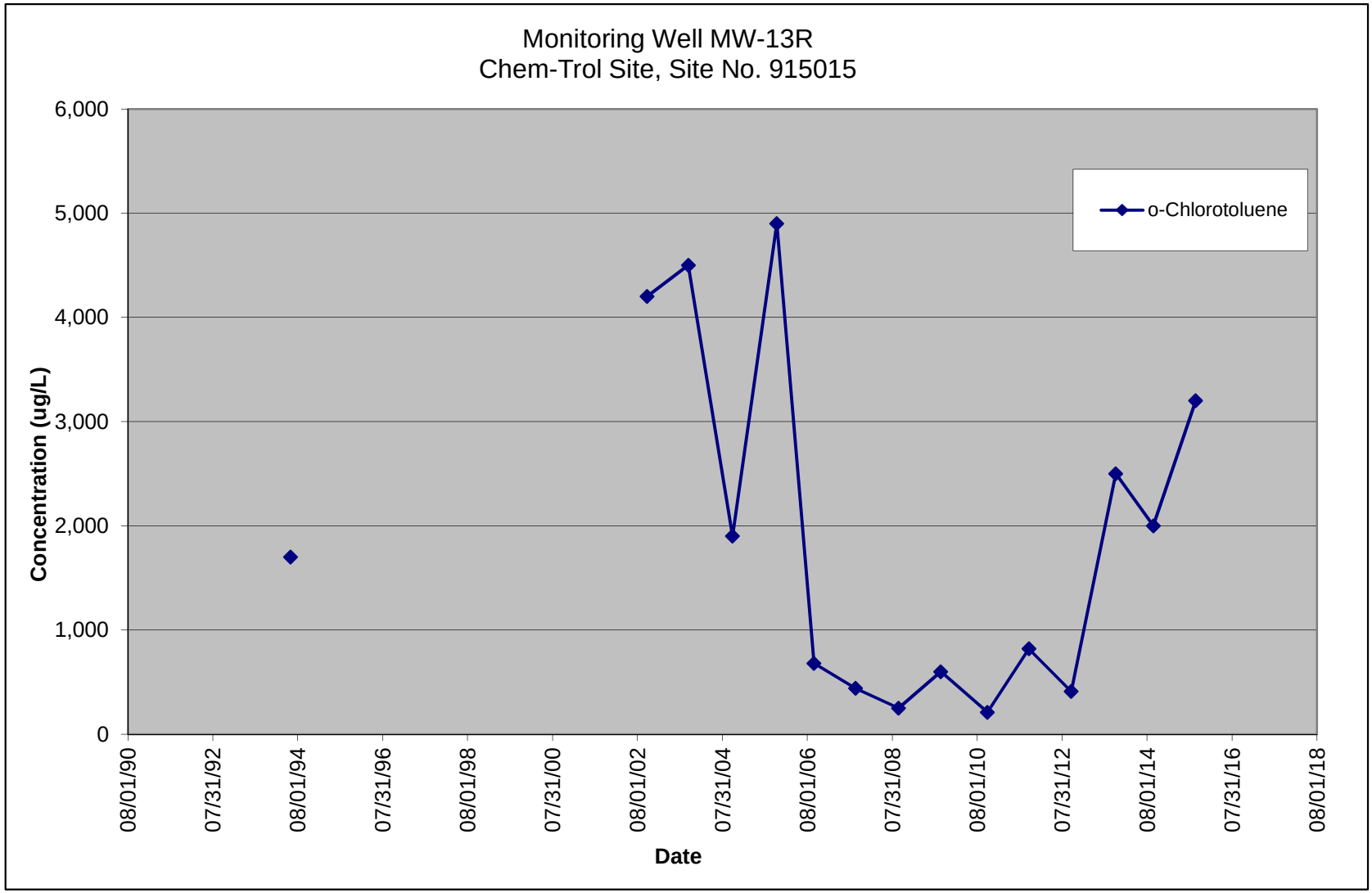
Data not included due to high detection limits for ND values: (1) 2003 - 200 ug/L except for Total Xylenes, which was 600 ug/L.

Data not included due to 1/2 the detection limit being higher than the previous 3 years of positive results.

Value is equal to 1/2 the detection limit.


Monitoring Well MW-13R
Chem-Trol Site, Site No. 915015
160.0
140.0
120.0
100.0
80.0
60.0
40.0
20.0
0.0
Concentration (ug/L)
Chloroethane
08/01/90
07/31/92
08/01/94
07/31/96
08/01/98
07/31/00
08/01/02
07/31/04
08/01/06
07/31/08
08/01/10
07/31/12
08/01/14
07/31/16
08/01/18
Date


Monitoring Well MW-13R
Chem-Trol Site, Site No. 915015
300.0
250.0
200.0
150.0
100.0
50.0
0.0
Concentration (ug/L)
1,1-Dichloroethane
1,1,1-Trichloroethane
08/01/90
07/31/92
08/01/94
07/31/96
08/01/98
07/31/00
08/01/02
07/31/04
08/01/06
07/31/08
08/01/10
07/31/12
08/01/14
07/31/16
08/01/18
Date


Monitoring Well MW-13R
Chem-Trol Site, Site No. 915015
6,000
5,000
4,000
3,000
2,000
1,000
0
Concentration (ug/L)
o-Chlorotoluene
08/01/90
07/31/92
08/01/94
07/31/96
08/01/98
07/31/00
08/01/02
07/31/04
08/01/06
07/31/08
08/01/10
07/31/12
08/01/14
07/31/16
08/01/18
Date