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Second Annual
Performance Monitoring Report

Permeable Reactive Barrier Downgradient of the Southern Source Area

Former Tecumseh Products Company Site
Tecumseh, Michigan

September 2013

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Executive Summary

Shallow groundwater has been affected by chlorinated volatile organic compounds (CVOCs), at the Former Tecumseh Products Company (TPC) site located at 100 East Patterson Street, Tecumseh, Michigan. In March 2011 a permeable reactive barrier (PRB) was proposed to control the potential vapor intrusion migration pathway downgradient of the southern source area by treating shallow CVOC-affected groundwater along the eastern (downgradient) property line before it migrates off site.

In May 2011 a PRB was installed in two sections as described in the "Construction Documentation Report for the Permeable Reactive Barrier Downgradient of the Southern Source Area" (TRC, February 2012). Groundwater monitoring has been performed, specifically to monitor the performance of the PRB, according to the "Workplan Addendum to Install Additional PRB Performance Monitoring Wells at the Former Tecumseh Products Site in Tecumseh, Michigan" (Workplan Addendum) which was submitted to USEPA on July 8, 2011. The September 2012, Performance Monitoring Report documented the results of the PRB monitoring activities through July 2012. Data provided in that report indicated that during the first year of operation the PRB enabled reductive dechlorination of the CVOCs in the shallow groundwater flow system by establishing favorable geochemical conditions and by providing a food source for de-halogenating bacteria.

This Second Annual PRB Performance Monitoring Report provides the results of the PRB monitoring activities through June 2013. Data provided in this report indicate that the PRB has continued to enable reductive dechlorination of the CVOCs in the shallow groundwater flow system by maintaining favorable geochemical conditions and by providing a food source for de-halogenating. A comparison of the total CVOC concentrations at downgradient monitoring wells located along Maumee Street was used to estimate the reduction in CVOC-mass flux. As a direct result of the installation of the PRB, the total trichloroethene (TCE) mass migrating across Maumee Street downgradient of the site has decreased by an estimated 84-percent in the past two years. Similarly total 1,1,1-trichloroethane (TCA) mass migrating across the same area has decreased by an estimated 66-percent in the past two years. The data continue to show that groundwater is not being diverted around or under the PRB and that the CVOC plume is decreasing in width. While concentrations of CVOCs still exceed their respective residential and non-residential groundwater screening levels for vapor intrusion (GWSLs), at some downgradient locations, concentrations are generally continuing to decrease toward GWSLs.

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Section 1
Introduction

1.1 Background

Tecumseh Products Company (TPC) has retained TRC Environmental Corporation (TRC), to assist with environmental investigation and remediation activities at the former TPC site located at 100 East Patterson Street in Tecumseh, Michigan. Investigation activities indicate that shallow groundwater affected by chlorinated volatile organic compounds (CVOCs) has migrated off-site at concentrations above residential and non-residential groundwater screening levels for vapor intrusion (GWSLs).

In March 2011, TRC proposed a permeable reactive barrier (PRB) to reduce the potential for vapor intrusion downgradient of the southern source area by treating shallow CVOC-affected groundwater along the eastern (downgradient) property line before it migrates off site. TRC submitted the "Workplan to Install a Permeable Reactive Barrier Downgradient of the Southern Source Area at the Former Tecumseh Products Company Site in Tecumseh, Michigan" to the United States Environmental Protection Agency (USEPA) for review and comment on March 30, 2011. Following preliminary comments made by USEPA during a conference call on April 7, 2011 the "Revised Workplan to Install a Permeable Reactive Barrier Downgradient of the Southern Source Area" (Workplan) was submitted to USEPA on May 2, 2011. The Workplan describes the PRB treatment objectives, the PRB technology and design, and the proposed monitoring plan.

During a conference call with USEPA on May 24, 2011, USEPA provided additional comments on the proposed PRB monitoring plan. A "Workplan Addendum to Install Additional PRB Performance Monitoring Wells at the Former Tecumseh Products Site in Tecumseh, Michigan" (Workplan Addendum) was submitted to USEPA on July 8, 2011. The Workplan Addendum describes the performance monitoring network including the purpose of each well in evaluating PRB performance, hydraulic conductivity testing, and the groundwater sampling program.

The PRB was installed in May 2011 and the performance monitoring network was installed in August 2011. A "Construction Documentation Report for the Permeable Reactive Barrier Downgradient of the Southern Source Area" (Construction Documentation Report) was submitted to USEPA in February 2012. The Construction Documentation Report described PRB installation activities, including deviations from the proposed design, PRB monitoring well construction; and PRB vent construction to manage methane produced by the PRB.

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Performance monitoring was initiated following installation of the performance monitoring network in August 2011. The "September 2012 Performance Monitoring Report for the Permeable Reactive Barrier Downgradient of the Southern Source Area" was prepared to document PRB performance during the first year after installation. Data provided in that report indicated that during the first year of operation, the PRB enabled reductive dechlorination of the CVOCs in the shallow groundwater flow system by establishing favorable geochemical conditions and by providing a food source for de-halogenating bacteria. During the first year following PRB installation, groundwater elevation data showed that groundwater was not being diverted around or under either section of the PRB, and groundwater analytical data indicated that the CVOC plume was decreasing in width. Groundwater chemistry data in the vicinity of PRB Section 2 showed only modest improvements in conditions favorable to reductive dechlorination and CVOC concentrations were trending downward in only one downgradient well. However, concentrations of CVOCs downgradient of PRB Section 1 had dropped significantly, resulting in an overall reduction in the size of the plume of CVOCs in groundwater.

1.2 Scope and Objectives

This Second Annual Performance Monitoring Report for the Permeable Reactive Barrier Downgradient of the Southern Source Area was prepared to document PRB performance during the second year after installation, including the following:

- A brief summary of PRB design and installation activities;
- A description of the performance monitoring program;
- A summary of PRB groundwater results through the second quarter 2013 sample event;
- A summary of PRB gas composition results through the third quarter 2013 sample event; and
- An evaluation of overall PRB performance and a description of the proposed future performance monitoring program.

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Section 2
PRB Design and Installation

2.1 Summary of PRB Design

In February and March 2011, TRC conducted perimeter groundwater investigation activities downgradient of the southern source area to supplement existing site data in support of the PRB feasibility assessment and design. These investigation activities are described in the Technical Memorandum titled "Summary of Design Basis Investigation to Support Permeable Reactive Barrier Evaluation and Design," dated March 22, 2011. This March 22, 2011 Technical Memorandum is included as Attachment 1 in the Workplan.

The site perimeter downgradient (east) of the southern source area is divided into two sections. PRB Section 1 is located adjacent to Maumee Street, and PRB Section 2 is located along the eastern site perimeter adjacent to parcel 325-0261-00 located at 805 South Maumee Street (Figure 1). PRB Section 1 was designed to extend from boring location B-4 south to the southern property line for a total length of 730 feet (ft), and PRB Section 2 was designed to extend from 100 ft north of monitoring well MW-01s to the midway point between borings B-53 and B-54 for a total length of 380 ft. Given the physical site constraints, two different installation techniques were proposed. Where the target treatment zone is relatively shallow, the PRB design included *in situ* soil blending to deliver the Adventus product DARAMEND® to the subsurface. The design included the use of injections to deliver the Redox Tech, LLC (Redox Tech) product ABC®+ to portions of the reactive barrier further below ground surface. The design also included injections around an existing sewer pipe.

The saturated thickness of the affected aquifer decreases from approximately 30 ft along the eastern perimeter of the site to approximately 2 ft downgradient of the site in proximity to the River Raisin, effectively making the entire aquifer shallow, *i.e.*, near the water table. Consequently the PRB design depth was selected so that intermediate-affected groundwater would not negate the effectiveness of the blended portion of the PRB further downgradient, in proximity to monitoring wells MW-21 and MW-31.

2.2 Blended PRB Construction

The blended portion of the PRB was installed along the eastern perimeter of the site, adjacent to Maumee Street. Excavation and blending were performed by Redox Tech with oversight and documentation conducted by TRC. The reactive material in the blended portion of the PRB is the Adventus product DARAMEND®, a pelletized form of controlled-release carbon and zero valent iron (ZVI). The project specific blend of DARAMEND® was composed of 40-percent

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by mass ZVI and 60-percent by mass organic material. The DARAMEND® dosing rate varied from 7.3-percent to 12.1-percent along the length of the barrier, with lower dosing in the northern portion of PRB Section 1 and higher dosing in the southern portion of PRB Section 1. A detailed description of blended PRB design and construction, including dosing rate, is provided in Section 2 of the Construction Documentation Report.

2.3 Injected PRB Construction

The injected portion of the PRB was installed along the eastern perimeter of the site. The reactive material in the injected portion of the PRB is the Redox Tech product ABC®+. ABC® is a patented mixture of ethyl lactate and glycerin. The project specific blend of ABC® also included lesser amounts of food grade yeast extract (micronutrient) and a carbonate buffer. The "Plus" component in the injectate is ZVI. The injected portion of the PRB was installed in several areas for the following design purposes:

- **Around an Existing Storm Sewer:** A sewer line intersects PRB Section 1 at the location shown on Figure 1. In order to avoid damaging this sewer line, a clearance distance of at least 5 ft from either side of the sewer line was maintained during soil blending activities. A short segment of shallow injections were located adjacent to this sanitary sewer line where DARAMEND® could not be blended without damaging the sewer line.
- **To Increase the Depth of PRB Section 1[1]:** The maximum depth to which Redox Tech could install a PRB via *in situ* soil blending was approximately 18 ft below ground surface (bgs). However investigation data indicated that concentrations that warrant treatment (*e.g.*, trichloroethene (TCE) at 440 micrograms per liter [ug/L] to 1600 ug/L) were present in groundwater to depths up to 24 ft bgs below the southern portion of PRB Section 1. ABC®+ was injected to increase the effective depth of the PRB in this area. The deep injected portion of PRB Section 1 extends from 510 feet north of the southern perimeter fence south to the southern perimeter fence.
- **PRB Section 2:** PRB Section 2 is located along the eastern site perimeter adjacent to the parcel located at 805 South Maumee Street (325-0261-00). The depth to groundwater in the vicinity of PRB Section 2 is approximately 16 ft bgs. Consequently installation of a PRB via *in situ* soil blending was not feasible with the blending equipment used for PRB Section 1.

A more detailed description of design and construction of the injected portion of the PRB, including dosing rate, is provided in Section 3 of the Construction Documentation Report.

[1] The PRB was designed and installed as an interim corrective measure to address the potential vapor intrusion pathway downgradient of the southern source area by treating shallow CVOCs. Due to the decrease in saturated thickness east of the site, the intermediate aquifer along Maumee Street was targeted for treatment to address the potential vapor intrusion pathway further downgradient of the site.

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Section 3
PRB Performance Monitoring

3.1 Introduction

The Workplan Addendum, which was submitted to USEPA on July 8, 2011, describes the performance monitoring network, including the purpose of each well in evaluating PRB performance, hydraulic conductivity testing, and the groundwater sampling program. In response to USEPA comments (documented in the May 30, 2012 USEPA letter "Re: Summary of March 5-6, 2012 Meeting"), one additional up gradient PRB monitoring well (PRB-16s) was installed on August 2, 2012. The PRB performance monitoring activities documented in this section were conducted in accordance with the Workplan Addendum.

3.2 Monitoring Well Functionality

As described in the Workplan Addendum, the general purpose of each type of monitoring well is described below.

- Up gradient wells are used to monitor PRB-influent VOC concentrations in the most affected areas.
- Wells located within the PRB are used for the following:
  - To evaluate the hydraulic performance of the PRB *i.e.*, to measure the hydraulic conductivity of the PRB directly;
  - To evaluate proper PRB installation; and
  - To monitor VOC concentrations within the PRB over time *i.e.*, to evaluate changes in reactivity/performance.
- Downgradient wells are used to monitor PRB-effluent VOC concentrations and to evaluate proper PRB installation.
- Deep wells are used to evaluate the hydraulic performance of the PRB *i.e.*, to monitor whether the PRB has changed groundwater flow patterns such that affected groundwater is diverted under the PRB rather than through the PRB. Note: The PRB was designed to expeditiously reduce the highest concentrations of CVOCs migrating off-site, not to treat all groundwater migrating off-site above Michigan Department of Environmental Quality (MDEQ) Part 201 criteria. As such the concentrations of CVOCs below the proposed PRB are not expected to be below MDEQ Part 201 criteria.
- Side gradient wells are used to evaluate the hydraulic performance of the PRB, *i.e.*, to monitor whether the PRB has changed groundwater flow patterns such that affected groundwater is diverted around the PRB rather than through the PRB. Note: The PRB was

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designed to expeditiously reduce the highest concentrations of CVOCs migrating off-site, not to treat all groundwater migrating off-site above MDEQ Part 201 criteria. As such the concentrations of CVOCs side gradient (north and south) of the proposed PRB are not expected to be below MDEQ Part 201 criteria.

3.3 Summary of PRB Groundwater Performance Monitoring Activities

Groundwater monitoring began as soon as feasible following PRB installation, in August 2011. Groundwater sample events are conducted in general accordance with the Workplan Addendum, the September 2012 Performance Monitoring Report, and the Quality Assurance Project Plan (QAPP). PRB monitoring program is evaluated and modified as appropriate on an annual basis. As proposed in the September 2012 Performance Monitoring Report, quarterly groundwater performance monitoring program continued through the second year following PRB installation. Field activities relevant to PRB performance conducted between October 2012 and June 2013 include:

- Between October 2, 2012 and October 11, 2012, TRC conducted the fourth quarter 2012 PRB performance groundwater sample event, which included:
  - Measurement of groundwater elevations at all 19 PRB monitoring well locations;
  - Collection of groundwater samples at all 19 PRB monitoring well locations, and measurement of field parameters (pH, conductivity, turbidity, temperature dissolved oxygen, and redox potential) at those locations;
  - Analysis of all 19 PRB groundwater samples for VOCs, dissolved metals (calcium, iron, magnesium and manganese), anions (chloride, nitrate and sulfate), and total organic carbon; and
  - Analysis of samples collected at shallow PRB monitoring locations installed downgradient of PRB Section 1 (PRB-01s, PRB-02s, PRB-04s, PRB-07s, and PRB-08s) for dissolved gasses (methane, ethane and ethylene)[2].
- Between March 4 and March 5, 2013, TRC conducted the first quarter 2013 PRB performance groundwater sample event, which included:
  - Measurement of groundwater elevations at all PRB monitoring well locations, excluding PRB-16s which was inadvertently omitted from this sample event;

[2] Analysis of groundwater samples for dissolved gases was not part of the proposed monitoring program. Methane is formed during the fermentation of the carbon sources that are a component of the PRB. Dissolved gas concentration data can be helpful in evaluating the robustness of the reductive dechlorination process. Concentrations of dissolved gasses in the vicinity of PRB Section 2 were low during the first year following installation. Given the soluble nature of the injected carbon source, there is no expectation that methane production will increase after the first year. Therefore, samples for analysis of dissolved gases were only collected at in-barrier and shallow downgradient wells in the vicinity of PRB Section 1.

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- Collection of groundwater samples at 18 PRB monitoring well locations, and measurement of field parameters (pH, conductivity, turbidity, temperature dissolved oxygen, and redox potential) at those locations;
- Analysis of all 18 PRB groundwater samples for VOCs; and
- Analysis of samples collected at shallow PRB monitoring locations installed within and downgradient of PRB Section 1 (PRB-01s, PRB-02s, PRB-04s, PRB-06s, PRB-07s, PRB-08s, and PRB-09s) for dissolved gasses (methane, ethane and ethylene).

- On March 29, 2013 a sample was collected at monitoring well PRB-16s to complete the first quarter 2013 PRB performance groundwater sample event. Field parameters were measured and the sample was analyzed for VOCs.
- Between June 5 and June 7, 2013, TRC conducted the second quarter 2013 PRB performance groundwater sample event, which included:
  - Measurement of groundwater elevations at all 19 PRB monitoring well locations;
  - Collection of groundwater samples at all 19 PRB monitoring well locations, and measurement of field parameters (pH, conductivity, turbidity, temperature dissolved oxygen, and redox potential) at these locations;
  - Analysis of all 19 PRB groundwater samples for VOCs; and
  - Analysis of samples collected at shallow PRB monitoring locations installed within and downgradient of PRB Section 1 (PRB-01s, PRB-02s, PRB-04s, PRB-06s, PRB-07s, PRB-08s, and PRB-09s) for dissolved gasses (methane, ethane and ethylene).

3.4 Hydraulic Performance

Groundwater levels were collected prior to each groundwater sample event. Water levels are tabulated in Table 1. Groundwater contour maps were prepared quarterly for each section of the PRB to help evaluate and visually assess the horizontal groundwater flow patterns in the vicinity of the PRB. Groundwater contours for PRB Section 1 are included in Appendix A, as Figures A-1 through A-3, and groundwater contours for PRB Section 2 are included in Appendix A, as Figures A-4 through A-6. These contours are generally consistent with previously interpreted groundwater contours in the vicinity of the PRB with groundwater flow predominantly from west to east. **Horizontal flow patterns do NOT indicate diversion of groundwater flow around either section of PRB, *i.e.*, groundwater contours developed from measured groundwater elevations do NOT bend significantly outward at the ends of the either PRB Section**.

The vertical hydraulic gradient was calculated for each nested well pair: PRB-04s/d, PRB-08s/d and PRB-15s/d. The calculated vertical gradients are presented in Table A1. For all well pairs the vertical gradient was essentially neutral during all monitoring events. For well pair

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PRB-04s/d the vertical gradient ranged from -0.0042 to 0.0026, with an average vertical gradient of -0.0002. For well pair PRB-08s/d the vertical gradient ranged from -0.0032 to 0.0024, with an average vertical gradient of 0.0001, and for well pair PRB-15s/d the vertical gradient ranged from -0.0014 to 0.0007, with an average vertical gradient of -0.0001. None of the well pairs exhibit a consistent or significant positive vertical gradient that would be indicative of groundwater flow routed below the PRB. **Calculated vertical gradients are NOT indicative of the diversion of groundwater flow below either section of the PRB.**

3.5 Evaluation of Groundwater Chemistry

Concentrations of VOCs detected at one or more monitoring locations are tabulated in Table 2 and laboratory analytical data are provided in Appendix B. Two trend charts were prepared for each performance monitoring location (Appendix C):

- The first series of trend charts illustrates the concentration of chlorinated ethenes (tetrachloroethene [PCE], trichloroethene [TCE], cis-1,2-dichloroethene [cis-DCE] and vinyl chloride) over time at each monitoring location; and
- The second series of trend charts illustrates the concentration of chlorinated ethanes (1,1,1-trichloroethane [TCA], 1,1-dichloroethane [1,1-DCA] and chloroethane) over time at each monitoring location.

In addition to trend charts, isoconcentration maps illustrating the spatial distribution of the parent compounds TCE and TCA around the PRB were prepared (Figures 2 and 3 respectively). Similar isoconcentration maps illustrating the distribution of TCE and TCA in July 2012 were provided in the September 2012 Performance Monitoring Report. Those figures may be referenced for comparative purposes.

In order to enable reductive dechlorination, both reducing conditions and a food source (*i.e.*, electron donor) are needed within the groundwater system. The reactive materials added to the subsurface (the Adventus product DARAMEND® and the Redox Tech product ABC®+) included zero valent iron (ZVI), which is a strong reducing agent and a source of organic carbon (*e.g.*, lactate and vegetable oil), as the food source. Therefore water quality parameters may be used in conjunction with VOC concentration data to evaluate PRB effectiveness.

Reducing conditions are best measured by the redox potential (ORP) and the dissolved oxygen (DO) concentration in groundwater. A negative ORP and a low DO concentration generally indicate that the aquifer is under reducing conditions. Field measurements, including ORP and DO, were collected during each sample event, and are provided in Table 3. Other indicators, such as high concentrations of iron and manganese and/or low concentrations of sulfate, can support the use of ORP and DO measurements in evaluating reducing conditions. While these measurements can help confirm that the groundwater is under reducing conditions, they are

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typically not definitive, since the iron and manganese concentrations can only be high if there is iron and manganese present in the formation and sulfate can only be low compared to higher background concentrations. A summary of these water quality parameters (collected through October 2012) is included as Table 4. Regardless of the initial organic carbon source, anaerobic breakdown (*i.e.*, fermentation) of the carbon additions will result in the production of dissolved gases. Therefore, dissolved gases in groundwater are good indicators that the desired anaerobic conditions have been produced. Results of the dissolved gas analyses are presented in Table 5.

3.5.1 PRB Section 1

Field data (Table 3) show that DO concentrations in groundwater up gradient of PRB Section 1 have typically ranged from 3 and 6 mg/L, and that the ORP in the shallow aquifer is positive. Within and downgradient of Section 1, the DO measurements are typically below 1 mg/L and the ORP is negative. Iron concentrations (Table 4) at the in-barrier monitoring wells PRB-06s and PRB-09s are elevated due to the addition of ZVI and the low ORP.

Methane and other soluble compounds (*e.g.*, volatile fatty acids) are formed during the fermentation of the carbon sources that are a component of the PRB, while the ethane and ethylene result from the complete dechlorination of TCE and TCA. Dissolved gases and other byproducts of fermentation can be used as a food source. Dissolved gasses are present in varying amounts at in-barrier and downgradient monitoring locations.

As described above, indicator parameters indicate that PRB Section 1 has been effective in creating conditions favorable to reductive dechlorination. Most importantly, concentrations of CVOCs, particularly the parent compounds TCE and TCA, have decreased in areal extent and in maximum concentration downgradient of PRB Section 1.

Chlorinated Ethenes

As illustrated on Figure 2, the core of the TCE plume (as defined by the 100 ug/L contour) has decreased in size from 750 feet in width along Maumee Street to approximately 300 feet in width, along Maumee Street, downgradient of PRB Section 1, and during the most recent sample event concentrations of TCE were below 1,000 ug/L at all downgradient monitoring locations for the first time.

As reported in September 2012, TCE concentrations at most in-barrier and downgradient monitoring wells decreased substantially during the first year following PRB installation. However, at that time, TCE concentrations at downgradient monitoring well PRB-07s appeared unaffected by the PRB. Since

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that time the TCE concentrations have declined (or remained below the detection limit) at all in-barrier and downgradient monitoring locations, including PRB-07s. Specifically, the concentration at PRB-07s decreased from a range of 1,100 to 1,400 (August 2011 through July 2012) to a concentration of 370 ug/L in June 2013. The recent increase in cis 1,2 DCE at PRB-07s indicates that the decrease in TCE is due to reductive dechlorination. The concentration of TCE at monitoring well PRB-01s has continued to decrease from 3,900 ug/L in August 2011 to 1,600 ug/L in July 2012 to 960 ug/L in June 2013. Similarly TCE concentration data from monitoring well PRB-02s illustrate a decreasing trend from 3,100 ug/L (August 2011) to 1,200 ug/L (July 2012) to 280 ug/L (June 2013).

The southernmost portion of PRB Section 1 has shown significant and sustained reductions in chlorinated ethene concentrations. At up gradient monitoring well PRB-05s, the concentration of the parent compounds PCE and TCE have ranged from 200 to 310 ug/l and 620 to 1,000, respectively. However, concentrations of parent compounds PCE and TCE have been at or near the detection limit since October 2011, at both the in-barrier monitoring well (PRB-06s) and the downgradient monitoring well (PRB-04s) associated with up gradient well PRB-05s.

Concentrations of breakdown products, particularly cis-1,2 DCE and vinyl chloride initially spiked at in-barrier monitoring well PRB-06s before dropping down to concentrations at or near the detection limit. Concentrations of the breakdown products cis-1,2 DCE and vinyl chloride remain above the detection limit at downgradient monitoring well PRB-04s. The downgradient breakdown products are likely generated by the degradation of TCE as it desorbs from the aquifer matrix. Elevated concentrations of ethane and ethylene at both monitoring well PRB-04s and monitoring well PRB-06s indicate conditions favorable for complete dechlorination of TCE and its breakdown products. Therefore, concentrations of the breakdown products cis-1,2 DCE and vinyl chloride are expected to decline at monitoring well PRB-04s as groundwater which is under reducing conditions, which is also carrying a food source continues to migrate through PRB Section 1 to monitoring well PRB-04s.

Influent CVOC concentrations in the northernmost portion of PRB Section 1 (PRB-16s) are low when compared to concentrations in the southern portion of PRB Section 1. Nevertheless, the northern portion of the PRB has also been effective in reducing concentrations of both TCE and its breakdown products. Concentrations of TCE have remained below the detection limit during all sample events at in-barrier monitoring well PRB-09s, and the concentration of

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TCE has decreased from 5.3 ug/L to less than 1 ug/L at downgradient monitoring well PRB-08s. With one exception (cis-1,2 DCE during January 2012), concentrations of the breakdown products cis-1,2 DCE and vinyl chloride have been below the detection limit at in-barrier monitoring well PRB-09s. The recent increase in cis-DCE concentrations at PRB-08s likely reflects the variable CVOC loading on the PRB. The cis-DCE concentration trend will continue to be monitored at this location; however the sustained decrease in vinyl chloride concentrations suggests that the PRB remains effective in generating conditions favorable to complete degradation.

Chlorinated Ethanes

As illustrated on Figure 3, the PRB has also decreased the size of the core of the TCA plume (as defined by the 100 ug/L contour) along Maumee Street downgradient of PRB Section 1 by creating an area with TCA concentrations less than 100 ug/L within the center of the former TCA plume. Note that the initial TCA plume did not extend as far north as the TCE plume; concentrations of TCA at all monitoring locations north of boring location B-3 (including up gradient and side gradient locations) have remained at or below the detection limit during all sample events.

TCA concentrations have been below the detection limit at in-barrier monitoring well PRB-06s during all sample events, and a significant decrease in TCA concentrations has been observed at all of the downgradient monitoring wells located within the area of TCA-affected groundwater, *i.e.*, south of boring location B-3. TCA concentration data from monitoring wells PRB-02s, PRB-04s, and PRB-07s illustrate decreasing trends, from initial concentrations of approximately 100 ug/L to current concentrations of 4.8 ug/L, less than 1.0 ug/L, and 16 ug/L, respectively. A significant drop in the concentration of TCA at monitoring well PRB-01s was observed during the first year or so (from 3,700 ug/L in August 2011 to 570 ug/L in October 2012). Since that time the concentration has increased to 970 ug/L. A concurrent increase in the concentration of the breakdown product 1 ,1-DCA was observed. Concentrations trends at monitoring well PRB-01s will continue to be monitored. However, the concurrent increase in the 1 ,1-DCA concentration is a strong indicator of variable loading on the PRB rather than a decrease in PRB effectiveness.

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Groundwater Flow

As discussed in the Workplan Addendum, PRB performance has been monitored to verify that there are no significant upward trends in CVOCs, particularly parent compounds (PCE, TCE and TCA), at side gradient locations, in order to confirm that affected-groundwater is not being diverted horizontally around the PRB. **VOC-data do NOT indicate that installation of PRB Section 1 has resulted in the horizontal diversion of flow around the north or the south end of PRB Section 1.** Concentrations of parent compounds in side gradient monitoring well PRB-03s, located south of PRB Section 1 have remained stable. Concentrations of PCE and TCA have remained at or near the detection limit, and the TCE concentration has fluctuated between 10 and 25 ug/L during this monitoring period with no apparent upward or downward trend. At side gradient monitoring well PRB-10s, located north of PRB Section 1, concentrations of PCE, TCE and TCA have remained below detection limit throughout the monitoring period. Cis-DCE and trans-1,2-dichloroethene (trans-DCE), the only compounds detected at monitoring well PRB-10s, fluctuate between 5.9 and 42 ug/L and 1.0 and 4.5 ug/L respectively. Neither compound exhibits an apparent upward or downward trend during the monitoring period.

As discussed in the Workplan Addendum, PRB performance has been monitored to verify that there are no significant upward trends in CVOCs, particularly parent compounds (PCE, TCE and TCA), at deep downgradient locations, in order to confirm that affected-groundwater is not being diverted vertically below the PRB. **VOC-data do NOT indicate that installation of PRB Section 1 has resulted in the vertical diversion of flow below the bottom of PRB Section 1.** Concentrations of parent compounds in deep downgradient monitoring wells PRB-04d and PRB-08d have remained stable. The TCE concentration at monitoring well PRB-04d does exhibit a downward trend from 9.8 ug/L to <1.0 ug/L indicating that the injected portion of the PRB may be providing limited treatment in the deeper groundwater. Vinyl chloride is the only compound detection at deep downgradient monitoring well PRB-08d. The vinyl chloride concentration at monitoring well PRB-08d exhibits an apparent upward trend during the monitoring period. This trend will continue to be monitored, but the upward trend of only one compound is not indicative of the diversion of untreated groundwater below the PRB. Rather this trend is likely due to a “halo” effect around the PRB creating more anaerobic conditions downgradient of the barrier, resulting in slower aerobic breakdown of vinyl chloride at depth.

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Toluene

During the first year following PRB installation, in-barrier monitoring well PRB-09s showed an apparent increase in toluene from below 100 ug/L to 2,000 ug/L. Since that time the toluene concentration at PRB-09s has decreased to below 200 ug/L. However, the toluene concentration at in-barrier monitoring well PRB-06s has increased from <1.0 to 440 ug/L. Similar increases in toluene concentrations were not observed at up gradient monitoring locations. The source for toluene at the in-barrier wells is unknown, but may be a breakdown product of the carbon in the barrier which exhibits similar chemical characteristics to toluene. These concentration trends will continue to be monitored. Toluene concentrations remain below the detection limit at all downgradient monitoring locations.

3.5.2 PRB Section 2

Groundwater chemistry data collected in the vicinity of PRB Section 2 indicate that PRB Section 2 has not had the same effectiveness when compared to PRB Section 1. The DO concentration is generally lower in monitoring wells PRB-14s and PRB-15s, as compared to the up gradient and side gradient monitoring wells, indicating that PRB Section 2 has had a positive effect in developing conditions favorable to reductive dechlorination. However, VOC-data indicate that the PRB has only had a limited effect on groundwater concentrations.

Chlorinated Ethenes

As illustrated on Figure 2, PRB Section 2 has had no notable effect on TCE concentrations. An evaluation of the charts provided in Appendix C indicates that TCE concentrations at all monitoring locations in the vicinity of PRB Section 2 have remained relatively stable, with higher concentrations generally found to the north. At monitoring well PRB-14s, TCE concentrations ranged from 2,700 ug/L to 3,300 ug/L, and at monitoring well PRB-12s, TCE concentrations have ranged from 840 ug/L to 1,600 ug/L. TCE concentrations at shallow downgradient monitoring well PRB-15s have been variable between 1,600 ug/L and 2,700 ug/L. Cis-DCE (a breakdown product of TCE) has been detected at downgradient monitoring well PRB-15s, indicating some reduction in up gradient TCE concentrations. However, this increase in degradation byproducts has not translated to a meaningful reduction in downgradient TCE concentrations.

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Chlorinated Ethanes

An evaluation of the charts provided in Appendix C indicates that TCA concentrations at all monitoring locations in the vicinity of PRB Section 2, with the exception of PRB-15s, have remained relatively stable, with higher concentrations generally found to the north. At monitoring well PRB-14s, TCA concentrations ranged from 910 ug/L to 1,300 ug/L, and at monitoring well PRB-12s, TCA concentrations have ranged from 19 ug/L to 35 ug/L. By contrast, the TCA concentration at monitoring well PRB-15s has shown a significant and steady reduction in the concentration of TCA from 1,200 ug/L in August 2011 to 260 ug/L in June 2013.

Groundwater Flow

VOC-data do NOT indicate that installation of PRB Section 2 has resulted in the horizontal diversion of flow around the south end of PRB Section 2. The TCE concentrations in side gradient monitoring well PRB-11s, located south of PRB Section 2 has remained stable or decreasing with concentrations ranging from 3.4 ug/L to <1.0 ug/L. The concentrations of all other compounds at monitoring well PRB-11s have remained below the detection limit throughout the monitoring period.

VOC-data do NOT indicate that installation of PRB Section 2 has resulted in the vertical diversion of flow beneath PRB Section 2. With the exception for one apparently anomalous reading (August 11, 2011 sample; note that well development and/or hydraulic conductivity testing may have resulted in a brief reduction in groundwater concentration at this location), concentrations of CVOCs at deep downgradient monitoring well PRB-15d have remained stable.

3.5.3 Summary of PRB Effectiveness

As described above, PRB Section 1 is having a significant effect on the off-site migration of CVOCs, particularly TCE and TCA. Geochemical parameters and indicators of food sources show that the PRB is creating conditions which enable the native bacteria to reductively dechlorinate TCE and TCA, *i.e.*, lowering the ORP and releasing sources of food (dissolved organic carbon) into the aquifer. Although the flux of dissolved organic carbon will decline over time, the effect of the PRB is expected to be maintained or improve for several years as the native microbial populations increase. Downgradient of PRB Section 1 the core of the plume has continued to decrease in width and in magnitude during the past year.

Groundwater data collected in the vicinity of PRB Section 2, indicate that the injected portion of the PRB has not duplicated the robust reducing conditions and abundant food source provided by the blended portion of the PRB. This is not unexpected, given the relative quantity of reactive material delivered to the subsurface (7 to 12-percent by mass in PRB Section 1 compared to 0.18 to 0.55-percent by mass in PRB Section 2). VOC data show that there is reductive dechlorination occurring in the vicinity of PRB Section 2. However, given the limited effectiveness of PRB Section 2 to date, the soluble nature of injected carbon source, the limited quantity of injected material when compared to PRB Section 1, and the relatively high groundwater flow rate, there is little reason to expect a significant or sustained improvement in CVOC concentrations downgradient of the PRB Section 2. Rather it seems likely that the mass of injected material was insufficient to create and maintain an environment favorable to reductive dechlorination while a robust population of dechlorinating bacteria developed.

Both groundwater elevation data and groundwater chemistry data indicate that groundwater has NOT been diverted horizontally around the ends of the PRB or vertically beneath the PRB.

The overall effectiveness of the PRB was evaluated by comparing the change in CVOC concentrations over time at downgradient monitoring wells located along Maumee Street. As a direct result of the installation of the PRB, the total TCE concentration has been reduced from 9,430 ug/L to 1,750 ug/L, and the total TCA concentration has been reduced from 4,210 ug/L to 1,239 ug/L. The change in concentration at each well was adjusted to be proportional to its representative cross sectional area in order to estimate the change in mass flux across Maumee Street downgradient of the site. The mass flux of TCE has decreased by an estimated 84-percent in the past two years, and the mass flux of TCA has decreased by an estimated 66-percent in the past two years.

3.6 Data Quality Assurance

Data were collected to evaluate the effectiveness of the PRB, and are not intended to be used for long-term compliance monitoring. Therefore, field and laboratory data were evaluated in accordance with the QAPP using Level 3 data quality objectives. The data quality objectives and laboratory completeness goals for the project were met, and the data are usable.

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Section 4
Methane Management

4.1 Introduction

In conjunction with the August 2011 and October 2011 groundwater sample events, a GEM 2000 Landfill Gas Meter was used to measure the oxygen, carbon dioxide and methane concentrations in the headspace of PRB monitoring well locations. Gas readings collected during the fourth quarter 2011 sample event suggested that the portion of the PRB composed of DARAMEND® (blended PRB) was producing highly reducing conditions resulting in methanogenesis. These reducing conditions are favorable to the degradation of CVOCs, including the complete degradation of TCE to ethylene without the accumulation of vinyl chloride. However, the generation of methane in the subsurface needed to be managed to protect the health and safety of adjacent land owners.

4.2 Methane Management System

As documented in the PRB Construction Documentation Report, passive vents were installed adjacent to PRB Section 1 between October 27, 2011 and October 28, 2011. Vents were installed at approximate 50-foot spacing as shown on the attached Figure 4. Vents are screened in the vadose zone from approximately 4 feet below ground surface to approximately 1 foot below the water table. The above-grade vent components are composed of galvanized steel to increase durability; and each vent is equipped with a wind-driven turbine ventilator and a sample port so that methane concentrations can be monitored.

Evaluation of initial methane concentration data collected at passive vent locations prompted a pilot study and the subsequent installation of active ventilation at the three northernmost vent locations (V-01, V-02, and V-03). Field activities associated with the installation of active ventilation units are documented in the Construction Documentation Report.

4.3 Gas Composition Monitoring Program – Year 1

During the first year of operation, methane concentrations at vents V-05 through V-15 remained below the target concentration of 5.1-percent methane (the lower explosive limit) during each of the gas composition sample events. Concentrations of methane at V-01 through V-04 located along the northern portion of the PRB exceeded the target concentration of 5.1-percent methane in late 2011. These concentrations prompted a pilot study and the subsequent installation of active ventilation at the three northernmost vent locations (V-01 through V-03).

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As documented in Table 6, methane concentrations at the northernmost vent locations decreased dramatically following installation of active ventilation. Methane concentrations at all vent locations were below the target concentration of 5.1-percent methane since June 2012.

4.4 Gas Composition Monitoring Program – Year 2

Methane concentrations were monitored on a quarterly basis through the third quarter of 2013. The monitoring frequency was increased to monthly during the first quarter 2013 while the ground was frozen. Gas composition readings through August 2013 are provided in Table 6.

Gas composition readings through August 2013 are tabulated in Table 6. Methane concentrations at vents V-01, V-02, V-03, V-04, V-05, V-08, V-09, V-10, V-13, and V-15 have remained below the target concentration of 5.1-percent methane through the past year. Concentrations of methane at V-06, V-07, V-11, V-12 and V-14 were slightly above the target methane concentration during one or more monitoring events. The maximum detected methane concentration was 7.6-percent. Although these vents exceed the target concentration, they are located on-site, immediately adjacent to the blended portion of the PRB. In August 2013, gas composition readings were also collected at the two soil gas sample point located off-site immediately downgradient of the PRB (SG-02 and SG-03R). Methane concentrations at these locations were non-detect prior to the installation of active ventilation at V-01, V-02 and V-03, and they remain non-detect.

4.5 Ongoing Gas Composition Monitoring Program

As noted in the Construction Documentation Report, methane production is expected to decrease over time; therefore the frequency of methane monitoring activities may be reduced in the future. TRC proposes that methane concentrations continue to be monitored at all vent locations and at soil gas sample points SG-02 and SG-03R on a quarterly basis through the third quarter of 2014, expect during the winter months (*i.e.*, while the ground is frozen), when sample frequency will be increased to monthly [3]. If methane concentrations remain below the target methane concentration through the next year, TRC may reduce the monitoring frequency beginning in the fourth quarter of 2014. PRB performance monitoring, including methane concentration data, will be documented in the 2014 PRB Performance Monitoring Report.

[3] Effort will be made to collect readings at soil gas sample points SG-02 and SG-03R during each monitoring event. However, those monitoring points are located inside flush mount covers immediately adjacent to the Maumee Street roadway. Significant snow and ice cover from road clearing activities may prevent monitoring at those locations during winter months.

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Section 5
Summary and Conclusions

In May 2011 a PRB was installed in two sections as summarized in this report and described in detail in the Construction Documentation Report. The PRB performance monitoring network was installed in July and August 2011 in accordance with the Workplan Addendum. Quarterly groundwater monitoring was initiated in August 2011 in order to monitor the performance of the PRB.

PRB Section 1, located along the eastern perimeter of the site adjacent to Maumee Street, is having a significant effect on the off-site migration of CVOCs, particularly TCE and TCA. Geochemical parameters and indicators of food sources show that the PRB is creating conditions which enable the native bacteria to reductively dechlorinate TCE and TCA, *i.e.*, lowering the ORP and releasing sources of food (dissolved organic carbon) into the aquifer. Although the flux of dissolved organic carbon will decline over time, the effect of the PRB is expected to be maintained or improve for several years as the native microbial populations increase. Downgradient of PRB Section 1 the core of the plume has decreased in width and in magnitude in the two years since the PRB was installed.

Field data suggest that PRB Section 1 (the blended portion of the PRB) continues to produce highly reducing conditions resulting in methanogenesis. These reducing conditions are favorable to the degradation of CVOCs, including the complete degradation of TCE to ethylene without the accumulation of vinyl chloride.

Groundwater data collected in the vicinity of PRB Section 2 indicate that the injected portion of the PRB has not duplicated the strong reducing conditions and abundant food source provided by the blended portion of the PRB. This is not unexpected, given the relative quantity of reactive material delivered to the subsurface. VOC data show that there is reductive dechlorination occurring in the vicinity of PRB Section 2. However, given the limited effectiveness of PRB Section 2 to date, the soluble nature of injected carbon source, the limited quantity of injected material when compared to PRB Section 1, and the relatively high groundwater flow rate, there is little reason to expect a significant or sustained improvement in CVOC concentrations downgradient of the PRB Section 2. Rather it seems likely that the mass of injected material was insufficient to create and maintain an environment favorable to reductive dechlorination while a robust population of dechlorinating bacteria developed.

The groundwater monitoring has demonstrated that the plume is shrinking in width and in magnitude. Both groundwater elevation data and groundwater chemistry data indicate that groundwater has NOT been diverted horizontally around the ends of the PRB or vertically beneath the PRB.

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As a direct result of the installation of the PRB, the total TCE concentration at wells located along Maumee Street downgradient of the PRB has been reduced from 9,430 ug/L to 1,750 ug/L, and the total TCA concentration has been reduced from 4,210 ug/L to 1,239 ug/L over the same area. The change in concentration at each well was adjusted to be proportional to its representative cross sectional area in order to estimate the change in mass flux across Maumee Street downgradient of the site. The mass flux of TCE has decreased by an estimated 84-percent in the past two years, and the mass flux of TCA has decreased by an estimated 66-percent in the past two years.

Quarterly monitoring for the past two years, has allowed TPC to monitor changing groundwater chemistry following PRB installation. Rapid and significant changes in groundwater chemistry are no longer anticipated. Therefore, TRC intends to reduce the frequency of the PRB performance monitoring to semi-annual. These data will be used to continue to evaluate the long-term effectiveness of the PRB. TRC proposes to monitor the PRB performance monitoring network for the following

- ORP, DO, pH, specific conductance, and temperature, and
- VOCs

In response to the accumulation of methane in the subsurface unsaturated soil, methane vents were installed along the length of PRB Section 1. Methane concentrations at vent locations located immediately adjacent to the PRB had concentrations up to 7.6-percent. Methane concentrations at soil gas point located off-site immediately downgradient of the PRB remain non-detect.

TRC proposes that methane concentrations at PRB vent locations continue to be monitored on a quarterly basis through the third quarter of 2014, except during the winter months (*i.e.*, while the ground is frozen), when sample frequency will be increased to monthly.

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Section 6
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Tables

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Table 1
Groundwater Elevations
PRB Performance Monitoring
Former Tecumseh Products Company Site
Tecumseh, Michigan

Well Location	Top of Well Casing (ft MSL)	Measurement Date	Depth to Groundwater (ft BTOC)	Groundwater Elevation (ft MSL)
PRB-01s	784.06	8/9/2011	5.60	778.46
		10/5/2011	5.91	778.15
		1/11/2012	5.29	778.77
		4/2/2012	5.10	778.96
		7/2/2012	5.81	778.25
		10/2/2012	6.84	777.22
		3/4/2013	7.45	776.61
		6/5/2013	7.19	776.87
PRB-02s	784.07	8/9/2011	5.70	778.37
		10/5/2011	5.93	778.14
		1/11/2012	5.29	778.78
		4/2/2012	5.06	779.01
		7/2/2012	5.84	778.23
		10/2/2012	6.85	777.22
		3/4/2013	7.41	776.66
		6/5/2013	7.27	776.80
PRB-03s	784.16	8/9/2011	5.52	778.64
		10/5/2011	5.83	778.33
		1/11/2012	5.17	778.99
		4/2/2012	5.02	779.14
		7/2/2012	5.62	778.54
		10/2/2012	6.68	777.48
		3/4/2013	7.15	777.01
		6/5/2013	6.96	777.20
PRB-04s	784.70	8/9/2011	6.14	778.56
		10/5/2011	6.40	778.30
		1/11/2012	5.76	778.94
		4/2/2012	5.57	779.13
		7/2/2012	6.28	778.42
		10/2/2012	7.23	777.47
		3/4/2013	7.84	776.86
		6/5/2013	7.66	777.04
PRB-04d	784.70	8/9/2011	6.10	778.60
		10/5/2011	6.40	778.30
		1/11/2012	5.77	778.93
		4/2/2012	5.57	779.13
		7/2/2012	6.30	778.40
		10/2/2012	7.31	777.39
		3/4/2013	7.85	776.85
		6/5/2013	7.61	777.09
PRB-05s	784.66	8/9/2011	5.96	778.70
		10/5/2011	6.23	778.43
		1/11/2012	5.58	779.08
		4/2/2012	5.38	779.28
		7/2/2012	6.05	778.61
		10/2/2012	7.15	777.51
		3/4/2013	7.64	777.02
		6/5/2013	7.39	777.27

Notes:

Survey conducted to feet mean sea level by Midwestern Consultants, Inc. (2011)

ft MSL - feet above mean sea level

ft BTOC - feet below top of casing

NI- Not installed at time of measurement

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Table 1
Groundwater Elevations
PRB Performance Monitoring
Former Tecumseh Products Company Site
Tecumseh, Michigan

Well Location	Top of Well Casing (ft MSL)	Measurement Date	Depth to Groundwater (ft BTOC)	Groundwater Elevation (ft MSL)
PRB-06s	784.52	8/9/2011	5.90	778.62
		10/5/2011	6.16	778.36
		1/11/2012	5.51	779.01
		4/2/2012	5.62	778.90
		7/2/2012	6.00	778.52
		10/2/2012	7.06	777.46
		3/4/2013	7.54	776.98
		6/5/2013	7.29	777.23
PRB-07s	784.08	8/9/2011	5.59	778.49
		10/5/2011	5.82	778.26
		1/11/2012	5.19	778.89
		4/2/2012	4.98	779.10
		7/2/2012	5.70	778.38
		10/2/2012	6.78	777.30
		3/4/2013	7.31	776.77
		6/5/2013	7.06	777.02
PRB-08s	784.69	8/9/2011	6.17	778.52
		10/5/2011	6.39	778.30
		1/11/2012	5.76	778.93
		4/2/2012	5.54	779.15
		7/2/2012	6.24	778.45
		10/2/2012	7.29	777.40
		3/4/2013	7.80	776.89
		6/5/2013	7.56	777.13
PRB-08d	784.69	8/9/2011	6.14	778.55
		10/5/2011	6.38	778.31
		1/11/2012	5.74	778.95
		4/2/2012	5.53	779.16
		7/2/2012	6.25	778.44
		10/2/2012	7.33	777.36
		3/4/2013	7.78	776.91
		6/5/2013	7.59	777.10
PRB-09s	785.08	8/9/2011	6.45	778.63
		10/5/2011	6.69	778.39
		1/11/2012	6.03	779.05
		4/2/2012	5.99	779.09
		7/2/2012	6.55	778.53
		10/2/2012	7.66	777.42
		3/4/2013	8.00	777.08
		6/5/2013	7.73	777.35
PRB-10s	785.22	8/9/2011	6.60	778.62
		10/5/2011	6.85	778.37
		1/11/2012	6.21	779.01
		4/2/2012	5.97	779.25
		7/2/2012	6.69	778.53
		10/2/2012	7.87	777.35
		3/4/2013	8.17	777.05
		6/5/2013	7.93	777.29

Notes:

Survey conducted to feet mean sea level by Midwestern Consultants, Inc. (2011)

ft MSL - feet above mean sea level

ft BTOC - feet below top of casing

NI- Not installed at time of measurement

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Table 1
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PRB Performance Monitoring
Former Tecumseh Products Company Site
Tecumseh, Michigan

Well Location	Top of Well Casing (ft MSL)	Measurement Date	Depth to Groundwater (ft BTOC)	Groundwater Elevation (ft MSL)
PRB-11s	795.12	8/9/2011	15.73	779.39
		10/5/2011	16.02	779.10
		1/11/2012	15.32	779.80
		4/2/2012	15.06	780.06
		7/2/2012	15.70	779.42
		10/2/2012	16.88	778.24
		3/4/2013	17.24	777.88
		6/5/2013	16.96	778.16
PRB-12s	795.46	8/9/2011	16.02	779.44
		10/5/2011	16.34	779.12
		1/11/2012	15.66	779.80
		4/2/2012	15.42	780.04
		7/2/2012	16.04	779.42
		10/2/2012	17.22	778.24
		3/4/2013	17.66	777.80
		6/5/2013	17.31	778.15
PRB-13s	797.2	8/9/2011	17.67	779.53
		10/5/2011	18.01	779.19
		1/11/2012	17.34	779.86
		4/2/2012	17.06	780.14
		7/2/2012	17.69	779.51
		10/2/2012	18.88	778.32
		3/4/2013	19.23	777.97
		6/5/2013	18.96	778.24
PRB-14s	796.7	8/9/2011	17.24	779.46
		10/5/2011	17.58	779.12
		1/3/2012	16.92	779.78
		4/2/2012	16.64	780.06
		7/2/2012	17.30	779.40
		10/2/2012	18.43	778.27
		3/4/2013	18.91	777.79
		6/5/2013	18.55	778.15
PRB-15s	795.35	8/9/2011	15.95	779.40
		10/5/2011	16.26	779.09
		1/11/2012	15.59	779.76
		4/2/2012	15.33	780.02
		7/2/2012	15.95	779.40
		10/2/2012	17.16	778.19
		3/4/2013	17.60	777.75
		6/5/2013	17.21	778.14

Notes:

Survey conducted to feet mean sea level by Midwestern Consultants, Inc. (2011)

ft MSL - feet above mean sea level

ft BTOC - feet below top of casing

NI- Not installed at time of measurement

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Table 1
Groundwater Elevations
PRB Performance Monitoring
Former Tecumseh Products Company Site
Tecumseh, Michigan

Well Location	Top of Well Casing (ft MSL)	Measurement Date	Depth to Groundwater (ft BTOC)	Groundwater Elevation (ft MSL)
PRB-15d	795.43	8/9/2011	16.02	779.41
		10/5/2011	16.34	779.09
		1/11/2012	15.66	779.77
		4/2/2012	15.41	780.02
		7/2/2012	16.05	779.38
		10/2/2012	17.23	778.20
		3/4/2013	17.70	777.73
		6/5/2013	17.29	778.14
PRB-16s	785.02	8/9/2011	NI	--
		10/5/2011	NI	--
		1/11/2012	NI	--
		4/2/2012	NI	--
		7/2/2012	NI	--
		10/2/2012	7.52	777.50
		3/27/2013	8.04	776.98
		6/5/2013	7.71	777.31

Notes:

Survey conducted to feet mean sea level by Midwestern Consultants, Inc. (2011)

ft MSL - feet above mean sea level

ft BTOC - feet below top of casing

NI- Not installed at time of measurement

US EPA ARCHIVE DOCUMENT

Table 2
Summary of Detected Volatile Organic Compounds in Groundwater
PRB Performance Monitoring
Former Tecumseh Products Company Site
Tecumseh, Michigan

Analyte		Acetone(2)	2-Butanone	Benzene(2)	Chloroethane	Chloroform	1,1-Dichloro-ethane	1,2-Dichloro-ethane	1,1-Dichloro-ethene(2)	cis-1,2-Dichloro-ethene	trans-1,2-Dichloro-ethene	Ethyl-benzene(2)	Isopropyl-benzene	n-Propyl Benzene(2)	Tetrachloro-ethene	Toluene(2)	1,1,1-Tri-chloroethane	1,1,2-Tri-chloroethane	Trichloro-ethene	1,2,4-Tri-methyl-benzene	Vinyl Chloride	Total Xylenes(2)
Residential Health-Based DW Criteria		730	13,000	5.0	430	80	880	5.0	7.0	70	100	700	800	80	5.0	1,000	200	5.0	5.0	1,000	2.0	10,000
Non-Residential Health-Based DW Criteria		2,100	38,000	5.0	1,700	80	2,500	5.0	7.0	70	100	700	2,300	230	5.0	1,000	200	5.0	5.0	2,900	2.0	10,000
GSI Criteria		1,700	2,200	200(1)	1,100(1)	350	740	360(1)	130	620	1,500(1)	18	28	NC	60(1)	270	89	330(1)	200(1)	17	13(1)	41
Residential GWSLs for Vapor Intrusion		NC	4.5E+06	NC	NC	NC	130	NC	390	440	330	NC	NC	NC	11	NC	15,000	NC	9.9	NC	5.0	NC
Non-Residential GWSLs for Vapor Intrusion		NC	1.9E+07	NC	NC	NC	670	NC	1,600	1,800	1,400	NC	NC	NC	55	NC	63,000	NC	42	NC	50	NC
Groundwater Contact Criteria		3.1E+07	2.4E+08	11,000	4.4E+05	1.5E+05	2.4E+06	19,000	11,000	2.0E+05	2.2E+05	1.7E+05	56,000	15,000	12,000	5.3E+05	1.3E+06	21,000	22,000	56,000	1,000	1.9E+05
Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
PRB-01s (6-11') Depth to Groundwater* Approx. 5.5 - 6.5'	8/10/2011	<1,000	<250	<50	<250	<50	<50	<50	**170**	<50	<50	<50	<50	<50	<50	<50	**3,700**	<50	**3,900**	<50	<50	<150
	10/7/2011	<500	<120	<25	<120	<25	<25	<25	**42**	<25	<25	<25	<25	<25	<25	<25	**2,900**	<25	**3,300**	<25	<25	<75
	1/11/2012	<200	<50	<10	<50	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	**960**	<10	**2,000**	<10	<10	<30
	4/10/2012	<400	<100	<20	<100	<20	**50**	<20	**31**	**230**	<20	<20	<20	<20	<20	<20	**670**	<20	**1,800**	<20	**22**	<30
	7/16/2012	<200	<50	<10	<50	**10**	**41**	<10	**120**	**750**	<10	<10	<10	<10	<10	<10	**600**	<10	**1,600**	<10	**20**	<30
	10/10/2012	<200	<50	<10	<50	<10	**29**	<10	**23**	**350**	<10	<10	<10	<10	<10	<10	**570**	<10	**1,400**	<10	<10	<30
	3/4/2013	<200	**130**	<10	<50	<10	**90**	<10	**27**	**88**	<10	<10	<10	<10	<10	<10	**730**	<10	**1,100**	<10	**140**	<30
	6/7/2013	<200	<50	<10	<50	<10	**380**	<10	**24**	**620**	<10	<10	<10	<10	<10	<10	**970**	<10	**960**	<10	**48**	<30
PRB-02s (6-11') Depth to Groundwater* Approx. 5.5 - 6.5'	8/10/2011	<500	<120	<25	<120	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	**110**	<25	**3,100**	<25	<25	<75
	10/7/2011	<500	<120	<25	<120	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	**80**	<25	**2,300**	<25	<25	<75
	1/11/2012	<400	<100	<20	<100	<20	<20	<20	<20	**1,200**	<20	<20	<20	<20	<20	<20	**64**	<20	**1,900**	<20	<20	<60
	4/10/2012	<400	<100	<20	<100	<20	<20	<20	<20	**1,800**	**23**	<20	<20	<20	<20	<20	**36**	<20	**1,300**	<20	<20	<60
	7/13/2012	<200	<50	<10	<50	<10	<10	<10	<10	**1,000**	**19**	<10	<10	<10	<10	<10	**29**	<10	**1,200**	<10	<10	<30
	10/10/2012	<200	<50	<10	<50	<10	<10	<10	<10	**410**	<10	<10	<10	<10	<10	<10	**24**	<10	**1,100**	<10	**33**	<30
	3/5/2013	<50	<12	<2.5	<12	<2.5	**4.4**	<2.5	<2.5	**250**	**6.4**	<2.5	<2.5	<2.5	<2.5	<2.5	**4.8**	<2.5	**310**	<2.5	**43**	<7.5
	6/7/2013	<50	<12	<2.5	<12	<2.5	**9.0**	<2.5	<2.5	**140**	**4.8**	<2.5	<2.5	<2.5	<2.5	<2.5	**4.8**	<2.5	**280**	<2.5	**26**	<7.5
PRB-03s (6-11') Depth to Groundwater* Approx. 5.5 - 6.5'	8/10/2011	<200	<50	<10	<50	<10	**19**	<10	<10	<10	<10	**560**	<10	<10	<10	<10	<10	<10	**14**	<10	<10	**3,400**
	10/6/2011	<200	<50	<10	<50	<10	**17**	<10	<10	<10	<10	**510**	<10	<10	<10	<10	<10	<10	**10**	<10	<10	**2,990**
	1/11/2012	<100	<25	<5.0	<25	<5.0	**13**	<5.0	<5.0	<5.0	<5.0	**320**	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	**24**	<5.0	<5.0	**1,920**
	4/10/2012	<40	<10	<2.0	<10	<2.0	**11**	<2.0	<2.0	<2.0	<2.0	**170**	**2.3**	**2.2**	<2.0	<2.0	**3.6**	<2.0	**25**	<2.0	<2.0	**890**
	7/16/2012	<100	<25	<5.0	**34**	<5.0	**26**	<5.0	<5.0	<5.0	<5.0	**410**	**17**	<5.0	<5.0	<5.0	<5.0	<5.0	**11**	**14**	<5.0	**2,090**
	10/9/2012	<100	<25	<5.0	<25	<5.0	**29**	<5.0	<5.0	<5.0	<5.0	**370**	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	**21**	**5.0**	**10**	**2,100**
	3/4/2013	<100	<25	<5.0	<25	<5.0	**56**	<5.0	<5.0	<5.0	<5.0	**260**	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	**20**	<5.0	**7.8**	**1,410**
	6/6/2013	<50	<12	<2.5	<12	<2.5	**62**	<2.5	<2.5	**7.4**	<2.5	**220**	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	**14**	**2.8**	**7.2**	**1,010**
PRB-04s (6-11') Depth to Groundwater* Approx. 6.0 - 7.0'	8/10/2011	<200	**110**	<10	<50	<10	<10	<10	<10	**590**	<10	<10	<10	<10	<10	<10	**100**	<10	**1,100**	<10	<10	<30
	10/7/2011	<500	**900**	<25	<120	<25	<25	<25	<25	**3,400**	<25	<25	<25	<25	<25	<25	**62**	<25	<25	<25	<25	<75
	1/11/2012	<500	**440**	<25	<120	<25	**110**	<25	<25	**3,600**	**36**	<25	<25	<25	<25	<25	**34**	<25	<25	<25	**67**	<75
	4/10/2012	<500	**360**	<25	**130**	<25	**200**	<25	<25	**2,400**	**37**	<25	<25	<25	<25	<25	<25	<25	**26**	<25	**190**	<75
	7/16/2012	<500	**660**	<25	**120**	<25	**490**	**29**	<25	**2,500**	**67**	<25	<25	<25	<25	<25	<25	<25	<25	<25	**610**	**108**
	10/4/2012	<200	<50	<10	**74**	<10	**180**	<10	<10	**1,400**	**36**	<10	<10	<10	<10	<10	<10	<10	<10	<10	**430**	<30
	3/4/2013	<100	<25	<5.0	**46**	<5.0	**42**	<5.0	<5.0	**560**	**7.0**	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	**190**	<15
	6/6/2013	**28**	**36**	<1.0	**58**	<1.0	**50**	<1.0	**1.0**	**200**	**2.2**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**73**	<3.0

Notes:

Health-Based Residential and Non-Residential Drinking Water (DW) Criteria, Groundwater/Surface Water Interface (GSI) Criteria and Groundwater Contact Criteria from MDEQ RRD Op Memo 1 Part 201 Generic Cleanup Criteria/Part 213 Risk Based Cleanup Levels, September 28, 2012. Groundwater Screening Levels (GWSLs) for Vapor Intrusion were calculated in accordance with the MDEQ Remediation and Redevelopment Division Program Redesign 2009 document titled Background Document: Draft Proposed Vapor Intrusion Indoor Air Criteria (IAC), Soil Gas Criteria (SGC), and Groundwater Screening Levels (GW_{VI}SLs) for Vapor Intrusion using both residential and non-residential exposure scenarios and the most recent chemical specific toxicity values accepted and/or published by the United States Environmental Protection Agency (USEPA) as of February 1, 2012.

ug/L = micrograms per liter

NC = No criteria

Bold font denotes concentrations detected above laboratory reporting limits

Denotes concentrations above one or more criteria

* An asterisk indicates that the depth to groundwater intersects or may periodically intersect an overlying clay unit. The depth to the bottom of the upper clay unit is approximately 3.5 feet below ground surface (ft bgs) at PRB-09s; 4.0 ft bgs at PRB-06s; 5.0 ft bgs at PRB-08s, PRB-08d, and PRB-10s; 6.5 ft bgs at PRB-01s, PRB-02s, PRB-04s, and PRB-04d; 7.0 ft bgs at PRB-05s and PRB-07s; and 8.0 ft bgs at PRB-03s.

1) Criterion is not protective for surface water used as a drinking water source as described in footnote {X} of MDEQ Op Memo 1 Part 201, Attachment 1.

2) Compound may exhibit characteristic ignitability as defined in 40 C.F.R. § 261.21

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Table 2
Summary of Detected Volatile Organic Compounds in Groundwater
PRB Performance Monitoring
Former Tecumseh Products Company Site
Tecumseh, Michigan

Analyte		Acetone(2)	2-Butanone	Benzene(2)	Chloroethane	Chloroform	1,1-Dichloro-ethane	1,2-Dichloro-ethane	1,1-Dichloro-ethene(2)	cis-1,2-Dichloro-ethene	trans-1,2-Dichloro-ethene	Ethyl-benzene(2)	Isopropyl-benzene	n-Propyl Benzene(2)	Tetrachloro-ethene	Toluene(2)	1,1,1-Tri-chloroethane	1,1,2-Tri-chloroethane	Trichloro-ethene	1,2,4-Tri-methyl-benzene	Vinyl Chloride	Total Xylenes(2)
Residential Health-Based DW Criteria		730	13,000	5.0	430	80	880	5.0	7.0	70	100	700	800	80	5.0	1,000	200	5.0	5.0	1,000	2.0	10,000
Non-Residential Health-Based DW Criteria		2,100	38,000	5.0	1,700	80	2,500	5.0	7.0	70	100	700	2,300	230	5.0	1,000	200	5.0	5.0	2,900	2.0	10,000
GSI Criteria		1,700	2,200	200(1)	1,100(1)	350	740	360(1)	130	620	1,500(1)	18	28	NC	60(1)	270	89	330(1)	200(1)	17	13(1)	41
Residential GWSLs for Vapor Intrusion		NC	4.5E+06	NC	NC	NC	130	NC	390	440	330	NC	NC	NC	11	NC	15,000	NC	9.9	NC	5.0	NC
Non-Residential GWSLs for Vapor Intrusion		NC	1.9E+07	NC	NC	NC	670	NC	1,600	1,800	1,400	NC	NC	NC	55	NC	63,000	NC	42	NC	50	NC
Groundwater Contact Criteria		3.1E+07	2.4E+08	11,000	4.4E+05	1.5E+05	2.4E+06	19,000	11,000	2.0E+05	2.2E+05	1.7E+05	56,000	15,000	12,000	5.3E+05	1.3E+06	21,000	22,000	56,000	1,000	1.9E+05
Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
PRB-04d (25-30') Depth to Groundwater* Approx. 6.0 - 7.0'	8/10/2011	<20	**10**	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**9.8**	<1.0	**12**	<3.0
	10/7/2011	<20	<5.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**3.4**	<1.0	**11**	<3.0
	1/11/2012	<20	<5.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	**2.5**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**3.2**	<1.0	**9.4**	<3.0
	4/10/2012	<20	<5.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	**1.0**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**2.1**	<1.0	**9.4**	<3.0
	7/16/2012	<20	<5.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**9.2**	<3.0
	10/4/2012	<20	<5.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**13**	<3.0
	3/4/2013	<20	<5.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**17**	<3.0
	6/6/2013	<20	<5.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**14**	<3.0
PRB-05s (6-11') Depth to Groundwater* Approx. 6.0 - 7.0'	8/11/2011	<200	<50	<10	<50	<10	<10	<10	<10	<10	<10	<10	<10	<10	**270**	<10	**57**	<10	**990**	<10	<10	<30
	10/6/2011	<200	<50	<10	<50	<10	<10	<10	<10	**21**	<10	<10	<10	<10	**270**	<10	**53**	<10	**1,000**	<10	<10	<30
	1/12/2012	<200	<50	<10	<50	<10	<10	<10	<10	<10	<10	<10	<10	<10	**230**	<10	**35**	<10	**780**	<10	<10	<30
	4/9/2012	<100	<25	<5.0	<25	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	**200**	<5.0	**28**	<5.0	**630**	<5.0	<5.0	<15
	7/12/2012	<100	<25	<5.0	<25	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	**280**	<5.0	**36**	<5.0	**810**	<5.0	<5.0	<15
	10/9/2012	<100	<25	<5.0	<25	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	**290**	<5.0	**37**	<5.0	**760**	<5.0	<5.0	<15
	3/5/2013	<100	**27**	<5.0	<25	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	**310**	<5.0	**35**	<5.0	**720**	<5.0	<5.0	<15
	6/7/2013	<100	<25	<5.0	<25	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	**260**	<5.0	**31**	<5.0	**620**	<5.0	<5.0	<15
PRB-06s (6-11') Depth to Groundwater* Approx. 6.0 - 6.5'	8/11/2011	<1,000	**3,600**	<50	<250	<50	**360**	<50	<50	**4,200**	<50	<50	<50	<50	<50	<50	<50	<50	**310**	<50	<50	<150
	10/6/2011	<1,000	**5,800**	<50	<250	<50	**260**	<50	<50	**6,000**	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	**71**	<150
	1/12/2012	<200	**940**	<10	**81**	<10	<10	<10	<10	**300**	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	**35**	<30
	4/10/2012	**24**	**130**	**1.0**	**71**	<1.0	<1.0	<1.0	<1.0	**35**	**2.4**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**1.7**	<1.0	**18**	<3.0
	7/12/2012	<100	**480**	<5.0	<25	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<15
	10/9/2012	<100	**170**	<5.0	<25	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	**450**	<5.0	<5.0	<5.0	<5.0	<5.0	<15
	3/5/2013	<100	<25	<5.0	<25	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	**340**	<5.0	<5.0	<5.0	<5.0	<5.0	<15
	6/7/2013	<100	**38**	<5.0	<25	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	**6.4**	<5.0	<5.0	<5.0	**440**	<5.0	<5.0	<5.0	<5.0	<5.0	<15
PRB-07s (7-12') Depth to Groundwater* Approx. 5.5 - 6.5'	8/10/2011	<200	**120**	<10	<50	<10	<10	<10	<10	**880**	<10	<10	<10	<10	<10	<10	**100**	<10	**1,200**	<10	<10	<30
	10/7/2011	<200	<50	<10	<50	<10	**16**	<10	**10**	**790**	**18**	<10	<10	<10	<10	<10	**130**	<10	**1,400**	<10	<10	<30
	1/11/2012	<200	<50	<10	<50	<10	<10	<10	<10	**510**	<10	<10	<10	<10	<10	<10	**92**	<10	**1,300**	<10	<10	<30
	4/10/2012	<200	<50	<10	<50	<10	<10	<10	<10	**260**	**28**	<10	<10	<10	<10	<10	**56**	<10	**1,100**	<10	<10	<30
	7/16/2012	<200	<50	<10	<50	<10	<10	<10	<10	**200**	**50**	<10	<10	<10	<10	<10	**45**	<10	**1,300**	<10	<10	<30
	10/4/2012	<200	<50	<10	<50	<10	<10	<10	<10	**150**	**41**	<10	<10	<10	<10	<10	**17**	<10	**750**	<10	<10	<30
	3/4/2013	<100	<25	<5.0	<25	<5.0	**7.9**	<5.0	<5.0	**100**	**11**	<5.0	<5.0	<5.0	<5.0	<5.0	**7.6**	<5.0	**480**	<5.0	<5.0	<15
	6/6/2013	<100	**50**	<5.0	<25	<5.0	**5.6**	<5.0	<5.0	**570**	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	**16**	<5.0	**370**	<5.0	**38**	<15

Notes:
Health-Based Residential and Non-Residential Drinking Water (DW) Criteria, Groundwater/Surface Water Interface (GSI) Criteria and Groundwater Contact Criteria from MDEQ RRD Op Memo 1 Part 201 Generic Cleanup Criteria/Part 213 Risk Based Cleanup Levels, September 28, 2012. Groundwater Screening Levels (GWSLs) for Vapor Intrusion were calculated in accordance with the MDEQ Remediation and Redevelopment Division Program Redesign 2009 document titled Background Document: Draft Proposed Vapor Intrusion Indoor Air Criteria (IAC), Soil Gas Criteria (SGC), and Groundwater Screening Levels ($GW_{vi}SLs$) for Vapor Intrusion using both residential and non-residential exposure scenarios and the most recent chemical specific toxicity values accepted and/or published by the United States Environmental Protection Agency (USEPA) as of February 1, 2012.
ug/L = micrograms per liter
NC = No criteria
Bold font denotes concentrations detected above laboratory reporting limits
Denotes concentrations above one or more criteria
* An asterisk indicates that the depth to groundwater intersects or may periodically intersect an overlying clay unit. The depth to the bottom of the upper clay unit is approximately 3.5 feet below ground surface (ft bgs) at PRB-09s; 4.0 ft bgs at PRB-06s; 5.0 ft bgs at PRB-08s, PRB-08d, and PRB-10s; 6.5 ft bgs at PRB-01s, PRB-02s, PRB-04s, and PRB-04d; 7.0 ft bgs at PRB-05s and PRB-07s; and 8.0 ft bgs at PRB-03s.
1) Criterion is not protective for surface water used as a drinking water source as described in footnote {X} of MDEQ Op Memo 1 Part 201, Attachment 1.
2) Compound may exhibit characteristic ignitability as defined in 40 C.F.R. § 261.21

US EPA ARCHIVE DOCUMENT

Table 2
Summary of Detected Volatile Organic Compounds in Groundwater
PRB Performance Monitoring
Former Tecumseh Products Company Site
Tecumseh, Michigan

Analyte		Acetone(2)	2-Butanone	Benzene(2)	Chloroethane	Chloroform	1,1-Dichloro-ethane	1,2-Dichloro-ethane	1,1-Dichloro-ethene(2)	cis-1,2-Dichloro-ethene	trans-1,2-Dichloro-ethene	Ethyl-benzene(2)	Isopropyl-benzene	n-Propyl Benzene(2)	Tetrachloro-ethene	Toluene(2)	1,1,1-Tri-chloroethane	1,1,2-Tri-chloroethane	Trichloro-ethene	1,2,4-Tri-methyl-benzene	Vinyl Chloride	Total Xylenes(2)
Residential Health-Based DW Criteria		730	13,000	5.0	430	80	880	5.0	7.0	70	100	700	800	80	5.0	1,000	200	5.0	5.0	1,000	2.0	10,000
Non-Residential Health-Based DW Criteria		2,100	38,000	5.0	1,700	80	2,500	5.0	7.0	70	100	700	2,300	230	5.0	1,000	200	5.0	5.0	2,900	2.0	10,000
GSI Criteria		1,700	2,200	200(1)	1,100(1)	350	740	360(1)	130	620	1,500(1)	18	28	NC	60(1)	270	89	330(1)	200(1)	17	13(1)	41
Residential GWSLs for Vapor Intrusion		NC	4.5E+06	NC	NC	NC	130	NC	390	440	330	NC	NC	NC	11	NC	15,000	NC	9.9	NC	5.0	NC
Non-Residential GWSLs for Vapor Intrusion		NC	1.9E+07	NC	NC	NC	670	NC	1,600	1,800	1,400	NC	NC	NC	55	NC	63,000	NC	42	NC	50	NC
Groundwater Contact Criteria		3.1E+07	2.4E+08	11,000	4.4E+05	1.5E+05	2.4E+06	19,000	11,000	2.0E+05	2.2E+05	1.7E+05	56,000	15,000	12,000	5.3E+05	1.3E+06	21,000	22,000	56,000	1,000	1.9E+05
Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
PRB-08s (6-11') Depth to Groundwater* Approx. 6.0 - 7.0'	8/10/2011	**83**	**39**	<1.0	<5.0	<1.0	**11**	<1.0	**1.0**	**84**	**9.5**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**5.3**	<1.0	**31**	<3.0
	10/7/2011	**240**	**300**	<2.5	<12	<2.5	**7.3**	<2.5	<2.5	**77**	**9.2**	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	**24**	<7.5
	1/11/2012	<20	<5.0	<1.0	<5.0	<1.0	**2.0**	<1.0	<1.0	**35**	**4.4**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**10**	<3.0
	4/10/2012	<20	<5.0	<1.0	<5.0	<1.0	**1.3**	<1.0	<1.0	**18**	**2.4**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**4.5**	<3.0
	7/13/2012	<20	<5.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	**11**	**1.4**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**2.8**	<3.0
	10/4/2012	<20	<5.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	**11**	**1.6**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**2.2**	<3.0
	3/5/2013	<20	<5.0	<1.0	<5.0	<1.0	**3.6**	<1.0	<1.0	**27**	**3.5**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**1.9**	<3.0
	6/6/2013	<20	<5.0	<1.0	<5.0	<1.0	**6.9**	<1.0	<1.0	**50**	**6.0**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**2.0**	<3.0
PRB-08d (18.5-23.5') Depth to Groundwater* Approx. 6.0 - 7.0'	8/10/2011	<20	<5.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**14**	<3.0
	10/7/2011	<20	<5.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**2.6**	<3.0
	1/11/2012	<20	<5.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**3.2**	<3.0
	4/10/2012	<20	<5.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**5.1**	<3.0
	7/13/2012	<20	<5.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**11**	<3.0
	10/4/2012	<20	<5.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**23**	<3.0
	3/5/2013	<20	<5.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**37**	<3.0
	6/6/2013	<20	<5.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**37**	<3.0
PRB-09s (5-10') Depth to Groundwater* Approx. 6.5 - 7.5'	8/11/2011	**4,200**	**8,200**	<100	<500	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<300
	10/6/2011	**13,000**	**17,000**	<100	<500	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	**110**	<100	<100	<100	<100	<100	<300
	1/12/2012	<200	**68**	<10	<50	<10	<10	<10	<10	**14**	<10	<10	<10	<10	<10	**1,400**	<10	<10	<10	<10	<10	<30
	2/9/2012	<200	**200**	<10	<50	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	**1,600**	<10	<10	<10	<10	<10	<30
	4/9/2012	<200	<50	<10	<50	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	**2,000**	<10	<10	<10	<10	<10	<30
	7/13/2012	<400	<100	<20	<100	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	**2,000**	<20	<20	<20	<20	<20	<60
	10/9/2012	<100	<25	<5.0	<25	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	**610**	<5.0	<5.0	<5.0	<5.0	<5.0	<15
	3/5/2013	<20	<5.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**1.9**	<1.0	<1.0	<1.0	**54**	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0
	6/7/2013	<20	<5.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**3.2**	<1.0	<1.0	<1.0	**160**	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0
PRB-10s (6-11') Depth to Groundwater* Approx. 7.0 - 8.0'	8/11/2011	<20	<5.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	**11**	**1.7**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0
	10/6/2011	<20	<5.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	**16**	**2.6**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0
	1/12/2012	<20	<5.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	**42**	**4.3**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0
	4/9/2012	<20	<5.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	**26**	**3.4**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0
	7/13/2012	<20	<5.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	**17**	**2.8**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0
	10/9/2012	<20	<5.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	**5.9**	**1.0**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0
	3/5/2013	<20	<5.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	**15**	**2.6**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0
	6/6/2013	<20	<5.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	**31**	**4.5**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0

Notes:

Health-Based Residential and Non-Residential Drinking Water (DW) Criteria, Groundwater/Surface Water Interface (GSI) Criteria and Groundwater Contact Criteria from MDEQ RRD Op Memo 1 Part 201 Generic Cleanup Criteria/Part 213 Risk Based Cleanup Levels, September 28, 2012. Groundwater Screening Levels (GWSLs) for Vapor Intrusion were calculated in accordance with the MDEQ Remediation and Redevelopment Division Program Redesign 2009 document titled Background Document: Draft Proposed Vapor Intrusion Indoor Air Criteria (IAC), Soil Gas Criteria (SGC), and Groundwater Screening Levels ($GW_{VI}SLs$) for Vapor Intrusion using both residential and non-residential exposure scenarios and the most recent chemical specific toxicity values accepted and/or published by the United States Environmental Protection Agency (USEPA) as of February 1, 2012.

ug/L = micrograms per liter

NC = No criteria

Bold font denotes concentrations detected above laboratory reporting limits

Denotes concentrations above one or more criteria

* An asterisk indicates that the depth to groundwater intersects or may periodically intersect an overlying clay unit. The depth to the bottom of the upper clay unit is approximately 3.5 feet below ground surface (ft bgs) at PRB-09s; 4.0 ft bgs at PRB-06s; 5.0 ft bgs at PRB-08s, PRB-08d, and PRB-10s; 6.5 ft bgs at PRB-01s, PRB-02s, PRB-04s, and PRB-04d; 7.0 ft bgs at PRB-05s and PRB-07s; and 8.0 ft bgs at PRB-03s.

1) Criterion is not protective for surface water used as a drinking water source as described in footnote {X} of MDEQ Op Memo 1 Part 201, Attachment 1.

2) Compound may exhibit characteristic ignitability as defined in 40 C.F.R. § 261.21

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PRB Performance Monitoring
Former Tecumseh Products Company Site
Tecumseh, Michigan

Analyte		Acetone(2)	2-Butanone	Benzene(2)	Chloroethane	Chloroform	1,1-Dichloro-ethane	1,2-Dichloro-ethane	1,1-Dichloro-ethene(2)	cis-1,2-Dichloro-ethene	trans-1,2-Dichloro-ethene	Ethyl-benzene(2)	Isopropyl-benzene	n-Propyl Benzene(2)	Tetrachloro-ethene	Toluene(2)	1,1,1-Tri-chloroethane	1,1,2-Tri-chloroethane	Trichloro-ethene	1,2,4-Tri-methyl-benzene	Vinyl Chloride	Total Xylenes(2)
Residential Health-Based DW Criteria		730	13,000	5.0	430	80	880	5.0	7.0	70	100	700	800	80	5.0	1,000	200	5.0	5.0	1,000	2.0	10,000
Non-Residential Health-Based DW Criteria		2,100	38,000	5.0	1,700	80	2,500	5.0	7.0	70	100	700	2,300	230	5.0	1,000	200	5.0	5.0	2,900	2.0	10,000
GSI Criteria		1,700	2,200	200(1)	1,100(1)	350	740	360(1)	130	620	1,500(1)	18	28	NC	60(1)	270	89	330(1)	200(1)	17	13(1)	41
Residential GWSLs for Vapor Intrusion		NC	4.5E+06	NC	NC	NC	130	NC	390	440	330	NC	NC	NC	11	NC	15,000	NC	9.9	NC	5.0	NC
Non-Residential GWSLs for Vapor Intrusion		NC	1.9E+07	NC	NC	NC	670	NC	1,600	1,800	1,400	NC	NC	NC	55	NC	63,000	NC	42	NC	50	NC
Groundwater Contact Criteria		3.1E+07	2.4E+08	11,000	4.4E+05	1.5E+05	2.4E+06	19,000	11,000	2.0E+05	2.2E+05	1.7E+05	56,000	15,000	12,000	5.3E+05	1.3E+06	21,000	22,000	56,000	1,000	1.9E+05
Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
PRB-11s (15-20') Depth to Groundwater Approx. 15.5 - 16.5'	8/10/2011	<20	<5.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**3.4**	<1.0	<1.0	<3.0
	10/6/2011	<20	<5.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**1.5**	<1.0	<1.0	<3.0
	1/11/2012	<20	<5.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**1.7**	<1.0	<1.0	<3.0
	4/9/2012	<20	<5.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**1.4**	<1.0	<1.0	<3.0
	7/16/2012	<20	<5.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**1.4**	<1.0	<1.0	<3.0
	10/11/2012	<20	<5.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0
	3/4/2013	<20	<5.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**1.3**	<1.0	<1.0	<3.0
	6/7/2013	<20	<5.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**1.2**	<1.0	<1.0	<3.0
PRB-12s (15-20') Depth to Groundwater Approx. 15.5 - 16.5'	8/11/2011	<200	<50	<10	<50	<10	<10	<10	<10	<10	<10	<10	<10	<10	**17**	<10	**33**	<10	**1,100**	<10	<10	<30
	10/7/2011	<200	<50	<10	<50	<10	<10	<10	<10	<10	<10	<10	<10	<10	**17**	<10	**35**	<10	**1,300**	<10	<10	<30
	1/12/2012	<200	<50	<10	<50	<10	<10	<10	<10	<10	<10	<10	<10	<10	**14**	<10	**26**	<10	**950**	<10	<10	<30
	4/9/2012	<200	<50	<10	<50	<10	<10	<10	<10	<10	<10	<10	<10	<10	**12**	<10	**25**	<10	**850**	<10	<10	<30
	7/12/2012	<200	<50	<10	<50	<10	<10	<10	<10	<10	<10	<10	<10	<10	**14**	<10	**27**	**10**	**1,200**	<10	<10	<30
	10/11/2012	<200	**84**	<10	<50	<10	<10	<10	<10	<10	<10	<10	<10	<10	**16**	<10	**30**	<10	**1,600**	<10	<10	<30
	3/5/2013	<200	<50	<10	<50	<10	<10	<10	<10	<10	<10	<10	<10	<10	**12**	<10	**21**	<10	**840**	<10	<10	<30
	6/5/2013	<200	<50	<10	<50	<10	<10	<10	<10	<10	<10	<10	<10	<10	**12**	<10	**19**	<10	**950**	<10	<10	<30
PRB-13s (19-24') Depth to Groundwater Approx. 18.0 - 19.0'	8/11/2011	<200	<50	<10	<50	<10	<10	<10	<10	**12**	<10	<10	<10	<10	<10	<10	**380**	<10	**550**	<10	**14**	<30
	10/6/2011	<500	<120	<25	<120	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	**1,100**	<25	**2,700**	<25	<25	<75
	1/12/2012	<500	<120	<25	<120	<25	<25	<25	<25	**25**	<25	<25	<25	<25	<25	<25	**1,200**	<25	**2,800**	<25	<25	<75
	4/3/2012	<500	<120	<25	<120	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	**1,100**	<25	**2,500**	<25	<25	<75
	7/12/2012	<400	<100	<20	<100	<20	<20	<20	**23**	<20	<20	<20	<20	<20	<20	<20	**1,200**	<20	**2,900**	<20	**20**	<60
	10/11/2012	<400	**110**	<20	<100	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	**1,200**	<20	**3,100**	<20	<20	<60
	3/5/2013	<400	**110**	<20	<100	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	**1,300**	<20	**3,200**	<20	<20	<60
	6/5/2013	<400	<100	<20	<100	<20	<20	<20	<20	**20**	<20	<20	<20	<20	<20	<20	**1,200**	<20	**2,700**	<20	<20	<60
PRB-14s (19.5-24.5') Depth to Groundwater 17.0 - 18.0'	8/11/2011	<400	<100	<20	<100	<20	<20	<20	<20	**65**	<20	<20	<20	<20	<20	<20	**910**	<20	**3,000**	<20	**62**	<60
	10/6/2011	<400	<100	<20	<100	<20	<20	<20	<20	**48**	<20	<20	<20	<20	<20	<20	**1,100**	<20	**3,300**	<20	**65**	<60
	1/12/2012	<400	<100	<20	<100	<20	<20	<20	<20	**53**	<20	<20	<20	<20	<20	<20	**1,000**	<20	**3,200**	<20	**57**	<60
	4/3/2012	<400	<100	<20	<100	<20	<20	<20	<20	**29**	<20	<20	<20	<20	<20	<20	**990**	<20	**2,700**	<20	**32**	<60
	7/12/2012	<400	<100	<20	<100	<20	<20	<20	<20	**33**	<20	<20	<20	<20	<20	<20	**1,200**	<20	**3,100**	<20	**43**	<60
	10/11/2012	<400	**120**	<20	<100	<20	<20	<20	<20	**35**	<20	<20	<20	<20	<20	<20	**1,300**	<20	**3,500**	<20	**45**	<60
	3/5/2013	<400	**120**	<20	<100	<20	<20	<20	<20	**29**	<20	<20	<20	<20	<20	<20	**1,100**	<20	**3,200**	<20	**41**	<60
	6/5/2013	<400	<100	<20	<100	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	**1,200**	<20	**2,700**	<20	<20	<60

Notes:

Health-Based Residential and Non-Residential Drinking Water (DW) Criteria, Groundwater/Surface Water Interface (GSI) Criteria and Groundwater Contact Criteria from MDEQ RRD Op Memo 1 Part 201 Generic Cleanup Criteria/Part 213 Risk Based Cleanup Levels, September 28, 2012. Groundwater Screening Levels (GWSLs) for Vapor Intrusion were calculated in accordance with the MDEQ Remediation and Redevelopment Division Program Redesign 2009 document titled Background Document: Draft Proposed Vapor Intrusion Indoor Air Criteria (IAC), Soil Gas Criteria (SGC), and Groundwater Screening Levels ($GW_{VI}SLs$) for Vapor Intrusion using both residential and non-residential exposure scenarios and the most recent chemical specific toxicity values accepted and/or published by the United States Environmental Protection Agency (USEPA) as of February 1, 2012.

ug/L = micrograms per liter

NC = No criteria

Bold font denotes concentrations detected above laboratory reporting limits

Denotes concentrations above one or more criteria

* An asterisk indicates that the depth to groundwater intersects or may periodically intersect an overlying clay unit. The depth to the bottom of the upper clay unit is approximately 3.5 feet below ground surface (ft bgs) at PRB-09s; 4.0 ft bgs at PRB-06s; 5.0 ft bgs at PRB-08s, PRB-08d, and PRB-10s; 6.5 ft bgs at PRB-01s, PRB-02s, PRB-04s, and PRB-04d; 7.0 ft bgs at PRB-05s and PRB-07s; and 8.0 ft bgs at PRB-03s.

1) Criterion is not protective for surface water used as a drinking water source as described in footnote {X} of MDEQ Op Memo 1 Part 201, Attachment 1.

2) Compound may exhibit characteristic ignitability as defined in 40 C.F.R. § 261.21

US EPA ARCHIVE DOCUMENT

Table 2
Summary of Detected Volatile Organic Compounds in Groundwater
PRB Performance Monitoring
Former Tecumseh Products Company Site
Tecumseh, Michigan

Analyte		Acetone(2)	2-Butanone	Benzene(2)	Chloroethane	Chloroform	1,1-Dichloro-ethane	1,2-Dichloro-ethane	1,1-Dichloro-ethene(2)	cis-1,2-Dichloro-ethene	trans-1,2-Dichloro-ethene	Ethyl-benzene(2)	Isopropyl-benzene	n-Propyl Benzene(2)	Tetrachloro-ethene	Toluene(2)	1,1,1-Tri-chloroethane	1,1,2-Tri-chloroethane	Trichloro-ethene	1,2,4-Tri-methyl-benzene	Vinyl Chloride	Total Xylenes(2)
Residential Health-Based DW Criteria		730	13,000	5.0	430	80	880	5.0	7.0	70	100	700	800	80	5.0	1,000	200	5.0	5.0	1,000	2.0	10,000
Non-Residential Health-Based DW Criteria		2,100	38,000	5.0	1,700	80	2,500	5.0	7.0	70	100	700	2,300	230	5.0	1,000	200	5.0	5.0	2,900	2.0	10,000
GSI Criteria		1,700	2,200	200(1)	1,100(1)	350	740	360(1)	130	620	1,500(1)	18	28	NC	60(1)	270	89	330(1)	200(1)	17	13(1)	41
Residential GWSLs for Vapor Intrusion		NC	4.5E+06	NC	NC	NC	130	NC	390	440	330	NC	NC	NC	11	NC	15,000	NC	9.9	NC	5.0	NC
Non-Residential GWSLs for Vapor Intrusion		NC	1.9E+07	NC	NC	NC	670	NC	1,600	1,800	1,400	NC	NC	NC	55	NC	63,000	NC	42	NC	50	NC
Groundwater Contact Criteria		3.1E+07	2.4E+08	11,000	4.4E+05	1.5E+05	2.4E+06	19,000	11,000	2.0E+05	2.2E+05	1.7E+05	56,000	15,000	12,000	5.3E+05	1.3E+06	21,000	22,000	56,000	1,000	1.9E+05
Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
PRB-15s (15-20') Depth to Groundwater 16.0 - 17.0'	8/11/2011	<400	<100	<20	<100	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	**1,200**	<20	**2,500**	<20	<20	<60
	10/6/2011	<400	<100	<20	<100	<20	<20	<20	<20	**20**	<20	<20	<20	<20	<20	<20	**1,200**	<20	**2,700**	<20	<20	<60
	1/12/2012	<400	<100	<20	<100	<20	<20	<20	<20	**21**	<20	<20	<20	<20	<20	<20	**850**	<20	**1,900**	<20	<20	<60
	4/9/2012	<400	<100	<20	<100	<20	<20	<20	<20	**1,700**	<20	<20	<20	<20	<20	<20	**730**	<20	**1,800**	<20	<20	<60
	7/12/2012	<400	<100	<20	<100	<20	<20	<20	<20	**460**	<20	<20	<20	<20	<20	<20	**580**	<20	**2,300**	<20	<20	<60
	10/11/2012	<400	**120**	<20	<100	<20	<20	<20	<20	**880**	<20	<20	<20	<20	<20	<20	**750**	<20	**2,700**	<20	<20	<60
	3/5/2013	<400	**110**	<20	<100	<20	<20	<20	<20	**120**	<20	<20	<20	<20	<20	<20	**570**	<20	**1,800**	<20	<20	<60
	6/5/2013	<400	<100	<20	<100	<20	<20	<20	<20	**130**	<20	<20	<20	<20	<20	<20	**260**	<20	**1,600**	<20	<20	<60
PRB-15d (29-34') Depth to Groundwater 16.0 - 17.0'	8/11/2011	<20	<5.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	**1.1**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**1.9**	<1.0	<1.0	<3.0
	10/6/2011	<20	<5.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	**5.8**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**2.3**	<1.0	**13**	<1.0	**1.9**	<3.0
	1/12/2012	<20	<5.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	**3.9**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**5.4**	<1.0	**28**	<1.0	**1.2**	<3.0
	4/9/2012	<20	<5.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	**6.9**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**5.0**	<1.0	**24**	<1.0	**2.0**	<3.0
	7/12/2012	<20	<5.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	**2.7**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**3.7**	<1.0	**19**	<1.0	<1.0	<3.0
	10/11/2012	<20	<5.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	**3.5**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**5.2**	<1.0	**26**	<1.0	<1.0	<3.0
	3/5/2013	<20	<5.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	**3.0**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**5.0**	<1.0	**32**	<1.0	<1.0	<3.0
	6/5/2013	<20	<5.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	**2.6**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**3.7**	<1.0	**19**	<1.0	<1.0	<3.0
PRB-16s (5-10') Depth to Groundwater 6.5 - 7.5'	8/6/2012	<20	<5.0	<1.0	<5.0	<1.0	**5.3**	<1.0	**1.4**	**51**	**4.8**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**5.5**	**3.5**	<1.0	<1.0	<3.0
	10/9/2012	<20	<5.0	<1.0	<5.0	<1.0	**3.8**	<1.0	**1.1**	**31**	**2.8**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**5.5**	**4.6**	<1.0	<1.0	<3.0
	3/27/2013	<20	<5.0	<1.0	<5.0	<1.0	**3.6**	<1.0	**1.1**	**29**	**3.2**	<1.0	<1.0	<1.0	<1.0	<1.0	**1.0**	**2.8**	**12**	<1.0	<1.0	<3.0
	6/6/2013	<20	<5.0	<1.0	<5.0	<1.0	**4.4**	<1.0	**1.3**	**32**	**2.9**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**3.1**	**11**	<1.0	<1.0	<3.0

Notes:

Health-Based Residential and Non-Residential Drinking Water (DW) Criteria, Groundwater/Surface Water Interface (GSI) Criteria and Groundwater Contact Criteria from MDEQ RRD Op Memo 1 Part 201 Generic Cleanup Criteria/Part 213 Risk Based Cleanup Levels, September 28, 2012. Groundwater Screening Levels (GWSLs) for Vapor Intrusion were calculated in accordance with the MDEQ Remediation and Redevelopment Division Program Redesign 2009 document titled Background Document: Draft Proposed Vapor Intrusion Indoor Air Criteria (IAC), Soil Gas Criteria (SGC), and Groundwater Screening Levels ($GW_{VI}SLs$) for Vapor Intrusion using both residential and non-residential exposure scenarios and the most recent chemical specific toxicity values accepted and/or published by the United States Environmental Protection Agency (USEPA) as of February 1, 2012.

ug/L = micrograms per liter

NC = No criteria

Bold font denotes concentrations detected above laboratory reporting limits

Denotes concentrations above one or more criteria

* An asterisk indicates that the depth to groundwater intersects or may periodically intersect an overlying clay unit. The depth to the bottom of the upper clay unit is approximately 3.5 feet below ground surface (ft bgs) at PRB-09s; 4.0 ft bgs at PRB-06s; 5.0 ft bgs at PRB-08s, PRB-08d, and PRB-10s; 6.5 ft bgs at PRB-01s, PRB-02s, PRB-04s, and PRB-04d; 7.0 ft bgs at PRB-05s and PRB-07s; and 8.0 ft bgs at PRB-03s.

1) Criterion is not protective for surface water used as a drinking water source as described in footnote {X} of MDEQ Op Memo 1 Part 201, Attachment 1.

2) Compound may exhibit characteristic ignitability as defined in 40 C.F.R. § 261.21

US EPA ARCHIVE DOCUMENT

Table 3
Field Data
PRB Performance Monitoring
Former Tecumseh Products Company Site
Tecumseh, Michigan

Analyte		pH	Conductivity	Redox Potential	Dissolved Oxygen	Turbidity	Temperature
Units		S.U.	umhos/cm	mV	mg/L	NTU	°C
PRB-01s	8/10/2011	7.56	1,010	-74	0.33	20.8	18.23
	10/7/2011	7.54	858	-9	0.23	1.1	18.61
	1/11/2012	7.20	1,180	24	0.43	0.0	10.42
	4/10/2012	7.71	626	-7	0.32	1.7	9.70
	7/16/2012	6.99	810	-94	0.60	10.5	17.75
	10/10/2012	NM	NM	-35	0.31	10.8	17.93
	3/4/2013	7.38	813	-51	0.93	0.2	7.91
	6/7/2013	7.48	925	-69	0.35	0.6	12.75
PRB-02s	8/10/2011	7.70	1,051	-55	0.31	22.9	18.05
	10/7/2011	7.62	1,117	-58.4	0.20	3.6	18.72
	1/11/2012	7.24	708	-7	0.41	2.0	10.65
	4/10/2012	7.62	728	-47	0.42	1.2	9.75
	7/13/2012	7.39	747	-91	0.37	15.7	18.34
	10/10/2012	NM	NM	-56	0.28	11.7	17.91
	3/5/2013	6.98	625	107	1.12	0.6	6.20
	6/7/2013	7.63	679	20	0.27	0.5	12.42
PRB-03s	8/10/2011	7.46	392	-199	0.40	22.1	17.41
	10/6/2011	7.07	497	-164.1	0.38	2.1	16.95
	1/11/2012	7.15	641	-146	0.49	0.5	9.56
	4/10/2012	7.61	465	-107	0.37	4.4	9.63
	7/16/2012	7.27	719	-178	0.43	32.1	19.33
	10/9/2012	NM	529	-134	0.36	11.7	17.69
	3/4/2013	7.10	927	-85	1.82	3.9	7.07
	6/6/2013	7.30	575	-199	0.76	2.4	12.54
PRB-04s	8/10/2011	7.43	737	-152	0.36	23.9	17.60
	10/7/2011	7.70	964	-137	0.21	4.9	16.78
	1/11/2012	7.29	825	-172	0.31	8.0	10.27
	4/10/2012	7.53	894	-161	0.25	1.9	9.86
	7/16/2012	7.04	988	-172	0.43	19.8	18.09
	10/4/2012	NM	592	-173	0.26	5.0	17.88
	3/4/2013	6.98	659	-86	0.69	1.7	8.58
	6/6/2013	7.27	739	-130	0.35	1.5	11.39
PRB-04d	8/10/2011	7.27	1,160	-192	0.25	22.0	13.20
	10/7/2011	7.49	1,127	-110.4	0.23	3.5	13.94
	1/1/2012	7.05	1,177	-169	0.34	0.0	12.00
	4/10/2012	7.53	959	-91	0.39	3.3	11.25
	7/16/2012	7.25	1,113	-138	0.38	27.3	15.21
	10/4/2012	NM	1,009	-176	0.27	1.8	14.58
	3/4/2013	7.28	947	-80	1.46	1.8	10.65
	6/6/2013	7.67	897	-210	0.32	8.1	11.79

Notes:
S.U. = standard pH units
umhos/cm = micromhos per centimeter
mV = millivolts
mg/L = milligrams per liter
NTU = nephelometric turbidity units
°C = degrees Celsius
NM = not measured

US EPA ARCHIVE DOCUMENT

Table 3
Field Data
PRB Performance Monitoring
Former Tecumseh Products Company Site
Tecumseh, Michigan

Analyte		pH	Conductivity	Redox Potential	Dissolved Oxygen	Turbidity	Temperature
Units		S.U.	umhos/cm	mV	mg/L	NTU	°C
PRB-05s	8/11/2011	7.52	556	37	5.56	26.6	17.05
	10/6/2011	7.47	500	5.7	5.08	2.5	17.45
	1/12/2012	7.20	607	48	4.74	1.2	9.09
	4/9/2012	7.60	490	64	5.31	2.5	10.38
	7/12/2012	7.38	618	31	4.77	14.2	17.05
	10/9/2012	NM	NM	54	6.09	11.0	16.74
	3/5/2013	7.53	423	59	8.34	3.4	6.50
	6/7/2013	7.35	426	120	4.25	0.5	11.36
PRB-06s	8/11/2011	6.49	13,900	-177	0.14	62.8	20.08
	10/6/2011	6.28	8,656	-114.8	0.09	77.7	19.11
	1/12/2012	6.77	2,480	-153	1.60	29.8	9.04
	4/10/2012	7.42	1,146	-123	1.46	54.9	7.98
	7/12/2012	7.19	1,780	-192	1.36	207	20.31
	10/9/2012	NM	NM	-75	6.85	88.0	21.28
	3/5/2013	7.12	243	-59	1.29	25.5	5.34
	6/7/2013	7.51	795	-147	0.76	42.0	11.01
PRB-07s	8/10/2011	7.59	667	-188	0.29	23.0	17.81
	10/7/2011	7.64	577	-97.1	0.25	1.7	17.12
	1/11/2012	7.14	591	-88	0.35	1.1	9.88
	4/10/2012	7.65	443	-42	0.58	2.1	9.09
	7/16/2012	7.10	675	-118	0.44	32.5	16.99
	10/4/2012	NM	560	-109	0.34	3.5	17.66
	3/4/2013	7.28	538	-71	1.78	1.7	8.00
	6/6/2013	7.66	703	-212	0.33	0.7	12.25
PRB-08s	8/10/2011	7.44	1,119	-122	0.28	22.7	18.39
	10/6/2011	7.35	1,148	-143.5	0.37	2.3	17.02
	1/11/2012	7.06	1,233	-129	0.41	1.0	9.97
	4/10/2012	7.29	965	-105	0.31	1.1	10.28
	7/13/2012	6.91	1,157	-105	0.37	14.7	17.80
	10/4/2012	NM	796	-111	0.30	5.9	18.72
	3/5/2013	7.01	832	-49	1.92	9.8	7.08
	6/6/2013	7.51	856	-164	0.30	4.3	13.12
PRB-08d	8/10/2011	7.59	1,044	-162	0.20	21.0	14.30
	10/6/2011	7.40	996	-93	0.27	9.6	14.05
	1/11/2012	7.05	972	-90	0.41	0.0	11.91
	4/10/2012	7.40	836	-63	0.23	1.5	11.92
	7/13/2012	7.23	1,163	-105	0.33	14.2	16.05
	10/4/2012	NM	874	-126	0.25	4.4	15.18
	3/5/2013	7.29	812	-30	0.94	3.3	10.34
	6/6/2013	7.55	819	-119	0.29	8.6	13.42

Notes:
S.U. = standard pH units
umhos/cm = micromhos per centimeter
mV = millivolts
mg/L = milligrams per liter
NTU = nephelometric turbidity units
°C = degrees Celsius
NM = not measured

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Table 3
Field Data
PRB Performance Monitoring
Former Tecumseh Products Company Site
Tecumseh, Michigan

Analyte		pH	Conductivity	Redox Potential	Dissolved Oxygen	Turbidity	Temperature
Units		S.U.	umhos/cm	mV	mg/L	NTU	°C
PRB-09s	8/11/2011	6.70	8,440	-202	0.15	41.8	19.38
	10/6/2011	7.04	2,984	-130.8	2.45	91.0	20.65
	1/12/2012	7.02	2,370	-140	0.88	25.0	9.80
	4/9/2012	7.50	1,840	-143	0.86	37.8	12.68
	7/13/2012	7.27	3,470	-198	0.36	57.7	18.97
	10/9/2012	NM	1,910	-109	5.69	74.7	21.55
	3/5/2013	7.35	468	-42	1.69	35.7	6.23
	6/7/2013	7.51	1,156	-106	4.03	52.1	13.29
PRB-10s	8/11/2011	7.37	1,054	-66	2.95	21.1	18.54
	10/6/2011	6.95	992	27.5	2.90	1.7	18.81
	1/12/2012	6.97	1,158	37	1.57	24.0	10.15
	4/9/2012	7.33	827	96	3.20	3.3	11.58
	7/13/2012	6.79	1,392	68	2.28	12.2	17.92
	10/9/2012	NM	921	40	1.42	9.7	18.79
	3/5/2013	7.25	672	93	5.41	0.5	7.37
	6/6/2013	7.57	591	62	6.56	1.2	13.73
PRB-11s	8/10/2011	7.39	530	133	6.63	19.1	14.12
	10/6/2011	6.97	454	-6.3	8.12	3.1	13.80
	1/11/2012	7.24	454	188	5.30	1.0	10.80
	4/9/2012	7.67	394	46	6.95	11.8	12.27
	7/16/2012	7.52	503	0	6.50	21.8	15.50
	10/11/2012	7.63	NM	56	7.48	12.2	13.71
	3/4/2013	7.28	389	180	6.31	0.3	10.55
	6/7/2013	7.78	338	112	6.38	2.2	11.69
PRB-12s	8/11/2011	7.65	890	-48	4.75	21.8	13.28
	10/6/2011	6.94	988	59.2	4.59	3.1	13.72
	1/12/2012	7.00	1,001	143	3.72	2.1	11.26
	4/9/2012	7.56	674	90	6.07	4.1	11.67
	7/12/2012	7.10	1,143	191	2.96	7.9	13.13
	10/11/2012	7.29	NM	202	3.64	12.0	13.54
	3/5/2013	8.19	196	70	6.81	2.6	7.09
	6/5/2013	7.73	523	218	8.65	0.6	12.22
PRB-13s	8/11/2011	7.66	686	-77	1.44	24.0	14.70
	10/6/2011	6.81	721	46.1	2.36	1.1	14.77
	1/12/2012	7.18	626	115	1.32	0.0	12.96
	4/3/2012	7.23	570	62	1.00	1.0	14.65
	7/12/2012	7.31	684	25	1.92	13.9	15.53
	10/11/2012	7.39	NM	169	2.72	13.3	14.56
	3/5/2013	7.47	615	43	2.59	7.0	11.96
	6/5/2013	7.82	593	146	1.43	4.5	15.14

Notes:
S.U. = standard pH units
umhos/cm = micromhos per centimeter
mV = millivolts
mg/L = milligrams per liter
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Table 3
Field Data
PRB Performance Monitoring
Former Tecumseh Products Company Site
Tecumseh, Michigan

Analyte		pH	Conductivity	Redox Potential	Dissolved Oxygen	Turbidity	Temperature
Units		S.U.	umhos/cm	mV	mg/L	NTU	°C
PRB-14s	8/11/2011	7.56	952	-111	0.33	32.0	14.93
	10/6/2011	7.38	698	6.2	0.32	3.3	15.58
	1/12/2012	6.75	704	8	0.39	9.9	13.05
	4/3/2012	7.47	651	25	0.55	6.3	14.10
	7/12/2012	7.33	835	4	0.42	16.3	16.12
	10/11/2012	7.44	NM	86	0.91	14.3	15.29
	3/5/2013	7.45	628	36	2.39	3.0	10.40
	6/5/2013	7.74	681	153	0.66	0.8	14.64
PRB-15s	8/11/2011	7.43	924	-103	0.91	28.0	14.63
	10/6/2011	7.05	914	25	1.82	2.5	16.01
	1/12/2012	7.53	467	95	3.75	32.0	12.67
	4/9/2012	7.35	729	119	1.55	7.8	11.74
	7/12/2012	7.17	1,154	48	1.63	14.6	15.52
	10/11/2012	7.40	NM	-68	0.74	11.3	16.17
	3/5/2013	7.39	538	5	1.07	2.0	10.20
	6/5/2013	7.52	1,058	169	3.79	2.9	13.92
PRB-15d	8/11/2011	7.52	1,009	-172	0.41	26.9	14.85
	10/6/2011	7.20	876	-82.5	0.28	4.2	14.86
	1/12/2012	7.10	957	-162	0.42	0.5	13.09
	4/9/2012	7.39	877	41	0.56	5.1	12.76
	7/12/2012	7.35	1,195	-88	0.32	14.3	16.03
	10/11/2012	7.46	NM	-110	0.38	12.8	14.76
	3/5/2013	7.43	850	-74	1.28	5.9	10.21
	6/5/2013	7.80	919	-218	0.38	3.1	14.67
PRB-16s	7/12/2012	7.01	778	68	2.81	4.8	21.05
	10/9/2012	NM	641	58	3.12	12.6	19.01
	3/27/2013	8.70	883	93	4.37	0.0	8.56
	6/6/2013	7.46	834	68	3.70	0.9	14.25

Notes:
S.U. = standard pH units
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mV = millivolts
mg/L = milligrams per liter
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°C = degrees Celsius
NM = not measured

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Table 4
Summary of Water Quality Parameters
PRB Performance Monitoring
Tecumseh Products Company
Tecumseh, Michigan

Analyte		Chloride	Nitrate as Nitrogen	Sulfate	Total Organic Carbon	Calcium	Iron	Manganese	Magnesium
Units		mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	mg/L
PRB-01s	8/10/2011	140	0.21	12	8.2	70	<200	290	15
	1/11/2012	--	--	29	--	--	<200	100	--
	4/10/2012	--	--	3.0	--	--	<200	460	--
	7/16/2012	--	--	11	--	--	310	510	--
	10/10/2012	35	0.34	26	2.5	69	<200	440	16
PRB-02s	8/10/2011	180	<0.050	39	3.0	86	<200	270	18
	1/11/2012	--	--	15	--	--	<200	380	--
	4/10/2012	--	--	3.6	--	--	460	840	--
	7/13/2012	--	--	8.4	--	--	220	470	--
	10/10/2012	44	<0.050	6.7	2.0	68	220	430	20
PRB-03s	8/10/2011	7.4	<0.050	<1.0	2.0	53	1,800	79	9.0
	1/11/2012	--	--	5.0	--	--	2,800	93	--
	4/10/2012	--	--	6.5	--	--	2,200	84	--
	7/16/2012	--	--	<1.0	--	--	4,100	96	--
	10/9/2012	14	0.11	3.4	3.3	88	4,200	100	13
PRB-04s	8/10/2011	33	0.058	<1.0	30	83	800	1,600	23
	1/11/2012	--	--	<1.0	--	--	5,400	930	--
	4/10/2012	--	--	<1.0	--	--	12,000	1,100	--
	7/16/2012	--	--	<1.0	--	--	16,000	830	--
	10/4/2012	5.9	<0.050	<1.0	15	81	25,000	720	18
PRB-04d	8/10/2011	150	<0.050	46	1.4	110	4,100	270	19
	1/11/2012	--	--	53	--	--	2,500	86	--
	4/10/2012	--	--	52	--	--	2,500	77	--
	7/16/2012	--	--	34	--	--	1,700	55	--
	10/4/2012	150	<0.050	32	2.7	110	1,900	58	29

Notes:
mg/L = milligrams per liter
ug/L = micrograms per liter
-- = Not analyzed

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Table 4
Summary of Water Quality Parameters
PRB Performance Monitoring
Tecumseh Products Company
Tecumseh, Michigan

Analyte		Chloride	Nitrate as Nitrogen	Sulfate	Total Organic Carbon	Calcium	Iron	Manganese	Magnesium
Units		mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	mg/L
PRB-05s	8/11/2011	6.7	3.3	12	2.1	69	<200	<50	15
	1/12/2012	--	--	9.4	--	--	<200	<50	--
	4/9/2012	--	--	14	--	--	<200	<50	--
	7/12/2012	--	--	12	--	--	<200	<50	--
	10/9/2012	2.9	1.4	11	2.2	66	<200	<50	15
PRB-06s	8/11/2011	130	0.19	11	9,000	1,800	3,400,000	86,000	280
	1/12/2012	--	--	4.0	--	--	480,000	4,200	--
	4/10/2012	--	--	<1.0	--	--	62,000	1,000	--
	7/12/2012	--	--	<1.0	--	--	240,000	1,700	--
	10/9/2012	31	<0.050	3.9	530	37	13,000	160	22
PRB-07s	8/10/2011	5.8	<0.050	10	21	69	1,500	1,100	21
	1/11/2012	--	--	9.0	--	--	550	930	--
	4/10/2012	--	--	18	--	--	920	810	--
	7/16/2012	--	--	21	--	--	930	670	--
	10/4/2012	25	0.21	26	2.3	83	1,400	850	14
PRB-08s	8/10/2011	150	<0.050	22	9.5	100	340	280	23
	1/11/2012	--	--	44	--	--	3,600	410	--
	4/10/2012	--	--	34	--	--	5,400	460	--
	7/13/2012	--	--	24	--	--	5,300	610	--
	10/4/2012	43	<0.050	9.6	2.8	83	4,200	620	22
PRB-08d	8/10/2011	110	<0.050	48	1.3	100	1,200	<50	26
	1/11/2012	--	--	45	--	--	910	<50	--
	4/10/2012	--	--	45	--	--	1,000	<50	--
	7/13/2012	--	--	43	--	--	1,200	<50	--
	10/4/2012	110	<0.050	42	2.5	110	1,000	<50	28

Notes:
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-- = Not analyzed

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Table 4
Summary of Water Quality Parameters
PRB Performance Monitoring
Tecumseh Products Company
Tecumseh, Michigan

Analyte		Chloride	Nitrate as Nitrogen	Sulfate	Total Organic Carbon	Calcium	Iron	Manganese	Magnesium
Units		mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	mg/L
PRB-09s	8/11/2011	180	<0.050	<2.0	4,100	840	1,300,000	35,000	150
	1/12/2012	--	--	1.4	--	--	22,000	84	--
	4/9/2012	--	--	<1.0	--	--	22,000	170	--
	7/13/2012	--	--	<1.0	--	--	13,000	70	--
	10/9/2012	120	<0.050	1.3	41	26	3,300	<50	37
PRB-10s	8/11/2011	66.0	1.6	63	3.0	95	<200	<50	20
	1/12/2012	--	--	61	--	--	<200	<50	--
	4/9/2012	--	--	44	--	--	<200	<50	--
	7/13/2012	--	--	62	--	--	<200	<50	--
	10/9/2012	96	0.74	57	3.1	100	<200	<50	21
PRB-11s	8/10/2011	7.0	2.1	10	0.84	70	<200	<50	16
	1/11/2012	--	--	8.1	--	--	<200	<50	--
	4/9/2012	--	--	6.7	--	--	<200	<50	--
	7/16/2012	--	--	8.2	--	--	<200	<50	--
	10/11/2012	1.4	2.1	8.1	1.3	64	<200	<50	14
PRB-12s	8/11/2011	50	7.6	52	3.9	94	<200	<50	17
	1/12/2012	--	--	47	--	--	<200	<50	--
	4/9/2012	--	--	50	--	--	<200	<50	--
	7/12/2012	--	--	48	--	--	<200	<50	--
	10/11/2012	110	1.8	45	1.9	88	<200	<50	19
PRB-13s	8/11/2011	25	2.4	23	1.3	73	<200	<50	16
	1/12/2012	--	--	13	--	--	<200	<50	--
	4/3/2012	--	--	25	--	--	42	14	--
	7/12/2012	--	--	11	--	--	<200	<50	--
	10/11/2012	37	1.8	16	1.5	67	<200	<50	15

Notes:
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ug/L = micrograms per liter
-- = Not analyzed

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Table 4
Summary of Water Quality Parameters
PRB Performance Monitoring
Tecumseh Products Company
Tecumseh, Michigan

Analyte		Chloride	Nitrate as Nitrogen	Sulfate	Total Organic Carbon	Calcium	Iron	Manganese	Magnesium
Units		mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	mg/L
PRB-14s	8/11/2011	110	0.092	34	1.2	84	<200	590	19
	1/12/2012	--	--	21	--	--	<200	290	--
	4/3/2012	--	--	27	--	--	70	120	--
	7/12/2012	--	--	20	--	--	<200	150	--
	10/11/2012	54	1.2	24	1.6	70	<200	100	16
PRB-15s	8/11/2011	110	3.6	33	6.0	98	<200	190	20
	1/12/2012	--	--	16	--	--	640	57	--
	4/9/2012	--	--	33	--	--	<200	<50	--
	7/12/2012	--	--	45	--	--	<200	140	--
	10/11/2012	19	1.7	20	1.9	61	<200	270	12
PRB-15d	8/11/2011	91	0.086	34	16	88	590	<50	22
	1/12/2012	--	--	50	--	--	450	<50	--
	4/9/2012	--	--	51	--	--	<200	<50	--
	7/12/2012	--	--	52	--	--	320	<50	--
	10/11/2012	110	<0.050	49	1.3	74	390	<50	19
PRB-16s	8/6/2012	--	--	29	--	--	18	19	--
	10/9/2012	33	1.3	25	1.9	78	<200	<50	16

Notes:
mg/L = milligrams per liter
ug/L = micrograms per liter
-- = Not analyzed

Table 5
Summary of Dissolved Gases Near PRB Section 1
PRB Performance Monitoring
Tecumseh Products Company
Tecumseh, Michigan

Analyte		Methane	Ethane	Ethylene
Units		ug/L	ug/L	ug/L
PRB-01s	10/7/2011	7.0	9.1	<1.0
	1/11/2012	1,800	3.7	2.2
	4/10/2012	9,700(1)	9.6	1.0
	7/16/2012	470	1.7	1.2
	10/10/2012	340	<1.0	<1.0
	3/4/2013	4,500	3.2	58
	6/7/2013	1,300	3.1	9.4
PRB-02s	10/7/2011	730	4.5	<1.0
	1/11/2012	2,400	1.9	<1.0
	4/10/2012	9,200	5.0	<1.0
	7/13/2012	8,800	1.2	1.7
	10/10/2012	1,800	2.0	12
	3/5/2013	1,600	<1.0	20
	6/7/2013	4,100	1.1	61
PRB-04s	10/7/2011	20	3.1	<1.0
	1/11/2012	2,300	6.5	20
	4/10/2012	9,000	13	180
	7/16/2012	7,300	7.6	250
	10/4/2012	3,400	2.6	100
	3/4/2013	12,000	1.6	84
	6/6/2013	14,000	1.2	160
PRB-06s	10/6/2011	--	--	--
	1/12/2012	1,700	21	74
	4/10/2012	14,000	27	78
	7/12/2012	9,100	17	54
	10/9/2012	3,000	11	30
	3/5/2013	6,800	24	40
	6/7/2013	10,000	26	<1.0
PRB-07s	10/7/2011	1,500	1.9	<1.0
	1/11/2012	1,600	2.0	1.3
	4/10/2012	11,000	<1.0	<1.0
	7/16/2012	8,700	1.4	1.1
	10/4/2012	3,200	1.4	<1.0
	3/4/2013	5,000	2.2	<1.0
	6/6/2013	7,800	2.1	16
PRB-08s	10/7/2011	2,200	2.6	1.1
	1/11/2012	1,700	<1.0	<1.0
	4/10/2012	9,700	1.2	<1.0
	7/13/2012	8,200	1.0	<1.0
	10/4/2012	3,000	<1.0	<1.0
	3/5/2013	1,600	<1.0	1.3
	6/6/2013	1,100	<1.0	1.3
PRB-09s	10/6/2011	--	--	--
	1/12/2012	1,500	4.0	4.1
	4/9/2012	15,000	6.2	7.2
	7/13/2012	10,000	6.9	2.8
	10/9/2012	1,600	<1.0	<1.0
	3/5/2013	3,700	3.7	<1.0
	6/7/2013	6,300	6.9	<1.0

Notes:
ug/L = micrograms per liter
-- = Not analyzed
1) Reported concentration is greater than the calibrated range of the instrument. Result is approximate.

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Table 6
Summary of Gas Composition at Methane Vent Locations
PRB Performance Monitoring
Tecumseh Products Company
Tecumseh, Michigan

Analyte		Methane	Carbon Dioxide	Oxygen	Balance Gas
Units		%	%	%	%
V-01[1,2]	11/4/2011	10.8	2.7	15.0	71.3
	11/14/2011	16.0	4.5	12.2	67.7
	12/14/2011	24.0	4.0	10.0	62.6
	1/24/2012	0.0	0.0	21.5	78.5
	2/15/2012	8.1	3.9	13.8	74.2
	2/22/2012	0.9	1.8	18.5	78.7
	2/28/2012	0.5	1.7	19.3	78.5
	3/7/2012	0.7	1.4	19.2	78.7
	3/21/2012	0.7	2.6	18.6	78.0
	5/2/2012	0.5	1.1	18.8	79.5
	6/14/2012	0.1	1.1	20.6	78.2
	8/23/2012	0.2	1.2	19.3	79.3
	11/29/2012	0.0	0.8	20.4	78.6
	1/24/2013	0.0	0.4	20.3	79.2
	2/28/2013	0.0	0.7	19.8	79.5
	3/25/2013	0.0	0.5	20.1	79.2
	5/23/2013	0.0	0.6	21.4	78.0
	8/16/2013	0.0	1.6	19.4	79.0
V-02[1,2]	11/4/2011	39.5	3.9	10.1	46.7
	11/14/2011	32.0	4.3	8.8	53.5
	12/14/2011	33.0	3.2	11.8	52.8
	1/24/2012	26.4	4.6	3.7	65.4
	2/15/2012	12.6	4.2	11.9	71.3
	2/22/2012	1.8	2.4	15.5	80.2
	2/28/2012	0.9	2.7	17.3	79.0
	3/7/2012	1.2	2.2	17.5	78.9
	3/21/2012	1.0	3.4	17.3	78.3
	5/2/2012	1.0	3.1	16.6	79.3
	6/14/2012	0.5	2.4	19.2	77.9
	8/23/2012	0.2	1.8	18.6	79.4
	11/29/2012	0.0	1.0	20.2	78.7
	1/24/2013	0.0	0.5	20.3	79.1
	2/28/2013	0.0	0.7	19.6	79.7
	3/25/2013	0.0	0.4	20.6	78.8
	5/23/2013	0.0	0.6	21.4	78.0
	8/16/2013	0.0	1.6	19.3	79.1

Notes:

Passive vents were installed at all locations (V-01 through V-15) on October 27-28, 2011 in order to reduce methane concentrations in the subsurface soil gas to less than 5.1-percent.

1) Concentrations of methane at vent locations V-01, V-02, V-03 and V-04 triggered a pilot study for active soil gas removal which was conducted on December 22, 2011.

2) Based on pilot study results, an active soil gas removal system was designed and installed at vents V-01, V-02 and V-03. The permanent power-supply was installed, and the active system became fully functional on February 15, 2012.

3) Water in sample port. Gas reading terminated prior to stabilization.

US EPA ARCHIVE DOCUMENT

Table 6
Summary of Gas Composition at Methane Vent Locations
PRB Performance Monitoring
Tecumseh Products Company
Tecumseh, Michigan

Analyte		Methane	Carbon Dioxide	Oxygen	Balance Gas
Units		%	%	%	%
V-03[1,2]	11/4/2011	18.9	2.0	15.7	63.4
	11/14/2011	29.0	3.1	13.2	54.3
	12/14/2011	33.0	2.8	14.0	50.3
	1/24/2012	0.0	0.0	21.5	78.4
	2/15/2012	32.6	4.1	5.9	57.4
	2/22/2012	12.0	3.3	11.7	73.3
	2/28/2012	6.8	3.5	13.2	76.6
	3/7/2012	6.5	3.5	12.9	77.0
	3/21/2012	5.4	4.7	12.5	77.3
	5/2/2012	6.1	5.3	12.3	76.3
	6/14/2012	1.4	4.4	16.1	78.2
	8/23/2012	0.7	4.6	14.3	80.4
	11/29/2012	0.1	2.7	18.3	79.0
	1/24/2013	0.0	1.2	18.7	80.0
	2/28/2013	0.0	1.4	17.8	80.8
	3/25/2013	0.0	1.0	19.0	78.9
	5/23/2013	0.0	1.8	19.7	78.4
	8/16/2013	0.0	3.5	16.6	80.0
V-04[1]	11/4/2011	10.2	0.6	17.9	72.7
	11/14/2011	25.6	1.5	14.3	58.4
	12/14/2011	5.8	0.4	20.5	72.8
	1/24/2012	0.9	0.1	21.1	77.9
	2/15/2012	0.1	0.0	20.5	79.3
	2/22/2012	NM	NM	NM	NM
	2/28/2012	0.0	0.0	21.0	78.9
	3/7/2012	1.5	0.0	20.2	78.1
	3/21/2012	0.0	0.0	20.8	79.1
	5/2/2012	0.0	0.0	20.2	79.7
	6/14/2012	0.0	0.1	21.5	78.4
	8/23/2012	0.1	0.0	20.6	79.2
	11/29/2012	0.0	0.1	21.1	78.7
	1/24/2013	0.0	0.1	20.7	79.0
	2/28/2013	0.0	0.0	21.4	78.6
	3/25/2013	0.0	0.1	20.7	79.1
	5/23/2013	0.0	0.0	22.2	77.8
	8/16/2013	0.0	0.0	20.4	79.6

Notes:

Passive vents were installed at all locations (V-01 through V-15) on October 27-28, 2011 in order to reduce methane concentrations in the subsurface soil gas to less than 5.1-percent.

1) Concentrations of methane at vent locations V-01, V-02, V-03 and V-04 triggered a pilot study for active soil gas removal which was conducted on December 22, 2011.

2) Based on pilot study results, an active soil gas removal system was designed and installed at vents V-01, V-02 and V-03. The permanent power-supply was installed, and the active system became fully functional on February 15, 2012.

3) Water in sample port. Gas reading terminated prior to stabilization.

US EPA ARCHIVE DOCUMENT

Table 6
Summary of Gas Composition at Methane Vent Locations
PRB Performance Monitoring
Tecumseh Products Company
Tecumseh, Michigan

Analyte		Methane	Carbon Dioxide	Oxygen	Balance Gas
Units		%	%	%	%
V-05	11/4/2011	0.3	0.3	20.0	79.5
	11/14/2011	0.2	0.2	21.2	78.3
	12/14/2011	0.7	0.3	21.4	77.7
	1/24/2012	0.2	0.1	21.3	78.4
	2/15/2012	0.2	0.3	20.4	79.1
	3/21/2012	0.0	0.0	20.9	79.1
	5/2/2012	0.2	0.1	20.2	79.6
	6/14/2012	0.1	0.3	21.1	78.2
	8/23/2012	0.7	6.2	11.2	81.8
	11/29/2012	0.7	2.3	18.0	78.9
	1/24/2013	0.5	0.4	19.8	79.1
	2/28/2013	0.0	0.0	21.5	78.5
	3/25/2013	1.0	0.6	18.9	79.4
	5/23/2013	4.6	4.0	13.9	77.3
	8/16/2013	0.0	0.0	20.4	79.6
V-06	11/4/2011	0.2	0.2	20.3	79.1
	11/14/2011	0.7	0.3	21.1	77.9
	12/14/2011	0.7	0.2	21.8	77.3
	1/24/2012	0.9	0.2	21.2	77.7
	2/15/2012	0.7	0.1	20.5	78.8
	3/21/2012	0.5	0.0	20.7	78.7
	5/2/2012	0.5	0.1	20.0	79.3
	6/14/2012	0.3	0.2	21.2	78.0
	8/23/2012	1.4	5.6	12.7	80.1
	11/29/2012	1.0	2.5	17.3	78.7
	1/24/2013	2.0	0.6	19.3	78.1
	2/28/2013	6.6	1.3	16.9	75.1
	3/25/2013	6.4	1.2	16.8	75.6
	5/23/2013	7.0	2.5	16.4	73.8
	8/16/2013	0.9	0.3	19.9	78.8
V-07	11/4/2011	0.0	0.1	20.4	79.3
	11/14/2011	0.4	0.2	21.1	78.1
	12/14/2011	1.0	0.2	21.7	77.1
	1/24/2012	0.2	0.1	21.3	78.4
	2/15/2012	0.3	0.1	20.8	78.9
	3/21/2012	0.1	0.0	20.8	79.0
	5/2/2012	0.0	0.0	20.3	79.7
	6/14/2012	0.0	0.1	21.4	78.5
	8/23/2012	0.1	0.3	20.4	79.2
	11/29/2012	0.4	1.2	19.7	78.6
	1/24/2013	1.5	0.5	19.5	78.3
	2/28/2013	6.5	0.8	17.6	75.0
	3/25/2013	5.0	0.9	16.8	76.9
	5/23/2013	2.9	1.6	17.8	77.7
	8/16/2013	0.3	0.1	20.3	79.3

Notes:

Passive vents were installed at all locations (V-01 through V-15) on October 27-28, 2011 in order to reduce methane concentrations in the subsurface soil gas to less than 5.1-percent.

1) Concentrations of methane at vent locations V-01, V-02, V-03 and V-04 triggered a pilot study for active soil gas removal which was conducted on December 22, 2011.

2) Based on pilot study results, an active soil gas removal system was designed and installed at vents V-01, V-02 and V-03. The permanent power-supply was installed, and the active system became fully functional on February 15, 2012.

3) Water in sample port. Gas reading terminated prior to stabilization.

US EPA ARCHIVE DOCUMENT

Table 6
Summary of Gas Composition at Methane Vent Locations
PRB Performance Monitoring
Tecumseh Products Company
Tecumseh, Michigan

Analyte		Methane	Carbon Dioxide	Oxygen	Balance Gas
Units		%	%	%	%
V-08	11/4/2011	0.9	0.1	20.1	78.7
	11/14/2011	2.4	0.3	20.3	76.9
	12/14/2011	1.5	0.2	21.6	77.0
	1/24/2012	1.7	0.1	20.8	77.5
	2/15/2012	1.8	0.2	20.3	77.5
	3/21/2012	1.3	0.0	20.4	78.3
	5/2/2012	0.6	0.1	19.6	79.6
	6/14/2012	0.5	0.4	20.9	78.2
	8/23/2012	1.4	3.5	15.3	79.7
	11/29/2012	0.2	0.6	20.7	78.5
	1/24/2013	0.4	0.3	20.6	78.5
	2/28/2013	0.0	0.0	21.7	78.3
	3/25/2013	0.9	0.3	20.0	78.7
	5/23/2013	2.8	1.4	18.9	76.8
	8/16/2013	0.0	0.1	20.4	79.5
V-09	11/4/2011	0.1	0.0	20.4	79.4
	11/14/2011	0.3	0.1	21.0	78.3
	12/14/2011	0.0	0.0	22.2	77.8
	1/24/2012	0.4	0.1	21.0	78.3
	2/15/2012	0.2	0.1	20.8	78.8
	3/21/2012	0.0	0.1	20.6	79.2
	5/2/2012	0.0	0.1	19.8	80.1
	6/14/2012	0.0	0.4	20.9	78.6
	8/23/2012	0.5	0.6	19.8	79.0
	11/29/2012	0.6	0.7	20.2	78.4
	1/24/2013	0.8	0.2	20.6	78.3
	2/28/2013	0.0	0.1	21.7	78.2
	3/25/2013	3.2	0.4	19.5	76.6
	5/23/2013	2.8	1.2	19.6	76.6
	8/16/2013	0.0	0.0	20.5	79.5
V-10	11/4/2011	0.0	0.1	20.5	79.3
	11/14/2011	0.0	0.1	21.3	78.7
	12/14/2011	0.0	0.1	21.7	78.2
	1/24/2012	0.0	0.1	21.2	78.6
	2/15/2012	0.1	0.1	20.8	78.9
	3/21/2012	0.0	0.0	20.9	79.1
	5/2/2012	0.0	0.2	19.7	80.1
	6/14/2012	0.0	0.4	21.0	78.5
	8/23/2012	0.1	1.3	18.5	80.0
	11/29/2012	0.0	3.3	15.9	80.6
	1/24/2013	0.0	0.3	20.6	79.0
	2/28/2013	0.6	1.0	16.6	81.7
	3/25/2013	1.2	2.1	15.7	80.8
	5/23/2013	0.2	6.4	11.7	82.7
	8/16/2013	0.0	4.1	14.2	81.7

Notes:

Passive vents were installed at all locations (V-01 through V-15) on October 27-28, 2011 in order to reduce methane concentrations in the subsurface soil gas to less than 5.1-percent.

1) Concentrations of methane at vent locations V-01, V-02, V-03 and V-04 triggered a pilot study for active soil gas removal which was conducted on December 22, 2011.

2) Based on pilot study results, an active soil gas removal system was designed and installed at vents V-01, V-02 and V-03. The permanent power-supply was installed, and the active system became fully functional on February 15, 2012.

3) Water in sample port. Gas reading terminated prior to stabilization.

US EPA ARCHIVE DOCUMENT

Table 6
Summary of Gas Composition at Methane Vent Locations
PRB Performance Monitoring
Tecumseh Products Company
Tecumseh, Michigan

Analyte		Methane	Carbon Dioxide	Oxygen	Balance Gas
Units		%	%	%	%
V-11	11/4/2011	0.3	0.2	20.1	79.2
	11/14/2011	0.9	0.3	20.7	78.1
	12/14/2011	0.0	0.0	22.2	77.8
	1/24/2012	0.7	0.1	21.0	78.1
	2/15/2012	0.6	0.1	20.8	78.5
	3/21/2012	0.0	0.0	20.9	79.1
	5/2/2012	0.2	0.1	19.8	79.9
	6/14/2012	0.3	0.4	20.9	78.3
	8/23/2012	3.0	1.9	17.8	77.2
	11/29/2012	3.5	3.5	15.1	77.9
	1/24/2013	1.3	1.2	18.5	79.0
	2/28/2013	3.8	2.0	14.8	79.4
	3/25/2013	5.6	3.8	11.0	79.7
	5/23/2013	6.2	4.1	12.1	76.6
	8/16/2013	2.5	1.9	17.6	78.3
V-12	11/4/2011	0.4	0.5	19.7	79.5
	11/14/2011	0.1	0.4	20.5	78.8
	12/14/2011	0.0	0.1	22.2	77.7
	1/24/2012	0.0	0.1	21.1	78.7
	2/15/2012	0.0	0.0	21.0	78.8
	3/21/2012	0.0	0.0	20.9	79.1
	5/2/2012	0.0	0.1	19.9	80.0
	6/14/2012	0.0	0.3	21.1	78.5
	8/23/2012	2.3	1.4	18.0	78.4
	11/29/2012	1.8	3.3	16.3	78.6
	1/24/2013	1.6	1.7	17.5	79.1
	2/28/2013	4.9	3.7	12.1	79.2
	3/25/2013	5.3	4.6	10.6	80.0
	5/23/2013	7.4	7.2	5.2	80.3
	8/16/2013	1.5	1.7	18.2	78.5
V-13	11/4/2011	0.2	0.5	19.8	79.7
	11/14/2011	0.1	0.6	20.4	78.8
	12/14/2011	0.4	0.5	20.9	78.1
	1/24/2012	0.6	0.2	20.7	78.5
	2/15/2012	0.4	0.2	20.8	78.6
	3/21/2012	0.0	0.0	20.9	79.1
	5/2/2012	0.1	0.2	19.7	79.9
	6/14/2012	0.1	3.0	16.6	80.3
	8/23/2012	0.2	0.4	20.0	79.1
	11/29/2012	0.1	0.8	20.3	78.7
	1/24/2013	0.0	1.0	19.0	79.9
	2/28/2013	1.3	0.7	18.4	79.5
	3/25/2013	0.7	0.6	18.6	80.1
	5/23/2013	1.4	2.4	17.0	79.1
	8/16/2013	0.0	0.1	20.3	79.6

Notes:

Passive vents were installed at all locations (V-01 through V-15) on October 27-28, 2011 in order to reduce methane concentrations in the subsurface soil gas to less than 5.1-percent.

1) Concentrations of methane at vent locations V-01, V-02, V-03 and V-04 triggered a pilot study for active soil gas removal which was conducted on December 22, 2011.

2) Based on pilot study results, an active soil gas removal system was designed and installed at vents V-01, V-02 and V-03. The permanent power-supply was installed, and the active system became fully functional on February 15, 2012.

3) Water in sample port. Gas reading terminated prior to stabilization.

US EPA ARCHIVE DOCUMENT

Table 6
Summary of Gas Composition at Methane Vent Locations
PRB Performance Monitoring
Tecumseh Products Company
Tecumseh, Michigan

Analyte		Methane	Carbon Dioxide	Oxygen	Balance Gas
Units		%	%	%	%
V-14	11/4/2011	0.3	3.1	15.5	81.0
	11/14/2011	0.0	0.3	20.9	78.7
	12/14/2011	1.0	1.4	*19.4*	78.2
	1/24/2012	0.3	0.2	20.8	78.7
	2/15/2012	0.7	0.3	20.4	78.8
	3/21/2012	0.0	0.0	20.9	79.1
	5/2/2012	0.7	1.7	16.3	81.4
	6/14/2012	0.1	6.6	11.2	82.0
	8/23/2012	0.5	7.9	8.7	82.7
	11/29/2012	0.8	4.6	12.5	82.2
	1/24/2013	0.6	1.0	18.7	79.5
	2/28/2013	7.6	1.3	15.5	75.3
	3/25/2013	4.7	1.8	15.6	77.2
	5/23/2013	5.2	4.4	13.2	77.1
	8/16/2013	2.7	6.1	11.3	79.9
V-15	11/4/2011	0.0	0.3	20.0	79.4
	11/14/2011	0.0	0.3	20.9	78.6
	12/14/2011	0.0	0.0	22.3	77.7
	1/24/2012	0.0	0.1	21.1	78.8
	2/15/2012	0.0	0.0	21.1	78.7
	3/21/2012	0.0	0.0	20.9	79.1
	5/2/2012	0.0	0.0	19.9	80.0
	6/14/2012	0.0	0.0	21.4	78.5
	8/23/2012	0.0	0.9	20.1	78.8
	11/29/2012	0.0	0.8	20.6	78.5
	1/24/2013	0.0	0.5	20.6	78.8
	2/28/2013	0.0	1.2	18.5	80.3
	3/25/2013	0.0	1.3	18.5	80.1
	5/23/2013	0.0	2.5	18.4	79.1
	8/16/2013	0.0	3.0	17.9	79.1
SG-02	11/4/2011	0.0	1.2	18.3	80.4
	12/14/2011	0.0	1.0	13.5	85.5
	2/15/2012	0.0	0.6	18.0	81.5
	3/21/2012(3)	0.0	0.5	18.9	79.3
	8/16/2013	0.0	4.5	12.8	82.5
SG-03	11/4/2011	0.0	4.9	8.1	86.9
	12/14/2011	0.0	1.5	19.5	79.0
	2/15/2012	0.0	0.0	20.9	79.0
	3/21/2012	0.0	0.1	20.6	79.3
SG-03R	8/16/2013	0.0	2.6	18.7	78.7

Notes:

Passive vents were installed at all locations (V-01 through V-15) on October 27-28, 2011 in order to reduce methane concentrations in the subsurface soil gas to less than 5.1-percent.

1) Concentrations of methane at vent locations V-01, V-02, V-03 and V-04 triggered a pilot study for active soil gas removal which was conducted on December 22, 2011.

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3) Water in sample port. Gas reading terminated prior to stabilization.

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Figures

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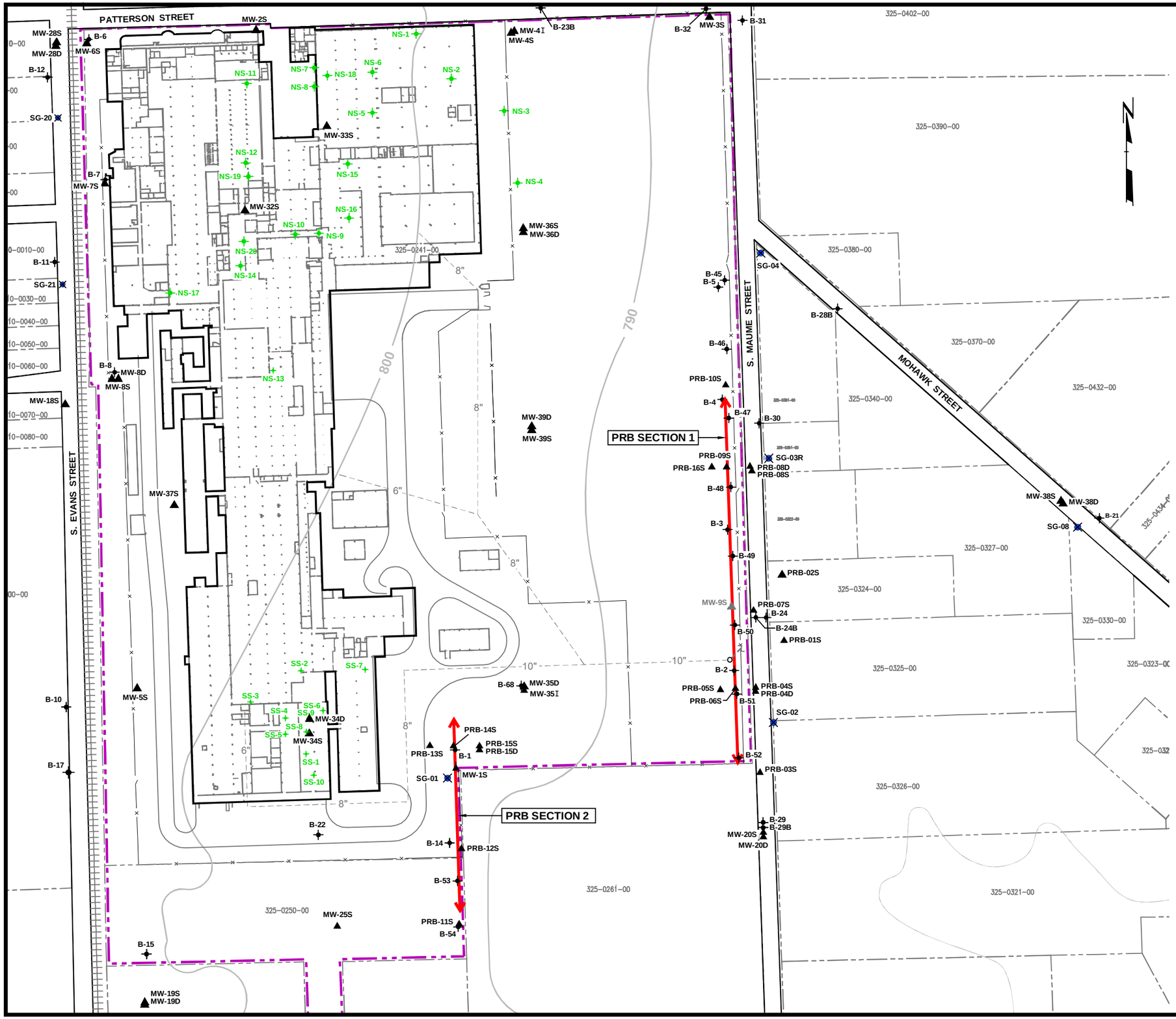


LEGEND

- FORMER TECUMSEH PRODUCTS SITE BOUNDARY
- PARCEL BOUNDARY
- RAILROAD TRACKS (APPROXIMATE LOCATION)
- 800 — APPROXIMATE GROUND TOPOGRAPHY BASED OFF 7.5 MINUTE U.S.G.S. TOPOGRAPHIC QUADRANGLE MAP
- B-2 — PERIMETER / OFF-SITE INVESTIGATION SOIL BORING LOCATION AND NUMBER
- MW-4S — MONITORING WELL LOCATION AND NUMBER
- MW-9S — DECOMISSIONED MONITORING WELL LOCATION AND NUMBER
- SS-2 — SOURCE AREA INVESTIGATION BORING LOCATION AND NUMBER
- SG-02 — SOIL GAS SAMPLE LOCATION AND NUMBER
- 8" — PIPE DIAMETER AND APPROXIMATE LOCATION OF ON-SITE SANITARY SEWER
- PRB LOCATION
- x — FENCE LINE

NOTES

1. BASE MAP DEVELOPED FROM SITE PLAN PROVIDED BY THE CITY OF TECUMSEH, DRAWING NO. CITY.DWG, MARCH 2009.
2. GROUND TOPOGRAPHY BASED OFF 7.5 MINUTE U.S.G.S TOPOGRAPHIC QUADRANGLE MAP AND GROUND SURVEY DATA.

APPROXIMATE HORIZONTAL SCALE

0 200' 400'

PROJECT:

FORMER TECUMSEH PRODUCTS SITE
TECUMSEH, MICHIGAN

SHEET TITLE:

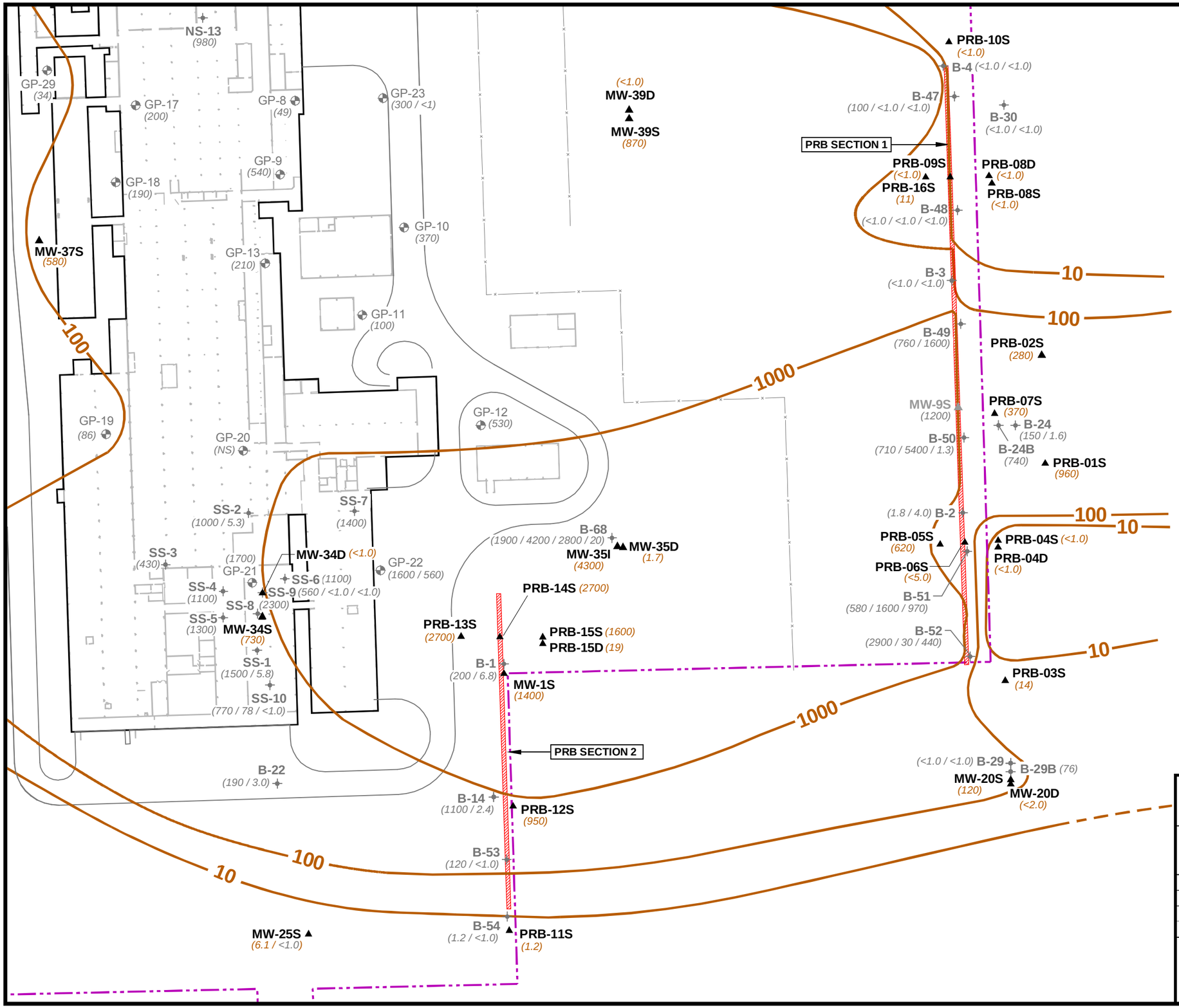
SITE PLAN
AND PRB MONITORING LOCATIONS

DRAWN BY: DGS	SCALE:	PROJ. NO.	186299.0001.01
CHECKED BY: SEM	AS INDICATED	FILE NO.	186299.0001.01.01.dwg
APPROVED BY: GC	DATE PRINTED:	**FIGURE 1**	
DATE: SEPTEMBER 2013			

TRC
1540 Eisenhower Place
Ann Arbor, MI 48108
Phone: 734.971.7080
Fax: 734.971.9022

bm033109 FIG01 Site Plan & PRBs
Attached Xref's:
Attached Images:
Layout:
Dwg Size: 2.10 Mb
Plot Date: September 5, 2013
Plot Time: 12:28 PM
PLOT DATA
Drawing Name: J:_TRC\Tecumseh Products\Tecumseh MI\186299\0001\01\2013 PRB ANNUAL RPT\186299.0001.01.01.dwg
Operator Name: STEHLE, DIANAH
Drawing Plot Scale: 0.366863

US EPA ARCHIVE DOCUMENT



LEGEND

	FORMER TECUMSEH PRODUCTS SITE BOUNDARY
	PARCEL BOUNDARY
B-2	PERIMETER / OFF-SITE INVESTIGATION SOIL BORING LOCATION AND NUMBER (MARCH 2009-AUGUST 2012) (SEE NOTE 4)
MW-4S	MONITORING WELL LOCATION AND NUMBER (SEE NOTE 5)
MW-9S	DECOMMISSIONED MONITORING WELL LOCATION AND NUMBER (SEE NOTE 5)
SS-2	SOURCE AREA INVESTIGATION BORING LOCATION AND NUMBER (MARCH 2009-AUGUST 2012) (SEE NOTE 4)
GP-24	ATC GEOPROBE BORING LOCATION AND NUMBER (DECEMBER 2008-JANUARY 2009) (SEE NOTE 4)
	PRB LOCATION
x	FENCE LINE
100	APPROXIMATE TRICHLOROETHENE ISOCONCENTRATION LINE
(13)	TRICHLOROETHENE CONCENTRATION IN ug/L (SEE NOTES 3 AND 4)
(45 / 19)	TRICHLOROETHENE CONCENTRATION IN ug/L WHERE SAMPLES WERE COLLECTED AT MULTIPLE DEPTHS. CONCENTRATIONS ARE LISTED IN ORDER OF INCREASING DEPTH (SEE NOTES 3 AND 4)
(NS)	NO SAMPLE COLLECTED FOR TRICHLOROETHENE ANALYSIS

NOTES

1. BASE MAP DEVELOPED FROM SITE PLAN PROVIDED BY THE CITY OF TECUMSEH, DRAWING NO. CITY.DWG, MARCH 2009.
2. GROUND TOPOGRAPHY BASED OFF 7.5 MINUTE U.S.G.S TOPOGRAPHIC QUADRANGLE MAP AND GROUND SURVEY DATA.
3. SEE TABLES IN APPENDIX D FOR FURTHER SAMPLE INFORMATION (SAMPLE COLLECTION DATE, SAMPLE DEPTH, ETC.).
4. SCREENED (GRAY) SAMPLE LOCATIONS WERE INSTALLED AND SAMPLED PRIOR TO MAY / JUNE 2013. TRICHLOROETHENE CONCENTRATION DATA FOR THESE LOCATIONS (ALSO SCREENED) WERE USED FOR UP GRADIENT PLUME DELINEATION.
5. CONCENTRATION DATA FROM THE MOST RECENT SAMPLE EVENT IS DISPLAYED.

N

0 120 240

APPROXIMATE SCALE IN FEET

PROJECT: FORMER TECUMSEH PRODUCTS SITE
TECUMSEH, MICHIGAN

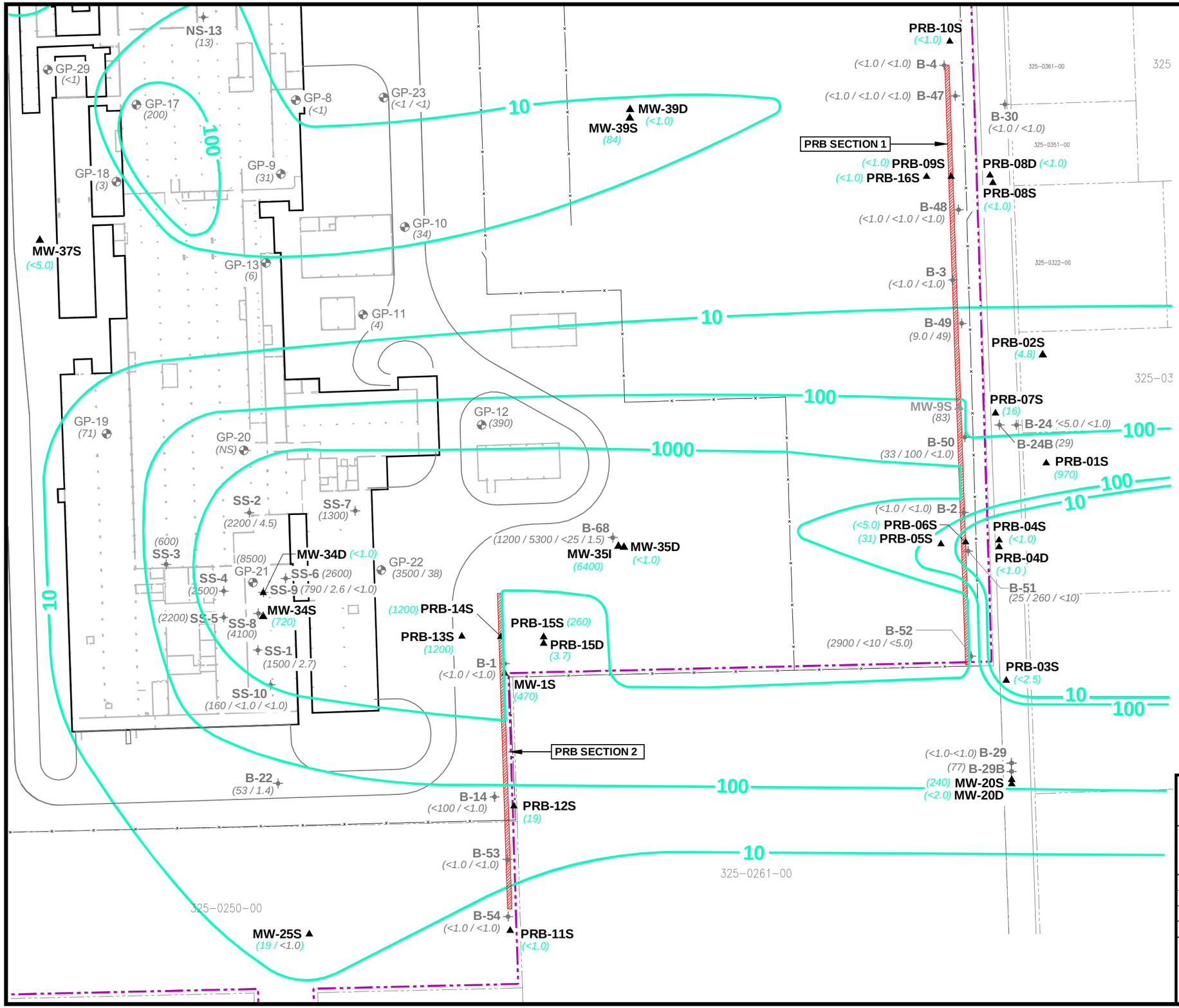
TITLE: GROUNDWATER ISOCONCENTRATION MAP
TRICHLOROETHENE
MAY / JUNE 2013

DRAWN BY: DGS	SCALE:	PROJ. NO.	186299.0001.01
CHECKED BY: SEM	AS INDICATED	FILE NO.	186299.0001.01.02.dwg
APPROVED BY: GC	DATE PRINTED:	FIGURE 2	
DATE: SEPTEMBER 2013			

TRC
1540 Eisenhower Place
Ann Arbor, MI 48108
Phone: 734.971.7080
Fax: 734.971.9022

PLOT DATA
Drawing Name: J:_TRC\Tecumseh Products\Tecumseh MI\186299\0001\01\2013 PRB ANNUAL RPT\186299.0001.01.02.dwg
Operator Name: STEHLE, DIANAH
Drawing Plot Scale: 0.386863
Dwg Size: 3.04 Mb
Plot Date: September 5, 2013
Plot Time: 12:30 PM
Attached Xref's:
Attached Images:
Layout: FIG02 GW Iso TCE

US EPA ARCHIVE DOCUMENT



LEGEND

	FORMER TECUMSEH PRODUCTS SITE BOUNDARY
	PARCEL BOUNDARY
B-2	PERIMETER / OFF-SITE INVESTIGATION SOIL BORING LOCATION AND NUMBER (MARCH 2009-AUGUST 2012) (SEE NOTE 4)
MW-4S	MONITORING WELL LOCATION AND NUMBER (SEE NOTE 5)
MW-9S	DECOMMISSIONED MONITORING WELL LOCATION AND NUMBER (SEE NOTE 5)
SS-2	SOURCE AREA INVESTIGATION BORING LOCATION AND NUMBER (MARCH 2009-AUGUST 2012) (SEE NOTE 4)
GP-24	TEMPORARY ATC GEOPROBE BORING LOCATION AND NUMBER (DECEMBER 2008-JANUARY 2009) (SEE NOTE 4)
	PRB LOCATION
x	FENCE LINE
100	APPROXIMATE 1,1,1-TRICHLOROETHANE ISOCONCENTRATION LINE
(390)	1,1,1-TRICHLOROETHANE CONCENTRATION IN ug/L (SEE NOTES 3 AND 4)
(<1.0 / 8.6)	1,1,1-TRICHLOROETHANE CONCENTRATION IN ug/L WHERE SAMPLES WERE COLLECTED AT MULTIPLE DEPTHS. CONCENTRATIONS ARE LISTED IN ORDER OF INCREASING DEPTH (SEE NOTES 3 AND 4)
(NS)	NO SAMPLE COLLECTED FOR 1,1,1-TRICHLOROETHANE ANALYSIS

NOTES

1. BASE MAP DEVELOPED FROM SITE PLAN PROVIDED BY THE CITY OF TECUMSEH, DRAWING NO. CITY.DWG, MARCH 2009.
2. GROUND TOPOGRAPHY BASED OFF 7.5 MINUTE U.S.G.S TOPOGRAPHIC QUADRANGLE MAP AND GROUND SURVEY DATA.
3. SEE TABLES IN APPENDIX D FOR FURTHER SAMPLE INFORMATION (SAMPLE COLLECTION DATE, SAMPLE DEPTH, ETC.).
4. SCREENED (GRAY) SAMPLE LOCATIONS WERE INSTALLED AND SAMPLED PRIOR TO MAY / JUNE 2013. 1,1,1-TRICHLOROETHANE CONCENTRATION DATA FOR THESE LOCATIONS (ALSO SCREENED) WERE USED FOR UP GRADIENT PLUME DELINEATION.
5. CONCENTRATION DATA FROM THE MOST RECENT SAMPLE EVENT IS DISPLAYED.

N

0 120 240

APPROXIMATE SCALE IN FEET

PROJECT:
FORMER TECUMSEH PRODUCTS SITE
TECUMSEH, MICHIGAN

TITLE: **GROUNDWATER ISOCONCENTRATION MAP**
1,1,1-TRICHLOROETHANE
MAY / JUNE 2013

DRAWN BY: DGS	SCALE:	PROJ. NO.	186299.0001.01
CHECKED BY: SEM	AS INDICATED	FILE NO.	186299.0001.01.03.dwg
APPROVED BY: GC	DATE PRINTED:	FIGURE 3	
DATE: SEPTEMBER 2013			

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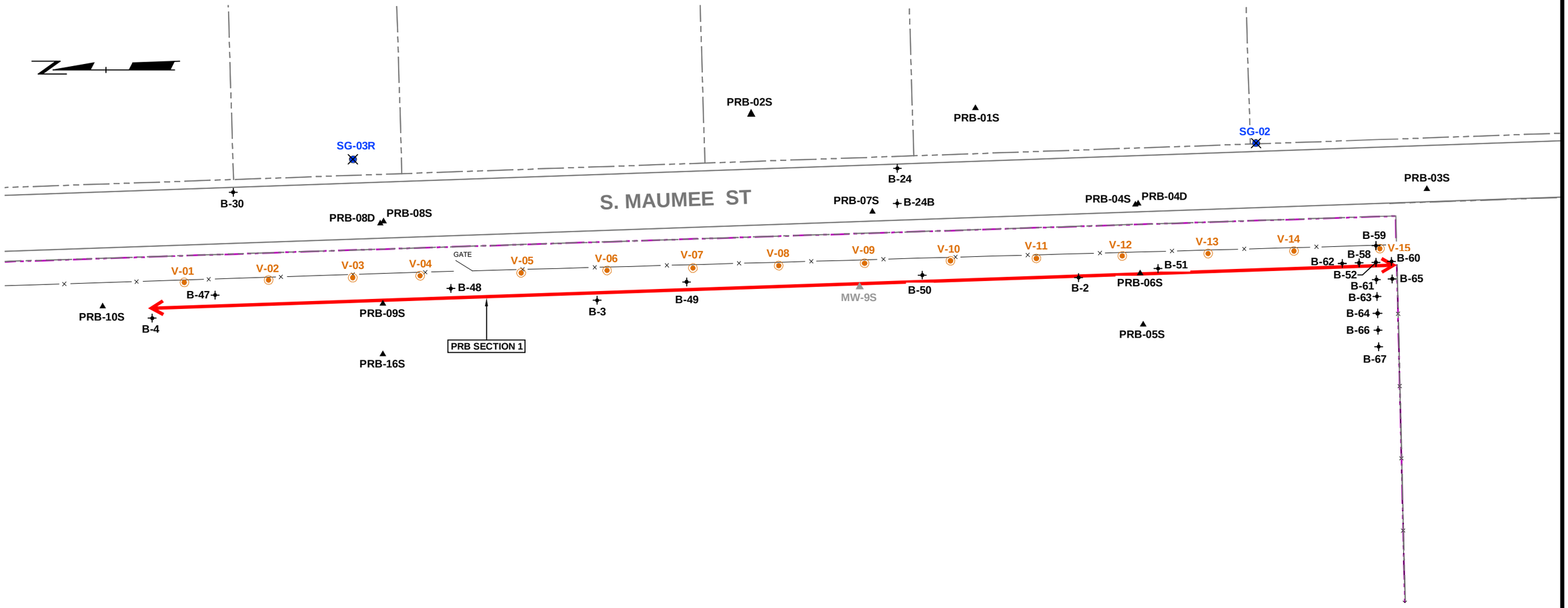
Fax: 734.971.9022

PLOT DATA
Drawing Name: J:_TRC\Tecumseh Products\Tecumseh MI\186299\0001\012013 PRB ANNUAL RPT\186299.0001.01.03.dwg
Operator Name: STEHLE, DIANAH
Drawing Plot Scale: 0.386663
Dwg Size: 3.07 Mb bm033109
Plot Date: September 5, 2013
Plot Time: 12:32 PM
Attached Xref's:
Attached Images:
Layout: FIG03 GW Iso 1111-TCA

US EPA ARCHIVE DOCUMENT

PLOT DATA
Drawing Name: J:_TRC\Tecumseh Products\Tecumseh MI\186299\0001\01\2013 PRB ANNUAL RPT\186299.0001.01.04.dwg
Operator Name: STEHLE, DIANAH
Drawing Plot Scale: 0.386863
Dwg Size: 2.26 Mb
Plot Date: September 5, 2013
Plot Time: 12:32 PM
Attached Xrefs: bm033109
Attached Images:
Layout: FIG04 Methane Vents



APPROXIMATE HORIZONTAL SCALE

0 60' 120'

LEGEND

- FORMER TECUMSEH PRODUCTS SITE BOUNDARY
- PARCEL BOUNDARY
- B-2 — PERIMETER / OFF-SITE INVESTIGATION SOIL BORING LOCATION AND NUMBER
- PRB-04S — MONITORING WELL LOCATION AND NUMBER
- MW-9S — DECOMMISSIONED MONITORING WELL LOCATION AND NUMBER
- SG-02 — SOIL GAS SAMPLE LOCATION AND NUMBER
- V-04 — METHANE VENT LOCATION AND NUMBER
- PRB LOCATION
- FENCE LINE

NOTES

1. BASE MAP DEVELOPED FROM SITE PLAN PROVIDED BY THE CITY OF TECUMSEH, DRAWING NO. CITY.DWG, MARCH 2009.
2. GROUND TOPOGRAPHY BASED OFF 7.5 MINUTE U.S.G.S TOPOGRAPHIC QUADRANGLE MAP AND GROUND SURVEY DATA.

PROJECT:
FORMER TECUMSEH PRODUCTS SITE
TECUMSEH, MICHIGAN

SHEET TITLE:
METHANE VENT LOCATIONS

DRAWN BY: DGS	SCALE:	PROJ. NO.	186299.0001.01
CHECKED BY: SEM	AS INDICATED	FILE NO.	186299.0001.01.04.dwg
APPROVED BY: GC	DATE PRINTED:	**FIGURE 4**	
DATE: SEPTEMBER 2013			

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Fax: 734.971.9022

Appendix A
Hydraulic Performance Data

US EPA ARCHIVE DOCUMENT

US EPA ARCHIVE DOCUMENT

Table

Table A1
Vertical Gradient Calculations
PRB Performance Monitoring
Former Tecumseh Products Company Site
Tecumseh, Michigan

Well Pair Location	Measurement Date	Shallow Aquifer Groundwater Elevation (ft MSL)	Intermediate Aquifer Groundwater Elevation (ft MSL)	Vertical Gradient (ft/ft)
PRB-04s/d	8/9/2011	778.56	778.60	0.0021
	10/5/2011	778.30	778.30	0.0000
	1/11/2012	778.94	778.93	-0.0005
	4/2/2012	779.13	779.13	0.0000
	7/2/2012	778.42	778.40	-0.0011
	10/2/2012	777.47	777.39	-0.0042
	3/4/2013	776.86	776.85	-0.0005
	6/5/2013	777.04	777.09	0.0026
	Average	**778.09**	**778.09**	**-0.0002**
PRB-08s/d	8/9/2011	778.52	778.55	0.0024
	10/5/2011	778.30	778.31	0.0008
	1/11/2012	778.93	778.95	0.0016
	4/2/2012	779.15	779.16	0.0008
	7/2/2012	778.45	778.44	-0.0008
	10/2/2012	777.40	777.36	-0.0032
	3/4/2013	776.89	776.91	0.0016
	6/5/2013	777.13	777.10	-0.0024
	Average	**778.10**	**778.10**	**0.0001**
PRB-15s/d	8/9/2011	779.40	779.41	0.0007
	10/5/2011	779.09	779.09	0.0000
	1/11/2012	779.76	779.77	0.0007
	4/2/2012	780.02	780.02	0.0000
	7/2/2012	779.40	779.38	-0.0014
	10/2/2012	778.19	778.20	0.0007
	3/4/2013	777.75	777.73	-0.0014
	6/5/2013	778.14	778.14	0.0000
	Average	**778.97**	**778.97**	**-0.0001**

Notes:
ft MSL - feet above mean sea level

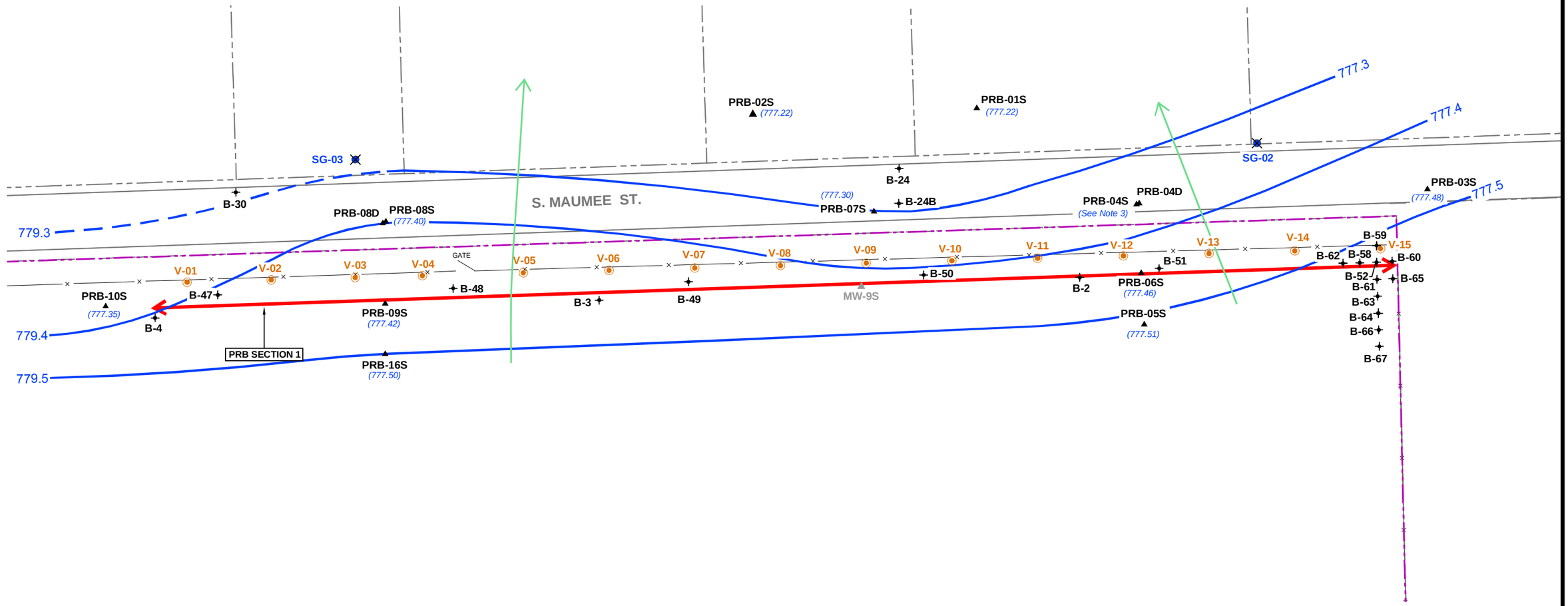
US EPA ARCHIVE DOCUMENT

US EPA ARCHIVE DOCUMENT

Figures

US EPA ARCHIVE DOCUMENT

PLOT DATA
Drawing Name: J:_TRC\Tecumseh Products\Tecumseh MI\186299\0001\01\2013 PRB ANNUAL RPT\186299.0001.01.A1-A3.dwg
Operator Name: STEHLE, DIANAH
Drawing Plot Scale: 0.386863
Dwg Size: 2.20 Mb
Plot Date: September 5, 2013
Plot Time: 12:37 PM
Attached Xrefs: bm033109
Attached Images:
Layout: FIG A1 PRB Sec1 GW Cont 2012 Oct



APPROXIMATE SCALE IN FEET

0 60' 120'

LEGEND

- FORMER TECUMSEH PRODUCTS SITE BOUNDARY
- PARCEL BOUNDARY
- B-2 — PERIMETER / OFF-SITE INVESTIGATION SOIL BORING LOCATION AND NUMBER
- PRB-04S — MONITORING WELL LOCATION AND NUMBER
- MW-9S — DECOMMISSIONED MONITORING WELL LOCATION AND NUMBER
- SG-02 — SOIL GAS SAMPLE LOCATION AND NUMBER
- V-04 — METHANE VENT LOCATION AND NUMBER
- PRB LOCATION
- FENCE LINE
- 778.5 — 0.1 FOOT GROUNDWATER CONTOUR LINE
- (778.62) — GROUNDWATER ELEVATION
- GROUNDWATER FLOW DIRECTION

NOTES

1. BASE MAP DEVELOPED FROM SITE PLAN PROVIDED BY THE CITY OF TECUMSEH, DRAWING NO. CITY.DWG, MARCH 2009.
2. GROUND TOPOGRAPHY BASED OFF 7.5 MINUTE U.S.G.S TOPOGRAPHIC QUADRANGLE MAP AND GROUND SURVEY DATA.
3. MEASURED DEPTH TO GROUNDWATER IS ANOMALOUS. DATUM NOT USED.

PROJECT:
FORMER TECUMSEH PRODUCTS SITE
TECUMSEH, MICHIGAN

TITLE:
PRB SECTION 1
GROUNDWATER CONTOUR MAP
OCTOBER 2012

DRAWN BY: DGS	SCALE:	PROJ. NO.	186299.0001.01
CHECKED BY: SEM	AS INDICATED	FILE NO.	186299.0001.01.A1-A3.dwg
APPROVED BY: GC	DATE PRINTED:	**FIGURE A1**	
DATE: SEPTEMBER 2013			

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Ann Arbor, MI 48108
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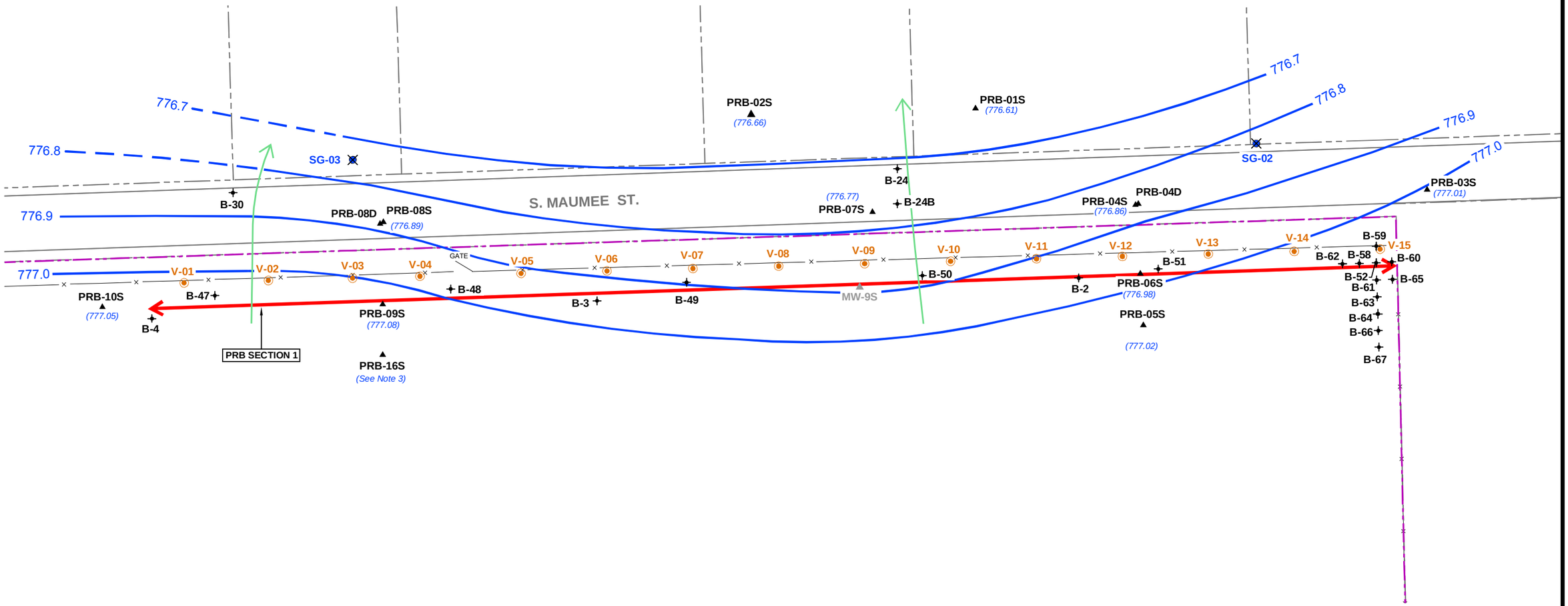
Fax: 734.971.9022

US EPA ARCHIVE DOCUMENT

PLOT DATA
Drawing Name: J:_TRC\Tecumseh Products\Tecumseh MI\186299\0001\01\2013 PRB ANNUAL RPT\186299.0001.01.A1-A3.dwg
Operator Name: STEHLE, DIANAH
Drawing Plot Scale: 0.386863
Dwg Size: 2.20 Mb
Plot Date: September 5, 2013
Plot Time: 12:39 PM
Attached Xref's: bm033109
Attached Images:
Layout: FIG A2 PRB Sec1 GW Cont 2013 Mar



APPROXIMATE SCALE IN FEET

0 60' 120'

LEGEND

- FORMER TECUMSEH PRODUCTS SITE BOUNDARY
- PARCEL BOUNDARY
- B-2 — PERIMETER / OFF-SITE INVESTIGATION SOIL BORING LOCATION AND NUMBER
- PRB-04S — MONITORING WELL LOCATION AND NUMBER
- MW-9S — DECOMMISSIONED MONITORING WELL LOCATION AND NUMBER
- SG-02 — SOIL GAS SAMPLE LOCATION AND NUMBER
- V-04 — METHANE VENT LOCATION AND NUMBER
- PRB LOCATION
- FENCE LINE
- 779.0 — 0.1 FOOT GROUNDWATER CONTOUR LINE
- (779.01) — GROUNDWATER ELEVATION
- GROUNDWATER FLOW DIRECTION

NOTES

1. BASE MAP DEVELOPED FROM SITE PLAN PROVIDED BY THE CITY OF TECUMSEH, DRAWING NO. CITY.DWG, MARCH 2009.
2. GROUND TOPOGRAPHY BASED OFF 7.5 MINUTE U.S.G.S TOPOGRAPHIC QUADRANGLE MAP AND GROUND SURVEY DATA.
3. THE WATER LEVEL AT MONITORING WELL PRB-16S WAS INADVERTENTLY NOT COLLECTED ON THE SAME DAY AS OTHER MONITORING LOCATIONS.

PROJECT: **FORMER TECUMSEH PRODUCTS SITE TECUMSEH, MICHIGAN**

TITLE: **PRB SECTION 1 GROUNDWATER CONTOUR MAP MARCH 2013**

DRAWN BY: DGS	SCALE:	PROJ. NO.	186299.0001.01
CHECKED BY: SEM	AS INDICATED	FILE NO.	186299.0001.01.A1-A3.dwg
APPROVED BY: GC	DATE PRINTED:	**FIGURE A2**	
DATE: SEPTEMBER 2013			

TRC
1540 Eisenhower Place
Ann Arbor, MI 48108
Phone: 734.971.7080
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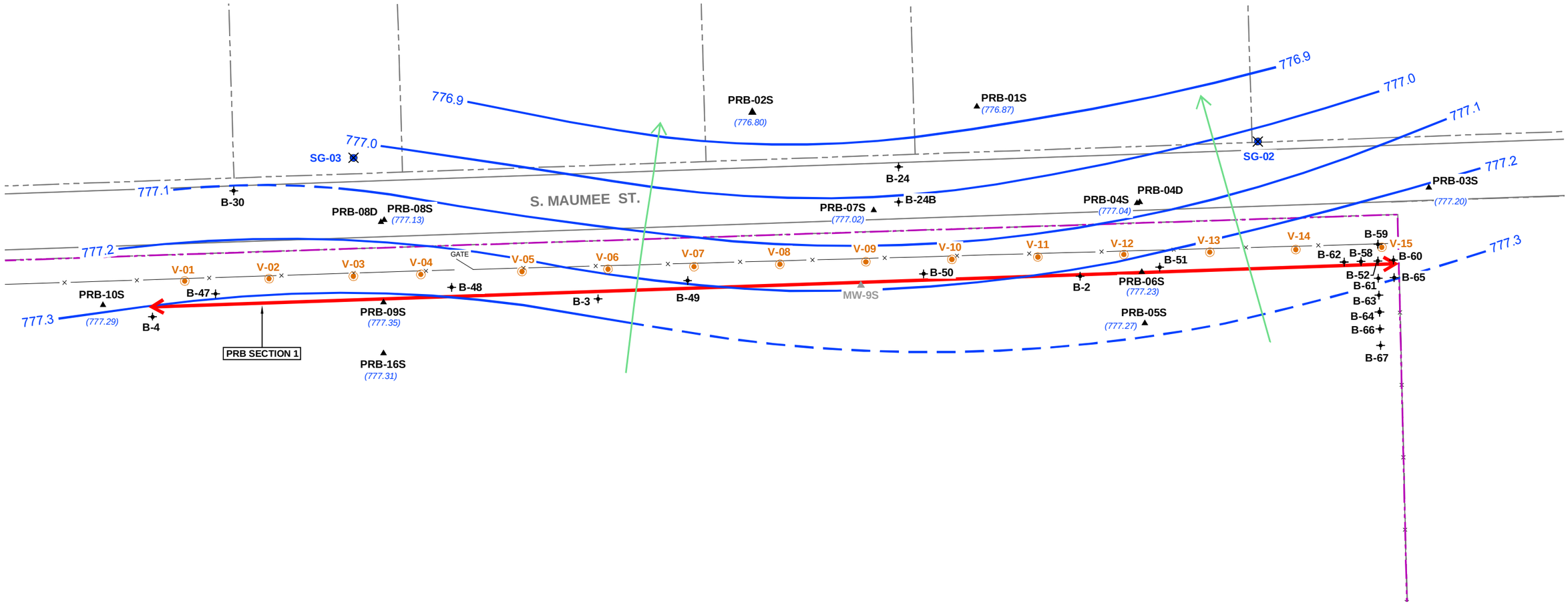
US EPA ARCHIVE DOCUMENT



APPROXIMATE SCALE IN FEET

0 60' 120'

LEGEND

- FORMER TECUMSEH PRODUCTS SITE BOUNDARY
- PARCEL BOUNDARY
- B-2 — PERIMETER / OFF-SITE INVESTIGATION SOIL BORING LOCATION AND NUMBER
- PRB-04S — MONITORING WELL LOCATION AND NUMBER
- MW-9S — DECOMMISSIONED MONITORING WELL LOCATION AND NUMBER
- SG-02 — SOIL GAS SAMPLE LOCATION AND NUMBER
- V-04 — METHANE VENT LOCATION AND NUMBER
- PRB LOCATION
- FENCE LINE
- 778.3 — 0.1 FOOT GROUNDWATER CONTOUR LINE
- (778.39) — GROUNDWATER ELEVATION
- GROUNDWATER FLOW DIRECTION

NOTES

1. BASE MAP DEVELOPED FROM SITE PLAN PROVIDED BY THE CITY OF TECUMSEH, DRAWING NO. CITY.DWG, MARCH 2009.
2. GROUND TOPOGRAPHY BASED OFF 7.5 MINUTE U.S.G.S TOPOGRAPHIC QUADRANGLE MAP AND GROUND SURVEY DATA.

PROJECT: **FORMER TECUMSEH PRODUCTS SITE TECUMSEH, MICHIGAN**

TITLE: **PRB SECTION 1 GROUNDWATER CONTOUR MAP JUNE 2013**

DRAWN BY: DGS	SCALE:	PROJ. NO.	186299.0001.01
CHECKED BY: SEM	AS INDICATED	FILE NO.	186299.0001.01.A1-A3.dwg
APPROVED BY: GC	DATE PRINTED:	FIGURE A3	
DATE: SEPTEMBER 2013			

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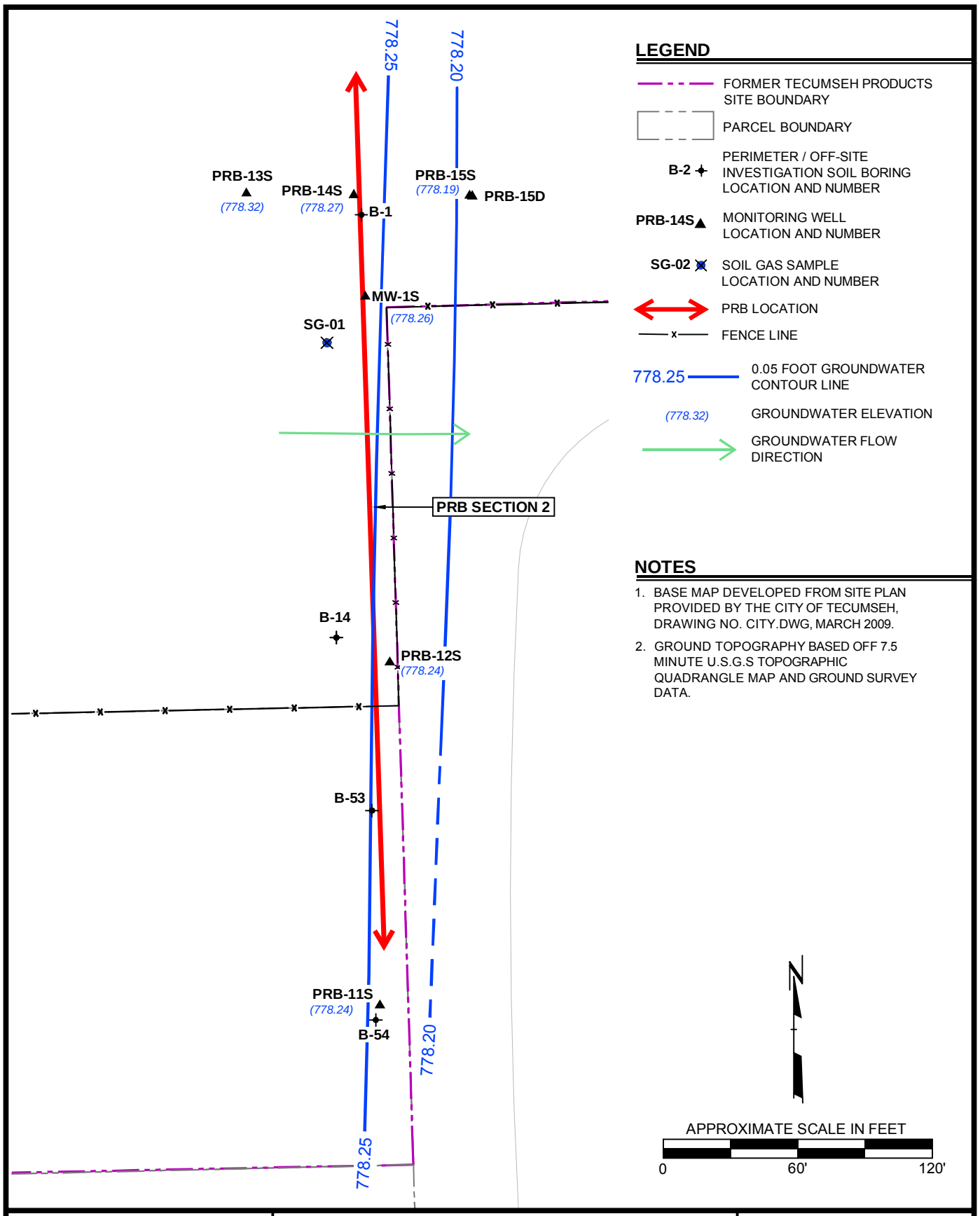
Ann Arbor, MI 48108
Phone: 734.971.7080
Fax: 734.971.9022

PLOT DATA
Drawing Name: J:_TRC\Tecumseh Products\Tecumseh MI\186299\0001\01\2013 PRB ANNUAL RPT\186299.0001.01.A1-A3.dwg
Operator Name: STEHLE, DIANAH
Drawing Plot Scale: 0.386863
Dwg Size: 2.20 Mb
Plot Date: September 5, 2013
Plot Time: 12:41 PM
Attached Xref's: bm033109
Attached Images:
Layout: FIG A3 PRB Sec1 GW Cont 2013 Jun

US EPA ARCHIVE DOCUMENT



TRC
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Ann Arbor, MI 48108
Phone: 734.971.7080
Fax: 734.971.9022

PROJECT:
FORMER TECUMSEH PRODUCTS SITE
TECUMSEH, MICHIGAN

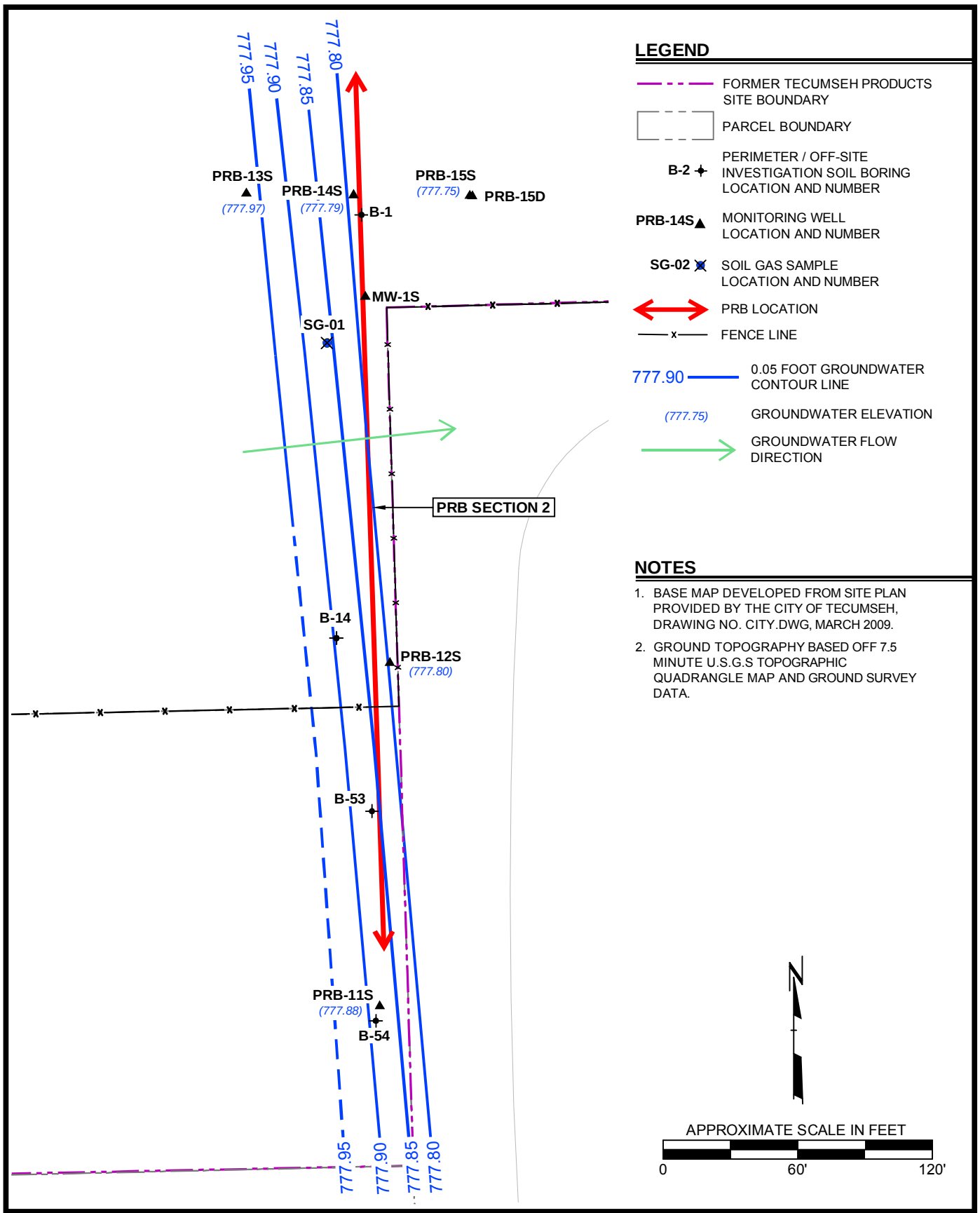
TITLE:
PRB SECTION 2
GROUNDWATER CONTOUR MAP
OCTOBER 2012

DRAWN BY:	DGS
APPROVED BY:	SEM
PROJ. NO.	186299.0001.01
FILE NO.	186299.0001.01.A4-A6.dwg
DATE:	SEPTEMBER 2013

FIGURE A4

Drawing Name: FIG A4 PRB Sec2 GW Cont 2012 Oct
Operator Name: STEHLE, DIANAH
Drawing Plot Scale: 0.386863
Plot Date: September 5, 2013
Plot Time: 12:43 PM
Layout: Attached Images:

US EPA ARCHIVE DOCUMENT



TRC
1540 Eisenhower Place
Ann Arbor, MI 48108
Phone: 734.971.7080
Fax: 734.971.9022

PROJECT:
FORMER TECUMSEH PRODUCTS SITE
TECUMSEH, MICHIGAN

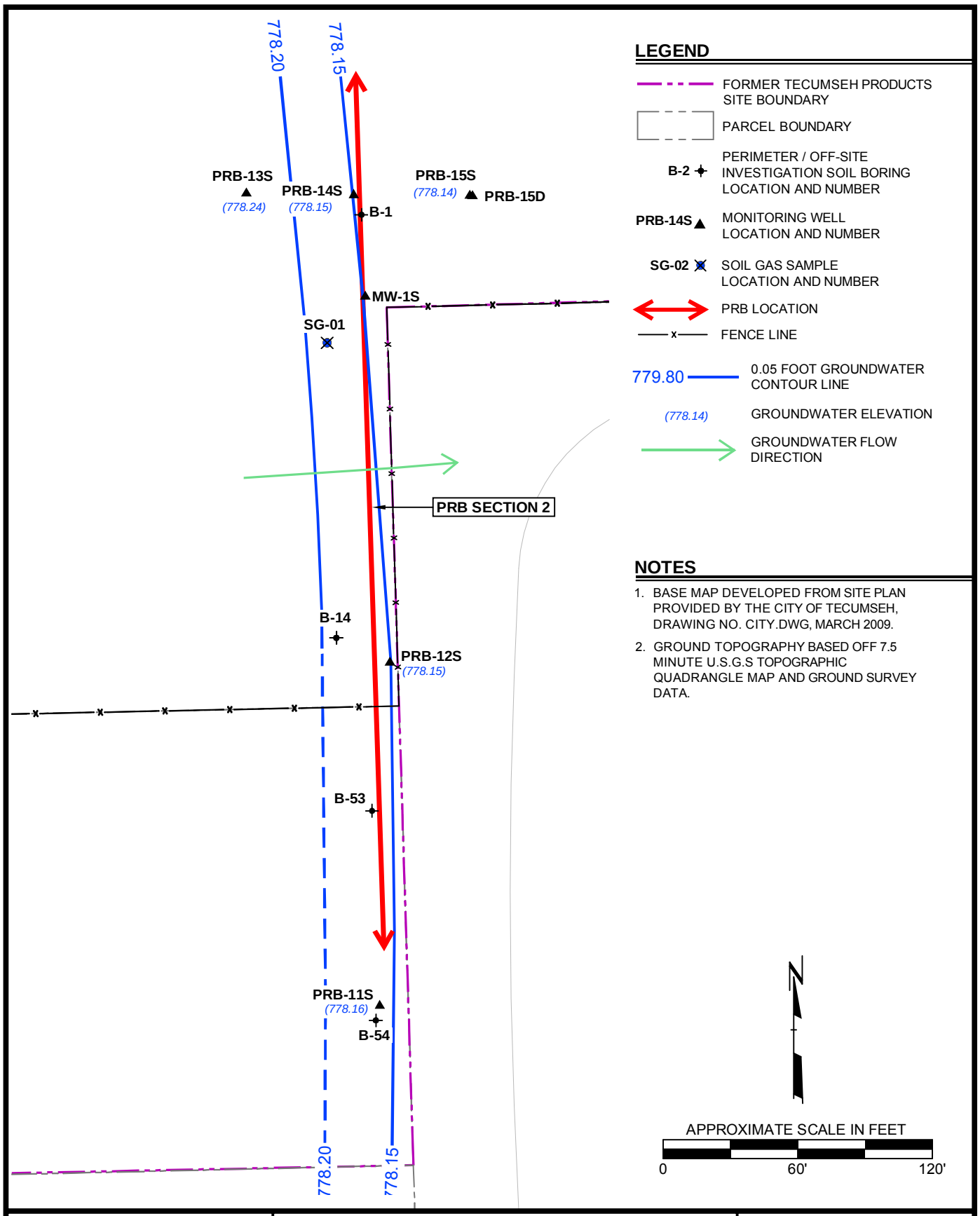
TITLE:
PRB SECTION 2
GROUNDWATER CONTOUR MAP
JUNE 2013

DRAWN BY:	DGS
APPROVED BY:	SEM
PROJ. NO.	186299.0001.01
FILE NO.	186299.0001.01.A4-A6.dwg
DATE:	SEPTEMBER 2013

FIGURE A5

Drawing Name: Layout: FIG A5 PRB Sec2 GW Cont 2013 Mar
Operator Name: STEHLE, DIANAH Plot Date: September 5, 2013 Attached Images:
Drawing Plot Scale: 0.386863 Plot Time: 12:45 PM

US EPA ARCHIVE DOCUMENT



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1540 Eisenhower Place
Ann Arbor, MI 48108
Phone: 734.971.7080
Fax: 734.971.9022

PROJECT:
FORMER TECUMSEH PRODUCTS SITE
TECUMSEH, MICHIGAN

TITLE:
PRB SECTION 2
GROUNDWATER CONTOUR MAP
JUNE 2013

DRAWN BY:	DGS
APPROVED BY:	SEM
PROJ. NO.	186299.0001.01
FILE NO.	186299.0001.01.A4-A6.dwg
DATE:	SEPTEMBER 2013

FIGURE A6

Drawing Name: Layout: FIG A6 PRB Sec2 GW Cont 2013 Jun
Operator Name: STEHLE, DIANAH Plot Date: September 5, 2013 Attached Images:
Drawing Plot Scale: 0.386863 Plot Time: 12:46 PM

Appendix B
Laboratory Data

US EPA ARCHIVE DOCUMENT

US EPA ARCHIVE DOCUMENT

Fourth Quarter 2012 Laboratory Data

October 25, 2012

TRC Companies. - Ann Arbor Office
Attn: Ms. Stacy Metz
1540 Eisenhower Place
Ann Arbor, MI 48108

Project: TPC - PRB Performance Monitoring

Dear Ms. Stacy Metz,

Enclosed is a copy of the laboratory report for the following work order(s) received by TriMatrix Laboratories:

Work Order	Received	Description
1210124	10/05/2012	Laboratory Services
1210209	10/10/2012	Laboratory Services
1210229	10/11/2012	Laboratory Services
1210284	10/12/2012	Laboratory Services

This report relates only to the sample(s) as received. Test results are in compliance with the requirements of the National Environmental Laboratory Accreditation Program (NELAP) and/or one of the following certification programs:

ACLASS DoD-ELAP/ISO17025 (#ADE-1542); Arkansas DEP (#11-054-0); Florida DEP (#E87622-24); Georgia EPD (#E87622-24); Illinois DEP (#002841); Kansas DPH (#E-10302); Kentucky DEP (#0021); Louisiana DEP (#03068); Michigan DPH (#0034); Minnesota DPH (#367345); New York ELAP (#46503); North Carolina DNRE (#659); Texas CEQ (#T104704495-12-2); Virginia DCLS (#1622); Wisconsin DNR (#999472650); USDA Soil Import Permit (#P330-09-00163).

Any qualification or narration of results, including sample acceptance requirements and test exceptions to the above referenced programs, is presented in the Statement of Data Qualifications section of this report. Estimates of analytical uncertainties and certification documents for the test results contained within this report are available upon request.

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Individual sample results relate only to the sample tested.
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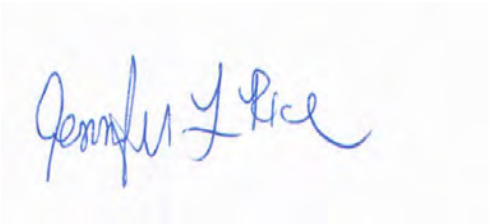
US EPA ARCHIVE DOCUMENT

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,



Jennifer L. Rice
Project Chemist

US EPA ARCHIVE DOCUMENT

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210124**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-08d**	Sampled:	10/04/12 13:06
Lab Sample ID:	**1210124-01**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/05/12 08:15
Unit:	ug/L	Prepared:	10/13/2012 By: BAG
Dilution Factor:	1	Analyzed:	10/13/12 By: BAG
QC Batch:	1212405	Analytical Batch:	2J15044

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	RL
67-64-1	Acetone	<20	20
107-13-1	Acrylonitrile	<2.0	2.0
71-43-2	Benzene	<1.0	1.0
108-86-1	Bromobenzene	<1.0	1.0
74-97-5	Bromochloromethane	<1.0	1.0
75-27-4	Bromodichloromethane	<1.0	1.0
75-25-2	Bromoform	<1.0	1.0
*74-83-9	Bromomethane	<5.0	5.0
104-51-8	n-Butylbenzene	<1.0	1.0
135-98-8	sec-Butylbenzene	<1.0	1.0
98-06-6	tert-Butylbenzene	<1.0	1.0
75-15-0	Carbon Disulfide	<1.0	1.0
56-23-5	Carbon Tetrachloride	<1.0	1.0
108-90-7	Chlorobenzene	<1.0	1.0
*75-00-3	Chloroethane	<5.0	5.0
67-66-3	Chloroform	<1.0	1.0
*74-87-3	Chloromethane	<5.0	5.0
96-12-8	1,2-Dibromo-3-chloropropane	<5.0	5.0
124-48-1	Dibromochloromethane	<1.0	1.0
106-93-4	1,2-Dibromoethane	<1.0	1.0
74-95-3	Dibromomethane	<1.0	1.0
110-57-6	trans-1,4-Dichloro-2-butene	<1.0	1.0
95-50-1	1,2-Dichlorobenzene	<1.0	1.0
541-73-1	1,3-Dichlorobenzene	<1.0	1.0
106-46-7	1,4-Dichlorobenzene	<1.0	1.0
75-71-8	Dichlorodifluoromethane	<5.0	5.0
75-34-3	1,1-Dichloroethane	<1.0	1.0
107-06-2	1,2-Dichloroethane	<1.0	1.0
75-35-4	1,1-Dichloroethene	<1.0	1.0
156-59-2	cis-1,2-Dichloroethene	<1.0	1.0
156-60-5	trans-1,2-Dichloroethene	<1.0	1.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210124**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-08d**	Sampled:	10/04/12 13:06
Lab Sample ID:	**1210124-01**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/05/12 08:15
Unit:	ug/L	Prepared:	10/13/2012 By: BAG
Dilution Factor:	1	Analyzed:	10/13/12 By: BAG
QC Batch:	1212405	Analytical Batch:	2J15044

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
78-87-5	1,2-Dichloropropane	<1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	<1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	<1.0	1.0
100-41-4	Ethylbenzene	<1.0	1.0
60-29-7	Ethyl Ether	<5.0	5.0
591-78-6	2-Hexanone	<5.0	5.0
*74-88-4	Iodomethane	<1.0	1.0
98-82-8	Isopropylbenzene	<1.0	1.0
99-87-6	4-Isopropyltoluene	<5.0	5.0
1634-04-4	Methyl tert-Butyl Ether	<5.0	5.0
75-09-2	Methylene Chloride	<5.0	5.0
78-93-3	2-Butanone (MEK)	<5.0	5.0
91-57-6	2-Methylnaphthalene	<5.0	5.0
108-10-1	4-Methyl-2-pentanone (MIBK)	<5.0	5.0
91-20-3	Naphthalene	<5.0	5.0
103-65-1	n-Propylbenzene	<1.0	1.0
100-42-5	Styrene	<1.0	1.0
630-20-6	1,1,1,2-Tetrachloroethane	<1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	<1.0	1.0
127-18-4	Tetrachloroethene	<1.0	1.0
109-99-9	Tetrahydrofuran	<5.0	5.0
108-88-3	Toluene	<1.0	1.0
87-61-6	1,2,3-Trichlorobenzene	<5.0	5.0
120-82-1	1,2,4-Trichlorobenzene	<5.0	5.0
71-55-6	1,1,1-Trichloroethane	<1.0	1.0
79-00-5	1,1,2-Trichloroethane	<1.0	1.0
79-01-6	Trichloroethene	<1.0	1.0
75-69-4	Trichlorofluoromethane	<1.0	1.0
96-18-4	1,2,3-Trichloropropane	<1.0	1.0
95-63-6	1,2,4-Trimethylbenzene	<1.0	1.0
108-67-8	1,3,5-Trimethylbenzene	<1.0	1.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210124**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-08d**	Sampled:	10/04/12 13:06
Lab Sample ID:	**1210124-01**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/05/12 08:15
Unit:	ug/L	Prepared:	10/13/2012 By: BAG
Dilution Factor:	1	Analyzed:	10/13/12 By: BAG
QC Batch:	1212405	Analytical Batch:	2J15044

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
75-01-4	Vinyl Chloride	**23**	1.0
179601-23-1	Xylene, Meta + Para	<2.0	2.0
95-47-6	Xylene, Ortho	<1.0	1.0

Surrogates:	***% Recovery***	***Control Limits***
Dibromofluoromethane	*98*	*85-118*
1,2-Dichloroethane-d4	*100*	*87-122*
Toluene-d8	*98*	*85-113*
4-Bromofluorobenzene	*98*	*82-110*

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ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210124**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-08d**	Sampled:	10/04/12 13:06
Lab Sample ID:	**1210124-01**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/05/12 08:15

Dissolved Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Calcium	**110**	0.50	mg/L	1	USEPA-6010C	10/11/12 08:30	KLV	1212101
Iron	**1000**	200	ug/L	1	USEPA-6010C	10/11/12 08:30	KLV	1212101
Magnesium	**28**	0.50	mg/L	1	USEPA-6010C	10/11/12 08:30	KLV	1212101
Manganese	<50	50	ug/L	1	USEPA-6010C	10/11/12 08:30	KLV	1212101

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210124**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-08d**	Sampled:	10/04/12 13:06
Lab Sample ID:	**1210124-01**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/05/12 08:15

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Chloride	**110**	2.0	mg/L	2	SM 4500-Cl E 20th	10/16/12 09:13	LMA	1212441
Carbon, Total Organic	**2.5**	1.0	mg/L	1	SM 5310 C 20th	10/08/12 13:13	KAR	1212169
Nitrogen, Nitrate	<0.050	0.050	mg/L	1	SM 4500-NO3 F 20th	10/05/12 11:44	CAC	1212100
Sulfate	**42**	10	mg/L	2	ASTM D516-90 (02)	10/17/12 09:44	LMA	1212566

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ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210124**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-08s**	Sampled:	10/04/12 13:37
Lab Sample ID:	**1210124-02**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/05/12 08:15
Unit:	ug/L	Prepared:	10/12/2012 By: BJH
Dilution Factor:	1	Analyzed:	10/12/12 By: BJH
QC Batch:	1212279	Analytical Batch:	2J12040

Dissolved Gases in Water by RSK-175 Headspace Analysis

CAS Number	Analyte	Analytical Result	RL
74-84-0	Ethane	<1.0	1.0
*74-82-8	Methane	**3000**	0.50
74-85-1	Ethylene	<1.0	1.0

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ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210124**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-08s**	Sampled:	10/04/12 13:37
Lab Sample ID:	**1210124-02**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/05/12 08:15
Unit:	ug/L	Prepared:	10/13/2012 By: BAG
Dilution Factor:	1	Analyzed:	10/13/12 By: BAG
QC Batch:	1212405	Analytical Batch:	2J15044

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	RL
67-64-1	Acetone	<20	20
107-13-1	Acrylonitrile	<2.0	2.0
71-43-2	Benzene	<1.0	1.0
108-86-1	Bromobenzene	<1.0	1.0
74-97-5	Bromochloromethane	<1.0	1.0
75-27-4	Bromodichloromethane	<1.0	1.0
75-25-2	Bromoform	<1.0	1.0
*74-83-9	Bromomethane	<5.0	5.0
104-51-8	n-Butylbenzene	<1.0	1.0
135-98-8	sec-Butylbenzene	<1.0	1.0
98-06-6	tert-Butylbenzene	<1.0	1.0
75-15-0	Carbon Disulfide	<1.0	1.0
56-23-5	Carbon Tetrachloride	<1.0	1.0
108-90-7	Chlorobenzene	<1.0	1.0
*75-00-3	Chloroethane	<5.0	5.0
67-66-3	Chloroform	<1.0	1.0
*74-87-3	Chloromethane	<5.0	5.0
96-12-8	1,2-Dibromo-3-chloropropane	<5.0	5.0
124-48-1	Dibromochloromethane	<1.0	1.0
106-93-4	1,2-Dibromoethane	<1.0	1.0
74-95-3	Dibromomethane	<1.0	1.0
110-57-6	trans-1,4-Dichloro-2-butene	<1.0	1.0
95-50-1	1,2-Dichlorobenzene	<1.0	1.0
541-73-1	1,3-Dichlorobenzene	<1.0	1.0
106-46-7	1,4-Dichlorobenzene	<1.0	1.0
75-71-8	Dichlorodifluoromethane	<5.0	5.0
75-34-3	1,1-Dichloroethane	<1.0	1.0
107-06-2	1,2-Dichloroethane	<1.0	1.0
75-35-4	1,1-Dichloroethene	<1.0	1.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210124**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-08s**	Sampled:	10/04/12 13:37
Lab Sample ID:	**1210124-02**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/05/12 08:15
Unit:	ug/L	Prepared:	10/13/2012 By: BAG
Dilution Factor:	1	Analyzed:	10/13/12 By: BAG
QC Batch:	1212405	Analytical Batch:	2J15044

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
156-59-2	cis-1,2-Dichloroethene	**11**	1.0
156-60-5	trans-1,2-Dichloroethene	**1.6**	1.0
78-87-5	1,2-Dichloropropane	<1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	<1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	<1.0	1.0
100-41-4	Ethylbenzene	<1.0	1.0
60-29-7	Ethyl Ether	<5.0	5.0
591-78-6	2-Hexanone	<5.0	5.0
*74-88-4	Iodomethane	<1.0	1.0
98-82-8	Isopropylbenzene	<1.0	1.0
99-87-6	4-Isopropyltoluene	<5.0	5.0
1634-04-4	Methyl tert-Butyl Ether	<5.0	5.0
75-09-2	Methylene Chloride	<5.0	5.0
78-93-3	2-Butanone (MEK)	<5.0	5.0
91-57-6	2-Methylnaphthalene	<5.0	5.0
108-10-1	4-Methyl-2-pentanone (MIBK)	<5.0	5.0
91-20-3	Naphthalene	<5.0	5.0
103-65-1	n-Propylbenzene	<1.0	1.0
100-42-5	Styrene	<1.0	1.0
630-20-6	1,1,1,2-Tetrachloroethane	<1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	<1.0	1.0
127-18-4	Tetrachloroethene	<1.0	1.0
109-99-9	Tetrahydrofuran	<5.0	5.0
108-88-3	Toluene	<1.0	1.0
87-61-6	1,2,3-Trichlorobenzene	<5.0	5.0
120-82-1	1,2,4-Trichlorobenzene	<5.0	5.0
71-55-6	1,1,1-Trichloroethane	<1.0	1.0
79-00-5	1,1,2-Trichloroethane	<1.0	1.0
79-01-6	Trichloroethene	<1.0	1.0
75-69-4	Trichlorofluoromethane	<1.0	1.0
96-18-4	1,2,3-Trichloropropane	<1.0	1.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210124**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-08s**	Sampled:	10/04/12 13:37
Lab Sample ID:	**1210124-02**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/05/12 08:15
Unit:	ug/L	Prepared:	10/13/2012 By: BAG
Dilution Factor:	1	Analyzed:	10/13/12 By: BAG
QC Batch:	1212405	Analytical Batch:	2J15044

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
95-63-6	1,2,4-Trimethylbenzene	<1.0	1.0
108-67-8	1,3,5-Trimethylbenzene	<1.0	1.0
75-01-4	Vinyl Chloride	**2.2**	1.0
179601-23-1	Xylene, Meta + Para	<2.0	2.0
95-47-6	Xylene, Ortho	<1.0	1.0

Surrogates:	***% Recovery***	***Control Limits***
Dibromofluoromethane	*99*	*85-118*
1,2-Dichloroethane-d4	*100*	*87-122*
Toluene-d8	*98*	*85-113*
4-Bromofluorobenzene	*98*	*82-110*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210124**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-08s**	Sampled:	10/04/12 13:37
Lab Sample ID:	**1210124-02**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/05/12 08:15

Dissolved Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Calcium	**83**	0.50	mg/L	1	USEPA-6010C	10/11/12 08:53	KLV	1212101
Iron	**4200**	200	ug/L	1	USEPA-6010C	10/11/12 08:53	KLV	1212101
Magnesium	**22**	0.50	mg/L	1	USEPA-6010C	10/11/12 08:53	KLV	1212101
Manganese	**620**	50	ug/L	1	USEPA-6010C	10/11/12 08:53	KLV	1212101

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210124**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-08s**	Sampled:	10/04/12 13:37
Lab Sample ID:	**1210124-02**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/05/12 08:15

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Chloride	**43**	1.0	mg/L	1	SM 4500-Cl E 20th	10/16/12 08:33	LMA	1212441
Carbon, Total Organic	**2.8**	1.0	mg/L	1	SM 5310 C 20th	10/08/12 13:46	KAR	1212169
Nitrogen, Nitrate	<0.050	0.050	mg/L	1	SM 4500-NO3 F 20th	10/05/12 11:45	CAC	1212100
Sulfate	**9.6**	5.0	mg/L	1	ASTM D516-90 (02)	10/17/12 08:42	LMA	1212566

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210124**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-08s**	Sampled:	10/04/12 13:37
Lab Sample ID:	**1210124-02RE1**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/05/12 08:15
Unit:	ug/L	Prepared:	10/12/2012 By: BJH
Dilution Factor:	200	Analyzed:	10/12/12 By: BJH
QC Batch:	1212279	Analytical Batch:	2J12040

Dissolved Gases in Water by RSK-175 Headspace Analysis

CAS Number	Analyte	Analytical Result	RL
74-84-0	Ethane	<200	200
74-82-8	Methane	**6300**	100
74-85-1	Ethylene	<200	200

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210124**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-07s**	Sampled:	10/04/12 14:59
Lab Sample ID:	**1210124-03**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/05/12 08:15
Unit:	ug/L	Prepared:	10/12/2012 By: BJH
Dilution Factor:	1	Analyzed:	10/12/12 By: BJH
QC Batch:	1212279	Analytical Batch:	2J12040

Dissolved Gases in Water by RSK-175 Headspace Analysis

CAS Number	Analyte	Analytical Result	RL
74-84-0	Ethane	**1.4**	1.0
*74-82-8	Methane	**3200**	0.50
74-85-1	Ethylene	<1.0	1.0

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ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210124**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-07s**	Sampled:	10/04/12 14:59
Lab Sample ID:	**1210124-03**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/05/12 08:15
Unit:	ug/L	Prepared:	10/13/2012 By: BAG
Dilution Factor:	10	Analyzed:	10/13/12 By: BAG
QC Batch:	1212405	Analytical Batch:	2J15044

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	RL
67-64-1	Acetone	<200	200
107-13-1	Acrylonitrile	<20	20
71-43-2	Benzene	<10	10
108-86-1	Bromobenzene	<10	10
74-97-5	Bromochloromethane	<10	10
75-27-4	Bromodichloromethane	<10	10
75-25-2	Bromoform	<10	10
*74-83-9	Bromomethane	<50	50
104-51-8	n-Butylbenzene	<10	10
135-98-8	sec-Butylbenzene	<10	10
98-06-6	tert-Butylbenzene	<10	10
75-15-0	Carbon Disulfide	<10	10
56-23-5	Carbon Tetrachloride	<10	10
108-90-7	Chlorobenzene	<10	10
*75-00-3	Chloroethane	<50	50
67-66-3	Chloroform	<10	10
*74-87-3	Chloromethane	<50	50
96-12-8	1,2-Dibromo-3-chloropropane	<50	50
124-48-1	Dibromochloromethane	<10	10
106-93-4	1,2-Dibromoethane	<10	10
74-95-3	Dibromomethane	<10	10
110-57-6	trans-1,4-Dichloro-2-butene	<10	10
95-50-1	1,2-Dichlorobenzene	<10	10
541-73-1	1,3-Dichlorobenzene	<10	10
106-46-7	1,4-Dichlorobenzene	<10	10
75-71-8	Dichlorodifluoromethane	<50	50
75-34-3	1,1-Dichloroethane	<10	10
107-06-2	1,2-Dichloroethane	<10	10
75-35-4	1,1-Dichloroethene	<10	10

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210124**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-07s**	Sampled:	10/04/12 14:59
Lab Sample ID:	**1210124-03**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/05/12 08:15
Unit:	ug/L	Prepared:	10/13/2012 By: BAG
Dilution Factor:	10	Analyzed:	10/13/12 By: BAG
QC Batch:	1212405	Analytical Batch:	2J15044

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
156-59-2	cis-1,2-Dichloroethene	**150**	10
156-60-5	trans-1,2-Dichloroethene	**41**	10
78-87-5	1,2-Dichloropropane	<10	10
10061-01-5	cis-1,3-Dichloropropene	<10	10
10061-02-6	trans-1,3-Dichloropropene	<10	10
100-41-4	Ethylbenzene	<10	10
60-29-7	Ethyl Ether	<50	50
591-78-6	2-Hexanone	<50	50
*74-88-4	Iodomethane	<10	10
98-82-8	Isopropylbenzene	<10	10
99-87-6	4-Isopropyltoluene	<50	50
1634-04-4	Methyl tert-Butyl Ether	<50	50
75-09-2	Methylene Chloride	<50	50
78-93-3	2-Butanone (MEK)	<50	50
91-57-6	2-Methylnaphthalene	<50	50
108-10-1	4-Methyl-2-pentanone (MIBK)	<50	50
91-20-3	Naphthalene	<50	50
103-65-1	n-Propylbenzene	<10	10
100-42-5	Styrene	<10	10
630-20-6	1,1,1,2-Tetrachloroethane	<10	10
79-34-5	1,1,2,2-Tetrachloroethane	<10	10
127-18-4	Tetrachloroethene	<10	10
109-99-9	Tetrahydrofuran	<50	50
108-88-3	Toluene	<10	10
87-61-6	1,2,3-Trichlorobenzene	<50	50
120-82-1	1,2,4-Trichlorobenzene	<50	50
71-55-6	1,1,1-Trichloroethane	**17**	10
79-00-5	1,1,2-Trichloroethane	<10	10
79-01-6	Trichloroethene	**750**	10
75-69-4	Trichlorofluoromethane	<10	10
96-18-4	1,2,3-Trichloropropane	<10	10

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210124**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-07s**	Sampled:	10/04/12 14:59
Lab Sample ID:	**1210124-03**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/05/12 08:15
Unit:	ug/L	Prepared:	10/13/2012 By: BAG
Dilution Factor:	10	Analyzed:	10/13/12 By: BAG
QC Batch:	1212405	Analytical Batch:	2J15044

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
95-63-6	1,2,4-Trimethylbenzene	<10	10
108-67-8	1,3,5-Trimethylbenzene	<10	10
75-01-4	Vinyl Chloride	<10	10
179601-23-1	Xylene, Meta + Para	<20	20
95-47-6	Xylene, Ortho	<10	10

Surrogates:	***% Recovery***	***Control Limits***
Dibromofluoromethane	*99*	*85-118*
1,2-Dichloroethane-d4	*99*	*87-122*
Toluene-d8	*98*	*85-113*
4-Bromofluorobenzene	*99*	*82-110*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210124**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-07s**	Sampled:	10/04/12 14:59
Lab Sample ID:	**1210124-03**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/05/12 08:15

Dissolved Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Calcium	**83**	0.50	mg/L	1	USEPA-6010C	10/11/12 08:56	KLV	1212101
Iron	**1400**	200	ug/L	1	USEPA-6010C	10/11/12 08:56	KLV	1212101
Magnesium	**14**	0.50	mg/L	1	USEPA-6010C	10/11/12 08:56	KLV	1212101
Manganese	**850**	50	ug/L	1	USEPA-6010C	10/11/12 08:56	KLV	1212101

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ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210124**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-07s**	Sampled:	10/04/12 14:59
Lab Sample ID:	**1210124-03**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/05/12 08:15

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Carbon, Total Organic	**2.3**	1.0	mg/L	1	SM 5310 C 20th	10/08/12 13:57	KAR	1212169
Chloride	**25**	1.0	mg/L	1	SM 4500-Cl E 20th	10/16/12 08:33	LMA	1212441
Nitrogen, Nitrate	**0.21**	0.050	mg/L	1	SM 4500-NO3 F 20th	10/05/12 11:47	CAC	1212100
Sulfate	**26**	5.0	mg/L	1	ASTM D516-90 (02)	10/17/12 08:42	LMA	1212566

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210124**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-07s**	Sampled:	10/04/12 14:59
Lab Sample ID:	**1210124-03RE1**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/05/12 08:15
Unit:	ug/L	Prepared:	10/12/2012 By: BJH
Dilution Factor:	200	Analyzed:	10/12/12 By: BJH
QC Batch:	1212279	Analytical Batch:	2J12040

Dissolved Gases in Water by RSK-175 Headspace Analysis

CAS Number	Analyte	Analytical Result	RL
74-84-0	Ethane	<200	200
74-82-8	Methane	**6300**	100
74-85-1	Ethylene	<200	200

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ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210124**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-04s**	Sampled:	10/04/12 17:04
Lab Sample ID:	**1210124-04**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/05/12 08:15
Unit:	ug/L	Prepared:	10/12/2012 By: BJH
Dilution Factor:	1	Analyzed:	10/12/12 By: BJH
QC Batch:	1212279	Analytical Batch:	2J12040

Dissolved Gases in Water by RSK-175 Headspace Analysis

CAS Number	Analyte	Analytical Result	RL
74-84-0	Ethane	**2.6**	1.0
*74-82-8	Methane	**3400**	0.50
74-85-1	Ethylene	**100**	1.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210124**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-04s**	Sampled:	10/04/12 17:04
Lab Sample ID:	**1210124-04**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/05/12 08:15
Unit:	ug/L	Prepared:	10/15/2012 By: BAG
Dilution Factor:	10	Analyzed:	10/15/12 By: BAG
QC Batch:	1212468	Analytical Batch:	2J16018

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	RL
67-64-1	Acetone	<200	200
107-13-1	Acrylonitrile	<20	20
71-43-2	Benzene	<10	10
108-86-1	Bromobenzene	<10	10
74-97-5	Bromochloromethane	<10	10
75-27-4	Bromodichloromethane	<10	10
75-25-2	Bromoform	<10	10
*74-83-9	Bromomethane	<50	50
104-51-8	n-Butylbenzene	<10	10
135-98-8	sec-Butylbenzene	<10	10
98-06-6	tert-Butylbenzene	<10	10
75-15-0	Carbon Disulfide	<10	10
56-23-5	Carbon Tetrachloride	<10	10
108-90-7	Chlorobenzene	<10	10
75-00-3	Chloroethane	**74**	50
67-66-3	Chloroform	<10	10
74-87-3	Chloromethane	<50	50
96-12-8	1,2-Dibromo-3-chloropropane	<50	50
124-48-1	Dibromochloromethane	<10	10
106-93-4	1,2-Dibromoethane	<10	10
74-95-3	Dibromomethane	<10	10
110-57-6	trans-1,4-Dichloro-2-butene	<10	10
95-50-1	1,2-Dichlorobenzene	<10	10
541-73-1	1,3-Dichlorobenzene	<10	10
106-46-7	1,4-Dichlorobenzene	<10	10
75-71-8	Dichlorodifluoromethane	<50	50
75-34-3	1,1-Dichloroethane	**180**	10
107-06-2	1,2-Dichloroethane	<10	10
75-35-4	1,1-Dichloroethene	<10	10

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ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210124**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-04s**	Sampled:	10/04/12 17:04
Lab Sample ID:	**1210124-04**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/05/12 08:15
Unit:	ug/L	Prepared:	10/15/2012 By: BAG
Dilution Factor:	10	Analyzed:	10/15/12 By: BAG
QC Batch:	1212468	Analytical Batch:	2J16018

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
156-59-2	cis-1,2-Dichloroethene	**1400**	10
156-60-5	trans-1,2-Dichloroethene	**36**	10
78-87-5	1,2-Dichloropropane	<10	10
10061-01-5	cis-1,3-Dichloropropene	<10	10
10061-02-6	trans-1,3-Dichloropropene	<10	10
100-41-4	Ethylbenzene	<10	10
60-29-7	Ethyl Ether	<50	50
591-78-6	2-Hexanone	<50	50
*74-88-4	Iodomethane	<10	10
98-82-8	Isopropylbenzene	<10	10
99-87-6	4-Isopropyltoluene	<50	50
1634-04-4	Methyl tert-Butyl Ether	<50	50
75-09-2	Methylene Chloride	<50	50
78-93-3	2-Butanone (MEK)	<50	50
91-57-6	2-Methylnaphthalene	<50	50
108-10-1	4-Methyl-2-pentanone (MIBK)	<50	50
91-20-3	Naphthalene	<50	50
103-65-1	n-Propylbenzene	<10	10
100-42-5	Styrene	<10	10
630-20-6	1,1,1,2-Tetrachloroethane	<10	10
79-34-5	1,1,2,2-Tetrachloroethane	<10	10
127-18-4	Tetrachloroethene	<10	10
109-99-9	Tetrahydrofuran	<50	50
108-88-3	Toluene	<10	10
87-61-6	1,2,3-Trichlorobenzene	<50	50
120-82-1	1,2,4-Trichlorobenzene	<50	50
71-55-6	1,1,1-Trichloroethane	<10	10
79-00-5	1,1,2-Trichloroethane	<10	10
79-01-6	Trichloroethene	<10	10
*75-69-4	Trichlorofluoromethane	<10	10
96-18-4	1,2,3-Trichloropropane	<10	10

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210124**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-04s**	Sampled:	10/04/12 17:04
Lab Sample ID:	**1210124-04**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/05/12 08:15
Unit:	ug/L	Prepared:	10/15/2012 By: BAG
Dilution Factor:	10	Analyzed:	10/15/12 By: BAG
QC Batch:	1212468	Analytical Batch:	2J16018

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
95-63-6	1,2,4-Trimethylbenzene	<10	10
108-67-8	1,3,5-Trimethylbenzene	<10	10
75-01-4	Vinyl Chloride	**430**	10
179601-23-1	Xylene, Meta + Para	<20	20
95-47-6	Xylene, Ortho	<10	10

Surrogates:	***% Recovery***	***Control Limits***
Dibromofluoromethane	*98*	*85-118*
1,2-Dichloroethane-d4	*103*	*87-122*
Toluene-d8	*100*	*85-113*
4-Bromofluorobenzene	*98*	*82-110*

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ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210124**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-04s**	Sampled:	10/04/12 17:04
Lab Sample ID:	**1210124-04**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/05/12 08:15

Dissolved Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Calcium	**81**	0.50	mg/L	1	USEPA-6010C	10/11/12 09:00	KLV	1212101
Iron	**25000**	200	ug/L	1	USEPA-6010C	10/11/12 09:00	KLV	1212101
Magnesium	**18**	0.50	mg/L	1	USEPA-6010C	10/11/12 09:00	KLV	1212101
Manganese	**720**	50	ug/L	1	USEPA-6010C	10/11/12 09:00	KLV	1212101

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210124**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-04s**	Sampled:	10/04/12 17:04
Lab Sample ID:	**1210124-04**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/05/12 08:15

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Chloride	**5.9**	1.0	mg/L	1	SM 4500-Cl E 20th	10/16/12 08:33	LMA	1212441
Carbon, Total Organic	**15**	1.0	mg/L	1	SM 5310 C 20th	10/08/12 14:08	KAR	1212169
Nitrogen, Nitrate	<0.050	0.050	mg/L	1	SM 4500-NO3 F 20th	10/05/12 11:48	CAC	1212100
Sulfate	<1.0	1.0	mg/L	1	ASTM D516-90 (02)	10/17/12 10:19	LMA	1212568

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210124**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-04s**	Sampled:	10/04/12 17:04
Lab Sample ID:	**1210124-04RE1**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/05/12 08:15
Unit:	ug/L	Prepared:	10/12/2012 By: BJH
Dilution Factor:	200	Analyzed:	10/12/12 By: BJH
QC Batch:	1212279	Analytical Batch:	2J12040

Dissolved Gases in Water by RSK-175 Headspace Analysis

CAS Number	Analyte	Analytical Result	RL
74-84-0	Ethane	<200	200
74-82-8	Methane	**8400**	100
74-85-1	Ethylene	<200	200

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210124**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-04d**	Sampled:	10/04/12 17:31
Lab Sample ID:	**1210124-05**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/05/12 08:15
Unit:	ug/L	Prepared:	10/13/2012 By: BAG
Dilution Factor:	1	Analyzed:	10/13/12 By: BAG
QC Batch:	1212405	Analytical Batch:	2J15044

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	RL
67-64-1	Acetone	<20	20
107-13-1	Acrylonitrile	<2.0	2.0
71-43-2	Benzene	<1.0	1.0
108-86-1	Bromobenzene	<1.0	1.0
74-97-5	Bromochloromethane	<1.0	1.0
75-27-4	Bromodichloromethane	<1.0	1.0
75-25-2	Bromoform	<1.0	1.0
*74-83-9	Bromomethane	<5.0	5.0
104-51-8	n-Butylbenzene	<1.0	1.0
135-98-8	sec-Butylbenzene	<1.0	1.0
98-06-6	tert-Butylbenzene	<1.0	1.0
75-15-0	Carbon Disulfide	<1.0	1.0
56-23-5	Carbon Tetrachloride	<1.0	1.0
108-90-7	Chlorobenzene	<1.0	1.0
*75-00-3	Chloroethane	<5.0	5.0
67-66-3	Chloroform	<1.0	1.0
*74-87-3	Chloromethane	<5.0	5.0
96-12-8	1,2-Dibromo-3-chloropropane	<5.0	5.0
124-48-1	Dibromochloromethane	<1.0	1.0
106-93-4	1,2-Dibromoethane	<1.0	1.0
74-95-3	Dibromomethane	<1.0	1.0
110-57-6	trans-1,4-Dichloro-2-butene	<1.0	1.0
95-50-1	1,2-Dichlorobenzene	<1.0	1.0
541-73-1	1,3-Dichlorobenzene	<1.0	1.0
106-46-7	1,4-Dichlorobenzene	<1.0	1.0
75-71-8	Dichlorodifluoromethane	<5.0	5.0
75-34-3	1,1-Dichloroethane	<1.0	1.0
107-06-2	1,2-Dichloroethane	<1.0	1.0
75-35-4	1,1-Dichloroethene	<1.0	1.0
156-59-2	cis-1,2-Dichloroethene	<1.0	1.0
156-60-5	trans-1,2-Dichloroethene	<1.0	1.0

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ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210124**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-04d**	Sampled:	10/04/12 17:31
Lab Sample ID:	**1210124-05**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/05/12 08:15
Unit:	ug/L	Prepared:	10/13/2012 By: BAG
Dilution Factor:	1	Analyzed:	10/13/12 By: BAG
QC Batch:	1212405	Analytical Batch:	2J15044

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
78-87-5	1,2-Dichloropropane	<1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	<1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	<1.0	1.0
100-41-4	Ethylbenzene	<1.0	1.0
60-29-7	Ethyl Ether	<5.0	5.0
591-78-6	2-Hexanone	<5.0	5.0
*74-88-4	Iodomethane	<1.0	1.0
98-82-8	Isopropylbenzene	<1.0	1.0
99-87-6	4-Isopropyltoluene	<5.0	5.0
1634-04-4	Methyl tert-Butyl Ether	<5.0	5.0
75-09-2	Methylene Chloride	<5.0	5.0
78-93-3	2-Butanone (MEK)	<5.0	5.0
91-57-6	2-Methylnaphthalene	<5.0	5.0
108-10-1	4-Methyl-2-pentanone (MIBK)	<5.0	5.0
91-20-3	Naphthalene	<5.0	5.0
103-65-1	n-Propylbenzene	<1.0	1.0
100-42-5	Styrene	<1.0	1.0
630-20-6	1,1,1,2-Tetrachloroethane	<1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	<1.0	1.0
127-18-4	Tetrachloroethene	<1.0	1.0
109-99-9	Tetrahydrofuran	<5.0	5.0
108-88-3	Toluene	<1.0	1.0
87-61-6	1,2,3-Trichlorobenzene	<5.0	5.0
120-82-1	1,2,4-Trichlorobenzene	<5.0	5.0
71-55-6	1,1,1-Trichloroethane	<1.0	1.0
79-00-5	1,1,2-Trichloroethane	<1.0	1.0
79-01-6	Trichloroethene	<1.0	1.0
75-69-4	Trichlorofluoromethane	<1.0	1.0
96-18-4	1,2,3-Trichloropropane	<1.0	1.0
95-63-6	1,2,4-Trimethylbenzene	<1.0	1.0
108-67-8	1,3,5-Trimethylbenzene	<1.0	1.0

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*See Statement of Data Qualifications

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210124**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-04d**	Sampled:	10/04/12 17:31
Lab Sample ID:	**1210124-05**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/05/12 08:15
Unit:	ug/L	Prepared:	10/13/2012 By: BAG
Dilution Factor:	1	Analyzed:	10/13/12 By: BAG
QC Batch:	1212405	Analytical Batch:	2J15044

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
75-01-4	Vinyl Chloride	**13**	1.0
179601-23-1	Xylene, Meta + Para	<2.0	2.0
95-47-6	Xylene, Ortho	<1.0	1.0

Surrogates:	***% Recovery***	***Control Limits***
Dibromofluoromethane	*98*	*85-118*
1,2-Dichloroethane-d4	*101*	*87-122*
Toluene-d8	*99*	*85-113*
4-Bromofluorobenzene	*99*	*82-110*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210124**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-04d**	Sampled:	10/04/12 17:31
Lab Sample ID:	**1210124-05**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/05/12 08:15

Dissolved Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Calcium	**110**	0.50	mg/L	1	USEPA-6010C	10/11/12 09:03	KLV	1212101
Iron	**1900**	200	ug/L	1	USEPA-6010C	10/11/12 09:03	KLV	1212101
Magnesium	**29**	0.50	mg/L	1	USEPA-6010C	10/11/12 09:03	KLV	1212101
Manganese	**58**	50	ug/L	1	USEPA-6010C	10/11/12 09:03	KLV	1212101

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210124**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-04d**	Sampled:	10/04/12 17:31
Lab Sample ID:	**1210124-05**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/05/12 08:15

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Chloride	**150**	2.0	mg/L	2	SM 4500-Cl E 20th	10/16/12 09:21	LMA	1212441
Carbon, Total Organic	**2.7**	1.0	mg/L	1	SM 5310 C 20th	10/08/12 14:19	KAR	1212169
Nitrogen, Nitrate	<0.050	0.050	mg/L	1	SM 4500-NO3 F 20th	10/05/12 11:49	CAC	1212100
Sulfate	**32**	10	mg/L	2	ASTM D516-90 (02)	10/17/12 09:48	LMA	1212566

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210209**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-03s**	Sampled:	10/09/12 10:35
Lab Sample ID:	**1210209-01**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/10/12 08:15
Unit:	ug/L	Prepared:	10/16/2012 By: LEW
Dilution Factor:	5	Analyzed:	10/17/12 By: LEW
QC Batch:	1212640	Analytical Batch:	2J18057

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	RL
67-64-1	Acetone	<100	100
107-13-1	Acrylonitrile	<10	10
71-43-2	Benzene	<5.0	5.0
108-86-1	Bromobenzene	<5.0	5.0
74-97-5	Bromochloromethane	<5.0	5.0
75-27-4	Bromodichloromethane	<5.0	5.0
75-25-2	Bromoform	<5.0	5.0
74-83-9	Bromomethane	<25	25
104-51-8	n-Butylbenzene	<5.0	5.0
135-98-8	sec-Butylbenzene	<5.0	5.0
98-06-6	tert-Butylbenzene	<5.0	5.0
75-15-0	Carbon Disulfide	<5.0	5.0
56-23-5	Carbon Tetrachloride	<5.0	5.0
108-90-7	Chlorobenzene	<5.0	5.0
75-00-3	Chloroethane	<25	25
67-66-3	Chloroform	<5.0	5.0
74-87-3	Chloromethane	<25	25
96-12-8	1,2-Dibromo-3-chloropropane	<25	25
124-48-1	Dibromochloromethane	<5.0	5.0
106-93-4	1,2-Dibromoethane	<5.0	5.0
74-95-3	Dibromomethane	<5.0	5.0
110-57-6	trans-1,4-Dichloro-2-butene	<5.0	5.0
95-50-1	1,2-Dichlorobenzene	<5.0	5.0
541-73-1	1,3-Dichlorobenzene	<5.0	5.0
106-46-7	1,4-Dichlorobenzene	<5.0	5.0
75-71-8	Dichlorodifluoromethane	<25	25
75-34-3	1,1-Dichloroethane	**29**	5.0
107-06-2	1,2-Dichloroethane	<5.0	5.0
75-35-4	1,1-Dichloroethene	<5.0	5.0
156-59-2	cis-1,2-Dichloroethene	<5.0	5.0
156-60-5	trans-1,2-Dichloroethene	<5.0	5.0

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ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210209**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-03s**	Sampled:	10/09/12 10:35
Lab Sample ID:	**1210209-01**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/10/12 08:15
Unit:	ug/L	Prepared:	10/16/2012 By: LEW
Dilution Factor:	5	Analyzed:	10/17/12 By: LEW
QC Batch:	1212640	Analytical Batch:	2J18057

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
78-87-5	1,2-Dichloropropane	<5.0	5.0
10061-01-5	cis-1,3-Dichloropropene	<5.0	5.0
10061-02-6	trans-1,3-Dichloropropene	<5.0	5.0
100-41-4	Ethylbenzene	**370**	5.0
60-29-7	Ethyl Ether	<25	25
591-78-6	2-Hexanone	<25	25
74-88-4	Iodomethane	<5.0	5.0
98-82-8	Isopropylbenzene	<5.0	5.0
99-87-6	4-Isopropyltoluene	<25	25
1634-04-4	Methyl tert-Butyl Ether	<25	25
75-09-2	Methylene Chloride	<25	25
78-93-3	2-Butanone (MEK)	<25	25
91-57-6	2-Methylnaphthalene	<25	25
108-10-1	4-Methyl-2-pentanone (MIBK)	<25	25
91-20-3	Naphthalene	<25	25
103-65-1	n-Propylbenzene	<5.0	5.0
100-42-5	Styrene	<5.0	5.0
630-20-6	1,1,1,2-Tetrachloroethane	<5.0	5.0
79-34-5	1,1,2,2-Tetrachloroethane	<5.0	5.0
127-18-4	Tetrachloroethene	<5.0	5.0
109-99-9	Tetrahydrofuran	<25	25
108-88-3	Toluene	<5.0	5.0
87-61-6	1,2,3-Trichlorobenzene	<25	25
120-82-1	1,2,4-Trichlorobenzene	<25	25
71-55-6	1,1,1-Trichloroethane	<5.0	5.0
79-00-5	1,1,2-Trichloroethane	<5.0	5.0
79-01-6	Trichloroethene	**21**	5.0
75-69-4	Trichlorofluoromethane	<5.0	5.0
96-18-4	1,2,3-Trichloropropane	<5.0	5.0
95-63-6	1,2,4-Trimethylbenzene	**5.0**	5.0
108-67-8	1,3,5-Trimethylbenzene	<5.0	5.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210209**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-03s**	Sampled:	10/09/12 10:35
Lab Sample ID:	**1210209-01**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/10/12 08:15
Unit:	ug/L	Prepared:	10/16/2012 By: LEW
Dilution Factor:	5	Analyzed:	10/17/12 By: LEW
QC Batch:	1212640	Analytical Batch:	2J18057

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
75-01-4	Vinyl Chloride	**10**	5.0
179601-23-1	Xylene, Meta + Para	**1400**	10
95-47-6	Xylene, Ortho	**700**	5.0

Surrogates:	***% Recovery***	***Control Limits***
Dibromofluoromethane	*102*	*85-118*
1,2-Dichloroethane-d4	*105*	*87-122*
Toluene-d8	*98*	*85-113*
4-Bromofluorobenzene	*105*	*82-110*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210209**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-03s**	Sampled:	10/09/12 10:35
Lab Sample ID:	**1210209-01**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/10/12 08:15

Dissolved Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Calcium	**88**	0.50	mg/L	1	USEPA-6010C	10/15/12 15:56	KLV	1212256
Iron	**4200**	200	ug/L	1	USEPA-6010C	10/15/12 15:56	KLV	1212256
Magnesium	**13**	0.50	mg/L	1	USEPA-6010C	10/15/12 15:56	KLV	1212256
Manganese	**100**	50	ug/L	1	USEPA-6010C	10/15/12 15:56	KLV	1212256

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210209**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-03s**	Sampled:	10/09/12 10:35
Lab Sample ID:	**1210209-01**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/10/12 08:15

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Chloride	**14**	1.0	mg/L	1	SM 4500-Cl E 20th	10/16/12 11:31	LMA	1212445
Carbon, Total Organic	**3.3**	1.0	mg/L	1	SM 5310 C 20th	10/15/12 15:25	KAR	1212454
Nitrogen, Nitrate	**0.11**	0.050	mg/L	1	SM 4500-NO3 F 20th	10/10/12 15:35	CAC	1212329
Sulfate	**3.4**	1.0	mg/L	1	ASTM D516-90 (02)	10/18/12 09:48	LMA	1212666

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210209**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-10s**	Sampled:	10/09/12 11:38
Lab Sample ID:	**1210209-02**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/10/12 08:15
Unit:	ug/L	Prepared:	10/16/2012 By: LEW
Dilution Factor:	1	Analyzed:	10/17/12 By: LEW
QC Batch:	1212640	Analytical Batch:	2J18057

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	RL
67-64-1	Acetone	<20	20
107-13-1	Acrylonitrile	<2.0	2.0
71-43-2	Benzene	<1.0	1.0
108-86-1	Bromobenzene	<1.0	1.0
74-97-5	Bromochloromethane	<1.0	1.0
75-27-4	Bromodichloromethane	<1.0	1.0
75-25-2	Bromoform	<1.0	1.0
74-83-9	Bromomethane	<5.0	5.0
104-51-8	n-Butylbenzene	<1.0	1.0
135-98-8	sec-Butylbenzene	<1.0	1.0
98-06-6	tert-Butylbenzene	<1.0	1.0
75-15-0	Carbon Disulfide	<1.0	1.0
56-23-5	Carbon Tetrachloride	<1.0	1.0
108-90-7	Chlorobenzene	<1.0	1.0
75-00-3	Chloroethane	<5.0	5.0
67-66-3	Chloroform	<1.0	1.0
74-87-3	Chloromethane	<5.0	5.0
96-12-8	1,2-Dibromo-3-chloropropane	<5.0	5.0
124-48-1	Dibromochloromethane	<1.0	1.0
106-93-4	1,2-Dibromoethane	<1.0	1.0
74-95-3	Dibromomethane	<1.0	1.0
110-57-6	trans-1,4-Dichloro-2-butene	<1.0	1.0
95-50-1	1,2-Dichlorobenzene	<1.0	1.0
541-73-1	1,3-Dichlorobenzene	<1.0	1.0
106-46-7	1,4-Dichlorobenzene	<1.0	1.0
75-71-8	Dichlorodifluoromethane	<5.0	5.0
75-34-3	1,1-Dichloroethane	<1.0	1.0
107-06-2	1,2-Dichloroethane	<1.0	1.0
75-35-4	1,1-Dichloroethene	<1.0	1.0
156-59-2	cis-1,2-Dichloroethene	**5.9**	1.0
156-60-5	trans-1,2-Dichloroethene	**1.0**	1.0

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ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210209**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-10s**	Sampled:	10/09/12 11:38
Lab Sample ID:	**1210209-02**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/10/12 08:15
Unit:	ug/L	Prepared:	10/16/2012 By: LEW
Dilution Factor:	1	Analyzed:	10/17/12 By: LEW
QC Batch:	1212640	Analytical Batch:	2J18057

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
78-87-5	1,2-Dichloropropane	<1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	<1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	<1.0	1.0
100-41-4	Ethylbenzene	<1.0	1.0
60-29-7	Ethyl Ether	<5.0	5.0
591-78-6	2-Hexanone	<5.0	5.0
74-88-4	Iodomethane	<1.0	1.0
98-82-8	Isopropylbenzene	<1.0	1.0
99-87-6	4-Isopropyltoluene	<5.0	5.0
1634-04-4	Methyl tert-Butyl Ether	<5.0	5.0
75-09-2	Methylene Chloride	<5.0	5.0
78-93-3	2-Butanone (MEK)	<5.0	5.0
91-57-6	2-Methylnaphthalene	<5.0	5.0
108-10-1	4-Methyl-2-pentanone (MIBK)	<5.0	5.0
91-20-3	Naphthalene	<5.0	5.0
103-65-1	n-Propylbenzene	<1.0	1.0
100-42-5	Styrene	<1.0	1.0
630-20-6	1,1,1,2-Tetrachloroethane	<1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	<1.0	1.0
127-18-4	Tetrachloroethene	<1.0	1.0
109-99-9	Tetrahydrofuran	<5.0	5.0
108-88-3	Toluene	<1.0	1.0
87-61-6	1,2,3-Trichlorobenzene	<5.0	5.0
120-82-1	1,2,4-Trichlorobenzene	<5.0	5.0
71-55-6	1,1,1-Trichloroethane	<1.0	1.0
79-00-5	1,1,2-Trichloroethane	<1.0	1.0
79-01-6	Trichloroethene	<1.0	1.0
75-69-4	Trichlorofluoromethane	<1.0	1.0
96-18-4	1,2,3-Trichloropropane	<1.0	1.0
95-63-6	1,2,4-Trimethylbenzene	<1.0	1.0
108-67-8	1,3,5-Trimethylbenzene	<1.0	1.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210209**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-10s**	Sampled:	10/09/12 11:38
Lab Sample ID:	**1210209-02**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/10/12 08:15
Unit:	ug/L	Prepared:	10/16/2012 By: LEW
Dilution Factor:	1	Analyzed:	10/17/12 By: LEW
QC Batch:	1212640	Analytical Batch:	2J18057

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
75-01-4	Vinyl Chloride	<1.0	1.0
179601-23-1	Xylene, Meta + Para	<2.0	2.0
95-47-6	Xylene, Ortho	<1.0	1.0

Surrogates:	***% Recovery***	***Control Limits***
Dibromofluoromethane	*102*	*85-118*
1,2-Dichloroethane-d4	*104*	*87-122*
Toluene-d8	*96*	*85-113*
4-Bromofluorobenzene	*97*	*82-110*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210209**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-10s**	Sampled:	10/09/12 11:38
Lab Sample ID:	**1210209-02**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/10/12 08:15

Dissolved Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Calcium	**100**	0.50	mg/L	1	USEPA-6010C	10/15/12 16:00	KLV	1212256
Iron	<200	200	ug/L	1	USEPA-6010C	10/15/12 16:00	KLV	1212256
Magnesium	**21**	0.50	mg/L	1	USEPA-6010C	10/15/12 16:00	KLV	1212256
Manganese	<50	50	ug/L	1	USEPA-6010C	10/15/12 16:00	KLV	1212256

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210209**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-10s**	Sampled:	10/09/12 11:38
Lab Sample ID:	**1210209-02**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/10/12 08:15

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Carbon, Total Organic	**3.1**	1.0	mg/L	1	SM 5310 C 20th	10/15/12 15:36	KAR	1212454
Chloride	**96**	1.0	mg/L	1	SM 4500-Cl E 20th	10/16/12 11:32	LMA	1212445
Nitrogen, Nitrate	**0.74**	0.050	mg/L	1	SM 4500-NO3 F 20th	10/10/12 15:36	CAC	1212329
Sulfate	**57**	10	mg/L	2	ASTM D516-90 (02)	10/18/12 11:30	LMA	1212664

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210209**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-09s**	Sampled:	10/09/12 13:09
Lab Sample ID:	**1210209-03**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/10/12 08:15
Unit:	ug/L	Prepared:	10/12/2012 By: BJH
Dilution Factor:	1	Analyzed:	10/12/12 By: BJH
QC Batch:	1212279	Analytical Batch:	2J12040

Dissolved Gases in Water by RSK-175 Headspace Analysis

CAS Number	Analyte	Analytical Result	RL
74-84-0	Ethane	<1.0	1.0
*74-82-8	Methane	**1600**	0.50
74-85-1	Ethylene	<1.0	1.0

*See Statement of Data Qualifications

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210209**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-09s**	Sampled:	10/09/12 13:09
Lab Sample ID:	**1210209-03**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/10/12 08:15
Unit:	ug/L	Prepared:	10/17/2012 By: LEW
Dilution Factor:	5	Analyzed:	10/17/12 By: LEW
QC Batch:	1212700	Analytical Batch:	2J19019

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	RL
67-64-1	Acetone	<100	100
107-13-1	Acrylonitrile	<10	10
71-43-2	Benzene	<5.0	5.0
108-86-1	Bromobenzene	<5.0	5.0
74-97-5	Bromochloromethane	<5.0	5.0
75-27-4	Bromodichloromethane	<5.0	5.0
75-25-2	Bromoform	<5.0	5.0
74-83-9	Bromomethane	<25	25
104-51-8	n-Butylbenzene	<5.0	5.0
135-98-8	sec-Butylbenzene	<5.0	5.0
98-06-6	tert-Butylbenzene	<5.0	5.0
75-15-0	Carbon Disulfide	<5.0	5.0
56-23-5	Carbon Tetrachloride	<5.0	5.0
108-90-7	Chlorobenzene	<5.0	5.0
75-00-3	Chloroethane	<25	25
67-66-3	Chloroform	<5.0	5.0
74-87-3	Chloromethane	<25	25
96-12-8	1,2-Dibromo-3-chloropropane	<25	25
124-48-1	Dibromochloromethane	<5.0	5.0
106-93-4	1,2-Dibromoethane	<5.0	5.0
74-95-3	Dibromomethane	<5.0	5.0
110-57-6	trans-1,4-Dichloro-2-butene	<5.0	5.0
95-50-1	1,2-Dichlorobenzene	<5.0	5.0
541-73-1	1,3-Dichlorobenzene	<5.0	5.0
106-46-7	1,4-Dichlorobenzene	<5.0	5.0
75-71-8	Dichlorodifluoromethane	<25	25
75-34-3	1,1-Dichloroethane	<5.0	5.0
107-06-2	1,2-Dichloroethane	<5.0	5.0
75-35-4	1,1-Dichloroethene	<5.0	5.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210209**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-09s**	Sampled:	10/09/12 13:09
Lab Sample ID:	**1210209-03**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/10/12 08:15
Unit:	ug/L	Prepared:	10/17/2012 By: LEW
Dilution Factor:	5	Analyzed:	10/17/12 By: LEW
QC Batch:	1212700	Analytical Batch:	2J19019

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
156-59-2	cis-1,2-Dichloroethene	<5.0	5.0
156-60-5	trans-1,2-Dichloroethene	<5.0	5.0
78-87-5	1,2-Dichloropropane	<5.0	5.0
10061-01-5	cis-1,3-Dichloropropene	<5.0	5.0
10061-02-6	trans-1,3-Dichloropropene	<5.0	5.0
100-41-4	Ethylbenzene	<5.0	5.0
60-29-7	Ethyl Ether	<25	25
591-78-6	2-Hexanone	<25	25
74-88-4	Iodomethane	<5.0	5.0
98-82-8	Isopropylbenzene	<5.0	5.0
99-87-6	4-Isopropyltoluene	<25	25
1634-04-4	Methyl tert-Butyl Ether	<25	25
75-09-2	Methylene Chloride	<25	25
78-93-3	2-Butanone (MEK)	<25	25
91-57-6	2-Methylnaphthalene	<25	25
108-10-1	4-Methyl-2-pentanone (MIBK)	<25	25
91-20-3	Naphthalene	<25	25
103-65-1	n-Propylbenzene	<5.0	5.0
100-42-5	Styrene	<5.0	5.0
630-20-6	1,1,1,2-Tetrachloroethane	<5.0	5.0
79-34-5	1,1,2,2-Tetrachloroethane	<5.0	5.0
127-18-4	Tetrachloroethene	<5.0	5.0
109-99-9	Tetrahydrofuran	<25	25
108-88-3	Toluene	**610**	5.0
87-61-6	1,2,3-Trichlorobenzene	<25	25
120-82-1	1,2,4-Trichlorobenzene	<25	25
71-55-6	1,1,1-Trichloroethane	<5.0	5.0
79-00-5	1,1,2-Trichloroethane	<5.0	5.0
79-01-6	Trichloroethene	<5.0	5.0
75-69-4	Trichlorofluoromethane	<5.0	5.0
96-18-4	1,2,3-Trichloropropane	<5.0	5.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210209**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-09s**	Sampled:	10/09/12 13:09
Lab Sample ID:	**1210209-03**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/10/12 08:15
Unit:	ug/L	Prepared:	10/17/2012 By: LEW
Dilution Factor:	5	Analyzed:	10/17/12 By: LEW
QC Batch:	1212700	Analytical Batch:	2J19019

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
95-63-6	1,2,4-Trimethylbenzene	<5.0	5.0
108-67-8	1,3,5-Trimethylbenzene	<5.0	5.0
75-01-4	Vinyl Chloride	<5.0	5.0
179601-23-1	Xylene, Meta + Para	<10	10
95-47-6	Xylene, Ortho	<5.0	5.0

Surrogates:	***% Recovery***	***Control Limits***
Dibromofluoromethane	*102*	*85-118*
1,2-Dichloroethane-d4	*103*	*87-122*
Toluene-d8	*97*	*85-113*
4-Bromofluorobenzene	*98*	*82-110*

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ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210209**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-09s**	Sampled:	10/09/12 13:09
Lab Sample ID:	**1210209-03**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/10/12 08:15

Dissolved Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Calcium	**26**	0.50	mg/L	1	USEPA-6010C	10/15/12 16:04	KLV	1212256
Iron	**3300**	200	ug/L	1	USEPA-6010C	10/15/12 16:04	KLV	1212256
Magnesium	**37**	0.50	mg/L	1	USEPA-6010C	10/15/12 16:04	KLV	1212256
Manganese	<50	50	ug/L	1	USEPA-6010C	10/15/12 16:04	KLV	1212256

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210209**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-09s**	Sampled:	10/09/12 13:09
Lab Sample ID:	**1210209-03**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/10/12 08:15

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Chloride	**120**	2.0	mg/L	2	SM 4500-Cl E 20th	10/16/12 12:02	LMA	1212445
Carbon, Total Organic	**41**	1.0	mg/L	1	SM 5310 C 20th	10/15/12 20:29	KAR	1212454
Nitrogen, Nitrate	<0.050	0.050	mg/L	1	SM 4500-NO3 F 20th	10/10/12 15:37	CAC	1212329
Sulfate	**1.3**	1.0	mg/L	1	ASTM D516-90 (02)	10/18/12 09:48	LMA	1212666

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210209**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-09s**	Sampled:	10/09/12 13:09
Lab Sample ID:	**1210209-03RE1**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/10/12 08:15
Unit:	ug/L	Prepared:	10/12/2012 By: BJH
Dilution Factor:	40	Analyzed:	10/12/12 By: BJH
QC Batch:	1212279	Analytical Batch:	2J12040

Dissolved Gases in Water by RSK-175 Headspace Analysis

CAS Number	Analyte	Analytical Result	RL
74-84-0	Ethane	<40	40
74-82-8	Methane	**1500**	20
74-85-1	Ethylene	<40	40

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ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210209**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-16s**	Sampled:	10/09/12 14:58
Lab Sample ID:	**1210209-04**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/10/12 08:15
Unit:	ug/L	Prepared:	10/16/2012 By: LEW
Dilution Factor:	1	Analyzed:	10/17/12 By: LEW
QC Batch:	1212640	Analytical Batch:	2J18057

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	RL
67-64-1	Acetone	<20	20
107-13-1	Acrylonitrile	<2.0	2.0
71-43-2	Benzene	<1.0	1.0
108-86-1	Bromobenzene	<1.0	1.0
74-97-5	Bromochloromethane	<1.0	1.0
75-27-4	Bromodichloromethane	<1.0	1.0
75-25-2	Bromoform	<1.0	1.0
74-83-9	Bromomethane	<5.0	5.0
104-51-8	n-Butylbenzene	<1.0	1.0
135-98-8	sec-Butylbenzene	<1.0	1.0
98-06-6	tert-Butylbenzene	<1.0	1.0
75-15-0	Carbon Disulfide	<1.0	1.0
56-23-5	Carbon Tetrachloride	<1.0	1.0
108-90-7	Chlorobenzene	<1.0	1.0
75-00-3	Chloroethane	<5.0	5.0
67-66-3	Chloroform	<1.0	1.0
74-87-3	Chloromethane	<5.0	5.0
96-12-8	1,2-Dibromo-3-chloropropane	<5.0	5.0
124-48-1	Dibromochloromethane	<1.0	1.0
106-93-4	1,2-Dibromoethane	<1.0	1.0
74-95-3	Dibromomethane	<1.0	1.0
110-57-6	trans-1,4-Dichloro-2-butene	<1.0	1.0
95-50-1	1,2-Dichlorobenzene	<1.0	1.0
541-73-1	1,3-Dichlorobenzene	<1.0	1.0
106-46-7	1,4-Dichlorobenzene	<1.0	1.0
75-71-8	Dichlorodifluoromethane	<5.0	5.0
75-34-3	1,1-Dichloroethane	**3.8**	1.0
107-06-2	1,2-Dichloroethane	<1.0	1.0
75-35-4	1,1-Dichloroethene	**1.1**	1.0
156-59-2	cis-1,2-Dichloroethene	**31**	1.0
156-60-5	trans-1,2-Dichloroethene	**2.8**	1.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210209**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-16s**	Sampled:	10/09/12 14:58
Lab Sample ID:	**1210209-04**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/10/12 08:15
Unit:	ug/L	Prepared:	10/16/2012 By: LEW
Dilution Factor:	1	Analyzed:	10/17/12 By: LEW
QC Batch:	1212640	Analytical Batch:	2J18057

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
78-87-5	1,2-Dichloropropane	<1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	<1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	<1.0	1.0
100-41-4	Ethylbenzene	<1.0	1.0
60-29-7	Ethyl Ether	<5.0	5.0
591-78-6	2-Hexanone	<5.0	5.0
74-88-4	Iodomethane	<1.0	1.0
98-82-8	Isopropylbenzene	<1.0	1.0
99-87-6	4-Isopropyltoluene	<5.0	5.0
1634-04-4	Methyl tert-Butyl Ether	<5.0	5.0
75-09-2	Methylene Chloride	<5.0	5.0
78-93-3	2-Butanone (MEK)	<5.0	5.0
91-57-6	2-Methylnaphthalene	<5.0	5.0
108-10-1	4-Methyl-2-pentanone (MIBK)	<5.0	5.0
91-20-3	Naphthalene	<5.0	5.0
103-65-1	n-Propylbenzene	<1.0	1.0
100-42-5	Styrene	<1.0	1.0
630-20-6	1,1,1,2-Tetrachloroethane	<1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	<1.0	1.0
127-18-4	Tetrachloroethene	<1.0	1.0
109-99-9	Tetrahydrofuran	<5.0	5.0
108-88-3	Toluene	<1.0	1.0
87-61-6	1,2,3-Trichlorobenzene	<5.0	5.0
120-82-1	1,2,4-Trichlorobenzene	<5.0	5.0
71-55-6	1,1,1-Trichloroethane	<1.0	1.0
79-00-5	1,1,2-Trichloroethane	**5.5**	1.0
79-01-6	Trichloroethene	**4.6**	1.0
75-69-4	Trichlorofluoromethane	<1.0	1.0
96-18-4	1,2,3-Trichloropropane	<1.0	1.0
95-63-6	1,2,4-Trimethylbenzene	<1.0	1.0
108-67-8	1,3,5-Trimethylbenzene	<1.0	1.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210209**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-16s**	Sampled:	10/09/12 14:58
Lab Sample ID:	**1210209-04**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/10/12 08:15
Unit:	ug/L	Prepared:	10/16/2012 By: LEW
Dilution Factor:	1	Analyzed:	10/17/12 By: LEW
QC Batch:	1212640	Analytical Batch:	2J18057

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
75-01-4	Vinyl Chloride	<1.0	1.0
179601-23-1	Xylene, Meta + Para	<2.0	2.0
95-47-6	Xylene, Ortho	<1.0	1.0

Surrogates:	***% Recovery***	***Control Limits***
Dibromofluoromethane	*102*	*85-118*
1,2-Dichloroethane-d4	*105*	*87-122*
Toluene-d8	*95*	*85-113*
4-Bromofluorobenzene	*97*	*82-110*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210209**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-16s**	Sampled:	10/09/12 14:58
Lab Sample ID:	**1210209-04**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/10/12 08:15

Dissolved Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
***Calcium**	**78**	0.50	mg/L	1	USEPA-6010C	10/15/12 16:16	KLV	1212256
Iron	<200	200	ug/L	1	USEPA-6010C	10/15/12 16:16	KLV	1212256
Magnesium	**16**	0.50	mg/L	1	USEPA-6010C	10/15/12 16:16	KLV	1212256
Manganese	<50	50	ug/L	1	USEPA-6010C	10/15/12 16:16	KLV	1212256

*See Statement of Data Qualifications

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210209**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-16s**	Sampled:	10/09/12 14:58
Lab Sample ID:	**1210209-04**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/10/12 08:15

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Carbon, Total Organic	**1.9**	1.0	mg/L	1	SM 5310 C 20th	10/15/12 15:58	KAR	1212454
Chloride	**33**	1.0	mg/L	1	SM 4500-Cl E 20th	10/16/12 11:32	LMA	1212445
Nitrogen, Nitrate	**1.3**	0.50	mg/L	10	SM 4500-NO3 F 20th	10/10/12 17:25	CAC	1212329
Sulfate	**25**	5.0	mg/L	1	ASTM D516-90 (02)	10/18/12 08:17	LMA	1212664

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210209**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-06s**	Sampled:	10/09/12 16:26
Lab Sample ID:	**1210209-05**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/10/12 08:15
Unit:	ug/L	Prepared:	10/12/2012 By: BJH
Dilution Factor:	1	Analyzed:	10/12/12 By: BJH
QC Batch:	1212279	Analytical Batch:	2J12040

Dissolved Gases in Water by RSK-175 Headspace Analysis

CAS Number	Analyte	Analytical Result	RL
74-84-0	Ethane	**11**	1.0
*74-82-8	Methane	**3000**	0.50
74-85-1	Ethylene	**30**	1.0

*See Statement of Data Qualifications

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210209**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-06s**	Sampled:	10/09/12 16:26
Lab Sample ID:	**1210209-05**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/10/12 08:15
Unit:	ug/L	Prepared:	10/16/2012 By: LEW
Dilution Factor:	5	Analyzed:	10/17/12 By: LEW
QC Batch:	1212640	Analytical Batch:	2J18057

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	RL
67-64-1	Acetone	<100	100
107-13-1	Acrylonitrile	<10	10
71-43-2	Benzene	<5.0	5.0
108-86-1	Bromobenzene	<5.0	5.0
74-97-5	Bromochloromethane	<5.0	5.0
75-27-4	Bromodichloromethane	<5.0	5.0
75-25-2	Bromoform	<5.0	5.0
74-83-9	Bromomethane	<25	25
104-51-8	n-Butylbenzene	<5.0	5.0
135-98-8	sec-Butylbenzene	<5.0	5.0
98-06-6	tert-Butylbenzene	<5.0	5.0
75-15-0	Carbon Disulfide	<5.0	5.0
56-23-5	Carbon Tetrachloride	<5.0	5.0
108-90-7	Chlorobenzene	<5.0	5.0
75-00-3	Chloroethane	<25	25
67-66-3	Chloroform	<5.0	5.0
74-87-3	Chloromethane	<25	25
96-12-8	1,2-Dibromo-3-chloropropane	<25	25
124-48-1	Dibromochloromethane	<5.0	5.0
106-93-4	1,2-Dibromoethane	<5.0	5.0
74-95-3	Dibromomethane	<5.0	5.0
110-57-6	trans-1,4-Dichloro-2-butene	<5.0	5.0
95-50-1	1,2-Dichlorobenzene	<5.0	5.0
541-73-1	1,3-Dichlorobenzene	<5.0	5.0
106-46-7	1,4-Dichlorobenzene	<5.0	5.0
75-71-8	Dichlorodifluoromethane	<25	25
75-34-3	1,1-Dichloroethane	<5.0	5.0
107-06-2	1,2-Dichloroethane	<5.0	5.0
75-35-4	1,1-Dichloroethene	<5.0	5.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210209**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-06s**	Sampled:	10/09/12 16:26
Lab Sample ID:	**1210209-05**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/10/12 08:15
Unit:	ug/L	Prepared:	10/16/2012 By: LEW
Dilution Factor:	5	Analyzed:	10/17/12 By: LEW
QC Batch:	1212640	Analytical Batch:	2J18057

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
156-59-2	cis-1,2-Dichloroethene	<5.0	5.0
156-60-5	trans-1,2-Dichloroethene	<5.0	5.0
78-87-5	1,2-Dichloropropane	<5.0	5.0
10061-01-5	cis-1,3-Dichloropropene	<5.0	5.0
10061-02-6	trans-1,3-Dichloropropene	<5.0	5.0
100-41-4	Ethylbenzene	<5.0	5.0
60-29-7	Ethyl Ether	<25	25
591-78-6	2-Hexanone	<25	25
74-88-4	Iodomethane	<5.0	5.0
98-82-8	Isopropylbenzene	<5.0	5.0
99-87-6	4-Isopropyltoluene	<25	25
1634-04-4	Methyl tert-Butyl Ether	<25	25
75-09-2	Methylene Chloride	<25	25
78-93-3	2-Butanone (MEK)	**170**	25
91-57-6	2-Methylnaphthalene	<25	25
108-10-1	4-Methyl-2-pentanone (MIBK)	<25	25
91-20-3	Naphthalene	<25	25
103-65-1	n-Propylbenzene	<5.0	5.0
100-42-5	Styrene	<5.0	5.0
630-20-6	1,1,1,2-Tetrachloroethane	<5.0	5.0
79-34-5	1,1,2,2-Tetrachloroethane	<5.0	5.0
127-18-4	Tetrachloroethene	<5.0	5.0
109-99-9	Tetrahydrofuran	<25	25
108-88-3	Toluene	**450**	5.0
87-61-6	1,2,3-Trichlorobenzene	<25	25
120-82-1	1,2,4-Trichlorobenzene	<25	25
71-55-6	1,1,1-Trichloroethane	<5.0	5.0
79-00-5	1,1,2-Trichloroethane	<5.0	5.0
79-01-6	Trichloroethene	<5.0	5.0
75-69-4	Trichlorofluoromethane	<5.0	5.0
96-18-4	1,2,3-Trichloropropane	<5.0	5.0

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ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210209**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-06s**	Sampled:	10/09/12 16:26
Lab Sample ID:	**1210209-05**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/10/12 08:15
Unit:	ug/L	Prepared:	10/16/2012 By: LEW
Dilution Factor:	5	Analyzed:	10/17/12 By: LEW
QC Batch:	1212640	Analytical Batch:	2J18057

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
95-63-6	1,2,4-Trimethylbenzene	<5.0	5.0
108-67-8	1,3,5-Trimethylbenzene	<5.0	5.0
75-01-4	Vinyl Chloride	<5.0	5.0
179601-23-1	Xylene, Meta + Para	<10	10
95-47-6	Xylene, Ortho	<5.0	5.0

Surrogates:	***% Recovery***	***Control Limits***
Dibromofluoromethane	*102*	*85-118*
1,2-Dichloroethane-d4	*103*	*87-122*
Toluene-d8	*97*	*85-113*
4-Bromofluorobenzene	*98*	*82-110*

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ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210209**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-06s**	Sampled:	10/09/12 16:26
Lab Sample ID:	**1210209-05**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/10/12 08:15

Dissolved Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Calcium	**37**	0.50	mg/L	1	USEPA-6010C	10/15/12 16:36	KLV	1212256
Iron	**13000**	200	ug/L	1	USEPA-6010C	10/15/12 16:36	KLV	1212256
Magnesium	**22**	0.50	mg/L	1	USEPA-6010C	10/15/12 16:36	KLV	1212256
Manganese	**160**	50	ug/L	1	USEPA-6010C	10/15/12 16:36	KLV	1212256

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ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210209**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-06s**	Sampled:	10/09/12 16:26
Lab Sample ID:	**1210209-05**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/10/12 08:15

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Chloride	**31**	1.0	mg/L	1	SM 4500-Cl E 20th	10/16/12 11:32	LMA	1212445
Carbon, Total Organic	**530**	100	mg/L	100	SM 5310 C 20th	10/15/12 16:31	KAR	1212454
Nitrogen, Nitrate	<0.050	0.050	mg/L	1	SM 4500-NO3 F 20th	10/10/12 15:42	CAC	1212329
Sulfate	**3.9**	1.0	mg/L	1	ASTM D516-90 (02)	10/18/12 09:48	LMA	1212666

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210209**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-06s**	Sampled:	10/09/12 16:26
Lab Sample ID:	**1210209-05RE1**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/10/12 08:15
Unit:	ug/L	Prepared:	10/12/2012 By: BJH
Dilution Factor:	200	Analyzed:	10/12/12 By: BJH
QC Batch:	1212279	Analytical Batch:	2J12040

Dissolved Gases in Water by RSK-175 Headspace Analysis

CAS Number	Analyte	Analytical Result	RL
74-84-0	Ethane	<200	200
74-82-8	Methane	**6300**	100
74-85-1	Ethylene	<200	200

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ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210209**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-05s**	Sampled:	10/09/12 17:59
Lab Sample ID:	**1210209-06**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/10/12 08:15
Unit:	ug/L	Prepared:	10/16/2012 By: LEW
Dilution Factor:	5	Analyzed:	10/17/12 By: LEW
QC Batch:	1212640	Analytical Batch:	2J18057

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	RL
67-64-1	Acetone	<100	100
107-13-1	Acrylonitrile	<10	10
71-43-2	Benzene	<5.0	5.0
108-86-1	Bromobenzene	<5.0	5.0
74-97-5	Bromochloromethane	<5.0	5.0
75-27-4	Bromodichloromethane	<5.0	5.0
75-25-2	Bromoform	<5.0	5.0
74-83-9	Bromomethane	<25	25
104-51-8	n-Butylbenzene	<5.0	5.0
135-98-8	sec-Butylbenzene	<5.0	5.0
98-06-6	tert-Butylbenzene	<5.0	5.0
75-15-0	Carbon Disulfide	<5.0	5.0
56-23-5	Carbon Tetrachloride	<5.0	5.0
108-90-7	Chlorobenzene	<5.0	5.0
75-00-3	Chloroethane	<25	25
67-66-3	Chloroform	<5.0	5.0
74-87-3	Chloromethane	<25	25
96-12-8	1,2-Dibromo-3-chloropropane	<25	25
124-48-1	Dibromochloromethane	<5.0	5.0
106-93-4	1,2-Dibromoethane	<5.0	5.0
74-95-3	Dibromomethane	<5.0	5.0
110-57-6	trans-1,4-Dichloro-2-butene	<5.0	5.0
95-50-1	1,2-Dichlorobenzene	<5.0	5.0
541-73-1	1,3-Dichlorobenzene	<5.0	5.0
106-46-7	1,4-Dichlorobenzene	<5.0	5.0
75-71-8	Dichlorodifluoromethane	<25	25
75-34-3	1,1-Dichloroethane	<5.0	5.0
107-06-2	1,2-Dichloroethane	<5.0	5.0
75-35-4	1,1-Dichloroethene	<5.0	5.0
156-59-2	cis-1,2-Dichloroethene	<5.0	5.0
156-60-5	trans-1,2-Dichloroethene	<5.0	5.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210209**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-05s**	Sampled:	10/09/12 17:59
Lab Sample ID:	**1210209-06**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/10/12 08:15
Unit:	ug/L	Prepared:	10/16/2012 By: LEW
Dilution Factor:	5	Analyzed:	10/17/12 By: LEW
QC Batch:	1212640	Analytical Batch:	2J18057

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
78-87-5	1,2-Dichloropropane	<5.0	5.0
10061-01-5	cis-1,3-Dichloropropene	<5.0	5.0
10061-02-6	trans-1,3-Dichloropropene	<5.0	5.0
100-41-4	Ethylbenzene	<5.0	5.0
60-29-7	Ethyl Ether	<25	25
591-78-6	2-Hexanone	<25	25
74-88-4	Iodomethane	<5.0	5.0
98-82-8	Isopropylbenzene	<5.0	5.0
99-87-6	4-Isopropyltoluene	<25	25
1634-04-4	Methyl tert-Butyl Ether	<25	25
75-09-2	Methylene Chloride	<25	25
78-93-3	2-Butanone (MEK)	<25	25
91-57-6	2-Methylnaphthalene	<25	25
108-10-1	4-Methyl-2-pentanone (MIBK)	<25	25
91-20-3	Naphthalene	<25	25
103-65-1	n-Propylbenzene	<5.0	5.0
100-42-5	Styrene	<5.0	5.0
630-20-6	1,1,1,2-Tetrachloroethane	<5.0	5.0
79-34-5	1,1,2,2-Tetrachloroethane	<5.0	5.0
127-18-4	Tetrachloroethene	**290**	5.0
109-99-9	Tetrahydrofuran	<25	25
108-88-3	Toluene	<5.0	5.0
87-61-6	1,2,3-Trichlorobenzene	<25	25
120-82-1	1,2,4-Trichlorobenzene	<25	25
71-55-6	1,1,1-Trichloroethane	**37**	5.0
79-00-5	1,1,2-Trichloroethane	<5.0	5.0
79-01-6	Trichloroethene	**760**	5.0
75-69-4	Trichlorofluoromethane	<5.0	5.0
96-18-4	1,2,3-Trichloropropane	<5.0	5.0
95-63-6	1,2,4-Trimethylbenzene	<5.0	5.0
108-67-8	1,3,5-Trimethylbenzene	<5.0	5.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210209**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-05s**	Sampled:	10/09/12 17:59
Lab Sample ID:	**1210209-06**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/10/12 08:15
Unit:	ug/L	Prepared:	10/16/2012 By: LEW
Dilution Factor:	5	Analyzed:	10/17/12 By: LEW
QC Batch:	1212640	Analytical Batch:	2J18057

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
75-01-4	Vinyl Chloride	<5.0	5.0
179601-23-1	Xylene, Meta + Para	<10	10
95-47-6	Xylene, Ortho	<5.0	5.0

Surrogates:	***% Recovery***	***Control Limits***
Dibromofluoromethane	*102*	*85-118*
1,2-Dichloroethane-d4	*104*	*87-122*
Toluene-d8	*96*	*85-113*
4-Bromofluorobenzene	*97*	*82-110*

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ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210209**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-05s**	Sampled:	10/09/12 17:59
Lab Sample ID:	**1210209-06**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/10/12 08:15

Dissolved Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Calcium	**66**	0.50	mg/L	1	USEPA-6010C	10/15/12 16:43	KLV	1212256
Iron	<200	200	ug/L	1	USEPA-6010C	10/15/12 16:43	KLV	1212256
Magnesium	**15**	0.50	mg/L	1	USEPA-6010C	10/15/12 16:43	KLV	1212256
Manganese	<50	50	ug/L	1	USEPA-6010C	10/15/12 16:43	KLV	1212256

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ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210209**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-05s**	Sampled:	10/09/12 17:59
Lab Sample ID:	**1210209-06**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/10/12 08:15

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Carbon, Total Organic	**2.2**	1.0	mg/L	1	SM 5310 C 20th	10/15/12 17:10	KAR	1212454
Chloride	**2.9**	1.0	mg/L	1	SM 4500-Cl E 20th	10/16/12 11:32	LMA	1212445
Nitrogen, Nitrate	**1.4**	0.25	mg/L	5	SM 4500-NO3 F 20th	10/10/12 17:29	CAC	1212329
Sulfate	**11**	5.0	mg/L	1	ASTM D516-90 (02)	10/18/12 08:20	LMA	1212664

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210209**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**TB-01**	Sampled:	10/10/12 00:00
Lab Sample ID:	**1210209-07**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/10/12 08:15
Unit:	ug/L	Prepared:	10/16/2012 By: LEW
Dilution Factor:	1	Analyzed:	10/17/12 By: LEW
QC Batch:	1212640	Analytical Batch:	2J18057

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	RL
67-64-1	Acetone	<20	20
107-13-1	Acrylonitrile	<2.0	2.0
71-43-2	Benzene	<1.0	1.0
108-86-1	Bromobenzene	<1.0	1.0
74-97-5	Bromochloromethane	<1.0	1.0
75-27-4	Bromodichloromethane	<1.0	1.0
75-25-2	Bromoform	<1.0	1.0
74-83-9	Bromomethane	<5.0	5.0
104-51-8	n-Butylbenzene	<1.0	1.0
135-98-8	sec-Butylbenzene	<1.0	1.0
98-06-6	tert-Butylbenzene	<1.0	1.0
75-15-0	Carbon Disulfide	<1.0	1.0
56-23-5	Carbon Tetrachloride	<1.0	1.0
108-90-7	Chlorobenzene	<1.0	1.0
75-00-3	Chloroethane	<5.0	5.0
67-66-3	Chloroform	<1.0	1.0
74-87-3	Chloromethane	<5.0	5.0
96-12-8	1,2-Dibromo-3-chloropropane	<5.0	5.0
124-48-1	Dibromochloromethane	<1.0	1.0
106-93-4	1,2-Dibromoethane	<1.0	1.0
74-95-3	Dibromomethane	<1.0	1.0
110-57-6	trans-1,4-Dichloro-2-butene	<1.0	1.0
95-50-1	1,2-Dichlorobenzene	<1.0	1.0
541-73-1	1,3-Dichlorobenzene	<1.0	1.0
106-46-7	1,4-Dichlorobenzene	<1.0	1.0
75-71-8	Dichlorodifluoromethane	<5.0	5.0
75-34-3	1,1-Dichloroethane	<1.0	1.0
107-06-2	1,2-Dichloroethane	<1.0	1.0
75-35-4	1,1-Dichloroethene	<1.0	1.0
156-59-2	cis-1,2-Dichloroethene	<1.0	1.0
156-60-5	trans-1,2-Dichloroethene	<1.0	1.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210209**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**TB-01**	Sampled:	10/10/12 00:00
Lab Sample ID:	**1210209-07**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/10/12 08:15
Unit:	ug/L	Prepared:	10/16/2012 By: LEW
Dilution Factor:	1	Analyzed:	10/17/12 By: LEW
QC Batch:	1212640	Analytical Batch:	2J18057

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
78-87-5	1,2-Dichloropropane	<1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	<1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	<1.0	1.0
100-41-4	Ethylbenzene	<1.0	1.0
60-29-7	Ethyl Ether	<5.0	5.0
591-78-6	2-Hexanone	<5.0	5.0
74-88-4	Iodomethane	<1.0	1.0
98-82-8	Isopropylbenzene	<1.0	1.0
99-87-6	4-Isopropyltoluene	<5.0	5.0
1634-04-4	Methyl tert-Butyl Ether	<5.0	5.0
75-09-2	Methylene Chloride	<5.0	5.0
78-93-3	2-Butanone (MEK)	<5.0	5.0
91-57-6	2-Methylnaphthalene	<5.0	5.0
108-10-1	4-Methyl-2-pentanone (MIBK)	<5.0	5.0
91-20-3	Naphthalene	<5.0	5.0
103-65-1	n-Propylbenzene	<1.0	1.0
100-42-5	Styrene	<1.0	1.0
630-20-6	1,1,1,2-Tetrachloroethane	<1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	<1.0	1.0
127-18-4	Tetrachloroethene	<1.0	1.0
109-99-9	Tetrahydrofuran	<5.0	5.0
108-88-3	Toluene	<1.0	1.0
87-61-6	1,2,3-Trichlorobenzene	<5.0	5.0
120-82-1	1,2,4-Trichlorobenzene	<5.0	5.0
71-55-6	1,1,1-Trichloroethane	<1.0	1.0
79-00-5	1,1,2-Trichloroethane	<1.0	1.0
79-01-6	Trichloroethene	<1.0	1.0
75-69-4	Trichlorofluoromethane	<1.0	1.0
96-18-4	1,2,3-Trichloropropane	<1.0	1.0
95-63-6	1,2,4-Trimethylbenzene	<1.0	1.0
108-67-8	1,3,5-Trimethylbenzene	<1.0	1.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210209**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**TB-01**	Sampled:	10/10/12 00:00
Lab Sample ID:	**1210209-07**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/10/12 08:15
Unit:	ug/L	Prepared:	10/16/2012 By: LEW
Dilution Factor:	1	Analyzed:	10/17/12 By: LEW
QC Batch:	1212640	Analytical Batch:	2J18057

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
75-01-4	Vinyl Chloride	<1.0	1.0
179601-23-1	Xylene, Meta + Para	<2.0	2.0
95-47-6	Xylene, Ortho	<1.0	1.0

Surrogates:	***% Recovery***	***Control Limits***
Dibromofluoromethane	*102*	*85-118*
1,2-Dichloroethane-d4	*105*	*87-122*
Toluene-d8	*96*	*85-113*
4-Bromofluorobenzene	*97*	*82-110*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210229**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-01s**	Sampled:	10/10/12 16:40
Lab Sample ID:	**1210229-01**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/11/12 08:30
Unit:	ug/L	Prepared:	10/12/2012 By: BJH
Dilution Factor:	1	Analyzed:	10/12/12 By: BJH
QC Batch:	1212279	Analytical Batch:	2J12040

Dissolved Gases in Water by RSK-175 Headspace Analysis

CAS Number	Analyte	Analytical Result	RL
74-84-0	Ethane	<1.0	1.0
*74-82-8	Methane	**340**	0.50
74-85-1	Ethylene	<1.0	1.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210229**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-01s**	Sampled:	10/10/12 16:40
Lab Sample ID:	**1210229-01**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/11/12 08:30
Unit:	ug/L	Prepared:	10/16/2012 By: LEW
Dilution Factor:	10	Analyzed:	10/17/12 By: LEW
QC Batch:	1212640	Analytical Batch:	2J18057

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	RL
67-64-1	Acetone	<200	200
107-13-1	Acrylonitrile	<20	20
71-43-2	Benzene	<10	10
108-86-1	Bromobenzene	<10	10
74-97-5	Bromochloromethane	<10	10
75-27-4	Bromodichloromethane	<10	10
75-25-2	Bromoform	<10	10
74-83-9	Bromomethane	<50	50
104-51-8	n-Butylbenzene	<10	10
135-98-8	sec-Butylbenzene	<10	10
98-06-6	tert-Butylbenzene	<10	10
75-15-0	Carbon Disulfide	<10	10
56-23-5	Carbon Tetrachloride	<10	10
108-90-7	Chlorobenzene	<10	10
75-00-3	Chloroethane	<50	50
67-66-3	Chloroform	<10	10
74-87-3	Chloromethane	<50	50
96-12-8	1,2-Dibromo-3-chloropropane	<50	50
124-48-1	Dibromochloromethane	<10	10
106-93-4	1,2-Dibromoethane	<10	10
74-95-3	Dibromomethane	<10	10
110-57-6	trans-1,4-Dichloro-2-butene	<10	10
95-50-1	1,2-Dichlorobenzene	<10	10
541-73-1	1,3-Dichlorobenzene	<10	10
106-46-7	1,4-Dichlorobenzene	<10	10
75-71-8	Dichlorodifluoromethane	<50	50
75-34-3	1,1-Dichloroethane	**29**	10
107-06-2	1,2-Dichloroethane	<10	10
75-35-4	1,1-Dichloroethene	**23**	10

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ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210229**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-01s**	Sampled:	10/10/12 16:40
Lab Sample ID:	**1210229-01**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/11/12 08:30
Unit:	ug/L	Prepared:	10/16/2012 By: LEW
Dilution Factor:	10	Analyzed:	10/17/12 By: LEW
QC Batch:	1212640	Analytical Batch:	2J18057

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
156-59-2	cis-1,2-Dichloroethene	**350**	10
156-60-5	trans-1,2-Dichloroethene	<10	10
78-87-5	1,2-Dichloropropane	<10	10
10061-01-5	cis-1,3-Dichloropropene	<10	10
10061-02-6	trans-1,3-Dichloropropene	<10	10
100-41-4	Ethylbenzene	<10	10
60-29-7	Ethyl Ether	<50	50
591-78-6	2-Hexanone	<50	50
74-88-4	Iodomethane	<10	10
98-82-8	Isopropylbenzene	<10	10
99-87-6	4-Isopropyltoluene	<50	50
1634-04-4	Methyl tert-Butyl Ether	<50	50
75-09-2	Methylene Chloride	<50	50
78-93-3	2-Butanone (MEK)	<50	50
91-57-6	2-Methylnaphthalene	<50	50
108-10-1	4-Methyl-2-pentanone (MIBK)	<50	50
91-20-3	Naphthalene	<50	50
103-65-1	n-Propylbenzene	<10	10
100-42-5	Styrene	<10	10
630-20-6	1,1,1,2-Tetrachloroethane	<10	10
79-34-5	1,1,2,2-Tetrachloroethane	<10	10
127-18-4	Tetrachloroethene	<10	10
109-99-9	Tetrahydrofuran	<50	50
108-88-3	Toluene	<10	10
87-61-6	1,2,3-Trichlorobenzene	<50	50
120-82-1	1,2,4-Trichlorobenzene	<50	50
71-55-6	1,1,1-Trichloroethane	**570**	10
79-00-5	1,1,2-Trichloroethane	<10	10
79-01-6	Trichloroethene	**1400**	10
75-69-4	Trichlorofluoromethane	<10	10
96-18-4	1,2,3-Trichloropropane	<10	10

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210229**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-01s**	Sampled:	10/10/12 16:40
Lab Sample ID:	**1210229-01**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/11/12 08:30
Unit:	ug/L	Prepared:	10/16/2012 By: LEW
Dilution Factor:	10	Analyzed:	10/17/12 By: LEW
QC Batch:	1212640	Analytical Batch:	2J18057

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
95-63-6	1,2,4-Trimethylbenzene	<10	10
108-67-8	1,3,5-Trimethylbenzene	<10	10
75-01-4	Vinyl Chloride	<10	10
179601-23-1	Xylene, Meta + Para	<20	20
95-47-6	Xylene, Ortho	<10	10

Surrogates:	***% Recovery***	***Control Limits***
Dibromofluoromethane	*103*	*85-118*
1,2-Dichloroethane-d4	*104*	*87-122*
Toluene-d8	*96*	*85-113*
4-Bromofluorobenzene	*97*	*82-110*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210229**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-01s**	Sampled:	10/10/12 16:40
Lab Sample ID:	**1210229-01**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/11/12 08:30

Dissolved Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Calcium	**69**	0.50	mg/L	1	USEPA-6010C	10/22/12 15:34	KLV	1212356
Iron	<200	200	ug/L	1	USEPA-6010C	10/22/12 15:34	KLV	1212356
Magnesium	**16**	0.50	mg/L	1	USEPA-6010C	10/22/12 15:34	KLV	1212356
Manganese	**440**	50	ug/L	1	USEPA-6010C	10/22/12 15:34	KLV	1212356

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210229**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-01s**	Sampled:	10/10/12 16:40
Lab Sample ID:	**1210229-01**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/11/12 08:30

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Chloride	**35**	1.0	mg/L	1	SM 4500-Cl E 20th	10/19/12 08:47	LMA	1212691
Carbon, Total Organic	**2.5**	1.0	mg/L	1	SM 5310 C 20th	10/15/12 17:22	KAR	1212454
Nitrogen, Nitrate	**0.34**	0.050	mg/L	1	SM 4500-NO3 F 20th	10/11/12 15:49	CAC	1212338
Sulfate	**26**	5.0	mg/L	1	ASTM D516-90 (02)	10/18/12 08:26	LMA	1212664

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210229**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-01s**	Sampled:	10/10/12 16:40
Lab Sample ID:	**1210229-01RE1**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/11/12 08:30
Unit:	ug/L	Prepared:	10/12/2012 By: BJH
Dilution Factor:	10	Analyzed:	10/12/12 By: BJH
QC Batch:	1212279	Analytical Batch:	2J12040

Dissolved Gases in Water by RSK-175 Headspace Analysis

CAS Number	Analyte	Analytical Result	RL
74-84-0	Ethane	<10	10
74-82-8	Methane	**310**	5.0
74-85-1	Ethylene	<10	10

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210229**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-02s**	Sampled:	10/10/12 17:35
Lab Sample ID:	**1210229-02**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/11/12 08:30
Unit:	ug/L	Prepared:	10/12/2012 By: BJH
Dilution Factor:	1	Analyzed:	10/12/12 By: BJH
QC Batch:	1212279	Analytical Batch:	2J12040

Dissolved Gases in Water by RSK-175 Headspace Analysis

CAS Number	Analyte	Analytical Result	RL
74-84-0	Ethane	**2.0**	1.0
*74-82-8	Methane	**1800**	0.50
74-85-1	Ethylene	**12**	1.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210229**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-02s**	Sampled:	10/10/12 17:35
Lab Sample ID:	**1210229-02**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/11/12 08:30
Unit:	ug/L	Prepared:	10/16/2012 By: LEW
Dilution Factor:	10	Analyzed:	10/17/12 By: LEW
QC Batch:	1212640	Analytical Batch:	2J18057

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	RL
67-64-1	Acetone	<200	200
107-13-1	Acrylonitrile	<20	20
71-43-2	Benzene	<10	10
108-86-1	Bromobenzene	<10	10
74-97-5	Bromochloromethane	<10	10
75-27-4	Bromodichloromethane	<10	10
75-25-2	Bromoform	<10	10
74-83-9	Bromomethane	<50	50
104-51-8	n-Butylbenzene	<10	10
135-98-8	sec-Butylbenzene	<10	10
98-06-6	tert-Butylbenzene	<10	10
75-15-0	Carbon Disulfide	<10	10
56-23-5	Carbon Tetrachloride	<10	10
108-90-7	Chlorobenzene	<10	10
75-00-3	Chloroethane	<50	50
67-66-3	Chloroform	<10	10
74-87-3	Chloromethane	<50	50
96-12-8	1,2-Dibromo-3-chloropropane	<50	50
124-48-1	Dibromochloromethane	<10	10
106-93-4	1,2-Dibromoethane	<10	10
74-95-3	Dibromomethane	<10	10
110-57-6	trans-1,4-Dichloro-2-butene	<10	10
95-50-1	1,2-Dichlorobenzene	<10	10
541-73-1	1,3-Dichlorobenzene	<10	10
106-46-7	1,4-Dichlorobenzene	<10	10
75-71-8	Dichlorodifluoromethane	<50	50
75-34-3	1,1-Dichloroethane	<10	10
107-06-2	1,2-Dichloroethane	<10	10
75-35-4	1,1-Dichloroethene	<10	10

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210229**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-02s**	Sampled:	10/10/12 17:35
Lab Sample ID:	**1210229-02**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/11/12 08:30
Unit:	ug/L	Prepared:	10/16/2012 By: LEW
Dilution Factor:	10	Analyzed:	10/17/12 By: LEW
QC Batch:	1212640	Analytical Batch:	2J18057

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
156-59-2	cis-1,2-Dichloroethene	**410**	10
156-60-5	trans-1,2-Dichloroethene	<10	10
78-87-5	1,2-Dichloropropane	<10	10
10061-01-5	cis-1,3-Dichloropropene	<10	10
10061-02-6	trans-1,3-Dichloropropene	<10	10
100-41-4	Ethylbenzene	<10	10
60-29-7	Ethyl Ether	<50	50
591-78-6	2-Hexanone	<50	50
74-88-4	Iodomethane	<10	10
98-82-8	Isopropylbenzene	<10	10
99-87-6	4-Isopropyltoluene	<50	50
1634-04-4	Methyl tert-Butyl Ether	<50	50
75-09-2	Methylene Chloride	<50	50
78-93-3	2-Butanone (MEK)	<50	50
91-57-6	2-Methylnaphthalene	<50	50
108-10-1	4-Methyl-2-pentanone (MIBK)	<50	50
91-20-3	Naphthalene	<50	50
103-65-1	n-Propylbenzene	<10	10
100-42-5	Styrene	<10	10
630-20-6	1,1,1,2-Tetrachloroethane	<10	10
79-34-5	1,1,2,2-Tetrachloroethane	<10	10
127-18-4	Tetrachloroethene	<10	10
109-99-9	Tetrahydrofuran	<50	50
108-88-3	Toluene	<10	10
87-61-6	1,2,3-Trichlorobenzene	<50	50
120-82-1	1,2,4-Trichlorobenzene	<50	50
71-55-6	1,1,1-Trichloroethane	**24**	10
79-00-5	1,1,2-Trichloroethane	<10	10
79-01-6	Trichloroethene	**1100**	10
75-69-4	Trichlorofluoromethane	<10	10
96-18-4	1,2,3-Trichloropropane	<10	10

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210229**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-02s**	Sampled:	10/10/12 17:35
Lab Sample ID:	**1210229-02**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/11/12 08:30
Unit:	ug/L	Prepared:	10/16/2012 By: LEW
Dilution Factor:	10	Analyzed:	10/17/12 By: LEW
QC Batch:	1212640	Analytical Batch:	2J18057

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
95-63-6	1,2,4-Trimethylbenzene	<10	10
108-67-8	1,3,5-Trimethylbenzene	<10	10
75-01-4	Vinyl Chloride	**33**	10
179601-23-1	Xylene, Meta + Para	<20	20
95-47-6	Xylene, Ortho	<10	10

Surrogates:	***% Recovery***	***Control Limits***
Dibromofluoromethane	*102*	*85-118*
1,2-Dichloroethane-d4	*104*	*87-122*
Toluene-d8	*96*	*85-113*
4-Bromofluorobenzene	*97*	*82-110*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210229**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-02s**	Sampled:	10/10/12 17:35
Lab Sample ID:	**1210229-02**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/11/12 08:30

Dissolved Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Calcium	**68**	0.50	mg/L	1	USEPA-6010C	10/22/12 15:54	KLV	1212356
Iron	**220**	200	ug/L	1	USEPA-6010C	10/22/12 15:54	KLV	1212356
Magnesium	**20**	0.50	mg/L	1	USEPA-6010C	10/22/12 15:54	KLV	1212356
Manganese	**430**	50	ug/L	1	USEPA-6010C	10/22/12 15:54	KLV	1212356

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210229**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-02s**	Sampled:	10/10/12 17:35
Lab Sample ID:	**1210229-02**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/11/12 08:30

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Chloride	**44**	1.0	mg/L	1	SM 4500-Cl E 20th	10/19/12 08:43	LMA	1212691
Carbon, Total Organic	**2.0**	1.0	mg/L	1	SM 5310 C 20th	10/15/12 17:32	KAR	1212454
Nitrogen, Nitrate	<0.050	0.050	mg/L	1	SM 4500-NO3 F 20th	10/11/12 15:50	CAC	1212338
Sulfate	**6.7**	5.0	mg/L	1	ASTM D516-90 (02)	10/18/12 08:26	LMA	1212664

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210229**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-02s**	Sampled:	10/10/12 17:35
Lab Sample ID:	**1210229-02RE1**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/11/12 08:30
Unit:	ug/L	Prepared:	10/12/2012 By: BJH
Dilution Factor:	40	Analyzed:	10/12/12 By: BJH
QC Batch:	1212279	Analytical Batch:	2J12040

Dissolved Gases in Water by RSK-175 Headspace Analysis

CAS Number	Analyte	Analytical Result	RL
74-84-0	Ethane	<40	40
74-82-8	Methane	**1700**	20
74-85-1	Ethylene	<40	40

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210229**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**TB-02**	Sampled:	10/10/12 00:00
Lab Sample ID:	**1210229-03**	Sampled By:	TML
Matrix:	Water	Received:	10/11/12 08:30
Unit:	ug/L	Prepared:	10/16/2012 By: LEW
Dilution Factor:	1	Analyzed:	10/17/12 By: LEW
QC Batch:	1212640	Analytical Batch:	2J18057

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	RL
67-64-1	Acetone	<20	20
107-13-1	Acrylonitrile	<2.0	2.0
71-43-2	Benzene	<1.0	1.0
108-86-1	Bromobenzene	<1.0	1.0
74-97-5	Bromochloromethane	<1.0	1.0
75-27-4	Bromodichloromethane	<1.0	1.0
75-25-2	Bromoform	<1.0	1.0
74-83-9	Bromomethane	<5.0	5.0
104-51-8	n-Butylbenzene	<1.0	1.0
135-98-8	sec-Butylbenzene	<1.0	1.0
98-06-6	tert-Butylbenzene	<1.0	1.0
75-15-0	Carbon Disulfide	<1.0	1.0
56-23-5	Carbon Tetrachloride	<1.0	1.0
108-90-7	Chlorobenzene	<1.0	1.0
75-00-3	Chloroethane	<5.0	5.0
67-66-3	Chloroform	<1.0	1.0
74-87-3	Chloromethane	<5.0	5.0
96-12-8	1,2-Dibromo-3-chloropropane	<5.0	5.0
124-48-1	Dibromochloromethane	<1.0	1.0
106-93-4	1,2-Dibromoethane	<1.0	1.0
74-95-3	Dibromomethane	<1.0	1.0
110-57-6	trans-1,4-Dichloro-2-butene	<1.0	1.0
95-50-1	1,2-Dichlorobenzene	<1.0	1.0
541-73-1	1,3-Dichlorobenzene	<1.0	1.0
106-46-7	1,4-Dichlorobenzene	<1.0	1.0
75-71-8	Dichlorodifluoromethane	<5.0	5.0
75-34-3	1,1-Dichloroethane	<1.0	1.0
107-06-2	1,2-Dichloroethane	<1.0	1.0
75-35-4	1,1-Dichloroethene	<1.0	1.0
156-59-2	cis-1,2-Dichloroethene	<1.0	1.0
156-60-5	trans-1,2-Dichloroethene	<1.0	1.0

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ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210229**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**TB-02**	Sampled:	10/10/12 00:00
Lab Sample ID:	**1210229-03**	Sampled By:	TML
Matrix:	Water	Received:	10/11/12 08:30
Unit:	ug/L	Prepared:	10/16/2012 By: LEW
Dilution Factor:	1	Analyzed:	10/17/12 By: LEW
QC Batch:	1212640	Analytical Batch:	2J18057

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
78-87-5	1,2-Dichloropropane	<1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	<1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	<1.0	1.0
100-41-4	Ethylbenzene	<1.0	1.0
60-29-7	Ethyl Ether	<5.0	5.0
591-78-6	2-Hexanone	<5.0	5.0
74-88-4	Iodomethane	<1.0	1.0
98-82-8	Isopropylbenzene	<1.0	1.0
99-87-6	4-Isopropyltoluene	<5.0	5.0
1634-04-4	Methyl tert-Butyl Ether	<5.0	5.0
75-09-2	Methylene Chloride	<5.0	5.0
78-93-3	2-Butanone (MEK)	<5.0	5.0
91-57-6	2-Methylnaphthalene	<5.0	5.0
108-10-1	4-Methyl-2-pentanone (MIBK)	<5.0	5.0
91-20-3	Naphthalene	<5.0	5.0
103-65-1	n-Propylbenzene	<1.0	1.0
100-42-5	Styrene	<1.0	1.0
630-20-6	1,1,1,2-Tetrachloroethane	<1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	<1.0	1.0
127-18-4	Tetrachloroethene	<1.0	1.0
109-99-9	Tetrahydrofuran	<5.0	5.0
108-88-3	Toluene	<1.0	1.0
87-61-6	1,2,3-Trichlorobenzene	<5.0	5.0
120-82-1	1,2,4-Trichlorobenzene	<5.0	5.0
71-55-6	1,1,1-Trichloroethane	<1.0	1.0
79-00-5	1,1,2-Trichloroethane	<1.0	1.0
79-01-6	Trichloroethene	<1.0	1.0
75-69-4	Trichlorofluoromethane	<1.0	1.0
96-18-4	1,2,3-Trichloropropane	<1.0	1.0
95-63-6	1,2,4-Trimethylbenzene	<1.0	1.0
108-67-8	1,3,5-Trimethylbenzene	<1.0	1.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210229**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**TB-02**	Sampled:	10/10/12 00:00
Lab Sample ID:	**1210229-03**	Sampled By:	TML
Matrix:	Water	Received:	10/11/12 08:30
Unit:	ug/L	Prepared:	10/16/2012 By: LEW
Dilution Factor:	1	Analyzed:	10/17/12 By: LEW
QC Batch:	1212640	Analytical Batch:	2J18057

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
75-01-4	Vinyl Chloride	<1.0	1.0
179601-23-1	Xylene, Meta + Para	<2.0	2.0
95-47-6	Xylene, Ortho	<1.0	1.0

Surrogates:	***% Recovery***	***Control Limits***
Dibromofluoromethane	*102*	*85-118*
1,2-Dichloroethane-d4	*105*	*87-122*
Toluene-d8	*96*	*85-113*
4-Bromofluorobenzene	*97*	*82-110*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210284**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-12s**	Sampled:	10/11/12 09:49
Lab Sample ID:	**1210284-01**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/12/12 08:30
Unit:	ug/L	Prepared:	10/23/2012 By: LEW
Dilution Factor:	10	Analyzed:	10/23/12 By: DLV
QC Batch:	1212918	Analytical Batch:	2J24043

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	RL
67-64-1	Acetone	<200	200
107-13-1	Acrylonitrile	<20	20
71-43-2	Benzene	<10	10
108-86-1	Bromobenzene	<10	10
74-97-5	Bromochloromethane	<10	10
75-27-4	Bromodichloromethane	<10	10
75-25-2	Bromoform	<10	10
*74-83-9	Bromomethane	<50	50
104-51-8	n-Butylbenzene	<10	10
135-98-8	sec-Butylbenzene	<10	10
98-06-6	tert-Butylbenzene	<10	10
75-15-0	Carbon Disulfide	<10	10
56-23-5	Carbon Tetrachloride	<10	10
108-90-7	Chlorobenzene	<10	10
75-00-3	Chloroethane	<50	50
67-66-3	Chloroform	<10	10
74-87-3	Chloromethane	<50	50
96-12-8	1,2-Dibromo-3-chloropropane	<50	50
124-48-1	Dibromochloromethane	<10	10
106-93-4	1,2-Dibromoethane	<10	10
74-95-3	Dibromomethane	<10	10
110-57-6	trans-1,4-Dichloro-2-butene	<10	10
95-50-1	1,2-Dichlorobenzene	<10	10
541-73-1	1,3-Dichlorobenzene	<10	10
106-46-7	1,4-Dichlorobenzene	<10	10
75-71-8	Dichlorodifluoromethane	<50	50
75-34-3	1,1-Dichloroethane	<10	10
107-06-2	1,2-Dichloroethane	<10	10
75-35-4	1,1-Dichloroethene	<10	10
156-59-2	cis-1,2-Dichloroethene	<10	10
156-60-5	trans-1,2-Dichloroethene	<10	10

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210284**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-12s**	Sampled:	10/11/12 09:49
Lab Sample ID:	**1210284-01**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/12/12 08:30
Unit:	ug/L	Prepared:	10/23/2012 By: LEW
Dilution Factor:	10	Analyzed:	10/23/12 By: DLV
QC Batch:	1212918	Analytical Batch:	2J24043

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
78-87-5	1,2-Dichloropropane	<10	10
10061-01-5	cis-1,3-Dichloropropene	<10	10
10061-02-6	trans-1,3-Dichloropropene	<10	10
100-41-4	Ethylbenzene	<10	10
60-29-7	Ethyl Ether	<50	50
591-78-6	2-Hexanone	**77**	50
74-88-4	Iodomethane	<10	10
98-82-8	Isopropylbenzene	<10	10
99-87-6	4-Isopropyltoluene	<50	50
1634-04-4	Methyl tert-Butyl Ether	<50	50
75-09-2	Methylene Chloride	<50	50
78-93-3	2-Butanone (MEK)	**84**	50
91-57-6	2-Methylnaphthalene	<50	50
108-10-1	4-Methyl-2-pentanone (MIBK)	<50	50
91-20-3	Naphthalene	<50	50
103-65-1	n-Propylbenzene	<10	10
100-42-5	Styrene	<10	10
630-20-6	1,1,1,2-Tetrachloroethane	<10	10
79-34-5	1,1,2,2-Tetrachloroethane	<10	10
127-18-4	Tetrachloroethene	**16**	10
109-99-9	Tetrahydrofuran	<50	50
108-88-3	Toluene	<10	10
87-61-6	1,2,3-Trichlorobenzene	<50	50
120-82-1	1,2,4-Trichlorobenzene	<50	50
71-55-6	1,1,1-Trichloroethane	**30**	10
79-00-5	1,1,2-Trichloroethane	<10	10
79-01-6	Trichloroethene	**1600**	10
75-69-4	Trichlorofluoromethane	<10	10
96-18-4	1,2,3-Trichloropropane	<10	10
95-63-6	1,2,4-Trimethylbenzene	<10	10
108-67-8	1,3,5-Trimethylbenzene	<10	10

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210284**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-12s**	Sampled:	10/11/12 09:49
Lab Sample ID:	**1210284-01**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/12/12 08:30
Unit:	ug/L	Prepared:	10/23/2012 By: LEW
Dilution Factor:	10	Analyzed:	10/23/12 By: DLV
QC Batch:	1212918	Analytical Batch:	2J24043

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
75-01-4	Vinyl Chloride	<10	10
179601-23-1	Xylene, Meta + Para	<20	20
95-47-6	Xylene, Ortho	<10	10

Surrogates:	***% Recovery***	***Control Limits***
Dibromofluoromethane	*107*	*85-118*
1,2-Dichloroethane-d4	*104*	*87-122*
Toluene-d8	*103*	*85-113*
4-Bromofluorobenzene	*100*	*82-110*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210284**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-12s**	Sampled:	10/11/12 09:49
Lab Sample ID:	**1210284-01**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/12/12 08:30

Dissolved Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Calcium	**88**	0.50	mg/L	1	USEPA-6010C	10/22/12 15:58	KLV	1212356
Iron	<200	200	ug/L	1	USEPA-6010C	10/22/12 15:58	KLV	1212356
Magnesium	**19**	0.50	mg/L	1	USEPA-6010C	10/22/12 15:58	KLV	1212356
Manganese	<50	50	ug/L	1	USEPA-6010C	10/22/12 15:58	KLV	1212356

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210284**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-12s**	Sampled:	10/11/12 09:49
Lab Sample ID:	**1210284-01**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/12/12 08:30

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Carbon, Total Organic	**1.9**	1.0	mg/L	1	SM 5310 C 20th	10/15/12 17:43	KAR	1212454
Chloride	**110**	2.0	mg/L	2	SM 4500-Cl E 20th	10/19/12 11:13	LMA	1212694
***Nitrogen, Nitrate**	**1.8**	0.50	mg/L	10	SM 4500-NO3 F 20th	10/12/12 11:18	CAC	1212367
Sulfate	**45**	10	mg/L	2	ASTM D516-90 (02)	10/18/12 09:02	LMA	1212665

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210284**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-13s**	Sampled:	10/11/12 10:43
Lab Sample ID:	**1210284-02**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/12/12 08:30
Unit:	ug/L	Prepared:	10/23/2012 By: LEW
Dilution Factor:	20	Analyzed:	10/23/12 By: DLV
QC Batch:	1212918	Analytical Batch:	2J24043

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	RL
67-64-1	Acetone	<400	400
107-13-1	Acrylonitrile	<40	40
71-43-2	Benzene	<20	20
108-86-1	Bromobenzene	<20	20
74-97-5	Bromochloromethane	<20	20
75-27-4	Bromodichloromethane	<20	20
75-25-2	Bromoform	<20	20
*74-83-9	Bromomethane	<100	100
104-51-8	n-Butylbenzene	<20	20
135-98-8	sec-Butylbenzene	<20	20
98-06-6	tert-Butylbenzene	<20	20
75-15-0	Carbon Disulfide	<20	20
56-23-5	Carbon Tetrachloride	<20	20
108-90-7	Chlorobenzene	<20	20
75-00-3	Chloroethane	<100	100
67-66-3	Chloroform	<20	20
74-87-3	Chloromethane	<100	100
96-12-8	1,2-Dibromo-3-chloropropane	<100	100
124-48-1	Dibromochloromethane	<20	20
106-93-4	1,2-Dibromoethane	<20	20
74-95-3	Dibromomethane	<20	20
110-57-6	trans-1,4-Dichloro-2-butene	<20	20
95-50-1	1,2-Dichlorobenzene	<20	20
541-73-1	1,3-Dichlorobenzene	<20	20
106-46-7	1,4-Dichlorobenzene	<20	20
75-71-8	Dichlorodifluoromethane	<100	100
75-34-3	1,1-Dichloroethane	<20	20
107-06-2	1,2-Dichloroethane	<20	20
75-35-4	1,1-Dichloroethene	<20	20
156-59-2	cis-1,2-Dichloroethene	<20	20
156-60-5	trans-1,2-Dichloroethene	<20	20

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210284**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-13s**	Sampled:	10/11/12 10:43
Lab Sample ID:	**1210284-02**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/12/12 08:30
Unit:	ug/L	Prepared:	10/23/2012 By: LEW
Dilution Factor:	20	Analyzed:	10/23/12 By: DLV
QC Batch:	1212918	Analytical Batch:	2J24043

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
78-87-5	1,2-Dichloropropane	<20	20
10061-01-5	cis-1,3-Dichloropropene	<20	20
10061-02-6	trans-1,3-Dichloropropene	<20	20
100-41-4	Ethylbenzene	<20	20
60-29-7	Ethyl Ether	<100	100
591-78-6	2-Hexanone	<100	100
74-88-4	Iodomethane	<20	20
98-82-8	Isopropylbenzene	<20	20
99-87-6	4-Isopropyltoluene	<100	100
1634-04-4	Methyl tert-Butyl Ether	<100	100
75-09-2	Methylene Chloride	<100	100
78-93-3	2-Butanone (MEK)	**110**	100
91-57-6	2-Methylnaphthalene	<100	100
108-10-1	4-Methyl-2-pentanone (MIBK)	<100	100
91-20-3	Naphthalene	<100	100
103-65-1	n-Propylbenzene	<20	20
100-42-5	Styrene	<20	20
630-20-6	1,1,1,2-Tetrachloroethane	<20	20
79-34-5	1,1,2,2-Tetrachloroethane	<20	20
127-18-4	Tetrachloroethene	<20	20
109-99-9	Tetrahydrofuran	<100	100
108-88-3	Toluene	<20	20
87-61-6	1,2,3-Trichlorobenzene	<100	100
120-82-1	1,2,4-Trichlorobenzene	<100	100
71-55-6	1,1,1-Trichloroethane	**1200**	20
79-00-5	1,1,2-Trichloroethane	<20	20
79-01-6	Trichloroethene	**3100**	20
75-69-4	Trichlorofluoromethane	<20	20
96-18-4	1,2,3-Trichloropropane	<20	20
95-63-6	1,2,4-Trimethylbenzene	<20	20
108-67-8	1,3,5-Trimethylbenzene	<20	20

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210284**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-13s**	Sampled:	10/11/12 10:43
Lab Sample ID:	**1210284-02**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/12/12 08:30
Unit:	ug/L	Prepared:	10/23/2012 By: LEW
Dilution Factor:	20	Analyzed:	10/23/12 By: DLV
QC Batch:	1212918	Analytical Batch:	2J24043

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
75-01-4	Vinyl Chloride	<20	20
179601-23-1	Xylene, Meta + Para	<40	40
95-47-6	Xylene, Ortho	<20	20

Surrogates:	***% Recovery***	***Control Limits***
Dibromofluoromethane	*108*	*85-118*
1,2-Dichloroethane-d4	*104*	*87-122*
Toluene-d8	*104*	*85-113*
4-Bromofluorobenzene	*99*	*82-110*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210284**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-13s**	Sampled:	10/11/12 10:43
Lab Sample ID:	**1210284-02**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/12/12 08:30

Dissolved Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Calcium	**67**	0.50	mg/L	1	USEPA-6010C	10/22/12 16:08	KLV	1212356
Iron	<200	200	ug/L	1	USEPA-6010C	10/22/12 16:08	KLV	1212356
Magnesium	**15**	0.50	mg/L	1	USEPA-6010C	10/22/12 16:08	KLV	1212356
Manganese	<50	50	ug/L	1	USEPA-6010C	10/22/12 16:08	KLV	1212356

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ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210284**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-13s**	Sampled:	10/11/12 10:43
Lab Sample ID:	**1210284-02**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/12/12 08:30

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Chloride	**37**	1.0	mg/L	1	SM 4500-Cl E 20th	10/19/12 10:51	LMA	1212694
Carbon, Total Organic	**1.5**	1.0	mg/L	1	SM 5310 C 20th	10/15/12 18:16	KAR	1212454
Nitrogen, Nitrate	**1.8**	0.25	mg/L	5	SM 4500-NO3 F 20th	10/12/12 11:21	CAC	1212367
Sulfate	**16**	5.0	mg/L	1	ASTM D516-90 (02)	10/18/12 08:30	LMA	1212665

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ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210284**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-14s**	Sampled:	10/11/12 13:29
Lab Sample ID:	**1210284-03**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/12/12 08:30
Unit:	ug/L	Prepared:	10/23/2012 By: LEW
Dilution Factor:	20	Analyzed:	10/23/12 By: DLV
QC Batch:	1212918	Analytical Batch:	2J24043

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	RL
67-64-1	Acetone	<400	400
107-13-1	Acrylonitrile	<40	40
71-43-2	Benzene	<20	20
108-86-1	Bromobenzene	<20	20
74-97-5	Bromochloromethane	<20	20
75-27-4	Bromodichloromethane	<20	20
75-25-2	Bromoform	<20	20
*74-83-9	Bromomethane	<100	100
104-51-8	n-Butylbenzene	<20	20
135-98-8	sec-Butylbenzene	<20	20
98-06-6	tert-Butylbenzene	<20	20
75-15-0	Carbon Disulfide	<20	20
56-23-5	Carbon Tetrachloride	<20	20
108-90-7	Chlorobenzene	<20	20
75-00-3	Chloroethane	<100	100
67-66-3	Chloroform	<20	20
74-87-3	Chloromethane	<100	100
96-12-8	1,2-Dibromo-3-chloropropane	<100	100
124-48-1	Dibromochloromethane	<20	20
106-93-4	1,2-Dibromoethane	<20	20
74-95-3	Dibromomethane	<20	20
110-57-6	trans-1,4-Dichloro-2-butene	<20	20
95-50-1	1,2-Dichlorobenzene	<20	20
541-73-1	1,3-Dichlorobenzene	<20	20
106-46-7	1,4-Dichlorobenzene	<20	20
75-71-8	Dichlorodifluoromethane	<100	100
75-34-3	1,1-Dichloroethane	<20	20
107-06-2	1,2-Dichloroethane	<20	20
75-35-4	1,1-Dichloroethene	<20	20
156-59-2	cis-1,2-Dichloroethene	**35**	20
156-60-5	trans-1,2-Dichloroethene	<20	20

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ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210284**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-14s**	Sampled:	10/11/12 13:29
Lab Sample ID:	**1210284-03**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/12/12 08:30
Unit:	ug/L	Prepared:	10/23/2012 By: LEW
Dilution Factor:	20	Analyzed:	10/23/12 By: DLV
QC Batch:	1212918	Analytical Batch:	2J24043

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
78-87-5	1,2-Dichloropropane	<20	20
10061-01-5	cis-1,3-Dichloropropene	<20	20
10061-02-6	trans-1,3-Dichloropropene	<20	20
100-41-4	Ethylbenzene	<20	20
60-29-7	Ethyl Ether	<100	100
591-78-6	2-Hexanone	<100	100
74-88-4	Iodomethane	<20	20
98-82-8	Isopropylbenzene	<20	20
99-87-6	4-Isopropyltoluene	<100	100
1634-04-4	Methyl tert-Butyl Ether	<100	100
75-09-2	Methylene Chloride	<100	100
78-93-3	2-Butanone (MEK)	**120**	100
91-57-6	2-Methylnaphthalene	<100	100
108-10-1	4-Methyl-2-pentanone (MIBK)	<100	100
91-20-3	Naphthalene	<100	100
103-65-1	n-Propylbenzene	<20	20
100-42-5	Styrene	<20	20
630-20-6	1,1,1,2-Tetrachloroethane	<20	20
79-34-5	1,1,2,2-Tetrachloroethane	<20	20
127-18-4	Tetrachloroethene	<20	20
109-99-9	Tetrahydrofuran	<100	100
108-88-3	Toluene	<20	20
87-61-6	1,2,3-Trichlorobenzene	<100	100
120-82-1	1,2,4-Trichlorobenzene	<100	100
71-55-6	1,1,1-Trichloroethane	**1300**	20
79-00-5	1,1,2-Trichloroethane	<20	20
79-01-6	Trichloroethene	**3500**	20
75-69-4	Trichlorofluoromethane	<20	20
96-18-4	1,2,3-Trichloropropane	<20	20
95-63-6	1,2,4-Trimethylbenzene	<20	20
108-67-8	1,3,5-Trimethylbenzene	<20	20

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210284**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-14s**	Sampled:	10/11/12 13:29
Lab Sample ID:	**1210284-03**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/12/12 08:30
Unit:	ug/L	Prepared:	10/23/2012 By: LEW
Dilution Factor:	20	Analyzed:	10/23/12 By: DLV
QC Batch:	1212918	Analytical Batch:	2J24043

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
75-01-4	Vinyl Chloride	**45**	20
179601-23-1	Xylene, Meta + Para	<40	40
95-47-6	Xylene, Ortho	<20	20

Surrogates:	***% Recovery***	***Control Limits***
Dibromofluoromethane	*107*	*85-118*
1,2-Dichloroethane-d4	*104*	*87-122*
Toluene-d8	*104*	*85-113*
4-Bromofluorobenzene	*98*	*82-110*

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ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210284**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-14s**	Sampled:	10/11/12 13:29
Lab Sample ID:	**1210284-03**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/12/12 08:30

Dissolved Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Calcium	**70**	0.50	mg/L	1	USEPA-6010C	10/22/12 15:51	KLV	1212356
Iron	<200	200	ug/L	1	USEPA-6010C	10/22/12 15:51	KLV	1212356
Magnesium	**16**	0.50	mg/L	1	USEPA-6010C	10/22/12 15:51	KLV	1212356
Manganese	**100**	50	ug/L	1	USEPA-6010C	10/22/12 15:51	KLV	1212356

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ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210284**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-14s**	Sampled:	10/11/12 13:29
Lab Sample ID:	**1210284-03**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/12/12 08:30

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Chloride	**54**	1.0	mg/L	1	SM 4500-Cl E 20th	10/19/12 10:51	LMA	1212694
Carbon, Total Organic	**1.6**	1.0	mg/L	1	SM 5310 C 20th	10/15/12 18:27	KAR	1212454
Nitrogen, Nitrate	**1.2**	0.25	mg/L	5	SM 4500-NO3 F 20th	10/12/12 11:22	CAC	1212367
Sulfate	**24**	5.0	mg/L	1	ASTM D516-90 (02)	10/18/12 08:30	LMA	1212665

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ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210284**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-15s**	Sampled:	10/11/12 14:21
Lab Sample ID:	**1210284-04**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/12/12 08:30
Unit:	ug/L	Prepared:	10/23/2012 By: LEW
Dilution Factor:	20	Analyzed:	10/23/12 By: DLV
QC Batch:	1212918	Analytical Batch:	2J24043

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	RL
67-64-1	Acetone	<400	400
107-13-1	Acrylonitrile	<40	40
71-43-2	Benzene	<20	20
108-86-1	Bromobenzene	<20	20
74-97-5	Bromochloromethane	<20	20
75-27-4	Bromodichloromethane	<20	20
75-25-2	Bromoform	<20	20
*74-83-9	Bromomethane	<100	100
104-51-8	n-Butylbenzene	<20	20
135-98-8	sec-Butylbenzene	<20	20
98-06-6	tert-Butylbenzene	<20	20
75-15-0	Carbon Disulfide	<20	20
56-23-5	Carbon Tetrachloride	<20	20
108-90-7	Chlorobenzene	<20	20
75-00-3	Chloroethane	<100	100
67-66-3	Chloroform	<20	20
74-87-3	Chloromethane	<100	100
96-12-8	1,2-Dibromo-3-chloropropane	<100	100
124-48-1	Dibromochloromethane	<20	20
106-93-4	1,2-Dibromoethane	<20	20
74-95-3	Dibromomethane	<20	20
110-57-6	trans-1,4-Dichloro-2-butene	<20	20
95-50-1	1,2-Dichlorobenzene	<20	20
541-73-1	1,3-Dichlorobenzene	<20	20
106-46-7	1,4-Dichlorobenzene	<20	20
75-71-8	Dichlorodifluoromethane	<100	100
75-34-3	1,1-Dichloroethane	<20	20
107-06-2	1,2-Dichloroethane	<20	20
75-35-4	1,1-Dichloroethene	<20	20
156-59-2	cis-1,2-Dichloroethene	**880**	20
156-60-5	trans-1,2-Dichloroethene	<20	20

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ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210284**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-15s**	Sampled:	10/11/12 14:21
Lab Sample ID:	**1210284-04**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/12/12 08:30
Unit:	ug/L	Prepared:	10/23/2012 By: LEW
Dilution Factor:	20	Analyzed:	10/23/12 By: DLV
QC Batch:	1212918	Analytical Batch:	2J24043

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
78-87-5	1,2-Dichloropropane	<20	20
10061-01-5	cis-1,3-Dichloropropene	<20	20
10061-02-6	trans-1,3-Dichloropropene	<20	20
100-41-4	Ethylbenzene	<20	20
60-29-7	Ethyl Ether	<100	100
591-78-6	2-Hexanone	<100	100
74-88-4	Iodomethane	<20	20
98-82-8	Isopropylbenzene	<20	20
99-87-6	4-Isopropyltoluene	<100	100
1634-04-4	Methyl tert-Butyl Ether	<100	100
75-09-2	Methylene Chloride	<100	100
78-93-3	2-Butanone (MEK)	**120**	100
91-57-6	2-Methylnaphthalene	<100	100
108-10-1	4-Methyl-2-pentanone (MIBK)	<100	100
91-20-3	Naphthalene	<100	100
103-65-1	n-Propylbenzene	<20	20
100-42-5	Styrene	<20	20
630-20-6	1,1,1,2-Tetrachloroethane	<20	20
79-34-5	1,1,2,2-Tetrachloroethane	<20	20
127-18-4	Tetrachloroethene	<20	20
109-99-9	Tetrahydrofuran	<100	100
108-88-3	Toluene	<20	20
87-61-6	1,2,3-Trichlorobenzene	<100	100
120-82-1	1,2,4-Trichlorobenzene	<100	100
71-55-6	1,1,1-Trichloroethane	**750**	20
79-00-5	1,1,2-Trichloroethane	<20	20
79-01-6	Trichloroethene	**2700**	20
75-69-4	Trichlorofluoromethane	<20	20
96-18-4	1,2,3-Trichloropropane	<20	20
95-63-6	1,2,4-Trimethylbenzene	<20	20
108-67-8	1,3,5-Trimethylbenzene	<20	20

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210284**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-15s**	Sampled:	10/11/12 14:21
Lab Sample ID:	**1210284-04**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/12/12 08:30
Unit:	ug/L	Prepared:	10/23/2012 By: LEW
Dilution Factor:	20	Analyzed:	10/23/12 By: DLV
QC Batch:	1212918	Analytical Batch:	2J24043

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
75-01-4	Vinyl Chloride	<20	20
179601-23-1	Xylene, Meta + Para	<40	40
95-47-6	Xylene, Ortho	<20	20

Surrogates:	***% Recovery***	***Control Limits***
Dibromofluoromethane	*107*	*85-118*
1,2-Dichloroethane-d4	*105*	*87-122*
Toluene-d8	*105*	*85-113*
4-Bromofluorobenzene	*98*	*82-110*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210284**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-15s**	Sampled:	10/11/12 14:21
Lab Sample ID:	**1210284-04**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/12/12 08:30

Dissolved Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Calcium	**61**	0.50	mg/L	1	USEPA-6010C	10/22/12 16:12	KLV	1212356
Iron	<200	200	ug/L	1	USEPA-6010C	10/22/12 16:12	KLV	1212356
Magnesium	**12**	0.50	mg/L	1	USEPA-6010C	10/22/12 16:12	KLV	1212356
Manganese	**270**	50	ug/L	1	USEPA-6010C	10/22/12 16:12	KLV	1212356

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210284**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-15s**	Sampled:	10/11/12 14:21
Lab Sample ID:	**1210284-04**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/12/12 08:30

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Carbon, Total Organic	**1.9**	1.0	mg/L	1	SM 5310 C 20th	10/15/12 18:38	KAR	1212454
Chloride	**19**	1.0	mg/L	1	SM 4500-Cl E 20th	10/19/12 10:51	LMA	1212694
Nitrogen, Nitrate	**1.7**	0.25	mg/L	5	SM 4500-NO3 F 20th	10/12/12 11:26	CAC	1212367
Sulfate	**20**	5.0	mg/L	1	ASTM D516-90 (02)	10/18/12 08:30	LMA	1212665

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210284**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-15d**	Sampled:	10/11/12 15:05
Lab Sample ID:	**1210284-05**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/12/12 08:30
Unit:	ug/L	Prepared:	10/23/2012 By: LEW
Dilution Factor:	1	Analyzed:	10/23/12 By: DLV
QC Batch:	1212918	Analytical Batch:	2J24043

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	RL
67-64-1	Acetone	<20	20
107-13-1	Acrylonitrile	<2.0	2.0
71-43-2	Benzene	<1.0	1.0
108-86-1	Bromobenzene	<1.0	1.0
74-97-5	Bromochloromethane	<1.0	1.0
75-27-4	Bromodichloromethane	<1.0	1.0
75-25-2	Bromoform	<1.0	1.0
*74-83-9	Bromomethane	<5.0	5.0
104-51-8	n-Butylbenzene	<1.0	1.0
135-98-8	sec-Butylbenzene	<1.0	1.0
98-06-6	tert-Butylbenzene	<1.0	1.0
75-15-0	Carbon Disulfide	<1.0	1.0
56-23-5	Carbon Tetrachloride	<1.0	1.0
108-90-7	Chlorobenzene	<1.0	1.0
75-00-3	Chloroethane	<5.0	5.0
67-66-3	Chloroform	<1.0	1.0
74-87-3	Chloromethane	<5.0	5.0
96-12-8	1,2-Dibromo-3-chloropropane	<5.0	5.0
124-48-1	Dibromochloromethane	<1.0	1.0
106-93-4	1,2-Dibromoethane	<1.0	1.0
74-95-3	Dibromomethane	<1.0	1.0
110-57-6	trans-1,4-Dichloro-2-butene	<1.0	1.0
95-50-1	1,2-Dichlorobenzene	<1.0	1.0
541-73-1	1,3-Dichlorobenzene	<1.0	1.0
106-46-7	1,4-Dichlorobenzene	<1.0	1.0
75-71-8	Dichlorodifluoromethane	<5.0	5.0
75-34-3	1,1-Dichloroethane	<1.0	1.0
107-06-2	1,2-Dichloroethane	<1.0	1.0
75-35-4	1,1-Dichloroethene	<1.0	1.0
156-59-2	cis-1,2-Dichloroethene	**3.5**	1.0
156-60-5	trans-1,2-Dichloroethene	<1.0	1.0

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ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210284**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-15d**	Sampled:	10/11/12 15:05
Lab Sample ID:	**1210284-05**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/12/12 08:30
Unit:	ug/L	Prepared:	10/23/2012 By: LEW
Dilution Factor:	1	Analyzed:	10/23/12 By: DLV
QC Batch:	1212918	Analytical Batch:	2J24043

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
78-87-5	1,2-Dichloropropane	<1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	<1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	<1.0	1.0
100-41-4	Ethylbenzene	<1.0	1.0
60-29-7	Ethyl Ether	<5.0	5.0
591-78-6	2-Hexanone	<5.0	5.0
74-88-4	Iodomethane	<1.0	1.0
98-82-8	Isopropylbenzene	<1.0	1.0
99-87-6	4-Isopropyltoluene	<5.0	5.0
1634-04-4	Methyl tert-Butyl Ether	<5.0	5.0
75-09-2	Methylene Chloride	<5.0	5.0
78-93-3	2-Butanone (MEK)	<5.0	5.0
91-57-6	2-Methylnaphthalene	<5.0	5.0
108-10-1	4-Methyl-2-pentanone (MIBK)	<5.0	5.0
91-20-3	Naphthalene	<5.0	5.0
103-65-1	n-Propylbenzene	<1.0	1.0
100-42-5	Styrene	<1.0	1.0
630-20-6	1,1,1,2-Tetrachloroethane	<1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	<1.0	1.0
127-18-4	Tetrachloroethene	<1.0	1.0
109-99-9	Tetrahydrofuran	<5.0	5.0
108-88-3	Toluene	<1.0	1.0
87-61-6	1,2,3-Trichlorobenzene	<5.0	5.0
120-82-1	1,2,4-Trichlorobenzene	<5.0	5.0
71-55-6	1,1,1-Trichloroethane	**5.2**	1.0
79-00-5	1,1,2-Trichloroethane	<1.0	1.0
79-01-6	Trichloroethene	**26**	1.0
75-69-4	Trichlorofluoromethane	<1.0	1.0
96-18-4	1,2,3-Trichloropropane	<1.0	1.0
95-63-6	1,2,4-Trimethylbenzene	<1.0	1.0
108-67-8	1,3,5-Trimethylbenzene	<1.0	1.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210284**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-15d**	Sampled:	10/11/12 15:05
Lab Sample ID:	**1210284-05**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/12/12 08:30
Unit:	ug/L	Prepared:	10/23/2012 By: LEW
Dilution Factor:	1	Analyzed:	10/23/12 By: DLV
QC Batch:	1212918	Analytical Batch:	2J24043

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
75-01-4	Vinyl Chloride	<1.0	1.0
179601-23-1	Xylene, Meta + Para	<2.0	2.0
95-47-6	Xylene, Ortho	<1.0	1.0

Surrogates:	***% Recovery***	***Control Limits***
Dibromofluoromethane	*105*	*85-118*
1,2-Dichloroethane-d4	*104*	*87-122*
Toluene-d8	*104*	*85-113*
4-Bromofluorobenzene	*100*	*82-110*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210284**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-15d**	Sampled:	10/11/12 15:05
Lab Sample ID:	**1210284-05**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/12/12 08:30

Dissolved Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Calcium	**74**	0.50	mg/L	1	USEPA-6010C	10/22/12 16:15	KLV	1212356
Iron	**390**	200	ug/L	1	USEPA-6010C	10/22/12 16:15	KLV	1212356
Magnesium	**19**	0.50	mg/L	1	USEPA-6010C	10/22/12 16:15	KLV	1212356
Manganese	<50	50	ug/L	1	USEPA-6010C	10/22/12 16:15	KLV	1212356

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210284**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-15d**	Sampled:	10/11/12 15:05
Lab Sample ID:	**1210284-05**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/12/12 08:30

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Chloride	**110**	2.0	mg/L	2	SM 4500-Cl E 20th	10/19/12 11:14	LMA	1212694
Carbon, Total Organic	**1.3**	1.0	mg/L	1	SM 5310 C 20th	10/15/12 18:49	KAR	1212454
Nitrogen, Nitrate	<0.050	0.050	mg/L	1	SM 4500-NO3 F 20th	10/12/12 11:05	CAC	1212367
Sulfate	**49**	10	mg/L	2	ASTM D516-90 (02)	10/18/12 09:04	LMA	1212665

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210284**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-11s**	Sampled:	10/11/12 16:10
Lab Sample ID:	**1210284-06**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/12/12 08:30
Unit:	ug/L	Prepared:	10/23/2012 By: LEW
Dilution Factor:	1	Analyzed:	10/23/12 By: DLV
QC Batch:	1212918	Analytical Batch:	2J24043

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	RL
67-64-1	Acetone	<20	20
107-13-1	Acrylonitrile	<2.0	2.0
71-43-2	Benzene	<1.0	1.0
108-86-1	Bromobenzene	<1.0	1.0
74-97-5	Bromochloromethane	<1.0	1.0
75-27-4	Bromodichloromethane	<1.0	1.0
75-25-2	Bromoform	<1.0	1.0
*74-83-9	Bromomethane	<5.0	5.0
104-51-8	n-Butylbenzene	<1.0	1.0
135-98-8	sec-Butylbenzene	<1.0	1.0
98-06-6	tert-Butylbenzene	<1.0	1.0
75-15-0	Carbon Disulfide	<1.0	1.0
56-23-5	Carbon Tetrachloride	<1.0	1.0
108-90-7	Chlorobenzene	<1.0	1.0
75-00-3	Chloroethane	<5.0	5.0
67-66-3	Chloroform	<1.0	1.0
74-87-3	Chloromethane	<5.0	5.0
96-12-8	1,2-Dibromo-3-chloropropane	<5.0	5.0
124-48-1	Dibromochloromethane	<1.0	1.0
106-93-4	1,2-Dibromoethane	<1.0	1.0
74-95-3	Dibromomethane	<1.0	1.0
110-57-6	trans-1,4-Dichloro-2-butene	<1.0	1.0
95-50-1	1,2-Dichlorobenzene	<1.0	1.0
541-73-1	1,3-Dichlorobenzene	<1.0	1.0
106-46-7	1,4-Dichlorobenzene	<1.0	1.0
75-71-8	Dichlorodifluoromethane	<5.0	5.0
75-34-3	1,1-Dichloroethane	<1.0	1.0
107-06-2	1,2-Dichloroethane	<1.0	1.0
75-35-4	1,1-Dichloroethene	<1.0	1.0
156-59-2	cis-1,2-Dichloroethene	<1.0	1.0
156-60-5	trans-1,2-Dichloroethene	<1.0	1.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210284**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-11s**	Sampled:	10/11/12 16:10
Lab Sample ID:	**1210284-06**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/12/12 08:30
Unit:	ug/L	Prepared:	10/23/2012 By: LEW
Dilution Factor:	1	Analyzed:	10/23/12 By: DLV
QC Batch:	1212918	Analytical Batch:	2J24043

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
78-87-5	1,2-Dichloropropane	<1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	<1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	<1.0	1.0
100-41-4	Ethylbenzene	<1.0	1.0
60-29-7	Ethyl Ether	<5.0	5.0
591-78-6	2-Hexanone	<5.0	5.0
74-88-4	Iodomethane	<1.0	1.0
98-82-8	Isopropylbenzene	<1.0	1.0
99-87-6	4-Isopropyltoluene	<5.0	5.0
1634-04-4	Methyl tert-Butyl Ether	<5.0	5.0
75-09-2	Methylene Chloride	<5.0	5.0
78-93-3	2-Butanone (MEK)	<5.0	5.0
91-57-6	2-Methylnaphthalene	<5.0	5.0
108-10-1	4-Methyl-2-pentanone (MIBK)	<5.0	5.0
91-20-3	Naphthalene	<5.0	5.0
103-65-1	n-Propylbenzene	<1.0	1.0
100-42-5	Styrene	<1.0	1.0
630-20-6	1,1,1,2-Tetrachloroethane	<1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	<1.0	1.0
127-18-4	Tetrachloroethene	<1.0	1.0
109-99-9	Tetrahydrofuran	<5.0	5.0
108-88-3	Toluene	<1.0	1.0
87-61-6	1,2,3-Trichlorobenzene	<5.0	5.0
120-82-1	1,2,4-Trichlorobenzene	<5.0	5.0
71-55-6	1,1,1-Trichloroethane	<1.0	1.0
79-00-5	1,1,2-Trichloroethane	<1.0	1.0
79-01-6	Trichloroethene	<1.0	1.0
75-69-4	Trichlorofluoromethane	<1.0	1.0
96-18-4	1,2,3-Trichloropropane	<1.0	1.0
95-63-6	1,2,4-Trimethylbenzene	<1.0	1.0
108-67-8	1,3,5-Trimethylbenzene	<1.0	1.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210284**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-11s**	Sampled:	10/11/12 16:10
Lab Sample ID:	**1210284-06**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/12/12 08:30
Unit:	ug/L	Prepared:	10/23/2012 By: LEW
Dilution Factor:	1	Analyzed:	10/23/12 By: DLV
QC Batch:	1212918	Analytical Batch:	2J24043

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
75-01-4	Vinyl Chloride	<1.0	1.0
179601-23-1	Xylene, Meta + Para	<2.0	2.0
95-47-6	Xylene, Ortho	<1.0	1.0

Surrogates:	***% Recovery***	***Control Limits***
Dibromofluoromethane	*105*	*85-118*
1,2-Dichloroethane-d4	*104*	*87-122*
Toluene-d8	*105*	*85-113*
4-Bromofluorobenzene	*98*	*82-110*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210284**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-11s**	Sampled:	10/11/12 16:10
Lab Sample ID:	**1210284-06**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/12/12 08:30

Dissolved Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Calcium	**64**	0.50	mg/L	1	USEPA-6010C	10/22/12 16:18	KLV	1212356
Iron	<200	200	ug/L	1	USEPA-6010C	10/22/12 16:18	KLV	1212356
Magnesium	**14**	0.50	mg/L	1	USEPA-6010C	10/22/12 16:18	KLV	1212356
Manganese	<50	50	ug/L	1	USEPA-6010C	10/22/12 16:18	KLV	1212356

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210284**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-11s**	Sampled:	10/11/12 16:10
Lab Sample ID:	**1210284-06**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/12/12 08:30

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Chloride	**1.4**	1.0	mg/L	1	SM 4500-Cl E 20th	10/19/12 10:51	LMA	1212694
Carbon, Total Organic	**1.3**	1.0	mg/L	1	SM 5310 C 20th	10/15/12 19:28	KAR	1212454
Nitrogen, Nitrate	**2.1**	0.25	mg/L	5	SM 4500-NO3 F 20th	10/12/12 11:27	CAC	1212367
Sulfate	**8.1**	5.0	mg/L	1	ASTM D516-90 (02)	10/18/12 08:33	LMA	1212665

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210284**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**DUP-01**	Sampled:	10/11/12 00:00
Lab Sample ID:	**1210284-07**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/12/12 08:30
Unit:	ug/L	Prepared:	10/19/2012 By: BAG
Dilution Factor:	1	Analyzed:	10/19/12 By: BAG
QC Batch:	1212766	Analytical Batch:	2J22027

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	RL
67-64-1	Acetone	<20	20
107-13-1	Acrylonitrile	<2.0	2.0
71-43-2	Benzene	<1.0	1.0
108-86-1	Bromobenzene	<1.0	1.0
74-97-5	Bromochloromethane	<1.0	1.0
75-27-4	Bromodichloromethane	<1.0	1.0
75-25-2	Bromoform	<1.0	1.0
74-83-9	Bromomethane	<5.0	5.0
104-51-8	n-Butylbenzene	<1.0	1.0
135-98-8	sec-Butylbenzene	<1.0	1.0
98-06-6	tert-Butylbenzene	<1.0	1.0
75-15-0	Carbon Disulfide	<1.0	1.0
56-23-5	Carbon Tetrachloride	<1.0	1.0
108-90-7	Chlorobenzene	<1.0	1.0
*75-00-3	Chloroethane	<5.0	5.0
67-66-3	Chloroform	<1.0	1.0
*74-87-3	Chloromethane	<5.0	5.0
96-12-8	1,2-Dibromo-3-chloropropane	<5.0	5.0
124-48-1	Dibromochloromethane	<1.0	1.0
106-93-4	1,2-Dibromoethane	<1.0	1.0
74-95-3	Dibromomethane	<1.0	1.0
110-57-6	trans-1,4-Dichloro-2-butene	<1.0	1.0
95-50-1	1,2-Dichlorobenzene	<1.0	1.0
541-73-1	1,3-Dichlorobenzene	<1.0	1.0
106-46-7	1,4-Dichlorobenzene	<1.0	1.0
*75-71-8	Dichlorodifluoromethane	<5.0	5.0
75-34-3	1,1-Dichloroethane	<1.0	1.0
107-06-2	1,2-Dichloroethane	<1.0	1.0
75-35-4	1,1-Dichloroethene	<1.0	1.0
156-59-2	cis-1,2-Dichloroethene	**2.6**	1.0
156-60-5	trans-1,2-Dichloroethene	<1.0	1.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210284**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**DUP-01**	Sampled:	10/11/12 00:00
Lab Sample ID:	**1210284-07**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/12/12 08:30
Unit:	ug/L	Prepared:	10/19/2012 By: BAG
Dilution Factor:	1	Analyzed:	10/19/12 By: BAG
QC Batch:	1212766	Analytical Batch:	2J22027

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
78-87-5	1,2-Dichloropropane	<1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	<1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	<1.0	1.0
100-41-4	Ethylbenzene	<1.0	1.0
60-29-7	Ethyl Ether	<5.0	5.0
591-78-6	2-Hexanone	<5.0	5.0
*74-88-4	Iodomethane	<1.0	1.0
98-82-8	Isopropylbenzene	<1.0	1.0
99-87-6	4-Isopropyltoluene	<5.0	5.0
1634-04-4	Methyl tert-Butyl Ether	<5.0	5.0
75-09-2	Methylene Chloride	<5.0	5.0
78-93-3	2-Butanone (MEK)	<5.0	5.0
*91-57-6	2-Methylnaphthalene	<5.0	5.0
108-10-1	4-Methyl-2-pentanone (MIBK)	<5.0	5.0
*91-20-3	Naphthalene	<5.0	5.0
103-65-1	n-Propylbenzene	<1.0	1.0
100-42-5	Styrene	<1.0	1.0
630-20-6	1,1,1,2-Tetrachloroethane	<1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	<1.0	1.0
127-18-4	Tetrachloroethene	<1.0	1.0
109-99-9	Tetrahydrofuran	<5.0	5.0
108-88-3	Toluene	<1.0	1.0
87-61-6	1,2,3-Trichlorobenzene	<5.0	5.0
120-82-1	1,2,4-Trichlorobenzene	<5.0	5.0
71-55-6	1,1,1-Trichloroethane	**4.4**	1.0
79-00-5	1,1,2-Trichloroethane	<1.0	1.0
79-01-6	Trichloroethene	**22**	1.0
*75-69-4	Trichlorofluoromethane	<1.0	1.0
96-18-4	1,2,3-Trichloropropane	<1.0	1.0
95-63-6	1,2,4-Trimethylbenzene	<1.0	1.0
108-67-8	1,3,5-Trimethylbenzene	<1.0	1.0

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ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210284**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**DUP-01**	Sampled:	10/11/12 00:00
Lab Sample ID:	**1210284-07**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/12/12 08:30
Unit:	ug/L	Prepared:	10/19/2012 By: BAG
Dilution Factor:	1	Analyzed:	10/19/12 By: BAG
QC Batch:	1212766	Analytical Batch:	2J22027

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
75-01-4	Vinyl Chloride	<1.0	1.0
179601-23-1	Xylene, Meta + Para	<2.0	2.0
95-47-6	Xylene, Ortho	<1.0	1.0

Surrogates:	***% Recovery***	***Control Limits***
Dibromofluoromethane	*99*	*85-118*
1,2-Dichloroethane-d4	*97*	*87-122*
Toluene-d8	*99*	*85-113*
4-Bromofluorobenzene	*100*	*82-110*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210284**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**DUP-01**	Sampled:	10/11/12 00:00
Lab Sample ID:	**1210284-07**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	10/12/12 08:30

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Chloride	**110**	2.0	mg/L	2	SM 4500-Cl E 20th	10/19/12 11:13	LMA	1212694
Nitrogen, Nitrate	<0.050	0.050	mg/L	1	SM 4500-NO3 F 20th	10/12/12 11:07	CAC	1212367
Sulfate	**48**	10	mg/L	2	ASTM D516-90 (02)	10/18/12 09:04	LMA	1212665

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ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210284**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**TB-03**	Sampled:	10/11/12 00:00
Lab Sample ID:	**1210284-08**	Sampled By:	TML
Matrix:	Water	Received:	10/12/12 08:30
Unit:	ug/L	Prepared:	10/18/2012 By: BAG
Dilution Factor:	1	Analyzed:	10/18/12 By: BAG
QC Batch:	1212703	Analytical Batch:	2J19020

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	RL
67-64-1	Acetone	<20	20
107-13-1	Acrylonitrile	<2.0	2.0
71-43-2	Benzene	<1.0	1.0
108-86-1	Bromobenzene	<1.0	1.0
74-97-5	Bromochloromethane	<1.0	1.0
75-27-4	Bromodichloromethane	<1.0	1.0
75-25-2	Bromoform	<1.0	1.0
74-83-9	Bromomethane	<5.0	5.0
104-51-8	n-Butylbenzene	<1.0	1.0
135-98-8	sec-Butylbenzene	<1.0	1.0
98-06-6	tert-Butylbenzene	<1.0	1.0
75-15-0	Carbon Disulfide	<1.0	1.0
56-23-5	Carbon Tetrachloride	<1.0	1.0
108-90-7	Chlorobenzene	<1.0	1.0
*75-00-3	Chloroethane	<5.0	5.0
67-66-3	Chloroform	<1.0	1.0
74-87-3	Chloromethane	<5.0	5.0
96-12-8	1,2-Dibromo-3-chloropropane	<5.0	5.0
124-48-1	Dibromochloromethane	<1.0	1.0
106-93-4	1,2-Dibromoethane	<1.0	1.0
74-95-3	Dibromomethane	<1.0	1.0
110-57-6	trans-1,4-Dichloro-2-butene	<1.0	1.0
95-50-1	1,2-Dichlorobenzene	<1.0	1.0
541-73-1	1,3-Dichlorobenzene	<1.0	1.0
106-46-7	1,4-Dichlorobenzene	<1.0	1.0
*75-71-8	Dichlorodifluoromethane	<5.0	5.0
75-34-3	1,1-Dichloroethane	<1.0	1.0
107-06-2	1,2-Dichloroethane	<1.0	1.0
75-35-4	1,1-Dichloroethene	<1.0	1.0
156-59-2	cis-1,2-Dichloroethene	<1.0	1.0
156-60-5	trans-1,2-Dichloroethene	<1.0	1.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210284**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**TB-03**	Sampled:	10/11/12 00:00
Lab Sample ID:	**1210284-08**	Sampled By:	TML
Matrix:	Water	Received:	10/12/12 08:30
Unit:	ug/L	Prepared:	10/18/2012 By: BAG
Dilution Factor:	1	Analyzed:	10/18/12 By: BAG
QC Batch:	1212703	Analytical Batch:	2J19020

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
78-87-5	1,2-Dichloropropane	<1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	<1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	<1.0	1.0
100-41-4	Ethylbenzene	<1.0	1.0
60-29-7	Ethyl Ether	<5.0	5.0
591-78-6	2-Hexanone	<5.0	5.0
*74-88-4	Iodomethane	<1.0	1.0
98-82-8	Isopropylbenzene	<1.0	1.0
99-87-6	4-Isopropyltoluene	<5.0	5.0
1634-04-4	Methyl tert-Butyl Ether	<5.0	5.0
75-09-2	Methylene Chloride	<5.0	5.0
78-93-3	2-Butanone (MEK)	<5.0	5.0
*91-57-6	2-Methylnaphthalene	<5.0	5.0
108-10-1	4-Methyl-2-pentanone (MIBK)	<5.0	5.0
91-20-3	Naphthalene	<5.0	5.0
103-65-1	n-Propylbenzene	<1.0	1.0
100-42-5	Styrene	<1.0	1.0
630-20-6	1,1,1,2-Tetrachloroethane	<1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	<1.0	1.0
127-18-4	Tetrachloroethene	<1.0	1.0
109-99-9	Tetrahydrofuran	<5.0	5.0
108-88-3	Toluene	<1.0	1.0
87-61-6	1,2,3-Trichlorobenzene	<5.0	5.0
120-82-1	1,2,4-Trichlorobenzene	<5.0	5.0
71-55-6	1,1,1-Trichloroethane	<1.0	1.0
79-00-5	1,1,2-Trichloroethane	<1.0	1.0
79-01-6	Trichloroethene	<1.0	1.0
*75-69-4	Trichlorofluoromethane	<1.0	1.0
96-18-4	1,2,3-Trichloropropane	<1.0	1.0
95-63-6	1,2,4-Trimethylbenzene	<1.0	1.0
108-67-8	1,3,5-Trimethylbenzene	<1.0	1.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1210284**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**TB-03**	Sampled:	10/11/12 00:00
Lab Sample ID:	**1210284-08**	Sampled By:	TML
Matrix:	Water	Received:	10/12/12 08:30
Unit:	ug/L	Prepared:	10/18/2012 By: BAG
Dilution Factor:	1	Analyzed:	10/18/12 By: BAG
QC Batch:	1212703	Analytical Batch:	2J19020

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
75-01-4	Vinyl Chloride	<1.0	1.0
179601-23-1	Xylene, Meta + Para	<2.0	2.0
95-47-6	Xylene, Ortho	<1.0	1.0

Surrogates:	***% Recovery***	***Control Limits***
Dibromofluoromethane	*100*	*85-118*
1,2-Dichloroethane-d4	*101*	*87-122*
Toluene-d8	*100*	*85-113*
4-Bromofluorobenzene	*100*	*82-110*

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TRIMATRIX LABORATORIES

QUALITY CONTROL REPORT

Dissolved Gases in Water by RSK-175 Headspace Analysis

QC Batch: 1212279 Method-Specific Extraction/RSK-175

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
Method Blank					Analyzed:		10/12/2012	By: BJH
Unit: ug/L					Analytical Batch:		2J12040	
Ethane			<1.0			--		1.0
Methane			<0.50			--		0.50
Ethylene			<1.0			--		1.0
Laboratory Control Sample					Analyzed:		10/12/2012	By: BJH
Unit: ug/L					Analytical Batch:		2J12040	
Ethane		55.8	**55.5**	99	69-121	--		1.0
Methane		34.0	**33.3**	98	65-113	--		0.50
Ethylene		55.3	**54.1**	98	69-125	--		1.0
Laboratory Control Sample Duplicate					Analyzed:		10/12/2012	By: BJH
Unit: ug/L					Analytical Batch:		2J12040	
Ethane		55.8	**52.3**	94	69-121	6	20	1.0
Methane		34.0	**31.4**	92	65-113	6	20	0.50
Ethylene		55.3	**51.2**	93	69-125	6	20	1.0

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QUALITY CONTROL REPORT

Volatile Organic Compounds by EPA Method 8260B

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL

QC Batch: 1212405 5030B Aqueous Purge & Trap/USEPA-8260B

Method Blank Analyzed: 10/13/2012 By: BAG
Unit: ug/L Analytical Batch: 2J15044

Acetone	<20		20
Acrylonitrile	<2.0		2.0
Benzene	<1.0		1.0
Bromobenzene	<1.0	--	1.0
Bromochloromethane	<1.0		1.0
Bromodichloromethane	<1.0		1.0
Bromoform	<1.0		1.0
Bromomethane	<5.0		5.0
n-Butylbenzene	<1.0		1.0
sec-Butylbenzene	<1.0		1.0
tert-Butylbenzene	<1.0		1.0
Carbon Disulfide	<1.0	--	1.0
Carbon Tetrachloride	<1.0		1.0
Chlorobenzene	<1.0		1.0
Chloroethane	<5.0		5.0
Chloroform	<1.0	--	1.0
Chloromethane	<5.0		5.0
1,2-Dibromo-3-chloropropane	<5.0		5.0
Dibromochloromethane	<1.0		1.0
1,2-Dibromoethane	<1.0		1.0
Dibromomethane	<1.0		1.0
trans-1,4-Dichloro-2-butene	<1.0		1.0
1,2-Dichlorobenzene	<1.0		1.0
1,3-Dichlorobenzene	<1.0		1.0
1,4-Dichlorobenzene	<1.0		1.0
Dichlorodifluoromethane	<5.0		5.0
1,1-Dichloroethane	<1.0		1.0
1,2-Dichloroethane	<1.0		1.0
1,1-Dichloroethene	<1.0		1.0
cis-1,2-Dichloroethene	<1.0		1.0
trans-1,2-Dichloroethene	<1.0		1.0
1,2-Dichloropropane	<1.0		1.0
cis-1,3-Dichloropropene	<1.0		1.0
trans-1,3-Dichloropropene	<1.0		1.0
Ethylbenzene	<1.0	--	1.0
Ethyl Ether	<5.0		5.0

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Volatile Organic Compounds by EPA Method 8260B (Continued)

QC Batch: 1212405 (Continued) 5030B Aqueous Purge & Trap/USEPA-8260B

Method Blank (Continued) Analyzed: 10/13/2012 By: BAG
Unit: ug/L Analytical Batch: 2J15044

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
2-Hexanone			<5.0					5.0
Iodomethane			<1.0					1.0
Isopropylbenzene			<1.0					1.0
4-Isopropyltoluene			<5.0					5.0
Methyl tert-Butyl Ether			<5.0					5.0
Methylene Chloride			<5.0			--		5.0
2-Butanone (MEK)			<5.0					5.0
2-Methylnaphthalene			<5.0			--		5.0
4-Methyl-2-pentanone (MIBK)			<5.0			--		5.0
Naphthalene			<5.0			--		5.0
n-Propylbenzene			<1.0					1.0
Styrene			<1.0					1.0
1,1,1,2-Tetrachloroethane			<1.0					1.0
1,1,2,2-Tetrachloroethane			<1.0					1.0
Tetrachloroethene			<1.0					1.0
Tetrahydrofuran			<5.0					5.0
Toluene			<1.0					1.0
1,2,3-Trichlorobenzene			<5.0					5.0
1,2,4-Trichlorobenzene			<5.0					5.0
1,1,1-Trichloroethane			<1.0					1.0
1,1,2-Trichloroethane			<1.0					1.0
Trichloroethene			<1.0					1.0
Trichlorofluoromethane			<1.0					1.0
1,2,3-Trichloropropane			<1.0					1.0
1,2,4-Trimethylbenzene			<1.0					1.0
1,3,5-Trimethylbenzene			<1.0					1.0
Vinyl Chloride			<1.0					1.0
Xylene, Meta + Para			<2.0					2.0
Xylene, Ortho			<1.0					1.0
Surrogates:								
Dibromofluoromethane				*98*	*85-118*			
1,2-Dichloroethane-d4				*99*	*87-122*			
Toluene-d8				*98*	*85-113*			
4-Bromofluorobenzene				*98*	*82-110*			

Laboratory Control Sample Analyzed: 10/13/2012 By: BAG
Unit: ug/L Analytical Batch: 2J15044

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
Benzene		40.0	**39.0**	97	84-119	--	20	1.0

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Volatile Organic Compounds by EPA Method 8260B (Continued)

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL

QC Batch: 1212405 (Continued) 5030B Aqueous Purge & Trap/USEPA-8260B

Laboratory Control Sample (Continued) Analyzed: 10/13/2012 By: BAG
Unit: ug/L Analytical Batch: 2J15044

Chlorobenzene	40.0	**37.9**	95	84-118	--	20	1.0
1,1-Dichloroethene	40.0	**41.3**	103	77-123	--	20	1.0
Toluene	40.0	**38.4**	96	85-118	--	20	1.0
Trichloroethene	40.0	**43.2**	108	82-119	--	20	1.0
Surrogates:							
Dibromofluoromethane			*101*	*85-118*			
1,2-Dichloroethane-d4			*99*	*87-122*			
Toluene-d8			*101*	*85-113*			
4-Bromofluorobenzene			*100*	*82-110*			

QC Batch: 1212468 5030B Aqueous Purge & Trap/USEPA-8260B

Method Blank Analyzed: 10/15/2012 By: BAG
Unit: ug/L Analytical Batch: 2J16018

Acetone	<20		20
Acrylonitrile	<2.0		2.0
Benzene	<1.0		1.0
Bromobenzene	<1.0	--	1.0
Bromochloromethane	<1.0		1.0
Bromodichloromethane	<1.0		1.0
Bromoform	<1.0		1.0
Bromomethane	<5.0		5.0
n-Butylbenzene	<1.0		1.0
sec-Butylbenzene	<1.0		1.0
tert-Butylbenzene	<1.0		1.0
Carbon Disulfide	<1.0	--	1.0
Carbon Tetrachloride	<1.0		1.0
Chlorobenzene	<1.0		1.0
Chloroethane	<5.0		5.0
Chloroform	<1.0	--	1.0
Chloromethane	<5.0		5.0
1,2-Dibromo-3-chloropropane	<5.0		5.0
Dibromochloromethane	<1.0		1.0
1,2-Dibromoethane	<1.0		1.0
Dibromomethane	<1.0		1.0
trans-1,4-Dichloro-2-butene	<1.0		1.0
1,2-Dichlorobenzene	<1.0		1.0

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Volatile Organic Compounds by EPA Method 8260B (Continued)

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL

QC Batch: 1212468 (Continued) 5030B Aqueous Purge & Trap/USEPA-8260B

Method Blank (Continued) Analyzed: 10/15/2012 By: BAG
Unit: ug/L Analytical Batch: 2J16018

1,3-Dichlorobenzene	<1.0	--	1.0
1,4-Dichlorobenzene	<1.0	--	1.0
Dichlorodifluoromethane	<5.0		5.0
1,1-Dichloroethane	<1.0		1.0
1,2-Dichloroethane	<1.0		1.0
1,1-Dichloroethene	<1.0		1.0
cis-1,2-Dichloroethene	<1.0		1.0
trans-1,2-Dichloroethene	<1.0		1.0
1,2-Dichloropropane	<1.0		1.0
cis-1,3-Dichloropropene	<1.0		1.0
trans-1,3-Dichloropropene	<1.0		1.0
Ethylbenzene	<1.0	--	1.0
Ethyl Ether	<5.0		5.0
2-Hexanone	<5.0		5.0
Iodomethane	<1.0		1.0
Isopropylbenzene	<1.0		1.0
4-Isopropyltoluene	<5.0		5.0
Methyl tert-Butyl Ether	<5.0		5.0
Methylene Chloride	<5.0	--	5.0
2-Butanone (MEK)	<5.0		5.0
2-Methylnaphthalene	<5.0	--	5.0
4-Methyl-2-pentanone (MIBK)	<5.0	--	5.0
Naphthalene	<5.0	--	5.0
n-Propylbenzene	<1.0		1.0
Styrene	<1.0		1.0
1,1,1,2-Tetrachloroethane	<1.0		1.0
1,1,2,2-Tetrachloroethane	<1.0		1.0
Tetrachloroethene	<1.0		1.0
Tetrahydrofuran	<5.0		5.0
Toluene	<1.0		1.0
1,2,3-Trichlorobenzene	<5.0	--	5.0
1,2,4-Trichlorobenzene	<5.0	--	5.0
1,1,1-Trichloroethane	<1.0		1.0
1,1,2-Trichloroethane	<1.0		1.0
Trichloroethene	<1.0		1.0
Trichlorofluoromethane	<1.0		1.0

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Volatile Organic Compounds by EPA Method 8260B (Continued)

QC Batch: 1212468 (Continued) 5030B Aqueous Purge & Trap/USEPA-8260B

Method Blank (Continued) Analyzed: 10/15/2012 By: BAG
Unit: ug/L Analytical Batch: 2J16018

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
1,2,3-Trichloropropane			<1.0					1.0
1,2,4-Trimethylbenzene			<1.0					1.0
1,3,5-Trimethylbenzene			<1.0					1.0
Vinyl Chloride			<1.0					1.0
Xylene, Meta + Para			<2.0					2.0
Xylene, Ortho			<1.0					1.0
Surrogates:								
Dibromofluoromethane				*98*	*85-118*			
1,2-Dichloroethane-d4				*100*	*87-122*			
Toluene-d8				*98*	*85-113*			
4-Bromofluorobenzene				*99*	*82-110*			

Laboratory Control Sample Analyzed: 10/15/2012 By: BAG
Unit: ug/L Analytical Batch: 2J16018

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
Benzene		40.0	**39.2**	98	84-119	--	20	1.0
Chlorobenzene		40.0	**38.9**	97	84-118	--	20	1.0
1,1-Dichloroethene		40.0	**41.5**	104	77-123	--	20	1.0
Toluene		40.0	**39.2**	98	85-118	--	20	1.0
Trichloroethene		40.0	**39.5**	99	82-119	--	20	1.0
Surrogates:								
Dibromofluoromethane				*101*	*85-118*			
1,2-Dichloroethane-d4				*98*	*87-122*			
Toluene-d8				*101*	*85-113*			
4-Bromofluorobenzene				*101*	*82-110*			

QC Batch: 1212640 5030B Aqueous Purge & Trap/USEPA-8260B

Method Blank Analyzed: 10/16/2012 By: LEW
Unit: ug/L Analytical Batch: 2J18057

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
Acetone			<20			--		20
Acrylonitrile			<2.0					2.0
Benzene			<1.0					1.0
Bromobenzene			<1.0					1.0
Bromochloromethane			<1.0					1.0
Bromodichloromethane			<1.0					1.0
Bromoform			<1.0					1.0
Bromomethane			<5.0			--		5.0

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Volatile Organic Compounds by EPA Method 8260B (Continued)

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL

QC Batch: 1212640 (Continued) 5030B Aqueous Purge & Trap/USEPA-8260B

Method Blank (Continued) Analyzed: 10/16/2012 By: LEW
Unit: ug/L Analytical Batch: 2J18057

n-Butylbenzene	<1.0		1.0
sec-Butylbenzene	<1.0		1.0
tert-Butylbenzene	<1.0		1.0
Carbon Disulfide	<1.0	--	1.0
Carbon Tetrachloride	<1.0		1.0
Chlorobenzene	<1.0		1.0
Chloroethane	<5.0		5.0
Chloroform	<1.0		1.0
Chloromethane	<5.0		5.0
1,2-Dibromo-3-chloropropane	<5.0		5.0
Dibromochloromethane	<1.0		1.0
1,2-Dibromoethane	<1.0		1.0
Dibromomethane	<1.0		1.0
trans-1,4-Dichloro-2-butene	<1.0		1.0
1,2-Dichlorobenzene	<1.0		1.0
1,3-Dichlorobenzene	<1.0		1.0
1,4-Dichlorobenzene	<1.0		1.0
Dichlorodifluoromethane	<5.0		5.0
1,1-Dichloroethane	<1.0		1.0
1,2-Dichloroethane	<1.0		1.0
1,1-Dichloroethene	<1.0		1.0
cis-1,2-Dichloroethene	<1.0		1.0
trans-1,2-Dichloroethene	<1.0		1.0
1,2-Dichloropropane	<1.0		1.0
cis-1,3-Dichloropropene	<1.0		1.0
trans-1,3-Dichloropropene	<1.0		1.0
Ethylbenzene	<1.0		1.0
Ethyl Ether	<5.0		5.0
2-Hexanone	<5.0		5.0
Iodomethane	<1.0		1.0
Isopropylbenzene	<1.0		1.0
4-Isopropyltoluene	<5.0		5.0
Methyl tert-Butyl Ether	<5.0		5.0
Methylene Chloride	<5.0		5.0
2-Butanone (MEK)	<5.0		5.0
2-Methylnaphthalene	**11**	--	5.0

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QUALITY CONTROL REPORT

Volatile Organic Compounds by EPA Method 8260B (Continued)

QC Batch: 1212640 (Continued) 5030B Aqueous Purge & Trap/USEPA-8260B

Method Blank (Continued) Analyzed: 10/16/2012 By: LEW
Unit: ug/L Analytical Batch: 2J18057

Analyte	Result	RL
4-Methyl-2-pentanone (MIBK)	<5.0	5.0
Naphthalene	<5.0	5.0
n-Propylbenzene	<1.0	1.0
Styrene	<1.0	1.0
1,1,1,2-Tetrachloroethane	<1.0	1.0
1,1,2,2-Tetrachloroethane	<1.0	1.0
Tetrachloroethene	<1.0	1.0
Tetrahydrofuran	<5.0	5.0
Toluene	<1.0	1.0
1,2,3-Trichlorobenzene	<5.0	5.0
1,2,4-Trichlorobenzene	<5.0	5.0
1,1,1-Trichloroethane	<1.0	1.0
1,1,2-Trichloroethane	<1.0	1.0
Trichloroethene	<1.0	1.0
Trichlorofluoromethane	<1.0	1.0
1,2,3-Trichloropropane	<1.0	1.0
1,2,4-Trimethylbenzene	<1.0	1.0
1,3,5-Trimethylbenzene	<1.0	1.0
Vinyl Chloride	<1.0	1.0
Xylene, Meta + Para	<2.0	2.0
Xylene, Ortho	<1.0	1.0

Surrogates:

Dibromofluoromethane	*101*	*85-118*
1,2-Dichloroethane-d4	*103*	*87-122*
Toluene-d8	*96*	*85-113*
4-Bromofluorobenzene	*96*	*82-110*

Laboratory Control Sample Analyzed: 10/16/2012 By: LEW
Unit: ug/L Analytical Batch: 2J18057

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
Benzene		40.0	**38.7**	97	84-119	--	20	1.0
Chlorobenzene		40.0	**37.9**	95	84-118	--	20	1.0
1,1-Dichloroethene		40.0	**36.7**	92	77-123	--	20	1.0
Toluene		40.0	**38.7**	97	85-118	--	20	1.0
Trichloroethene		40.0	**39.0**	97	82-119	--	20	1.0

Surrogates:

Dibromofluoromethane	*101*	*85-118*

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QUALITY CONTROL REPORT

Volatile Organic Compounds by EPA Method 8260B (Continued)

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL

QC Batch: 1212640 (Continued) 5030B Aqueous Purge & Trap/USEPA-8260B

Laboratory Control Sample (Continued) Analyzed: 10/16/2012 By: LEW
Unit: ug/L Analytical Batch: 2J18057

Surrogates (Continued):								
1,2-Dichloroethane-d4				*100*	*87-122*			
Toluene-d8				*101*	*85-113*			
4-Bromofluorobenzene				*100*	*82-110*			

Matrix Spike 1210209-04 PRB-16s Analyzed: 10/17/2012 By: LEW
Unit: ug/L Analytical Batch: 2J18057

Benzene	<1.0	40.0	**42.2**	106	80-129	--	9	1.0
Chlorobenzene	<1.0	40.0	**40.5**	101	80-121	--	8	1.0
1,1-Dichloroethene	1.06	40.0	**40.6**	99	74-134	--	11	1.0
Toluene	<1.0	40.0	**41.9**	105	79-129	--	9	1.0
Trichloroethene	4.59	40.0	**45.3**	102	75-127	--	10	1.0
Surrogates:								
Dibromofluoromethane				*101*	*85-118*			
1,2-Dichloroethane-d4				*103*	*87-122*			
Toluene-d8				*100*	*85-113*			
4-Bromofluorobenzene				*102*	*82-110*			

Matrix Spike Duplicate 1210209-04 PRB-16s Analyzed: 10/17/2012 By: LEW
Unit: ug/L Analytical Batch: 2J18057

Benzene	<1.0	40.0	**41.3**	103	80-129	2	9	1.0
Chlorobenzene	<1.0	40.0	**39.8**	99	80-121	2	8	1.0
1,1-Dichloroethene	1.06	40.0	**40.6**	99	74-134	0.05	11	1.0
Toluene	<1.0	40.0	**40.7**	102	79-129	3	9	1.0
Trichloroethene	4.59	40.0	**44.7**	100	75-127	1	10	1.0
Surrogates:								
Dibromofluoromethane				*101*	*85-118*			
1,2-Dichloroethane-d4				*103*	*87-122*			
Toluene-d8				*99*	*85-113*			
4-Bromofluorobenzene				*101*	*82-110*			

QC Batch: 1212700 5030B Aqueous Purge & Trap/USEPA-8260B

Method Blank Analyzed: 10/17/2012 By: LEW
Unit: ug/L Analytical Batch: 2J19019

Acetone	<20	--	20
Acrylonitrile	<2.0		2.0

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Volatile Organic Compounds by EPA Method 8260B (Continued)

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL

QC Batch: 1212700 (Continued) 5030B Aqueous Purge & Trap/USEPA-8260B

Method Blank (Continued) Analyzed: 10/17/2012 By: LEW
Unit: ug/L Analytical Batch: 2J19019

Benzene	<1.0			1.0
Bromobenzene	<1.0			1.0
Bromochloromethane	<1.0			1.0
Bromodichloromethane	<1.0			1.0
Bromoform	<1.0			1.0
Bromomethane	<5.0			5.0
n-Butylbenzene	<1.0			1.0
sec-Butylbenzene	<1.0			1.0
tert-Butylbenzene	<1.0			1.0
Carbon Disulfide	<1.0		--	1.0
Carbon Tetrachloride	<1.0			1.0
Chlorobenzene	<1.0			1.0
Chloroethane	<5.0			5.0
Chloroform	<1.0			1.0
Chloromethane	<5.0			5.0
1,2-Dibromo-3-chloropropane	<5.0			5.0
Dibromochloromethane	<1.0			1.0
1,2-Dibromoethane	<1.0			1.0
Dibromomethane	<1.0			1.0
trans-1,4-Dichloro-2-butene	<1.0			1.0
1,2-Dichlorobenzene	<1.0			1.0
1,3-Dichlorobenzene	<1.0			1.0
1,4-Dichlorobenzene	<1.0			1.0
Dichlorodifluoromethane	<5.0			5.0
1,1-Dichloroethane	<1.0			1.0
1,2-Dichloroethane	<1.0			1.0
1,1-Dichloroethene	<1.0			1.0
cis-1,2-Dichloroethene	<1.0			1.0
trans-1,2-Dichloroethene	<1.0			1.0
1,2-Dichloropropane	<1.0			1.0
cis-1,3-Dichloropropene	<1.0			1.0
trans-1,3-Dichloropropene	<1.0			1.0
Ethylbenzene	<1.0			1.0
Ethyl Ether	<5.0			5.0
2-Hexanone	<5.0			5.0
Iodomethane	<1.0			1.0

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QUALITY CONTROL REPORT

Volatile Organic Compounds by EPA Method 8260B (Continued)

QC Batch: 1212700 (Continued) 5030B Aqueous Purge & Trap/USEPA-8260B

Method Blank (Continued) Analyzed: 10/17/2012 By: LEW
Unit: ug/L Analytical Batch: 2J19019

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
Isopropylbenzene			<1.0					1.0
4-Isopropyltoluene			<5.0					5.0
Methyl tert-Butyl Ether			<5.0					5.0
Methylene Chloride			<5.0					5.0
2-Butanone (MEK)			<5.0					5.0
2-Methylnaphthalene			**11**			--		5.0
4-Methyl-2-pentanone (MIBK)			<5.0					5.0
Naphthalene			<5.0					5.0
n-Propylbenzene			<1.0					1.0
Styrene			<1.0					1.0
1,1,1,2-Tetrachloroethane			<1.0					1.0
1,1,2,2-Tetrachloroethane			<1.0					1.0
Tetrachloroethene			<1.0					1.0
Tetrahydrofuran			<5.0					5.0
Toluene			<1.0					1.0
1,2,3-Trichlorobenzene			<5.0					5.0
1,2,4-Trichlorobenzene			<5.0					5.0
1,1,1-Trichloroethane			<1.0					1.0
1,1,2-Trichloroethane			<1.0					1.0
Trichloroethene			<1.0					1.0
Trichlorofluoromethane			<1.0					1.0
1,2,3-Trichloropropane			<1.0					1.0
1,2,4-Trimethylbenzene			<1.0					1.0
1,3,5-Trimethylbenzene			<1.0					1.0
Vinyl Chloride			<1.0					1.0
Xylene, Meta + Para			<2.0					2.0
Xylene, Ortho			<1.0					1.0
Surrogates:								
Dibromofluoromethane				*102*	*85-118*			
1,2-Dichloroethane-d4				*104*	*87-122*			
Toluene-d8				*96*	*85-113*			
4-Bromofluorobenzene				*97*	*82-110*			

Laboratory Control Sample Analyzed: 10/17/2012 By: LEW
Unit: ug/L Analytical Batch: 2J19019

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
Benzene		40.0	**42.5**	106	84-119	--	20	1.0

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Volatile Organic Compounds by EPA Method 8260B (Continued)

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
QC Batch: 1212700 (Continued) 5030B Aqueous Purge & Trap/USEPA-8260B								
Laboratory Control Sample (Continued)					Analyzed:		10/17/2012	By: LEW
Unit: ug/L					Analytical Batch:		2J19019	
Chlorobenzene		40.0	**41.1**	103	84-118	--	20	1.0
1,1-Dichloroethene		40.0	**39.8**	100	77-123	--	20	1.0
Toluene		40.0	**42.9**	107	85-118	--	20	1.0
Trichloroethene		40.0	**41.8**	104	82-119	--	20	1.0
Surrogates:								
Dibromofluoromethane				*101*	*85-118*			
1,2-Dichloroethane-d4				*104*	*87-122*			
Toluene-d8				*103*	*85-113*			
4-Bromofluorobenzene				*102*	*82-110*			
Laboratory Control Sample Duplicate					Analyzed:		10/17/2012	By: LEW
Unit: ug/L					Analytical Batch:		2J19019	
Benzene		40.0	**41.7**	104	84-119	2	20	1.0
Chlorobenzene		40.0	**40.9**	102	84-118	0.5	20	1.0
1,1-Dichloroethene		40.0	**39.7**	99	77-123	0.4	20	1.0
Toluene		40.0	**41.7**	104	85-118	3	20	1.0
Trichloroethene		40.0	**40.8**	102	82-119	2	20	1.0
Surrogates:								
Dibromofluoromethane				*101*	*85-118*			
1,2-Dichloroethane-d4				*104*	*87-122*			
Toluene-d8				*102*	*85-113*			
4-Bromofluorobenzene				*102*	*82-110*			
QC Batch: 1212703 5030B Aqueous Purge & Trap/USEPA-8260B								
Method Blank					Analyzed:		10/18/2012	By: BAG
Unit: ug/L					Analytical Batch:		2J19020	
Acetone			<20				20	
Acrylonitrile			<2.0				2.0	
Benzene			<1.0				1.0	
Bromobenzene			<1.0			--	1.0	
Bromochloromethane			<1.0				1.0	
Bromodichloromethane			<1.0				1.0	
Bromoform			<1.0				1.0	
Bromomethane			<5.0				5.0	
n-Butylbenzene			<1.0				1.0	
sec-Butylbenzene			<1.0				1.0	

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Volatile Organic Compounds by EPA Method 8260B (Continued)

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL

QC Batch: 1212703 (Continued) 5030B Aqueous Purge & Trap/USEPA-8260B

Method Blank (Continued) Analyzed: 10/18/2012 By: BAG
Unit: ug/L Analytical Batch: 2J19020

tert-Butylbenzene	<1.0		1.0
Carbon Disulfide	<1.0	--	1.0
Carbon Tetrachloride	<1.0		1.0
Chlorobenzene	<1.0		1.0
Chloroethane	<5.0		5.0
Chloroform	<1.0		1.0
Chloromethane	<5.0		5.0
1,2-Dibromo-3-chloropropane	<5.0		5.0
Dibromochloromethane	<1.0		1.0
1,2-Dibromoethane	<1.0		1.0
Dibromomethane	<1.0		1.0
trans-1,4-Dichloro-2-butene	<1.0		1.0
1,2-Dichlorobenzene	<1.0		1.0
1,3-Dichlorobenzene	<1.0	--	1.0
1,4-Dichlorobenzene	<1.0	--	1.0
Dichlorodifluoromethane	<5.0		5.0
1,1-Dichloroethane	<1.0		1.0
1,2-Dichloroethane	<1.0		1.0
1,1-Dichloroethene	<1.0		1.0
cis-1,2-Dichloroethene	<1.0		1.0
trans-1,2-Dichloroethene	<1.0		1.0
1,2-Dichloropropane	<1.0		1.0
cis-1,3-Dichloropropene	<1.0		1.0
trans-1,3-Dichloropropene	<1.0		1.0
Ethylbenzene	<1.0	--	1.0
Ethyl Ether	<5.0		5.0
2-Hexanone	<5.0		5.0
Iodomethane	<1.0		1.0
Isopropylbenzene	<1.0		1.0
4-Isopropyltoluene	<5.0	--	5.0
Methyl tert-Butyl Ether	<5.0		5.0
Methylene Chloride	<5.0	--	5.0
2-Butanone (MEK)	<5.0	--	5.0
2-Methylnaphthalene	<5.0	--	5.0
4-Methyl-2-pentanone (MIBK)	<5.0		5.0
Naphthalene	<5.0	--	5.0

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QUALITY CONTROL REPORT

Volatile Organic Compounds by EPA Method 8260B (Continued)

QC Batch: 1212703 (Continued) 5030B Aqueous Purge & Trap/USEPA-8260B

Method Blank (Continued) Analyzed: 10/18/2012 By: BAG
Unit: ug/L Analytical Batch: 2J19020

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
n-Propylbenzene			<1.0					1.0
Styrene			<1.0					1.0
1,1,1,2-Tetrachloroethane			<1.0					1.0
1,1,2,2-Tetrachloroethane			<1.0					1.0
Tetrachloroethene			<1.0					1.0
Tetrahydrofuran			<5.0					5.0
Toluene			<1.0					1.0
1,2,3-Trichlorobenzene			<5.0			--		5.0
1,2,4-Trichlorobenzene			<5.0			--		5.0
1,1,1-Trichloroethane			<1.0					1.0
1,1,2-Trichloroethane			<1.0					1.0
Trichloroethene			<1.0					1.0
Trichlorofluoromethane			<1.0					1.0
1,2,3-Trichloropropane			<1.0					1.0
1,2,4-Trimethylbenzene			<1.0					1.0
1,3,5-Trimethylbenzene			<1.0					1.0
Vinyl Chloride			<1.0					1.0
Xylene, Meta + Para			<2.0					2.0
Xylene, Ortho			<1.0					1.0
Surrogates:								
Dibromofluoromethane				*101*	*85-118*			
1,2-Dichloroethane-d4				*102*	*87-122*			
Toluene-d8				*100*	*85-113*			
4-Bromofluorobenzene				*101*	*82-110*			

Laboratory Control Sample Analyzed: 10/18/2012 By: BAG
Unit: ug/L Analytical Batch: 2J19020

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
Benzene		40.0	**41.1**	103	84-119	--	20	1.0
Chlorobenzene		40.0	**40.7**	102	84-118	--	20	1.0
1,1-Dichloroethene		40.0	**44.4**	111	77-123	--	20	1.0
Toluene		40.0	**41.3**	103	85-118	--	20	1.0
Trichloroethene		40.0	**41.0**	103	82-119	--	20	1.0
Surrogates:								
Dibromofluoromethane				*103*	*85-118*			
1,2-Dichloroethane-d4				*101*	*87-122*			
Toluene-d8				*103*	*85-113*			

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Volatile Organic Compounds by EPA Method 8260B (Continued)

QC Batch: 1212703 (Continued) 5030B Aqueous Purge & Trap/USEPA-8260B

Laboratory Control Sample (Continued) Analyzed: 10/18/2012 By: BAG
Unit: ug/L Analytical Batch: 2J19020

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
Surrogates (Continued):								
4-Bromofluorobenzene				*103*	*82-110*			

Laboratory Control Sample Duplicate Analyzed: 10/18/2012 By: BAG
Unit: ug/L Analytical Batch: 2J19020

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
Benzene		40.0	**40.6**	102	84-119	1	20	1.0
Chlorobenzene		40.0	**40.0**	100	84-118	2	20	1.0
1,1-Dichloroethene		40.0	**43.4**	109	77-123	2	20	1.0
Toluene		40.0	**40.7**	102	85-118	2	20	1.0
Trichloroethene		40.0	**41.2**	103	82-119	0.3	20	1.0
Surrogates:								
Dibromofluoromethane				*101*	*85-118*			
1,2-Dichloroethane-d4				*101*	*87-122*			
Toluene-d8				*101*	*85-113*			
4-Bromofluorobenzene				*102*	*82-110*			

QC Batch: 1212766 5030B Aqueous Purge & Trap/USEPA-8260B

Method Blank Analyzed: 10/19/2012 By: BAG
Unit: ug/L Analytical Batch: 2J22027

Analyte	Result	RPD	RL
Acetone	<20		20
Acrylonitrile	<2.0		2.0
Benzene	<1.0		1.0
Bromobenzene	<1.0	--	1.0
Bromochloromethane	<1.0		1.0
Bromodichloromethane	<1.0		1.0
Bromoform	<1.0		1.0
Bromomethane	<5.0		5.0
n-Butylbenzene	<1.0	--	1.0
sec-Butylbenzene	<1.0	--	1.0
tert-Butylbenzene	<1.0		1.0
Carbon Disulfide	<1.0	--	1.0
Carbon Tetrachloride	<1.0		1.0
Chlorobenzene	<1.0		1.0
Chloroethane	<5.0		5.0
Chloroform	<1.0	--	1.0
Chloromethane	<5.0		5.0

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Volatile Organic Compounds by EPA Method 8260B (Continued)

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL

QC Batch: 1212766 (Continued) 5030B Aqueous Purge & Trap/USEPA-8260B

Method Blank (Continued) Analyzed: 10/19/2012 By: BAG
Unit: ug/L Analytical Batch: 2J22027

1,2-Dibromo-3-chloropropane	<5.0		5.0
Dibromochloromethane	<1.0		1.0
1,2-Dibromoethane	<1.0		1.0
Dibromomethane	<1.0		1.0
trans-1,4-Dichloro-2-butene	<1.0		1.0
1,2-Dichlorobenzene	<1.0	--	1.0
1,3-Dichlorobenzene	<1.0	--	1.0
1,4-Dichlorobenzene	<1.0	--	1.0
Dichlorodifluoromethane	<5.0		5.0
1,1-Dichloroethane	<1.0		1.0
1,2-Dichloroethane	<1.0		1.0
1,1-Dichloroethene	<1.0		1.0
cis-1,2-Dichloroethene	<1.0		1.0
trans-1,2-Dichloroethene	<1.0		1.0
1,2-Dichloropropane	<1.0		1.0
cis-1,3-Dichloropropene	<1.0		1.0
trans-1,3-Dichloropropene	<1.0		1.0
Ethylbenzene	<1.0	--	1.0
Ethyl Ether	<5.0		5.0
2-Hexanone	<5.0		5.0
Iodomethane	<1.0		1.0
Isopropylbenzene	<1.0		1.0
4-Isopropyltoluene	<5.0	--	5.0
Methyl tert-Butyl Ether	<5.0		5.0
Methylene Chloride	<5.0	--	5.0
2-Butanone (MEK)	<5.0		5.0
2-Methylnaphthalene	<5.0		5.0
4-Methyl-2-pentanone (MIBK)	<5.0	--	5.0
Naphthalene	<5.0		5.0
n-Propylbenzene	<1.0		1.0
Styrene	<1.0		1.0
1,1,1,2-Tetrachloroethane	<1.0		1.0
1,1,2,2-Tetrachloroethane	<1.0		1.0
Tetrachloroethene	<1.0		1.0
Tetrahydrofuran	<5.0		5.0
Toluene	<1.0		1.0

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QUALITY CONTROL REPORT

Volatile Organic Compounds by EPA Method 8260B (Continued)

QC Batch: 1212766 (Continued) 5030B Aqueous Purge & Trap/USEPA-8260B

Method Blank (Continued) Analyzed: 10/19/2012 By: BAG
Unit: ug/L Analytical Batch: 2J22027

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
1,2,3-Trichlorobenzene			<5.0			--		5.0
1,2,4-Trichlorobenzene			<5.0			--		5.0
1,1,1-Trichloroethane			<1.0					1.0
1,1,2-Trichloroethane			<1.0					1.0
Trichloroethene			<1.0					1.0
Trichlorofluoromethane			<1.0					1.0
1,2,3-Trichloropropane			<1.0					1.0
1,2,4-Trimethylbenzene			<1.0			--		1.0
1,3,5-Trimethylbenzene			<1.0					1.0
Vinyl Chloride			<1.0					1.0
Xylene, Meta + Para			<2.0					2.0
Xylene, Ortho			<1.0					1.0
Surrogates:								
Dibromofluoromethane				*98*	*85-118*			
1,2-Dichloroethane-d4				*98*	*87-122*			
Toluene-d8				*99*	*85-113*			
4-Bromofluorobenzene				*99*	*82-110*			

Laboratory Control Sample Analyzed: 10/19/2012 By: BAG
Unit: ug/L Analytical Batch: 2J22027

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
Benzene		40.0	**41.1**	103	84-119	--	20	1.0
Chlorobenzene		40.0	**40.6**	101	84-118	--	20	1.0
1,1-Dichloroethene		40.0	**43.4**	109	77-123	--	20	1.0
Toluene		40.0	**41.4**	103	85-118	--	20	1.0
Trichloroethene		40.0	**42.0**	105	82-119	--	20	1.0
Surrogates:								
Dibromofluoromethane				*101*	*85-118*			
1,2-Dichloroethane-d4				*97*	*87-122*			
Toluene-d8				*101*	*85-113*			
4-Bromofluorobenzene				*100*	*82-110*			

Laboratory Control Sample Duplicate Analyzed: 10/19/2012 By: BAG
Unit: ug/L Analytical Batch: 2J22027

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
Benzene		40.0	**40.5**	101	84-119	1	20	1.0
Chlorobenzene		40.0	**39.9**	100	84-118	2	20	1.0
1,1-Dichloroethene		40.0	**42.7**	107	77-123	2	20	1.0

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QUALITY CONTROL REPORT

Volatile Organic Compounds by EPA Method 8260B (Continued)

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL

QC Batch: 1212766 (Continued) 5030B Aqueous Purge & Trap/USEPA-8260B

Laboratory Control Sample Duplicate (Continued) Analyzed: 10/19/2012 By: BAG
Unit: ug/L Analytical Batch: 2J22027

Toluene	40.0	**40.8**	102	85-118	1	20	1.0
Trichloroethene	40.0	**41.9**	105	82-119	0.4	20	1.0
Surrogates:							
Dibromofluoromethane			*101*	*85-118*			
1,2-Dichloroethane-d4			*97*	*87-122*			
Toluene-d8			*101*	*85-113*			
4-Bromofluorobenzene			*100*	*82-110*			

QC Batch: 1212918 5030B Aqueous Purge & Trap/USEPA-8260B

Method Blank Analyzed: 10/23/2012 By: DLV
Unit: ug/L Analytical Batch: 2J24043

Acetone	<20	--	20
Acrylonitrile	<2.0		2.0
Benzene	<1.0		1.0
Bromobenzene	<1.0		1.0
Bromochloromethane	<1.0		1.0
Bromodichloromethane	<1.0		1.0
Bromoform	<1.0		1.0
Bromomethane	<5.0		5.0
n-Butylbenzene	<1.0		1.0
sec-Butylbenzene	<1.0		1.0
tert-Butylbenzene	<1.0		1.0
Carbon Disulfide	<1.0	--	1.0
Carbon Tetrachloride	<1.0		1.0
Chlorobenzene	<1.0		1.0
Chloroethane	<5.0		5.0
Chloroform	<1.0		1.0
Chloromethane	<5.0		5.0
1,2-Dibromo-3-chloropropane	<5.0		5.0
Dibromochloromethane	<1.0		1.0
1,2-Dibromoethane	<1.0		1.0
Dibromomethane	<1.0		1.0
trans-1,4-Dichloro-2-butene	<1.0		1.0
1,2-Dichlorobenzene	<1.0		1.0
1,3-Dichlorobenzene	<1.0	--	1.0
1,4-Dichlorobenzene	<1.0	--	1.0

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Volatile Organic Compounds by EPA Method 8260B (Continued)

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL

QC Batch: 1212918 (Continued) 5030B Aqueous Purge & Trap/USEPA-8260B

Method Blank (Continued) Analyzed: 10/23/2012 By: DLV
Unit: ug/L Analytical Batch: 2J24043

Dichlorodifluoromethane	<5.0		5.0
1,1-Dichloroethane	<1.0		1.0
1,2-Dichloroethane	<1.0		1.0
1,1-Dichloroethene	<1.0		1.0
cis-1,2-Dichloroethene	<1.0		1.0
trans-1,2-Dichloroethene	<1.0		1.0
1,2-Dichloropropane	<1.0		1.0
cis-1,3-Dichloropropene	<1.0		1.0
trans-1,3-Dichloropropene	<1.0		1.0
Ethylbenzene	<1.0		1.0
Ethyl Ether	<5.0		5.0
2-Hexanone	<5.0		5.0
Iodomethane	<1.0		1.0
Isopropylbenzene	<1.0		1.0
4-Isopropyltoluene	<5.0		5.0
Methyl tert-Butyl Ether	<5.0		5.0
Methylene Chloride	<5.0	--	5.0
2-Butanone (MEK)	<5.0		5.0
2-Methylnaphthalene	**8.8**	--	5.0
4-Methyl-2-pentanone (MIBK)	<5.0		5.0
Naphthalene	**6.1**	--	5.0
n-Propylbenzene	<1.0		1.0
Styrene	<1.0		1.0
1,1,1,2-Tetrachloroethane	<1.0		1.0
1,1,2,2-Tetrachloroethane	<1.0		1.0
Tetrachloroethene	<1.0		1.0
Tetrahydrofuran	<5.0		5.0
Toluene	<1.0		1.0
1,2,3-Trichlorobenzene	<5.0		5.0
1,2,4-Trichlorobenzene	<5.0		5.0
1,1,1-Trichloroethane	<1.0		1.0
1,1,2-Trichloroethane	<1.0		1.0
Trichloroethene	<1.0		1.0
Trichlorofluoromethane	<1.0		1.0
1,2,3-Trichloropropane	<1.0		1.0
1,2,4-Trimethylbenzene	<1.0		1.0

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QUALITY CONTROL REPORT

Volatile Organic Compounds by EPA Method 8260B (Continued)

QC Batch: 1212918 (Continued) 5030B Aqueous Purge & Trap/USEPA-8260B

Method Blank (Continued) Analyzed: 10/23/2012 By: DLV
Unit: ug/L Analytical Batch: 2J24043

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
1,3,5-Trimethylbenzene			<1.0					1.0
Vinyl Chloride			<1.0					1.0
Xylene, Meta + Para			<2.0					2.0
Xylene, Ortho			<1.0					1.0
Surrogates:								
Dibromofluoromethane				*104*	*85-118*			
1,2-Dichloroethane-d4				*103*	*87-122*			
Toluene-d8				*102*	*85-113*			
4-Bromofluorobenzene				*99*	*82-110*			

Laboratory Control Sample Analyzed: 10/23/2012 By: DLV
Unit: ug/L Analytical Batch: 2J24043

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
Benzene		40.0	**43.4**	109	84-119	--	20	1.0
Chlorobenzene		40.0	**39.8**	100	84-118	--	20	1.0
1,1-Dichloroethene		40.0	**46.5**	116	77-123	--	20	1.0
Toluene		40.0	**45.2**	113	85-118	--	20	1.0
Trichloroethene		40.0	**45.2**	113	82-119	--	20	1.0
Surrogates:								
Dibromofluoromethane				*106*	*85-118*			
1,2-Dichloroethane-d4				*102*	*87-122*			
Toluene-d8				*108*	*85-113*			
4-Bromofluorobenzene				*103*	*82-110*			

Matrix Spike 1210284-01 PRB-12s Analyzed: 10/23/2012 By: DLV
Unit: ug/L Analytical Batch: 2J24043

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
Benzene	<10	400	**429**	107	80-129	--	9	10
Chlorobenzene	<10	400	**390**	98	80-121	--	8	10
1,1-Dichloroethene	<10	400	**446**	111	74-134	--	11	10
Toluene	<10	400	**442**	111	79-129	--	9	10
Trichloroethene	1550	400	**2020**	116	75-127	--	10	10
Surrogates:								
Dibromofluoromethane				*107*	*85-118*			
1,2-Dichloroethane-d4				*101*	*87-122*			
Toluene-d8				*106*	*85-113*			
4-Bromofluorobenzene				*103*	*82-110*			

Matrix Spike Duplicate 1210284-01 PRB-12s Analyzed: 10/23/2012 By: DLV
Unit: ug/L Analytical Batch: 2J24043

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
Benzene	<10	400	**438**	110	80-129	2	9	10

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QUALITY CONTROL REPORT

Volatile Organic Compounds by EPA Method 8260B (Continued)

QC Batch: 1212918 (Continued) 5030B Aqueous Purge & Trap/USEPA-8260B

Matrix Spike Duplicate (Continued) 1210284-01 PRB-12s — Analyzed: 10/23/2012 By: DLV

Unit: ug/L — Analytical Batch: 2J24043

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
Chlorobenzene	<10	400	**405**	101	80-121	4	8	10
1,1-Dichloroethene	<10	400	**461**	115	74-134	3	11	10
Toluene	<10	400	**452**	113	79-129	2	9	10
Trichloroethene	1550	400	**2060**	127	75-127	2	10	10
Surrogates:								
Dibromofluoromethane				*107*	*85-118*			
1,2-Dichloroethane-d4				*100*	*87-122*			
Toluene-d8				*105*	*85-113*			
4-Bromofluorobenzene				*103*	*82-110*			

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QUALITY CONTROL REPORT

Dissolved Metals by EPA 6000/7000 Series Methods

QC Type	Sample Conc.	Spike Qty.	Result	Unit	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
Analyte: Calcium/USEPA-6010C									
QC Batch: 1212101 (3010A Digestion)							Analyzed: 10/11/2012		By: KLV
Method Blank			<0.50	mg/L					0.50
Laboratory Control Sample		20.0	**19.5**	mg/L	97	80-120		20	0.50
1210124-01 [PRB-08d]									
Matrix Spike	114	20.0	**132**	mg/L	91	75-125		20	0.50
Matrix Spike Duplicate	114	20.0	**129**	mg/L	77	75-125	2	20	0.50
QC Batch: 1212256 (3010A Digestion)							Analyzed: 10/15/2012		By: KLV
Method Blank			<0.50	mg/L					0.50
Laboratory Control Sample		20.0	**20.6**	mg/L	103	80-120		20	0.50
1210209-04 [PRB-16s]									
Matrix Spike	78.5	20.0	**102**	mg/L	116	75-125		20	0.50
Matrix Spike Duplicate	78.5	20.0	**103**	mg/L	122	75-125	1	20	0.50
QC Batch: 1212356 (3010A Digestion)							Analyzed: 10/22/2012		By: KLV
Method Blank			<0.50	mg/L					0.50
Laboratory Control Sample		20.0	**18.3**	mg/L	92	80-120		20	0.50
1210284-01 [PRB-12s]									
Matrix Spike	87.7	20.0	**107**	mg/L	95	75-125		20	0.50
Matrix Spike Duplicate	87.7	20.0	**104**	mg/L	82	75-125	3	20	0.50
Analyte: Iron/USEPA-6010C									
QC Batch: 1212101 (3010A Digestion)							Analyzed: 10/11/2012		By: KLV
Method Blank			<200	ug/L					200
Laboratory Control Sample		400	**408**	ug/L	102	80-120		20	200
1210124-01 [PRB-08d]									
Matrix Spike	1030	400	**1380**	ug/L	88	75-125		20	200
Matrix Spike Duplicate	1030	400	**1370**	ug/L	85	75-125	0.7	20	200
QC Batch: 1212256 (3010A Digestion)							Analyzed: 10/15/2012		By: KLV
Method Blank			<200	ug/L					200
Laboratory Control Sample		400	**431**	ug/L	108	80-120		20	200

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QUALITY CONTROL REPORT

Dissolved Metals by EPA 6000/7000 Series Methods (Continued)

QC Type	Sample Conc.	Spike Qty.	Result	Unit	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
Analyte: Iron/USEPA-6010C (Continued)									
QC Batch: 1212256 (Continued) (3010A Digestion)							Analyzed: 10/15/2012		By: KLV
1210209-04 [PRB-16s]									
Matrix Spike	9.54	400	**418**	ug/L	102	75-125		20	200
Matrix Spike Duplicate	9.54	400	**429**	ug/L	105	75-125	3	20	200
QC Batch: 1212356 (3010A Digestion)							Analyzed: 10/22/2012		By: KLV
Method Blank			<200	ug/L					200
Laboratory Control Sample		400	**381**	ug/L	95	80-120		20	200
1210284-01 [PRB-12s]									
Matrix Spike	<200	400	**401**	ug/L	100	75-125		20	200
Matrix Spike Duplicate	<200	400	**388**	ug/L	97	75-125	3	20	200
Analyte: Magnesium/USEPA-6010C									
QC Batch: 1212101 (3010A Digestion)							Analyzed: 10/11/2012		By: KLV
Method Blank			<0.50	mg/L					0.50
Laboratory Control Sample		20.0	**19.6**	mg/L	98	80-120		20	0.50
1210124-01 [PRB-08d]									
Matrix Spike	28.3	20.0	**46.7**	mg/L	92	75-125		20	0.50
Matrix Spike Duplicate	28.3	20.0	**46.7**	mg/L	92	75-125	0.02	20	0.50
QC Batch: 1212256 (3010A Digestion)							Analyzed: 10/15/2012		By: KLV
Method Blank			<0.50	mg/L					0.50
Laboratory Control Sample		20.0	**20.9**	mg/L	105	80-120		20	0.50
1210209-04 [PRB-16s]									
Matrix Spike	16.5	20.0	**37.0**	mg/L	102	75-125		20	0.50
Matrix Spike Duplicate	16.5	20.0	**37.4**	mg/L	104	75-125	1	20	0.50
QC Batch: 1212356 (3010A Digestion)							Analyzed: 10/22/2012		By: KLV
Method Blank			<0.50	mg/L					0.50
Laboratory Control Sample		20.0	**19.1**	mg/L	95	80-120		20	0.50
1210284-01 [PRB-12s]									
Matrix Spike	19.4	20.0	**39.4**	mg/L	100	75-125		20	0.50
Matrix Spike Duplicate	19.4	20.0	**38.8**	mg/L	97	75-125	2	20	0.50

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QUALITY CONTROL REPORT

Dissolved Metals by EPA 6000/7000 Series Methods (Continued)

QC Type	Sample Conc.	Spike Qty.	Result	Unit	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
Analyte: Manganese/USEPA-6010C									
QC Batch: 1212101 (3010A Digestion)							Analyzed: 10/11/2012		By: KLV
Method Blank			<50	ug/L					50
Laboratory Control Sample		400	**397**	ug/L	99	80-120		20	50
1210124-01 [PRB-08d]									
Matrix Spike	40.6	400	**414**	ug/L	93	75-125		20	50
Matrix Spike Duplicate	40.6	400	**426**	ug/L	96	75-125	3	20	50
QC Batch: 1212256 (3010A Digestion)							Analyzed: 10/15/2012		By: KLV
Method Blank			<50	ug/L					50
Laboratory Control Sample		400	**426**	ug/L	107	80-120		20	50
1210209-04 [PRB-16s]									
Matrix Spike	8.44	400	**409**	ug/L	100	75-125		20	50
Matrix Spike Duplicate	8.44	400	**414**	ug/L	101	75-125	1	20	50
QC Batch: 1212356 (3010A Digestion)							Analyzed: 10/22/2012		By: KLV
Method Blank			<50	ug/L					50
Laboratory Control Sample		400	**378**	ug/L	95	80-120		20	50
1210284-01 [PRB-12s]									
Matrix Spike	<50	400	**393**	ug/L	98	75-125		20	50
Matrix Spike Duplicate	<50	400	**386**	ug/L	97	75-125	2	20	50

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QUALITY CONTROL REPORT

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

QC Type	Sample Conc.	Spike Qty.	Result	Unit	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
Analyte: Carbon, Total Organic/SM 5310 C 20th									
QC Batch: 1212169 (General Inorganic Prep)							Analyzed: 10/08/2012		By: KAR
Method Blank			<1.0	mg/L					1.0
Laboratory Control Sample		40.0	**38.5**	mg/L	96	87-111			1.0
Laboratory Control Sample Duplicate			**39.3**	mg/L			2	20	1.0
1210124-01 [PRB-08d]									
Matrix Spike	2.53	40.0	**39.7**	mg/L	93	75-124			1.0
Matrix Spike Duplicate	2.53	40.0	**40.7**	mg/L	95	75-124	3	20	1.0
QC Batch: 1212454 (General Inorganic Prep)							Analyzed: 10/15/2012		By: KAR
Method Blank			<1.0	mg/L					1.0
Laboratory Control Sample		40.0	**38.3**	mg/L	96	87-111			1.0
1210209-04 [PRB-16s]									
Matrix Spike	1.93	40.0	**41.5**	mg/L	99	75-124			1.0
Matrix Spike Duplicate	1.93	40.0	**40.8**	mg/L	97	75-124	2	20	1.0
1210284-01 [PRB-12s]									
Matrix Spike	1.86	40.0	**40.9**	mg/L	98	75-124			1.0
Matrix Spike Duplicate	1.86	40.0	**40.8**	mg/L	97	75-124	0.4	20	1.0
Analyte: Chloride/SM 4500-Cl E 20th									
QC Batch: 1212441 (General Inorganic Prep)							Analyzed: 10/16/2012		By: LMA
Method Blank			<1.0	mg/L					1.0
Laboratory Control Sample		50.0	**50.2**	mg/L	100	90-106		20	1.0
QC Batch: 1212445 (General Inorganic Prep)							Analyzed: 10/16/2012		By: LMA
Method Blank			<1.0	mg/L					1.0
Laboratory Control Sample		50.0	**51.3**	mg/L	103	90-106		20	1.0
1210209-04 [PRB-16s]									
Matrix Spike	33.1	50.0	**82.0**	mg/L	98	72-123		20	1.0
Matrix Spike Duplicate	33.1	50.0	**83.7**	mg/L	101	72-123	2	20	1.0
QC Batch: 1212691 (General Inorganic Prep)							Analyzed: 10/19/2012		By: LMA
Method Blank			<1.0	mg/L					1.0

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QUALITY CONTROL REPORT

Physical/Chemical Parameters by EPA/APHA/ASTM Methods (Continued)

QC Type	Sample Conc.	Spike Qty.	Result	Unit	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
Analyte: Chloride/SM 4500-Cl E 20th (Continued)									
QC Batch: 1212691 (Continued) (General Inorganic Prep)							Analyzed: 10/19/2012		By: LMA
Laboratory Control Sample		50.0	**49.9**	mg/L	100	90-106		20	1.0
1210229-01 [PRB-01s]									
Matrix Spike	35.0	50.0	**83.3**	mg/L	97	72-123		20	1.0
Matrix Spike Duplicate	35.0	50.0	**82.0**	mg/L	94	72-123	2	20	1.0
QC Batch: 1212694 (General Inorganic Prep)							Analyzed: 10/19/2012		By: LMA
Method Blank			<1.0	mg/L					1.0
Laboratory Control Sample		50.0	**50.7**	mg/L	101	90-106		20	1.0
1210284-01 [PRB-12s]									
Matrix Spike	110	50.0	**159**	mg/L	98	72-123		20	2.0
Matrix Spike Duplicate	110	50.0	**158**	mg/L	95	72-123	0.8	20	2.0
Analyte: Nitrogen, Nitrate/SM 4500-NO3 F 20th									
QC Batch: 1212100 (General Inorganic Prep)							Analyzed: 10/05/2012		By: CAC
Method Blank			<0.050	mg/L					0.050
Laboratory Control Sample		0.500	**0.515**	mg/L	103	90-110		20	0.050
QC Batch: 1212329 (General Inorganic Prep)							Analyzed: 10/10/2012		By: CAC
Method Blank			<0.050	mg/L					0.050
Laboratory Control Sample		0.500	**0.535**	mg/L	107	90-110		20	0.050
1210209-04 [PRB-16s]									
Matrix Spike	1.34	5.00	**6.53**	mg/L	104	90-110		20	0.50
Matrix Spike Duplicate	1.34	5.00	**6.39**	mg/L	101	90-110	2	20	0.50
QC Batch: 1212338 (General Inorganic Prep)							Analyzed: 10/11/2012		By: CAC
Method Blank			<0.050	mg/L					0.050
Laboratory Control Sample		0.500	**0.543**	mg/L	109	90-110		20	0.050
QC Batch: 1212367 (General Inorganic Prep)							Analyzed: 10/12/2012		By: CAC
Method Blank			<0.050	mg/L					0.050

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QUALITY CONTROL REPORT

Physical/Chemical Parameters by EPA/APHA/ASTM Methods (Continued)

QC Type	Sample Conc.	Spike Qty.	Result	Unit	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
Analyte: Nitrogen, Nitrate/SM 4500-NO3 F 20th (Continued)									
QC Batch: 1212367 (Continued) (General Inorganic Prep)							Analyzed: 10/12/2012		By: CAC
Laboratory Control Sample		0.500	**0.525**	mg/L	105	90-110		20	0.050
1210284-01 [PRB-12s]									
Matrix Spike	1.76	5.00	**7.29**	mg/L	**111**	90-110		20	0.50
Matrix Spike Duplicate	1.76	5.00	**6.85**	mg/L	102	90-110	6	20	0.50
Analyte: Sulfate/ASTM D516-90 (02)									
QC Batch: 1212566 (General Inorganic Prep)							Analyzed: 10/17/2012		By: LMA
Method Blank			<1.0	mg/L					1.0
Laboratory Control Sample		20.0	**20.3**	mg/L	102	88-116		20	1.0
QC Batch: 1212568 (General Inorganic Prep)							Analyzed: 10/17/2012		By: LMA
Method Blank			<1.0	mg/L					1.0
Laboratory Control Sample		20.0	**20.6**	mg/L	103	88-116		20	2.0
QC Batch: 1212664 (General Inorganic Prep)							Analyzed: 10/18/2012		By: LMA
Method Blank			<1.0	mg/L					1.0
Laboratory Control Sample		20.0	**19.1**	mg/L	96	88-116		20	1.0
1210209-04 [PRB-16s]									
Matrix Spike	25.3	20.0	**44.1**	mg/L	94	55-151		20	2.0
Matrix Spike Duplicate	25.3	20.0	**44.0**	mg/L	93	55-151	0.2	20	2.0
QC Batch: 1212665 (General Inorganic Prep)							Analyzed: 10/18/2012		By: LMA
Method Blank			<1.0	mg/L					1.0
Laboratory Control Sample		20.0	**20.5**	mg/L	102	88-116		20	1.0
1210284-01 [PRB-12s]									
Matrix Spike	44.7	20.0	**62.7**	mg/L	90	55-151		20	2.0
Matrix Spike Duplicate	44.7	20.0	**62.8**	mg/L	91	55-151	0.1	20	2.0
QC Batch: 1212666 (General Inorganic Prep)							Analyzed: 10/18/2012		By: LMA
Method Blank			<1.0	mg/L					1.0

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QUALITY CONTROL REPORT

Physical/Chemical Parameters by EPA/APHA/ASTM Methods (Continued)

QC Type	Sample Conc.	Spike Qty.	Result	Unit	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
Analyte: Sulfate/ASTM D516-90 (02) (Continued)									
QC Batch: 1212666 (Continued) (General Inorganic Prep)							Analyzed: 10/18/2012		By: LMA
Laboratory Control Sample		20.0	**19.9**	mg/L	100	88-116		20	2.0

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STATEMENT OF DATA QUALIFICATIONS

Dissolved Gases in Water by RSK-175 Headspace Analysis

Qualification: The analyte concentration in the sample exceeded the calibrated range of the instrument. The sample result is considered estimated.

Analysis: RSK-175

Sample/Analyte:			
	1210124-02	PRB-08s	Methane
	1210124-03	PRB-07s	Methane
	1210124-04	PRB-04s	Methane
	1210209-03	PRB-09s	Methane
	1210209-05	PRB-06s	Methane
	1210229-01	PRB-01s	Methane
	1210229-02	PRB-02s	Methane

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STATEMENT OF DATA QUALIFICATIONS

Volatile Organic Compounds by EPA Method 8260B

Qualification: The corresponding CCV for this analytical batch had a recovery exceeding the upper control limit of the method. A positive result for this analyte in any associated samples are considered estimated. Non-detectable results are not qualified.

Analysis: USEPA-8260B

Sample/Analyte:		
1210124-01	PRB-08d	Chloroethane
1210124-02	PRB-08s	Chloroethane
1210124-03	PRB-07s	Chloroethane
1210124-04	PRB-04s	Trichlorofluoromethane
1210124-05	PRB-04d	Chloroethane
1210284-01	PRB-12s	Bromomethane
1210284-02	PRB-13s	Bromomethane
1210284-03	PRB-14s	Bromomethane
1210284-04	PRB-15s	Bromomethane
1210284-05	PRB-15d	Bromomethane
1210284-06	PRB-11s	Bromomethane
1210284-07	DUP-01	Chloroethane
1210284-07	DUP-01	Naphthalene
1210284-07	DUP-01	Trichlorofluoromethane
1210284-08	TB-03	Chloroethane
1210284-08	TB-03	Dichlorodifluoromethane
1210284-08	TB-03	Trichlorofluoromethane

Qualification: The corresponding CCV for this analytical batch had a recovery below the lower control limit of the method. Positive results for this analyte in any associated samples are considered estimated; non-detectable results are considered approximate.

Analysis: USEPA-8260B

Sample/Analyte:		
1210124-01	PRB-08d	Bromomethane
1210124-01	PRB-08d	Chloromethane
1210124-01	PRB-08d	Iodomethane
1210124-02	PRB-08s	Bromomethane
1210124-02	PRB-08s	Chloromethane
1210124-02	PRB-08s	Iodomethane
1210124-03	PRB-07s	Bromomethane
1210124-03	PRB-07s	Chloromethane
1210124-03	PRB-07s	Iodomethane
1210124-04	PRB-04s	Bromomethane
1210124-04	PRB-04s	Iodomethane
1210124-05	PRB-04d	Bromomethane
1210124-05	PRB-04d	Chloromethane
1210124-05	PRB-04d	Iodomethane
1210284-07	DUP-01	2-Methylnaphthalene
1210284-07	DUP-01	Chloromethane
1210284-07	DUP-01	Dichlorodifluoromethane
1210284-07	DUP-01	Iodomethane
1210284-08	TB-03	2-Methylnaphthalene
1210284-08	TB-03	Iodomethane

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STATEMENT OF DATA QUALIFICATIONS

Dissolved Metals by EPA 6000/7000 Series Methods

Qualification: The % difference in results between the sample and a serial dilution of the sample exceeded the control limit. Sample matrix interference is suspected and the reported result is considered estimated.

Analysis: USEPA-6010C

Sample/Analyte: 1210209-04 PRB-16s Calcium

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STATEMENT OF DATA QUALIFICATIONS

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Qualification: The MS or MSD recovery, but not both, was outside the control limit. The RPD is within the control limit. The unspiked sample result is not qualified.

Analysis: SM 4500-NO3 F 20th

Sample/Analyte: 1210284-01 PRB-12s Nitrogen, Nitrate

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Grand Rapids, MI 49512
Phone (616) 975-4500 Fax (616) 942-7463
www.trimatrixlabs.com

Chain of Custody Record

COC No. 142443

Pg. 1 of 1

For Lab Use Only
Cart: 2
VOA Rack/Tray: 136, 452 Blue
Receipt Log No.: 45-7
Project Chemist:
Work Order No.: E12/0124

Client Name: TRC Environmental
Address: 1540 Eisenhower Place
City, State Zip: Ann Arbor MI 48108
Phone/Fax: 734-751-7080 / 734-791-9020
Email: smetz@trcsolutions.com

Project Name: TPC-PRB
Client Project No. / P.O. No.: 186299.0001
Invoice To: [X] Client [ ] Other (comments)
Contact/Report To: Stacy Metz

Analyses Requested

Container Type (corresponds to Container Packing List)

PRESERVATIVES
A NONE pH~7
B HNO_3 pH<2
C H_2SO_4 pH<2
D 1+1 HCl pH<2
E NaOH pH>12
F ZnAc/NaOH pH>9
G MeOH
H Other (note below)

Schedule	Matrix Code	Sample Number	Field Sample ID	Cooler ID	Sample Date	Sample Time	COMP	GRAB	Matrix	VOC (D)	Dis. Metals* (B)	Anion** (C)	General Methane, Ethane and Ethene (A)	(D)	Total	Sample Comments
06		-01	PRB-8D	TM 1390	10/4/12	1306		X	GW	X	X	X	X		7	
04		-02	PRB-8S			1337		X	GW	X	X	X	X	X	9	
		-03	PRB-7S			1459		X	GW	X	X	X	X	X	9	
		-04	PRB-4S			1704		X	GW	X	X	X	X	X	9	
06		-05	PRB-4D			1731		X	GW	X	X	X	X		7	

Number of Containers Submitted

Sampled By (print): Rachel N Sartor
Sampler's Signature: Rachel N. Sartor
Company: TRC Environ

How Shipped? Hand ___ Carrier Fed Ex
Tracking No.

Comments

	Date	Time
1. Relinquished By: Rachel N. Sartor	10/4/12	1830
1. Received By		
2. Relinquished By		
2. Received By		
3. Relinquished By		
3. Received For Lab By: [signature]	10/5/12	0815

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SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES

Client: TRC Environmental
Receipt Record Page/Line #: 45-7
Work Order #: E120124
New / Add To
Project Chemist
Sample #s

Recorded by (initials/date): Lr 10/5/12

☒ Cooler ☐ Box ☐ Other
Qty Received: 1

Thermometer Used: ☒ IR Gun (#202) ☐ Digital Thermometer (#54) ☐ Other (#_____) ☐ See Additional Cooler Information Form

Cooler #	Time	Recorded °C	Correction Factor °C	Actual °C
1390	0915	Temp Blank:	—	1.9
		TB location: Representative / Not Representative		
		1 3.6	—	3.6
		2 3.5	—	3.5
		3 2.9	—	3.9
			Average °C	3.3

Cooler #1390 — Time 0915

Custody Seals: ☒ None ☐ Present / Intact ☐ Present / Not Intact

Coolant Location: Dispersed / Top / Middle / Bottom

Coolant/Temperature Taken Via: ☒ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers

Alternate Temperature Taken Via: ☒ Temperature Blank (TB) ☐ 1 Container

☒ Cooler ID on COC? ☒ VOC Trip Blank received?

Cooler # ____ Time ____

Custody Seals: ☐ None ☐ Present / Intact ☐ Present / Not Intact

Coolant Location: Dispersed / Top / Middle / Bottom

Coolant/Temperature Taken Via: ☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers

Alternate Temperature Taken Via: ☐ Temperature Blank (TB) ☐ 1 Container

Recorded °C | Correction Factor °C | Actual °C
Temp Blank:
TB location: Representative / Not Representative
1
2
3
Average °C

☐ Cooler ID on COC? ☐ VOC Trip Blank received?

Cooler # ____ Time ____

Custody Seals: ☐ None ☐ Present / Intact ☐ Present / Not Intact

Coolant Location: Dispersed / Top / Middle / Bottom

Coolant/Temperature Taken Via: ☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers

Alternate Temperature Taken Via: ☐ Temperature Blank (TB) ☐ 1 Container

Recorded °C | Correction Factor °C | Actual °C
Temp Blank:
TB location: Representative / Not Representative
1
2
3
Average °C

☐ Cooler ID on COC? ☐ VOC Trip Blank received?

Cooler # ____ Time ____

Custody Seals: ☐ None ☐ Present / Intact ☐ Present / Not Intact

Coolant Location: Dispersed / Top / Middle / Bottom

Coolant/Temperature Taken Via: ☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers

Alternate Temperature Taken Via: ☐ Temperature Blank (TB) ☐ 1 Container

Recorded °C | Correction Factor °C | Actual °C
Temp Blank:
TB location: Representative / Not Representative
1
2
3
Average °C

☐ Cooler ID on COC? ☐ VOC Trip Blank received?

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received

Yes	No	
☒	☐	Chain of Custody record(s)? If No, Initiated By _____
☒		Received for Lab Signed/Date/Time?
☒	☐	Shipping document?
☐	☒	Other _____

COC Information

☒ TriMatrix COC ☐ Other 142443

COC ID Numbers:

Check COC for Accuracy

Yes	No	
☒	☐	Analysis Requested?
☒	☐	Sample ID matches COC?
☒	☐	Sample Date and Time matches COC?
☒		Container type completed on COC?
☒	☐	All container types indicated are received?

Sample Condition Summary

N/A	Yes	No	
	☐	☒	Broken containers/lids?
	☐	☒	Missing or incomplete labels?
	☐	☒	Illegible information on labels?
	☐	☒	Low volume received?
	☐	☒	Inappropriate or non-TriMatrix containers received?
☐	☐	☒	VOC vials / TOX containers have headspace?
☐	☐	☒	Extra sample locations / containers not listed on COC?

Check Sample Preservation

N/A	Yes	No	
	☒	☐	Average sample temperature ≤6° C?
☒	☐	☐	Was thermal preservation required?
☒		☐	If "No", Project Chemist Approval Intials: _____
☒		☐	If "Yes" Completed Non Con Cooler - Cont Inventory Form?
☐	☒		Completed Sample Preservation Verification Form?
☐	☒	☐	Samples chemically preserved correctly?
☒		☐	If "No", added orange tag?
		☒	Received pre-preserved VOC soils? ☐ MeOH ☐ Na_2SO_4

Check for Short Hold-Time Prep/Analyses

☐ Bacteriological
☐ Air Bags
☐ EnCores / Methanol Pre-Preserved
☐ Formaldehyde/Aldehyde
☒ Green-tagged containers
☐ Yellow/White-tagged 1L ambers (SV Prep-Lab)

AFTER HOURS ONLY:
COPIES OF COC TO LAB AREA(S)
☐ NONE RECEIVED
☒ RECEIVED, COCs TO LAB(S)

Notes

☒ Trip Blank received ☐ Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤1 Hour Goal Met?
10/5/12 0815	10/5/12 0926	Yes (No)

Log In Forms - Receiving.Log-In_Checklist

revision: 3.4

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TRIMATRIX LABORATORIES

SAMPLE PRESERVATION VERIFICATION FORM

page ____ of ____

Client: TRC Environmental	Work Order #: E-1210124
Receipt Log #: 45-7	Completed By (initials/date): LH 10/5/12
	Project Chemist:

COC ID # 142443			Adjusted by: ____ Date: ____		DO NOT ADJUST pH FOR THESE CONTAINER TYPES			
Container Type	5 / 23	4	13		3	6	15	
Tag Color	Lt. Blue	Blue	Brown		Green	Red	Red Stripe	
Preservative	NaOH	H_2SO_4	H_2SO_4		None	HNO_3	HNO_3	
Expected pH	>12	<2	<2		6-8	<2	<2	
COC Line #1					✓	✓		
COC Line #2					✓	✓		
COC Line #3					✓	✓		
COC Line #4					✓	✓		
COC Line #5					✓	✓		
COC Line #6								
COC Line #7								
COC Line #8								
COC Line #9								
COC Line #10								

Comments

Ph Strip Lot #

☑ HC137671

☐ ____

Aqueous Samples: For each sample and container type, check the box if pH is acceptable. If pH is not acceptable for any sample container, record pH in box, and note on Sample Receiving Checklist and on Sample Receiving Non-Conformance Form. If approved by Project Chemist, add acid or base to the sample to achieve the correct pH. Add up to, but do not exceed 2x the volume initially added at container prep (see table below for initial volumes used). Add orange pH tag to sample container and record information requested. Record adjusted pH on this form. Do not adjust pH for container types 3, 6, and 15.

COC ID #			Adjusted by: ____ Date: ____		DO NOT ADJUST pH FOR THESE CONTAINER TYPES			
Container Type	5	4	13		3	6	15	
Tag Color	Lt. Blue	Blue	Brown		Green	Red	Red Stripe	
Preservative	NaOH	H_2SO_4	H_2SO_4		None	HNO_3	HNO_3	
Expected pH	>12	<2	<2		~7	<2	<2	
COC Line #1								
COC Line #2								
COC Line #3								
COC Line #4								
COC Line #5								
COC Line #6								
COC Line #7								
COC Line #8								
COC Line #9								
COC Line #10								

Comments

Container Size (mL)	Original Vol. of Preservative (mL)
Container Type 5	NaOH
500	2.5
1000	5.0
Container Type 4	H_2SO_4
125	0.5
250	1.0
500	2.0
1000	4.0
Container Type 13	H_2SO_4
500	2.5

Log In Forms -- Sample_Preserve_Verification

version: 2.0

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Chain of Custody Record

COC No. 142442

Pg. ___ of ___

For Lab Use Only
Cart: 13
VOA Rack/Tray: 363-6, 43-6
Receipt Log No.: 3-13
Project Chemist:
Work Order No.: 1210209

Client Name: TRC Environmental
Address: 1540 Eisenhower Place
City, State Zip: Ann Arbor, MI 48108
Phone/Fax: 734-751-7080 / 734-791-9020
Email: smetz@trcsolutions.com

Project Name: TPC-PRB
Client Project No. / P.O. No.: 186299.0001
Invoice To: ☒ Client ☐ Other (comments)
Contact/Report To: Stacy Metz

Analyses Requested

PRESERVATIVES: A NONE pH~7; B HNO_3 pH<2; C H_2SO_4 pH<2; D 1+1 HCl pH<2; E NaOH pH>12; F ZnAc/NaOH pH>9; G MeOH; H Other (note below)

Container Type (corresponds to Container Packing List)

Schedule	Matrix Code	Sample Number	Field Sample ID	Cooler ID	Sample Date	Sample Time	COMP	GRAB	Matrix	D VOC	B Dis. Metals*	C Anion	A General	D Ethane, Ethene, Methane	D DI H_2O	Total	Sample Comments
			Number of Containers Submitted														
06		01	1 PRB-3S		10/9/12	1035	X		GW	X	X	X	X			7	
06		02	2 PRB-10S			1138	X		GW	X	X	X	X			7	
04		03	3 PRB-9S			1309	X		GW	X	X	X	X	X		9	
05		04	4 PRB-16S + MS/MSD			1458	X		GW	X	X	X	X			~~8~~ 13	
04		05	5 PRB-6S			1626	X		GW	X	X	X	X	X		9	
06		06	6 PRB-5S			1759	X		GW	X	X	X	X			7	
01		07	7 ~~TRIP Blank #~~ TB-01			0000									X	1	
			8														
			9														
			10														

Sampled By (print): Rachel N Sorter
Sampler's Signature: Rachel N Sorter
Company: TRC

How Shipped? Hand ___ Carrier ___
Tracking No.

Comments

1. Relinquished By	Date	Time	2. Relinquished By	Date	Time	3. Relinquished By	Date	Time
Rachel Sorter	10/9/12	1900						
1. Received By	**Date**	**Time**	**2. Received By**	**Date**	**Time**	**3. Received For Lab By**	**Date**	**Time**
						[signature]	10-10-12	08:15

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TRIMATRIX LABORATORIES

US EPA ARCHIVE DOCUMENT

SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES

Client: TRC Environmental
Receipt Record Page/Line #: 3-13
Work Order #: 1210207
New / Add To
Project Chemist
Sample #s

Recorded by (initials/date): 10-10-12
☑ Cooler ☐ Box ☐ Other
Qty Received: 1
Thermometer Used: ☑ IR Gun (#202) ☐ Digital Thermometer (#54) ☐ Other (#_____)
☐ See Additional Cooler Information Form

Cooler #	Time	Custody Seals	Coolant Location	Coolant/Temperature Taken Via	Alternate Temperature Taken Via
		☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container

Recorded °C	Correction Factor °C	Actual °C
2.1 Temp Blank:	0	2.1
TB location: Representative / Not Representative		
1 2.3	0	2.3
2 2.2	0	2.2
3 1.9	0	1.9
Average °C		2.1

☐ Cooler ID on COC? ☑ VOC Trip Blank received?

Cooler #	Time	Custody Seals	Coolant Location	Coolant/Temperature Taken Via	Alternate Temperature Taken Via
		☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container

Recorded °C	Correction Factor °C	Actual °C
Temp Blank:		
TB location: Representative / Not Representative		
1		
2		
3		
Average °C		

☐ Cooler ID on COC? ☐ VOC Trip Blank received?

Cooler #	Time	Custody Seals	Coolant Location	Coolant/Temperature Taken Via	Alternate Temperature Taken Via
		☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container

Recorded °C	Correction Factor °C	Actual °C
Temp Blank:		
TB location: Representative / Not Representative		
1		
2		
3		
Average °C		

☐ Cooler ID on COC? ☐ VOC Trip Blank received?

Cooler #	Time	Custody Seals	Coolant Location	Coolant/Temperature Taken Via	Alternate Temperature Taken Via
		☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container

Recorded °C	Correction Factor °C	Actual °C
Temp Blank:		
TB location: Representative / Not Representative		
1		
2		
3		
Average °C		

☐ Cooler ID on COC? ☐ VOC Trip Blank received?

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received

Yes	No	
☐	☐	Chain of Custody record(s)? If No, Initiated By _____
☑		Received for Lab Signed/Date/Time?
☑	☐	Shipping document?
☐	☑	Other _____

COC Information

☑ TriMatrix COC ☐ Other _____

COC ID Numbers: 142442

Check COC for Accuracy

Yes	No	
☑	☐	Analysis Requested?
☑	☐	Sample ID matches COC?
☑	☐	Sample Date and Time matches COC?
☑		Container type completed on COC?
☑	☐	All container types indicated are received?

Check Sample Preservation

N/A	Yes	No	
	☑	☐	Average sample temperature ≤6° C?
☐	☑	☐	Was thermal preservation required?
☑		☐	If "No", Project Chemist Approval Intials: _____
☑		☐	If "Yes" Completed Non Con Cooler - Cont Inventory Form?
☐		☑	Completed Sample Preservation Verification Form?
☐		☑	Samples chemically preserved correctly?
☑		☐	If "No", added orange tag?
		☑	Received pre-preserved VOC soils? ☐ MeOH ☐ Na_2SO_4

Check for Short Hold-Time Prep/Analyses

☐ Bacteriological
☐ Air Bags
☐ EnCores / Methanol Pre-Preserved
☐ Formaldehyde/Aldehyde
☐ Green-tagged containers
☐ Yellow/White-tagged 1L ambers (SV Prep-Lab)

AFTER HOURS ONLY:
COPIES OF COC TO LAB AREA(S)
☐ NONE RECEIVED
☐ RECEIVED, COCs TO LAB(S)

Sample Condition Summary

N/A	Yes	No	
	☐	☑	Broken containers/lids?
	☐	☑	Missing or incomplete labels?
	☐	☑	Illegible information on labels?
	☐	☑	Low volume received?
	☐	☑	Inappropriate or non-TriMatrix containers received?
☐	☐	☑	VOC vials / TOX containers have headspace?
☐	☐	☑	Extra sample locations / containers not listed on COC?

Notes

☑ Trip Blank received ☐ Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤1 Hour Goal Met?
10-10-12		Yes / No

Log In Forms - Receiving.Log-In_Checklist

revision: 3.4

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US EPA ARCHIVE DOCUMENT

TRIMATRIX LABORATORIES

SAMPLE PRESERVATION VERIFICATION FORM

page 1 of 1

Client: TRC Environmental	Work Order #: 1210209
Receipt Log #: 3-13	Project Chemist:
Completed By (initials/date):	

COC ID #			Adjusted by: ____ Date: ____		DO NOT ADJUST pH FOR THESE CONTAINER TYPES			
Container Type	5 / 23	4	13		3	6	15	
Tag Color	Lt. Blue	Blue	Brown		Green	Red	Red Stripe	
Preservative	NaOH	H_2SO_4	H_2SO_4		None	HNO_3	HNO_3	
Expected pH	>12	<2	<2		6-8	<2	<2	
COC Line #1					✓	✓		
COC Line #2					✓	✓		
COC Line #3					✓	✓		
COC Line #4					✓	✓		
COC Line #5					✓	✓		
COC Line #6					✓	✓		
COC Line #7								
COC Line #8								
COC Line #9								
COC Line #10								

Comments

Ph Strip Lot #

☑ HC137671

☐ _____

Aqueous Samples: For each sample and container type, check the box if pH is acceptable. If pH is not acceptable for any sample container, record pH in box, and note on Sample Receiving Checklist and on Sample Receiving Non-Conformance Form. If approved by Project Chemist, add acid or base to the sample to achieve the correct pH. Add up to, but do not exceed 2x the volume initially added at container prep (see table below for initial volumes used). Add orange pH tag to sample container and record information requested. Record adjusted pH on this form. Do not adjust pH for container types 3, 6, and 15.

COC ID #			Adjusted by: ____ Date: ____		DO NOT ADJUST pH FOR THESE CONTAINER TYPES			
Container Type	5	4	13		3	6	15	
Tag Color	Lt. Blue	Blue	Brown		Green	Red	Red Stripe	
Preservative	NaOH	H_2SO_4	H_2SO_4		None	HNO_3	HNO_3	
Expected pH	>12	<2	<2		~7	<2	<2	
COC Line #1								
COC Line #2								
COC Line #3								
COC Line #4								
COC Line #5								
COC Line #6								
COC Line #7								
COC Line #8								
COC Line #9								
COC Line #10								

Comments

Container Size (mL)	Original Vol. of Preservative (mL)
Container Type 5	NaOH
500	2.5
1000	5.0
Container Type 4	H_2SO_4
125	0.5
250	1.0
500	2.0
1000	4.0
Container Type 13	H_2SO_4
500	2.5

Log In Forms -- Sample_Preserve_Verification

version: 2.0

US EPA ARCHIVE DOCUMENT

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Chain of Custody Record

COC No. 142624

Pg. 2 of 2

For Lab Use Only
Cart: 89G, 3
VOA Rack/Tray: 516R
Receipt Log No.: 5.7
Project Chemist:
Work Order No.: 1210229

Client Name: TRC Environmental
Address: 1540 Eisenhower Place
City, State Zip: Ann Arbor, MI 48108
Phone/Fax: 734-751-7080/734-791-9020
Email: smetz@trcsolutions.com

Project Name: TPC-PRB
Client Project No. / P.O. No.: 186299.0001
Invoice To: ☒ Client ☐ Other (comments)
Contact/Report To: Stacy Metz

Analyses Requested

PRESERVATIVES
A NONE pH~7
B HNO_3 pH<2
C H_2SO_4 pH<2
D 1+1 HCl pH<2
E NaOH pH>12
F ZnAc/NaOH pH>9
G MeOH
H Other (note below)

Schedule	Matrix Code	Sample Number	Field Sample ID	Cooler ID	Sample Date	Sample Time	COMP	GRAB	Matrix	VOC (D)	Dis. Metals (B)	Anion (C)	General (A)	Methane Ethane Ethene (D)	Total	Sample Comments
04		01	PRB-1S		10/10/12	1640		X	GW	X	X	X	X	X	9	
		02	PRB-2S			1735		X	GW	X	X	X	X	X	9	
01		03	~~TRIP BLANK #~~ TB-02			0000		X	DI						2	

Container Type (corresponds to Container Packing List)
Number of Containers Submitted

Sampled By (print): Rachel N Sartor
Sampler's Signature: Rachel N. Sartor
Company: TRC Environ.

How Shipped? Hand ___ Carrier Fed Ex
Tracking No.

Comments

1. Relinquished By	Date	Time	2. Relinquished By	Date	Time	3. Relinquished By	Date	Time
Rachel N. Sartor	10/10/12	1830						

1. Received By	Date	Time	2. Received By	Date	Time	3. Received For Lab By	Date	Time
						[illegible]	10/11/12	0830

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TRIMATRIX LABORATORIES

US EPA ARCHIVE DOCUMENT

SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES

Client: TRC
Receipt Record Page/Line #: 5.7
Work Order #: 1210229
New / Add To
Project Chemist | Sample #s

Recorded by (initials/date): WC 10/11/12

☑ Cooler ☐ Box ☐ Other_____ | Qty Received: 1

Thermometer Used: ☑ IR Gun (#202) ☐ Digital Thermometer (#54) ☐ Other (#_____) ☐ See Additional Cooler Information Form

Cooler #	Time	Custody Seals	Coolant Location	Coolant/Temperature Taken Via	Alternate Temperature Taken Via
Tm 28016	1001	☑ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / (Top) / Middle / Bottom	☑ Loose Ice / Avg 2-3 containers ☑ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container
		☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container
		☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container
		☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container

Cooler #	Recorded °C	Correction Factor °C	Actual °C
Temp Blank:			
TB location: Representative / Not Representative			
1	3.2	–	3.2
2	3.6	–	3.6
3	4.1	–	4.1
Average °C			3.6
☐ Cooler ID on COC?			
☑ VOC Trip Blank received?			

Cooler #	Recorded °C	Correction Factor °C	Actual °C
Temp Blank:			
TB location: Representative / Not Representative			
1			
2			
3			
Average °C			
☐ Cooler ID on COC?			
☐ VOC Trip Blank received?			

Cooler #	Recorded °C	Correction Factor °C	Actual °C
Temp Blank:			
TB location: Representative / Not Representative			
1			
2			
3			
Average °C			
☐ Cooler ID on COC?			
☐ VOC Trip Blank received?			

Cooler #	Recorded °C	Correction Factor °C	Actual °C
Temp Blank:			
TB location: Representative / Not Representative			
1			
2			
3			
Average °C			
☐ Cooler ID on COC?			
☐ VOC Trip Blank received?			

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received

Yes / No
- ☐ ☐ Chain of Custody record(s)? If No, Initiated By _____
- ☑ ☐ Received for Lab Signed/Date/Time?
- ☑ ☐ Shipping document?
- ☐ ☑ Other _____

COC Information

☑ TriMatrix COC ☐ Other_____

COC ID Numbers:

Check COC for Accuracy

Yes / No
- ☑ ☐ Analysis Requested?
- ☑ ☐ Sample ID matches COC?
- ☑ ☐ Sample Date and Time matches COC?
- ☑ ☐ Container type completed on COC?
- ☑ ☐ All container types indicated are received?

Check Sample Preservation

N/A / Yes / No
- ☐ ☑ ☐ Average sample temperature ≤6° C?
- ☑ ☐ ☐ Was thermal preservation required?
- ☑ ☐ ☐ If "No", Project Chemist Approval Intials:_____
- ☑ ☐ ☑ If "Yes" Completed Non Con Cooler - Cont Inventory Form?
- ☐ ☑ ☑ Completed Sample Preservation Verification Form?
- ☐ ☑ ☐ Samples chemically preserved correctly?
- ☑ ☐ ☐ If "No", added orange tag?
- ☐ ☐ Received pre-preserved VOC soils?
- ☐ MeOH ☐ Na_2SO_4

Check for Short Hold-Time Prep/Analyses

- ☐ Bacteriological
- ☐ Air Bags
- ☐ EnCores / Methanol Pre-Preserved
- ☐ Formaldehyde/Aldehyde
- ☑ Green-tagged containers
- ☐ Yellow/White-tagged 1L ambers (SV Prep-Lab)

AFTER HOURS ONLY:
COPIES OF COC TO LAB AREA(S)
- ☐ NONE RECEIVED
- ☑ RECEIVED, COCs TO LAB(S)

Sample Condition Summary

N/A / Yes / No
- ☐ ☑ ☐ Broken containers/lids?
- ☐ ☑ ☐ Missing or incomplete labels?
- ☐ ☑ ☐ Illegible information on labels?
- ☐ ☑ ☐ Low volume received?
- ☐ ☑ ☐ Inappropriate or non-TriMatrix containers received?
- ☐ ☑ ☐ VOC vials / TOX containers have headspace?
- ☐ ☑ ☐ Extra sample locations / containers not listed on COC?

Notes

☑ Trip Blank received ☐ Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤1 Hour Goal Met?
10/11/12 0830	10/11/12 1005	Yes (No)

Log In Forms - Receiving.Log-In_Checklist

revision: 3.4

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TRIMATRIX LABORATORIES

SAMPLE PRESERVATION VERIFICATION FORM

page 1 of 1

Client: TRC		Work Order #: 1210229
Receipt Log #: 5.7	Completed By (initials/date): WS 10/11/12	Project Chemist:

COC ID #: 1426025

Adjusted by: _____ Date: _____

DO NOT ADJUST pH FOR THESE CONTAINER TYPES

Container Type	5 / 23	4	13	23	3	6	15	
Tag Color	Lt. Blue	Blue	Brown		Green	Red	Red Stripe	
Preservative	NaOH	H_2SO_4	H_2SO_4		None	HNO_3	HNO_3	
Expected pH	>12	<2	<2	<2	6-8	<2	<2	
COC Line #1				✓	✓			
COC Line #2				✓	✓			
COC Line #3				✓	✓			
COC Line #4								
COC Line #5								
COC Line #6								
COC Line #7								
COC Line #8								
COC Line #9								
COC Line #10								

Comments

Ph Strip Lot #: HC137671

Aqueous Samples: For each sample and container type, check the box if pH is acceptable. If pH is not acceptable for any sample container, record pH in box, and note on Sample Receiving Checklist and on Sample Receiving Non-Conformance Form. If approved by Project Chemist, add acid or base to the sample to achieve the correct pH. Add up to, but do not exceed 2x the volume initially added at container prep (see table below for initial volumes used). Add orange pH tag to sample container and record information requested. Record adjusted pH on this form. Do not adjust pH for container types 3, 6, and 15.

COC ID #: 1426024

Adjusted by: _____ Date: _____

DO NOT ADJUST pH FOR THESE CONTAINER TYPES

Container Type	5	4	13		3	6	15	
Tag Color	Lt. Blue	Blue	Brown		Green	Red	Red Stripe	
Preservative	NaOH	H_2SO_4	H_2SO_4		None	HNO_3	HNO_3	
Expected pH	>12	<2	<2		~7	<2	<2	
COC Line #1					✓		✓	
COC Line #2					✓		✓	
COC Line #3								
COC Line #4								
COC Line #5								
COC Line #6								
COC Line #7								
COC Line #8								
COC Line #9								
COC Line #10								

Comments

Container Size (mL)	Original Vol. of Preservative (mL)
Container Type 5	NaOH
500	2.5
1000	5.0
Container Type 4	H_2SO_4
125	0.5
250	1.0
500	2.0
1000	4.0
Container Type 13	H_2SO_4
500	2.5

Log In Forms -- Sample_Preserve_Verification

version: 2.0

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Chain of Custody Record

COC No. 142626

Pg. 1 of 1

For Lab Use Only
Cart: 10
VOA Rack/Tray: 405 Red
Receipt Log No.: 7-2
Project Chemist:
Work Order No.: 1210284

Client Name: TRC Environmental
Address: 1540 Eisenhower Place
City, State Zip: Ann Arbor MI 48108
Phone/Fax: 734-751-7080/734-791-9020
Email: smetz@trcsolutions.com

Project Name: TPC-PRB
Client Project No. / P.O. No.: 186299.0001
Invoice To: [X] Client [ ] Other (comments)
Contact/Report To: Stacy Metz

Analyses Requested

PRESERVATIVES
A NONE pH~7
B HNO_3 pH<2
C H_2SO_4 pH<2
D 1+1 HCl pH<2
E NaOH pH>12
F ZnAc/NaOH pH>9
G MeOH
H Other (note below)

Schedule	Matrix Code	Sample Number	Field Sample ID	Cooler ID	Sample Date	Sample Time	COMP	GRAB	Matrix	D VOC	B Diss. Metals	C Anion	A General Methods	Total	Sample Comments
05		01	1 PRB-12S + MS/MSD	2472	10/11/12	0949				X	X	X	X	10	
06		02	2 PRB-13S			1043				X	X	X	X	7	
		03	3 PRB-14S			1329				X	X	X	X	7	
		04	4 PRB-15S			1421				X	X	X	X	7	
		05	5 PRB-15D			1505				X	X	X	X	7	
		06	6 PRB-11S			1610				X	X	X	X	7	
07		07	7 DUP-01							X	X		X	3	
01		08	8 TB-03		10-11-12					X				1	
			9												
			10												

Container Type (corresponds to Container Packing List)
Number of Containers Submitted

Sampled By (print): Rachel N Sorter
Sampler's Signature: Rachel N. Sorter
Company: TRC Environ.

How Shipped? Hand ___ Carrier Fed Ex
Tracking No.

Comments

1. Relinquished By	Date	Time	2. Relinquished By	Date	Time	3. Relinquished By	Date	Time
Rachel N. Sorter	10/11/12	1832						
1. Received By	**Date**	**Time**	**2. Received By**	**Date**	**Time**	**3. Received For Lab By**	**Date**	**Time**
						[signature]	10/12/12	0830

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SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES

Client: TRC
Receipt Record Page/Line #: 1-2
Work Order #: 1210284
New / Add To
Project Chemist | Sample #s

Recorded by (initials/date): fil 10/12/12

☒ Cooler ☐ Box ☐ Other
Qty Received: 1

Thermometer Used: ☒ IR Gun (#202) ☐ Digital Thermometer (#54) ☐ Other (#_____)
☐ See Additional Cooler Information Form

Cooler #	Time	Custody Seals	Coolant Location	Coolant/Temperature Taken Via	Alternate Temperature Taken Via
2472	0918	☒ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☒ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container
		☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container
		☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container
		☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container

Cooler #	Recorded °C	Correction Factor °C	Actual °C	Average °C	Cooler ID on COC?	VOC Trip Blank received?
2472	1 1.9 / 2 2.1 / 3 2.4	–	1.9 / 2.1 / 2.4	2.1	☒	☒
					☐	☐
					☐	☐
					☐	☐

Temp Blank:
TB location: Representative / Not Representative

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received

Yes	No	
☒	☐	Chain of Custody record(s)? If No, Initiated By _____
☒		Received for Lab Signed/Date/Time?
☒	☐	Shipping document?
☐	☒	Other _____

COC Information

☒ TriMatrix COC ☐ Other 142626

COC ID Numbers:

Check COC for Accuracy

Yes	No	
☒	☐	Analysis Requested?
☒	☐	Sample ID matches COC?
☒	☐	Sample Date and Time matches COC?
☒		Container type completed on COC?
☒	☐	All container types indicated are received?

Sample Condition Summary

N/A	Yes	No	
	☐	☒	Broken containers/lids?
	☐	☒	Missing or incomplete labels?
	☐	☒	Illegible information on labels?
	☐	☒	Low volume received?
	☐	☒	Inappropriate or non-TriMatrix containers received?
☐	☐	☒	VOC vials / TOX containers have headspace?
☐	☐	☒	Extra sample locations / containers not listed on COC?

Check Sample Preservation

N/A	Yes	No	
	☒	☐	Average sample temperature ≤6° C?
☒	☐	☐	Was thermal preservation required?
☒	☐		If "No", Project Chemist Approval Intials: _____
☒	☐		If "Yes" Completed Non Con Cooler - Cont Inventory Form?
☐	☒		Completed Sample Preservation Verification Form?
☐	☒	☐	Samples chemically preserved correctly?
☒	☐		If "No", added orange tag?
☐	☒		Received pre-preserved VOC soils? ☐ MeOH ☐ Na_2SO_4

Check for Short Hold-Time Prep/Analyses

☐ Bacteriological
☐ Air Bags
☐ EnCores / Methanol Pre-Preserved
☐ Formaldehyde/Aldehyde
☒ Green-tagged containers
☐ Yellow/White-tagged 1L ambers (SV Prep-Lab)

AFTER HOURS ONLY:
COPIES OF COC TO LAB AREA(S)
☐ NONE RECEIVED
☒ RECEIVED, COCs TO LAB(S)

Notes

☒ Trip Blank received ☐ Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤1 Hour Goal Met?
10/12/12 0830	10/12/12 0930	(Yes) / No

Log In Forms - Receiving.Log-In_Checklist

revision: 3.4

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TRIMATRIX LABORATORIES

SAMPLE PRESERVATION VERIFICATION FORM

page ____ of ____

Client: TRC		Work Order #: 1210284	
Receipt Log #: 7-2	Completed By (initials/date): LR 10/12/12	Project Chemist:	

COC ID # 142626			Adjusted by:_____ Date:_____		DO NOT ADJUST pH FOR THESE CONTAINER TYPES			
Container Type	5 / 23	4	13		3	6	15	
Tag Color	Lt. Blue	Blue	Brown		Green	Red	Red Stripe	
Preservative	NaOH	H_2SO_4	H_2SO_4		None	HNO_3	HNO_3	
Expected pH	>12	<2	<2		6-8	<2	<2	
COC Line #1					✓	✓		
COC Line #2					✓	✓		
COC Line #3					✓	✓		
COC Line #4					✓	✓		
COC Line #5					✓	✓		
COC Line #6					✓	✓		
COC Line #7					✓			
COC Line #8								
COC Line #9								
COC Line #10								

Comments

Ph Strip Lot #

☑ HC137671

☐ _____

Aqueous Samples: For each sample and container type, check the box if pH is acceptable. If pH is not acceptable for any sample container, record pH in box, and note on Sample Receiving Checklist and on Sample Receiving Non-Conformance Form. If approved by Project Chemist, add acid or base to the sample to achieve the correct pH. Add up to, but do not exceed 2x the volume initially added at container prep (see table below for initial volumes used). Add orange pH tag to sample container and record information requested. Record adjusted pH on this form. Do not adjust pH for container types 3, 6, and 15.

COC ID #			Adjusted by:_____ Date:_____		DO NOT ADJUST pH FOR THESE CONTAINER TYPES			
Container Type	5	4	13		3	6	15	
Tag Color	Lt. Blue	Blue	Brown		Green	Red	Red Stripe	
Preservative	NaOH	H_2SO_4	H_2SO_4		None	HNO_3	HNO_3	
Expected pH	>12	<2	<2		~7	<2	<2	
COC Line #1								
COC Line #2								
COC Line #3								
COC Line #4								
COC Line #5								
COC Line #6								
COC Line #7								
COC Line #8								
COC Line #9								
COC Line #10								

Comments

Container Size (mL)	Original Vol. of Preservative (mL)
Container Type 5	NaOH
500	2.5
1000	5.0
Container Type 4	H_2SO_4
125	0.5
250	1.0
500	2.0
1000	4.0
Container Type 13	H_2SO_4
500	2.5

Log In Forms -- Sample_Preserve_Verification

version: 2.0

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First Quarter 2013 Laboratory Data

March 21, 2013

TRC Companies. - Ann Arbor Office
Attn: Ms. Stacy Metz
1540 Eisenhower Place
Ann Arbor, MI 48108

Project: TPC - PRB Performance Monitoring

Dear Ms. Stacy Metz,

Enclosed is a copy of the laboratory report for the following work order(s) received by TriMatrix Laboratories:

Work Order	**Received**	**Description**
1303134	03/07/2013	Laboratory Services

This report relates only to the sample(s) as received. Test results are in compliance with the requirements of the National Environmental Laboratory Accreditation Program (NELAP) and/or one of the following certification programs:

ACLASS DoD-ELAP/ISO17025 (#ADE-1542); Arkansas DEP (#12-056-0); Florida DEP (#E87622-24); Georgia EPD (#E87622-24); Illinois DEP (#002841); Kansas DPH (#E-10302); Kentucky DEP (#0021); Louisiana DEP (#03068); Michigan DPH (#0034); Minnesota DPH (#367345); New York ELAP (#46503); North Carolina DNRE (#659); Texas CEQ (#T104704495-12-2); Virginia DCLS (#1622); Wisconsin DNR (#999472650); USDA Soil Import Permit (#P330-09-00163).

Any qualification or narration of results, including sample acceptance requirements and test exceptions to the above referenced programs, is presented in the Statement of Data Qualifications section of this report. Estimates of analytical uncertainties and certification documents for the test results contained within this report are available upon request.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

Jennifer L. Rice
Project Chemist

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1303134**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**TB-01**	Sampled:	03/05/13 00:00
Lab Sample ID:	**1303134-01**	Sampled By:	TML
Matrix:	Water	Received:	03/07/13 17:10
Unit:	ug/L	Prepared:	03/11/13 By: DLV
Dilution Factor:	1	Analyzed:	03/11/13 By: DLV
QC Batch:	1302156	Analytical Batch:	3C12044

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	RL
67-64-1	Acetone	<20	20
107-13-1	Acrylonitrile	<2.0	2.0
71-43-2	Benzene	<1.0	1.0
108-86-1	Bromobenzene	<1.0	1.0
74-97-5	Bromochloromethane	<1.0	1.0
75-27-4	Bromodichloromethane	<1.0	1.0
75-25-2	Bromoform	<1.0	1.0
*74-83-9	Bromomethane	<5.0	5.0
104-51-8	n-Butylbenzene	<1.0	1.0
135-98-8	sec-Butylbenzene	<1.0	1.0
98-06-6	tert-Butylbenzene	<1.0	1.0
75-15-0	Carbon Disulfide	<1.0	1.0
56-23-5	Carbon Tetrachloride	<1.0	1.0
108-90-7	Chlorobenzene	<1.0	1.0
75-00-3	Chloroethane	<5.0	5.0
67-66-3	Chloroform	<1.0	1.0
74-87-3	Chloromethane	<5.0	5.0
96-12-8	1,2-Dibromo-3-chloropropane	<5.0	5.0
124-48-1	Dibromochloromethane	<1.0	1.0
106-93-4	1,2-Dibromoethane	<1.0	1.0
74-95-3	Dibromomethane	<1.0	1.0
110-57-6	trans-1,4-Dichloro-2-butene	<1.0	1.0
95-50-1	1,2-Dichlorobenzene	<1.0	1.0
541-73-1	1,3-Dichlorobenzene	<1.0	1.0
106-46-7	1,4-Dichlorobenzene	<1.0	1.0
75-71-8	Dichlorodifluoromethane	<5.0	5.0
75-34-3	1,1-Dichloroethane	<1.0	1.0
107-06-2	1,2-Dichloroethane	<1.0	1.0
75-35-4	1,1-Dichloroethene	<1.0	1.0
156-59-2	cis-1,2-Dichloroethene	<1.0	1.0
156-60-5	trans-1,2-Dichloroethene	<1.0	1.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1303134**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**TB-01**	Sampled:	03/05/13 00:00
Lab Sample ID:	**1303134-01**	Sampled By:	TML
Matrix:	Water	Received:	03/07/13 17:10
Unit:	ug/L	Prepared:	03/11/13 By: DLV
Dilution Factor:	1	Analyzed:	03/11/13 By: DLV
QC Batch:	1302156	Analytical Batch:	3C12044

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
78-87-5	1,2-Dichloropropane	<1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	<1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	<1.0	1.0
100-41-4	Ethylbenzene	<1.0	1.0
60-29-7	Ethyl Ether	<5.0	5.0
591-78-6	2-Hexanone	<5.0	5.0
74-88-4	Iodomethane	<1.0	1.0
98-82-8	Isopropylbenzene	<1.0	1.0
99-87-6	4-Isopropyltoluene	<5.0	5.0
1634-04-4	Methyl tert-Butyl Ether	<5.0	5.0
75-09-2	Methylene Chloride	<5.0	5.0
78-93-3	2-Butanone (MEK)	<5.0	5.0
*91-57-6	2-Methylnaphthalene	<5.0	5.0
108-10-1	4-Methyl-2-pentanone (MIBK)	<5.0	5.0
91-20-3	Naphthalene	<5.0	5.0
103-65-1	n-Propylbenzene	<1.0	1.0
100-42-5	Styrene	<1.0	1.0
630-20-6	1,1,1,2-Tetrachloroethane	<1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	<1.0	1.0
127-18-4	Tetrachloroethene	<1.0	1.0
109-99-9	Tetrahydrofuran	<5.0	5.0
108-88-3	Toluene	<1.0	1.0
87-61-6	1,2,3-Trichlorobenzene	<5.0	5.0
120-82-1	1,2,4-Trichlorobenzene	<5.0	5.0
71-55-6	1,1,1-Trichloroethane	<1.0	1.0
79-00-5	1,1,2-Trichloroethane	<1.0	1.0
79-01-6	Trichloroethene	<1.0	1.0
75-69-4	Trichlorofluoromethane	<1.0	1.0
96-18-4	1,2,3-Trichloropropane	<1.0	1.0
95-63-6	1,2,4-Trimethylbenzene	<1.0	1.0
108-67-8	1,3,5-Trimethylbenzene	<1.0	1.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1303134**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**TB-01**	Sampled:	03/05/13 00:00
Lab Sample ID:	**1303134-01**	Sampled By:	TML
Matrix:	Water	Received:	03/07/13 17:10
Unit:	ug/L	Prepared:	03/11/13 By: DLV
Dilution Factor:	1	Analyzed:	03/11/13 By: DLV
QC Batch:	1302156	Analytical Batch:	3C12044

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
75-01-4	Vinyl Chloride	<1.0	1.0
179601-23-1	Xylene, Meta + Para	<2.0	2.0
95-47-6	Xylene, Ortho	<1.0	1.0

Surrogates:	***% Recovery***	***Control Limits***
Dibromofluoromethane	*106*	*85-118*
1,2-Dichloroethane-d4	*106*	*87-122*
Toluene-d8	*98*	*85-113*
4-Bromofluorobenzene	*94*	*82-110*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1303134**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-11s**	Sampled:	03/04/13 12:20
Lab Sample ID:	**1303134-02**	Sampled By:	J. Jasso
Matrix:	Water	Received:	03/07/13 17:10
Unit:	ug/L	Prepared:	03/11/13 By: DLV
Dilution Factor:	1	Analyzed:	03/11/13 By: DLV
QC Batch:	1302156	Analytical Batch:	3C12044

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	RL
67-64-1	Acetone	<20	20
107-13-1	Acrylonitrile	<2.0	2.0
71-43-2	Benzene	<1.0	1.0
108-86-1	Bromobenzene	<1.0	1.0
74-97-5	Bromochloromethane	<1.0	1.0
75-27-4	Bromodichloromethane	<1.0	1.0
75-25-2	Bromoform	<1.0	1.0
*74-83-9	Bromomethane	<5.0	5.0
104-51-8	n-Butylbenzene	<1.0	1.0
135-98-8	sec-Butylbenzene	<1.0	1.0
98-06-6	tert-Butylbenzene	<1.0	1.0
75-15-0	Carbon Disulfide	<1.0	1.0
56-23-5	Carbon Tetrachloride	<1.0	1.0
108-90-7	Chlorobenzene	<1.0	1.0
75-00-3	Chloroethane	<5.0	5.0
67-66-3	Chloroform	<1.0	1.0
74-87-3	Chloromethane	<5.0	5.0
96-12-8	1,2-Dibromo-3-chloropropane	<5.0	5.0
124-48-1	Dibromochloromethane	<1.0	1.0
106-93-4	1,2-Dibromoethane	<1.0	1.0
74-95-3	Dibromomethane	<1.0	1.0
110-57-6	trans-1,4-Dichloro-2-butene	<1.0	1.0
95-50-1	1,2-Dichlorobenzene	<1.0	1.0
541-73-1	1,3-Dichlorobenzene	<1.0	1.0
106-46-7	1,4-Dichlorobenzene	<1.0	1.0
75-71-8	Dichlorodifluoromethane	<5.0	5.0
75-34-3	1,1-Dichloroethane	<1.0	1.0
107-06-2	1,2-Dichloroethane	<1.0	1.0
75-35-4	1,1-Dichloroethene	<1.0	1.0
156-59-2	cis-1,2-Dichloroethene	<1.0	1.0
156-60-5	trans-1,2-Dichloroethene	<1.0	1.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1303134**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-11s**	Sampled:	03/04/13 12:20
Lab Sample ID:	**1303134-02**	Sampled By:	J. Jasso
Matrix:	Water	Received:	03/07/13 17:10
Unit:	ug/L	Prepared:	03/11/13 By: DLV
Dilution Factor:	1	Analyzed:	03/11/13 By: DLV
QC Batch:	1302156	Analytical Batch:	3C12044

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
78-87-5	1,2-Dichloropropane	<1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	<1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	<1.0	1.0
100-41-4	Ethylbenzene	<1.0	1.0
60-29-7	Ethyl Ether	<5.0	5.0
591-78-6	2-Hexanone	<5.0	5.0
74-88-4	Iodomethane	<1.0	1.0
98-82-8	Isopropylbenzene	<1.0	1.0
99-87-6	4-Isopropyltoluene	<5.0	5.0
1634-04-4	Methyl tert-Butyl Ether	<5.0	5.0
75-09-2	Methylene Chloride	<5.0	5.0
78-93-3	2-Butanone (MEK)	<5.0	5.0
*91-57-6	2-Methylnaphthalene	<5.0	5.0
108-10-1	4-Methyl-2-pentanone (MIBK)	<5.0	5.0
91-20-3	Naphthalene	<5.0	5.0
103-65-1	n-Propylbenzene	<1.0	1.0
100-42-5	Styrene	<1.0	1.0
630-20-6	1,1,1,2-Tetrachloroethane	<1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	<1.0	1.0
127-18-4	Tetrachloroethene	<1.0	1.0
109-99-9	Tetrahydrofuran	<5.0	5.0
108-88-3	Toluene	<1.0	1.0
87-61-6	1,2,3-Trichlorobenzene	<5.0	5.0
120-82-1	1,2,4-Trichlorobenzene	<5.0	5.0
71-55-6	1,1,1-Trichloroethane	<1.0	1.0
79-00-5	1,1,2-Trichloroethane	<1.0	1.0
79-01-6	Trichloroethene	**1.3**	1.0
75-69-4	Trichlorofluoromethane	<1.0	1.0
96-18-4	1,2,3-Trichloropropane	<1.0	1.0
95-63-6	1,2,4-Trimethylbenzene	<1.0	1.0
108-67-8	1,3,5-Trimethylbenzene	<1.0	1.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1303134**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-11s**	Sampled:	03/04/13 12:20
Lab Sample ID:	**1303134-02**	Sampled By:	J. Jasso
Matrix:	Water	Received:	03/07/13 17:10
Unit:	ug/L	Prepared:	03/11/13 By: DLV
Dilution Factor:	1	Analyzed:	03/11/13 By: DLV
QC Batch:	1302156	Analytical Batch:	3C12044

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
75-01-4	Vinyl Chloride	<1.0	1.0
179601-23-1	Xylene, Meta + Para	<2.0	2.0
95-47-6	Xylene, Ortho	<1.0	1.0

Surrogates:	***% Recovery***	***Control Limits***
Dibromofluoromethane	*106*	*85-118*
1,2-Dichloroethane-d4	*105*	*87-122*
Toluene-d8	*99*	*85-113*
4-Bromofluorobenzene	*95*	*82-110*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1303134**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-03s**	Sampled:	03/04/13 13:18
Lab Sample ID:	**1303134-03**	Sampled By:	J. Jasso
Matrix:	Water	Received:	03/07/13 17:10
Unit:	ug/L	Prepared:	03/11/13 By: DLV
Dilution Factor:	5	Analyzed:	03/11/13 By: DLV
QC Batch:	1302156	Analytical Batch:	3C12044

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	RL
67-64-1	Acetone	<100	100
107-13-1	Acrylonitrile	<10	10
71-43-2	Benzene	<5.0	5.0
108-86-1	Bromobenzene	<5.0	5.0
74-97-5	Bromochloromethane	<5.0	5.0
75-27-4	Bromodichloromethane	<5.0	5.0
75-25-2	Bromoform	<5.0	5.0
*74-83-9	Bromomethane	<25	25
104-51-8	n-Butylbenzene	<5.0	5.0
135-98-8	sec-Butylbenzene	<5.0	5.0
98-06-6	tert-Butylbenzene	<5.0	5.0
75-15-0	Carbon Disulfide	<5.0	5.0
56-23-5	Carbon Tetrachloride	<5.0	5.0
108-90-7	Chlorobenzene	<5.0	5.0
75-00-3	Chloroethane	<25	25
67-66-3	Chloroform	<5.0	5.0
74-87-3	Chloromethane	<25	25
96-12-8	1,2-Dibromo-3-chloropropane	<25	25
124-48-1	Dibromochloromethane	<5.0	5.0
106-93-4	1,2-Dibromoethane	<5.0	5.0
74-95-3	Dibromomethane	<5.0	5.0
110-57-6	trans-1,4-Dichloro-2-butene	<5.0	5.0
95-50-1	1,2-Dichlorobenzene	<5.0	5.0
541-73-1	1,3-Dichlorobenzene	<5.0	5.0
106-46-7	1,4-Dichlorobenzene	<5.0	5.0
75-71-8	Dichlorodifluoromethane	<25	25
75-34-3	1,1-Dichloroethane	**56**	5.0
107-06-2	1,2-Dichloroethane	<5.0	5.0
75-35-4	1,1-Dichloroethene	<5.0	5.0
156-59-2	cis-1,2-Dichloroethene	<5.0	5.0
156-60-5	trans-1,2-Dichloroethene	<5.0	5.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1303134**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-03s**	Sampled:	03/04/13 13:18
Lab Sample ID:	**1303134-03**	Sampled By:	J. Jasso
Matrix:	Water	Received:	03/07/13 17:10
Unit:	ug/L	Prepared:	03/11/13 By: DLV
Dilution Factor:	5	Analyzed:	03/11/13 By: DLV
QC Batch:	1302156	Analytical Batch:	3C12044

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
78-87-5	1,2-Dichloropropane	<5.0	5.0
10061-01-5	cis-1,3-Dichloropropene	<5.0	5.0
10061-02-6	trans-1,3-Dichloropropene	<5.0	5.0
100-41-4	Ethylbenzene	**260**	5.0
60-29-7	Ethyl Ether	<25	25
591-78-6	2-Hexanone	<25	25
74-88-4	Iodomethane	<5.0	5.0
98-82-8	Isopropylbenzene	<5.0	5.0
99-87-6	4-Isopropyltoluene	<25	25
1634-04-4	Methyl tert-Butyl Ether	<25	25
75-09-2	Methylene Chloride	<25	25
78-93-3	2-Butanone (MEK)	<25	25
*91-57-6	2-Methylnaphthalene	<25	25
108-10-1	4-Methyl-2-pentanone (MIBK)	<25	25
91-20-3	Naphthalene	<25	25
103-65-1	n-Propylbenzene	<5.0	5.0
100-42-5	Styrene	<5.0	5.0
630-20-6	1,1,1,2-Tetrachloroethane	<5.0	5.0
79-34-5	1,1,2,2-Tetrachloroethane	<5.0	5.0
127-18-4	Tetrachloroethene	<5.0	5.0
109-99-9	Tetrahydrofuran	<25	25
108-88-3	Toluene	<5.0	5.0
87-61-6	1,2,3-Trichlorobenzene	<25	25
120-82-1	1,2,4-Trichlorobenzene	<25	25
71-55-6	1,1,1-Trichloroethane	<5.0	5.0
79-00-5	1,1,2-Trichloroethane	<5.0	5.0
79-01-6	Trichloroethene	**20**	5.0
75-69-4	Trichlorofluoromethane	<5.0	5.0
96-18-4	1,2,3-Trichloropropane	<5.0	5.0
95-63-6	1,2,4-Trimethylbenzene	<5.0	5.0
108-67-8	1,3,5-Trimethylbenzene	<5.0	5.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1303134**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-03s**	Sampled:	03/04/13 13:18
Lab Sample ID:	**1303134-03**	Sampled By:	J. Jasso
Matrix:	Water	Received:	03/07/13 17:10
Unit:	ug/L	Prepared:	03/11/13 By: DLV
Dilution Factor:	5	Analyzed:	03/11/13 By: DLV
QC Batch:	1302156	Analytical Batch:	3C12044

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
75-01-4	Vinyl Chloride	**7.8**	5.0
179601-23-1	Xylene, Meta + Para	**870**	10
95-47-6	Xylene, Ortho	**540**	5.0

Surrogates:	***% Recovery***	***Control Limits***
Dibromofluoromethane	*107*	*85-118*
1,2-Dichloroethane-d4	*106*	*87-122*
Toluene-d8	*99*	*85-113*
4-Bromofluorobenzene	*109*	*82-110*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1303134**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-04s**	Sampled:	03/04/13 14:15
Lab Sample ID:	**1303134-04**	Sampled By:	J. Jasso
Matrix:	Water	Received:	03/07/13 17:10

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Ethane	**1.6**	1.0	ug/L	1	RSK-175	03/14/13 12:14	BJH	1302158
Methane	**12000**	200	ug/L	400	RSK-175	03/14/13 12:20	BJH	1302158
Ethylene	**84**	1.0	ug/L	1	RSK-175	03/14/13 12:14	BJH	1302158

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1303134**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-04s**	Sampled:	03/04/13 14:15
Lab Sample ID:	**1303134-04**	Sampled By:	J. Jasso
Matrix:	Water	Received:	03/07/13 17:10
Unit:	ug/L	Prepared:	03/12/13 By: LEW
Dilution Factor:	5	Analyzed:	03/12/13 By: LEW
QC Batch:	1302224	Analytical Batch:	3C13039

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	RL
67-64-1	Acetone	<100	100
107-13-1	Acrylonitrile	<10	10
71-43-2	Benzene	<5.0	5.0
108-86-1	Bromobenzene	<5.0	5.0
74-97-5	Bromochloromethane	<5.0	5.0
75-27-4	Bromodichloromethane	<5.0	5.0
75-25-2	Bromoform	<5.0	5.0
74-83-9	Bromomethane	<25	25
104-51-8	n-Butylbenzene	<5.0	5.0
135-98-8	sec-Butylbenzene	<5.0	5.0
98-06-6	tert-Butylbenzene	<5.0	5.0
75-15-0	Carbon Disulfide	<5.0	5.0
56-23-5	Carbon Tetrachloride	<5.0	5.0
108-90-7	Chlorobenzene	<5.0	5.0
75-00-3	Chloroethane	**46**	25
67-66-3	Chloroform	<5.0	5.0
74-87-3	Chloromethane	<25	25
96-12-8	1,2-Dibromo-3-chloropropane	<25	25
124-48-1	Dibromochloromethane	<5.0	5.0
106-93-4	1,2-Dibromoethane	<5.0	5.0
74-95-3	Dibromomethane	<5.0	5.0
*110-57-6	trans-1,4-Dichloro-2-butene	<5.0	5.0
95-50-1	1,2-Dichlorobenzene	<5.0	5.0
541-73-1	1,3-Dichlorobenzene	<5.0	5.0
106-46-7	1,4-Dichlorobenzene	<5.0	5.0
*75-71-8	Dichlorodifluoromethane	<25	25
75-34-3	1,1-Dichloroethane	**42**	5.0
107-06-2	1,2-Dichloroethane	<5.0	5.0
75-35-4	1,1-Dichloroethene	<5.0	5.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1303134**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-04s**	Sampled:	03/04/13 14:15
Lab Sample ID:	**1303134-04**	Sampled By:	J. Jasso
Matrix:	Water	Received:	03/07/13 17:10
Unit:	ug/L	Prepared:	03/12/13 By: LEW
Dilution Factor:	5	Analyzed:	03/12/13 By: LEW
QC Batch:	1302224	Analytical Batch:	3C13039

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
156-59-2	cis-1,2-Dichloroethene	**560**	5.0
156-60-5	trans-1,2-Dichloroethene	**7.0**	5.0
78-87-5	1,2-Dichloropropane	<5.0	5.0
10061-01-5	cis-1,3-Dichloropropene	<5.0	5.0
10061-02-6	trans-1,3-Dichloropropene	<5.0	5.0
100-41-4	Ethylbenzene	<5.0	5.0
60-29-7	Ethyl Ether	<25	25
591-78-6	2-Hexanone	<25	25
74-88-4	Iodomethane	<5.0	5.0
98-82-8	Isopropylbenzene	<5.0	5.0
99-87-6	4-Isopropyltoluene	<25	25
1634-04-4	Methyl tert-Butyl Ether	<25	25
75-09-2	Methylene Chloride	<25	25
78-93-3	2-Butanone (MEK)	<25	25
91-57-6	2-Methylnaphthalene	<25	25
108-10-1	4-Methyl-2-pentanone (MIBK)	<25	25
91-20-3	Naphthalene	<25	25
103-65-1	n-Propylbenzene	<5.0	5.0
100-42-5	Styrene	<5.0	5.0
630-20-6	1,1,1,2-Tetrachloroethane	<5.0	5.0
79-34-5	1,1,2,2-Tetrachloroethane	<5.0	5.0
127-18-4	Tetrachloroethene	<5.0	5.0
109-99-9	Tetrahydrofuran	<25	25
108-88-3	Toluene	<5.0	5.0
87-61-6	1,2,3-Trichlorobenzene	<25	25
120-82-1	1,2,4-Trichlorobenzene	<25	25
71-55-6	1,1,1-Trichloroethane	<5.0	5.0
79-00-5	1,1,2-Trichloroethane	<5.0	5.0
79-01-6	Trichloroethene	<5.0	5.0
75-69-4	Trichlorofluoromethane	<5.0	5.0
96-18-4	1,2,3-Trichloropropane	<5.0	5.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1303134**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-04s**	Sampled:	03/04/13 14:15
Lab Sample ID:	**1303134-04**	Sampled By:	J. Jasso
Matrix:	Water	Received:	03/07/13 17:10
Unit:	ug/L	Prepared:	03/12/13 By: LEW
Dilution Factor:	5	Analyzed:	03/12/13 By: LEW
QC Batch:	1302224	Analytical Batch:	3C13039

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
95-63-6	1,2,4-Trimethylbenzene	<5.0	5.0
108-67-8	1,3,5-Trimethylbenzene	<5.0	5.0
75-01-4	Vinyl Chloride	**190**	5.0
179601-23-1	Xylene, Meta + Para	<10	10
95-47-6	Xylene, Ortho	<5.0	5.0

Surrogates:	***% Recovery***	***Control Limits***
Dibromofluoromethane	*99*	*85-118*
1,2-Dichloroethane-d4	*96*	*87-122*
Toluene-d8	*95*	*85-113*
4-Bromofluorobenzene	*98*	*82-110*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1303134**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-04d**	Sampled:	03/04/13 14:58
Lab Sample ID:	**1303134-05**	Sampled By:	J. Jasso
Matrix:	Water	Received:	03/07/13 17:10
Unit:	ug/L	Prepared:	03/11/13 By: DLV
Dilution Factor:	1	Analyzed:	03/12/13 By: DLV
QC Batch:	1302156	Analytical Batch:	3C12044

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	RL
67-64-1	Acetone	<20	20
107-13-1	Acrylonitrile	<2.0	2.0
71-43-2	Benzene	<1.0	1.0
108-86-1	Bromobenzene	<1.0	1.0
74-97-5	Bromochloromethane	<1.0	1.0
75-27-4	Bromodichloromethane	<1.0	1.0
75-25-2	Bromoform	<1.0	1.0
*74-83-9	Bromomethane	<5.0	5.0
104-51-8	n-Butylbenzene	<1.0	1.0
135-98-8	sec-Butylbenzene	<1.0	1.0
98-06-6	tert-Butylbenzene	<1.0	1.0
75-15-0	Carbon Disulfide	<1.0	1.0
56-23-5	Carbon Tetrachloride	<1.0	1.0
108-90-7	Chlorobenzene	<1.0	1.0
75-00-3	Chloroethane	<5.0	5.0
67-66-3	Chloroform	<1.0	1.0
74-87-3	Chloromethane	<5.0	5.0
96-12-8	1,2-Dibromo-3-chloropropane	<5.0	5.0
124-48-1	Dibromochloromethane	<1.0	1.0
106-93-4	1,2-Dibromoethane	<1.0	1.0
74-95-3	Dibromomethane	<1.0	1.0
110-57-6	trans-1,4-Dichloro-2-butene	<1.0	1.0
95-50-1	1,2-Dichlorobenzene	<1.0	1.0
541-73-1	1,3-Dichlorobenzene	<1.0	1.0
106-46-7	1,4-Dichlorobenzene	<1.0	1.0
75-71-8	Dichlorodifluoromethane	<5.0	5.0
75-34-3	1,1-Dichloroethane	<1.0	1.0
107-06-2	1,2-Dichloroethane	<1.0	1.0
75-35-4	1,1-Dichloroethene	<1.0	1.0
156-59-2	cis-1,2-Dichloroethene	<1.0	1.0
156-60-5	trans-1,2-Dichloroethene	<1.0	1.0

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ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1303134**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-04d**	Sampled:	03/04/13 14:58
Lab Sample ID:	**1303134-05**	Sampled By:	J. Jasso
Matrix:	Water	Received:	03/07/13 17:10
Unit:	ug/L	Prepared:	03/11/13 By: DLV
Dilution Factor:	1	Analyzed:	03/12/13 By: DLV
QC Batch:	1302156	Analytical Batch:	3C12044

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
78-87-5	1,2-Dichloropropane	<1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	<1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	<1.0	1.0
100-41-4	Ethylbenzene	<1.0	1.0
60-29-7	Ethyl Ether	<5.0	5.0
591-78-6	2-Hexanone	<5.0	5.0
74-88-4	Iodomethane	<1.0	1.0
98-82-8	Isopropylbenzene	<1.0	1.0
99-87-6	4-Isopropyltoluene	<5.0	5.0
1634-04-4	Methyl tert-Butyl Ether	<5.0	5.0
75-09-2	Methylene Chloride	<5.0	5.0
78-93-3	2-Butanone (MEK)	<5.0	5.0
*91-57-6	2-Methylnaphthalene	<5.0	5.0
108-10-1	4-Methyl-2-pentanone (MIBK)	<5.0	5.0
91-20-3	Naphthalene	<5.0	5.0
103-65-1	n-Propylbenzene	<1.0	1.0
100-42-5	Styrene	<1.0	1.0
630-20-6	1,1,1,2-Tetrachloroethane	<1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	<1.0	1.0
127-18-4	Tetrachloroethene	<1.0	1.0
109-99-9	Tetrahydrofuran	<5.0	5.0
108-88-3	Toluene	<1.0	1.0
87-61-6	1,2,3-Trichlorobenzene	<5.0	5.0
120-82-1	1,2,4-Trichlorobenzene	<5.0	5.0
71-55-6	1,1,1-Trichloroethane	<1.0	1.0
79-00-5	1,1,2-Trichloroethane	<1.0	1.0
79-01-6	Trichloroethene	<1.0	1.0
75-69-4	Trichlorofluoromethane	<1.0	1.0
96-18-4	1,2,3-Trichloropropane	<1.0	1.0
95-63-6	1,2,4-Trimethylbenzene	<1.0	1.0
108-67-8	1,3,5-Trimethylbenzene	<1.0	1.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1303134**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-04d**	Sampled:	03/04/13 14:58
Lab Sample ID:	**1303134-05**	Sampled By:	J. Jasso
Matrix:	Water	Received:	03/07/13 17:10
Unit:	ug/L	Prepared:	03/11/13 By: DLV
Dilution Factor:	1	Analyzed:	03/12/13 By: DLV
QC Batch:	1302156	Analytical Batch:	3C12044

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
75-01-4	Vinyl Chloride	**17**	1.0
179601-23-1	Xylene, Meta + Para	<2.0	2.0
95-47-6	Xylene, Ortho	<1.0	1.0

Surrogates:	***% Recovery***	***Control Limits***
Dibromofluoromethane	*106*	*85-118*
1,2-Dichloroethane-d4	*105*	*87-122*
Toluene-d8	*98*	*85-113*
4-Bromofluorobenzene	*95*	*82-110*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1303134**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-01s**	Sampled:	03/04/13 15:55
Lab Sample ID:	**1303134-06**	Sampled By:	J. Jasso
Matrix:	Water	Received:	03/07/13 17:10

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Ethane	**3.2**	1.0	ug/L	1	RSK-175	03/14/13 12:23	BJH	1302158
Methane	**4500**	100	ug/L	200	RSK-175	03/14/13 12:28	BJH	1302158
Ethylene	**58**	1.0	ug/L	1	RSK-175	03/14/13 12:23	BJH	1302158

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1303134**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-01s**	Sampled:	03/04/13 15:55
Lab Sample ID:	**1303134-06**	Sampled By:	J. Jasso
Matrix:	Water	Received:	03/07/13 17:10
Unit:	ug/L	Prepared:	03/11/13 By: DLV
Dilution Factor:	10	Analyzed:	03/12/13 By: DLV
QC Batch:	1302156	Analytical Batch:	3C12044

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	RL
67-64-1	Acetone	<200	200
107-13-1	Acrylonitrile	<20	20
71-43-2	Benzene	<10	10
108-86-1	Bromobenzene	<10	10
74-97-5	Bromochloromethane	<10	10
75-27-4	Bromodichloromethane	<10	10
75-25-2	Bromoform	<10	10
*74-83-9	Bromomethane	<50	50
104-51-8	n-Butylbenzene	<10	10
135-98-8	sec-Butylbenzene	<10	10
98-06-6	tert-Butylbenzene	<10	10
75-15-0	Carbon Disulfide	<10	10
56-23-5	Carbon Tetrachloride	<10	10
108-90-7	Chlorobenzene	<10	10
75-00-3	Chloroethane	<50	50
67-66-3	Chloroform	<10	10
74-87-3	Chloromethane	<50	50
96-12-8	1,2-Dibromo-3-chloropropane	<50	50
124-48-1	Dibromochloromethane	<10	10
106-93-4	1,2-Dibromoethane	<10	10
74-95-3	Dibromomethane	<10	10
110-57-6	trans-1,4-Dichloro-2-butene	<10	10
95-50-1	1,2-Dichlorobenzene	<10	10
541-73-1	1,3-Dichlorobenzene	<10	10
106-46-7	1,4-Dichlorobenzene	<10	10
75-71-8	Dichlorodifluoromethane	<50	50
75-34-3	1,1-Dichloroethane	**90**	10
107-06-2	1,2-Dichloroethane	<10	10
75-35-4	1,1-Dichloroethene	**27**	10

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1303134**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-01s**	Sampled:	03/04/13 15:55
Lab Sample ID:	**1303134-06**	Sampled By:	J. Jasso
Matrix:	Water	Received:	03/07/13 17:10
Unit:	ug/L	Prepared:	03/11/13 By: DLV
Dilution Factor:	10	Analyzed:	03/12/13 By: DLV
QC Batch:	1302156	Analytical Batch:	3C12044

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
156-59-2	cis-1,2-Dichloroethene	**88**	10
156-60-5	trans-1,2-Dichloroethene	<10	10
78-87-5	1,2-Dichloropropane	<10	10
10061-01-5	cis-1,3-Dichloropropene	<10	10
10061-02-6	trans-1,3-Dichloropropene	<10	10
100-41-4	Ethylbenzene	<10	10
60-29-7	Ethyl Ether	<50	50
591-78-6	2-Hexanone	<50	50
74-88-4	Iodomethane	<10	10
98-82-8	Isopropylbenzene	<10	10
99-87-6	4-Isopropyltoluene	<50	50
1634-04-4	Methyl tert-Butyl Ether	<50	50
75-09-2	Methylene Chloride	<50	50
78-93-3	2-Butanone (MEK)	**130**	50
*91-57-6	2-Methylnaphthalene	<50	50
108-10-1	4-Methyl-2-pentanone (MIBK)	<50	50
91-20-3	Naphthalene	<50	50
103-65-1	n-Propylbenzene	<10	10
100-42-5	Styrene	<10	10
630-20-6	1,1,1,2-Tetrachloroethane	<10	10
79-34-5	1,1,2,2-Tetrachloroethane	<10	10
127-18-4	Tetrachloroethene	<10	10
109-99-9	Tetrahydrofuran	<50	50
108-88-3	Toluene	<10	10
87-61-6	1,2,3-Trichlorobenzene	<50	50
120-82-1	1,2,4-Trichlorobenzene	<50	50
71-55-6	1,1,1-Trichloroethane	**730**	10
79-00-5	1,1,2-Trichloroethane	<10	10
79-01-6	Trichloroethene	**1100**	10
75-69-4	Trichlorofluoromethane	<10	10
96-18-4	1,2,3-Trichloropropane	<10	10

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1303134**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-01s**	Sampled:	03/04/13 15:55
Lab Sample ID:	**1303134-06**	Sampled By:	J. Jasso
Matrix:	Water	Received:	03/07/13 17:10
Unit:	ug/L	Prepared:	03/11/13 By: DLV
Dilution Factor:	10	Analyzed:	03/12/13 By: DLV
QC Batch:	1302156	Analytical Batch:	3C12044

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
95-63-6	1,2,4-Trimethylbenzene	<10	10
108-67-8	1,3,5-Trimethylbenzene	<10	10
75-01-4	Vinyl Chloride	**140**	10
179601-23-1	Xylene, Meta + Para	<20	20
95-47-6	Xylene, Ortho	<10	10

Surrogates:	***% Recovery***	***Control Limits***
Dibromofluoromethane	*109*	*85-118*
1,2-Dichloroethane-d4	*105*	*87-122*
Toluene-d8	*100*	*85-113*
4-Bromofluorobenzene	*94*	*82-110*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1303134**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**DUP-01**	Sampled:	03/04/13 00:00
Lab Sample ID:	**1303134-07**	Sampled By:	J. Jasso
Matrix:	Water	Received:	03/07/13 17:10

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Ethane	**3.6**	1.0	ug/L	1	RSK-175	03/14/13 12:32	BJH	1302158
Methane	**3900**	100	ug/L	200	RSK-175	03/14/13 12:37	BJH	1302158
Ethylene	**58**	1.0	ug/L	1	RSK-175	03/14/13 12:32	BJH	1302158

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1303134**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**DUP-01**	Sampled:	03/04/13 00:00
Lab Sample ID:	**1303134-07**	Sampled By:	J. Jasso
Matrix:	Water	Received:	03/07/13 17:10
Unit:	ug/L	Prepared:	03/11/13 By: DLV
Dilution Factor:	10	Analyzed:	03/12/13 By: DLV
QC Batch:	1302156	Analytical Batch:	3C12044

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	RL
67-64-1	Acetone	<200	200
107-13-1	Acrylonitrile	<20	20
71-43-2	Benzene	<10	10
108-86-1	Bromobenzene	<10	10
74-97-5	Bromochloromethane	<10	10
75-27-4	Bromodichloromethane	<10	10
75-25-2	Bromoform	<10	10
*74-83-9	Bromomethane	<50	50
104-51-8	n-Butylbenzene	<10	10
135-98-8	sec-Butylbenzene	<10	10
98-06-6	tert-Butylbenzene	<10	10
75-15-0	Carbon Disulfide	<10	10
56-23-5	Carbon Tetrachloride	<10	10
108-90-7	Chlorobenzene	<10	10
75-00-3	Chloroethane	<50	50
67-66-3	Chloroform	<10	10
74-87-3	Chloromethane	<50	50
96-12-8	1,2-Dibromo-3-chloropropane	<50	50
124-48-1	Dibromochloromethane	<10	10
106-93-4	1,2-Dibromoethane	<10	10
74-95-3	Dibromomethane	<10	10
110-57-6	trans-1,4-Dichloro-2-butene	<10	10
95-50-1	1,2-Dichlorobenzene	<10	10
541-73-1	1,3-Dichlorobenzene	<10	10
106-46-7	1,4-Dichlorobenzene	<10	10
75-71-8	Dichlorodifluoromethane	<50	50
75-34-3	1,1-Dichloroethane	**93**	10
107-06-2	1,2-Dichloroethane	<10	10
75-35-4	1,1-Dichloroethene	**27**	10

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1303134**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**DUP-01**	Sampled:	03/04/13 00:00
Lab Sample ID:	**1303134-07**	Sampled By:	J. Jasso
Matrix:	Water	Received:	03/07/13 17:10
Unit:	ug/L	Prepared:	03/11/13 By: DLV
Dilution Factor:	10	Analyzed:	03/12/13 By: DLV
QC Batch:	1302156	Analytical Batch:	3C12044

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
156-59-2	cis-1,2-Dichloroethene	**88**	10
156-60-5	trans-1,2-Dichloroethene	<10	10
78-87-5	1,2-Dichloropropane	<10	10
10061-01-5	cis-1,3-Dichloropropene	<10	10
10061-02-6	trans-1,3-Dichloropropene	<10	10
100-41-4	Ethylbenzene	<10	10
60-29-7	Ethyl Ether	<50	50
591-78-6	2-Hexanone	<50	50
74-88-4	Iodomethane	<10	10
98-82-8	Isopropylbenzene	<10	10
99-87-6	4-Isopropyltoluene	<50	50
1634-04-4	Methyl tert-Butyl Ether	<50	50
75-09-2	Methylene Chloride	<50	50
78-93-3	2-Butanone (MEK)	**120**	50
*91-57-6	2-Methylnaphthalene	<50	50
108-10-1	4-Methyl-2-pentanone (MIBK)	<50	50
91-20-3	Naphthalene	<50	50
103-65-1	n-Propylbenzene	<10	10
100-42-5	Styrene	<10	10
630-20-6	1,1,1,2-Tetrachloroethane	<10	10
79-34-5	1,1,2,2-Tetrachloroethane	<10	10
127-18-4	Tetrachloroethene	<10	10
109-99-9	Tetrahydrofuran	<50	50
108-88-3	Toluene	<10	10
87-61-6	1,2,3-Trichlorobenzene	<50	50
120-82-1	1,2,4-Trichlorobenzene	<50	50
71-55-6	1,1,1-Trichloroethane	**750**	10
79-00-5	1,1,2-Trichloroethane	<10	10
79-01-6	Trichloroethene	**1100**	10
75-69-4	Trichlorofluoromethane	<10	10
96-18-4	1,2,3-Trichloropropane	<10	10

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1303134**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**DUP-01**	Sampled:	03/04/13 00:00
Lab Sample ID:	**1303134-07**	Sampled By:	J. Jasso
Matrix:	Water	Received:	03/07/13 17:10
Unit:	ug/L	Prepared:	03/11/13 By: DLV
Dilution Factor:	10	Analyzed:	03/12/13 By: DLV
QC Batch:	1302156	Analytical Batch:	3C12044

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
95-63-6	1,2,4-Trimethylbenzene	<10	10
108-67-8	1,3,5-Trimethylbenzene	<10	10
75-01-4	Vinyl Chloride	**140**	10
179601-23-1	Xylene, Meta + Para	<20	20
95-47-6	Xylene, Ortho	<10	10

Surrogates:	***% Recovery***	***Control Limits***
Dibromofluoromethane	*109*	*85-118*
1,2-Dichloroethane-d4	*105*	*87-122*
Toluene-d8	*100*	*85-113*
4-Bromofluorobenzene	*94*	*82-110*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1303134**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-07s**	Sampled:	03/04/13 16:59
Lab Sample ID:	**1303134-08**	Sampled By:	J. Jasso
Matrix:	Water	Received:	03/07/13 17:10

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Ethane	**2.2**	1.0	ug/L	1	RSK-175	03/14/13 13:24	BJH	1302158
Methane	**5000**	100	ug/L	200	RSK-175	03/14/13 13:28	BJH	1302158
Ethylene	<1.0	1.0	ug/L	1	RSK-175	03/14/13 13:24	BJH	1302158

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1303134**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-07s**	Sampled:	03/04/13 16:59
Lab Sample ID:	**1303134-08**	Sampled By:	J. Jasso
Matrix:	Water	Received:	03/07/13 17:10
Unit:	ug/L	Prepared:	03/12/13 By: LEW
Dilution Factor:	5	Analyzed:	03/12/13 By: LEW
QC Batch:	1302224	Analytical Batch:	3C13039

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	RL
67-64-1	Acetone	<100	100
107-13-1	Acrylonitrile	<10	10
71-43-2	Benzene	<5.0	5.0
108-86-1	Bromobenzene	<5.0	5.0
74-97-5	Bromochloromethane	<5.0	5.0
75-27-4	Bromodichloromethane	<5.0	5.0
75-25-2	Bromoform	<5.0	5.0
74-83-9	Bromomethane	<25	25
104-51-8	n-Butylbenzene	<5.0	5.0
135-98-8	sec-Butylbenzene	<5.0	5.0
98-06-6	tert-Butylbenzene	<5.0	5.0
75-15-0	Carbon Disulfide	<5.0	5.0
56-23-5	Carbon Tetrachloride	<5.0	5.0
108-90-7	Chlorobenzene	<5.0	5.0
75-00-3	Chloroethane	<25	25
67-66-3	Chloroform	<5.0	5.0
74-87-3	Chloromethane	<25	25
96-12-8	1,2-Dibromo-3-chloropropane	<25	25
124-48-1	Dibromochloromethane	<5.0	5.0
106-93-4	1,2-Dibromoethane	<5.0	5.0
74-95-3	Dibromomethane	<5.0	5.0
*110-57-6	trans-1,4-Dichloro-2-butene	<5.0	5.0
95-50-1	1,2-Dichlorobenzene	<5.0	5.0
541-73-1	1,3-Dichlorobenzene	<5.0	5.0
106-46-7	1,4-Dichlorobenzene	<5.0	5.0
*75-71-8	Dichlorodifluoromethane	<25	25
75-34-3	1,1-Dichloroethane	**7.9**	5.0
107-06-2	1,2-Dichloroethane	<5.0	5.0
75-35-4	1,1-Dichloroethene	<5.0	5.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1303134**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-07s**	Sampled:	03/04/13 16:59
Lab Sample ID:	**1303134-08**	Sampled By:	J. Jasso
Matrix:	Water	Received:	03/07/13 17:10
Unit:	ug/L	Prepared:	03/12/13 By: LEW
Dilution Factor:	5	Analyzed:	03/12/13 By: LEW
QC Batch:	1302224	Analytical Batch:	3C13039

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
156-59-2	cis-1,2-Dichloroethene	**100**	5.0
156-60-5	trans-1,2-Dichloroethene	**11**	5.0
78-87-5	1,2-Dichloropropane	<5.0	5.0
10061-01-5	cis-1,3-Dichloropropene	<5.0	5.0
10061-02-6	trans-1,3-Dichloropropene	<5.0	5.0
100-41-4	Ethylbenzene	<5.0	5.0
60-29-7	Ethyl Ether	<25	25
591-78-6	2-Hexanone	<25	25
74-88-4	Iodomethane	<5.0	5.0
98-82-8	Isopropylbenzene	<5.0	5.0
99-87-6	4-Isopropyltoluene	<25	25
1634-04-4	Methyl tert-Butyl Ether	<25	25
75-09-2	Methylene Chloride	<25	25
78-93-3	2-Butanone (MEK)	<25	25
91-57-6	2-Methylnaphthalene	<25	25
108-10-1	4-Methyl-2-pentanone (MIBK)	<25	25
91-20-3	Naphthalene	<25	25
103-65-1	n-Propylbenzene	<5.0	5.0
100-42-5	Styrene	<5.0	5.0
630-20-6	1,1,1,2-Tetrachloroethane	<5.0	5.0
79-34-5	1,1,2,2-Tetrachloroethane	<5.0	5.0
127-18-4	Tetrachloroethene	<5.0	5.0
109-99-9	Tetrahydrofuran	<25	25
108-88-3	Toluene	<5.0	5.0
87-61-6	1,2,3-Trichlorobenzene	<25	25
120-82-1	1,2,4-Trichlorobenzene	<25	25
71-55-6	1,1,1-Trichloroethane	**7.6**	5.0
79-00-5	1,1,2-Trichloroethane	<5.0	5.0
79-01-6	Trichloroethene	**480**	5.0
75-69-4	Trichlorofluoromethane	<5.0	5.0
96-18-4	1,2,3-Trichloropropane	<5.0	5.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1303134**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-07s**	Sampled:	03/04/13 16:59
Lab Sample ID:	**1303134-08**	Sampled By:	J. Jasso
Matrix:	Water	Received:	03/07/13 17:10
Unit:	ug/L	Prepared:	03/12/13 By: LEW
Dilution Factor:	5	Analyzed:	03/12/13 By: LEW
QC Batch:	1302224	Analytical Batch:	3C13039

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
95-63-6	1,2,4-Trimethylbenzene	<5.0	5.0
108-67-8	1,3,5-Trimethylbenzene	<5.0	5.0
75-01-4	Vinyl Chloride	<5.0	5.0
179601-23-1	Xylene, Meta + Para	<10	10
95-47-6	Xylene, Ortho	<5.0	5.0

Surrogates:	***% Recovery***	***Control Limits***
Dibromofluoromethane	*98*	*85-118*
1,2-Dichloroethane-d4	*96*	*87-122*
Toluene-d8	*95*	*85-113*
4-Bromofluorobenzene	*98*	*82-110*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1303134**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-02s**	Sampled:	03/05/13 07:40
Lab Sample ID:	**1303134-09**	Sampled By:	J. Jasso
Matrix:	Water	Received:	03/07/13 17:10

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Ethane	<1.0	1.0	ug/L	1	RSK-175	03/14/13 13:32	BJH	1302158
Methane	**1600**	20	ug/L	40	RSK-175	03/14/13 13:36	BJH	1302158
Ethylene	**20**	1.0	ug/L	1	RSK-175	03/14/13 13:32	BJH	1302158

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1303134**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-02s**	Sampled:	03/05/13 07:40
Lab Sample ID:	**1303134-09**	Sampled By:	J. Jasso
Matrix:	Water	Received:	03/07/13 17:10
Unit:	ug/L	Prepared:	03/12/13 By: LEW
Dilution Factor:	2.5	Analyzed:	03/12/13 By: LEW
QC Batch:	1302224	Analytical Batch:	3C13039

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	RL
67-64-1	Acetone	<50	50
107-13-1	Acrylonitrile	<5.0	5.0
71-43-2	Benzene	<2.5	2.5
108-86-1	Bromobenzene	<2.5	2.5
74-97-5	Bromochloromethane	<2.5	2.5
75-27-4	Bromodichloromethane	<2.5	2.5
75-25-2	Bromoform	<2.5	2.5
74-83-9	Bromomethane	<12	12
104-51-8	n-Butylbenzene	<2.5	2.5
135-98-8	sec-Butylbenzene	<2.5	2.5
98-06-6	tert-Butylbenzene	<2.5	2.5
75-15-0	Carbon Disulfide	<2.5	2.5
56-23-5	Carbon Tetrachloride	<2.5	2.5
108-90-7	Chlorobenzene	<2.5	2.5
75-00-3	Chloroethane	<12	12
67-66-3	Chloroform	<2.5	2.5
74-87-3	Chloromethane	<12	12
96-12-8	1,2-Dibromo-3-chloropropane	<12	12
124-48-1	Dibromochloromethane	<2.5	2.5
106-93-4	1,2-Dibromoethane	<2.5	2.5
74-95-3	Dibromomethane	<2.5	2.5
*110-57-6	trans-1,4-Dichloro-2-butene	<2.5	2.5
95-50-1	1,2-Dichlorobenzene	<2.5	2.5
541-73-1	1,3-Dichlorobenzene	<2.5	2.5
106-46-7	1,4-Dichlorobenzene	<2.5	2.5
*75-71-8	Dichlorodifluoromethane	<12	12
75-34-3	1,1-Dichloroethane	**4.4**	2.5
107-06-2	1,2-Dichloroethane	<2.5	2.5
75-35-4	1,1-Dichloroethene	<2.5	2.5

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1303134**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-02s**	Sampled:	03/05/13 07:40
Lab Sample ID:	**1303134-09**	Sampled By:	J. Jasso
Matrix:	Water	Received:	03/07/13 17:10
Unit:	ug/L	Prepared:	03/12/13 By: LEW
Dilution Factor:	2.5	Analyzed:	03/12/13 By: LEW
QC Batch:	1302224	Analytical Batch:	3C13039

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
156-59-2	cis-1,2-Dichloroethene	**250**	2.5
156-60-5	trans-1,2-Dichloroethene	**6.4**	2.5
78-87-5	1,2-Dichloropropane	<2.5	2.5
10061-01-5	cis-1,3-Dichloropropene	<2.5	2.5
10061-02-6	trans-1,3-Dichloropropene	<2.5	2.5
100-41-4	Ethylbenzene	<2.5	2.5
60-29-7	Ethyl Ether	<12	12
591-78-6	2-Hexanone	<12	12
74-88-4	Iodomethane	<2.5	2.5
98-82-8	Isopropylbenzene	<2.5	2.5
99-87-6	4-Isopropyltoluene	<12	12
1634-04-4	Methyl tert-Butyl Ether	<12	12
75-09-2	Methylene Chloride	<12	12
78-93-3	2-Butanone (MEK)	<12	12
91-57-6	2-Methylnaphthalene	<12	12
108-10-1	4-Methyl-2-pentanone (MIBK)	<12	12
91-20-3	Naphthalene	<12	12
103-65-1	n-Propylbenzene	<2.5	2.5
100-42-5	Styrene	<2.5	2.5
630-20-6	1,1,1,2-Tetrachloroethane	<2.5	2.5
79-34-5	1,1,2,2-Tetrachloroethane	<2.5	2.5
127-18-4	Tetrachloroethene	<2.5	2.5
109-99-9	Tetrahydrofuran	<12	12
108-88-3	Toluene	<2.5	2.5
87-61-6	1,2,3-Trichlorobenzene	<12	12
120-82-1	1,2,4-Trichlorobenzene	<12	12
71-55-6	1,1,1-Trichloroethane	**4.8**	2.5
79-00-5	1,1,2-Trichloroethane	<2.5	2.5
79-01-6	Trichloroethene	**310**	2.5
75-69-4	Trichlorofluoromethane	<2.5	2.5
96-18-4	1,2,3-Trichloropropane	<2.5	2.5

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1303134**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-02s**	Sampled:	03/05/13 07:40
Lab Sample ID:	**1303134-09**	Sampled By:	J. Jasso
Matrix:	Water	Received:	03/07/13 17:10
Unit:	ug/L	Prepared:	03/12/13 By: LEW
Dilution Factor:	2.5	Analyzed:	03/12/13 By: LEW
QC Batch:	1302224	Analytical Batch:	3C13039

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
95-63-6	1,2,4-Trimethylbenzene	<2.5	2.5
108-67-8	1,3,5-Trimethylbenzene	<2.5	2.5
75-01-4	Vinyl Chloride	**43**	2.5
179601-23-1	Xylene, Meta + Para	<5.0	5.0
95-47-6	Xylene, Ortho	<2.5	2.5

Surrogates:	***% Recovery***	***Control Limits***
Dibromofluoromethane	*99*	*85-118*
1,2-Dichloroethane-d4	*97*	*87-122*
Toluene-d8	*95*	*85-113*
4-Bromofluorobenzene	*97*	*82-110*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1303134**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-08s**	Sampled:	03/05/13 09:26
Lab Sample ID:	**1303134-10**	Sampled By:	J. Jasso
Matrix:	Water	Received:	03/07/13 17:10

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Ethane	<1.0	1.0	ug/L	1	RSK-175	03/14/13 13:41	BJH	1302158
Methane	**1600**	50	ug/L	100	RSK-175	03/14/13 13:48	BJH	1302158
Ethylene	**1.3**	1.0	ug/L	1	RSK-175	03/14/13 13:41	BJH	1302158

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1303134**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-08s**	Sampled:	03/05/13 09:26
Lab Sample ID:	**1303134-10**	Sampled By:	J. Jasso
Matrix:	Water	Received:	03/07/13 17:10
Unit:	ug/L	Prepared:	03/11/13 By: DLV
Dilution Factor:	1	Analyzed:	03/12/13 By: DLV
QC Batch:	1302156	Analytical Batch:	3C12044

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	RL
67-64-1	Acetone	<20	20
107-13-1	Acrylonitrile	<2.0	2.0
71-43-2	Benzene	<1.0	1.0
108-86-1	Bromobenzene	<1.0	1.0
74-97-5	Bromochloromethane	<1.0	1.0
75-27-4	Bromodichloromethane	<1.0	1.0
75-25-2	Bromoform	<1.0	1.0
*74-83-9	Bromomethane	<5.0	5.0
104-51-8	n-Butylbenzene	<1.0	1.0
135-98-8	sec-Butylbenzene	<1.0	1.0
98-06-6	tert-Butylbenzene	<1.0	1.0
75-15-0	Carbon Disulfide	<1.0	1.0
56-23-5	Carbon Tetrachloride	<1.0	1.0
108-90-7	Chlorobenzene	<1.0	1.0
75-00-3	Chloroethane	<5.0	5.0
67-66-3	Chloroform	<1.0	1.0
74-87-3	Chloromethane	<5.0	5.0
96-12-8	1,2-Dibromo-3-chloropropane	<5.0	5.0
124-48-1	Dibromochloromethane	<1.0	1.0
106-93-4	1,2-Dibromoethane	<1.0	1.0
74-95-3	Dibromomethane	<1.0	1.0
110-57-6	trans-1,4-Dichloro-2-butene	<1.0	1.0
95-50-1	1,2-Dichlorobenzene	<1.0	1.0
541-73-1	1,3-Dichlorobenzene	<1.0	1.0
106-46-7	1,4-Dichlorobenzene	<1.0	1.0
75-71-8	Dichlorodifluoromethane	<5.0	5.0
75-34-3	1,1-Dichloroethane	**3.6**	1.0
107-06-2	1,2-Dichloroethane	<1.0	1.0
75-35-4	1,1-Dichloroethene	<1.0	1.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1303134**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-08s**	Sampled:	03/05/13 09:26
Lab Sample ID:	**1303134-10**	Sampled By:	J. Jasso
Matrix:	Water	Received:	03/07/13 17:10
Unit:	ug/L	Prepared:	03/11/13 By: DLV
Dilution Factor:	1	Analyzed:	03/12/13 By: DLV
QC Batch:	1302156	Analytical Batch:	3C12044

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
156-59-2	cis-1,2-Dichloroethene	**27**	1.0
156-60-5	trans-1,2-Dichloroethene	**3.5**	1.0
78-87-5	1,2-Dichloropropane	<1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	<1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	<1.0	1.0
100-41-4	Ethylbenzene	<1.0	1.0
60-29-7	Ethyl Ether	<5.0	5.0
591-78-6	2-Hexanone	<5.0	5.0
74-88-4	Iodomethane	<1.0	1.0
98-82-8	Isopropylbenzene	<1.0	1.0
99-87-6	4-Isopropyltoluene	<5.0	5.0
1634-04-4	Methyl tert-Butyl Ether	<5.0	5.0
75-09-2	Methylene Chloride	<5.0	5.0
78-93-3	2-Butanone (MEK)	<5.0	5.0
*91-57-6	2-Methylnaphthalene	<5.0	5.0
108-10-1	4-Methyl-2-pentanone (MIBK)	<5.0	5.0
91-20-3	Naphthalene	<5.0	5.0
103-65-1	n-Propylbenzene	<1.0	1.0
100-42-5	Styrene	<1.0	1.0
630-20-6	1,1,1,2-Tetrachloroethane	<1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	<1.0	1.0
127-18-4	Tetrachloroethene	<1.0	1.0
109-99-9	Tetrahydrofuran	<5.0	5.0
108-88-3	Toluene	<1.0	1.0
87-61-6	1,2,3-Trichlorobenzene	<5.0	5.0
120-82-1	1,2,4-Trichlorobenzene	<5.0	5.0
71-55-6	1,1,1-Trichloroethane	<1.0	1.0
79-00-5	1,1,2-Trichloroethane	<1.0	1.0
79-01-6	Trichloroethene	<1.0	1.0
75-69-4	Trichlorofluoromethane	<1.0	1.0
96-18-4	1,2,3-Trichloropropane	<1.0	1.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1303134**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-08s**	Sampled:	03/05/13 09:26
Lab Sample ID:	**1303134-10**	Sampled By:	J. Jasso
Matrix:	Water	Received:	03/07/13 17:10
Unit:	ug/L	Prepared:	03/11/13 By: DLV
Dilution Factor:	1	Analyzed:	03/12/13 By: DLV
QC Batch:	1302156	Analytical Batch:	3C12044

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
95-63-6	1,2,4-Trimethylbenzene	<1.0	1.0
108-67-8	1,3,5-Trimethylbenzene	<1.0	1.0
75-01-4	Vinyl Chloride	**1.9**	1.0
179601-23-1	Xylene, Meta + Para	<2.0	2.0
95-47-6	Xylene, Ortho	<1.0	1.0

Surrogates:	***% Recovery***	***Control Limits***
Dibromofluoromethane	*108*	*85-118*
1,2-Dichloroethane-d4	*105*	*87-122*
Toluene-d8	*98*	*85-113*
4-Bromofluorobenzene	*94*	*82-110*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1303134**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-08d**	Sampled:	03/05/13 09:41
Lab Sample ID:	**1303134-11**	Sampled By:	J. Jasso
Matrix:	Water	Received:	03/07/13 17:10
Unit:	ug/L	Prepared:	03/11/13 By: DLV
Dilution Factor:	1	Analyzed:	03/12/13 By: DLV
QC Batch:	1302156	Analytical Batch:	3C12044

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	RL
67-64-1	Acetone	<20	20
107-13-1	Acrylonitrile	<2.0	2.0
71-43-2	Benzene	<1.0	1.0
108-86-1	Bromobenzene	<1.0	1.0
74-97-5	Bromochloromethane	<1.0	1.0
75-27-4	Bromodichloromethane	<1.0	1.0
75-25-2	Bromoform	<1.0	1.0
*74-83-9	Bromomethane	<5.0	5.0
104-51-8	n-Butylbenzene	<1.0	1.0
135-98-8	sec-Butylbenzene	<1.0	1.0
98-06-6	tert-Butylbenzene	<1.0	1.0
75-15-0	Carbon Disulfide	<1.0	1.0
56-23-5	Carbon Tetrachloride	<1.0	1.0
108-90-7	Chlorobenzene	<1.0	1.0
75-00-3	Chloroethane	<5.0	5.0
67-66-3	Chloroform	<1.0	1.0
74-87-3	Chloromethane	<5.0	5.0
96-12-8	1,2-Dibromo-3-chloropropane	<5.0	5.0
124-48-1	Dibromochloromethane	<1.0	1.0
106-93-4	1,2-Dibromoethane	<1.0	1.0
74-95-3	Dibromomethane	<1.0	1.0
110-57-6	trans-1,4-Dichloro-2-butene	<1.0	1.0
95-50-1	1,2-Dichlorobenzene	<1.0	1.0
541-73-1	1,3-Dichlorobenzene	<1.0	1.0
106-46-7	1,4-Dichlorobenzene	<1.0	1.0
75-71-8	Dichlorodifluoromethane	<5.0	5.0
75-34-3	1,1-Dichloroethane	<1.0	1.0
107-06-2	1,2-Dichloroethane	<1.0	1.0
75-35-4	1,1-Dichloroethene	<1.0	1.0
156-59-2	cis-1,2-Dichloroethene	<1.0	1.0
156-60-5	trans-1,2-Dichloroethene	<1.0	1.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1303134**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-08d**	Sampled:	03/05/13 09:41
Lab Sample ID:	**1303134-11**	Sampled By:	J. Jasso
Matrix:	Water	Received:	03/07/13 17:10
Unit:	ug/L	Prepared:	03/11/13 By: DLV
Dilution Factor:	1	Analyzed:	03/12/13 By: DLV
QC Batch:	1302156	Analytical Batch:	3C12044

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
78-87-5	1,2-Dichloropropane	<1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	<1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	<1.0	1.0
100-41-4	Ethylbenzene	<1.0	1.0
60-29-7	Ethyl Ether	<5.0	5.0
591-78-6	2-Hexanone	<5.0	5.0
74-88-4	Iodomethane	<1.0	1.0
98-82-8	Isopropylbenzene	<1.0	1.0
99-87-6	4-Isopropyltoluene	<5.0	5.0
1634-04-4	Methyl tert-Butyl Ether	<5.0	5.0
75-09-2	Methylene Chloride	<5.0	5.0
78-93-3	2-Butanone (MEK)	<5.0	5.0
*91-57-6	2-Methylnaphthalene	<5.0	5.0
108-10-1	4-Methyl-2-pentanone (MIBK)	<5.0	5.0
91-20-3	Naphthalene	<5.0	5.0
103-65-1	n-Propylbenzene	<1.0	1.0
100-42-5	Styrene	<1.0	1.0
630-20-6	1,1,1,2-Tetrachloroethane	<1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	<1.0	1.0
127-18-4	Tetrachloroethene	<1.0	1.0
109-99-9	Tetrahydrofuran	<5.0	5.0
108-88-3	Toluene	<1.0	1.0
87-61-6	1,2,3-Trichlorobenzene	<5.0	5.0
120-82-1	1,2,4-Trichlorobenzene	<5.0	5.0
71-55-6	1,1,1-Trichloroethane	<1.0	1.0
79-00-5	1,1,2-Trichloroethane	<1.0	1.0
79-01-6	Trichloroethene	<1.0	1.0
75-69-4	Trichlorofluoromethane	<1.0	1.0
96-18-4	1,2,3-Trichloropropane	<1.0	1.0
95-63-6	1,2,4-Trimethylbenzene	<1.0	1.0
108-67-8	1,3,5-Trimethylbenzene	<1.0	1.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1303134**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-08d**	Sampled:	03/05/13 09:41
Lab Sample ID:	**1303134-11**	Sampled By:	J. Jasso
Matrix:	Water	Received:	03/07/13 17:10
Unit:	ug/L	Prepared:	03/11/13 By: DLV
Dilution Factor:	1	Analyzed:	03/12/13 By: DLV
QC Batch:	1302156	Analytical Batch:	3C12044

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
75-01-4	Vinyl Chloride	**37**	1.0
179601-23-1	Xylene, Meta + Para	<2.0	2.0
95-47-6	Xylene, Ortho	<1.0	1.0

Surrogates:	***% Recovery***	***Control Limits***
Dibromofluoromethane	*108*	*85-118*
1,2-Dichloroethane-d4	*108*	*87-122*
Toluene-d8	*99*	*85-113*
4-Bromofluorobenzene	*93*	*82-110*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1303134**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-10s**	Sampled:	03/05/13 10:47
Lab Sample ID:	**1303134-12**	Sampled By:	J. Jasso
Matrix:	Water	Received:	03/07/13 17:10
Unit:	ug/L	Prepared:	03/11/13 By: DLV
Dilution Factor:	1	Analyzed:	03/12/13 By: DLV
QC Batch:	1302156	Analytical Batch:	3C12044

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	RL
67-64-1	Acetone	<20	20
107-13-1	Acrylonitrile	<2.0	2.0
71-43-2	Benzene	<1.0	1.0
108-86-1	Bromobenzene	<1.0	1.0
74-97-5	Bromochloromethane	<1.0	1.0
75-27-4	Bromodichloromethane	<1.0	1.0
75-25-2	Bromoform	<1.0	1.0
*74-83-9	Bromomethane	<5.0	5.0
104-51-8	n-Butylbenzene	<1.0	1.0
135-98-8	sec-Butylbenzene	<1.0	1.0
98-06-6	tert-Butylbenzene	<1.0	1.0
75-15-0	Carbon Disulfide	<1.0	1.0
56-23-5	Carbon Tetrachloride	<1.0	1.0
108-90-7	Chlorobenzene	<1.0	1.0
75-00-3	Chloroethane	<5.0	5.0
67-66-3	Chloroform	<1.0	1.0
74-87-3	Chloromethane	<5.0	5.0
96-12-8	1,2-Dibromo-3-chloropropane	<5.0	5.0
124-48-1	Dibromochloromethane	<1.0	1.0
106-93-4	1,2-Dibromoethane	<1.0	1.0
74-95-3	Dibromomethane	<1.0	1.0
110-57-6	trans-1,4-Dichloro-2-butene	<1.0	1.0
95-50-1	1,2-Dichlorobenzene	<1.0	1.0
541-73-1	1,3-Dichlorobenzene	<1.0	1.0
106-46-7	1,4-Dichlorobenzene	<1.0	1.0
75-71-8	Dichlorodifluoromethane	<5.0	5.0
75-34-3	1,1-Dichloroethane	<1.0	1.0
107-06-2	1,2-Dichloroethane	<1.0	1.0
75-35-4	1,1-Dichloroethene	<1.0	1.0
156-59-2	cis-1,2-Dichloroethene	**15**	1.0
156-60-5	trans-1,2-Dichloroethene	**2.6**	1.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1303134**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-10s**	Sampled:	03/05/13 10:47
Lab Sample ID:	**1303134-12**	Sampled By:	J. Jasso
Matrix:	Water	Received:	03/07/13 17:10
Unit:	ug/L	Prepared:	03/11/13 By: DLV
Dilution Factor:	1	Analyzed:	03/12/13 By: DLV
QC Batch:	1302156	Analytical Batch:	3C12044

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
78-87-5	1,2-Dichloropropane	<1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	<1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	<1.0	1.0
100-41-4	Ethylbenzene	<1.0	1.0
60-29-7	Ethyl Ether	<5.0	5.0
591-78-6	2-Hexanone	<5.0	5.0
74-88-4	Iodomethane	<1.0	1.0
98-82-8	Isopropylbenzene	<1.0	1.0
99-87-6	4-Isopropyltoluene	<5.0	5.0
1634-04-4	Methyl tert-Butyl Ether	<5.0	5.0
75-09-2	Methylene Chloride	<5.0	5.0
78-93-3	2-Butanone (MEK)	<5.0	5.0
*91-57-6	2-Methylnaphthalene	<5.0	5.0
108-10-1	4-Methyl-2-pentanone (MIBK)	<5.0	5.0
91-20-3	Naphthalene	<5.0	5.0
103-65-1	n-Propylbenzene	<1.0	1.0
100-42-5	Styrene	<1.0	1.0
630-20-6	1,1,1,2-Tetrachloroethane	<1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	<1.0	1.0
127-18-4	Tetrachloroethene	<1.0	1.0
109-99-9	Tetrahydrofuran	<5.0	5.0
108-88-3	Toluene	<1.0	1.0
87-61-6	1,2,3-Trichlorobenzene	<5.0	5.0
120-82-1	1,2,4-Trichlorobenzene	<5.0	5.0
71-55-6	1,1,1-Trichloroethane	<1.0	1.0
79-00-5	1,1,2-Trichloroethane	<1.0	1.0
79-01-6	Trichloroethene	<1.0	1.0
75-69-4	Trichlorofluoromethane	<1.0	1.0
96-18-4	1,2,3-Trichloropropane	<1.0	1.0
95-63-6	1,2,4-Trimethylbenzene	<1.0	1.0
108-67-8	1,3,5-Trimethylbenzene	<1.0	1.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1303134**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-10s**	Sampled:	03/05/13 10:47
Lab Sample ID:	**1303134-12**	Sampled By:	J. Jasso
Matrix:	Water	Received:	03/07/13 17:10
Unit:	ug/L	Prepared:	03/11/13 By: DLV
Dilution Factor:	1	Analyzed:	03/12/13 By: DLV
QC Batch:	1302156	Analytical Batch:	3C12044

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
75-01-4	Vinyl Chloride	<1.0	1.0
179601-23-1	Xylene, Meta + Para	<2.0	2.0
95-47-6	Xylene, Ortho	<1.0	1.0

Surrogates:	***% Recovery***	***Control Limits***
Dibromofluoromethane	*108*	*85-118*
1,2-Dichloroethane-d4	*108*	*87-122*
Toluene-d8	*99*	*85-113*
4-Bromofluorobenzene	*94*	*82-110*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1303134**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-09s**	Sampled:	03/05/13 11:25
Lab Sample ID:	**1303134-13**	Sampled By:	J. Jasso
Matrix:	Water	Received:	03/07/13 17:10

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Ethane	**3.7**	1.0	ug/L	1	RSK-175	03/14/13 14:00	BJH	1302158
Methane	**3700**	50	ug/L	100	RSK-175	03/14/13 14:04	BJH	1302158
Ethylene	<1.0	1.0	ug/L	1	RSK-175	03/14/13 14:00	BJH	1302158

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1303134**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-09s**	Sampled:	03/05/13 11:25
Lab Sample ID:	**1303134-13**	Sampled By:	J. Jasso
Matrix:	Water	Received:	03/07/13 17:10
Unit:	ug/L	Prepared:	03/12/13 By: LEW
Dilution Factor:	1	Analyzed:	03/12/13 By: LEW
QC Batch:	1302224	Analytical Batch:	3C13039

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	RL
67-64-1	Acetone	<20	20
107-13-1	Acrylonitrile	<2.0	2.0
71-43-2	Benzene	<1.0	1.0
108-86-1	Bromobenzene	<1.0	1.0
74-97-5	Bromochloromethane	<1.0	1.0
75-27-4	Bromodichloromethane	<1.0	1.0
75-25-2	Bromoform	<1.0	1.0
74-83-9	Bromomethane	<5.0	5.0
104-51-8	n-Butylbenzene	<1.0	1.0
135-98-8	sec-Butylbenzene	<1.0	1.0
98-06-6	tert-Butylbenzene	<1.0	1.0
75-15-0	Carbon Disulfide	**5.2**	1.0
56-23-5	Carbon Tetrachloride	<1.0	1.0
108-90-7	Chlorobenzene	<1.0	1.0
75-00-3	Chloroethane	<5.0	5.0
67-66-3	Chloroform	<1.0	1.0
74-87-3	Chloromethane	<5.0	5.0
96-12-8	1,2-Dibromo-3-chloropropane	<5.0	5.0
124-48-1	Dibromochloromethane	<1.0	1.0
106-93-4	1,2-Dibromoethane	<1.0	1.0
74-95-3	Dibromomethane	<1.0	1.0
*110-57-6	trans-1,4-Dichloro-2-butene	<1.0	1.0
95-50-1	1,2-Dichlorobenzene	<1.0	1.0
541-73-1	1,3-Dichlorobenzene	<1.0	1.0
106-46-7	1,4-Dichlorobenzene	<1.0	1.0
*75-71-8	Dichlorodifluoromethane	<5.0	5.0
75-34-3	1,1-Dichloroethane	<1.0	1.0
107-06-2	1,2-Dichloroethane	<1.0	1.0
75-35-4	1,1-Dichloroethene	<1.0	1.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1303134**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-09s**	Sampled:	03/05/13 11:25
Lab Sample ID:	**1303134-13**	Sampled By:	J. Jasso
Matrix:	Water	Received:	03/07/13 17:10
Unit:	ug/L	Prepared:	03/12/13 By: LEW
Dilution Factor:	1	Analyzed:	03/12/13 By: LEW
QC Batch:	1302224	Analytical Batch:	3C13039

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
156-59-2	cis-1,2-Dichloroethene	<1.0	1.0
156-60-5	trans-1,2-Dichloroethene	<1.0	1.0
78-87-5	1,2-Dichloropropane	<1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	<1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	<1.0	1.0
100-41-4	Ethylbenzene	**1.9**	1.0
60-29-7	Ethyl Ether	<5.0	5.0
591-78-6	2-Hexanone	<5.0	5.0
74-88-4	Iodomethane	<1.0	1.0
98-82-8	Isopropylbenzene	<1.0	1.0
99-87-6	4-Isopropyltoluene	<5.0	5.0
1634-04-4	Methyl tert-Butyl Ether	<5.0	5.0
75-09-2	Methylene Chloride	<5.0	5.0
78-93-3	2-Butanone (MEK)	<5.0	5.0
91-57-6	2-Methylnaphthalene	<5.0	5.0
108-10-1	4-Methyl-2-pentanone (MIBK)	<5.0	5.0
91-20-3	Naphthalene	<5.0	5.0
103-65-1	n-Propylbenzene	<1.0	1.0
100-42-5	Styrene	<1.0	1.0
630-20-6	1,1,1,2-Tetrachloroethane	<1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	<1.0	1.0
127-18-4	Tetrachloroethene	<1.0	1.0
109-99-9	Tetrahydrofuran	<5.0	5.0
108-88-3	Toluene	**54**	1.0
87-61-6	1,2,3-Trichlorobenzene	<5.0	5.0
120-82-1	1,2,4-Trichlorobenzene	<5.0	5.0
71-55-6	1,1,1-Trichloroethane	<1.0	1.0
79-00-5	1,1,2-Trichloroethane	<1.0	1.0
79-01-6	Trichloroethene	<1.0	1.0
75-69-4	Trichlorofluoromethane	<1.0	1.0
96-18-4	1,2,3-Trichloropropane	<1.0	1.0

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ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1303134**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-09s**	Sampled:	03/05/13 11:25
Lab Sample ID:	**1303134-13**	Sampled By:	J. Jasso
Matrix:	Water	Received:	03/07/13 17:10
Unit:	ug/L	Prepared:	03/12/13 By: LEW
Dilution Factor:	1	Analyzed:	03/12/13 By: LEW
QC Batch:	1302224	Analytical Batch:	3C13039

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
95-63-6	1,2,4-Trimethylbenzene	<1.0	1.0
108-67-8	1,3,5-Trimethylbenzene	<1.0	1.0
75-01-4	Vinyl Chloride	<1.0	1.0
179601-23-1	Xylene, Meta + Para	<2.0	2.0
95-47-6	Xylene, Ortho	<1.0	1.0

Surrogates:	***% Recovery***	***Control Limits***
Dibromofluoromethane	*96*	*85-118*
1,2-Dichloroethane-d4	*95*	*87-122*
Toluene-d8	*95*	*85-113*
4-Bromofluorobenzene	*98*	*82-110*

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ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1303134**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-06s**	Sampled:	03/05/13 12:13
Lab Sample ID:	**1303134-14**	Sampled By:	J. Jasso
Matrix:	Water	Received:	03/07/13 17:10

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Ethane	**24**	1.0	ug/L	1	RSK-175	03/14/13 14:08	BJH	1302158
Methane	**6800**	100	ug/L	200	RSK-175	03/14/13 14:21	BJH	1302158
Ethylene	**40**	1.0	ug/L	1	RSK-175	03/14/13 14:08	BJH	1302158

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ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1303134**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-06s**	Sampled:	03/05/13 12:13
Lab Sample ID:	**1303134-14**	Sampled By:	J. Jasso
Matrix:	Water	Received:	03/07/13 17:10
Unit:	ug/L	Prepared:	03/12/13 By: LEW
Dilution Factor:	5	Analyzed:	03/12/13 By: LEW
QC Batch:	1302224	Analytical Batch:	3C13039

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	RL
67-64-1	Acetone	<100	100
107-13-1	Acrylonitrile	<10	10
71-43-2	Benzene	<5.0	5.0
108-86-1	Bromobenzene	<5.0	5.0
74-97-5	Bromochloromethane	<5.0	5.0
75-27-4	Bromodichloromethane	<5.0	5.0
75-25-2	Bromoform	<5.0	5.0
74-83-9	Bromomethane	<25	25
104-51-8	n-Butylbenzene	<5.0	5.0
135-98-8	sec-Butylbenzene	<5.0	5.0
98-06-6	tert-Butylbenzene	<5.0	5.0
75-15-0	Carbon Disulfide	**25**	5.0
56-23-5	Carbon Tetrachloride	<5.0	5.0
108-90-7	Chlorobenzene	<5.0	5.0
75-00-3	Chloroethane	<25	25
67-66-3	Chloroform	<5.0	5.0
74-87-3	Chloromethane	<25	25
96-12-8	1,2-Dibromo-3-chloropropane	<25	25
124-48-1	Dibromochloromethane	<5.0	5.0
106-93-4	1,2-Dibromoethane	<5.0	5.0
74-95-3	Dibromomethane	<5.0	5.0
*110-57-6	trans-1,4-Dichloro-2-butene	<5.0	5.0
95-50-1	1,2-Dichlorobenzene	<5.0	5.0
541-73-1	1,3-Dichlorobenzene	<5.0	5.0
106-46-7	1,4-Dichlorobenzene	<5.0	5.0
*75-71-8	Dichlorodifluoromethane	<25	25
75-34-3	1,1-Dichloroethane	<5.0	5.0
107-06-2	1,2-Dichloroethane	<5.0	5.0
75-35-4	1,1-Dichloroethene	<5.0	5.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1303134**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-06s**	Sampled:	03/05/13 12:13
Lab Sample ID:	**1303134-14**	Sampled By:	J. Jasso
Matrix:	Water	Received:	03/07/13 17:10
Unit:	ug/L	Prepared:	03/12/13 By: LEW
Dilution Factor:	5	Analyzed:	03/12/13 By: LEW
QC Batch:	1302224	Analytical Batch:	3C13039

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
156-59-2	cis-1,2-Dichloroethene	<5.0	5.0
156-60-5	trans-1,2-Dichloroethene	<5.0	5.0
78-87-5	1,2-Dichloropropane	<5.0	5.0
10061-01-5	cis-1,3-Dichloropropene	<5.0	5.0
10061-02-6	trans-1,3-Dichloropropene	<5.0	5.0
100-41-4	Ethylbenzene	<5.0	5.0
60-29-7	Ethyl Ether	<25	25
591-78-6	2-Hexanone	<25	25
74-88-4	Iodomethane	<5.0	5.0
98-82-8	Isopropylbenzene	<5.0	5.0
99-87-6	4-Isopropyltoluene	<25	25
1634-04-4	Methyl tert-Butyl Ether	<25	25
75-09-2	Methylene Chloride	<25	25
78-93-3	2-Butanone (MEK)	<25	25
91-57-6	2-Methylnaphthalene	<25	25
108-10-1	4-Methyl-2-pentanone (MIBK)	<25	25
91-20-3	Naphthalene	<25	25
103-65-1	n-Propylbenzene	<5.0	5.0
100-42-5	Styrene	<5.0	5.0
630-20-6	1,1,1,2-Tetrachloroethane	<5.0	5.0
79-34-5	1,1,2,2-Tetrachloroethane	<5.0	5.0
127-18-4	Tetrachloroethene	<5.0	5.0
109-99-9	Tetrahydrofuran	<25	25
108-88-3	Toluene	**340**	5.0
87-61-6	1,2,3-Trichlorobenzene	<25	25
120-82-1	1,2,4-Trichlorobenzene	<25	25
71-55-6	1,1,1-Trichloroethane	<5.0	5.0
79-00-5	1,1,2-Trichloroethane	<5.0	5.0
79-01-6	Trichloroethene	<5.0	5.0
75-69-4	Trichlorofluoromethane	<5.0	5.0
96-18-4	1,2,3-Trichloropropane	<5.0	5.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1303134**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-06s**	Sampled:	03/05/13 12:13
Lab Sample ID:	**1303134-14**	Sampled By:	J. Jasso
Matrix:	Water	Received:	03/07/13 17:10
Unit:	ug/L	Prepared:	03/12/13 By: LEW
Dilution Factor:	5	Analyzed:	03/12/13 By: LEW
QC Batch:	1302224	Analytical Batch:	3C13039

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
95-63-6	1,2,4-Trimethylbenzene	<5.0	5.0
108-67-8	1,3,5-Trimethylbenzene	<5.0	5.0
75-01-4	Vinyl Chloride	<5.0	5.0
179601-23-1	Xylene, Meta + Para	<10	10
95-47-6	Xylene, Ortho	<5.0	5.0

Surrogates:	***% Recovery***	***Control Limits***
Dibromofluoromethane	*97*	*85-118*
1,2-Dichloroethane-d4	*94*	*87-122*
Toluene-d8	*94*	*85-113*
4-Bromofluorobenzene	*97*	*82-110*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1303134**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-05s**	Sampled:	03/05/13 13:04
Lab Sample ID:	**1303134-15**	Sampled By:	J. Jasso
Matrix:	Water	Received:	03/07/13 17:10
Unit:	ug/L	Prepared:	03/11/13 By: DLV
Dilution Factor:	5	Analyzed:	03/12/13 By: DLV
QC Batch:	1302156	Analytical Batch:	3C12044

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	RL
67-64-1	Acetone	<100	100
107-13-1	Acrylonitrile	<10	10
71-43-2	Benzene	<5.0	5.0
108-86-1	Bromobenzene	<5.0	5.0
74-97-5	Bromochloromethane	<5.0	5.0
75-27-4	Bromodichloromethane	<5.0	5.0
75-25-2	Bromoform	<5.0	5.0
*74-83-9	Bromomethane	<25	25
104-51-8	n-Butylbenzene	<5.0	5.0
135-98-8	sec-Butylbenzene	<5.0	5.0
98-06-6	tert-Butylbenzene	<5.0	5.0
75-15-0	Carbon Disulfide	<5.0	5.0
56-23-5	Carbon Tetrachloride	<5.0	5.0
108-90-7	Chlorobenzene	<5.0	5.0
75-00-3	Chloroethane	<25	25
67-66-3	Chloroform	<5.0	5.0
74-87-3	Chloromethane	<25	25
96-12-8	1,2-Dibromo-3-chloropropane	<25	25
124-48-1	Dibromochloromethane	<5.0	5.0
106-93-4	1,2-Dibromoethane	<5.0	5.0
74-95-3	Dibromomethane	<5.0	5.0
110-57-6	trans-1,4-Dichloro-2-butene	<5.0	5.0
95-50-1	1,2-Dichlorobenzene	<5.0	5.0
541-73-1	1,3-Dichlorobenzene	<5.0	5.0
106-46-7	1,4-Dichlorobenzene	<5.0	5.0
75-71-8	Dichlorodifluoromethane	<25	25
75-34-3	1,1-Dichloroethane	<5.0	5.0
107-06-2	1,2-Dichloroethane	<5.0	5.0
75-35-4	1,1-Dichloroethene	<5.0	5.0
156-59-2	cis-1,2-Dichloroethene	<5.0	5.0
156-60-5	trans-1,2-Dichloroethene	<5.0	5.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1303134**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-05s**	Sampled:	03/05/13 13:04
Lab Sample ID:	**1303134-15**	Sampled By:	J. Jasso
Matrix:	Water	Received:	03/07/13 17:10
Unit:	ug/L	Prepared:	03/11/13 By: DLV
Dilution Factor:	5	Analyzed:	03/12/13 By: DLV
QC Batch:	1302156	Analytical Batch:	3C12044

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
78-87-5	1,2-Dichloropropane	<5.0	5.0
10061-01-5	cis-1,3-Dichloropropene	<5.0	5.0
10061-02-6	trans-1,3-Dichloropropene	<5.0	5.0
100-41-4	Ethylbenzene	<5.0	5.0
60-29-7	Ethyl Ether	<25	25
591-78-6	2-Hexanone	<25	25
74-88-4	Iodomethane	<5.0	5.0
98-82-8	Isopropylbenzene	<5.0	5.0
99-87-6	4-Isopropyltoluene	<25	25
1634-04-4	Methyl tert-Butyl Ether	<25	25
75-09-2	Methylene Chloride	<25	25
78-93-3	2-Butanone (MEK)	**27**	25
*91-57-6	2-Methylnaphthalene	<25	25
108-10-1	4-Methyl-2-pentanone (MIBK)	<25	25
91-20-3	Naphthalene	<25	25
103-65-1	n-Propylbenzene	<5.0	5.0
100-42-5	Styrene	<5.0	5.0
630-20-6	1,1,1,2-Tetrachloroethane	<5.0	5.0
79-34-5	1,1,2,2-Tetrachloroethane	<5.0	5.0
127-18-4	Tetrachloroethene	**310**	5.0
109-99-9	Tetrahydrofuran	<25	25
108-88-3	Toluene	<5.0	5.0
87-61-6	1,2,3-Trichlorobenzene	<25	25
120-82-1	1,2,4-Trichlorobenzene	<25	25
71-55-6	1,1,1-Trichloroethane	**35**	5.0
79-00-5	1,1,2-Trichloroethane	<5.0	5.0
79-01-6	Trichloroethene	**720**	5.0
75-69-4	Trichlorofluoromethane	<5.0	5.0
96-18-4	1,2,3-Trichloropropane	<5.0	5.0
95-63-6	1,2,4-Trimethylbenzene	<5.0	5.0
108-67-8	1,3,5-Trimethylbenzene	<5.0	5.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1303134**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-05s**	Sampled:	03/05/13 13:04
Lab Sample ID:	**1303134-15**	Sampled By:	J. Jasso
Matrix:	Water	Received:	03/07/13 17:10
Unit:	ug/L	Prepared:	03/11/13 By: DLV
Dilution Factor:	5	Analyzed:	03/12/13 By: DLV
QC Batch:	1302156	Analytical Batch:	3C12044

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
75-01-4	Vinyl Chloride	<5.0	5.0
179601-23-1	Xylene, Meta + Para	<10	10
95-47-6	Xylene, Ortho	<5.0	5.0

Surrogates:	***% Recovery***	***Control Limits***
Dibromofluoromethane	*109*	*85-118*
1,2-Dichloroethane-d4	*105*	*87-122*
Toluene-d8	*102*	*85-113*
4-Bromofluorobenzene	*93*	*82-110*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1303134**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-15d**	Sampled:	03/05/13 13:54
Lab Sample ID:	**1303134-16**	Sampled By:	J. Jasso
Matrix:	Water	Received:	03/07/13 17:10
Unit:	ug/L	Prepared:	03/11/13 By: DLV
Dilution Factor:	1	Analyzed:	03/12/13 By: DLV
QC Batch:	1302156	Analytical Batch:	3C12044

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	RL
67-64-1	Acetone	<20	20
107-13-1	Acrylonitrile	<2.0	2.0
71-43-2	Benzene	<1.0	1.0
108-86-1	Bromobenzene	<1.0	1.0
74-97-5	Bromochloromethane	<1.0	1.0
75-27-4	Bromodichloromethane	<1.0	1.0
75-25-2	Bromoform	<1.0	1.0
*74-83-9	Bromomethane	<5.0	5.0
104-51-8	n-Butylbenzene	<1.0	1.0
135-98-8	sec-Butylbenzene	<1.0	1.0
98-06-6	tert-Butylbenzene	<1.0	1.0
75-15-0	Carbon Disulfide	<1.0	1.0
56-23-5	Carbon Tetrachloride	<1.0	1.0
108-90-7	Chlorobenzene	<1.0	1.0
75-00-3	Chloroethane	<5.0	5.0
67-66-3	Chloroform	<1.0	1.0
74-87-3	Chloromethane	<5.0	5.0
96-12-8	1,2-Dibromo-3-chloropropane	<5.0	5.0
124-48-1	Dibromochloromethane	<1.0	1.0
106-93-4	1,2-Dibromoethane	<1.0	1.0
74-95-3	Dibromomethane	<1.0	1.0
110-57-6	trans-1,4-Dichloro-2-butene	<1.0	1.0
95-50-1	1,2-Dichlorobenzene	<1.0	1.0
541-73-1	1,3-Dichlorobenzene	<1.0	1.0
106-46-7	1,4-Dichlorobenzene	<1.0	1.0
75-71-8	Dichlorodifluoromethane	<5.0	5.0
75-34-3	1,1-Dichloroethane	<1.0	1.0
107-06-2	1,2-Dichloroethane	<1.0	1.0
75-35-4	1,1-Dichloroethene	<1.0	1.0
156-59-2	cis-1,2-Dichloroethene	**3.0**	1.0
156-60-5	trans-1,2-Dichloroethene	<1.0	1.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1303134**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-15d**	Sampled:	03/05/13 13:54
Lab Sample ID:	**1303134-16**	Sampled By:	J. Jasso
Matrix:	Water	Received:	03/07/13 17:10
Unit:	ug/L	Prepared:	03/11/13 By: DLV
Dilution Factor:	1	Analyzed:	03/12/13 By: DLV
QC Batch:	1302156	Analytical Batch:	3C12044

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
78-87-5	1,2-Dichloropropane	<1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	<1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	<1.0	1.0
100-41-4	Ethylbenzene	<1.0	1.0
60-29-7	Ethyl Ether	<5.0	5.0
591-78-6	2-Hexanone	<5.0	5.0
74-88-4	Iodomethane	<1.0	1.0
98-82-8	Isopropylbenzene	<1.0	1.0
99-87-6	4-Isopropyltoluene	<5.0	5.0
1634-04-4	Methyl tert-Butyl Ether	<5.0	5.0
75-09-2	Methylene Chloride	<5.0	5.0
78-93-3	2-Butanone (MEK)	<5.0	5.0
*91-57-6	2-Methylnaphthalene	<5.0	5.0
108-10-1	4-Methyl-2-pentanone (MIBK)	<5.0	5.0
91-20-3	Naphthalene	<5.0	5.0
103-65-1	n-Propylbenzene	<1.0	1.0
100-42-5	Styrene	<1.0	1.0
630-20-6	1,1,1,2-Tetrachloroethane	<1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	<1.0	1.0
127-18-4	Tetrachloroethene	<1.0	1.0
109-99-9	Tetrahydrofuran	<5.0	5.0
108-88-3	Toluene	<1.0	1.0
87-61-6	1,2,3-Trichlorobenzene	<5.0	5.0
120-82-1	1,2,4-Trichlorobenzene	<5.0	5.0
71-55-6	1,1,1-Trichloroethane	**5.0**	1.0
79-00-5	1,1,2-Trichloroethane	<1.0	1.0
79-01-6	Trichloroethene	**32**	1.0
75-69-4	Trichlorofluoromethane	<1.0	1.0
96-18-4	1,2,3-Trichloropropane	<1.0	1.0
95-63-6	1,2,4-Trimethylbenzene	<1.0	1.0
108-67-8	1,3,5-Trimethylbenzene	<1.0	1.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1303134**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-15d**	Sampled:	03/05/13 13:54
Lab Sample ID:	**1303134-16**	Sampled By:	J. Jasso
Matrix:	Water	Received:	03/07/13 17:10
Unit:	ug/L	Prepared:	03/11/13 By: DLV
Dilution Factor:	1	Analyzed:	03/12/13 By: DLV
QC Batch:	1302156	Analytical Batch:	3C12044

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
75-01-4	Vinyl Chloride	<1.0	1.0
179601-23-1	Xylene, Meta + Para	<2.0	2.0
95-47-6	Xylene, Ortho	<1.0	1.0

Surrogates:	***% Recovery***	***Control Limits***
Dibromofluoromethane	*108*	*85-118*
1,2-Dichloroethane-d4	*106*	*87-122*
Toluene-d8	*101*	*85-113*
4-Bromofluorobenzene	*93*	*82-110*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1303134**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-15s**	Sampled:	03/05/13 14:52
Lab Sample ID:	**1303134-17**	Sampled By:	J. Jasso
Matrix:	Water	Received:	03/07/13 17:10
Unit:	ug/L	Prepared:	03/11/13 By: DLV
Dilution Factor:	20	Analyzed:	03/12/13 By: DLV
QC Batch:	1302156	Analytical Batch:	3C12044

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	RL
67-64-1	Acetone	<400	400
107-13-1	Acrylonitrile	<40	40
71-43-2	Benzene	<20	20
108-86-1	Bromobenzene	<20	20
74-97-5	Bromochloromethane	<20	20
75-27-4	Bromodichloromethane	<20	20
75-25-2	Bromoform	<20	20
*74-83-9	Bromomethane	<100	100
104-51-8	n-Butylbenzene	<20	20
135-98-8	sec-Butylbenzene	<20	20
98-06-6	tert-Butylbenzene	<20	20
75-15-0	Carbon Disulfide	<20	20
56-23-5	Carbon Tetrachloride	<20	20
108-90-7	Chlorobenzene	<20	20
75-00-3	Chloroethane	<100	100
67-66-3	Chloroform	<20	20
74-87-3	Chloromethane	<100	100
96-12-8	1,2-Dibromo-3-chloropropane	<100	100
124-48-1	Dibromochloromethane	<20	20
106-93-4	1,2-Dibromoethane	<20	20
74-95-3	Dibromomethane	<20	20
110-57-6	trans-1,4-Dichloro-2-butene	<20	20
95-50-1	1,2-Dichlorobenzene	<20	20
541-73-1	1,3-Dichlorobenzene	<20	20
106-46-7	1,4-Dichlorobenzene	<20	20
75-71-8	Dichlorodifluoromethane	<100	100
75-34-3	1,1-Dichloroethane	<20	20
107-06-2	1,2-Dichloroethane	<20	20
75-35-4	1,1-Dichloroethene	<20	20
156-59-2	cis-1,2-Dichloroethene	**120**	20
156-60-5	trans-1,2-Dichloroethene	<20	20

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1303134**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-15s**	Sampled:	03/05/13 14:52
Lab Sample ID:	**1303134-17**	Sampled By:	J. Jasso
Matrix:	Water	Received:	03/07/13 17:10
Unit:	ug/L	Prepared:	03/11/13 By: DLV
Dilution Factor:	20	Analyzed:	03/12/13 By: DLV
QC Batch:	1302156	Analytical Batch:	3C12044

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
78-87-5	1,2-Dichloropropane	<20	20
10061-01-5	cis-1,3-Dichloropropene	<20	20
10061-02-6	trans-1,3-Dichloropropene	<20	20
100-41-4	Ethylbenzene	<20	20
60-29-7	Ethyl Ether	<100	100
591-78-6	2-Hexanone	<100	100
74-88-4	Iodomethane	<20	20
98-82-8	Isopropylbenzene	<20	20
99-87-6	4-Isopropyltoluene	<100	100
1634-04-4	Methyl tert-Butyl Ether	<100	100
75-09-2	Methylene Chloride	<100	100
78-93-3	2-Butanone (MEK)	**110**	100
*91-57-6	2-Methylnaphthalene	<100	100
108-10-1	4-Methyl-2-pentanone (MIBK)	<100	100
91-20-3	Naphthalene	<100	100
103-65-1	n-Propylbenzene	<20	20
100-42-5	Styrene	<20	20
630-20-6	1,1,1,2-Tetrachloroethane	<20	20
79-34-5	1,1,2,2-Tetrachloroethane	<20	20
127-18-4	Tetrachloroethene	<20	20
109-99-9	Tetrahydrofuran	<100	100
108-88-3	Toluene	<20	20
87-61-6	1,2,3-Trichlorobenzene	<100	100
120-82-1	1,2,4-Trichlorobenzene	<100	100
71-55-6	1,1,1-Trichloroethane	**570**	20
79-00-5	1,1,2-Trichloroethane	<20	20
79-01-6	Trichloroethene	**1800**	20
75-69-4	Trichlorofluoromethane	<20	20
96-18-4	1,2,3-Trichloropropane	<20	20
95-63-6	1,2,4-Trimethylbenzene	<20	20
108-67-8	1,3,5-Trimethylbenzene	<20	20

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1303134**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-15s**	Sampled:	03/05/13 14:52
Lab Sample ID:	**1303134-17**	Sampled By:	J. Jasso
Matrix:	Water	Received:	03/07/13 17:10
Unit:	ug/L	Prepared:	03/11/13 By: DLV
Dilution Factor:	20	Analyzed:	03/12/13 By: DLV
QC Batch:	1302156	Analytical Batch:	3C12044

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
75-01-4	Vinyl Chloride	<20	20
179601-23-1	Xylene, Meta + Para	<40	40
95-47-6	Xylene, Ortho	<20	20

Surrogates:	***% Recovery***	***Control Limits***
Dibromofluoromethane	*110*	*85-118*
1,2-Dichloroethane-d4	*107*	*87-122*
Toluene-d8	*102*	*85-113*
4-Bromofluorobenzene	*94*	*82-110*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1303134**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-14s**	Sampled:	03/05/13 15:25
Lab Sample ID:	**1303134-18**	Sampled By:	J. Jasso
Matrix:	Water	Received:	03/07/13 17:10
Unit:	ug/L	Prepared:	03/11/13 By: DLV
Dilution Factor:	20	Analyzed:	03/12/13 By: DLV
QC Batch:	1302156	Analytical Batch:	3C12044

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	RL
67-64-1	Acetone	<400	400
107-13-1	Acrylonitrile	<40	40
71-43-2	Benzene	<20	20
108-86-1	Bromobenzene	<20	20
74-97-5	Bromochloromethane	<20	20
75-27-4	Bromodichloromethane	<20	20
75-25-2	Bromoform	<20	20
*74-83-9	Bromomethane	<100	100
104-51-8	n-Butylbenzene	<20	20
135-98-8	sec-Butylbenzene	<20	20
98-06-6	tert-Butylbenzene	<20	20
75-15-0	Carbon Disulfide	<20	20
56-23-5	Carbon Tetrachloride	<20	20
108-90-7	Chlorobenzene	<20	20
75-00-3	Chloroethane	<100	100
67-66-3	Chloroform	<20	20
74-87-3	Chloromethane	<100	100
96-12-8	1,2-Dibromo-3-chloropropane	<100	100
124-48-1	Dibromochloromethane	<20	20
106-93-4	1,2-Dibromoethane	<20	20
74-95-3	Dibromomethane	<20	20
110-57-6	trans-1,4-Dichloro-2-butene	<20	20
95-50-1	1,2-Dichlorobenzene	<20	20
541-73-1	1,3-Dichlorobenzene	<20	20
106-46-7	1,4-Dichlorobenzene	<20	20
75-71-8	Dichlorodifluoromethane	<100	100
75-34-3	1,1-Dichloroethane	<20	20
107-06-2	1,2-Dichloroethane	<20	20
75-35-4	1,1-Dichloroethene	<20	20
156-59-2	cis-1,2-Dichloroethene	**29**	20
156-60-5	trans-1,2-Dichloroethene	<20	20

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1303134**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-14s**	Sampled:	03/05/13 15:25
Lab Sample ID:	**1303134-18**	Sampled By:	J. Jasso
Matrix:	Water	Received:	03/07/13 17:10
Unit:	ug/L	Prepared:	03/11/13 By: DLV
Dilution Factor:	20	Analyzed:	03/12/13 By: DLV
QC Batch:	1302156	Analytical Batch:	3C12044

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
78-87-5	1,2-Dichloropropane	<20	20
10061-01-5	cis-1,3-Dichloropropene	<20	20
10061-02-6	trans-1,3-Dichloropropene	<20	20
100-41-4	Ethylbenzene	<20	20
60-29-7	Ethyl Ether	<100	100
591-78-6	2-Hexanone	<100	100
74-88-4	Iodomethane	<20	20
98-82-8	Isopropylbenzene	<20	20
99-87-6	4-Isopropyltoluene	<100	100
1634-04-4	Methyl tert-Butyl Ether	<100	100
75-09-2	Methylene Chloride	<100	100
78-93-3	2-Butanone (MEK)	**120**	100
*91-57-6	2-Methylnaphthalene	<100	100
108-10-1	4-Methyl-2-pentanone (MIBK)	<100	100
91-20-3	Naphthalene	<100	100
103-65-1	n-Propylbenzene	<20	20
100-42-5	Styrene	<20	20
630-20-6	1,1,1,2-Tetrachloroethane	<20	20
79-34-5	1,1,2,2-Tetrachloroethane	<20	20
127-18-4	Tetrachloroethene	<20	20
109-99-9	Tetrahydrofuran	<100	100
108-88-3	Toluene	<20	20
87-61-6	1,2,3-Trichlorobenzene	<100	100
120-82-1	1,2,4-Trichlorobenzene	<100	100
71-55-6	1,1,1-Trichloroethane	**1100**	20
79-00-5	1,1,2-Trichloroethane	<20	20
79-01-6	Trichloroethene	**3200**	20
75-69-4	Trichlorofluoromethane	<20	20
96-18-4	1,2,3-Trichloropropane	<20	20
95-63-6	1,2,4-Trimethylbenzene	<20	20
108-67-8	1,3,5-Trimethylbenzene	<20	20

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1303134**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-14s**	Sampled:	03/05/13 15:25
Lab Sample ID:	**1303134-18**	Sampled By:	J. Jasso
Matrix:	Water	Received:	03/07/13 17:10
Unit:	ug/L	Prepared:	03/11/13 By: DLV
Dilution Factor:	20	Analyzed:	03/12/13 By: DLV
QC Batch:	1302156	Analytical Batch:	3C12044

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
75-01-4	Vinyl Chloride	**41**	20
179601-23-1	Xylene, Meta + Para	<40	40
95-47-6	Xylene, Ortho	<20	20

Surrogates:	***% Recovery***	***Control Limits***
Dibromofluoromethane	*111*	*85-118*
1,2-Dichloroethane-d4	*105*	*87-122*
Toluene-d8	*102*	*85-113*
4-Bromofluorobenzene	*94*	*82-110*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1303134**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-13s**	Sampled:	03/05/13 16:18
Lab Sample ID:	**1303134-19**	Sampled By:	J. Jasso
Matrix:	Water	Received:	03/07/13 17:10
Unit:	ug/L	Prepared:	03/11/13 By: DLV
Dilution Factor:	20	Analyzed:	03/12/13 By: DLV
QC Batch:	1302156	Analytical Batch:	3C12044

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	RL
67-64-1	Acetone	<400	400
107-13-1	Acrylonitrile	<40	40
71-43-2	Benzene	<20	20
108-86-1	Bromobenzene	<20	20
74-97-5	Bromochloromethane	<20	20
75-27-4	Bromodichloromethane	<20	20
75-25-2	Bromoform	<20	20
*74-83-9	Bromomethane	<100	100
104-51-8	n-Butylbenzene	<20	20
135-98-8	sec-Butylbenzene	<20	20
98-06-6	tert-Butylbenzene	<20	20
75-15-0	Carbon Disulfide	<20	20
56-23-5	Carbon Tetrachloride	<20	20
108-90-7	Chlorobenzene	<20	20
75-00-3	Chloroethane	<100	100
67-66-3	Chloroform	<20	20
74-87-3	Chloromethane	<100	100
96-12-8	1,2-Dibromo-3-chloropropane	<100	100
124-48-1	Dibromochloromethane	<20	20
106-93-4	1,2-Dibromoethane	<20	20
74-95-3	Dibromomethane	<20	20
110-57-6	trans-1,4-Dichloro-2-butene	<20	20
95-50-1	1,2-Dichlorobenzene	<20	20
541-73-1	1,3-Dichlorobenzene	<20	20
106-46-7	1,4-Dichlorobenzene	<20	20
75-71-8	Dichlorodifluoromethane	<100	100
75-34-3	1,1-Dichloroethane	<20	20
107-06-2	1,2-Dichloroethane	<20	20
75-35-4	1,1-Dichloroethene	<20	20
156-59-2	cis-1,2-Dichloroethene	<20	20
156-60-5	trans-1,2-Dichloroethene	<20	20

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1303134**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-13s**	Sampled:	03/05/13 16:18
Lab Sample ID:	**1303134-19**	Sampled By:	J. Jasso
Matrix:	Water	Received:	03/07/13 17:10
Unit:	ug/L	Prepared:	03/11/13 By: DLV
Dilution Factor:	20	Analyzed:	03/12/13 By: DLV
QC Batch:	1302156	Analytical Batch:	3C12044

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
78-87-5	1,2-Dichloropropane	<20	20
10061-01-5	cis-1,3-Dichloropropene	<20	20
10061-02-6	trans-1,3-Dichloropropene	<20	20
100-41-4	Ethylbenzene	<20	20
60-29-7	Ethyl Ether	<100	100
591-78-6	2-Hexanone	<100	100
74-88-4	Iodomethane	<20	20
98-82-8	Isopropylbenzene	<20	20
99-87-6	4-Isopropyltoluene	<100	100
1634-04-4	Methyl tert-Butyl Ether	<100	100
75-09-2	Methylene Chloride	<100	100
78-93-3	2-Butanone (MEK)	**110**	100
*91-57-6	2-Methylnaphthalene	<100	100
108-10-1	4-Methyl-2-pentanone (MIBK)	<100	100
91-20-3	Naphthalene	<100	100
103-65-1	n-Propylbenzene	<20	20
100-42-5	Styrene	<20	20
630-20-6	1,1,1,2-Tetrachloroethane	<20	20
79-34-5	1,1,2,2-Tetrachloroethane	<20	20
127-18-4	Tetrachloroethene	<20	20
109-99-9	Tetrahydrofuran	<100	100
108-88-3	Toluene	<20	20
87-61-6	1,2,3-Trichlorobenzene	<100	100
120-82-1	1,2,4-Trichlorobenzene	<100	100
71-55-6	1,1,1-Trichloroethane	**1300**	20
79-00-5	1,1,2-Trichloroethane	<20	20
79-01-6	Trichloroethene	**3200**	20
75-69-4	Trichlorofluoromethane	<20	20
96-18-4	1,2,3-Trichloropropane	<20	20
95-63-6	1,2,4-Trimethylbenzene	<20	20
108-67-8	1,3,5-Trimethylbenzene	<20	20

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1303134**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-13s**	Sampled:	03/05/13 16:18
Lab Sample ID:	**1303134-19**	Sampled By:	J. Jasso
Matrix:	Water	Received:	03/07/13 17:10
Unit:	ug/L	Prepared:	03/11/13 By: DLV
Dilution Factor:	20	Analyzed:	03/12/13 By: DLV
QC Batch:	1302156	Analytical Batch:	3C12044

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
75-01-4	Vinyl Chloride	<20	20
179601-23-1	Xylene, Meta + Para	<40	40
95-47-6	Xylene, Ortho	<20	20

Surrogates:	***% Recovery***	***Control Limits***
Dibromofluoromethane	*110*	*85-118*
1,2-Dichloroethane-d4	*106*	*87-122*
Toluene-d8	*103*	*85-113*
4-Bromofluorobenzene	*95*	*82-110*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1303134**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-12s**	Sampled:	03/05/13 16:55
Lab Sample ID:	**1303134-20**	Sampled By:	J. Jasso
Matrix:	Water	Received:	03/07/13 17:10
Unit:	ug/L	Prepared:	03/11/13 By: DLV
Dilution Factor:	10	Analyzed:	03/12/13 By: DLV
QC Batch:	1302156	Analytical Batch:	3C12044

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	RL
67-64-1	Acetone	<200	200
107-13-1	Acrylonitrile	<20	20
71-43-2	Benzene	<10	10
108-86-1	Bromobenzene	<10	10
74-97-5	Bromochloromethane	<10	10
75-27-4	Bromodichloromethane	<10	10
75-25-2	Bromoform	<10	10
*74-83-9	Bromomethane	<50	50
104-51-8	n-Butylbenzene	<10	10
135-98-8	sec-Butylbenzene	<10	10
98-06-6	tert-Butylbenzene	<10	10
75-15-0	Carbon Disulfide	<10	10
56-23-5	Carbon Tetrachloride	<10	10
108-90-7	Chlorobenzene	<10	10
75-00-3	Chloroethane	<50	50
67-66-3	Chloroform	<10	10
74-87-3	Chloromethane	<50	50
96-12-8	1,2-Dibromo-3-chloropropane	<50	50
124-48-1	Dibromochloromethane	<10	10
106-93-4	1,2-Dibromoethane	<10	10
74-95-3	Dibromomethane	<10	10
110-57-6	trans-1,4-Dichloro-2-butene	<10	10
95-50-1	1,2-Dichlorobenzene	<10	10
541-73-1	1,3-Dichlorobenzene	<10	10
106-46-7	1,4-Dichlorobenzene	<10	10
75-71-8	Dichlorodifluoromethane	<50	50
75-34-3	1,1-Dichloroethane	<10	10
107-06-2	1,2-Dichloroethane	<10	10
75-35-4	1,1-Dichloroethene	<10	10
156-59-2	cis-1,2-Dichloroethene	<10	10
156-60-5	trans-1,2-Dichloroethene	<10	10

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1303134**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-12s**	Sampled:	03/05/13 16:55
Lab Sample ID:	**1303134-20**	Sampled By:	J. Jasso
Matrix:	Water	Received:	03/07/13 17:10
Unit:	ug/L	Prepared:	03/11/13 By: DLV
Dilution Factor:	10	Analyzed:	03/12/13 By: DLV
QC Batch:	1302156	Analytical Batch:	3C12044

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
78-87-5	1,2-Dichloropropane	<10	10
10061-01-5	cis-1,3-Dichloropropene	<10	10
10061-02-6	trans-1,3-Dichloropropene	<10	10
100-41-4	Ethylbenzene	<10	10
60-29-7	Ethyl Ether	<50	50
591-78-6	2-Hexanone	<50	50
74-88-4	Iodomethane	<10	10
98-82-8	Isopropylbenzene	<10	10
99-87-6	4-Isopropyltoluene	<50	50
1634-04-4	Methyl tert-Butyl Ether	<50	50
75-09-2	Methylene Chloride	<50	50
78-93-3	2-Butanone (MEK)	<50	50
*91-57-6	2-Methylnaphthalene	<50	50
108-10-1	4-Methyl-2-pentanone (MIBK)	<50	50
91-20-3	Naphthalene	<50	50
103-65-1	n-Propylbenzene	<10	10
100-42-5	Styrene	<10	10
630-20-6	1,1,1,2-Tetrachloroethane	<10	10
79-34-5	1,1,2,2-Tetrachloroethane	<10	10
127-18-4	Tetrachloroethene	**12**	10
109-99-9	Tetrahydrofuran	<50	50
108-88-3	Toluene	<10	10
87-61-6	1,2,3-Trichlorobenzene	<50	50
120-82-1	1,2,4-Trichlorobenzene	<50	50
71-55-6	1,1,1-Trichloroethane	**21**	10
79-00-5	1,1,2-Trichloroethane	<10	10
79-01-6	Trichloroethene	**840**	10
75-69-4	Trichlorofluoromethane	<10	10
96-18-4	1,2,3-Trichloropropane	<10	10
95-63-6	1,2,4-Trimethylbenzene	<10	10
108-67-8	1,3,5-Trimethylbenzene	<10	10

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1303134**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-12s**	Sampled:	03/05/13 16:55
Lab Sample ID:	**1303134-20**	Sampled By:	J. Jasso
Matrix:	Water	Received:	03/07/13 17:10
Unit:	ug/L	Prepared:	03/11/13 By: DLV
Dilution Factor:	10	Analyzed:	03/12/13 By: DLV
QC Batch:	1302156	Analytical Batch:	3C12044

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
75-01-4	Vinyl Chloride	<10	10
179601-23-1	Xylene, Meta + Para	<20	20
95-47-6	Xylene, Ortho	<10	10

Surrogates:	***% Recovery***	***Control Limits***
Dibromofluoromethane	*107*	*85-118*
1,2-Dichloroethane-d4	*107*	*87-122*
Toluene-d8	*103*	*85-113*
4-Bromofluorobenzene	*93*	*82-110*

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TRIMATRIX LABORATORIES

QUALITY CONTROL REPORT

Dissolved Gases in Water by RSK-175 Headspace Analysis

QC Batch: 1302158 Method-Specific Extraction/RSK-175

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
Method Blank					Analyzed:		03/14/2013	By: BJH
Unit: ug/L					Analytical Batch:		3C15019	
Ethane			<1.0			--		1.0
Methane			<0.50			--		0.50
Ethylene			<1.0			--		1.0
Laboratory Control Sample					Analyzed:		03/14/2013	By: BJH
Unit: ug/L					Analytical Batch:		3C15019	
Ethane		62.1	**57.7**	93	69-121	--		1.0
Methane		33.0	**30.0**	91	65-113	--		0.50
Ethylene		57.8	**52.2**	90	69-125	--		1.0
Laboratory Control Sample Duplicate					Analyzed:		03/14/2013	By: BJH
Unit: ug/L					Analytical Batch:		3C15019	
Ethane		62.1	**58.9**	95	69-121	2	20	1.0
Methane		33.0	**30.7**	93	65-113	2	20	0.50
Ethylene		57.8	**52.5**	91	69-125	0.6	20	1.0

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QUALITY CONTROL REPORT

Volatile Organic Compounds by EPA Method 8260B

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL

QC Batch: 1302156 5030B Aqueous Purge & Trap/USEPA-8260B

Method Blank Analyzed: 03/11/2013 By: DLV
Unit: ug/L Analytical Batch: 3C12044

Acetone	<20	--	20
Acrylonitrile	<2.0		2.0
Benzene	<1.0		1.0
Bromobenzene	<1.0		1.0
Bromochloromethane	<1.0		1.0
Bromodichloromethane	<1.0		1.0
Bromoform	<1.0		1.0
Bromomethane	<5.0	--	5.0
n-Butylbenzene	**1.4**	--	1.0
sec-Butylbenzene	<1.0		1.0
tert-Butylbenzene	<1.0		1.0
Carbon Disulfide	<1.0	--	1.0
Carbon Tetrachloride	<1.0		1.0
Chlorobenzene	<1.0		1.0
Chloroethane	<5.0		5.0
Chloroform	<1.0		1.0
Chloromethane	<5.0		5.0
1,2-Dibromo-3-chloropropane	<5.0		5.0
Dibromochloromethane	<1.0		1.0
1,2-Dibromoethane	<1.0		1.0
Dibromomethane	<1.0		1.0
trans-1,4-Dichloro-2-butene	<1.0		1.0
1,2-Dichlorobenzene	<1.0		1.0
1,3-Dichlorobenzene	<1.0	--	1.0
1,4-Dichlorobenzene	<1.0	--	1.0
Dichlorodifluoromethane	<5.0		5.0
1,1-Dichloroethane	<1.0		1.0
1,2-Dichloroethane	<1.0		1.0
1,1-Dichloroethene	<1.0		1.0
cis-1,2-Dichloroethene	<1.0		1.0
trans-1,2-Dichloroethene	<1.0		1.0
1,2-Dichloropropane	<1.0		1.0
cis-1,3-Dichloropropene	<1.0		1.0
trans-1,3-Dichloropropene	<1.0		1.0
Ethylbenzene	<1.0		1.0
Ethyl Ether	<5.0		5.0

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Volatile Organic Compounds by EPA Method 8260B (Continued)

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL

QC Batch: 1302156 (Continued) 5030B Aqueous Purge & Trap/USEPA-8260B

Method Blank (Continued) Analyzed: 03/11/2013 By: DLV
Unit: ug/L Analytical Batch: 3C12044

2-Hexanone	<5.0				5.0
Iodomethane	<1.0				1.0
Isopropylbenzene	<1.0				1.0
4-Isopropyltoluene	<5.0			--	5.0
Methyl tert-Butyl Ether	<5.0				5.0
Methylene Chloride	<5.0			--	5.0
2-Butanone (MEK)	<5.0				5.0
2-Methylnaphthalene	<5.0			--	5.0
4-Methyl-2-pentanone (MIBK)	<5.0				5.0
Naphthalene	<5.0			--	5.0
n-Propylbenzene	<1.0				1.0
Styrene	<1.0				1.0
1,1,1,2-Tetrachloroethane	<1.0				1.0
1,1,2,2-Tetrachloroethane	<1.0				1.0
Tetrachloroethene	<1.0				1.0
Tetrahydrofuran	<5.0				5.0
Toluene	<1.0				1.0
1,2,3-Trichlorobenzene	<5.0			--	5.0
1,2,4-Trichlorobenzene	<5.0			--	5.0
1,1,1-Trichloroethane	<1.0				1.0
1,1,2-Trichloroethane	<1.0				1.0
Trichloroethene	<1.0				1.0
Trichlorofluoromethane	<1.0				1.0
1,2,3-Trichloropropane	<1.0				1.0
1,2,4-Trimethylbenzene	<1.0				1.0
1,3,5-Trimethylbenzene	<1.0				1.0
Vinyl Chloride	<1.0				1.0
Xylene, Meta + Para	<2.0				2.0
Xylene, Ortho	<1.0				1.0
Surrogates:					
Dibromofluoromethane			*105*	*85-118*	
1,2-Dichloroethane-d4			*103*	*87-122*	
Toluene-d8			*98*	*85-113*	

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QUALITY CONTROL REPORT

Volatile Organic Compounds by EPA Method 8260B (Continued)

QC Batch: 1302156 (Continued) 5030B Aqueous Purge & Trap/USEPA-8260B

Method Blank (Continued) Analyzed: 03/11/2013 By: DLV
Unit: ug/L Analytical Batch: 3C12044

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
Surrogates (Continued):								
4-Bromofluorobenzene				*95*	*82-110*			

Laboratory Control Sample Analyzed: 03/11/2013 By: DLV
Unit: ug/L Analytical Batch: 3C12044

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
Benzene		40.0	**44.9**	112	84-119	--	20	1.0
Chlorobenzene		40.0	**43.8**	110	84-118	--	20	1.0
1,1-Dichloroethene		40.0	**46.2**	116	77-123	--	20	1.0
Toluene		40.0	**45.7**	114	85-118	--	20	1.0
Trichloroethene		40.0	**39.9**	100	82-119	--	20	1.0
Surrogates:								
Dibromofluoromethane				*104*	*85-118*			
1,2-Dichloroethane-d4				*103*	*87-122*			
Toluene-d8				*104*	*85-113*			
4-Bromofluorobenzene				*104*	*82-110*			

Matrix Spike 1303134-16 PRB-15d Analyzed: 03/12/2013 By: DLV
Unit: ug/L Analytical Batch: 3C12044

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
Benzene	<1.0	40.0	**46.2**	116	80-129	--	9	1.0
Chlorobenzene	<1.0	40.0	**45.6**	114	80-121	--	8	1.0
1,1-Dichloroethene	<1.0	40.0	**47.5**	119	74-134	--	11	1.0
Toluene	<1.0	40.0	**47.8**	120	79-129	--	9	1.0
Trichloroethene	32.3	40.0	**74.2**	105	75-127	--	10	1.0
Surrogates:								
Dibromofluoromethane				*107*	*85-118*			
1,2-Dichloroethane-d4				*106*	*87-122*			
Toluene-d8				*105*	*85-113*			
4-Bromofluorobenzene				*109*	*82-110*			

Matrix Spike Duplicate 1303134-16 PRB-15d Analyzed: 03/12/2013 By: DLV
Unit: ug/L Analytical Batch: 3C12044

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
Benzene	<1.0	40.0	**46.0**	115	80-129	0.5	9	1.0

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US EPA ARCHIVE DOCUMENT

Volatile Organic Compounds by EPA Method 8260B (Continued)

QC Batch: 1302156 (Continued) 5030B Aqueous Purge & Trap/USEPA-8260B

Matrix Spike Duplicate (Continued) 1303134-16 PRB-15d — Analyzed: 03/12/2013 By: DLV
Unit: ug/L — Analytical Batch: 3C12044

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
Chlorobenzene	<1.0	40.0	**44.7**	112	80-121	2	8	1.0
1,1-Dichloroethene	<1.0	40.0	**49.6**	124	74-134	4	11	1.0
Toluene	<1.0	40.0	**46.5**	116	79-129	3	9	1.0
Trichloroethene	32.3	40.0	**74.0**	104	75-127	0.3	10	1.0
Surrogates:								
Dibromofluoromethane				*105*	*85-118*			
1,2-Dichloroethane-d4				*103*	*87-122*			
Toluene-d8				*102*	*85-113*			
4-Bromofluorobenzene				*106*	*82-110*			

QC Batch: 1302224 5030B Aqueous Purge & Trap/USEPA-8260B

Method Blank — Analyzed: 03/12/2013 By: LEW
Unit: ug/L — Analytical Batch: 3C13039

Acetone	<20	--	20
Acrylonitrile	<2.0		2.0
Benzene	<1.0		1.0
Bromobenzene	<1.0	--	1.0
Bromochloromethane	<1.0		1.0
Bromodichloromethane	<1.0		1.0
Bromoform	<1.0		1.0
Bromomethane	<5.0		5.0
n-Butylbenzene	<1.0		1.0
sec-Butylbenzene	<1.0		1.0
tert-Butylbenzene	<1.0		1.0
Carbon Disulfide	<1.0		1.0
Carbon Tetrachloride	<1.0		1.0
Chlorobenzene	<1.0		1.0
Chloroethane	<5.0		5.0
Chloroform	<1.0		1.0
Chloromethane	<5.0		5.0
1,2-Dibromo-3-chloropropane	<5.0		5.0
Dibromochloromethane	<1.0		1.0
1,2-Dibromoethane	<1.0		1.0

Continued on next page

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Volatile Organic Compounds by EPA Method 8260B (Continued)

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL

QC Batch: 1302224 (Continued) 5030B Aqueous Purge & Trap/USEPA-8260B

Method Blank (Continued) Analyzed: 03/12/2013 By: LEW
Unit: ug/L Analytical Batch: 3C13039

Dibromomethane	<1.0		1.0
trans-1,4-Dichloro-2-butene	<1.0		1.0
1,2-Dichlorobenzene	<1.0	--	1.0
1,3-Dichlorobenzene	<1.0	--	1.0
1,4-Dichlorobenzene	<1.0	--	1.0
Dichlorodifluoromethane	<5.0		5.0
1,1-Dichloroethane	<1.0		1.0
1,2-Dichloroethane	<1.0		1.0
1,1-Dichloroethene	<1.0		1.0
cis-1,2-Dichloroethene	<1.0		1.0
trans-1,2-Dichloroethene	<1.0		1.0
1,2-Dichloropropane	<1.0		1.0
cis-1,3-Dichloropropene	<1.0		1.0
trans-1,3-Dichloropropene	<1.0		1.0
Ethylbenzene	<1.0		1.0
Ethyl Ether	<5.0		5.0
2-Hexanone	<5.0		5.0
Iodomethane	<1.0		1.0
Isopropylbenzene	<1.0		1.0
4-Isopropyltoluene	<5.0	--	5.0
Methyl tert-Butyl Ether	<5.0		5.0
Methylene Chloride	<5.0	--	5.0
2-Butanone (MEK)	<5.0		5.0
2-Methylnaphthalene	**6.2**	--	5.0
4-Methyl-2-pentanone (MIBK)	<5.0	--	5.0
Naphthalene	<5.0	--	5.0
n-Propylbenzene	<1.0		1.0
Styrene	<1.0		1.0
1,1,1,2-Tetrachloroethane	<1.0		1.0
1,1,2,2-Tetrachloroethane	<1.0		1.0
Tetrachloroethene	<1.0		1.0
Tetrahydrofuran	<5.0		5.0
Toluene	<1.0		1.0
1,2,3-Trichlorobenzene	<5.0	--	5.0
1,2,4-Trichlorobenzene	<5.0	--	5.0
1,1,1-Trichloroethane	<1.0		1.0

Continued on next page

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QUALITY CONTROL REPORT

Volatile Organic Compounds by EPA Method 8260B (Continued)

QC Batch: 1302224 (Continued) 5030B Aqueous Purge & Trap/USEPA-8260B

Method Blank (Continued) Analyzed: 03/12/2013 By: LEW
Unit: ug/L Analytical Batch: 3C13039

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
1,1,2-Trichloroethane			<1.0					1.0
Trichloroethene			<1.0					1.0
Trichlorofluoromethane			<1.0					1.0
1,2,3-Trichloropropane			<1.0					1.0
1,2,4-Trimethylbenzene			<1.0					1.0
1,3,5-Trimethylbenzene			<1.0					1.0
Vinyl Chloride			<1.0					1.0
Xylene, Meta + Para			<2.0					2.0
Xylene, Ortho			<1.0					1.0
Surrogates:								
Dibromofluoromethane				*99*	*85-118*			
1,2-Dichloroethane-d4				*96*	*87-122*			
Toluene-d8				*95*	*85-113*			
4-Bromofluorobenzene				*97*	*82-110*			

Laboratory Control Sample Analyzed: 03/12/2013 By: LEW
Unit: ug/L Analytical Batch: 3C13039

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
Benzene		40.0	**39.8**	100	84-119	--	20	1.0
Chlorobenzene		40.0	**38.3**	96	84-118	--	20	1.0
1,1-Dichloroethene		40.0	**36.5**	91	77-123	--	20	1.0
Toluene		40.0	**38.4**	96	85-118	--	20	1.0
Trichloroethene		40.0	**39.4**	99	82-119	--	20	1.0
Surrogates:								
Dibromofluoromethane				*98*	*85-118*			
1,2-Dichloroethane-d4				*93*	*87-122*			
Toluene-d8				*97*	*85-113*			
4-Bromofluorobenzene				*98*	*82-110*			

Laboratory Control Sample Duplicate Analyzed: 03/12/2013 By: LEW
Unit: ug/L Analytical Batch: 3C13039

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
Benzene		40.0	**38.4**	96	84-119	4	20	1.0

Continued on next page

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Volatile Organic Compounds by EPA Method 8260B (Continued)

QC Batch: 1302224 (Continued) 5030B Aqueous Purge & Trap/USEPA-8260B

Laboratory Control Sample Duplicate (Continued) Analyzed: 03/12/2013 By: LEW

Unit: ug/L Analytical Batch: 3C13039

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
Chlorobenzene		40.0	**37.2**	93	84-118	3	20	1.0
1,1-Dichloroethene		40.0	**34.9**	87	77-123	5	20	1.0
Toluene		40.0	**37.2**	93	85-118	3	20	1.0
Trichloroethene		40.0	**38.3**	96	82-119	3	20	1.0
Surrogates:								
Dibromofluoromethane				*104*	*85-118*			
1,2-Dichloroethane-d4				*94*	*87-122*			
Toluene-d8				*98*	*85-113*			
4-Bromofluorobenzene				*97*	*82-110*			

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STATEMENT OF DATA QUALIFICATIONS

Volatile Organic Compounds by EPA Method 8260B

Qualification: The corresponding CCV for this analytical batch had a recovery exceeding the upper control limit of the method. A positive result for this analyte in any associated samples are considered estimated. Non-detectable results are not qualified.

Analysis: USEPA-8260B

Sample/Analyte:		
1303134-01	TB-01	Bromomethane
1303134-02	PRB-11s	Bromomethane
1303134-03	PRB-03s	Bromomethane
1303134-05	PRB-04d	Bromomethane
1303134-06	PRB-01s	Bromomethane
1303134-07	DUP-01	Bromomethane
1303134-10	PRB-08s	Bromomethane
1303134-11	PRB-08d	Bromomethane
1303134-12	PRB-10s	Bromomethane
1303134-15	PRB-05s	Bromomethane
1303134-16	PRB-15d	Bromomethane
1303134-17	PRB-15s	Bromomethane
1303134-18	PRB-14s	Bromomethane
1303134-19	PRB-13s	Bromomethane
1303134-20	PRB-12s	Bromomethane

Qualification: The corresponding CCV for this analytical batch had a recovery below the lower control limit of the method. Positive results for this analyte in any associated samples are considered estimated; non-detectable results are considered approximate.

Analysis: USEPA-8260B

Sample/Analyte:		
1303134-01	TB-01	2-Methylnaphthalene
1303134-02	PRB-11s	2-Methylnaphthalene
1303134-03	PRB-03s	2-Methylnaphthalene
1303134-04	PRB-04s	Dichlorodifluoromethane
1303134-04	PRB-04s	trans-1,4-Dichloro-2-butene
1303134-05	PRB-04d	2-Methylnaphthalene
1303134-06	PRB-01s	2-Methylnaphthalene
1303134-07	DUP-01	2-Methylnaphthalene
1303134-08	PRB-07s	Dichlorodifluoromethane
1303134-08	PRB-07s	trans-1,4-Dichloro-2-butene
1303134-09	PRB-02s	Dichlorodifluoromethane
1303134-09	PRB-02s	trans-1,4-Dichloro-2-butene
1303134-10	PRB-08s	2-Methylnaphthalene
1303134-11	PRB-08d	2-Methylnaphthalene
1303134-12	PRB-10s	2-Methylnaphthalene
1303134-13	PRB-09s	Dichlorodifluoromethane
1303134-13	PRB-09s	trans-1,4-Dichloro-2-butene
1303134-14	PRB-06s	Dichlorodifluoromethane
1303134-14	PRB-06s	trans-1,4-Dichloro-2-butene
1303134-15	PRB-05s	2-Methylnaphthalene
1303134-16	PRB-15d	2-Methylnaphthalene

Continued on next page

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STATEMENT OF DATA QUALIFICATIONS

Volatile Organic Compounds by EPA Method 8260B (Continued)

Qualification: The corresponding CCV for this analytical batch had a recovery below the lower control limit of the method. Positive results for this analyte in any associated samples are considered estimated; non-detectable results are considered approximate.

Analysis: USEPA-8260B

Sample/Analyte:			
	1303134-17	PRB-15s	2-Methylnaphthalene
	1303134-18	PRB-14s	2-Methylnaphthalene
	1303134-19	PRB-13s	2-Methylnaphthalene
	1303134-20	PRB-12s	2-Methylnaphthalene

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Chain of Custody Record

COC No. 136763

Pg. 1 of 2

For Lab Use Only
Cart: –
VOA Rack/Tray: 30X, 350-B
Receipt Log No.: 44-24
Project Chemist: JZR
Work Order No.: 1303134

Client Name: TRC
Address: 1540 Eisenhower Place
City, State Zip: Ann Arbor MI 48108
Phone/Fax: 734 971 7080 734 971 9022
Email:

Project Name: Tecumseh PRB
Client Project No. / P.O. No.: 186299.0001.0000
Invoice To: ☑ Client ☐ Other (comments)
Contact/Report To: Stacy Metz

Analyses Requested: VOC, Methane, Ethane, Ethene

Container Type (corresponds to Container Packing List): 1 – 1 –

PRESERVATIVES
A NONE pH~7
B HNO_3 pH<2
C H_2SO_4 pH<2
D 1+1 HCl pH<2
E NaOH pH>12
F ZnAc/NaOH pH>9
G MeOH
H Other (note below)

Schedule	Matrix Code	Sample Number	Field Sample ID	Cooler ID	Sample Date	Sample Time	COMP	GRAB	Matrix				Total	Sample Comments
G1		01	1 ~~Trip Blank~~ TB-01	TRC 2564	–	–	X		DI	X			1	
G2		02	2 PRB 11s		3/4/13	1220		X	GW	X			2	
1		03	3 PRB-3s		3/4/13	1318		X	GW	X			2	
G4		04	4 PRB-4s		3/4/13	1415		X	GW	X	X	X	4	
G2		05	5 PRB-4D		3/4/13	1458		X	GW	X			2	
G4		06	6 PRB-01s		3/4/13	1555		X	GW	X	X	X	4	
		07	7 Dup-01		3/4/13	–		X	GW	X	X	X	4	
		08	8 PRB-07s		3/4/13	1659		X	GW	X	X	X	4	
		09	9 PRB 02s		3/5/13	0740		X	GW	X	X	X	4	
		10	10 PRB-08s		3/5/13	0928		X	GW	X	X	X	4	

Sampled By (print): Javier Jasso
Sampler's Signature: [signature]
Company: TRC

How Shipped? Hand ___ Carrier ___
Tracking No.

Comments

1. Relinquished By	Date	Time	2. Relinquished By	Date	Time	3. Relinquished By	Date	Time
[signature]	3/5/13	1815	[signature]	3-7-13	1710			

1. Received By	Date	Time	2. Received By	Date	Time	3. Received For Lab By	Date	Time
[signature]	3/7/13	1315				[signature]	3-7-13	1710

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Chain of Custody Record

COC No. 136764

Pg. 2 of 2

For Lab Use Only
Cart: –
VOA Rack/Tray: 35X, 35D-B
Receipt Log No.: 2/4-24
Project Chemist:
Work Order No.: 1303134

Client Name: TRC
Address: 1540 Eisenhower Place
City, State Zip: Ann Arbor MI 48108
Phone/Fax: 734 971 7080 734 971 9023
Email:

Project Name: Tecumseh PRB
Client Project No. / P.O. No.: 186299.0001 0000
Invoice To: ☑ Client ☐ Other (comments)
Contact/Report To: Stacy Metz

Analyses Requested: Methane, Ethane, Ethene, VOC

Container Type (corresponds to Container Packing List): – 1 – 1

PRESERVATIVES
A NONE pH~7
B HNO_3 pH<2
C H_2SO_4 pH<2
D 1+1 HCl pH<2
E NaOH pH>12
F ZnAc/NaOH pH>9
G MeOH
H Other (note below)

Schedule	Matrix Code	Sample Number	Field Sample ID	Cooler ID	Sample Date	Sample Time	COMP	GRAB	Matrix	Methane	Ethane	Ethene	VOC	Total	Sample Comments
G2		11	1 PRB-08D	2564	3/5/13	0941		X	GW				X	2	
G2		12	2 PRB-10s		3/5/13	1047		X	GW				X	2	
G4		13	3 PRB-09s		3/5/13	1125		X	GW	X	X	X	X	4	
1		14	4 PRB-06s		3/5/13	1213		X	GW	X	X	X	X	4	
G2		15	5 PRB-05s		3/5/13	1304		X	GW				X	2	
G3		~~17~~ 16	6 PRB-15D		3/5/13	1354		X	GW				X	2	
		16	7 PRB-15D MS&MSD		3/5/13	1354		X	GW				X	5	
G2		~~16~~ 17	8 PRB-15s		3/5/13	1452		X	GW				X	2	
1		~~17~~ 18	9 PRB-14s		3/5/13	1535		X	GW				X	2	
		~~18~~ 19	10 PRB-13s		3/5/13	1618		X	GW				X	2	

Sampled By (print): Javier Jasso
Sampler's Signature: [signature]
Company: TRC

How Shipped? Hand ___ Carrier ___
Tracking No.

Comments

Relinquished By	Date	Time	Received By	Date	Time
1. [signature]	3/5/13	1815	1. Ray Johnson	3/7/13	1315
2. Ray Johnson	3-7-13	1710	2. [signature]		
3.			3. Received For Lab By: D. Dardin	3-7-13	1710

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Chain of Custody Record

COC No. 143674

Pg. 3 of 3

For Lab Use Only

Cart —

VOA Rack/Tray 30X, 350-B

Receipt Log No. 44-24

Project Chemist

Work Order No. 1303134

Client Name: TRC

Address: 1540 Eisenhower PLACE

City, State Zip: Ann Arbor MI 48108

Phone/Fax: 734-971-7080 734-971-9033

Email

Project Name: T.P.C PRB

Client Project No. / P.O. No.: 186299.0001.000

Invoice To: ☑ Client ☐ Other (comments)

Contact/Report To: Stacy Mutc

Analyses Requested: VOC

Container Type (corresponds to Container Packing List): 1

Number of Containers Submitted

PRESERVATIVES
A NONE pH~7
B HNO_3 pH<2
C H_2SO_4 pH<2
D 1+1 HCl pH<2
E NaOH pH>12
F ZnAc/NaOH pH>9
G MeOH
H Other (note below)

	Schedule	Matrix Code	Sample Number	Field Sample ID	Cooler ID	Sample Date	Sample Time	COMP	GRAB	Matrix	Total	Sample Comments
1	02		20 ~~19~~	PRB-12,	3524	3/5/13	1655		X	W	2	
2												
3												
4												
5												
6												
7												
8												
9												
10												

Sampled By (print): Jacob Jasse

Sampler's Signature: [signature]

Company: TRI

How Shipped? Hand ___ Carrier ✓

Tracking No.

Comments

	Relinquished By	Date	Time	Received By	Date	Time
1	[signature]	3/5/13	1815	[signature]	3/7/13	1315
2	[signature]	3-7-13	1710	[signature]		
3				[signature]	3-7-13	1710

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TRIMATRIX LABORATORIES

TRIMATRIX LABORATORIES

SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES

Client: TRC
Receipt Record Page/Line #: 44-24
Work Order #: 1303134
New / Add To
Project Chemist: JLR
Sample #s:

Recorded by (initials/date): DN 3-7-13

☑ Cooler ☐ Box ☐ Other
Qty Received: 1

Thermometer Used: ☑ IR Gun (#202) ☐ Digital Thermometer (#54) ☐ Other (#_____) ☐ See Additional Cooler Information Form

Cooler #	Time	Custody Seals	Coolant Location	Coolant/Temperature Taken Via	Alternate Temperature Taken Via	Temp Blank Recorded °C	Correction Factor °C	Actual °C	Cooler ID on COC?	VOC Trip Blank received?
TM2364	1734	☑ None	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers; ☑ Bagged Ice / Avg 2-3 containers; ☐ Blue Ice / Avg 2-3 containers; ☐ None / Avg 2-3 containers	☑ Temperature Blank (TB); ☐ 1 Container	0		6.5	☐	☑
		☐ Present / Intact; ☐ Present / Not Intact								
						TB location: Representative / Not Representative				
						1: 4.6	0	4.6		
						2: 3.4	0	3.4		
						3: 3.3	0	3.3		
						Average °C		5.1		

Cooler #	Time	Custody Seals	Coolant Location	Coolant/Temperature Taken Via	Alternate Temperature Taken Via	Temp Blank Recorded °C	Correction Factor °C	Actual °C	Cooler ID on COC?	VOC Trip Blank received?
		☐ None	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers; ☐ Bagged Ice / Avg 2-3 containers; ☐ Blue Ice / Avg 2-3 containers; ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB); ☐ 1 Container				☐	☐
		☐ Present / Intact; ☐ Present / Not Intact								
						TB location: Representative / Not Representative				
						1				
						2				
						3				
						Average °C				

Cooler #	Time	Custody Seals	Coolant Location	Coolant/Temperature Taken Via	Alternate Temperature Taken Via	Temp Blank Recorded °C	Correction Factor °C	Actual °C	Cooler ID on COC?	VOC Trip Blank received?
		☐ None	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers; ☐ Bagged Ice / Avg 2-3 containers; ☐ Blue Ice / Avg 2-3 containers; ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB); ☐ 1 Container				☐	☐
		☐ Present / Intact; ☐ Present / Not Intact								
						TB location: Representative / Not Representative				
						1				
						2				
						3				
						Average °C				

Cooler #	Time	Custody Seals	Coolant Location	Coolant/Temperature Taken Via	Alternate Temperature Taken Via	Temp Blank Recorded °C	Correction Factor °C	Actual °C	Cooler ID on COC?	VOC Trip Blank received?
		☐ None	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers; ☐ Bagged Ice / Avg 2-3 containers; ☐ Blue Ice / Avg 2-3 containers; ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB); ☐ 1 Container				☐	☐
		☐ Present / Intact; ☐ Present / Not Intact								
						TB location: Representative / Not Representative				
						1				
						2				
						3				
						Average °C				

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received

Yes	No	
☑	☐	Chain of Custody record(s)? If No, Initiated By _____
☑		Received for Lab Signed/Date/Time?
☐	☑	Shipping document?
☐	☑	Other _____

COC Information

☑ TriMatrix COC ☐ Other _____

COC ID Numbers: 136763, 136764, 143674

Check Sample Preservation

N/A	Yes	No	
	☑	☐	Average sample temperature ≤6° C?
☑	☐	☐	Was thermal preservation required?
☑	☐		If "No", Project Chemist Approval Intials: _____
☑	☐		If "Yes" Completed Non Con Cooler - Cont Inventory Form?
☑	☐		Completed Sample Preservation Verification Form?
☑	☐	☐	Samples chemically preserved correctly?
☑	☐		If "No", added orange tag?
	☐	☑	Received pre-preserved VOC soils? ☐ MeOH ☐ Na_2SO_4

Check COC for Accuracy

Yes	No	
☑	☐	Analysis Requested?
☑	☐	Sample ID matches COC?
☐	☑	Sample Date and Time matches COC?
☑		Container type completed on COC?
☑	☐	All container types indicated are received?

Check for Short Hold-Time Prep/Analyses

- ☐ Bacteriological
- ☐ Air Bags
- ☐ EnCores / Methanol Pre-Preserved
- ☐ Formaldehyde/Aldehyde
- ☐ Green-tagged containers
- ☐ Yellow/White-tagged 1L ambers (SV Prep-Lab)

AFTER HOURS ONLY:
COPIES OF COC TO LAB AREA(S)
☑ NONE RECEIVED
☐ RECEIVED, COCs TO LAB(S)

Sample Condition Summary

N/A	Yes	No	
	☐	☑	Broken containers/lids?
	☐	☑	Missing or incomplete labels?
	☐	☑	Illegible information on labels?
	☐	☑	Low volume received?
	☐	☑	Inappropriate or non-TriMatrix containers received?
☐	☐	☑	VOC vials / TOX containers have headspace?
☑	☐	☐	Extra sample locations / containers not listed on COC?

Notes

☑ Trip Blank received ☐ Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤1 Hour Goal Met?
DN 3-7-13	3-7-13	Yes / No

Log In Forms - Receiving.Log-In_Checklist

revision: 3.4

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April 10, 2013

TRC Companies. - Ann Arbor Office
Attn: Ms. Stacy Metz
1540 Eisenhower Place
Ann Arbor, MI 48108

Project: TPC - PRB Performance Monitoring

Dear Ms. Stacy Metz,

Enclosed is a copy of the laboratory report for the following work order(s) received by TriMatrix Laboratories:

Work Order	**Received**	**Description**
1303421	03/28/2013	Laboratory Services

This report relates only to the sample(s) as received. Test results are in compliance with the requirements of the National Environmental Laboratory Accreditation Program (NELAP) and/or one of the following certification programs:

ACLASS DoD-ELAP/ISO17025 (#ADE-1542); Arkansas DEP (#12-056-0); Florida DEP (#E87622-24); Georgia EPD (#E87622-24); Illinois DEP (#002841); Kansas DPH (#E-10302); Kentucky DEP (#0021); Louisiana DEP (#03068); Michigan DPH (#0034); Minnesota DPH (#367345); New York ELAP (#46503); North Carolina DNRE (#659); Texas CEQ (#T104704495-12-2); Virginia DCLS (#1622); Wisconsin DNR (#999472650); USDA Soil Import Permit (#P330-09-00163).

Any qualification or narration of results, including sample acceptance requirements and test exceptions to the above referenced programs, is presented in the Statement of Data Qualifications section of this report. Estimates of analytical uncertainties and certification documents for the test results contained within this report are available upon request.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

Jennifer L. Rice
Project Chemist

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1303421**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-16s**	Sampled:	03/27/13 16:23
Lab Sample ID:	**1303421-01**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	03/28/13 17:50
Unit:	ug/L	Prepared:	04/02/13 By: BAG
Dilution Factor:	1	Analyzed:	04/02/13 By: BAG
QC Batch:	1302921	Analytical Batch:	3D03002

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	RL
67-64-1	Acetone	<20	20
107-13-1	Acrylonitrile	<2.0	2.0
71-43-2	Benzene	<1.0	1.0
108-86-1	Bromobenzene	<1.0	1.0
74-97-5	Bromochloromethane	<1.0	1.0
75-27-4	Bromodichloromethane	<1.0	1.0
75-25-2	Bromoform	<1.0	1.0
74-83-9	Bromomethane	<5.0	5.0
104-51-8	n-Butylbenzene	<1.0	1.0
135-98-8	sec-Butylbenzene	<1.0	1.0
98-06-6	tert-Butylbenzene	<1.0	1.0
75-15-0	Carbon Disulfide	<1.0	1.0
56-23-5	Carbon Tetrachloride	<1.0	1.0
108-90-7	Chlorobenzene	<1.0	1.0
75-00-3	Chloroethane	<5.0	5.0
67-66-3	Chloroform	<1.0	1.0
74-87-3	Chloromethane	<5.0	5.0
96-12-8	1,2-Dibromo-3-chloropropane	<5.0	5.0
124-48-1	Dibromochloromethane	<1.0	1.0
106-93-4	1,2-Dibromoethane	<1.0	1.0
74-95-3	Dibromomethane	<1.0	1.0
110-57-6	trans-1,4-Dichloro-2-butene	<1.0	1.0
95-50-1	1,2-Dichlorobenzene	<1.0	1.0
541-73-1	1,3-Dichlorobenzene	<1.0	1.0
106-46-7	1,4-Dichlorobenzene	<1.0	1.0
75-71-8	Dichlorodifluoromethane	<5.0	5.0
75-34-3	1,1-Dichloroethane	**3.6**	1.0
107-06-2	1,2-Dichloroethane	<1.0	1.0
75-35-4	1,1-Dichloroethene	**1.1**	1.0
156-59-2	cis-1,2-Dichloroethene	**29**	1.0
156-60-5	trans-1,2-Dichloroethene	**3.2**	1.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1303421**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-16s**	Sampled:	03/27/13 16:23
Lab Sample ID:	**1303421-01**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	03/28/13 17:50
Unit:	ug/L	Prepared:	04/02/13 By: BAG
Dilution Factor:	1	Analyzed:	04/02/13 By: BAG
QC Batch:	1302921	Analytical Batch:	3D03002

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
78-87-5	1,2-Dichloropropane	<1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	<1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	<1.0	1.0
100-41-4	Ethylbenzene	<1.0	1.0
60-29-7	Ethyl Ether	<5.0	5.0
591-78-6	2-Hexanone	<5.0	5.0
74-88-4	Iodomethane	<1.0	1.0
98-82-8	Isopropylbenzene	<1.0	1.0
99-87-6	4-Isopropyltoluene	<5.0	5.0
1634-04-4	Methyl tert-Butyl Ether	<5.0	5.0
75-09-2	Methylene Chloride	<5.0	5.0
78-93-3	2-Butanone (MEK)	<5.0	5.0
91-57-6	2-Methylnaphthalene	<5.0	5.0
108-10-1	4-Methyl-2-pentanone (MIBK)	<5.0	5.0
91-20-3	Naphthalene	<5.0	5.0
103-65-1	n-Propylbenzene	<1.0	1.0
100-42-5	Styrene	<1.0	1.0
630-20-6	1,1,1,2-Tetrachloroethane	<1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	<1.0	1.0
127-18-4	Tetrachloroethene	<1.0	1.0
109-99-9	Tetrahydrofuran	<5.0	5.0
108-88-3	Toluene	<1.0	1.0
87-61-6	1,2,3-Trichlorobenzene	<5.0	5.0
120-82-1	1,2,4-Trichlorobenzene	<5.0	5.0
71-55-6	1,1,1-Trichloroethane	**1.0**	1.0
79-00-5	1,1,2-Trichloroethane	**2.8**	1.0
79-01-6	Trichloroethene	**12**	1.0
75-69-4	Trichlorofluoromethane	<1.0	1.0
96-18-4	1,2,3-Trichloropropane	<1.0	1.0
95-63-6	1,2,4-Trimethylbenzene	<1.0	1.0
108-67-8	1,3,5-Trimethylbenzene	<1.0	1.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1303421**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-16s**	Sampled:	03/27/13 16:23
Lab Sample ID:	**1303421-01**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	03/28/13 17:50
Unit:	ug/L	Prepared:	04/02/13 By: BAG
Dilution Factor:	1	Analyzed:	04/02/13 By: BAG
QC Batch:	1302921	Analytical Batch:	3D03002

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
75-01-4	Vinyl Chloride	<1.0	1.0
179601-23-1	Xylene, Meta + Para	<2.0	2.0
95-47-6	Xylene, Ortho	<1.0	1.0

Surrogates:	***% Recovery***	***Control Limits***
Dibromofluoromethane	*99*	*85-118*
1,2-Dichloroethane-d4	*105*	*87-122*
Toluene-d8	*96*	*85-113*
4-Bromofluorobenzene	*98*	*82-110*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1303421**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**Trip Blank**	Sampled:	03/27/13 00:00
Lab Sample ID:	**1303421-02**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	03/28/13 17:50
Unit:	ug/L	Prepared:	04/02/13 By: BAG
Dilution Factor:	1	Analyzed:	04/02/13 By: BAG
QC Batch:	1302921	Analytical Batch:	3D03002

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	RL
67-64-1	Acetone	<20	20
107-13-1	Acrylonitrile	<2.0	2.0
71-43-2	Benzene	<1.0	1.0
108-86-1	Bromobenzene	<1.0	1.0
74-97-5	Bromochloromethane	<1.0	1.0
75-27-4	Bromodichloromethane	<1.0	1.0
75-25-2	Bromoform	<1.0	1.0
74-83-9	Bromomethane	<5.0	5.0
104-51-8	n-Butylbenzene	<1.0	1.0
135-98-8	sec-Butylbenzene	<1.0	1.0
98-06-6	tert-Butylbenzene	<1.0	1.0
75-15-0	Carbon Disulfide	<1.0	1.0
56-23-5	Carbon Tetrachloride	<1.0	1.0
108-90-7	Chlorobenzene	<1.0	1.0
75-00-3	Chloroethane	<5.0	5.0
67-66-3	Chloroform	<1.0	1.0
74-87-3	Chloromethane	<5.0	5.0
96-12-8	1,2-Dibromo-3-chloropropane	<5.0	5.0
124-48-1	Dibromochloromethane	<1.0	1.0
106-93-4	1,2-Dibromoethane	<1.0	1.0
74-95-3	Dibromomethane	<1.0	1.0
110-57-6	trans-1,4-Dichloro-2-butene	<1.0	1.0
95-50-1	1,2-Dichlorobenzene	<1.0	1.0
541-73-1	1,3-Dichlorobenzene	<1.0	1.0
106-46-7	1,4-Dichlorobenzene	<1.0	1.0
75-71-8	Dichlorodifluoromethane	<5.0	5.0
75-34-3	1,1-Dichloroethane	<1.0	1.0
107-06-2	1,2-Dichloroethane	<1.0	1.0
75-35-4	1,1-Dichloroethene	<1.0	1.0
156-59-2	cis-1,2-Dichloroethene	<1.0	1.0
156-60-5	trans-1,2-Dichloroethene	<1.0	1.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1303421**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**Trip Blank**	Sampled:	03/27/13 00:00
Lab Sample ID:	**1303421-02**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	03/28/13 17:50
Unit:	ug/L	Prepared:	04/02/13 By: BAG
Dilution Factor:	1	Analyzed:	04/02/13 By: BAG
QC Batch:	1302921	Analytical Batch:	3D03002

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
78-87-5	1,2-Dichloropropane	<1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	<1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	<1.0	1.0
100-41-4	Ethylbenzene	<1.0	1.0
60-29-7	Ethyl Ether	<5.0	5.0
591-78-6	2-Hexanone	<5.0	5.0
74-88-4	Iodomethane	<1.0	1.0
98-82-8	Isopropylbenzene	<1.0	1.0
99-87-6	4-Isopropyltoluene	<5.0	5.0
1634-04-4	Methyl tert-Butyl Ether	<5.0	5.0
75-09-2	Methylene Chloride	<5.0	5.0
78-93-3	2-Butanone (MEK)	<5.0	5.0
91-57-6	2-Methylnaphthalene	<5.0	5.0
108-10-1	4-Methyl-2-pentanone (MIBK)	<5.0	5.0
91-20-3	Naphthalene	<5.0	5.0
103-65-1	n-Propylbenzene	<1.0	1.0
100-42-5	Styrene	<1.0	1.0
630-20-6	1,1,1,2-Tetrachloroethane	<1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	<1.0	1.0
127-18-4	Tetrachloroethene	<1.0	1.0
109-99-9	Tetrahydrofuran	<5.0	5.0
108-88-3	Toluene	<1.0	1.0
87-61-6	1,2,3-Trichlorobenzene	<5.0	5.0
120-82-1	1,2,4-Trichlorobenzene	<5.0	5.0
71-55-6	1,1,1-Trichloroethane	<1.0	1.0
79-00-5	1,1,2-Trichloroethane	<1.0	1.0
79-01-6	Trichloroethene	<1.0	1.0
75-69-4	Trichlorofluoromethane	<1.0	1.0
96-18-4	1,2,3-Trichloropropane	<1.0	1.0
95-63-6	1,2,4-Trimethylbenzene	<1.0	1.0
108-67-8	1,3,5-Trimethylbenzene	<1.0	1.0

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ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1303421**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**Trip Blank**	Sampled:	03/27/13 00:00
Lab Sample ID:	**1303421-02**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	03/28/13 17:50
Unit:	ug/L	Prepared:	04/02/13 By: BAG
Dilution Factor:	1	Analyzed:	04/02/13 By: BAG
QC Batch:	1302921	Analytical Batch:	3D03002

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
75-01-4	Vinyl Chloride	<1.0	1.0
179601-23-1	Xylene, Meta + Para	<2.0	2.0
95-47-6	Xylene, Ortho	<1.0	1.0

Surrogates:	***% Recovery***	***Control Limits***
Dibromofluoromethane	*97*	*85-118*
1,2-Dichloroethane-d4	*104*	*87-122*
Toluene-d8	*96*	*85-113*
4-Bromofluorobenzene	*96*	*82-110*

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TRIMATRIX LABORATORIES

QUALITY CONTROL REPORT

Volatile Organic Compounds by EPA Method 8260B

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL

QC Batch: 1302921 5030B Aqueous Purge & Trap/USEPA-8260B

Method Blank Analyzed: 04/02/2013 By: BAG
Unit: ug/L Analytical Batch: 3D03002

Acetone	<20			20
Acrylonitrile	<2.0			2.0
Benzene	<1.0			1.0
Bromobenzene	<1.0			1.0
Bromochloromethane	<1.0			1.0
Bromodichloromethane	<1.0			1.0
Bromoform	<1.0			1.0
Bromomethane	<5.0			5.0
n-Butylbenzene	<1.0			1.0
sec-Butylbenzene	<1.0			1.0
tert-Butylbenzene	<1.0			1.0
Carbon Disulfide	<1.0		--	1.0
Carbon Tetrachloride	<1.0			1.0
Chlorobenzene	<1.0			1.0
Chloroethane	<5.0			5.0
Chloroform	<1.0			1.0
Chloromethane	<5.0			5.0
1,2-Dibromo-3-chloropropane	<5.0			5.0
Dibromochloromethane	<1.0			1.0
1,2-Dibromoethane	<1.0			1.0
Dibromomethane	<1.0			1.0
trans-1,4-Dichloro-2-butene	<1.0			1.0
1,2-Dichlorobenzene	<1.0			1.0
1,3-Dichlorobenzene	<1.0			1.0
1,4-Dichlorobenzene	<1.0			1.0
Dichlorodifluoromethane	<5.0			5.0
1,1-Dichloroethane	<1.0			1.0
1,2-Dichloroethane	<1.0			1.0
1,1-Dichloroethene	<1.0			1.0
cis-1,2-Dichloroethene	<1.0			1.0
trans-1,2-Dichloroethene	<1.0			1.0
1,2-Dichloropropane	<1.0			1.0
cis-1,3-Dichloropropene	<1.0			1.0
trans-1,3-Dichloropropene	<1.0			1.0
Ethylbenzene	<1.0			1.0
Ethyl Ether	<5.0			5.0

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Volatile Organic Compounds by EPA Method 8260B (Continued)

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL

QC Batch: 1302921 (Continued) 5030B Aqueous Purge & Trap/USEPA-8260B

Method Blank (Continued) Analyzed: 04/02/2013 By: BAG
Unit: ug/L Analytical Batch: 3D03002

2-Hexanone			<5.0			5.0
Iodomethane			<1.0			1.0
Isopropylbenzene			<1.0			1.0
4-Isopropyltoluene			<5.0			5.0
Methyl tert-Butyl Ether			<5.0			5.0
Methylene Chloride			<5.0			5.0
2-Butanone (MEK)			<5.0			5.0
2-Methylnaphthalene			<5.0			5.0
4-Methyl-2-pentanone (MIBK)			<5.0			5.0
Naphthalene			<5.0		--	5.0
n-Propylbenzene			<1.0			1.0
Styrene			<1.0			1.0
1,1,1,2-Tetrachloroethane			<1.0			1.0
1,1,2,2-Tetrachloroethane			<1.0			1.0
Tetrachloroethene			<1.0			1.0
Tetrahydrofuran			<5.0			5.0
Toluene			<1.0			1.0
1,2,3-Trichlorobenzene			<5.0			5.0
1,2,4-Trichlorobenzene			<5.0			5.0
1,1,1-Trichloroethane			<1.0			1.0
1,1,2-Trichloroethane			<1.0			1.0
Trichloroethene			<1.0			1.0
Trichlorofluoromethane			<1.0			1.0
1,2,3-Trichloropropane			<1.0			1.0
1,2,4-Trimethylbenzene			<1.0			1.0
1,3,5-Trimethylbenzene			<1.0			1.0
Vinyl Chloride			<1.0			1.0
Xylene, Meta + Para			<2.0			2.0
Xylene, Ortho			<1.0			1.0
Surrogates:						
Dibromofluoromethane				*98*	*85-118*	
1,2-Dichloroethane-d4				*105*	*87-122*	
Toluene-d8				*97*	*85-113*	

Continued on next page

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QUALITY CONTROL REPORT

Volatile Organic Compounds by EPA Method 8260B (Continued)

QC Batch: 1302921 (Continued) 5030B Aqueous Purge & Trap/USEPA-8260B

Method Blank (Continued) Analyzed: 04/02/2013 By: BAG
Unit: ug/L Analytical Batch: 3D03002

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
Surrogates (Continued):								
4-Bromofluorobenzene				*98*	*82-110*			

Laboratory Control Sample Analyzed: 04/02/2013 By: BAG
Unit: ug/L Analytical Batch: 3D03002

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
Benzene		40.0	**36.4**	91	84-119	--	20	1.0
Chlorobenzene		40.0	**39.7**	99	84-118	--	20	1.0
1,1-Dichloroethene		40.0	**37.2**	93	77-123	--	20	1.0
Toluene		40.0	**37.3**	93	85-118	--	20	1.0
Trichloroethene		40.0	**35.6**	89	82-119	--	20	1.0
Surrogates:								
Dibromofluoromethane				*100*	*85-118*			
1,2-Dichloroethane-d4				*104*	*87-122*			
Toluene-d8				*98*	*85-113*			
4-Bromofluorobenzene				*98*	*82-110*			

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STATEMENT OF DATA QUALIFICATIONS

All analyses have been validated and comply with our Quality Control Program.
No Qualification is required.

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Chain of Custody Record

COC No. 142811

Pg. 1 of 1

For Lab Use Only

Cart: (TB)#514-R
VOA Rack/Tray: 43-G
Receipt Log No.: 30-23
Project Chemist: JLR
Work Order No.: E130342

Client Name: TRC/TPC
Address: 1540 Eisenhower Place
City, State Zip: Ann Arbor, MI 48108
Phone/Fax: 734-585-7825 / 734-971-9022
Email: smetz@trcsolutions.com

Project Name: TPC - PRB
Client Project No. / P.O. No.: 186299.0001
Invoice To: ☒ Client ☐ Other (comments)
Contact/Report To: Stacy Metz

Analyses Requested: VOC's

Container Type (corresponds to Container Packing List): 1

PRESERVATIVES
A NONE pH~7
B HNO_3 pH<2
C H_2SO_4 pH<2
D 1+1 HCl pH<2
E NaOH pH>12
F ZnAc/NaOH pH>9
G MeOH
H Other (note below)

	Schedule	Matrix Code	Sample Number	Field Sample ID	Cooler ID	Sample Date	Sample Time	COMP	GRAB	Matrix	Number of Containers Submitted	Total	Sample Comments
1	02		-01	PRB-165	3006	3/27/13	1623			GW	2	2	
2	01		-02	Trip Blank	↓	3/27/13	—			DI	1	1	
3													
4													
5													
6													
7													
8													
9													
10													

Sampled By (print): Rachel N Sortor
Sampler's Signature: Rachel N. Sortor
Company: TRC

How Shipped? Hand ✓ Carrier ~~FedEx~~
Tracking No.

Comments: Please report trip blank on both PRB and GW monitoring reports (only sent one trip blank)

	Relinquished By	Date	Time	Received By	Date	Time
1	Rachel N Sortor	3/27/13	1825	Ray Johnson	3/28/13	1520
2	Ray Johnson	3-28-13	1750			
3				D. Mardini	3-28-13	1750

WHITE COPY - REPORT YELLOW COPY - LABORATORY PINK COPY - FIELD

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TRIMATRIX LABORATORIES

SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES

Client: TRC / TPC
Work Order #: 1303421
Receipt Record Page/Line #: 30-23
New / Add To
Project Chemist
Sample #s

Recorded by (initials/date): RN 3-28-13

Cooler ☐ Box ☐ Other ____ — Qty Received: 1

Thermometer Used: ☑ IR Gun (#202) ☐ Digital Thermometer (#54) ☐ Other (#____) ☐ See Additional Cooler Information Form

Cooler #	Time	Custody Seals	Coolant Location	Coolant/Temperature Taken Via	Alternate Temperature Taken Via
1 (TM3006)	2235	☑ None; ☐ Present / Intact; ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers; ☑ Bagged Ice / Avg 2-3 containers; ☐ Blue Ice / Avg 2-3 containers; ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB); ☐ 1 Container
		☐ None; ☐ Present / Intact; ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers; ☐ Bagged Ice / Avg 2-3 containers; ☐ Blue Ice / Avg 2-3 containers; ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB); ☐ 1 Container
		☐ None; ☐ Present / Intact; ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers; ☐ Bagged Ice / Avg 2-3 containers; ☐ Blue Ice / Avg 2-3 containers; ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB); ☐ 1 Container
		☐ None; ☐ Present / Intact; ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers; ☐ Bagged Ice / Avg 2-3 containers; ☐ Blue Ice / Avg 2-3 containers; ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB); ☐ 1 Container

Cooler #	Recorded °C	Correction Factor °C	Actual °C
1 Temp Blank			
1 TB location: Representative / Not Representative	10.1	0	10.1
2	11.4	0	11.4
3	10.6	0	10.6
Average °C			10.7

Cooler ID on COC? ☑ VOC Trip Blank received? ☑

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received

Yes	No	
☑	☐	Chain of Custody record(s)? If No, Initiated By ____
☑		Received for Lab Signed/Date/Time?
☐	☑	Shipping document?
☐	☐	Other ____

COC Information

☑ TriMatrix COC ☐ Other ____

COC ID Numbers: 142811

Check COC for Accuracy

Yes	No	
☑	☐	Analysis Requested?
☑	☐	Sample ID matches COC?
☑	☐	Sample Date and Time matches COC?
☑		Container type completed on COC?
☑	☐	All container types indicated are received?

Check Sample Preservation

N/A	Yes	No	
	☐	☑	Average sample temperature ≤6° C?
☐	☑	☐	Was thermal preservation required?
☑	☐		If "No", Project Chemist Approval Intials: ____
☑	☐		If "Yes" Completed Non Con Cooler - Cont Inventory Form?
☑	☐		Completed Sample Preservation Verification Form?
☑	☐	☐	Samples chemically preserved correctly?
☑	☐		If "No", added orange tag?
	☐	☑	Received pre-preserved VOC soils? ☐ MeOH ☐ Na_2SO_4

Check for Short Hold-Time Prep/Analyses

☐ Bacteriological
☐ Air Bags
☐ EnCores / Methanol Pre-Preserved
☐ Formaldehyde/Aldehyde
☐ Green-tagged containers
☐ Yellow/White-tagged 1L ambers (SV Prep-Lab)

AFTER HOURS ONLY: COPIES OF COC TO LAB AREA(S)
☑ NONE RECEIVED
☐ RECEIVED, COCs TO LAB(S)

Sample Condition Summary

N/A	Yes	No	
	☐	☑	Broken containers/lids?
	☐	☑	Missing or incomplete labels?
	☐	☑	Illegible information on labels?
	☐	☑	Low volume received?
	☐	☑	Inappropriate or non-TriMatrix containers received?
☐	☐	☑	VOC vials / TOX containers have headspace?
☑	☐	☐	Extra sample locations / containers not listed on COC?

Notes

☑ Trip Blank received ☐ Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤1 Hour Goal Met?
RN 3-28-13	3-28-13	Yes / No

Log In Forms - Receiving.Log-In_Checklist

revision: 3.4

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Second Quarter 2013 Laboratory Data

June 25, 2013

TRC Companies. - Ann Arbor Office
Attn: Ms. Stacy Metz
1540 Eisenhower Place
Ann Arbor, MI 48108

Project: TPC - PRB Performance Monitoring

Dear Ms. Stacy Metz,

Enclosed is a copy of the laboratory report for the following work order(s) received by TriMatrix Laboratories:

Work Order	**Received**	**Description**
1306211	06/11/2013	Laboratory Services

This report relates only to the sample(s) as received. Test results are in compliance with the requirements of the National Environmental Laboratory Accreditation Program (NELAP) and/or one of the following certification programs:

ACLASS DoD-ELAP/ISO17025 (#ADE-1542); Arkansas DEP (#88-0730/12-056-0); Florida DEP (#E87622-24); Georgia EPD (#E87622-24); Illinois DEP (#200026/003059); Kansas DPH (#E-10302); Kentucky DEP (#0021); Louisiana DEP (#83658); Michigan DPH (#0034); Minnesota DPH (#491715); New York ELAP (#11776/48855); North Carolina DNRE (#659); Texas CEQ (#T104704495-13-3); Virginia DCLS (#460153/1622); Wisconsin DNR (#999472650); USDA Soil Import Permit (#P330-12-00236).

Any qualification or narration of results, including sample acceptance requirements and test exceptions to the above referenced programs, is presented in the Statement of Data Qualifications section of this report. Estimates of analytical uncertainties and certification documents for the test results contained within this report are available upon request.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

Jennifer L. Rice
Project Chemist

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1306211**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**TB-01**	Sampled:	06/07/13 00:00
Lab Sample ID:	**1306211-01**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	06/11/13 18:20
Unit:	ug/L	Prepared:	06/14/13 By: BAG
Dilution Factor:	1	Analyzed:	06/14/13 By: BAG
QC Batch:	1306247	Analytical Batch:	3F17023

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	RL
67-64-1	Acetone	<20	20
107-13-1	Acrylonitrile	<2.0	2.0
71-43-2	Benzene	<1.0	1.0
108-86-1	Bromobenzene	<1.0	1.0
74-97-5	Bromochloromethane	<1.0	1.0
75-27-4	Bromodichloromethane	<1.0	1.0
75-25-2	Bromoform	<1.0	1.0
74-83-9	Bromomethane	<5.0	5.0
104-51-8	n-Butylbenzene	<1.0	1.0
135-98-8	sec-Butylbenzene	<1.0	1.0
98-06-6	tert-Butylbenzene	<1.0	1.0
75-15-0	Carbon Disulfide	<1.0	1.0
56-23-5	Carbon Tetrachloride	<1.0	1.0
108-90-7	Chlorobenzene	<1.0	1.0
75-00-3	Chloroethane	<5.0	5.0
67-66-3	Chloroform	<1.0	1.0
74-87-3	Chloromethane	<5.0	5.0
96-12-8	1,2-Dibromo-3-chloropropane	<5.0	5.0
124-48-1	Dibromochloromethane	<1.0	1.0
106-93-4	1,2-Dibromoethane	<1.0	1.0
74-95-3	Dibromomethane	<1.0	1.0
110-57-6	trans-1,4-Dichloro-2-butene	<1.0	1.0
95-50-1	1,2-Dichlorobenzene	<1.0	1.0
541-73-1	1,3-Dichlorobenzene	<1.0	1.0
106-46-7	1,4-Dichlorobenzene	<1.0	1.0
*75-71-8	Dichlorodifluoromethane	<5.0	5.0
75-34-3	1,1-Dichloroethane	<1.0	1.0
107-06-2	1,2-Dichloroethane	<1.0	1.0
75-35-4	1,1-Dichloroethene	<1.0	1.0
156-59-2	cis-1,2-Dichloroethene	<1.0	1.0
156-60-5	trans-1,2-Dichloroethene	<1.0	1.0

Continued on next page

*See Statement of Data Qualifications

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1306211**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**TB-01**	Sampled:	06/07/13 00:00
Lab Sample ID:	**1306211-01**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	06/11/13 18:20
Unit:	ug/L	Prepared:	06/14/13 By: BAG
Dilution Factor:	1	Analyzed:	06/14/13 By: BAG
QC Batch:	1306247	Analytical Batch:	3F17023

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
78-87-5	1,2-Dichloropropane	<1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	<1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	<1.0	1.0
100-41-4	Ethylbenzene	<1.0	1.0
60-29-7	Ethyl Ether	<5.0	5.0
591-78-6	2-Hexanone	<5.0	5.0
74-88-4	Iodomethane	<1.0	1.0
98-82-8	Isopropylbenzene	<1.0	1.0
99-87-6	4-Isopropyltoluene	<5.0	5.0
1634-04-4	Methyl tert-Butyl Ether	<5.0	5.0
75-09-2	Methylene Chloride	<5.0	5.0
78-93-3	2-Butanone (MEK)	<5.0	5.0
91-57-6	2-Methylnaphthalene	<5.0	5.0
108-10-1	4-Methyl-2-pentanone (MIBK)	<5.0	5.0
91-20-3	Naphthalene	<5.0	5.0
103-65-1	n-Propylbenzene	<1.0	1.0
100-42-5	Styrene	<1.0	1.0
630-20-6	1,1,1,2-Tetrachloroethane	<1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	<1.0	1.0
127-18-4	Tetrachloroethene	<1.0	1.0
109-99-9	Tetrahydrofuran	<5.0	5.0
108-88-3	Toluene	<1.0	1.0
87-61-6	1,2,3-Trichlorobenzene	<5.0	5.0
120-82-1	1,2,4-Trichlorobenzene	<5.0	5.0
71-55-6	1,1,1-Trichloroethane	<1.0	1.0
79-00-5	1,1,2-Trichloroethane	<1.0	1.0
79-01-6	Trichloroethene	<1.0	1.0
75-69-4	Trichlorofluoromethane	<1.0	1.0
96-18-4	1,2,3-Trichloropropane	<1.0	1.0
95-63-6	1,2,4-Trimethylbenzene	<1.0	1.0
108-67-8	1,3,5-Trimethylbenzene	<1.0	1.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1306211**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**TB-01**	Sampled:	06/07/13 00:00
Lab Sample ID:	**1306211-01**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	06/11/13 18:20
Unit:	ug/L	Prepared:	06/14/13 By: BAG
Dilution Factor:	1	Analyzed:	06/14/13 By: BAG
QC Batch:	1306247	Analytical Batch:	3F17023

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
75-01-4	Vinyl Chloride	<1.0	1.0
179601-23-1	Xylene, Meta + Para	<2.0	2.0
95-47-6	Xylene, Ortho	<1.0	1.0

Surrogates:	***% Recovery***	***Control Limits***
Dibromofluoromethane	*101*	*85-118*
1,2-Dichloroethane-d4	*111*	*87-122*
Toluene-d8	*100*	*85-113*
4-Bromofluorobenzene	*103*	*82-110*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1306211**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-12s**	Sampled:	06/05/13 12:39
Lab Sample ID:	**1306211-02**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	06/11/13 18:20
Unit:	ug/L	Prepared:	06/14/13 By: BAG
Dilution Factor:	10	Analyzed:	06/14/13 By: BAG
QC Batch:	1306247	Analytical Batch:	3F17023

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	RL
67-64-1	Acetone	<200	200
107-13-1	Acrylonitrile	<20	20
71-43-2	Benzene	<10	10
108-86-1	Bromobenzene	<10	10
74-97-5	Bromochloromethane	<10	10
75-27-4	Bromodichloromethane	<10	10
75-25-2	Bromoform	<10	10
74-83-9	Bromomethane	<50	50
104-51-8	n-Butylbenzene	<10	10
135-98-8	sec-Butylbenzene	<10	10
98-06-6	tert-Butylbenzene	<10	10
75-15-0	Carbon Disulfide	<10	10
56-23-5	Carbon Tetrachloride	<10	10
108-90-7	Chlorobenzene	<10	10
75-00-3	Chloroethane	<50	50
67-66-3	Chloroform	<10	10
74-87-3	Chloromethane	<50	50
96-12-8	1,2-Dibromo-3-chloropropane	<50	50
124-48-1	Dibromochloromethane	<10	10
106-93-4	1,2-Dibromoethane	<10	10
74-95-3	Dibromomethane	<10	10
110-57-6	trans-1,4-Dichloro-2-butene	<10	10
95-50-1	1,2-Dichlorobenzene	<10	10
541-73-1	1,3-Dichlorobenzene	<10	10
106-46-7	1,4-Dichlorobenzene	<10	10
*75-71-8	Dichlorodifluoromethane	<50	50
75-34-3	1,1-Dichloroethane	<10	10
107-06-2	1,2-Dichloroethane	<10	10
75-35-4	1,1-Dichloroethene	<10	10
156-59-2	cis-1,2-Dichloroethene	<10	10
156-60-5	trans-1,2-Dichloroethene	<10	10

Continued on next page

*See Statement of Data Qualifications

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1306211**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-12s**	Sampled:	06/05/13 12:39
Lab Sample ID:	**1306211-02**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	06/11/13 18:20
Unit:	ug/L	Prepared:	06/14/13 By: BAG
Dilution Factor:	10	Analyzed:	06/14/13 By: BAG
QC Batch:	1306247	Analytical Batch:	3F17023

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
78-87-5	1,2-Dichloropropane	<10	10
10061-01-5	cis-1,3-Dichloropropene	<10	10
10061-02-6	trans-1,3-Dichloropropene	<10	10
100-41-4	Ethylbenzene	<10	10
60-29-7	Ethyl Ether	<50	50
591-78-6	2-Hexanone	<50	50
74-88-4	Iodomethane	<10	10
98-82-8	Isopropylbenzene	<10	10
99-87-6	4-Isopropyltoluene	<50	50
1634-04-4	Methyl tert-Butyl Ether	<50	50
75-09-2	Methylene Chloride	<50	50
78-93-3	2-Butanone (MEK)	<50	50
91-57-6	2-Methylnaphthalene	<50	50
108-10-1	4-Methyl-2-pentanone (MIBK)	<50	50
91-20-3	Naphthalene	<50	50
103-65-1	n-Propylbenzene	<10	10
100-42-5	Styrene	<10	10
630-20-6	1,1,1,2-Tetrachloroethane	<10	10
79-34-5	1,1,2,2-Tetrachloroethane	<10	10
127-18-4	Tetrachloroethene	**12**	10
109-99-9	Tetrahydrofuran	<50	50
108-88-3	Toluene	<10	10
87-61-6	1,2,3-Trichlorobenzene	<50	50
120-82-1	1,2,4-Trichlorobenzene	<50	50
71-55-6	1,1,1-Trichloroethane	**19**	10
79-00-5	1,1,2-Trichloroethane	<10	10
79-01-6	Trichloroethene	**950**	10
75-69-4	Trichlorofluoromethane	<10	10
96-18-4	1,2,3-Trichloropropane	<10	10
95-63-6	1,2,4-Trimethylbenzene	<10	10
108-67-8	1,3,5-Trimethylbenzene	<10	10

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1306211**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-12s**	Sampled:	06/05/13 12:39
Lab Sample ID:	**1306211-02**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	06/11/13 18:20
Unit:	ug/L	Prepared:	06/14/13 By: BAG
Dilution Factor:	10	Analyzed:	06/14/13 By: BAG
QC Batch:	1306247	Analytical Batch:	3F17023

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
75-01-4	Vinyl Chloride	<10	10
179601-23-1	Xylene, Meta + Para	<20	20
95-47-6	Xylene, Ortho	<10	10

Surrogates:	***% Recovery***	***Control Limits***
Dibromofluoromethane	*102*	*85-118*
1,2-Dichloroethane-d4	*114*	*87-122*
Toluene-d8	*101*	*85-113*
4-Bromofluorobenzene	*104*	*82-110*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1306211**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-13s**	Sampled:	06/05/13 14:28
Lab Sample ID:	**1306211-03**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	06/11/13 18:20
Unit:	ug/L	Prepared:	06/14/13 By: BAG
Dilution Factor:	20	Analyzed:	06/14/13 By: BAG
QC Batch:	1306247	Analytical Batch:	3F17023

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	RL
67-64-1	Acetone	<400	400
107-13-1	Acrylonitrile	<40	40
71-43-2	Benzene	<20	20
108-86-1	Bromobenzene	<20	20
74-97-5	Bromochloromethane	<20	20
75-27-4	Bromodichloromethane	<20	20
75-25-2	Bromoform	<20	20
74-83-9	Bromomethane	<100	100
104-51-8	n-Butylbenzene	<20	20
135-98-8	sec-Butylbenzene	<20	20
98-06-6	tert-Butylbenzene	<20	20
75-15-0	Carbon Disulfide	<20	20
56-23-5	Carbon Tetrachloride	<20	20
108-90-7	Chlorobenzene	<20	20
75-00-3	Chloroethane	<100	100
67-66-3	Chloroform	<20	20
74-87-3	Chloromethane	<100	100
96-12-8	1,2-Dibromo-3-chloropropane	<100	100
124-48-1	Dibromochloromethane	<20	20
106-93-4	1,2-Dibromoethane	<20	20
74-95-3	Dibromomethane	<20	20
110-57-6	trans-1,4-Dichloro-2-butene	<20	20
95-50-1	1,2-Dichlorobenzene	<20	20
541-73-1	1,3-Dichlorobenzene	<20	20
106-46-7	1,4-Dichlorobenzene	<20	20
*75-71-8	Dichlorodifluoromethane	<100	100
75-34-3	1,1-Dichloroethane	<20	20
107-06-2	1,2-Dichloroethane	<20	20
75-35-4	1,1-Dichloroethene	<20	20
156-59-2	cis-1,2-Dichloroethene	**20**	20
156-60-5	trans-1,2-Dichloroethene	<20	20

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1306211**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-13s**	Sampled:	06/05/13 14:28
Lab Sample ID:	**1306211-03**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	06/11/13 18:20
Unit:	ug/L	Prepared:	06/14/13 By: BAG
Dilution Factor:	20	Analyzed:	06/14/13 By: BAG
QC Batch:	1306247	Analytical Batch:	3F17023

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
78-87-5	1,2-Dichloropropane	<20	20
10061-01-5	cis-1,3-Dichloropropene	<20	20
10061-02-6	trans-1,3-Dichloropropene	<20	20
100-41-4	Ethylbenzene	<20	20
60-29-7	Ethyl Ether	<100	100
591-78-6	2-Hexanone	<100	100
74-88-4	Iodomethane	<20	20
98-82-8	Isopropylbenzene	<20	20
99-87-6	4-Isopropyltoluene	<100	100
1634-04-4	Methyl tert-Butyl Ether	<100	100
75-09-2	Methylene Chloride	<100	100
78-93-3	2-Butanone (MEK)	<100	100
91-57-6	2-Methylnaphthalene	<100	100
108-10-1	4-Methyl-2-pentanone (MIBK)	<100	100
91-20-3	Naphthalene	<100	100
103-65-1	n-Propylbenzene	<20	20
100-42-5	Styrene	<20	20
630-20-6	1,1,1,2-Tetrachloroethane	<20	20
79-34-5	1,1,2,2-Tetrachloroethane	<20	20
127-18-4	Tetrachloroethene	<20	20
109-99-9	Tetrahydrofuran	<100	100
108-88-3	Toluene	<20	20
87-61-6	1,2,3-Trichlorobenzene	<100	100
120-82-1	1,2,4-Trichlorobenzene	<100	100
71-55-6	1,1,1-Trichloroethane	**1200**	20
79-00-5	1,1,2-Trichloroethane	<20	20
79-01-6	Trichloroethene	**2700**	20
75-69-4	Trichlorofluoromethane	<20	20
96-18-4	1,2,3-Trichloropropane	<20	20
95-63-6	1,2,4-Trimethylbenzene	<20	20
108-67-8	1,3,5-Trimethylbenzene	<20	20

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1306211**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-13s**	Sampled:	06/05/13 14:28
Lab Sample ID:	**1306211-03**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	06/11/13 18:20
Unit:	ug/L	Prepared:	06/14/13 By: BAG
Dilution Factor:	20	Analyzed:	06/14/13 By: BAG
QC Batch:	1306247	Analytical Batch:	3F17023

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
75-01-4	Vinyl Chloride	<20	20
179601-23-1	Xylene, Meta + Para	<40	40
95-47-6	Xylene, Ortho	<20	20

Surrogates:	***% Recovery***	***Control Limits***
Dibromofluoromethane	*104*	*85-118*
1,2-Dichloroethane-d4	*114*	*87-122*
Toluene-d8	*102*	*85-113*
4-Bromofluorobenzene	*104*	*82-110*

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ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1306211**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-14s**	Sampled:	06/05/13 15:04
Lab Sample ID:	**1306211-04**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	06/11/13 18:20
Unit:	ug/L	Prepared:	06/14/13 By: BAG
Dilution Factor:	20	Analyzed:	06/15/13 By: BAG
QC Batch:	1306255	Analytical Batch:	3F17032

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	RL
67-64-1	Acetone	<400	400
107-13-1	Acrylonitrile	<40	40
71-43-2	Benzene	<20	20
108-86-1	Bromobenzene	<20	20
74-97-5	Bromochloromethane	<20	20
75-27-4	Bromodichloromethane	<20	20
75-25-2	Bromoform	<20	20
74-83-9	Bromomethane	<100	100
104-51-8	n-Butylbenzene	<20	20
135-98-8	sec-Butylbenzene	<20	20
98-06-6	tert-Butylbenzene	<20	20
75-15-0	Carbon Disulfide	<20	20
56-23-5	Carbon Tetrachloride	<20	20
108-90-7	Chlorobenzene	<20	20
75-00-3	Chloroethane	<100	100
67-66-3	Chloroform	<20	20
74-87-3	Chloromethane	<100	100
96-12-8	1,2-Dibromo-3-chloropropane	<100	100
124-48-1	Dibromochloromethane	<20	20
106-93-4	1,2-Dibromoethane	<20	20
74-95-3	Dibromomethane	<20	20
110-57-6	trans-1,4-Dichloro-2-butene	<20	20
95-50-1	1,2-Dichlorobenzene	<20	20
541-73-1	1,3-Dichlorobenzene	<20	20
106-46-7	1,4-Dichlorobenzene	<20	20
75-71-8	Dichlorodifluoromethane	<100	100
75-34-3	1,1-Dichloroethane	<20	20
107-06-2	1,2-Dichloroethane	<20	20
75-35-4	1,1-Dichloroethene	<20	20
156-59-2	cis-1,2-Dichloroethene	<20	20
156-60-5	trans-1,2-Dichloroethene	<20	20

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ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1306211**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-14s**	Sampled:	06/05/13 15:04
Lab Sample ID:	**1306211-04**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	06/11/13 18:20
Unit:	ug/L	Prepared:	06/14/13 By: BAG
Dilution Factor:	20	Analyzed:	06/15/13 By: BAG
QC Batch:	1306255	Analytical Batch:	3F17032

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
78-87-5	1,2-Dichloropropane	<20	20
10061-01-5	cis-1,3-Dichloropropene	<20	20
10061-02-6	trans-1,3-Dichloropropene	<20	20
100-41-4	Ethylbenzene	<20	20
60-29-7	Ethyl Ether	<100	100
591-78-6	2-Hexanone	<100	100
74-88-4	Iodomethane	<20	20
98-82-8	Isopropylbenzene	<20	20
99-87-6	4-Isopropyltoluene	<100	100
1634-04-4	Methyl tert-Butyl Ether	<100	100
75-09-2	Methylene Chloride	<100	100
78-93-3	2-Butanone (MEK)	<100	100
91-57-6	2-Methylnaphthalene	<100	100
108-10-1	4-Methyl-2-pentanone (MIBK)	<100	100
91-20-3	Naphthalene	<100	100
103-65-1	n-Propylbenzene	<20	20
100-42-5	Styrene	<20	20
630-20-6	1,1,1,2-Tetrachloroethane	<20	20
79-34-5	1,1,2,2-Tetrachloroethane	<20	20
127-18-4	Tetrachloroethene	<20	20
109-99-9	Tetrahydrofuran	<100	100
108-88-3	Toluene	<20	20
87-61-6	1,2,3-Trichlorobenzene	<100	100
120-82-1	1,2,4-Trichlorobenzene	<100	100
71-55-6	1,1,1-Trichloroethane	**1200**	20
79-00-5	1,1,2-Trichloroethane	<20	20
79-01-6	Trichloroethene	**2700**	20
75-69-4	Trichlorofluoromethane	<20	20
96-18-4	1,2,3-Trichloropropane	<20	20
95-63-6	1,2,4-Trimethylbenzene	<20	20
108-67-8	1,3,5-Trimethylbenzene	<20	20

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1306211**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-14s**	Sampled:	06/05/13 15:04
Lab Sample ID:	**1306211-04**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	06/11/13 18:20
Unit:	ug/L	Prepared:	06/14/13 By: BAG
Dilution Factor:	20	Analyzed:	06/15/13 By: BAG
QC Batch:	1306255	Analytical Batch:	3F17032

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
75-01-4	Vinyl Chloride	<20	20
179601-23-1	Xylene, Meta + Para	<40	40
95-47-6	Xylene, Ortho	<20	20

Surrogates:	***% Recovery***	***Control Limits***
Dibromofluoromethane	*103*	*85-118*
1,2-Dichloroethane-d4	*114*	*87-122*
Toluene-d8	*101*	*85-113*
4-Bromofluorobenzene	*104*	*82-110*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1306211**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-15s**	Sampled:	06/05/13 15:59
Lab Sample ID:	**1306211-05**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	06/11/13 18:20
Unit:	ug/L	Prepared:	06/14/13 By: BAG
Dilution Factor:	20	Analyzed:	06/15/13 By: BAG
QC Batch:	1306255	Analytical Batch:	3F17032

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	RL
67-64-1	Acetone	<400	400
107-13-1	Acrylonitrile	<40	40
71-43-2	Benzene	<20	20
108-86-1	Bromobenzene	<20	20
74-97-5	Bromochloromethane	<20	20
75-27-4	Bromodichloromethane	<20	20
75-25-2	Bromoform	<20	20
74-83-9	Bromomethane	<100	100
104-51-8	n-Butylbenzene	<20	20
135-98-8	sec-Butylbenzene	<20	20
98-06-6	tert-Butylbenzene	<20	20
75-15-0	Carbon Disulfide	<20	20
56-23-5	Carbon Tetrachloride	<20	20
108-90-7	Chlorobenzene	<20	20
75-00-3	Chloroethane	<100	100
67-66-3	Chloroform	<20	20
74-87-3	Chloromethane	<100	100
96-12-8	1,2-Dibromo-3-chloropropane	<100	100
124-48-1	Dibromochloromethane	<20	20
106-93-4	1,2-Dibromoethane	<20	20
74-95-3	Dibromomethane	<20	20
110-57-6	trans-1,4-Dichloro-2-butene	<20	20
95-50-1	1,2-Dichlorobenzene	<20	20
541-73-1	1,3-Dichlorobenzene	<20	20
106-46-7	1,4-Dichlorobenzene	<20	20
75-71-8	Dichlorodifluoromethane	<100	100
75-34-3	1,1-Dichloroethane	<20	20
107-06-2	1,2-Dichloroethane	<20	20
75-35-4	1,1-Dichloroethene	<20	20
156-59-2	cis-1,2-Dichloroethene	**130**	20
156-60-5	trans-1,2-Dichloroethene	<20	20

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1306211**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-15s**	Sampled:	06/05/13 15:59
Lab Sample ID:	**1306211-05**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	06/11/13 18:20
Unit:	ug/L	Prepared:	06/14/13 By: BAG
Dilution Factor:	20	Analyzed:	06/15/13 By: BAG
QC Batch:	1306255	Analytical Batch:	3F17032

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
78-87-5	1,2-Dichloropropane	<20	20
10061-01-5	cis-1,3-Dichloropropene	<20	20
10061-02-6	trans-1,3-Dichloropropene	<20	20
100-41-4	Ethylbenzene	<20	20
60-29-7	Ethyl Ether	<100	100
591-78-6	2-Hexanone	<100	100
74-88-4	Iodomethane	<20	20
98-82-8	Isopropylbenzene	<20	20
99-87-6	4-Isopropyltoluene	<100	100
1634-04-4	Methyl tert-Butyl Ether	<100	100
75-09-2	Methylene Chloride	<100	100
78-93-3	2-Butanone (MEK)	<100	100
91-57-6	2-Methylnaphthalene	<100	100
108-10-1	4-Methyl-2-pentanone (MIBK)	<100	100
91-20-3	Naphthalene	<100	100
103-65-1	n-Propylbenzene	<20	20
100-42-5	Styrene	<20	20
630-20-6	1,1,1,2-Tetrachloroethane	<20	20
79-34-5	1,1,2,2-Tetrachloroethane	<20	20
127-18-4	Tetrachloroethene	<20	20
109-99-9	Tetrahydrofuran	<100	100
108-88-3	Toluene	<20	20
87-61-6	1,2,3-Trichlorobenzene	<100	100
120-82-1	1,2,4-Trichlorobenzene	<100	100
71-55-6	1,1,1-Trichloroethane	**260**	20
79-00-5	1,1,2-Trichloroethane	<20	20
79-01-6	Trichloroethene	**1600**	20
75-69-4	Trichlorofluoromethane	<20	20
96-18-4	1,2,3-Trichloropropane	<20	20
95-63-6	1,2,4-Trimethylbenzene	<20	20
108-67-8	1,3,5-Trimethylbenzene	<20	20

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1306211**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-15s**	Sampled:	06/05/13 15:59
Lab Sample ID:	**1306211-05**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	06/11/13 18:20
Unit:	ug/L	Prepared:	06/14/13 By: BAG
Dilution Factor:	20	Analyzed:	06/15/13 By: BAG
QC Batch:	1306255	Analytical Batch:	3F17032

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
75-01-4	Vinyl Chloride	<20	20
179601-23-1	Xylene, Meta + Para	<40	40
95-47-6	Xylene, Ortho	<20	20

Surrogates:	***% Recovery***	***Control Limits***
Dibromofluoromethane	*104*	*85-118*
1,2-Dichloroethane-d4	*114*	*87-122*
Toluene-d8	*102*	*85-113*
4-Bromofluorobenzene	*104*	*82-110*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1306211**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-15d**	Sampled:	06/05/13 16:26
Lab Sample ID:	**1306211-06**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	06/11/13 18:20
Unit:	ug/L	Prepared:	06/14/13 By: BAG
Dilution Factor:	1	Analyzed:	06/14/13 By: BAG
QC Batch:	1306247	Analytical Batch:	3F17023

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	RL
67-64-1	Acetone	<20	20
107-13-1	Acrylonitrile	<2.0	2.0
71-43-2	Benzene	<1.0	1.0
108-86-1	Bromobenzene	<1.0	1.0
74-97-5	Bromochloromethane	<1.0	1.0
75-27-4	Bromodichloromethane	<1.0	1.0
75-25-2	Bromoform	<1.0	1.0
74-83-9	Bromomethane	<5.0	5.0
104-51-8	n-Butylbenzene	<1.0	1.0
135-98-8	sec-Butylbenzene	<1.0	1.0
98-06-6	tert-Butylbenzene	<1.0	1.0
75-15-0	Carbon Disulfide	<1.0	1.0
56-23-5	Carbon Tetrachloride	<1.0	1.0
108-90-7	Chlorobenzene	<1.0	1.0
75-00-3	Chloroethane	<5.0	5.0
67-66-3	Chloroform	<1.0	1.0
74-87-3	Chloromethane	<5.0	5.0
96-12-8	1,2-Dibromo-3-chloropropane	<5.0	5.0
124-48-1	Dibromochloromethane	<1.0	1.0
106-93-4	1,2-Dibromoethane	<1.0	1.0
74-95-3	Dibromomethane	<1.0	1.0
110-57-6	trans-1,4-Dichloro-2-butene	<1.0	1.0
95-50-1	1,2-Dichlorobenzene	<1.0	1.0
541-73-1	1,3-Dichlorobenzene	<1.0	1.0
106-46-7	1,4-Dichlorobenzene	<1.0	1.0
*75-71-8	Dichlorodifluoromethane	<5.0	5.0
75-34-3	1,1-Dichloroethane	<1.0	1.0
107-06-2	1,2-Dichloroethane	<1.0	1.0
75-35-4	1,1-Dichloroethene	<1.0	1.0
156-59-2	cis-1,2-Dichloroethene	**2.6**	1.0
156-60-5	trans-1,2-Dichloroethene	<1.0	1.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1306211**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-15d**	Sampled:	06/05/13 16:26
Lab Sample ID:	**1306211-06**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	06/11/13 18:20
Unit:	ug/L	Prepared:	06/14/13 By: BAG
Dilution Factor:	1	Analyzed:	06/14/13 By: BAG
QC Batch:	1306247	Analytical Batch:	3F17023

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
78-87-5	1,2-Dichloropropane	<1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	<1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	<1.0	1.0
100-41-4	Ethylbenzene	<1.0	1.0
60-29-7	Ethyl Ether	<5.0	5.0
591-78-6	2-Hexanone	<5.0	5.0
74-88-4	Iodomethane	<1.0	1.0
98-82-8	Isopropylbenzene	<1.0	1.0
99-87-6	4-Isopropyltoluene	<5.0	5.0
1634-04-4	Methyl tert-Butyl Ether	<5.0	5.0
75-09-2	Methylene Chloride	<5.0	5.0
78-93-3	2-Butanone (MEK)	<5.0	5.0
91-57-6	2-Methylnaphthalene	<5.0	5.0
108-10-1	4-Methyl-2-pentanone (MIBK)	<5.0	5.0
91-20-3	Naphthalene	<5.0	5.0
103-65-1	n-Propylbenzene	<1.0	1.0
100-42-5	Styrene	<1.0	1.0
630-20-6	1,1,1,2-Tetrachloroethane	<1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	<1.0	1.0
127-18-4	Tetrachloroethene	<1.0	1.0
109-99-9	Tetrahydrofuran	<5.0	5.0
108-88-3	Toluene	<1.0	1.0
87-61-6	1,2,3-Trichlorobenzene	<5.0	5.0
120-82-1	1,2,4-Trichlorobenzene	<5.0	5.0
71-55-6	1,1,1-Trichloroethane	**3.7**	1.0
79-00-5	1,1,2-Trichloroethane	<1.0	1.0
79-01-6	Trichloroethene	**19**	1.0
75-69-4	Trichlorofluoromethane	<1.0	1.0
96-18-4	1,2,3-Trichloropropane	<1.0	1.0
95-63-6	1,2,4-Trimethylbenzene	<1.0	1.0
108-67-8	1,3,5-Trimethylbenzene	<1.0	1.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1306211**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-15d**	Sampled:	06/05/13 16:26
Lab Sample ID:	**1306211-06**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	06/11/13 18:20
Unit:	ug/L	Prepared:	06/14/13 By: BAG
Dilution Factor:	1	Analyzed:	06/14/13 By: BAG
QC Batch:	1306247	Analytical Batch:	3F17023

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
75-01-4	Vinyl Chloride	<1.0	1.0
179601-23-1	Xylene, Meta + Para	<2.0	2.0
95-47-6	Xylene, Ortho	<1.0	1.0

Surrogates:	***% Recovery***	***Control Limits***
Dibromofluoromethane	*103*	*85-118*
1,2-Dichloroethane-d4	*115*	*87-122*
Toluene-d8	*102*	*85-113*
4-Bromofluorobenzene	*103*	*82-110*

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ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1306211**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-03s**	Sampled:	06/06/13 09:33
Lab Sample ID:	**1306211-07**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	06/11/13 18:20
Unit:	ug/L	Prepared:	06/17/13 By: BAG
Dilution Factor:	2.5	Analyzed:	06/17/13 By: BAG
QC Batch:	1306303	Analytical Batch:	3F18017

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	RL
67-64-1	Acetone	<50	50
107-13-1	Acrylonitrile	<5.0	5.0
71-43-2	Benzene	<2.5	2.5
108-86-1	Bromobenzene	<2.5	2.5
74-97-5	Bromochloromethane	<2.5	2.5
75-27-4	Bromodichloromethane	<2.5	2.5
75-25-2	Bromoform	<2.5	2.5
74-83-9	Bromomethane	<12	12
104-51-8	n-Butylbenzene	<2.5	2.5
135-98-8	sec-Butylbenzene	<2.5	2.5
98-06-6	tert-Butylbenzene	<2.5	2.5
75-15-0	Carbon Disulfide	<2.5	2.5
*56-23-5	Carbon Tetrachloride	<2.5	2.5
108-90-7	Chlorobenzene	<2.5	2.5
75-00-3	Chloroethane	<12	12
67-66-3	Chloroform	<2.5	2.5
74-87-3	Chloromethane	<12	12
96-12-8	1,2-Dibromo-3-chloropropane	<12	12
124-48-1	Dibromochloromethane	<2.5	2.5
106-93-4	1,2-Dibromoethane	<2.5	2.5
74-95-3	Dibromomethane	<2.5	2.5
110-57-6	trans-1,4-Dichloro-2-butene	<2.5	2.5
95-50-1	1,2-Dichlorobenzene	<2.5	2.5
541-73-1	1,3-Dichlorobenzene	<2.5	2.5
106-46-7	1,4-Dichlorobenzene	<2.5	2.5
75-71-8	Dichlorodifluoromethane	<12	12
75-34-3	1,1-Dichloroethane	**62**	2.5
107-06-2	1,2-Dichloroethane	<2.5	2.5
75-35-4	1,1-Dichloroethene	<2.5	2.5
156-59-2	cis-1,2-Dichloroethene	**7.4**	2.5
156-60-5	trans-1,2-Dichloroethene	<2.5	2.5

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1306211**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-03s**	Sampled:	06/06/13 09:33
Lab Sample ID:	**1306211-07**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	06/11/13 18:20
Unit:	ug/L	Prepared:	06/17/13 By: BAG
Dilution Factor:	2.5	Analyzed:	06/17/13 By: BAG
QC Batch:	1306303	Analytical Batch:	3F18017

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
78-87-5	1,2-Dichloropropane	<2.5	2.5
10061-01-5	cis-1,3-Dichloropropene	<2.5	2.5
10061-02-6	trans-1,3-Dichloropropene	<2.5	2.5
100-41-4	Ethylbenzene	**220**	2.5
60-29-7	Ethyl Ether	<12	12
591-78-6	2-Hexanone	<12	12
74-88-4	Iodomethane	<2.5	2.5
98-82-8	Isopropylbenzene	<2.5	2.5
99-87-6	4-Isopropyltoluene	<12	12
1634-04-4	Methyl tert-Butyl Ether	<12	12
75-09-2	Methylene Chloride	<12	12
78-93-3	2-Butanone (MEK)	<12	12
91-57-6	2-Methylnaphthalene	<12	12
108-10-1	4-Methyl-2-pentanone (MIBK)	<12	12
91-20-3	Naphthalene	<12	12
103-65-1	n-Propylbenzene	<2.5	2.5
100-42-5	Styrene	<2.5	2.5
630-20-6	1,1,1,2-Tetrachloroethane	<2.5	2.5
*79-34-5	1,1,2,2-Tetrachloroethane	<2.5	2.5
127-18-4	Tetrachloroethene	<2.5	2.5
109-99-9	Tetrahydrofuran	<12	12
108-88-3	Toluene	<2.5	2.5
87-61-6	1,2,3-Trichlorobenzene	<12	12
120-82-1	1,2,4-Trichlorobenzene	<12	12
71-55-6	1,1,1-Trichloroethane	<2.5	2.5
79-00-5	1,1,2-Trichloroethane	<2.5	2.5
79-01-6	Trichloroethene	**14**	2.5
75-69-4	Trichlorofluoromethane	<2.5	2.5
96-18-4	1,2,3-Trichloropropane	<2.5	2.5
95-63-6	1,2,4-Trimethylbenzene	**2.8**	2.5
108-67-8	1,3,5-Trimethylbenzene	<2.5	2.5

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1306211**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-03s**	Sampled:	06/06/13 09:33
Lab Sample ID:	**1306211-07**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	06/11/13 18:20
Unit:	ug/L	Prepared:	06/17/13 By: BAG
Dilution Factor:	2.5	Analyzed:	06/17/13 By: BAG
QC Batch:	1306303	Analytical Batch:	3F18017

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
75-01-4	Vinyl Chloride	**7.2**	2.5
179601-23-1	Xylene, Meta + Para	**620**	5.0
95-47-6	Xylene, Ortho	**390**	2.5

Surrogates:	***% Recovery***	***Control Limits***
Dibromofluoromethane	*98*	*85-118*
1,2-Dichloroethane-d4	*98*	*87-122*
Toluene-d8	*99*	*85-113*
4-Bromofluorobenzene	*99*	*82-110*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1306211**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-04s**	Sampled:	06/06/13 10:26
Lab Sample ID:	**1306211-08**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	06/11/13 18:20

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Ethane	**1.2**	1.0	ug/L	1	RSK-175	06/20/13 14:27	JMF	1306334
Methane	**14000**	200	ug/L	400	RSK-175	06/20/13 14:46	JMF	1306334
Ethylene	**160**	2.0	ug/L	2	RSK-175	06/20/13 14:42	JMF	1306334

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ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1306211**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-04s**	Sampled:	06/06/13 10:26
Lab Sample ID:	**1306211-08**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	06/11/13 18:20
Unit:	ug/L	Prepared:	06/17/13 By: BAG
Dilution Factor:	1	Analyzed:	06/17/13 By: BAG
QC Batch:	1306303	Analytical Batch:	3F18017

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	RL
67-64-1	Acetone	**28**	20
107-13-1	Acrylonitrile	<2.0	2.0
71-43-2	Benzene	<1.0	1.0
108-86-1	Bromobenzene	<1.0	1.0
74-97-5	Bromochloromethane	<1.0	1.0
75-27-4	Bromodichloromethane	<1.0	1.0
75-25-2	Bromoform	<1.0	1.0
74-83-9	Bromomethane	<5.0	5.0
104-51-8	n-Butylbenzene	<1.0	1.0
135-98-8	sec-Butylbenzene	<1.0	1.0
98-06-6	tert-Butylbenzene	<1.0	1.0
75-15-0	Carbon Disulfide	<1.0	1.0
*56-23-5	Carbon Tetrachloride	<1.0	1.0
108-90-7	Chlorobenzene	<1.0	1.0
75-00-3	Chloroethane	**58**	5.0
67-66-3	Chloroform	<1.0	1.0
74-87-3	Chloromethane	<5.0	5.0
96-12-8	1,2-Dibromo-3-chloropropane	<5.0	5.0
124-48-1	Dibromochloromethane	<1.0	1.0
106-93-4	1,2-Dibromoethane	<1.0	1.0
74-95-3	Dibromomethane	<1.0	1.0
110-57-6	trans-1,4-Dichloro-2-butene	<1.0	1.0
95-50-1	1,2-Dichlorobenzene	<1.0	1.0
541-73-1	1,3-Dichlorobenzene	<1.0	1.0
106-46-7	1,4-Dichlorobenzene	<1.0	1.0
75-71-8	Dichlorodifluoromethane	<5.0	5.0
75-34-3	1,1-Dichloroethane	**50**	1.0
107-06-2	1,2-Dichloroethane	<1.0	1.0
75-35-4	1,1-Dichloroethene	**1.0**	1.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1306211**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-04s**	Sampled:	06/06/13 10:26
Lab Sample ID:	**1306211-08**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	06/11/13 18:20
Unit:	ug/L	Prepared:	06/17/13 By: BAG
Dilution Factor:	1	Analyzed:	06/17/13 By: BAG
QC Batch:	1306303	Analytical Batch:	3F18017

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
156-59-2	cis-1,2-Dichloroethene	**200**	1.0
156-60-5	trans-1,2-Dichloroethene	**2.2**	1.0
78-87-5	1,2-Dichloropropane	<1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	<1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	<1.0	1.0
100-41-4	Ethylbenzene	<1.0	1.0
60-29-7	Ethyl Ether	<5.0	5.0
591-78-6	2-Hexanone	<5.0	5.0
74-88-4	Iodomethane	<1.0	1.0
98-82-8	Isopropylbenzene	<1.0	1.0
99-87-6	4-Isopropyltoluene	<5.0	5.0
1634-04-4	Methyl tert-Butyl Ether	<5.0	5.0
75-09-2	Methylene Chloride	<5.0	5.0
78-93-3	2-Butanone (MEK)	**36**	5.0
91-57-6	2-Methylnaphthalene	<5.0	5.0
108-10-1	4-Methyl-2-pentanone (MIBK)	<5.0	5.0
91-20-3	Naphthalene	<5.0	5.0
103-65-1	n-Propylbenzene	<1.0	1.0
100-42-5	Styrene	<1.0	1.0
630-20-6	1,1,1,2-Tetrachloroethane	<1.0	1.0
*79-34-5	1,1,2,2-Tetrachloroethane	<1.0	1.0
127-18-4	Tetrachloroethene	<1.0	1.0
109-99-9	Tetrahydrofuran	<5.0	5.0
108-88-3	Toluene	<1.0	1.0
87-61-6	1,2,3-Trichlorobenzene	<5.0	5.0
120-82-1	1,2,4-Trichlorobenzene	<5.0	5.0
71-55-6	1,1,1-Trichloroethane	<1.0	1.0
79-00-5	1,1,2-Trichloroethane	<1.0	1.0
79-01-6	Trichloroethene	<1.0	1.0
75-69-4	Trichlorofluoromethane	<1.0	1.0
96-18-4	1,2,3-Trichloropropane	<1.0	1.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1306211**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-04s**	Sampled:	06/06/13 10:26
Lab Sample ID:	**1306211-08**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	06/11/13 18:20
Unit:	ug/L	Prepared:	06/17/13 By: BAG
Dilution Factor:	1	Analyzed:	06/17/13 By: BAG
QC Batch:	1306303	Analytical Batch:	3F18017

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
95-63-6	1,2,4-Trimethylbenzene	<1.0	1.0
108-67-8	1,3,5-Trimethylbenzene	<1.0	1.0
75-01-4	Vinyl Chloride	**73**	1.0
179601-23-1	Xylene, Meta + Para	<2.0	2.0
95-47-6	Xylene, Ortho	<1.0	1.0

Surrogates:	***% Recovery***	***Control Limits***
Dibromofluoromethane	*99*	*85-118*
1,2-Dichloroethane-d4	*98*	*87-122*
Toluene-d8	*100*	*85-113*
4-Bromofluorobenzene	*100*	*82-110*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1306211**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-04d**	Sampled:	06/06/13 11:46
Lab Sample ID:	**1306211-09**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	06/11/13 18:20
Unit:	ug/L	Prepared:	06/14/13 By: BAG
Dilution Factor:	1	Analyzed:	06/14/13 By: BAG
QC Batch:	1306247	Analytical Batch:	3F17023

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	RL
67-64-1	Acetone	<20	20
107-13-1	Acrylonitrile	<2.0	2.0
71-43-2	Benzene	<1.0	1.0
108-86-1	Bromobenzene	<1.0	1.0
74-97-5	Bromochloromethane	<1.0	1.0
75-27-4	Bromodichloromethane	<1.0	1.0
75-25-2	Bromoform	<1.0	1.0
74-83-9	Bromomethane	<5.0	5.0
104-51-8	n-Butylbenzene	<1.0	1.0
135-98-8	sec-Butylbenzene	<1.0	1.0
98-06-6	tert-Butylbenzene	<1.0	1.0
75-15-0	Carbon Disulfide	<1.0	1.0
56-23-5	Carbon Tetrachloride	<1.0	1.0
108-90-7	Chlorobenzene	<1.0	1.0
75-00-3	Chloroethane	<5.0	5.0
67-66-3	Chloroform	<1.0	1.0
74-87-3	Chloromethane	<5.0	5.0
96-12-8	1,2-Dibromo-3-chloropropane	<5.0	5.0
124-48-1	Dibromochloromethane	<1.0	1.0
106-93-4	1,2-Dibromoethane	<1.0	1.0
74-95-3	Dibromomethane	<1.0	1.0
110-57-6	trans-1,4-Dichloro-2-butene	<1.0	1.0
95-50-1	1,2-Dichlorobenzene	<1.0	1.0
541-73-1	1,3-Dichlorobenzene	<1.0	1.0
106-46-7	1,4-Dichlorobenzene	<1.0	1.0
*75-71-8	Dichlorodifluoromethane	<5.0	5.0
75-34-3	1,1-Dichloroethane	<1.0	1.0
107-06-2	1,2-Dichloroethane	<1.0	1.0
75-35-4	1,1-Dichloroethene	<1.0	1.0
156-59-2	cis-1,2-Dichloroethene	<1.0	1.0
156-60-5	trans-1,2-Dichloroethene	<1.0	1.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1306211**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-04d**	Sampled:	06/06/13 11:46
Lab Sample ID:	**1306211-09**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	06/11/13 18:20
Unit:	ug/L	Prepared:	06/14/13 By: BAG
Dilution Factor:	1	Analyzed:	06/14/13 By: BAG
QC Batch:	1306247	Analytical Batch:	3F17023

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
78-87-5	1,2-Dichloropropane	<1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	<1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	<1.0	1.0
100-41-4	Ethylbenzene	<1.0	1.0
60-29-7	Ethyl Ether	<5.0	5.0
591-78-6	2-Hexanone	<5.0	5.0
74-88-4	Iodomethane	<1.0	1.0
98-82-8	Isopropylbenzene	<1.0	1.0
99-87-6	4-Isopropyltoluene	<5.0	5.0
1634-04-4	Methyl tert-Butyl Ether	<5.0	5.0
75-09-2	Methylene Chloride	<5.0	5.0
78-93-3	2-Butanone (MEK)	<5.0	5.0
91-57-6	2-Methylnaphthalene	<5.0	5.0
108-10-1	4-Methyl-2-pentanone (MIBK)	<5.0	5.0
91-20-3	Naphthalene	<5.0	5.0
103-65-1	n-Propylbenzene	<1.0	1.0
100-42-5	Styrene	<1.0	1.0
630-20-6	1,1,1,2-Tetrachloroethane	<1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	<1.0	1.0
127-18-4	Tetrachloroethene	<1.0	1.0
109-99-9	Tetrahydrofuran	<5.0	5.0
108-88-3	Toluene	<1.0	1.0
87-61-6	1,2,3-Trichlorobenzene	<5.0	5.0
120-82-1	1,2,4-Trichlorobenzene	<5.0	5.0
71-55-6	1,1,1-Trichloroethane	<1.0	1.0
79-00-5	1,1,2-Trichloroethane	<1.0	1.0
79-01-6	Trichloroethene	<1.0	1.0
75-69-4	Trichlorofluoromethane	<1.0	1.0
96-18-4	1,2,3-Trichloropropane	<1.0	1.0
95-63-6	1,2,4-Trimethylbenzene	<1.0	1.0
108-67-8	1,3,5-Trimethylbenzene	<1.0	1.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1306211**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-04d**	Sampled:	06/06/13 11:46
Lab Sample ID:	**1306211-09**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	06/11/13 18:20
Unit:	ug/L	Prepared:	06/14/13 By: BAG
Dilution Factor:	1	Analyzed:	06/14/13 By: BAG
QC Batch:	1306247	Analytical Batch:	3F17023

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
75-01-4	Vinyl Chloride	**14**	1.0
179601-23-1	Xylene, Meta + Para	<2.0	2.0
95-47-6	Xylene, Ortho	<1.0	1.0

Surrogates:	***% Recovery***	***Control Limits***
Dibromofluoromethane	*101*	*85-118*
1,2-Dichloroethane-d4	*113*	*87-122*
Toluene-d8	*101*	*85-113*
4-Bromofluorobenzene	*103*	*82-110*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1306211**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**Dup-01**	Sampled:	06/06/13 00:00
Lab Sample ID:	**1306211-10**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	06/11/13 18:20

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Ethane	**1.5**	1.0	ug/L	1	RSK-175	06/20/13 14:50	JMF	1306334
Methane	**15000**	200	ug/L	400	RSK-175	06/20/13 14:58	JMF	1306334
Ethylene	**160**	2.0	ug/L	2	RSK-175	06/20/13 14:54	JMF	1306334

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ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1306211**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**Dup-02**	Sampled:	06/06/13 00:00
Lab Sample ID:	**1306211-11**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	06/11/13 18:20
Unit:	ug/L	Prepared:	06/14/13 By: BAG
Dilution Factor:	1	Analyzed:	06/14/13 By: BAG
QC Batch:	1306247	Analytical Batch:	3F17023

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	RL
67-64-1	Acetone	**22**	20
107-13-1	Acrylonitrile	<2.0	2.0
71-43-2	Benzene	<1.0	1.0
108-86-1	Bromobenzene	<1.0	1.0
74-97-5	Bromochloromethane	<1.0	1.0
75-27-4	Bromodichloromethane	<1.0	1.0
75-25-2	Bromoform	<1.0	1.0
74-83-9	Bromomethane	<5.0	5.0
104-51-8	n-Butylbenzene	<1.0	1.0
135-98-8	sec-Butylbenzene	<1.0	1.0
98-06-6	tert-Butylbenzene	<1.0	1.0
75-15-0	Carbon Disulfide	<1.0	1.0
56-23-5	Carbon Tetrachloride	<1.0	1.0
108-90-7	Chlorobenzene	<1.0	1.0
75-00-3	Chloroethane	**47**	5.0
67-66-3	Chloroform	<1.0	1.0
74-87-3	Chloromethane	<5.0	5.0
96-12-8	1,2-Dibromo-3-chloropropane	<5.0	5.0
124-48-1	Dibromochloromethane	<1.0	1.0
106-93-4	1,2-Dibromoethane	<1.0	1.0
74-95-3	Dibromomethane	<1.0	1.0
110-57-6	trans-1,4-Dichloro-2-butene	<1.0	1.0
95-50-1	1,2-Dichlorobenzene	<1.0	1.0
541-73-1	1,3-Dichlorobenzene	<1.0	1.0
106-46-7	1,4-Dichlorobenzene	<1.0	1.0
*75-71-8	Dichlorodifluoromethane	<5.0	5.0
75-34-3	1,1-Dichloroethane	**48**	1.0
107-06-2	1,2-Dichloroethane	<1.0	1.0
75-35-4	1,1-Dichloroethene	<1.0	1.0
156-59-2	cis-1,2-Dichloroethene	**180**	1.0
156-60-5	trans-1,2-Dichloroethene	**2.0**	1.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1306211**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**Dup-02**	Sampled:	06/06/13 00:00
Lab Sample ID:	**1306211-11**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	06/11/13 18:20
Unit:	ug/L	Prepared:	06/14/13 By: BAG
Dilution Factor:	1	Analyzed:	06/14/13 By: BAG
QC Batch:	1306247	Analytical Batch:	3F17023

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
78-87-5	1,2-Dichloropropane	<1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	<1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	<1.0	1.0
100-41-4	Ethylbenzene	<1.0	1.0
60-29-7	Ethyl Ether	<5.0	5.0
591-78-6	2-Hexanone	<5.0	5.0
74-88-4	Iodomethane	<1.0	1.0
98-82-8	Isopropylbenzene	<1.0	1.0
99-87-6	4-Isopropyltoluene	<5.0	5.0
1634-04-4	Methyl tert-Butyl Ether	<5.0	5.0
75-09-2	Methylene Chloride	<5.0	5.0
78-93-3	2-Butanone (MEK)	**26**	5.0
91-57-6	2-Methylnaphthalene	<5.0	5.0
108-10-1	4-Methyl-2-pentanone (MIBK)	<5.0	5.0
91-20-3	Naphthalene	<5.0	5.0
103-65-1	n-Propylbenzene	<1.0	1.0
100-42-5	Styrene	<1.0	1.0
630-20-6	1,1,1,2-Tetrachloroethane	<1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	<1.0	1.0
127-18-4	Tetrachloroethene	<1.0	1.0
109-99-9	Tetrahydrofuran	<5.0	5.0
108-88-3	Toluene	<1.0	1.0
87-61-6	1,2,3-Trichlorobenzene	<5.0	5.0
120-82-1	1,2,4-Trichlorobenzene	<5.0	5.0
71-55-6	1,1,1-Trichloroethane	<1.0	1.0
79-00-5	1,1,2-Trichloroethane	<1.0	1.0
79-01-6	Trichloroethene	**2.3**	1.0
75-69-4	Trichlorofluoromethane	<1.0	1.0
96-18-4	1,2,3-Trichloropropane	<1.0	1.0
95-63-6	1,2,4-Trimethylbenzene	<1.0	1.0
108-67-8	1,3,5-Trimethylbenzene	<1.0	1.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1306211**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**Dup-02**	Sampled:	06/06/13 00:00
Lab Sample ID:	**1306211-11**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	06/11/13 18:20
Unit:	ug/L	Prepared:	06/14/13 By: BAG
Dilution Factor:	1	Analyzed:	06/14/13 By: BAG
QC Batch:	1306247	Analytical Batch:	3F17023

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
75-01-4	Vinyl Chloride	**59**	1.0
179601-23-1	Xylene, Meta + Para	<2.0	2.0
95-47-6	Xylene, Ortho	<1.0	1.0

Surrogates:	***% Recovery***	***Control Limits***
Dibromofluoromethane	*101*	*85-118*
1,2-Dichloroethane-d4	*114*	*87-122*
Toluene-d8	*102*	*85-113*
4-Bromofluorobenzene	*105*	*82-110*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1306211**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-07s**	Sampled:	06/06/13 14:00
Lab Sample ID:	**1306211-12**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	06/11/13 18:20

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Ethane	**2.1**	1.0	ug/L	1	RSK-175	06/20/13 15:02	JMF	1306334
Methane	**7800**	100	ug/L	200	RSK-175	06/20/13 15:11	JMF	1306334
Ethylene	**16**	1.0	ug/L	1	RSK-175	06/20/13 15:02	JMF	1306334

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ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1306211**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-07s**	Sampled:	06/06/13 14:00
Lab Sample ID:	**1306211-12**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	06/11/13 18:20
Unit:	ug/L	Prepared:	06/14/13 By: BAG
Dilution Factor:	5	Analyzed:	06/15/13 By: BAG
QC Batch:	1306255	Analytical Batch:	3F17032

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	RL
67-64-1	Acetone	<100	100
107-13-1	Acrylonitrile	<10	10
71-43-2	Benzene	<5.0	5.0
108-86-1	Bromobenzene	<5.0	5.0
74-97-5	Bromochloromethane	<5.0	5.0
75-27-4	Bromodichloromethane	<5.0	5.0
75-25-2	Bromoform	<5.0	5.0
74-83-9	Bromomethane	<25	25
104-51-8	n-Butylbenzene	<5.0	5.0
135-98-8	sec-Butylbenzene	<5.0	5.0
98-06-6	tert-Butylbenzene	<5.0	5.0
75-15-0	Carbon Disulfide	<5.0	5.0
56-23-5	Carbon Tetrachloride	<5.0	5.0
108-90-7	Chlorobenzene	<5.0	5.0
75-00-3	Chloroethane	<25	25
67-66-3	Chloroform	<5.0	5.0
74-87-3	Chloromethane	<25	25
96-12-8	1,2-Dibromo-3-chloropropane	<25	25
124-48-1	Dibromochloromethane	<5.0	5.0
106-93-4	1,2-Dibromoethane	<5.0	5.0
74-95-3	Dibromomethane	<5.0	5.0
110-57-6	trans-1,4-Dichloro-2-butene	<5.0	5.0
95-50-1	1,2-Dichlorobenzene	<5.0	5.0
541-73-1	1,3-Dichlorobenzene	<5.0	5.0
106-46-7	1,4-Dichlorobenzene	<5.0	5.0
75-71-8	Dichlorodifluoromethane	<25	25
75-34-3	1,1-Dichloroethane	**5.6**	5.0
107-06-2	1,2-Dichloroethane	<5.0	5.0
75-35-4	1,1-Dichloroethene	<5.0	5.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1306211**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-07s**	Sampled:	06/06/13 14:00
Lab Sample ID:	**1306211-12**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	06/11/13 18:20
Unit:	ug/L	Prepared:	06/14/13 By: BAG
Dilution Factor:	5	Analyzed:	06/15/13 By: BAG
QC Batch:	1306255	Analytical Batch:	3F17032

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
156-59-2	cis-1,2-Dichloroethene	**570**	5.0
156-60-5	trans-1,2-Dichloroethene	<5.0	5.0
78-87-5	1,2-Dichloropropane	<5.0	5.0
10061-01-5	cis-1,3-Dichloropropene	<5.0	5.0
10061-02-6	trans-1,3-Dichloropropene	<5.0	5.0
100-41-4	Ethylbenzene	<5.0	5.0
60-29-7	Ethyl Ether	<25	25
591-78-6	2-Hexanone	<25	25
74-88-4	Iodomethane	<5.0	5.0
98-82-8	Isopropylbenzene	<5.0	5.0
99-87-6	4-Isopropyltoluene	<25	25
1634-04-4	Methyl tert-Butyl Ether	<25	25
75-09-2	Methylene Chloride	<25	25
78-93-3	2-Butanone (MEK)	**50**	25
91-57-6	2-Methylnaphthalene	<25	25
108-10-1	4-Methyl-2-pentanone (MIBK)	<25	25
91-20-3	Naphthalene	<25	25
103-65-1	n-Propylbenzene	<5.0	5.0
100-42-5	Styrene	<5.0	5.0
630-20-6	1,1,1,2-Tetrachloroethane	<5.0	5.0
79-34-5	1,1,2,2-Tetrachloroethane	<5.0	5.0
127-18-4	Tetrachloroethene	<5.0	5.0
109-99-9	Tetrahydrofuran	<25	25
108-88-3	Toluene	<5.0	5.0
87-61-6	1,2,3-Trichlorobenzene	<25	25
120-82-1	1,2,4-Trichlorobenzene	<25	25
71-55-6	1,1,1-Trichloroethane	**16**	5.0
79-00-5	1,1,2-Trichloroethane	<5.0	5.0
79-01-6	Trichloroethene	**370**	5.0
75-69-4	Trichlorofluoromethane	<5.0	5.0
96-18-4	1,2,3-Trichloropropane	<5.0	5.0

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ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1306211**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-07s**	Sampled:	06/06/13 14:00
Lab Sample ID:	**1306211-12**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	06/11/13 18:20
Unit:	ug/L	Prepared:	06/14/13 By: BAG
Dilution Factor:	5	Analyzed:	06/15/13 By: BAG
QC Batch:	1306255	Analytical Batch:	3F17032

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
95-63-6	1,2,4-Trimethylbenzene	<5.0	5.0
108-67-8	1,3,5-Trimethylbenzene	<5.0	5.0
75-01-4	Vinyl Chloride	**38**	5.0
179601-23-1	Xylene, Meta + Para	<10	10
95-47-6	Xylene, Ortho	<5.0	5.0

Surrogates:	***% Recovery***	***Control Limits***
Dibromofluoromethane	*100*	*85-118*
1,2-Dichloroethane-d4	*112*	*87-122*
Toluene-d8	*100*	*85-113*
4-Bromofluorobenzene	*103*	*82-110*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1306211**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-08d**	Sampled:	06/06/13 15:24
Lab Sample ID:	**1306211-13**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	06/11/13 18:20
Unit:	ug/L	Prepared:	06/14/13 By: BAG
Dilution Factor:	1	Analyzed:	06/14/13 By: BAG
QC Batch:	1306247	Analytical Batch:	3F17023

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	RL
67-64-1	Acetone	<20	20
107-13-1	Acrylonitrile	<2.0	2.0
71-43-2	Benzene	<1.0	1.0
108-86-1	Bromobenzene	<1.0	1.0
74-97-5	Bromochloromethane	<1.0	1.0
75-27-4	Bromodichloromethane	<1.0	1.0
75-25-2	Bromoform	<1.0	1.0
74-83-9	Bromomethane	<5.0	5.0
104-51-8	n-Butylbenzene	<1.0	1.0
135-98-8	sec-Butylbenzene	<1.0	1.0
98-06-6	tert-Butylbenzene	<1.0	1.0
75-15-0	Carbon Disulfide	<1.0	1.0
56-23-5	Carbon Tetrachloride	<1.0	1.0
108-90-7	Chlorobenzene	<1.0	1.0
75-00-3	Chloroethane	<5.0	5.0
67-66-3	Chloroform	<1.0	1.0
74-87-3	Chloromethane	<5.0	5.0
96-12-8	1,2-Dibromo-3-chloropropane	<5.0	5.0
124-48-1	Dibromochloromethane	<1.0	1.0
106-93-4	1,2-Dibromoethane	<1.0	1.0
74-95-3	Dibromomethane	<1.0	1.0
110-57-6	trans-1,4-Dichloro-2-butene	<1.0	1.0
95-50-1	1,2-Dichlorobenzene	<1.0	1.0
541-73-1	1,3-Dichlorobenzene	<1.0	1.0
106-46-7	1,4-Dichlorobenzene	<1.0	1.0
*75-71-8	Dichlorodifluoromethane	<5.0	5.0
75-34-3	1,1-Dichloroethane	<1.0	1.0
107-06-2	1,2-Dichloroethane	<1.0	1.0
75-35-4	1,1-Dichloroethene	<1.0	1.0
156-59-2	cis-1,2-Dichloroethene	<1.0	1.0
156-60-5	trans-1,2-Dichloroethene	<1.0	1.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1306211**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-08d**	Sampled:	06/06/13 15:24
Lab Sample ID:	**1306211-13**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	06/11/13 18:20
Unit:	ug/L	Prepared:	06/14/13 By: BAG
Dilution Factor:	1	Analyzed:	06/14/13 By: BAG
QC Batch:	1306247	Analytical Batch:	3F17023

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
78-87-5	1,2-Dichloropropane	<1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	<1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	<1.0	1.0
100-41-4	Ethylbenzene	<1.0	1.0
60-29-7	Ethyl Ether	<5.0	5.0
591-78-6	2-Hexanone	<5.0	5.0
74-88-4	Iodomethane	<1.0	1.0
98-82-8	Isopropylbenzene	<1.0	1.0
99-87-6	4-Isopropyltoluene	<5.0	5.0
1634-04-4	Methyl tert-Butyl Ether	<5.0	5.0
75-09-2	Methylene Chloride	<5.0	5.0
78-93-3	2-Butanone (MEK)	<5.0	5.0
91-57-6	2-Methylnaphthalene	<5.0	5.0
108-10-1	4-Methyl-2-pentanone (MIBK)	<5.0	5.0
91-20-3	Naphthalene	<5.0	5.0
103-65-1	n-Propylbenzene	<1.0	1.0
100-42-5	Styrene	<1.0	1.0
630-20-6	1,1,1,2-Tetrachloroethane	<1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	<1.0	1.0
127-18-4	Tetrachloroethene	<1.0	1.0
109-99-9	Tetrahydrofuran	<5.0	5.0
108-88-3	Toluene	<1.0	1.0
87-61-6	1,2,3-Trichlorobenzene	<5.0	5.0
120-82-1	1,2,4-Trichlorobenzene	<5.0	5.0
71-55-6	1,1,1-Trichloroethane	<1.0	1.0
79-00-5	1,1,2-Trichloroethane	<1.0	1.0
79-01-6	Trichloroethene	<1.0	1.0
75-69-4	Trichlorofluoromethane	<1.0	1.0
96-18-4	1,2,3-Trichloropropane	<1.0	1.0
95-63-6	1,2,4-Trimethylbenzene	<1.0	1.0
108-67-8	1,3,5-Trimethylbenzene	<1.0	1.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1306211**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-08d**	Sampled:	06/06/13 15:24
Lab Sample ID:	**1306211-13**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	06/11/13 18:20
Unit:	ug/L	Prepared:	06/14/13 By: BAG
Dilution Factor:	1	Analyzed:	06/14/13 By: BAG
QC Batch:	1306247	Analytical Batch:	3F17023

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
75-01-4	Vinyl Chloride	**37**	1.0
179601-23-1	Xylene, Meta + Para	<2.0	2.0
95-47-6	Xylene, Ortho	<1.0	1.0

Surrogates:	***% Recovery***	***Control Limits***
Dibromofluoromethane	*102*	*85-118*
1,2-Dichloroethane-d4	*112*	*87-122*
Toluene-d8	*102*	*85-113*
4-Bromofluorobenzene	*102*	*82-110*

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ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1306211**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-08s**	Sampled:	06/06/13 15:53
Lab Sample ID:	**1306211-14**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	06/11/13 18:20

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Ethane	<1.0	1.0	ug/L	1	RSK-175	06/20/13 15:15	JMF	1306334
***Methane**	**1100**	25	ug/L	50	RSK-175	06/20/13 15:21	JMF	1306334
Ethylene	**1.3**	1.0	ug/L	1	RSK-175	06/20/13 15:15	JMF	1306334

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ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1306211**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-08s**	Sampled:	06/06/13 15:53
Lab Sample ID:	**1306211-14**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	06/11/13 18:20
Unit:	ug/L	Prepared:	06/14/13 By: BAG
Dilution Factor:	1	Analyzed:	06/14/13 By: BAG
QC Batch:	1306247	Analytical Batch:	3F17023

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	RL
67-64-1	Acetone	<20	20
107-13-1	Acrylonitrile	<2.0	2.0
71-43-2	Benzene	<1.0	1.0
108-86-1	Bromobenzene	<1.0	1.0
74-97-5	Bromochloromethane	<1.0	1.0
75-27-4	Bromodichloromethane	<1.0	1.0
75-25-2	Bromoform	<1.0	1.0
74-83-9	Bromomethane	<5.0	5.0
104-51-8	n-Butylbenzene	<1.0	1.0
135-98-8	sec-Butylbenzene	<1.0	1.0
98-06-6	tert-Butylbenzene	<1.0	1.0
75-15-0	Carbon Disulfide	<1.0	1.0
56-23-5	Carbon Tetrachloride	<1.0	1.0
108-90-7	Chlorobenzene	<1.0	1.0
75-00-3	Chloroethane	<5.0	5.0
67-66-3	Chloroform	<1.0	1.0
74-87-3	Chloromethane	<5.0	5.0
96-12-8	1,2-Dibromo-3-chloropropane	<5.0	5.0
124-48-1	Dibromochloromethane	<1.0	1.0
106-93-4	1,2-Dibromoethane	<1.0	1.0
74-95-3	Dibromomethane	<1.0	1.0
110-57-6	trans-1,4-Dichloro-2-butene	<1.0	1.0
95-50-1	1,2-Dichlorobenzene	<1.0	1.0
541-73-1	1,3-Dichlorobenzene	<1.0	1.0
106-46-7	1,4-Dichlorobenzene	<1.0	1.0
*75-71-8	Dichlorodifluoromethane	<5.0	5.0
75-34-3	1,1-Dichloroethane	**6.9**	1.0
107-06-2	1,2-Dichloroethane	<1.0	1.0
75-35-4	1,1-Dichloroethene	<1.0	1.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1306211**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-08s**	Sampled:	06/06/13 15:53
Lab Sample ID:	**1306211-14**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	06/11/13 18:20
Unit:	ug/L	Prepared:	06/14/13 By: BAG
Dilution Factor:	1	Analyzed:	06/14/13 By: BAG
QC Batch:	1306247	Analytical Batch:	3F17023

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
156-59-2	cis-1,2-Dichloroethene	**50**	1.0
156-60-5	trans-1,2-Dichloroethene	**6.0**	1.0
78-87-5	1,2-Dichloropropane	<1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	<1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	<1.0	1.0
100-41-4	Ethylbenzene	<1.0	1.0
60-29-7	Ethyl Ether	<5.0	5.0
591-78-6	2-Hexanone	<5.0	5.0
74-88-4	Iodomethane	<1.0	1.0
98-82-8	Isopropylbenzene	<1.0	1.0
99-87-6	4-Isopropyltoluene	<5.0	5.0
1634-04-4	Methyl tert-Butyl Ether	<5.0	5.0
75-09-2	Methylene Chloride	<5.0	5.0
78-93-3	2-Butanone (MEK)	<5.0	5.0
91-57-6	2-Methylnaphthalene	<5.0	5.0
108-10-1	4-Methyl-2-pentanone (MIBK)	<5.0	5.0
91-20-3	Naphthalene	<5.0	5.0
103-65-1	n-Propylbenzene	<1.0	1.0
100-42-5	Styrene	<1.0	1.0
630-20-6	1,1,1,2-Tetrachloroethane	<1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	<1.0	1.0
127-18-4	Tetrachloroethene	<1.0	1.0
109-99-9	Tetrahydrofuran	<5.0	5.0
108-88-3	Toluene	<1.0	1.0
87-61-6	1,2,3-Trichlorobenzene	<5.0	5.0
120-82-1	1,2,4-Trichlorobenzene	<5.0	5.0
71-55-6	1,1,1-Trichloroethane	<1.0	1.0
79-00-5	1,1,2-Trichloroethane	<1.0	1.0
79-01-6	Trichloroethene	<1.0	1.0
75-69-4	Trichlorofluoromethane	<1.0	1.0
96-18-4	1,2,3-Trichloropropane	<1.0	1.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1306211**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-08s**	Sampled:	06/06/13 15:53
Lab Sample ID:	**1306211-14**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	06/11/13 18:20
Unit:	ug/L	Prepared:	06/14/13 By: BAG
Dilution Factor:	1	Analyzed:	06/14/13 By: BAG
QC Batch:	1306247	Analytical Batch:	3F17023

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
95-63-6	1,2,4-Trimethylbenzene	<1.0	1.0
108-67-8	1,3,5-Trimethylbenzene	<1.0	1.0
75-01-4	Vinyl Chloride	**2.0**	1.0
179601-23-1	Xylene, Meta + Para	<2.0	2.0
95-47-6	Xylene, Ortho	<1.0	1.0

Surrogates:	***% Recovery***	***Control Limits***
Dibromofluoromethane	*101*	*85-118*
1,2-Dichloroethane-d4	*113*	*87-122*
Toluene-d8	*101*	*85-113*
4-Bromofluorobenzene	*103*	*82-110*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1306211**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-10s**	Sampled:	06/06/13 17:26
Lab Sample ID:	**1306211-15**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	06/11/13 18:20
Unit:	ug/L	Prepared:	06/14/13 By: BAG
Dilution Factor:	1	Analyzed:	06/14/13 By: BAG
QC Batch:	1306247	Analytical Batch:	3F17023

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	RL
67-64-1	Acetone	<20	20
107-13-1	Acrylonitrile	<2.0	2.0
71-43-2	Benzene	<1.0	1.0
108-86-1	Bromobenzene	<1.0	1.0
74-97-5	Bromochloromethane	<1.0	1.0
75-27-4	Bromodichloromethane	<1.0	1.0
75-25-2	Bromoform	<1.0	1.0
74-83-9	Bromomethane	<5.0	5.0
104-51-8	n-Butylbenzene	<1.0	1.0
135-98-8	sec-Butylbenzene	<1.0	1.0
98-06-6	tert-Butylbenzene	<1.0	1.0
75-15-0	Carbon Disulfide	<1.0	1.0
56-23-5	Carbon Tetrachloride	<1.0	1.0
108-90-7	Chlorobenzene	<1.0	1.0
75-00-3	Chloroethane	<5.0	5.0
67-66-3	Chloroform	<1.0	1.0
74-87-3	Chloromethane	<5.0	5.0
96-12-8	1,2-Dibromo-3-chloropropane	<5.0	5.0
124-48-1	Dibromochloromethane	<1.0	1.0
106-93-4	1,2-Dibromoethane	<1.0	1.0
74-95-3	Dibromomethane	<1.0	1.0
110-57-6	trans-1,4-Dichloro-2-butene	<1.0	1.0
95-50-1	1,2-Dichlorobenzene	<1.0	1.0
541-73-1	1,3-Dichlorobenzene	<1.0	1.0
106-46-7	1,4-Dichlorobenzene	<1.0	1.0
*75-71-8	Dichlorodifluoromethane	<5.0	5.0
75-34-3	1,1-Dichloroethane	<1.0	1.0
107-06-2	1,2-Dichloroethane	<1.0	1.0
75-35-4	1,1-Dichloroethene	<1.0	1.0
156-59-2	cis-1,2-Dichloroethene	**31**	1.0
156-60-5	trans-1,2-Dichloroethene	**4.5**	1.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1306211**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-10s**	Sampled:	06/06/13 17:26
Lab Sample ID:	**1306211-15**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	06/11/13 18:20
Unit:	ug/L	Prepared:	06/14/13 By: BAG
Dilution Factor:	1	Analyzed:	06/14/13 By: BAG
QC Batch:	1306247	Analytical Batch:	3F17023

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
78-87-5	1,2-Dichloropropane	<1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	<1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	<1.0	1.0
100-41-4	Ethylbenzene	<1.0	1.0
60-29-7	Ethyl Ether	<5.0	5.0
591-78-6	2-Hexanone	<5.0	5.0
74-88-4	Iodomethane	<1.0	1.0
98-82-8	Isopropylbenzene	<1.0	1.0
99-87-6	4-Isopropyltoluene	<5.0	5.0
1634-04-4	Methyl tert-Butyl Ether	<5.0	5.0
75-09-2	Methylene Chloride	<5.0	5.0
78-93-3	2-Butanone (MEK)	<5.0	5.0
91-57-6	2-Methylnaphthalene	<5.0	5.0
108-10-1	4-Methyl-2-pentanone (MIBK)	<5.0	5.0
91-20-3	Naphthalene	<5.0	5.0
103-65-1	n-Propylbenzene	<1.0	1.0
100-42-5	Styrene	<1.0	1.0
630-20-6	1,1,1,2-Tetrachloroethane	<1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	<1.0	1.0
127-18-4	Tetrachloroethene	<1.0	1.0
109-99-9	Tetrahydrofuran	<5.0	5.0
108-88-3	Toluene	<1.0	1.0
87-61-6	1,2,3-Trichlorobenzene	<5.0	5.0
120-82-1	1,2,4-Trichlorobenzene	<5.0	5.0
71-55-6	1,1,1-Trichloroethane	<1.0	1.0
79-00-5	1,1,2-Trichloroethane	<1.0	1.0
79-01-6	Trichloroethene	<1.0	1.0
75-69-4	Trichlorofluoromethane	<1.0	1.0
96-18-4	1,2,3-Trichloropropane	<1.0	1.0
95-63-6	1,2,4-Trimethylbenzene	<1.0	1.0
108-67-8	1,3,5-Trimethylbenzene	<1.0	1.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1306211**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-10s**	Sampled:	06/06/13 17:26
Lab Sample ID:	**1306211-15**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	06/11/13 18:20
Unit:	ug/L	Prepared:	06/14/13 By: BAG
Dilution Factor:	1	Analyzed:	06/14/13 By: BAG
QC Batch:	1306247	Analytical Batch:	3F17023

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
75-01-4	Vinyl Chloride	<1.0	1.0
179601-23-1	Xylene, Meta + Para	<2.0	2.0
95-47-6	Xylene, Ortho	<1.0	1.0

Surrogates:	***% Recovery***	***Control Limits***
Dibromofluoromethane	*102*	*85-118*
1,2-Dichloroethane-d4	*114*	*87-122*
Toluene-d8	*101*	*85-113*
4-Bromofluorobenzene	*104*	*82-110*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1306211**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-16s**	Sampled:	06/06/13 18:04
Lab Sample ID:	**1306211-16**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	06/11/13 18:20
Unit:	ug/L	Prepared:	06/14/13 By: BAG
Dilution Factor:	1	Analyzed:	06/14/13 By: BAG
QC Batch:	1306247	Analytical Batch:	3F17023

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	RL
67-64-1	Acetone	<20	20
107-13-1	Acrylonitrile	<2.0	2.0
71-43-2	Benzene	<1.0	1.0
108-86-1	Bromobenzene	<1.0	1.0
74-97-5	Bromochloromethane	<1.0	1.0
75-27-4	Bromodichloromethane	<1.0	1.0
75-25-2	Bromoform	<1.0	1.0
74-83-9	Bromomethane	<5.0	5.0
104-51-8	n-Butylbenzene	<1.0	1.0
135-98-8	sec-Butylbenzene	<1.0	1.0
98-06-6	tert-Butylbenzene	<1.0	1.0
75-15-0	Carbon Disulfide	<1.0	1.0
56-23-5	Carbon Tetrachloride	<1.0	1.0
108-90-7	Chlorobenzene	<1.0	1.0
75-00-3	Chloroethane	<5.0	5.0
67-66-3	Chloroform	<1.0	1.0
74-87-3	Chloromethane	<5.0	5.0
96-12-8	1,2-Dibromo-3-chloropropane	<5.0	5.0
124-48-1	Dibromochloromethane	<1.0	1.0
106-93-4	1,2-Dibromoethane	<1.0	1.0
74-95-3	Dibromomethane	<1.0	1.0
110-57-6	trans-1,4-Dichloro-2-butene	<1.0	1.0
95-50-1	1,2-Dichlorobenzene	<1.0	1.0
541-73-1	1,3-Dichlorobenzene	<1.0	1.0
106-46-7	1,4-Dichlorobenzene	<1.0	1.0
*75-71-8	Dichlorodifluoromethane	<5.0	5.0
75-34-3	1,1-Dichloroethane	**4.4**	1.0
107-06-2	1,2-Dichloroethane	<1.0	1.0
75-35-4	1,1-Dichloroethene	**1.3**	1.0
156-59-2	cis-1,2-Dichloroethene	**32**	1.0
156-60-5	trans-1,2-Dichloroethene	**2.9**	1.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1306211**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-16s**	Sampled:	06/06/13 18:04
Lab Sample ID:	**1306211-16**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	06/11/13 18:20
Unit:	ug/L	Prepared:	06/14/13 By: BAG
Dilution Factor:	1	Analyzed:	06/14/13 By: BAG
QC Batch:	1306247	Analytical Batch:	3F17023

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
78-87-5	1,2-Dichloropropane	<1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	<1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	<1.0	1.0
100-41-4	Ethylbenzene	<1.0	1.0
60-29-7	Ethyl Ether	<5.0	5.0
591-78-6	2-Hexanone	<5.0	5.0
74-88-4	Iodomethane	<1.0	1.0
98-82-8	Isopropylbenzene	<1.0	1.0
99-87-6	4-Isopropyltoluene	<5.0	5.0
1634-04-4	Methyl tert-Butyl Ether	<5.0	5.0
75-09-2	Methylene Chloride	<5.0	5.0
78-93-3	2-Butanone (MEK)	<5.0	5.0
91-57-6	2-Methylnaphthalene	<5.0	5.0
108-10-1	4-Methyl-2-pentanone (MIBK)	<5.0	5.0
91-20-3	Naphthalene	<5.0	5.0
103-65-1	n-Propylbenzene	<1.0	1.0
100-42-5	Styrene	<1.0	1.0
630-20-6	1,1,1,2-Tetrachloroethane	<1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	<1.0	1.0
127-18-4	Tetrachloroethene	<1.0	1.0
109-99-9	Tetrahydrofuran	<5.0	5.0
108-88-3	Toluene	<1.0	1.0
87-61-6	1,2,3-Trichlorobenzene	<5.0	5.0
120-82-1	1,2,4-Trichlorobenzene	<5.0	5.0
71-55-6	1,1,1-Trichloroethane	<1.0	1.0
79-00-5	1,1,2-Trichloroethane	**3.1**	1.0
79-01-6	Trichloroethene	**11**	1.0
75-69-4	Trichlorofluoromethane	<1.0	1.0
96-18-4	1,2,3-Trichloropropane	<1.0	1.0
95-63-6	1,2,4-Trimethylbenzene	<1.0	1.0
108-67-8	1,3,5-Trimethylbenzene	<1.0	1.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1306211**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-16s**	Sampled:	06/06/13 18:04
Lab Sample ID:	**1306211-16**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	06/11/13 18:20
Unit:	ug/L	Prepared:	06/14/13 By: BAG
Dilution Factor:	1	Analyzed:	06/14/13 By: BAG
QC Batch:	1306247	Analytical Batch:	3F17023

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
75-01-4	Vinyl Chloride	<1.0	1.0
179601-23-1	Xylene, Meta + Para	<2.0	2.0
95-47-6	Xylene, Ortho	<1.0	1.0

Surrogates:	***% Recovery***	***Control Limits***
Dibromofluoromethane	*103*	*85-118*
1,2-Dichloroethane-d4	*114*	*87-122*
Toluene-d8	*101*	*85-113*
4-Bromofluorobenzene	*104*	*82-110*

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ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1306211**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-09s**	Sampled:	06/07/13 09:58
Lab Sample ID:	**1306211-17**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	06/11/13 18:20

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Ethane	**6.9**	1.0	ug/L	1	RSK-175	06/20/13 15:43	JMF	1306334
Methane	**6300**	100	ug/L	200	RSK-175	06/20/13 15:48	JMF	1306334
Ethylene	<1.0	1.0	ug/L	1	RSK-175	06/20/13 15:43	JMF	1306334

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ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1306211**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-09s**	Sampled:	06/07/13 09:58
Lab Sample ID:	**1306211-17**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	06/11/13 18:20
Unit:	ug/L	Prepared:	06/14/13 By: BAG
Dilution Factor:	1	Analyzed:	06/14/13 By: BAG
QC Batch:	1306247	Analytical Batch:	3F17023

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	RL
67-64-1	Acetone	<20	20
107-13-1	Acrylonitrile	<2.0	2.0
71-43-2	Benzene	<1.0	1.0
108-86-1	Bromobenzene	<1.0	1.0
74-97-5	Bromochloromethane	<1.0	1.0
75-27-4	Bromodichloromethane	<1.0	1.0
75-25-2	Bromoform	<1.0	1.0
74-83-9	Bromomethane	<5.0	5.0
104-51-8	n-Butylbenzene	<1.0	1.0
135-98-8	sec-Butylbenzene	<1.0	1.0
98-06-6	tert-Butylbenzene	<1.0	1.0
75-15-0	Carbon Disulfide	<1.0	1.0
56-23-5	Carbon Tetrachloride	<1.0	1.0
108-90-7	Chlorobenzene	<1.0	1.0
75-00-3	Chloroethane	<5.0	5.0
67-66-3	Chloroform	<1.0	1.0
74-87-3	Chloromethane	<5.0	5.0
96-12-8	1,2-Dibromo-3-chloropropane	<5.0	5.0
124-48-1	Dibromochloromethane	<1.0	1.0
106-93-4	1,2-Dibromoethane	<1.0	1.0
74-95-3	Dibromomethane	<1.0	1.0
110-57-6	trans-1,4-Dichloro-2-butene	<1.0	1.0
95-50-1	1,2-Dichlorobenzene	<1.0	1.0
541-73-1	1,3-Dichlorobenzene	<1.0	1.0
106-46-7	1,4-Dichlorobenzene	<1.0	1.0
*75-71-8	Dichlorodifluoromethane	<5.0	5.0
75-34-3	1,1-Dichloroethane	<1.0	1.0
107-06-2	1,2-Dichloroethane	<1.0	1.0
75-35-4	1,1-Dichloroethene	<1.0	1.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1306211**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-09s**	Sampled:	06/07/13 09:58
Lab Sample ID:	**1306211-17**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	06/11/13 18:20
Unit:	ug/L	Prepared:	06/14/13 By: BAG
Dilution Factor:	1	Analyzed:	06/14/13 By: BAG
QC Batch:	1306247	Analytical Batch:	3F17023

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
156-59-2	cis-1,2-Dichloroethene	<1.0	1.0
156-60-5	trans-1,2-Dichloroethene	<1.0	1.0
78-87-5	1,2-Dichloropropane	<1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	<1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	<1.0	1.0
100-41-4	Ethylbenzene	**3.2**	1.0
60-29-7	Ethyl Ether	<5.0	5.0
591-78-6	2-Hexanone	<5.0	5.0
74-88-4	Iodomethane	<1.0	1.0
98-82-8	Isopropylbenzene	<1.0	1.0
99-87-6	4-Isopropyltoluene	<5.0	5.0
1634-04-4	Methyl tert-Butyl Ether	<5.0	5.0
75-09-2	Methylene Chloride	<5.0	5.0
78-93-3	2-Butanone (MEK)	<5.0	5.0
91-57-6	2-Methylnaphthalene	<5.0	5.0
108-10-1	4-Methyl-2-pentanone (MIBK)	<5.0	5.0
91-20-3	Naphthalene	<5.0	5.0
103-65-1	n-Propylbenzene	<1.0	1.0
100-42-5	Styrene	<1.0	1.0
630-20-6	1,1,1,2-Tetrachloroethane	<1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	<1.0	1.0
127-18-4	Tetrachloroethene	<1.0	1.0
109-99-9	Tetrahydrofuran	<5.0	5.0
108-88-3	Toluene	**160**	1.0
87-61-6	1,2,3-Trichlorobenzene	<5.0	5.0
120-82-1	1,2,4-Trichlorobenzene	<5.0	5.0
71-55-6	1,1,1-Trichloroethane	<1.0	1.0
79-00-5	1,1,2-Trichloroethane	<1.0	1.0
79-01-6	Trichloroethene	<1.0	1.0
75-69-4	Trichlorofluoromethane	<1.0	1.0
96-18-4	1,2,3-Trichloropropane	<1.0	1.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1306211**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-09s**	Sampled:	06/07/13 09:58
Lab Sample ID:	**1306211-17**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	06/11/13 18:20
Unit:	ug/L	Prepared:	06/14/13 By: BAG
Dilution Factor:	1	Analyzed:	06/14/13 By: BAG
QC Batch:	1306247	Analytical Batch:	3F17023

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
95-63-6	1,2,4-Trimethylbenzene	<1.0	1.0
108-67-8	1,3,5-Trimethylbenzene	<1.0	1.0
75-01-4	Vinyl Chloride	<1.0	1.0
179601-23-1	Xylene, Meta + Para	<2.0	2.0
95-47-6	Xylene, Ortho	<1.0	1.0

Surrogates:	***% Recovery***	***Control Limits***
Dibromofluoromethane	*102*	*85-118*
1,2-Dichloroethane-d4	*114*	*87-122*
Toluene-d8	*101*	*85-113*
4-Bromofluorobenzene	*102*	*82-110*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1306211**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-06s**	Sampled:	06/07/13 11:39
Lab Sample ID:	**1306211-18**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	06/11/13 18:20

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Ethane	**26**	1.0	ug/L	1	RSK-175	06/21/13 09:24	JMF	1306451
Methane	**10000**	200	ug/L	400	RSK-175	06/21/13 09:39	JMF	1306451
Ethylene	<1.0	1.0	ug/L	1	RSK-175	06/21/13 09:24	JMF	1306451

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ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1306211**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-06s**	Sampled:	06/07/13 11:39
Lab Sample ID:	**1306211-18**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	06/11/13 18:20
Unit:	ug/L	Prepared:	06/14/13 By: BAG
Dilution Factor:	5	Analyzed:	06/15/13 By: BAG
QC Batch:	1306255	Analytical Batch:	3F17032

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	RL
67-64-1	Acetone	<100	100
107-13-1	Acrylonitrile	<10	10
71-43-2	Benzene	<5.0	5.0
108-86-1	Bromobenzene	<5.0	5.0
74-97-5	Bromochloromethane	<5.0	5.0
75-27-4	Bromodichloromethane	<5.0	5.0
75-25-2	Bromoform	<5.0	5.0
74-83-9	Bromomethane	<25	25
104-51-8	n-Butylbenzene	<5.0	5.0
135-98-8	sec-Butylbenzene	<5.0	5.0
98-06-6	tert-Butylbenzene	<5.0	5.0
75-15-0	Carbon Disulfide	<5.0	5.0
56-23-5	Carbon Tetrachloride	<5.0	5.0
108-90-7	Chlorobenzene	<5.0	5.0
75-00-3	Chloroethane	<25	25
67-66-3	Chloroform	<5.0	5.0
74-87-3	Chloromethane	<25	25
96-12-8	1,2-Dibromo-3-chloropropane	<25	25
124-48-1	Dibromochloromethane	<5.0	5.0
106-93-4	1,2-Dibromoethane	<5.0	5.0
74-95-3	Dibromomethane	<5.0	5.0
110-57-6	trans-1,4-Dichloro-2-butene	<5.0	5.0
95-50-1	1,2-Dichlorobenzene	<5.0	5.0
541-73-1	1,3-Dichlorobenzene	<5.0	5.0
106-46-7	1,4-Dichlorobenzene	<5.0	5.0
75-71-8	Dichlorodifluoromethane	<25	25
75-34-3	1,1-Dichloroethane	<5.0	5.0
107-06-2	1,2-Dichloroethane	<5.0	5.0
75-35-4	1,1-Dichloroethene	<5.0	5.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1306211**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-06s**	Sampled:	06/07/13 11:39
Lab Sample ID:	**1306211-18**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	06/11/13 18:20
Unit:	ug/L	Prepared:	06/14/13 By: BAG
Dilution Factor:	5	Analyzed:	06/15/13 By: BAG
QC Batch:	1306255	Analytical Batch:	3F17032

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
156-59-2	cis-1,2-Dichloroethene	<5.0	5.0
156-60-5	trans-1,2-Dichloroethene	<5.0	5.0
78-87-5	1,2-Dichloropropane	<5.0	5.0
10061-01-5	cis-1,3-Dichloropropene	<5.0	5.0
10061-02-6	trans-1,3-Dichloropropene	<5.0	5.0
100-41-4	Ethylbenzene	**6.4**	5.0
60-29-7	Ethyl Ether	<25	25
591-78-6	2-Hexanone	<25	25
74-88-4	Iodomethane	<5.0	5.0
98-82-8	Isopropylbenzene	<5.0	5.0
99-87-6	4-Isopropyltoluene	<25	25
1634-04-4	Methyl tert-Butyl Ether	<25	25
75-09-2	Methylene Chloride	<25	25
78-93-3	2-Butanone (MEK)	**38**	25
91-57-6	2-Methylnaphthalene	<25	25
108-10-1	4-Methyl-2-pentanone (MIBK)	<25	25
91-20-3	Naphthalene	<25	25
103-65-1	n-Propylbenzene	<5.0	5.0
100-42-5	Styrene	<5.0	5.0
630-20-6	1,1,1,2-Tetrachloroethane	<5.0	5.0
79-34-5	1,1,2,2-Tetrachloroethane	<5.0	5.0
127-18-4	Tetrachloroethene	<5.0	5.0
109-99-9	Tetrahydrofuran	<25	25
108-88-3	Toluene	**440**	5.0
87-61-6	1,2,3-Trichlorobenzene	<25	25
120-82-1	1,2,4-Trichlorobenzene	<25	25
71-55-6	1,1,1-Trichloroethane	<5.0	5.0
79-00-5	1,1,2-Trichloroethane	<5.0	5.0
79-01-6	Trichloroethene	<5.0	5.0
75-69-4	Trichlorofluoromethane	<5.0	5.0
96-18-4	1,2,3-Trichloropropane	<5.0	5.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1306211**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-06s**	Sampled:	06/07/13 11:39
Lab Sample ID:	**1306211-18**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	06/11/13 18:20
Unit:	ug/L	Prepared:	06/14/13 By: BAG
Dilution Factor:	5	Analyzed:	06/15/13 By: BAG
QC Batch:	1306255	Analytical Batch:	3F17032

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
95-63-6	1,2,4-Trimethylbenzene	<5.0	5.0
108-67-8	1,3,5-Trimethylbenzene	<5.0	5.0
75-01-4	Vinyl Chloride	<5.0	5.0
179601-23-1	Xylene, Meta + Para	<10	10
95-47-6	Xylene, Ortho	<5.0	5.0

Surrogates:	***% Recovery***	***Control Limits***
Dibromofluoromethane	*101*	*85-118*
1,2-Dichloroethane-d4	*115*	*87-122*
Toluene-d8	*102*	*85-113*
4-Bromofluorobenzene	*105*	*82-110*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1306211**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-05s**	Sampled:	06/07/13 12:30
Lab Sample ID:	**1306211-19**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	06/11/13 18:20
Unit:	ug/L	Prepared:	06/14/13 By: BAG
Dilution Factor:	5	Analyzed:	06/15/13 By: BAG
QC Batch:	1306255	Analytical Batch:	3F17032

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	RL
67-64-1	Acetone	<100	100
107-13-1	Acrylonitrile	<10	10
71-43-2	Benzene	<5.0	5.0
108-86-1	Bromobenzene	<5.0	5.0
74-97-5	Bromochloromethane	<5.0	5.0
75-27-4	Bromodichloromethane	<5.0	5.0
75-25-2	Bromoform	<5.0	5.0
74-83-9	Bromomethane	<25	25
104-51-8	n-Butylbenzene	<5.0	5.0
135-98-8	sec-Butylbenzene	<5.0	5.0
98-06-6	tert-Butylbenzene	<5.0	5.0
75-15-0	Carbon Disulfide	<5.0	5.0
56-23-5	Carbon Tetrachloride	<5.0	5.0
108-90-7	Chlorobenzene	<5.0	5.0
75-00-3	Chloroethane	<25	25
67-66-3	Chloroform	<5.0	5.0
74-87-3	Chloromethane	<25	25
96-12-8	1,2-Dibromo-3-chloropropane	<25	25
124-48-1	Dibromochloromethane	<5.0	5.0
106-93-4	1,2-Dibromoethane	<5.0	5.0
74-95-3	Dibromomethane	<5.0	5.0
110-57-6	trans-1,4-Dichloro-2-butene	<5.0	5.0
95-50-1	1,2-Dichlorobenzene	<5.0	5.0
541-73-1	1,3-Dichlorobenzene	<5.0	5.0
106-46-7	1,4-Dichlorobenzene	<5.0	5.0
75-71-8	Dichlorodifluoromethane	<25	25
75-34-3	1,1-Dichloroethane	<5.0	5.0
107-06-2	1,2-Dichloroethane	<5.0	5.0
75-35-4	1,1-Dichloroethene	<5.0	5.0
156-59-2	cis-1,2-Dichloroethene	<5.0	5.0
156-60-5	trans-1,2-Dichloroethene	<5.0	5.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1306211**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-05s**	Sampled:	06/07/13 12:30
Lab Sample ID:	**1306211-19**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	06/11/13 18:20
Unit:	ug/L	Prepared:	06/14/13 By: BAG
Dilution Factor:	5	Analyzed:	06/15/13 By: BAG
QC Batch:	1306255	Analytical Batch:	3F17032

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
78-87-5	1,2-Dichloropropane	<5.0	5.0
10061-01-5	cis-1,3-Dichloropropene	<5.0	5.0
10061-02-6	trans-1,3-Dichloropropene	<5.0	5.0
100-41-4	Ethylbenzene	<5.0	5.0
60-29-7	Ethyl Ether	<25	25
591-78-6	2-Hexanone	<25	25
74-88-4	Iodomethane	<5.0	5.0
98-82-8	Isopropylbenzene	<5.0	5.0
99-87-6	4-Isopropyltoluene	<25	25
1634-04-4	Methyl tert-Butyl Ether	<25	25
75-09-2	Methylene Chloride	<25	25
78-93-3	2-Butanone (MEK)	<25	25
91-57-6	2-Methylnaphthalene	<25	25
108-10-1	4-Methyl-2-pentanone (MIBK)	<25	25
91-20-3	Naphthalene	<25	25
103-65-1	n-Propylbenzene	<5.0	5.0
100-42-5	Styrene	<5.0	5.0
630-20-6	1,1,1,2-Tetrachloroethane	<5.0	5.0
79-34-5	1,1,2,2-Tetrachloroethane	<5.0	5.0
127-18-4	Tetrachloroethene	**260**	5.0
109-99-9	Tetrahydrofuran	<25	25
108-88-3	Toluene	<5.0	5.0
87-61-6	1,2,3-Trichlorobenzene	<25	25
120-82-1	1,2,4-Trichlorobenzene	<25	25
71-55-6	1,1,1-Trichloroethane	**31**	5.0
79-00-5	1,1,2-Trichloroethane	<5.0	5.0
79-01-6	Trichloroethene	**620**	5.0
75-69-4	Trichlorofluoromethane	<5.0	5.0
96-18-4	1,2,3-Trichloropropane	<5.0	5.0
95-63-6	1,2,4-Trimethylbenzene	<5.0	5.0
108-67-8	1,3,5-Trimethylbenzene	<5.0	5.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1306211**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-05s**	Sampled:	06/07/13 12:30
Lab Sample ID:	**1306211-19**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	06/11/13 18:20
Unit:	ug/L	Prepared:	06/14/13 By: BAG
Dilution Factor:	5	Analyzed:	06/15/13 By: BAG
QC Batch:	1306255	Analytical Batch:	3F17032

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
75-01-4	Vinyl Chloride	<5.0	5.0
179601-23-1	Xylene, Meta + Para	<10	10
95-47-6	Xylene, Ortho	<5.0	5.0

Surrogates:	***% Recovery***	***Control Limits***
Dibromofluoromethane	*102*	*85-118*
1,2-Dichloroethane-d4	*112*	*87-122*
Toluene-d8	*101*	*85-113*
4-Bromofluorobenzene	*104*	*82-110*

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ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1306211**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-11s**	Sampled:	06/07/13 14:48
Lab Sample ID:	**1306211-20**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	06/11/13 18:20
Unit:	ug/L	Prepared:	06/14/13 By: BAG
Dilution Factor:	1	Analyzed:	06/14/13 By: BAG
QC Batch:	1306247	Analytical Batch:	3F17023

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	RL
67-64-1	Acetone	<20	20
107-13-1	Acrylonitrile	<2.0	2.0
71-43-2	Benzene	<1.0	1.0
108-86-1	Bromobenzene	<1.0	1.0
74-97-5	Bromochloromethane	<1.0	1.0
75-27-4	Bromodichloromethane	<1.0	1.0
75-25-2	Bromoform	<1.0	1.0
74-83-9	Bromomethane	<5.0	5.0
104-51-8	n-Butylbenzene	<1.0	1.0
135-98-8	sec-Butylbenzene	<1.0	1.0
98-06-6	tert-Butylbenzene	<1.0	1.0
75-15-0	Carbon Disulfide	<1.0	1.0
56-23-5	Carbon Tetrachloride	<1.0	1.0
108-90-7	Chlorobenzene	<1.0	1.0
75-00-3	Chloroethane	<5.0	5.0
67-66-3	Chloroform	<1.0	1.0
74-87-3	Chloromethane	<5.0	5.0
96-12-8	1,2-Dibromo-3-chloropropane	<5.0	5.0
124-48-1	Dibromochloromethane	<1.0	1.0
106-93-4	1,2-Dibromoethane	<1.0	1.0
74-95-3	Dibromomethane	<1.0	1.0
110-57-6	trans-1,4-Dichloro-2-butene	<1.0	1.0
95-50-1	1,2-Dichlorobenzene	<1.0	1.0
541-73-1	1,3-Dichlorobenzene	<1.0	1.0
106-46-7	1,4-Dichlorobenzene	<1.0	1.0
*75-71-8	Dichlorodifluoromethane	<5.0	5.0
75-34-3	1,1-Dichloroethane	<1.0	1.0
107-06-2	1,2-Dichloroethane	<1.0	1.0
75-35-4	1,1-Dichloroethene	<1.0	1.0
156-59-2	cis-1,2-Dichloroethene	<1.0	1.0
156-60-5	trans-1,2-Dichloroethene	<1.0	1.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1306211**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-11s**	Sampled:	06/07/13 14:48
Lab Sample ID:	**1306211-20**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	06/11/13 18:20
Unit:	ug/L	Prepared:	06/14/13 By: BAG
Dilution Factor:	1	Analyzed:	06/14/13 By: BAG
QC Batch:	1306247	Analytical Batch:	3F17023

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
78-87-5	1,2-Dichloropropane	<1.0	1.0
10061-01-5	cis-1,3-Dichloropropene	<1.0	1.0
10061-02-6	trans-1,3-Dichloropropene	<1.0	1.0
100-41-4	Ethylbenzene	<1.0	1.0
60-29-7	Ethyl Ether	<5.0	5.0
591-78-6	2-Hexanone	<5.0	5.0
74-88-4	Iodomethane	<1.0	1.0
98-82-8	Isopropylbenzene	<1.0	1.0
99-87-6	4-Isopropyltoluene	<5.0	5.0
1634-04-4	Methyl tert-Butyl Ether	<5.0	5.0
75-09-2	Methylene Chloride	<5.0	5.0
78-93-3	2-Butanone (MEK)	<5.0	5.0
91-57-6	2-Methylnaphthalene	<5.0	5.0
108-10-1	4-Methyl-2-pentanone (MIBK)	<5.0	5.0
91-20-3	Naphthalene	<5.0	5.0
103-65-1	n-Propylbenzene	<1.0	1.0
100-42-5	Styrene	<1.0	1.0
630-20-6	1,1,1,2-Tetrachloroethane	<1.0	1.0
79-34-5	1,1,2,2-Tetrachloroethane	<1.0	1.0
127-18-4	Tetrachloroethene	<1.0	1.0
109-99-9	Tetrahydrofuran	<5.0	5.0
108-88-3	Toluene	<1.0	1.0
87-61-6	1,2,3-Trichlorobenzene	<5.0	5.0
120-82-1	1,2,4-Trichlorobenzene	<5.0	5.0
71-55-6	1,1,1-Trichloroethane	<1.0	1.0
79-00-5	1,1,2-Trichloroethane	<1.0	1.0
79-01-6	Trichloroethene	**1.2**	1.0
75-69-4	Trichlorofluoromethane	<1.0	1.0
96-18-4	1,2,3-Trichloropropane	<1.0	1.0
95-63-6	1,2,4-Trimethylbenzene	<1.0	1.0
108-67-8	1,3,5-Trimethylbenzene	<1.0	1.0

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1306211**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-11s**	Sampled:	06/07/13 14:48
Lab Sample ID:	**1306211-20**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	06/11/13 18:20
Unit:	ug/L	Prepared:	06/14/13 By: BAG
Dilution Factor:	1	Analyzed:	06/14/13 By: BAG
QC Batch:	1306247	Analytical Batch:	3F17023

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
75-01-4	Vinyl Chloride	<1.0	1.0
179601-23-1	Xylene, Meta + Para	<2.0	2.0
95-47-6	Xylene, Ortho	<1.0	1.0

Surrogates:	***% Recovery***	***Control Limits***
Dibromofluoromethane	*100*	*85-118*
1,2-Dichloroethane-d4	*113*	*87-122*
Toluene-d8	*102*	*85-113*
4-Bromofluorobenzene	*102*	*82-110*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1306211**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-01s**	Sampled:	06/07/13 15:48
Lab Sample ID:	**1306211-21**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	06/11/13 18:20

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Ethane	**3.1**	1.0	ug/L	1	RSK-175	06/21/13 09:44	JMF	1306451
Methane	**1300**	25	ug/L	50	RSK-175	06/21/13 09:48	JMF	1306451
Ethylene	**9.4**	1.0	ug/L	1	RSK-175	06/21/13 09:44	JMF	1306451

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1306211**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-01s**	Sampled:	06/07/13 15:48
Lab Sample ID:	**1306211-21**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	06/11/13 18:20
Unit:	ug/L	Prepared:	06/14/13 By: BAG
Dilution Factor:	10	Analyzed:	06/15/13 By: BAG
QC Batch:	1306255	Analytical Batch:	3F17032

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	RL
67-64-1	Acetone	<200	200
107-13-1	Acrylonitrile	<20	20
71-43-2	Benzene	<10	10
108-86-1	Bromobenzene	<10	10
74-97-5	Bromochloromethane	<10	10
75-27-4	Bromodichloromethane	<10	10
75-25-2	Bromoform	<10	10
74-83-9	Bromomethane	<50	50
104-51-8	n-Butylbenzene	<10	10
135-98-8	sec-Butylbenzene	<10	10
98-06-6	tert-Butylbenzene	<10	10
75-15-0	Carbon Disulfide	<10	10
56-23-5	Carbon Tetrachloride	<10	10
108-90-7	Chlorobenzene	<10	10
75-00-3	Chloroethane	<50	50
67-66-3	Chloroform	<10	10
74-87-3	Chloromethane	<50	50
96-12-8	1,2-Dibromo-3-chloropropane	<50	50
124-48-1	Dibromochloromethane	<10	10
106-93-4	1,2-Dibromoethane	<10	10
74-95-3	Dibromomethane	<10	10
110-57-6	trans-1,4-Dichloro-2-butene	<10	10
95-50-1	1,2-Dichlorobenzene	<10	10
541-73-1	1,3-Dichlorobenzene	<10	10
106-46-7	1,4-Dichlorobenzene	<10	10
75-71-8	Dichlorodifluoromethane	<50	50
75-34-3	1,1-Dichloroethane	**380**	10
107-06-2	1,2-Dichloroethane	<10	10
75-35-4	1,1-Dichloroethene	**24**	10

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1306211**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-01s**	Sampled:	06/07/13 15:48
Lab Sample ID:	**1306211-21**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	06/11/13 18:20
Unit:	ug/L	Prepared:	06/14/13 By: BAG
Dilution Factor:	10	Analyzed:	06/15/13 By: BAG
QC Batch:	1306255	Analytical Batch:	3F17032

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
156-59-2	cis-1,2-Dichloroethene	**620**	10
156-60-5	trans-1,2-Dichloroethene	<10	10
78-87-5	1,2-Dichloropropane	<10	10
10061-01-5	cis-1,3-Dichloropropene	<10	10
10061-02-6	trans-1,3-Dichloropropene	<10	10
100-41-4	Ethylbenzene	<10	10
60-29-7	Ethyl Ether	<50	50
591-78-6	2-Hexanone	<50	50
74-88-4	Iodomethane	<10	10
98-82-8	Isopropylbenzene	<10	10
99-87-6	4-Isopropyltoluene	<50	50
1634-04-4	Methyl tert-Butyl Ether	<50	50
75-09-2	Methylene Chloride	<50	50
78-93-3	2-Butanone (MEK)	<50	50
91-57-6	2-Methylnaphthalene	<50	50
108-10-1	4-Methyl-2-pentanone (MIBK)	<50	50
91-20-3	Naphthalene	<50	50
103-65-1	n-Propylbenzene	<10	10
100-42-5	Styrene	<10	10
630-20-6	1,1,1,2-Tetrachloroethane	<10	10
79-34-5	1,1,2,2-Tetrachloroethane	<10	10
127-18-4	Tetrachloroethene	<10	10
109-99-9	Tetrahydrofuran	<50	50
108-88-3	Toluene	<10	10
87-61-6	1,2,3-Trichlorobenzene	<50	50
120-82-1	1,2,4-Trichlorobenzene	<50	50
71-55-6	1,1,1-Trichloroethane	**970**	10
79-00-5	1,1,2-Trichloroethane	<10	10
79-01-6	Trichloroethene	**960**	10
75-69-4	Trichlorofluoromethane	<10	10
96-18-4	1,2,3-Trichloropropane	<10	10

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1306211**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-01s**	Sampled:	06/07/13 15:48
Lab Sample ID:	**1306211-21**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	06/11/13 18:20
Unit:	ug/L	Prepared:	06/14/13 By: BAG
Dilution Factor:	10	Analyzed:	06/15/13 By: BAG
QC Batch:	1306255	Analytical Batch:	3F17032

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
95-63-6	1,2,4-Trimethylbenzene	<10	10
108-67-8	1,3,5-Trimethylbenzene	<10	10
75-01-4	Vinyl Chloride	**48**	10
179601-23-1	Xylene, Meta + Para	<20	20
95-47-6	Xylene, Ortho	<10	10

Surrogates:	***% Recovery***	***Control Limits***
Dibromofluoromethane	*105*	*85-118*
1,2-Dichloroethane-d4	*114*	*87-122*
Toluene-d8	*101*	*85-113*
4-Bromofluorobenzene	*104*	*82-110*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1306211**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-02s**	Sampled:	06/07/13 16:55
Lab Sample ID:	**1306211-22**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	06/11/13 18:20

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Ethane	**1.1**	1.0	ug/L	1	RSK-175	06/21/13 09:52	JMF	1306451
Methane	**4100**	50	ug/L	100	RSK-175	06/21/13 09:58	JMF	1306451
Ethylene	**61**	1.0	ug/L	1	RSK-175	06/21/13 09:52	JMF	1306451

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1306211**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-02s**	Sampled:	06/07/13 16:55
Lab Sample ID:	**1306211-22**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	06/11/13 18:20
Unit:	ug/L	Prepared:	06/14/13 By: BAG
Dilution Factor:	2.5	Analyzed:	06/15/13 By: BAG
QC Batch:	1306255	Analytical Batch:	3F17032

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	RL
67-64-1	Acetone	<50	50
107-13-1	Acrylonitrile	<5.0	5.0
71-43-2	Benzene	<2.5	2.5
108-86-1	Bromobenzene	<2.5	2.5
74-97-5	Bromochloromethane	<2.5	2.5
75-27-4	Bromodichloromethane	<2.5	2.5
75-25-2	Bromoform	<2.5	2.5
74-83-9	Bromomethane	<12	12
104-51-8	n-Butylbenzene	<2.5	2.5
135-98-8	sec-Butylbenzene	<2.5	2.5
98-06-6	tert-Butylbenzene	<2.5	2.5
75-15-0	Carbon Disulfide	<2.5	2.5
56-23-5	Carbon Tetrachloride	<2.5	2.5
108-90-7	Chlorobenzene	<2.5	2.5
75-00-3	Chloroethane	<12	12
67-66-3	Chloroform	<2.5	2.5
74-87-3	Chloromethane	<12	12
96-12-8	1,2-Dibromo-3-chloropropane	<12	12
124-48-1	Dibromochloromethane	<2.5	2.5
106-93-4	1,2-Dibromoethane	<2.5	2.5
74-95-3	Dibromomethane	<2.5	2.5
110-57-6	trans-1,4-Dichloro-2-butene	<2.5	2.5
95-50-1	1,2-Dichlorobenzene	<2.5	2.5
541-73-1	1,3-Dichlorobenzene	<2.5	2.5
106-46-7	1,4-Dichlorobenzene	<2.5	2.5
75-71-8	Dichlorodifluoromethane	<12	12
75-34-3	1,1-Dichloroethane	**9.0**	2.5
107-06-2	1,2-Dichloroethane	<2.5	2.5
75-35-4	1,1-Dichloroethene	<2.5	2.5

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1306211**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-02s**	Sampled:	06/07/13 16:55
Lab Sample ID:	**1306211-22**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	06/11/13 18:20
Unit:	ug/L	Prepared:	06/14/13 By: BAG
Dilution Factor:	2.5	Analyzed:	06/15/13 By: BAG
QC Batch:	1306255	Analytical Batch:	3F17032

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
156-59-2	cis-1,2-Dichloroethene	**140**	2.5
156-60-5	trans-1,2-Dichloroethene	**4.8**	2.5
78-87-5	1,2-Dichloropropane	<2.5	2.5
10061-01-5	cis-1,3-Dichloropropene	<2.5	2.5
10061-02-6	trans-1,3-Dichloropropene	<2.5	2.5
100-41-4	Ethylbenzene	<2.5	2.5
60-29-7	Ethyl Ether	<12	12
591-78-6	2-Hexanone	<12	12
74-88-4	Iodomethane	<2.5	2.5
98-82-8	Isopropylbenzene	<2.5	2.5
99-87-6	4-Isopropyltoluene	<12	12
1634-04-4	Methyl tert-Butyl Ether	<12	12
75-09-2	Methylene Chloride	<12	12
78-93-3	2-Butanone (MEK)	<12	12
91-57-6	2-Methylnaphthalene	<12	12
108-10-1	4-Methyl-2-pentanone (MIBK)	<12	12
91-20-3	Naphthalene	<12	12
103-65-1	n-Propylbenzene	<2.5	2.5
100-42-5	Styrene	<2.5	2.5
630-20-6	1,1,1,2-Tetrachloroethane	<2.5	2.5
79-34-5	1,1,2,2-Tetrachloroethane	<2.5	2.5
127-18-4	Tetrachloroethene	<2.5	2.5
109-99-9	Tetrahydrofuran	<12	12
108-88-3	Toluene	<2.5	2.5
87-61-6	1,2,3-Trichlorobenzene	<12	12
120-82-1	1,2,4-Trichlorobenzene	<12	12
71-55-6	1,1,1-Trichloroethane	**4.8**	2.5
79-00-5	1,1,2-Trichloroethane	<2.5	2.5
79-01-6	Trichloroethene	**280**	2.5
75-69-4	Trichlorofluoromethane	<2.5	2.5
96-18-4	1,2,3-Trichloropropane	<2.5	2.5

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TRC Companies. - Ann Arbor Office**	Work Order:	**1306211**
Project:	TPC - PRB Performance Monitoring	Description:	Laboratory Services
Client Sample ID:	**PRB-02s**	Sampled:	06/07/13 16:55
Lab Sample ID:	**1306211-22**	Sampled By:	Rachel Sortar
Matrix:	Water	Received:	06/11/13 18:20
Unit:	ug/L	Prepared:	06/14/13 By: BAG
Dilution Factor:	2.5	Analyzed:	06/15/13 By: BAG
QC Batch:	1306255	Analytical Batch:	3F17032

Volatile Organic Compounds by EPA Method 8260B (Continued)

CAS Number	Analyte	Analytical Result	RL
95-63-6	1,2,4-Trimethylbenzene	<2.5	2.5
108-67-8	1,3,5-Trimethylbenzene	<2.5	2.5
75-01-4	Vinyl Chloride	**26**	2.5
179601-23-1	Xylene, Meta + Para	<5.0	5.0
95-47-6	Xylene, Ortho	<2.5	2.5

Surrogates:	***% Recovery***	***Control Limits***
Dibromofluoromethane	*104*	*85-118*
1,2-Dichloroethane-d4	*115*	*87-122*
Toluene-d8	*101*	*85-113*
4-Bromofluorobenzene	*104*	*82-110*

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TRIMATRIX LABORATORIES

QUALITY CONTROL REPORT

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
QC Batch: 1306334 Method-Specific Extraction/RSK-175								
Method Blank					Analyzed:	06/20/2013	By: JMF	
Unit: ug/L					Analytical Batch:	3F21007		
Ethane			<1.0			--		1.0
Methane			<0.50			--		0.50
Ethylene			<1.0			--		1.0
Laboratory Control Sample					Analyzed:	06/20/2013	By: JMF	
Unit: ug/L					Analytical Batch:	3F21007		
Ethane		58.0	**63.1**	109	67-122	--		1.0
Methane		35.4	**34.1**	96	70-116	--		0.50
Ethylene		57.5	**59.3**	103	67-121	--		1.0
Matrix Spike 1306211-14 PRB-08s					Analyzed:	06/20/2013	By: JMF	
Unit: ug/L					Analytical Batch:	3F21007		
Ethane	0.780	58.0	**58.1**	99	51-108	--		1.0
Methane	1090	35.4	**1010**	**0**	42-112	--		25
Ethylene	1.28	57.5	**55.2**	94	52-107	--		1.0
Matrix Spike Duplicate 1306211-14 PRB-08s					Analyzed:	06/20/2013	By: JMF	
Unit: ug/L					Analytical Batch:	3F21007		
Ethane	0.780	58.0	**53.8**	91	51-108	8	20	1.0
Methane	1090	35.4	**1100**	**23**	42-112	8	20	25
Ethylene	1.28	57.5	**51.2**	87	52-107	8	20	1.0
QC Batch: 1306451 Method-Specific Extraction/RSK-175								
Method Blank					Analyzed:	06/21/2013	By: JMF	
Unit: ug/L					Analytical Batch:	3F21031		
Ethane			<1.0			--		1.0
Methane			<0.50			--		0.50
Ethylene			<1.0			--		1.0
Laboratory Control Sample					Analyzed:	06/21/2013	By: JMF	
Unit: ug/L					Analytical Batch:	3F21031		
Ethane		58.0	**64.4**	111	67-122	--		1.0
Methane		35.4	**34.3**	97	70-116	--		0.50
Ethylene		57.5	**58.3**	101	67-121	--		1.0

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QUALITY CONTROL REPORT

Volatile Organic Compounds by EPA Method 8260B

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL

QC Batch: 1306247 5030B Aqueous Purge & Trap/USEPA-8260B

Method Blank Analyzed: 06/14/2013 By: BAG
Unit: ug/L Analytical Batch: 3F17023

Acetone			<20				20	
Acrylonitrile			<2.0				2.0	
Benzene			<1.0				1.0	
Bromobenzene			<1.0				1.0	
Bromochloromethane			<1.0				1.0	
Bromodichloromethane			<1.0				1.0	
Bromoform			<1.0				1.0	
Bromomethane			<5.0				5.0	
n-Butylbenzene			<1.0				1.0	
sec-Butylbenzene			<1.0				1.0	
tert-Butylbenzene			<1.0				1.0	
Carbon Disulfide			<1.0				1.0	
Carbon Tetrachloride			<1.0				1.0	
Chlorobenzene			<1.0				1.0	
Chloroethane			<5.0				5.0	
Chloroform			<1.0				1.0	
Chloromethane			<5.0				5.0	
1,2-Dibromo-3-chloropropane			<5.0				5.0	
Dibromochloromethane			<1.0				1.0	
1,2-Dibromoethane			<1.0				1.0	
Dibromomethane			<1.0				1.0	
trans-1,4-Dichloro-2-butene			<1.0				1.0	
1,2-Dichlorobenzene			<1.0				1.0	
1,3-Dichlorobenzene			<1.0				1.0	
1,4-Dichlorobenzene			<1.0				1.0	
Dichlorodifluoromethane			<5.0				5.0	
1,1-Dichloroethane			<1.0				1.0	
1,2-Dichloroethane			<1.0				1.0	
1,1-Dichloroethene			<1.0				1.0	
cis-1,2-Dichloroethene			<1.0				1.0	
trans-1,2-Dichloroethene			<1.0				1.0	
1,2-Dichloropropane			<1.0				1.0	
cis-1,3-Dichloropropene			<1.0				1.0	
trans-1,3-Dichloropropene			<1.0				1.0	
Ethylbenzene			<1.0				1.0	
Ethyl Ether			<5.0				5.0	

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Volatile Organic Compounds by EPA Method 8260B (Continued)

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL

QC Batch: 1306247 (Continued) 5030B Aqueous Purge & Trap/USEPA-8260B

Method Blank (Continued) Analyzed: 06/14/2013 By: BAG
Unit: ug/L Analytical Batch: 3F17023

2-Hexanone	<5.0				5.0
Iodomethane	<1.0				1.0
Isopropylbenzene	<1.0				1.0
4-Isopropyltoluene	<5.0				5.0
Methyl tert-Butyl Ether	<5.0				5.0
Methylene Chloride	<5.0			--	5.0
2-Butanone (MEK)	<5.0				5.0
2-Methylnaphthalene	<5.0				5.0
4-Methyl-2-pentanone (MIBK)	<5.0				5.0
Naphthalene	<5.0			--	5.0
n-Propylbenzene	<1.0				1.0
Styrene	<1.0				1.0
1,1,1,2-Tetrachloroethane	<1.0				1.0
1,1,2,2-Tetrachloroethane	<1.0				1.0
Tetrachloroethene	<1.0				1.0
Tetrahydrofuran	<5.0				5.0
Toluene	<1.0				1.0
1,2,3-Trichlorobenzene	<5.0			--	5.0
1,2,4-Trichlorobenzene	<5.0				5.0
1,1,1-Trichloroethane	<1.0				1.0
1,1,2-Trichloroethane	<1.0				1.0
Trichloroethene	<1.0				1.0
Trichlorofluoromethane	<1.0				1.0
1,2,3-Trichloropropane	<1.0				1.0
1,2,4-Trimethylbenzene	<1.0				1.0
1,3,5-Trimethylbenzene	<1.0				1.0
Vinyl Chloride	<1.0				1.0
Xylene, Meta + Para	<2.0				2.0
Xylene, Ortho	<1.0				1.0
Surrogates:					
Dibromofluoromethane			*100*	*85-118*	
1,2-Dichloroethane-d4			*112*	*87-122*	
Toluene-d8			*102*	*85-113*	

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QUALITY CONTROL REPORT

Volatile Organic Compounds by EPA Method 8260B (Continued)

QC Batch: 1306247 (Continued) 5030B Aqueous Purge & Trap/USEPA-8260B

Method Blank (Continued) Analyzed: 06/14/2013 By: BAG
Unit: ug/L Analytical Batch: 3F17023

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
Surrogates (Continued):								
4-Bromofluorobenzene				*104*	*82-110*			

Laboratory Control Sample Analyzed: 06/14/2013 By: BAG
Unit: ug/L Analytical Batch: 3F17023

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
Benzene		40.0	**38.9**	97	84-119	--		1.0
Chlorobenzene		40.0	**36.8**	92	84-118	--		1.0
1,1-Dichloroethene		40.0	**36.9**	92	77-123	--		1.0
Toluene		40.0	**37.9**	95	85-118	--		1.0
Trichloroethene		40.0	**43.8**	110	82-119	--		1.0
Surrogates:								
Dibromofluoromethane				*104*	*85-118*			
1,2-Dichloroethane-d4				*112*	*87-122*			
Toluene-d8				*102*	*85-113*			
4-Bromofluorobenzene				*102*	*82-110*			

Matrix Spike 1306211-14 PRB-08s Analyzed: 06/14/2013 By: BAG
Unit: ug/L Analytical Batch: 3F17023

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
Benzene	<1.0	40.0	**41.4**	104	80-129	--		1.0
Chlorobenzene	<1.0	40.0	**39.1**	98	80-121	--		1.0
1,1-Dichloroethene	<1.0	40.0	**43.1**	108	74-134	--		1.0
Toluene	<1.0	40.0	**40.8**	102	79-129	--		1.0
Trichloroethene	<1.0	40.0	**41.1**	103	75-127	--		1.0
Surrogates:								
Dibromofluoromethane				*106*	*85-118*			
1,2-Dichloroethane-d4				*116*	*87-122*			
Toluene-d8				*103*	*85-113*			
4-Bromofluorobenzene				*104*	*82-110*			

Matrix Spike Duplicate 1306211-14 PRB-08s Analyzed: 06/14/2013 By: BAG
Unit: ug/L Analytical Batch: 3F17023

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
Benzene	<1.0	40.0	**41.8**	105	80-129	1	9	1.0

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Volatile Organic Compounds by EPA Method 8260B (Continued)

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
QC Batch: 1306247 (Continued) 5030B Aqueous Purge & Trap/USEPA-8260B								
Matrix Spike Duplicate (Continued) 1306211-14 PRB-08s					Analyzed:	06/14/2013	By: BAG	
Unit: ug/L					Analytical Batch:	3F17023		
Chlorobenzene	<1.0	40.0	**39.5**	99	80-121	0.8	8	1.0
1,1-Dichloroethene	<1.0	40.0	**42.2**	106	74-134	2	11	1.0
Toluene	<1.0	40.0	**41.1**	103	79-129	0.6	9	1.0
Trichloroethene	<1.0	40.0	**40.6**	101	75-127	1	10	1.0
Surrogates:								
Dibromofluoromethane				*105*	*85-118*			
1,2-Dichloroethane-d4				*115*	*87-122*			
Toluene-d8				*102*	*85-113*			
4-Bromofluorobenzene				*104*	*82-110*			

QC Batch: 1306255 5030B Aqueous Purge & Trap/USEPA-8260B

Method Blank			Analyzed:	06/14/2013	By: BAG
Unit: ug/L			Analytical Batch:	3F17032	
Acetone	<20		--	20	
Acrylonitrile	<2.0			2.0	
Benzene	<1.0			1.0	
Bromobenzene	<1.0			1.0	
Bromochloromethane	<1.0			1.0	
Bromodichloromethane	<1.0			1.0	
Bromoform	<1.0			1.0	
Bromomethane	<5.0			5.0	
n-Butylbenzene	<1.0			1.0	
sec-Butylbenzene	<1.0			1.0	
tert-Butylbenzene	<1.0			1.0	
Carbon Disulfide	<1.0			1.0	
Carbon Tetrachloride	<1.0			1.0	
Chlorobenzene	<1.0			1.0	
Chloroethane	<5.0			5.0	
Chloroform	<1.0			1.0	
Chloromethane	<5.0			5.0	
1,2-Dibromo-3-chloropropane	<5.0			5.0	
Dibromochloromethane	<1.0			1.0	
1,2-Dibromoethane	<1.0			1.0	

Continued on next page

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Volatile Organic Compounds by EPA Method 8260B (Continued)

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL

QC Batch: 1306255 (Continued) 5030B Aqueous Purge & Trap/USEPA-8260B

Method Blank (Continued) Analyzed: 06/14/2013 By: BAG
Unit: ug/L Analytical Batch: 3F17032

Dibromomethane	<1.0			1.0
trans-1,4-Dichloro-2-butene	<1.0			1.0
1,2-Dichlorobenzene	<1.0			1.0
1,3-Dichlorobenzene	<1.0			1.0
1,4-Dichlorobenzene	<1.0			1.0
Dichlorodifluoromethane	<5.0			5.0
1,1-Dichloroethane	<1.0			1.0
1,2-Dichloroethane	<1.0			1.0
1,1-Dichloroethene	<1.0			1.0
cis-1,2-Dichloroethene	<1.0			1.0
trans-1,2-Dichloroethene	<1.0			1.0
1,2-Dichloropropane	<1.0			1.0
cis-1,3-Dichloropropene	<1.0			1.0
trans-1,3-Dichloropropene	<1.0			1.0
Ethylbenzene	<1.0			1.0
Ethyl Ether	<5.0			5.0
2-Hexanone	<5.0			5.0
Iodomethane	<1.0			1.0
Isopropylbenzene	<1.0			1.0
4-Isopropyltoluene	<5.0			5.0
Methyl tert-Butyl Ether	<5.0			5.0
Methylene Chloride	<5.0			5.0
2-Butanone (MEK)	<5.0			5.0
2-Methylnaphthalene	<5.0			5.0
4-Methyl-2-pentanone (MIBK)	<5.0			5.0
Naphthalene	<5.0		--	5.0
n-Propylbenzene	<1.0			1.0
Styrene	<1.0			1.0
1,1,1,2-Tetrachloroethane	<1.0			1.0
1,1,2,2-Tetrachloroethane	<1.0			1.0
Tetrachloroethene	<1.0			1.0
Tetrahydrofuran	<5.0			5.0
Toluene	<1.0			1.0
1,2,3-Trichlorobenzene	<5.0			5.0
1,2,4-Trichlorobenzene	<5.0			5.0
1,1,1-Trichloroethane	<1.0			1.0

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US EPA ARCHIVE DOCUMENT

QUALITY CONTROL REPORT

Volatile Organic Compounds by EPA Method 8260B (Continued)

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL

QC Batch: 1306255 (Continued) 5030B Aqueous Purge & Trap/USEPA-8260B

Method Blank (Continued) Analyzed: 06/14/2013 By: BAG
Unit: ug/L Analytical Batch: 3F17032

1,1,2-Trichloroethane			<1.0				1.0
Trichloroethene			<1.0				1.0
Trichlorofluoromethane			<1.0				1.0
1,2,3-Trichloropropane			<1.0				1.0
1,2,4-Trimethylbenzene			<1.0				1.0
1,3,5-Trimethylbenzene			<1.0				1.0
Vinyl Chloride			<1.0				1.0
Xylene, Meta + Para			<2.0				2.0
Xylene, Ortho			<1.0				1.0
Surrogates:							
Dibromofluoromethane				*102*	*85-118*		
1,2-Dichloroethane-d4				*113*	*87-122*		
Toluene-d8				*100*	*85-113*		
4-Bromofluorobenzene				*103*	*82-110*		

Laboratory Control Sample Analyzed: 06/14/2013 By: BAG
Unit: ug/L Analytical Batch: 3F17032

Benzene	40.0	**37.9**		95	84-119	--	1.0
Chlorobenzene	40.0	**36.3**		91	84-118	--	1.0
1,1-Dichloroethene	40.0	**39.1**		98	77-123	--	1.0
Toluene	40.0	**37.7**		94	85-118	--	1.0
Trichloroethene	40.0	**37.7**		94	82-119	--	1.0
Surrogates:							
Dibromofluoromethane				*105*	*85-118*		
1,2-Dichloroethane-d4				*115*	*87-122*		
Toluene-d8				*103*	*85-113*		
4-Bromofluorobenzene				*104*	*82-110*		

QC Batch: 1306303 5030B Aqueous Purge & Trap/USEPA-8260B

Method Blank Analyzed: 06/17/2013 By: BAG
Unit: ug/L Analytical Batch: 3F18017

Acetone			<20			--	20

Continued on next page

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Volatile Organic Compounds by EPA Method 8260B (Continued)

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL

QC Batch: 1306303 (Continued) 5030B Aqueous Purge & Trap/USEPA-8260B

Method Blank (Continued) Analyzed: 06/17/2013 By: BAG
Unit: ug/L Analytical Batch: 3F18017

Acrylonitrile	<2.0	2.0
Benzene	<1.0	1.0
Bromobenzene	<1.0	1.0
Bromochloromethane	<1.0	1.0
Bromodichloromethane	<1.0	1.0
Bromoform	<1.0	1.0
Bromomethane	<5.0	5.0
n-Butylbenzene	<1.0	1.0
sec-Butylbenzene	<1.0	1.0
tert-Butylbenzene	<1.0	1.0
Carbon Disulfide	<1.0	1.0
Carbon Tetrachloride	<1.0	1.0
Chlorobenzene	<1.0	1.0
Chloroethane	<5.0	5.0
Chloroform	<1.0	1.0
Chloromethane	<5.0	5.0
1,2-Dibromo-3-chloropropane	<5.0	5.0
Dibromochloromethane	<1.0	1.0
1,2-Dibromoethane	<1.0	1.0
Dibromomethane	<1.0	1.0
trans-1,4-Dichloro-2-butene	<1.0	1.0
1,2-Dichlorobenzene	<1.0	1.0
1,3-Dichlorobenzene	<1.0	1.0
1,4-Dichlorobenzene	<1.0	1.0
Dichlorodifluoromethane	<5.0	5.0
1,1-Dichloroethane	<1.0	1.0
1,2-Dichloroethane	<1.0	1.0
1,1-Dichloroethene	<1.0	1.0
cis-1,2-Dichloroethene	<1.0	1.0
trans-1,2-Dichloroethene	<1.0	1.0
1,2-Dichloropropane	<1.0	1.0
cis-1,3-Dichloropropene	<1.0	1.0
trans-1,3-Dichloropropene	<1.0	1.0
Ethylbenzene	<1.0	1.0
Ethyl Ether	<5.0	5.0
2-Hexanone	<5.0	5.0

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Volatile Organic Compounds by EPA Method 8260B (Continued)

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL

QC Batch: 1306303 (Continued) 5030B Aqueous Purge & Trap/USEPA-8260B

Method Blank (Continued) Analyzed: 06/17/2013 By: BAG
Unit: ug/L Analytical Batch: 3F18017

Iodomethane			<1.0				1.0
Isopropylbenzene			<1.0				1.0
4-Isopropyltoluene			<5.0				5.0
Methyl tert-Butyl Ether			<5.0				5.0
Methylene Chloride			<5.0			--	5.0
2-Butanone (MEK)			<5.0				5.0
2-Methylnaphthalene			<5.0				5.0
4-Methyl-2-pentanone (MIBK)			<5.0				5.0
Naphthalene			<5.0			--	5.0
n-Propylbenzene			<1.0				1.0
Styrene			<1.0				1.0
1,1,1,2-Tetrachloroethane			<1.0				1.0
1,1,2,2-Tetrachloroethane			<1.0				1.0
Tetrachloroethene			<1.0				1.0
Tetrahydrofuran			<5.0				5.0
Toluene			<1.0				1.0
1,2,3-Trichlorobenzene			<5.0			--	5.0
1,2,4-Trichlorobenzene			<5.0				5.0
1,1,1-Trichloroethane			<1.0				1.0
1,1,2-Trichloroethane			<1.0				1.0
Trichloroethene			<1.0				1.0
Trichlorofluoromethane			<1.0				1.0
1,2,3-Trichloropropane			<1.0				1.0
1,2,4-Trimethylbenzene			<1.0				1.0
1,3,5-Trimethylbenzene			<1.0				1.0
Vinyl Chloride			<1.0				1.0
Xylene, Meta + Para			<2.0				2.0
Xylene, Ortho			<1.0				1.0
Surrogates:							
Dibromofluoromethane				*99*	*85-118*		
1,2-Dichloroethane-d4				*98*	*87-122*		
Toluene-d8				*100*	*85-113*		
4-Bromofluorobenzene				*100*	*82-110*		

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US EPA ARCHIVE DOCUMENT

QUALITY CONTROL REPORT

Volatile Organic Compounds by EPA Method 8260B (Continued)

QC Batch: 1306303 (Continued) 5030B Aqueous Purge & Trap/USEPA-8260B

Laboratory Control Sample Analyzed: 06/17/2013 By: BAG
Unit: ug/L Analytical Batch: 3F18017

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
Benzene		40.0	**40.8**	102	84-119	--		1.0
Chlorobenzene		40.0	**40.4**	101	84-118	--		1.0
1,1-Dichloroethene		40.0	**42.5**	106	77-123	--		1.0
Toluene		40.0	**41.1**	103	85-118	--		1.0
Trichloroethene		40.0	**34.0**	85	82-119	--		1.0
Surrogates:								
Dibromofluoromethane				*103*	*85-118*			
1,2-Dichloroethane-d4				*98*	*87-122*			
Toluene-d8				*102*	*85-113*			
4-Bromofluorobenzene				*100*	*82-110*			

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STATEMENT OF DATA QUALIFICATIONS

Dissolved Gases in Water by RSK-175 Headspace Analysis

Qualification: The MS and/or MSD recovery was outside the control limit. The non-spiked sample concentration for the same analyte was greater than or equal to 4 times the spiked amount; the reported matrix spike results cannot be used to evaluate the sample.

Analysis: RSK-175

Sample/Analyte: 1306211-14 PRB-08s Methane

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STATEMENT OF DATA QUALIFICATIONS

Volatile Organic Compounds by EPA Method 8260B

Qualification: The corresponding CCV for this analytical batch had a recovery exceeding the upper control limit of the method. A positive result for this analyte in any associated samples are considered estimated. Non-detectable results are not qualified.

Analysis: USEPA-8260B

Sample/Analyte:	1306211-07	PRB-03s	1,1,2,2-Tetrachloroethane
	1306211-07	PRB-03s	Carbon Tetrachloride
	1306211-08	PRB-04s	1,1,2,2-Tetrachloroethane
	1306211-08	PRB-04s	Carbon Tetrachloride

Qualification: The corresponding CCV for this analytical batch had a recovery below the lower control limit of the method. Positive results for this analyte in any associated samples are considered estimated; non-detectable results are considered approximate.

Analysis: USEPA-8260B

Sample/Analyte:	1306211-01	TB-01	Dichlorodifluoromethane
	1306211-02	PRB-12s	Dichlorodifluoromethane
	1306211-03	PRB-13s	Dichlorodifluoromethane
	1306211-06	PRB-15d	Dichlorodifluoromethane
	1306211-09	PRB-04d	Dichlorodifluoromethane
	1306211-11	Dup-02	Dichlorodifluoromethane
	1306211-13	PRB-08d	Dichlorodifluoromethane
	1306211-14	PRB-08s	Dichlorodifluoromethane
	1306211-15	PRB-10s	Dichlorodifluoromethane
	1306211-16	PRB-16s	Dichlorodifluoromethane
	1306211-17	PRB-09s	Dichlorodifluoromethane
	1306211-20	PRB-11s	Dichlorodifluoromethane

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Chain of Custody Record

COC No. 144731

Pg. 1 of 3

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Cart: 143-W (Methane)
VOA Rack/Tray: 30X-(VOC)
Receipt Log No.: 4-34
Project Chemist: JLR
Work Order No.: 1306211

Client Name: TRC Environmental
Address: 1540 Eisenhower Place
City, State Zip: Ann Arbor, MI 48108
Phone/Fax: ~~734-351-1971-7080~~ / 734-971-9022
Email: smetz@trcsolutions.com
734-585-7825

Project Name: TPC PRB
Client Project No. / P.O. No.: 186299.0001
Invoice To: [X] Client [ ] Other (comments)
Contact/Report To: Stacy Metz

Analyses Requested: VOC, Methane, Ethane, Ethene

PRESERVATIVES
A NONE pH~7
B HNO_3 pH<2
C H_2SO_4 pH<2
D 1+1 HCl pH<2
E NaOH pH>12
F ZnAc/NaOH pH>9
G MeOH
H Other (note below)

Container Type (corresponds to Container Packing List): D D D D

Schedule	Matrix Code	Sample Number		Field Sample ID	Cooler ID	Sample Date	Sample Time	COMP	GRAB	Matrix	VOC	Methane	Ethane	Ethene	Total	Sample Comments
01		01	1	TB-01	—	—	—	X		DI	X				1	
02		02	2	PRB-12S		6/5/13	1239		X	GW	X				2	
		03	3	PRB-13S			1428				X				2	
		04	4	PRB-14S			1504				X				2	
		05	5	PRB-15S			1559				X				2	
		06	6	PRB-15D			1626				X				2	
		07	7	PRB-3S		6/6/13	0933				X				2	
04		08	8	PRB-4S-1			1026					X	X	X	2	
			9	PRB-4S-2			1026				X				2	
02		09	10	PRB-4D			1146				X				2	

Sampled By (print): Rachel N Sorter
Sampler's Signature: Rachel N. Sorter
Company: TRC Environ.

How Shipped? Hand X Carrier ____
Tracking No.

Comments

1. Relinquished By	Date	Time	2. Relinquished By	Date	Time	3. Relinquished By	Date	Time
Rachel N. Sorter	6/11/13	0945	[signature]	6.11.13	1215	[signature]	6/11/13	1820

1. Received By	Date	Time	2. Received By	Date	Time	3. Received For Lab By	Date	Time
TRC Refrigerator			[signature]	6.11.13	1215	D. Hardin	6-11-13	1820

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Chain of Custody Record

COC No. 144732

Pg. 2 of 3

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Cart: 143-W (METHANE)

VOA Rack/Tray: BOX - VOCs

Receipt Log No.: 4-34

Project Chemist:

Work Order No.: 1306211

Client Name: TRC Environmental

Address: 1540 Eisenhower Place

City, State Zip: Ann Arbor, MI 48108

Phone/Fax: 734-585-7825/734-971-9022

Email: smetz@trcsolutions.com

Project Name: TPC-PRB

Client Project No. / P.O. No.: 186299.0001

Invoice To: [X] Client [ ] Other (comments)

Contact/Report To: Stacy Metz

Analyses Requested: VOC, Methane, Ethane, Ethene

PRESERVATIVES
A NONE pH~7
B HNO_3 pH<2
C H_2SO_4 pH<2
D 1+1 HCl pH<2
E NaOH pH>12
F ZnAc/NaOH pH>9
G MeOH
H Other (note below)

Schedule	Matrix Code	Sample Number		Field Sample ID	Cooler ID	Sample Date	Sample Time	COMP	GRAB	Matrix	VOC	Methane	Ethane	Ethene	Total	Sample Comments
06		10	1	DUP-01		6/6/13	—		X	GW		X	X	X	2	
02		11	2	DUP-02			—		X		X				2	
04		12	3	PRB-7S			1400				X	X	X	X	~~2~~ 4	
02		13	4	PRB-8D			1524				X				2	
04		14	5	PRB-8S MS/MSD			1553				X	X	X	X	4	
02	15	~~15~~	6	PRB-10S			1726				X				2	
05		~~16~~	7	PRB-8S MS/MSD			1553				X	X	X	X	6	
02	16	~~17~~	8	PRB-16S			1804				X				2	
04	17	~~18~~	9	PRB-9S		6/7/13	0958				X	X	X	X	4	
04	18	~~19~~	10	PRB-6S			1139								4	

Sampled By (print): Rachel N Sorta

Sampler's Signature: Rachel N. Sorta

Company: TRC

How Shipped? Hand X Carrier

Tracking No.

Comments

	Relinquished By	Date	Time	Received By	Date	Time
1	Rachel N. Sorta	6/11/13	0945	TRC Refrigerator		
2	[signature]	6.11.13	1215	[signature]	6.11.13	1215
3	[signature]	6.11.13	1820	D. Nordin	6/11/13	1820

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Chain of Custody Record

COC No. 144733

Pg. 3 of 3

For Lab Use Only

Cart: 143-W (METHANE)

VOA Rack/Tray: 30x-VOCS

Receipt Log No.: 4-34

Project Chemist:

Work Order No.: 1306211

Client Name: TRC Environmental

Address: 1540 Eisenhower Place

City, State Zip: Ann Arbor, MI 48108

Phone/Fax: 734-585-7825 / 734-971-9022

Email: smetz@trcsolutions.com

Project Name: TPC-PRB

Client Project No. / P.O. No.: 186299.0001

Invoice To: [X] Client [ ] Other (comments)

Contact/Report To: Stacy Metz

Analyses Requested

Container Type (corresponds to Container Packing List): D D D D

Number of Containers Submitted

Schedule	Matrix Code	Sample Number	Field Sample ID	Cooler ID	Sample Date	Sample Time	COMP	GRAB	Matrix	VOC	Methane	Ethane	Ethene	Total	Sample Comments
02	19	~~20~~	1 PRB-5s		6/7/13	1230	X		GW	X				2	
02	20	~~21~~	2 PRB-11S			1448				X				2	
04	21	~~22~~	3 PRB-1s			1548				X	X	X	X	4	
04	22	~~23~~	4 PRB-2s			1655				X	X	X	X	4	
			5												
			6												
			7												
			8												
			9												
			10												

PRESERVATIVES
A NONE pH~7
B HNO_3 pH<2
C H_2SO_4 pH<2
D 1+1 HCl pH<2
E NaOH pH>12
F ZnAc/NaOH pH>9
G MeOH
H Other (note below)

Sampled By (print): Rachel N Sorter

Sampler's Signature: Rachel N. Sorter

Company: TRC

How Shipped? Hand X Carrier

Tracking No.

Comments

1. Relinquished By: Rachel N. Sorter Date 6/11/13 Time 0945

1. Received By: TRC Refrigerator Date Time

2. Relinquished By: [signature] Date 6.11.13 Time 1215

2. Received By: [signature] Date 6.11.13 Time 1215

3. Relinquished By: [signature] Date 6/11/13 Time 1820

3. Received For Lab By: [signature] Date 6-11-13 Time 1820

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Individual sample results relate only to the sample tested.
5560 Corporate Exchange Court SE ◆ Grand Rapids, MI 49512 ◆ 616.975.4500 ◆ Fax 616.942.7463 ◆ www.trimatrixlabs.com

TRIMATRIX LABORATORIES

US EPA ARCHIVE DOCUMENT

TRIMATRIX LABORATORIES

SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES

Client: TRC-ENV.
Receipt Record Page/Line #: 4-34
Work Order #: 1306211
New / Add To
Project Chemist: JLR
Sample #s

Recorded by (initials/date): DN 6-11-13

☑ Cooler ☐ Box ☐ Other ____ Qty Received: 1

Thermometer Used: ☑ IR Gun (#202) ☐ Digital Thermometer (#54) ☐ Other (#____) ☐ See Additional Cooler Information Form

Cooler #	Time
TM 2857	2311

Custody Seals: ☑ None ☐ Present / Intact ☐ Present / Not Intact

Coolant Location: Dispersed / Top / Middle / Bottom

Coolant/Temperature Taken Via: ☑ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers

Alternate Temperature Taken Via: ☑ Temperature Blank (TB) ☐ 1 Container

	Recorded °C	Correction Factor °C	Actual °C
Temp Blank:	0		2.7
TB location: Representative / Not Representative			
1	3.7	0	3.7
2	3.6	0	3.6
3	2.9	0	2.9
Average °C			3.4

☐ Cooler ID on COC? ☑ VOC Trip Blank received?

Cooler #	Time

Custody Seals: ☐ None ☐ Present / Intact ☐ Present / Not Intact

Coolant Location: Dispersed / Top / Middle / Bottom

Coolant/Temperature Taken Via: ☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers

Alternate Temperature Taken Via: ☐ Temperature Blank (TB) ☐ 1 Container

	Recorded °C	Correction Factor °C	Actual °C
Temp Blank:			
TB location: Representative / Not Representative			
1			
2			
3			
Average °C			

☐ Cooler ID on COC? ☐ VOC Trip Blank received?

Cooler #	Time

Custody Seals: ☐ None ☐ Present / Intact ☐ Present / Not Intact

Coolant Location: Dispersed / Top / Middle / Bottom

Coolant/Temperature Taken Via: ☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers

Alternate Temperature Taken Via: ☐ Temperature Blank (TB) ☐ 1 Container

	Recorded °C	Correction Factor °C	Actual °C
Temp Blank:			
TB location: Representative / Not Representative			
1			
2			
3			
Average °C			

☐ Cooler ID on COC? ☐ VOC Trip Blank received?

Cooler #	Time

Custody Seals: ☐ None ☐ Present / Intact ☐ Present / Not Intact

Coolant Location: Dispersed / Top / Middle / Bottom

Coolant/Temperature Taken Via: ☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers

Alternate Temperature Taken Via: ☐ Temperature Blank (TB) ☐ 1 Container

	Recorded °C	Correction Factor °C	Actual °C
Temp Blank:			
TB location: Representative / Not Representative			
1			
2			
3			
Average °C			

☐ Cooler ID on COC? ☐ VOC Trip Blank received?

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received

Yes	No	
☑	☐	Chain of Custody record(s)? If No, Initiated By ____
☑		Received for Lab Signed/Date/Time?
☐	☑	Shipping document?
☐	☑	Other ____

COC Information

☑ TriMatrix COC ☐ Other ____

COC ID Numbers: 144731 - 144733

Check COC for Accuracy

Yes	No	
☑	☐	Analysis Requested?
☑	☐	Sample ID matches COC?
☑	☐	Sample Date and Time matches COC?
☑		Container type completed on COC?
☑	☐	All container types indicated are received?

Check Sample Preservation

N/A	Yes	No	
	☑	☐	Average sample temperature ≤6° C?
☑	☐	☐	Was thermal preservation required?
☑	☐		If "No", Project Chemist Approval Intials: ____
☑	☐		If "Yes" Completed Non Con Cooler - Cont Inventory Form?
☑	☐		Completed Sample Preservation Verification Form?
☑	☐	☐	Samples chemically preserved correctly?
☑	☐		If "No", added orange tag?
	☑		Received pre-preserved VOC soils?
		☐	MeOH ☐ Na_2SO_4

Check for Short Hold-Time Prep/Analyses

☐ Bacteriological
☐ Air Bags
☐ EnCores / Methanol Pre-Preserved
☐ Formaldehyde/Aldehyde
☐ Green-tagged containers
☐ Yellow/White-tagged 1L ambers (SV Prep-Lab)

AFTER HOURS ONLY:
COPIES OF COC TO LAB AREA(S)
☑ NONE RECEIVED
☐ RECEIVED, COCs TO LAB(S)

Sample Condition Summary

N/A	Yes	No	
	☐	☑	Broken containers/lids?
	☐	☑	Missing or incomplete labels?
	☐	☑	Illegible information on labels?
	☐	☑	Low volume received?
	☐	☑	Inappropriate or non-TriMatrix containers received?
☐	☐	☑	VOC vials / TOX containers have headspace?
☑	☐	☐	Extra sample locations / containers not listed on COC?

Notes

☑ Trip Blank received ☐ Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤1 Hour Goal Met?
DN 6-11-13	6-11-13	Yes / No

Log In Forms - Receiving.Log-In_Checklist

revision: 3.4

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Appendix C
Groundwater Concentration Trend Charts

US EPA ARCHIVE DOCUMENT

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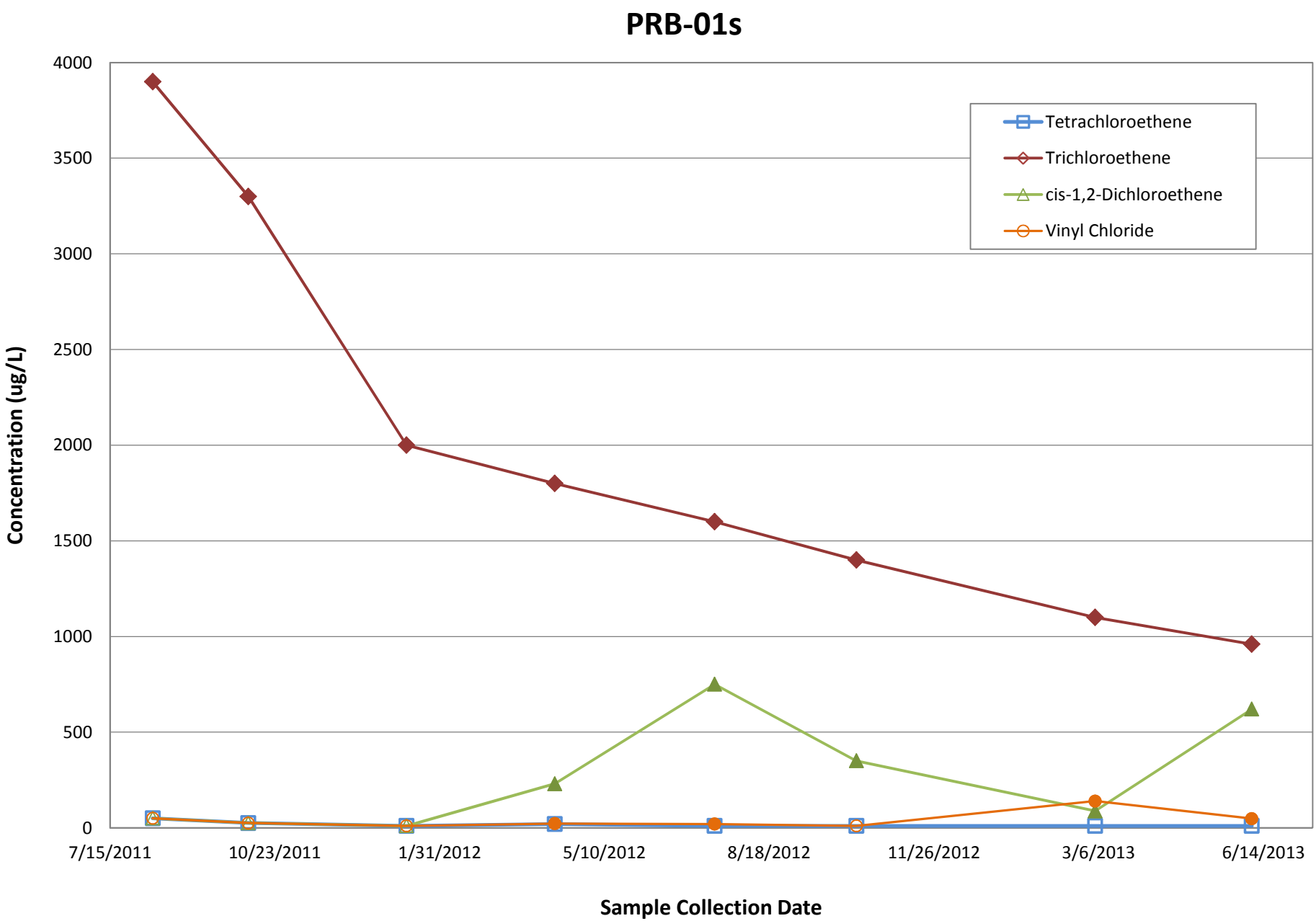
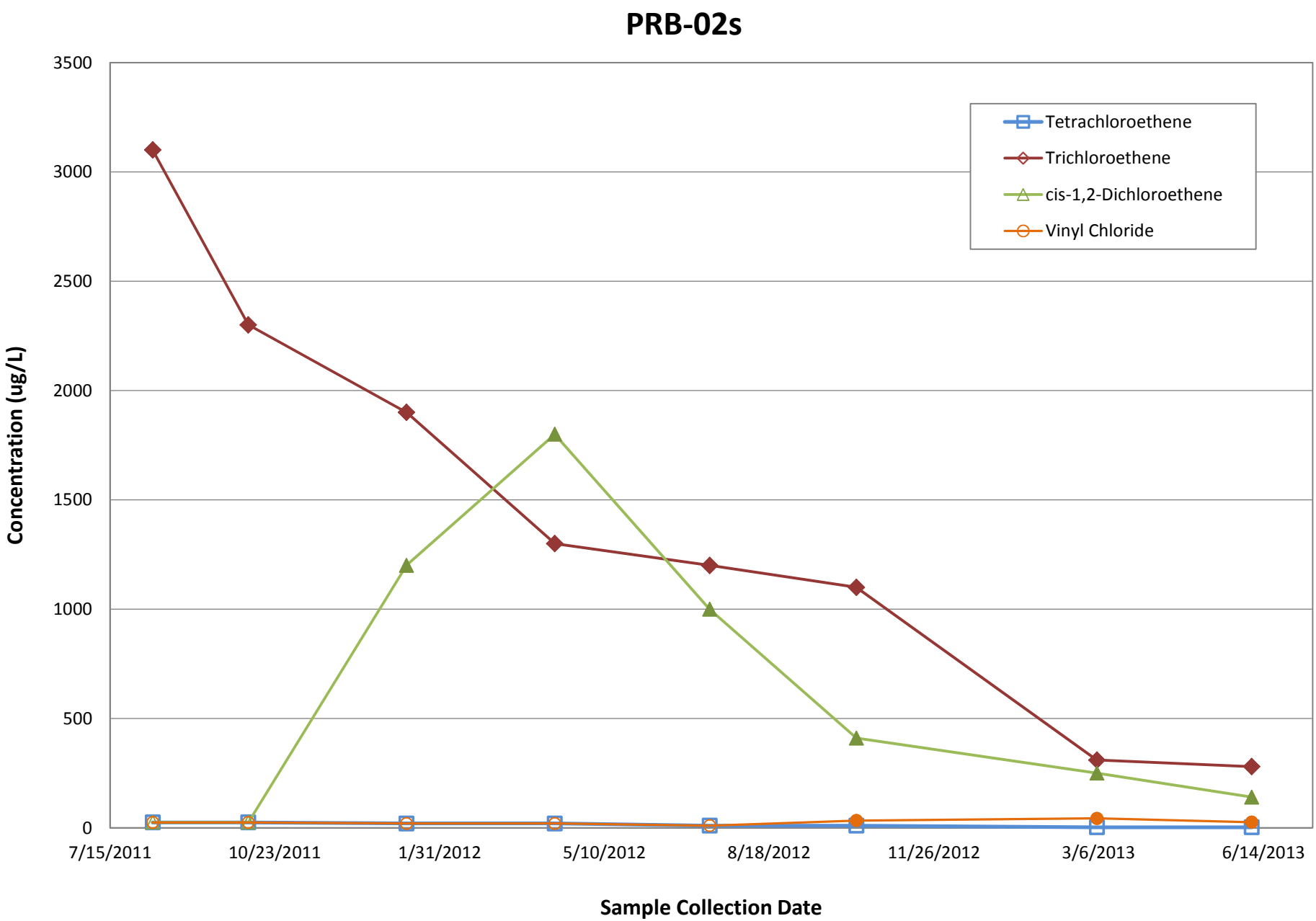
Chlorinated Ethene Trend Charts

US EPA ARCHIVE DOCUMENT



Note: Closed symbols indicate a detection of the specified compound. Open symbols indicate that the compound was not detected above the concentration specified (i.e. the reporting limit).

US EPA ARCHIVE DOCUMENT



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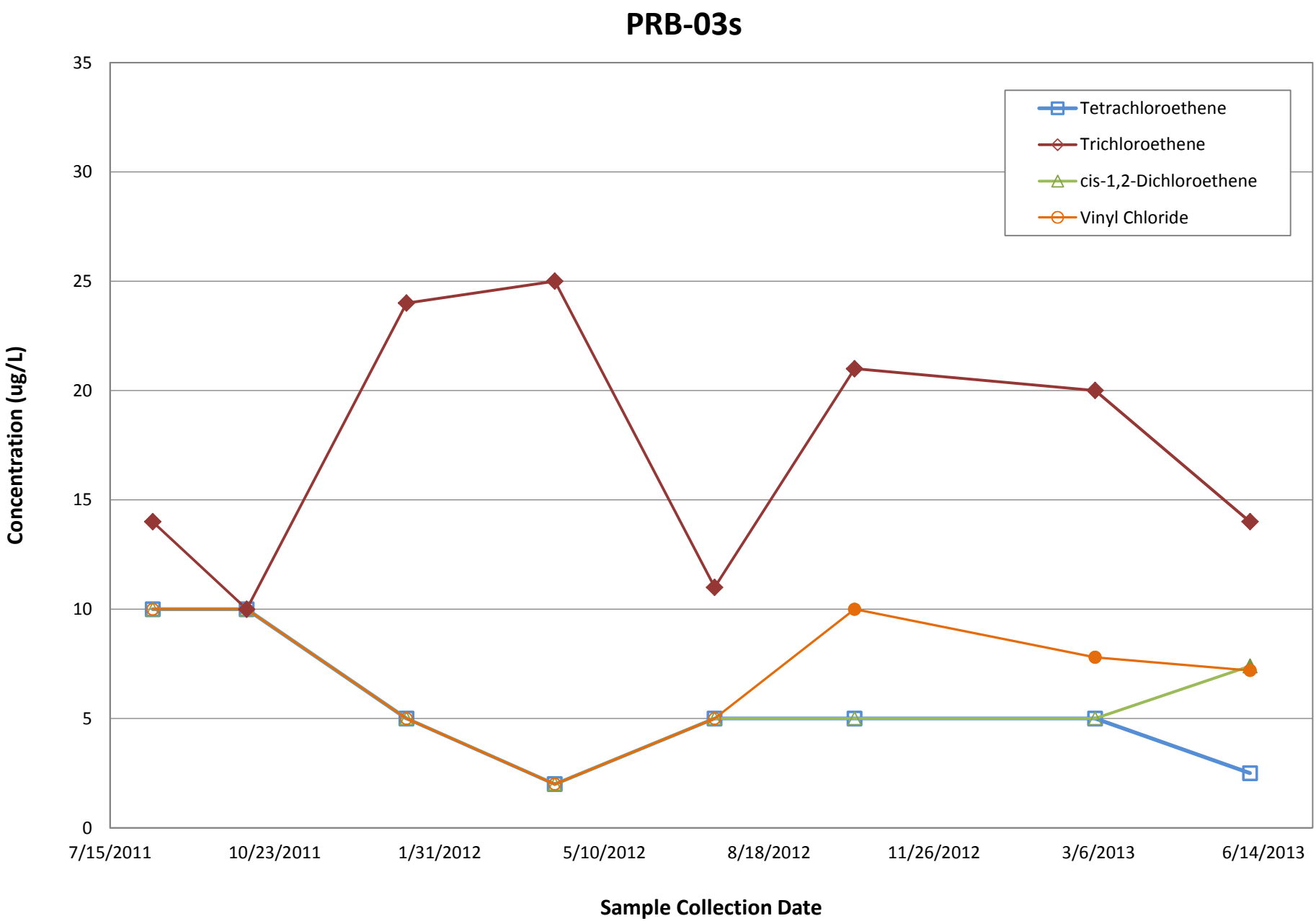

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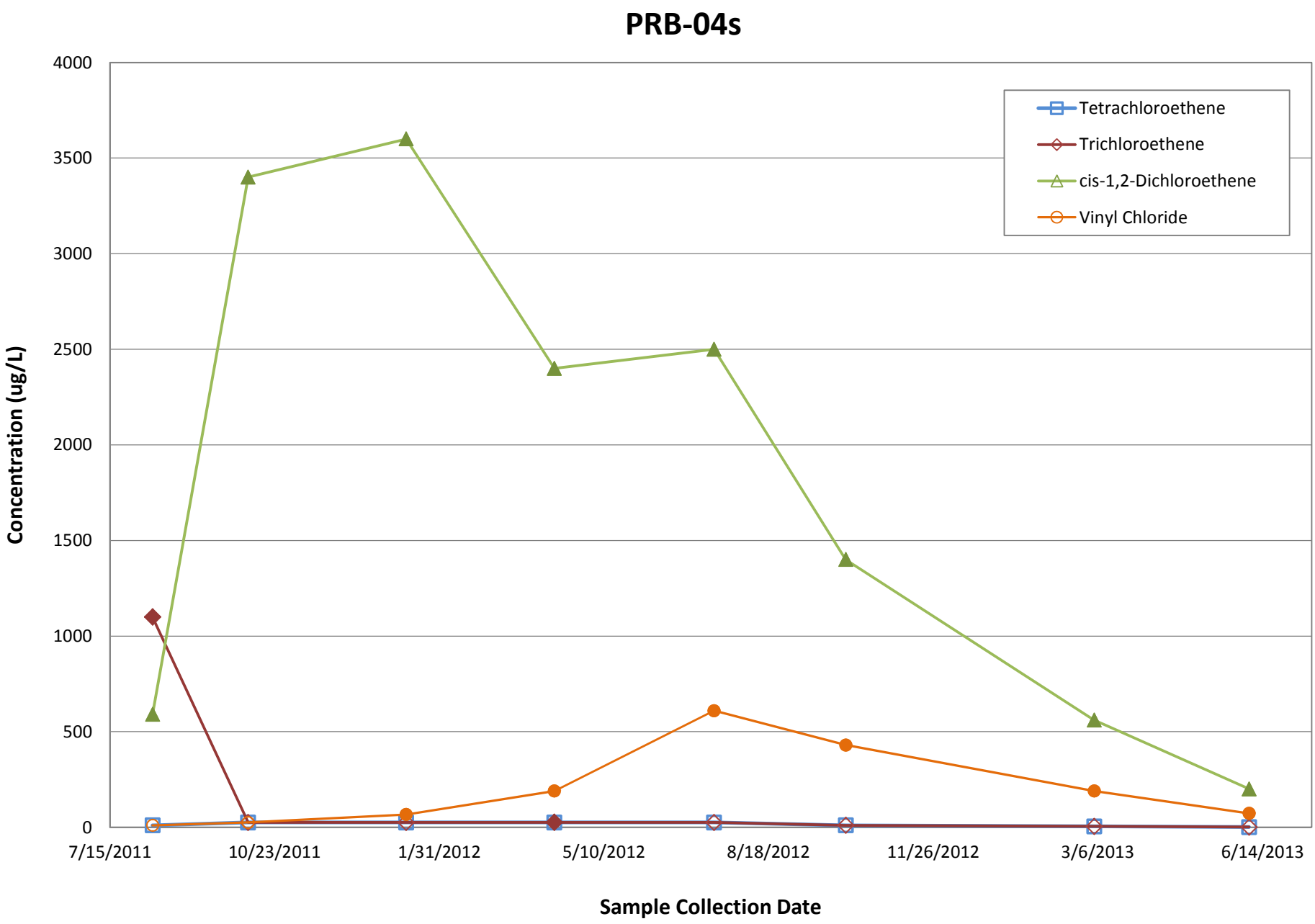

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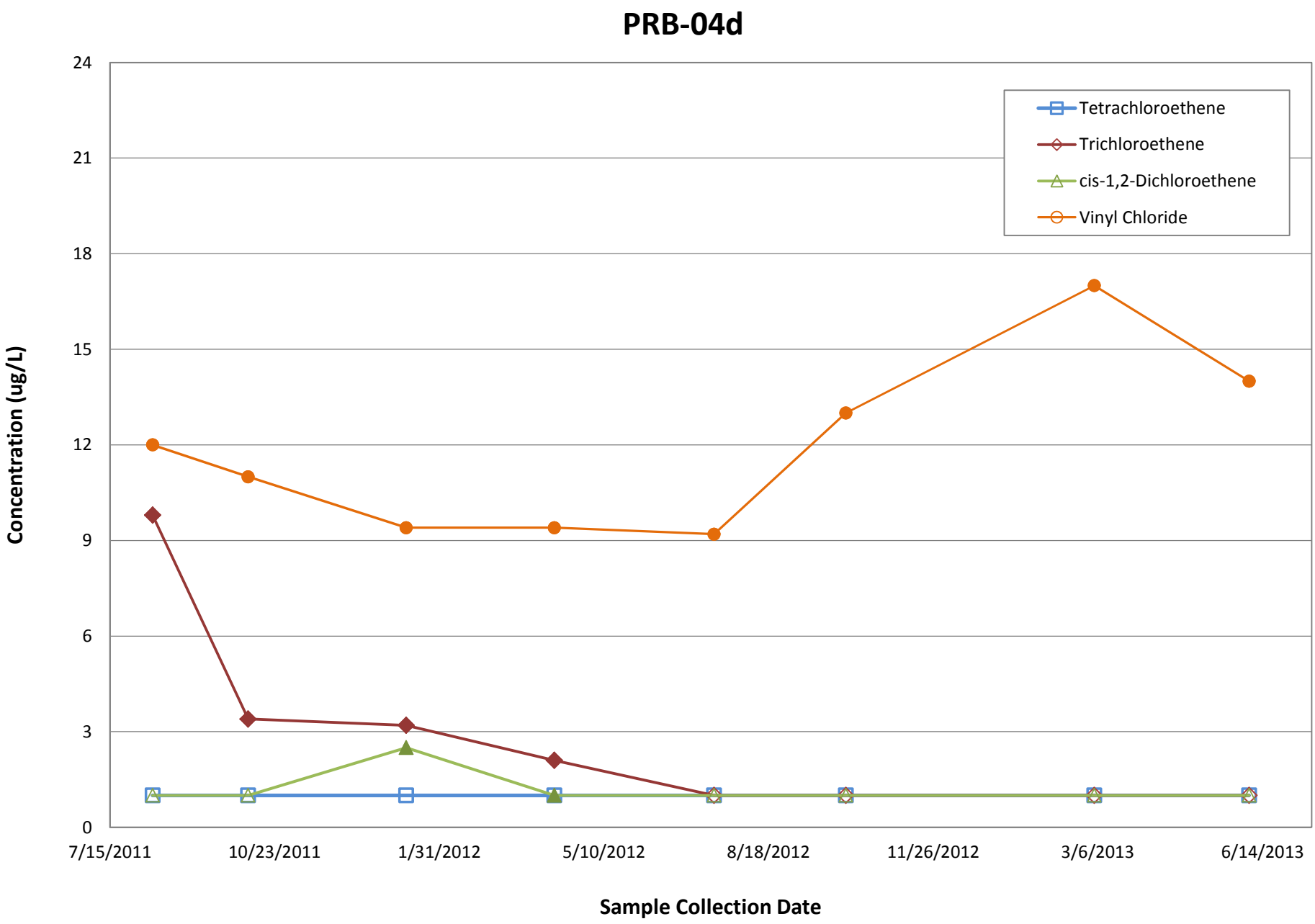

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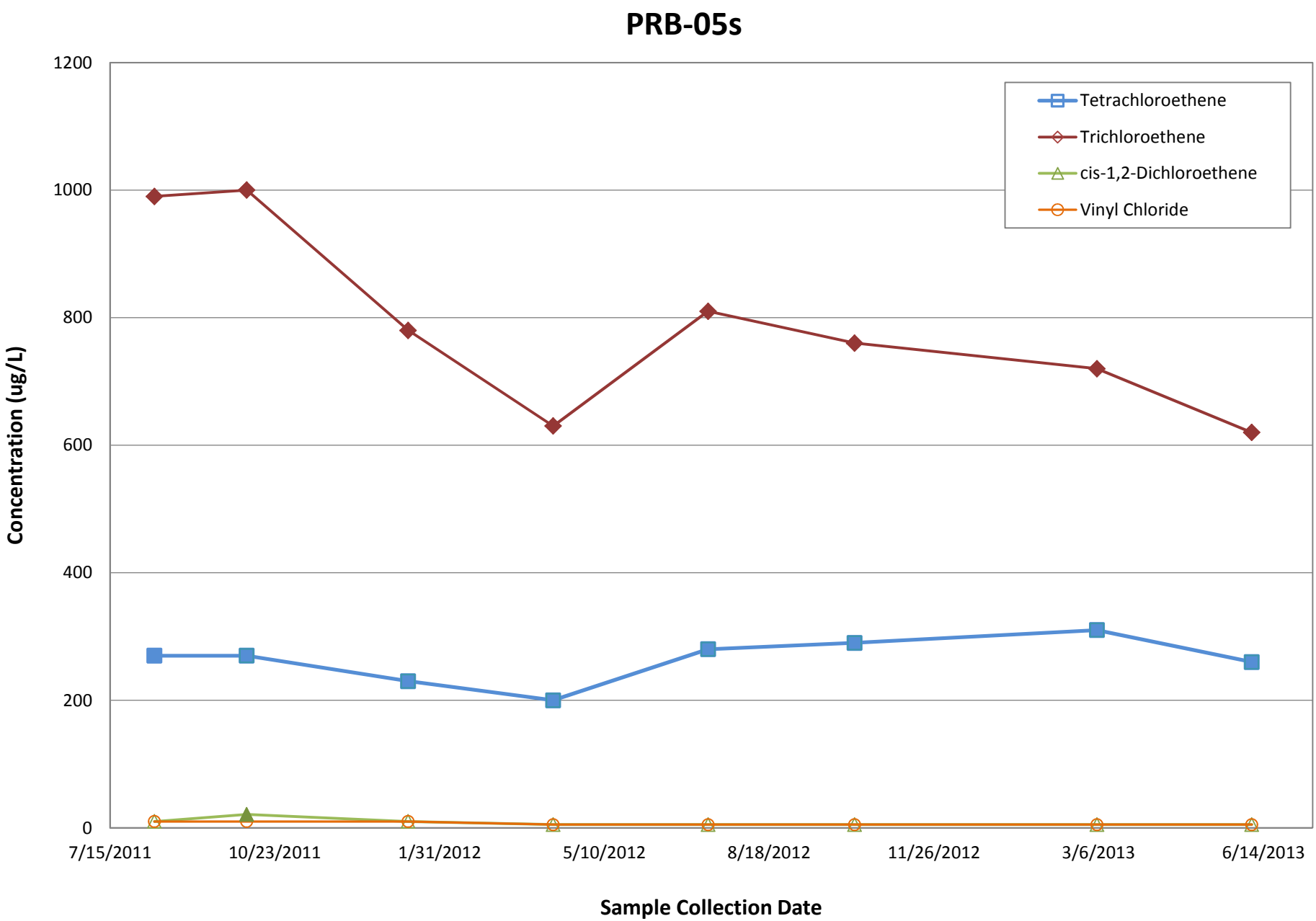

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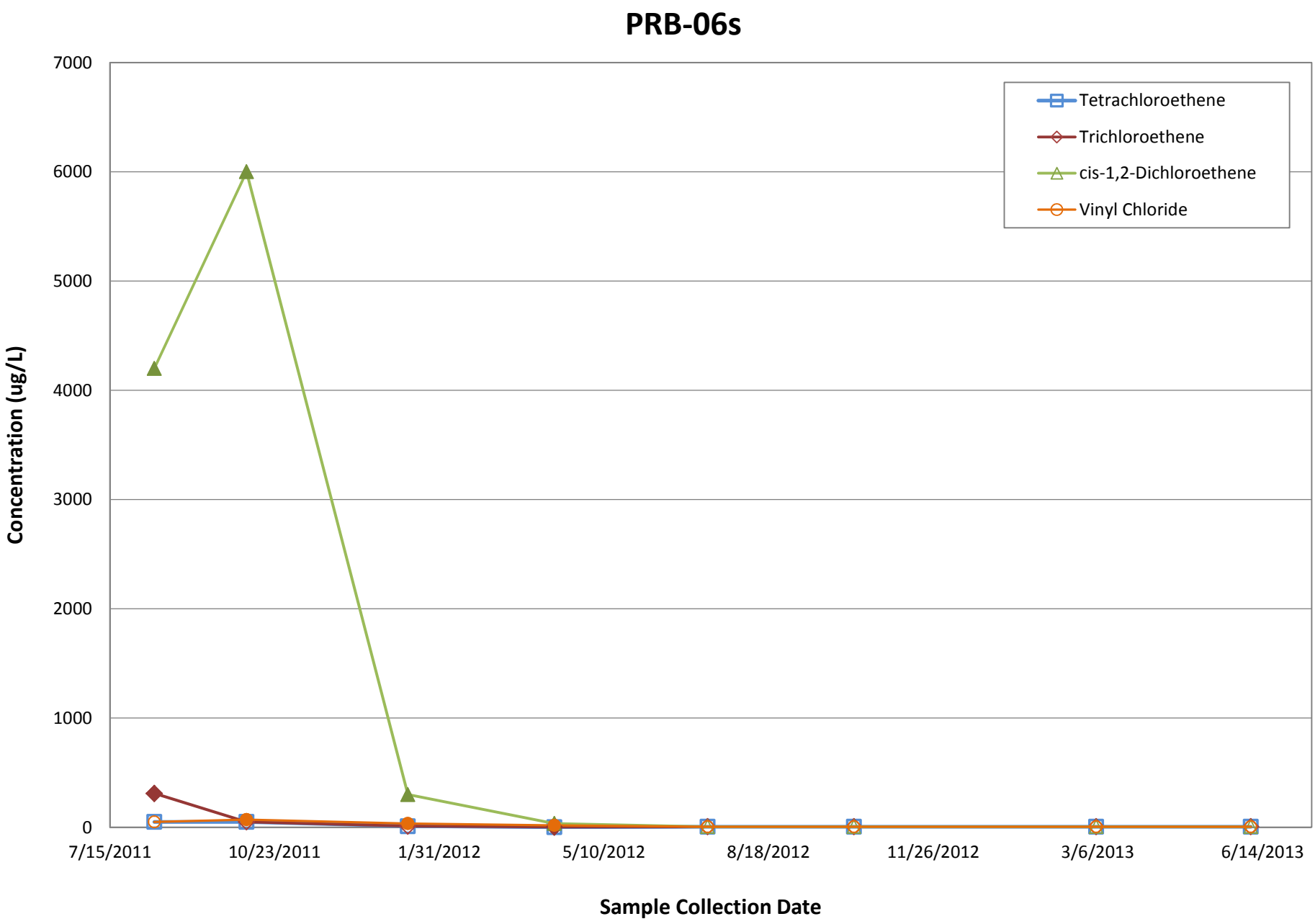

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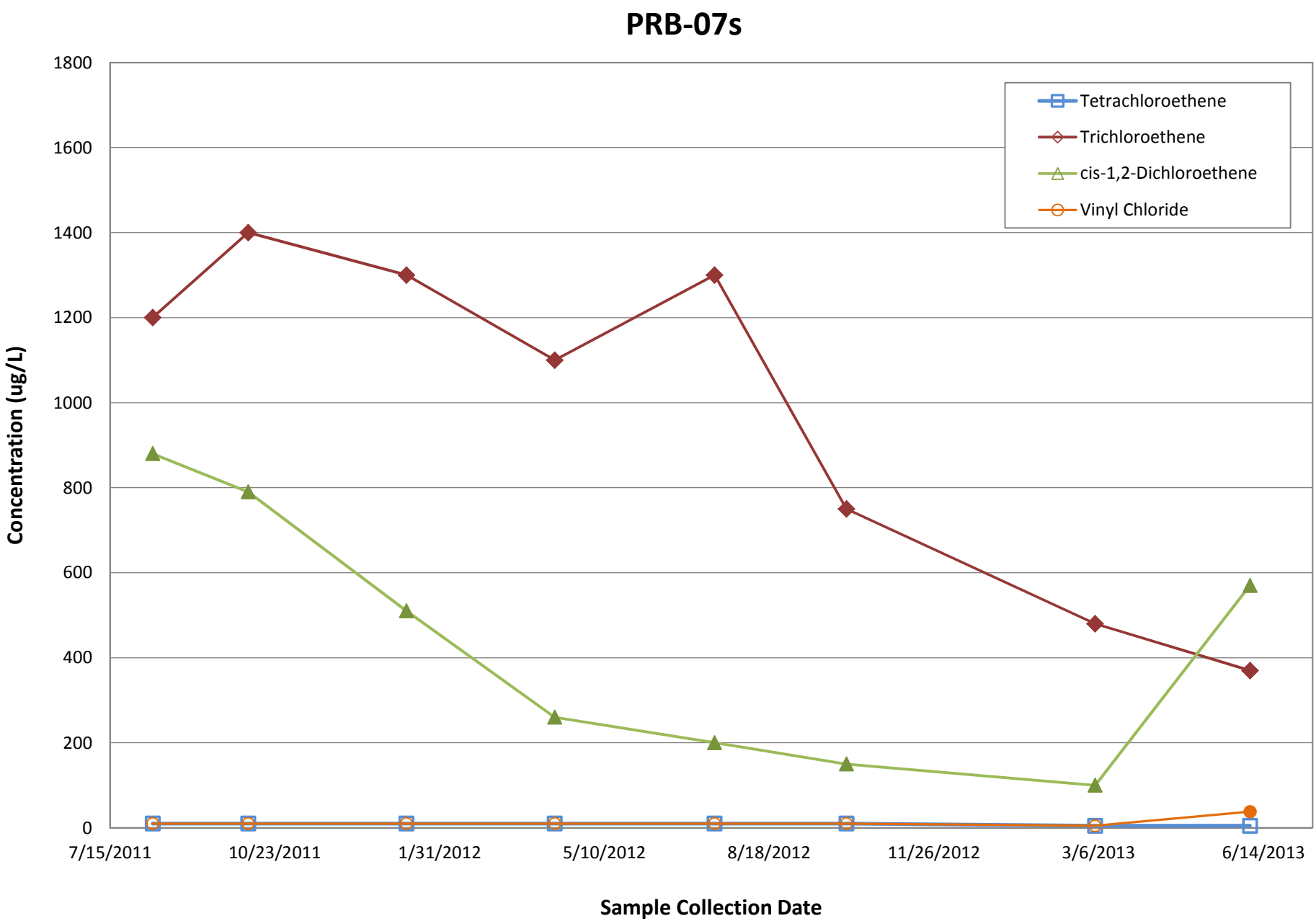

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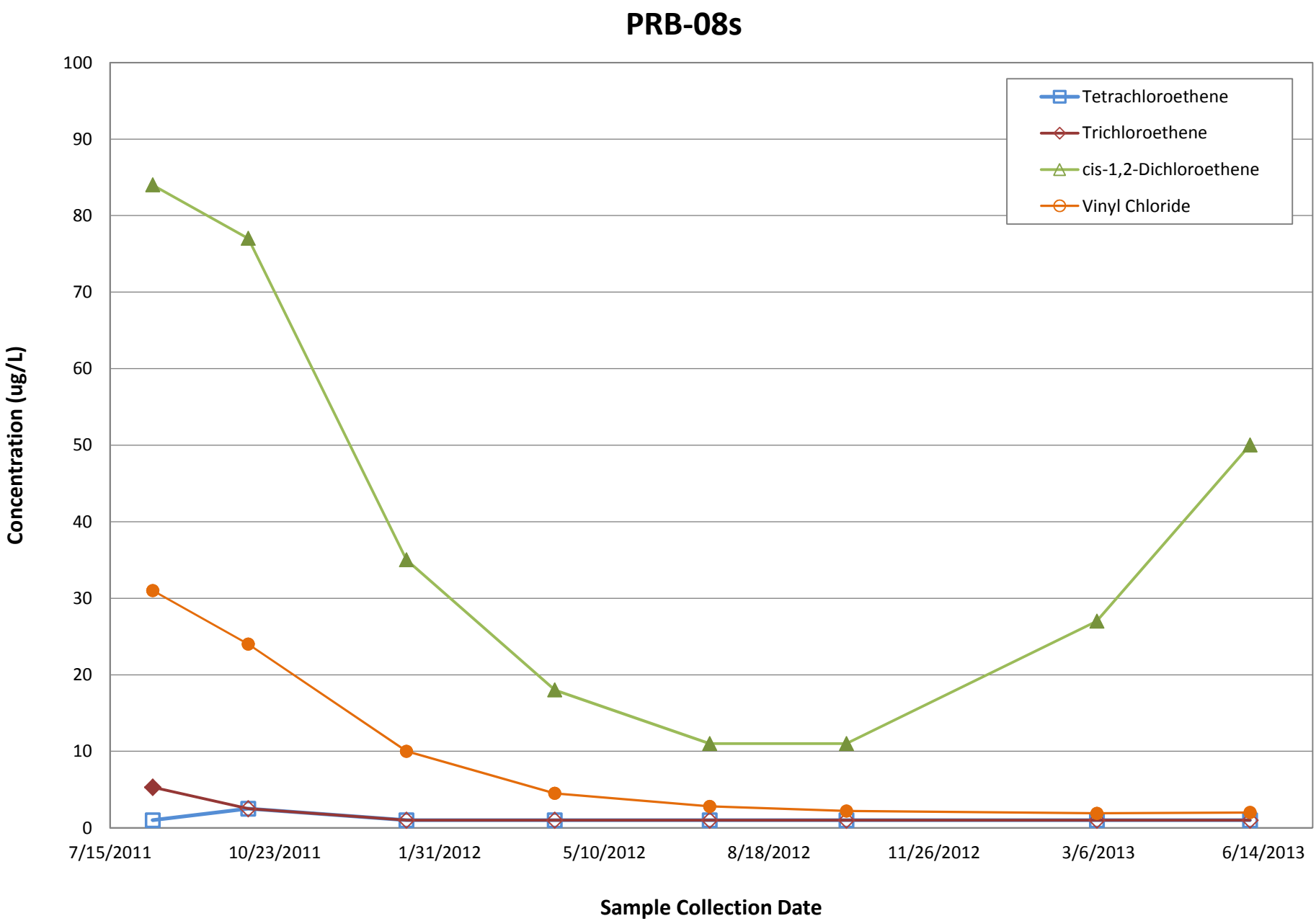

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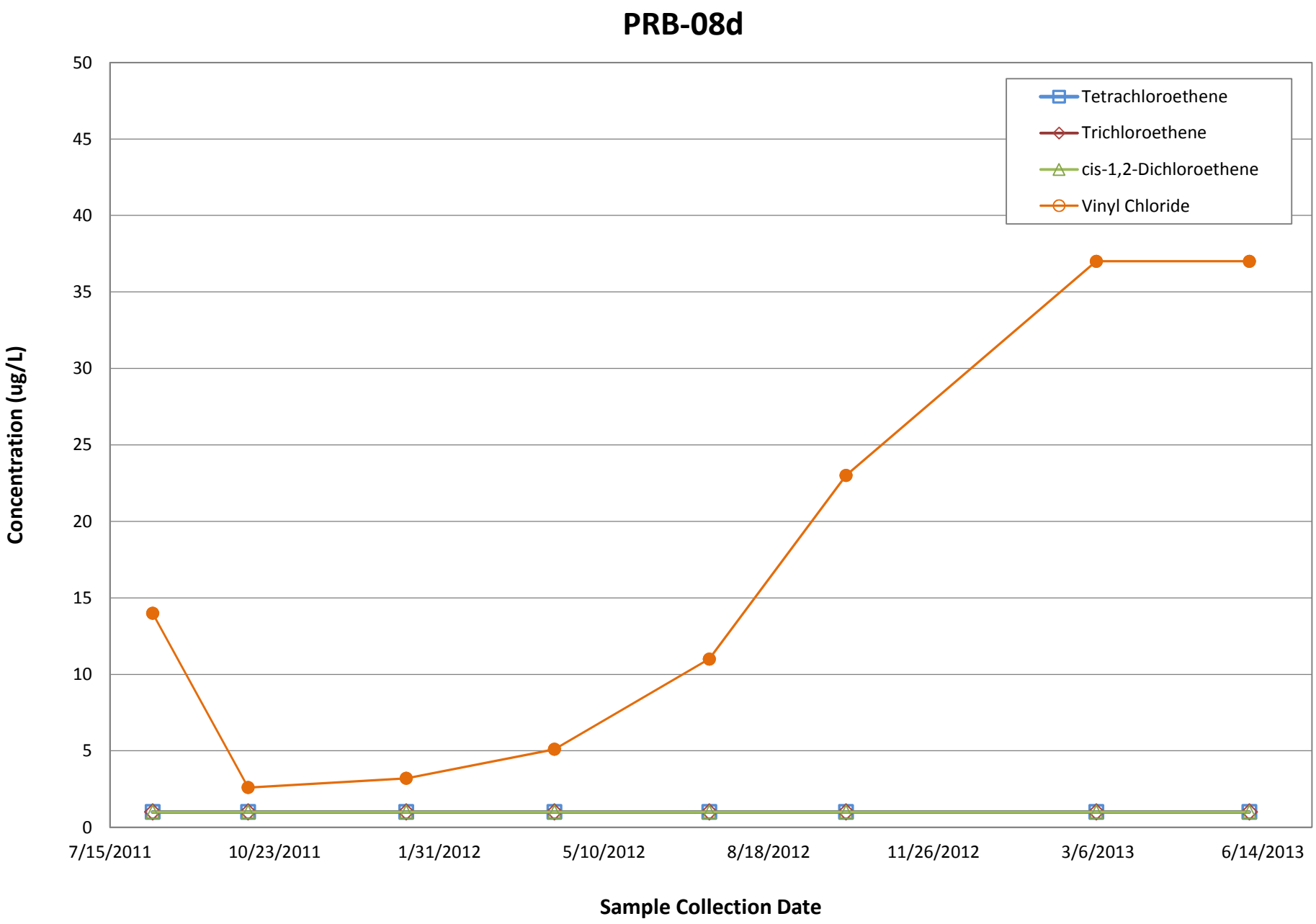

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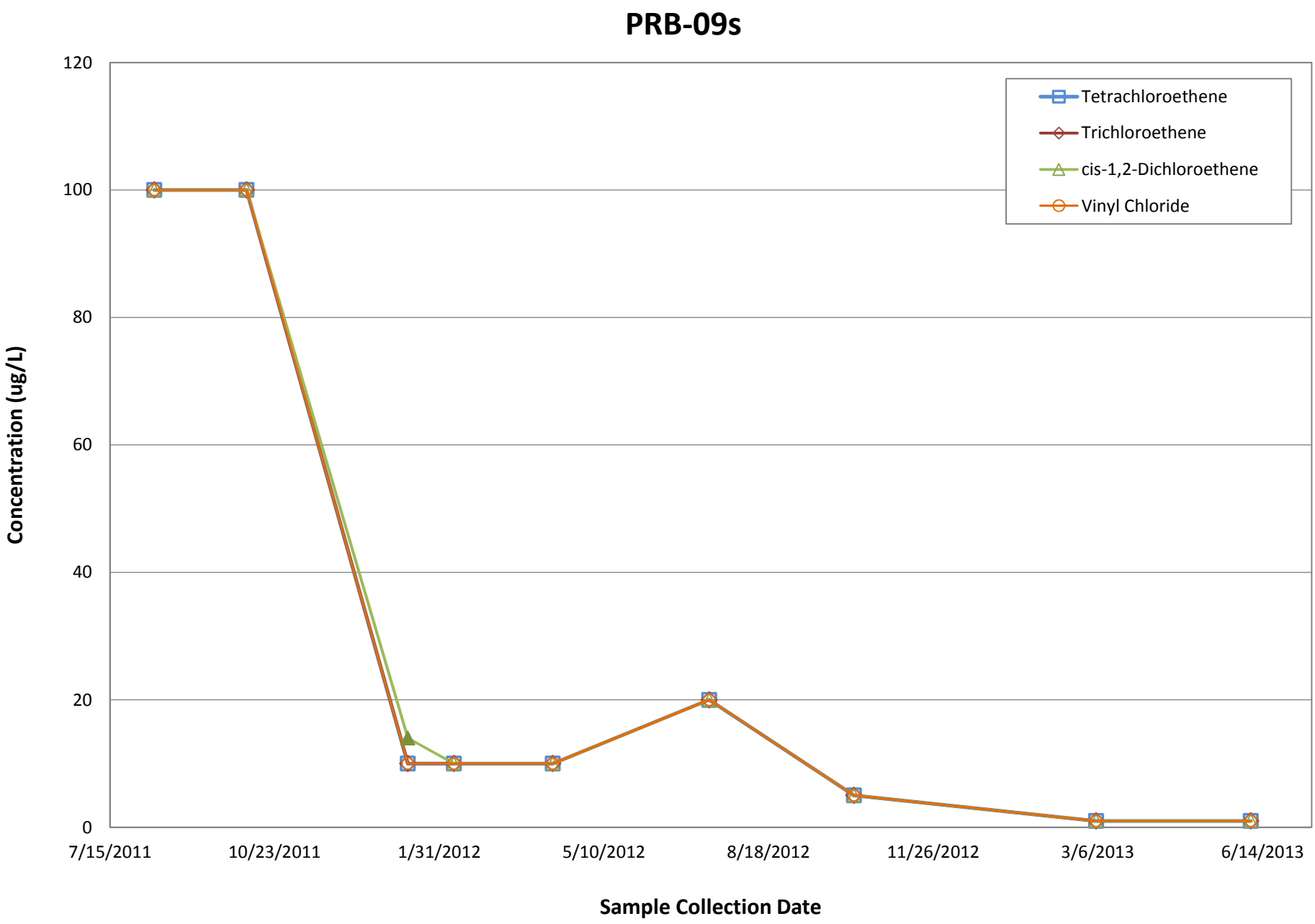

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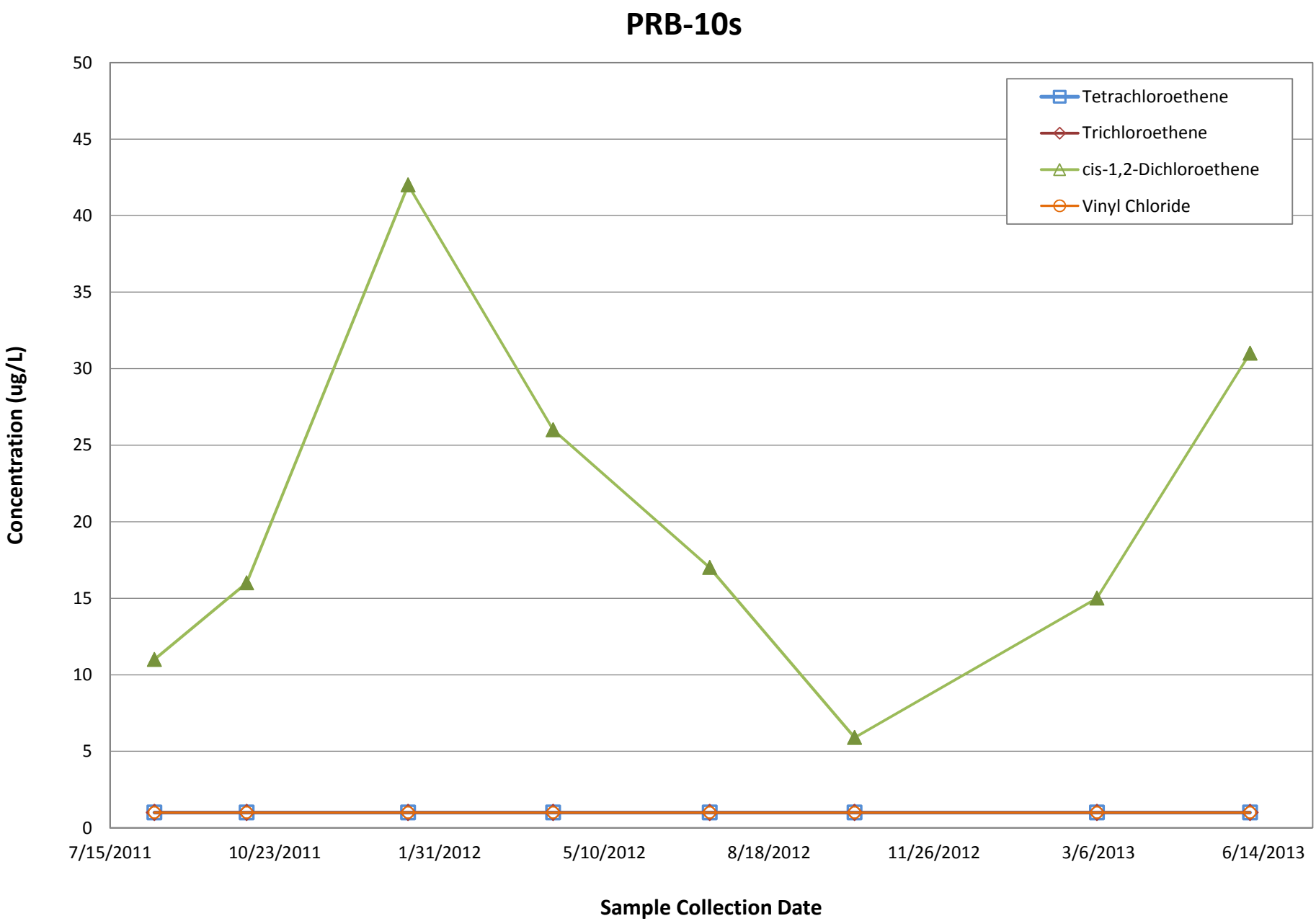

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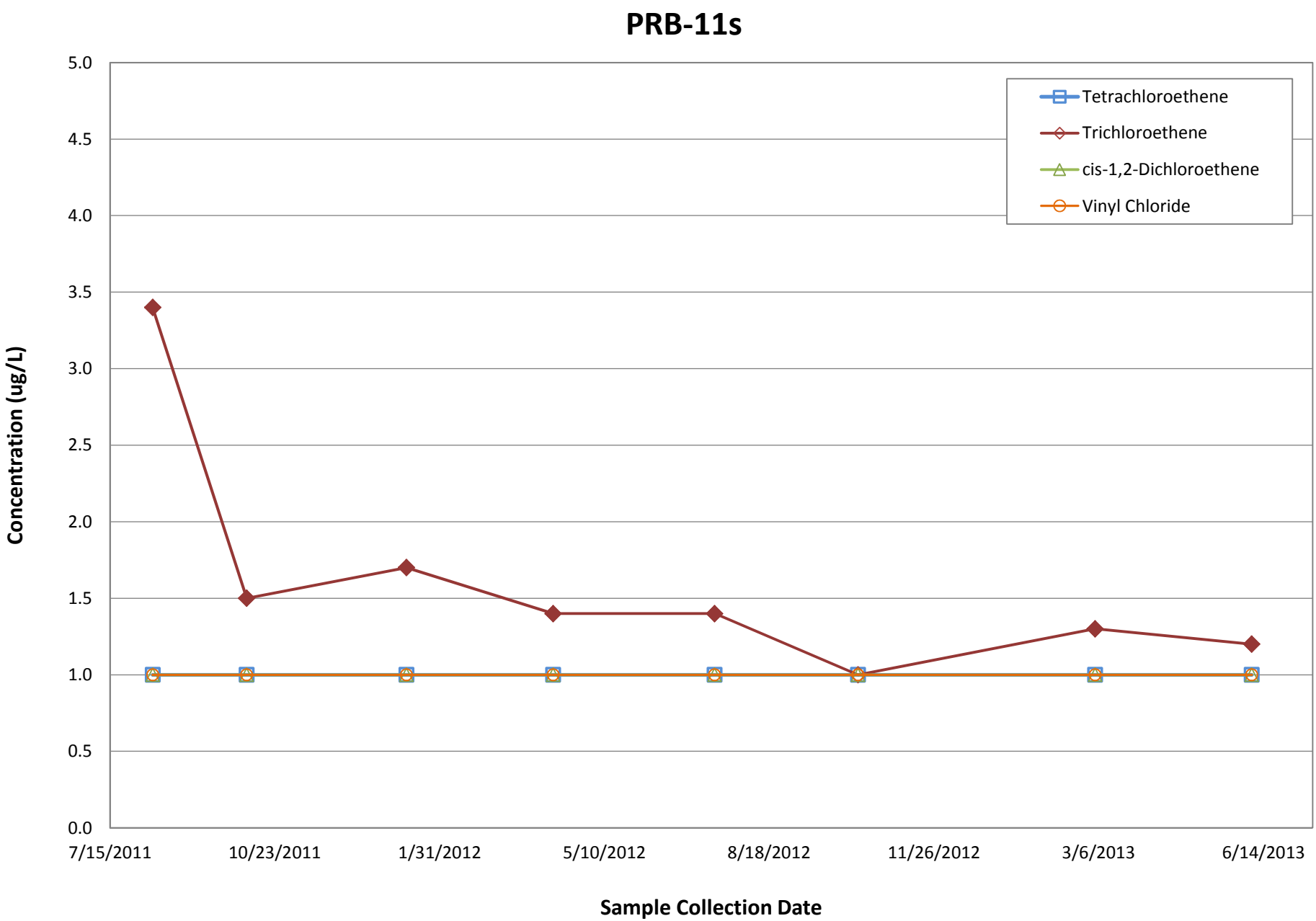

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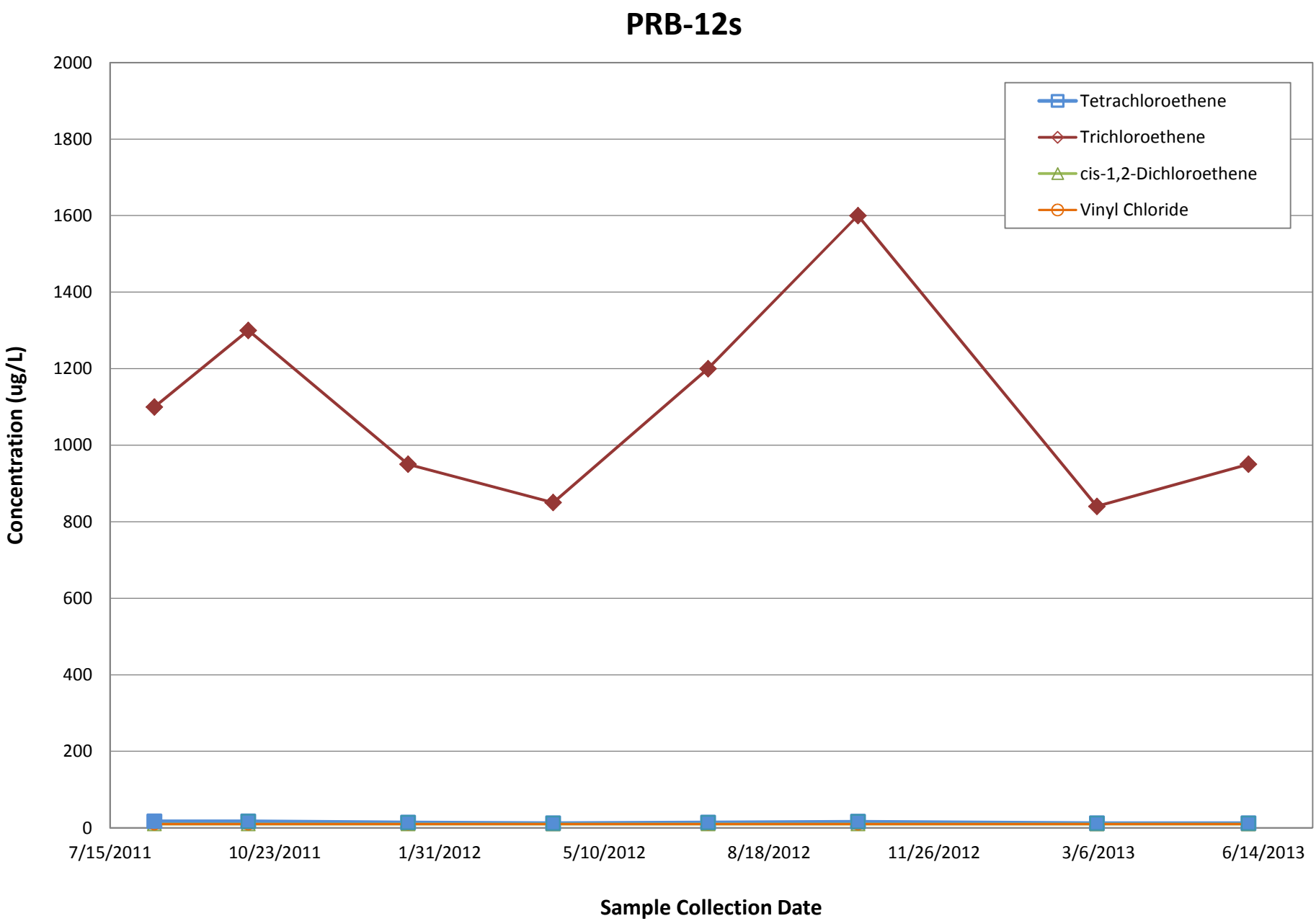

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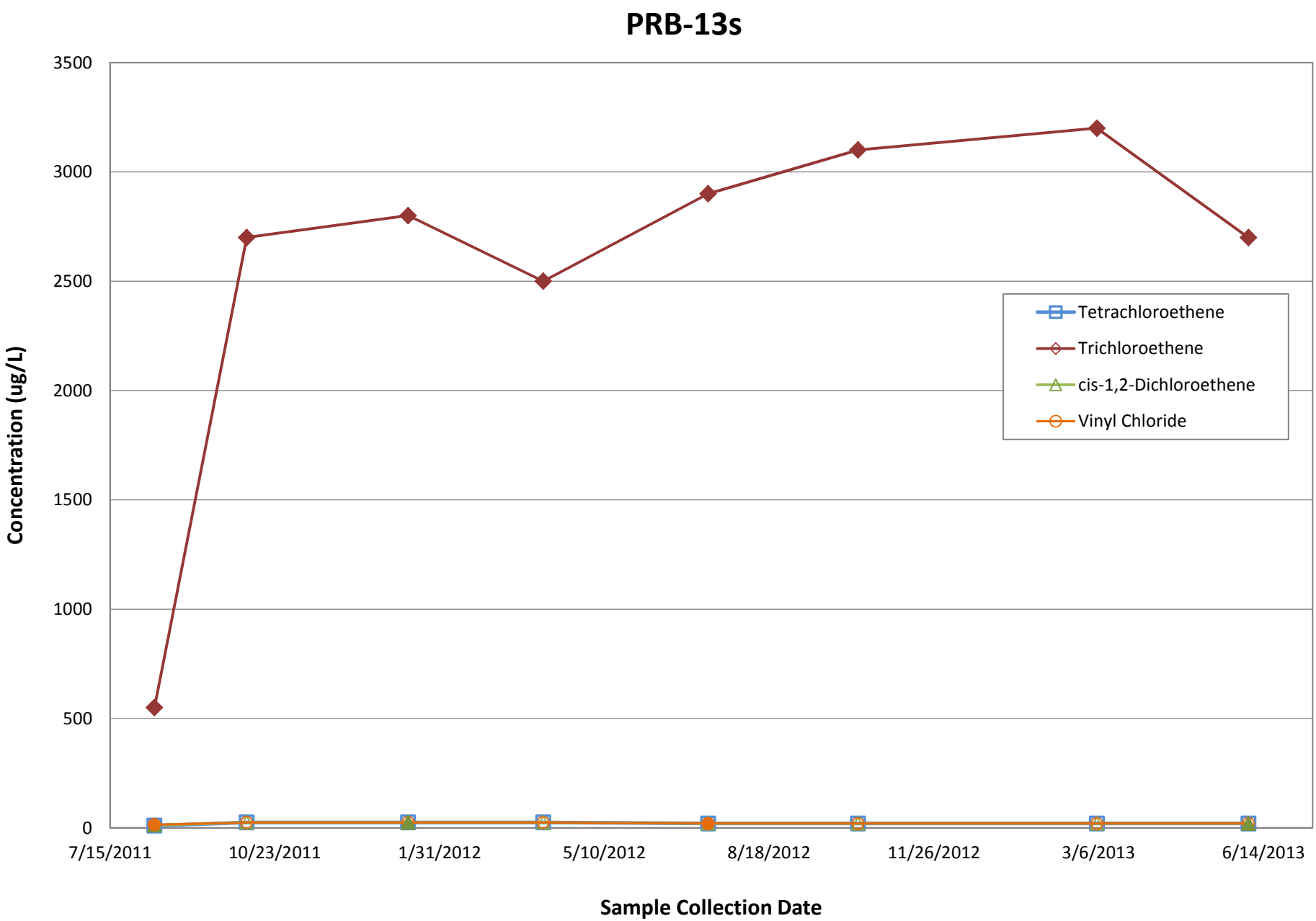

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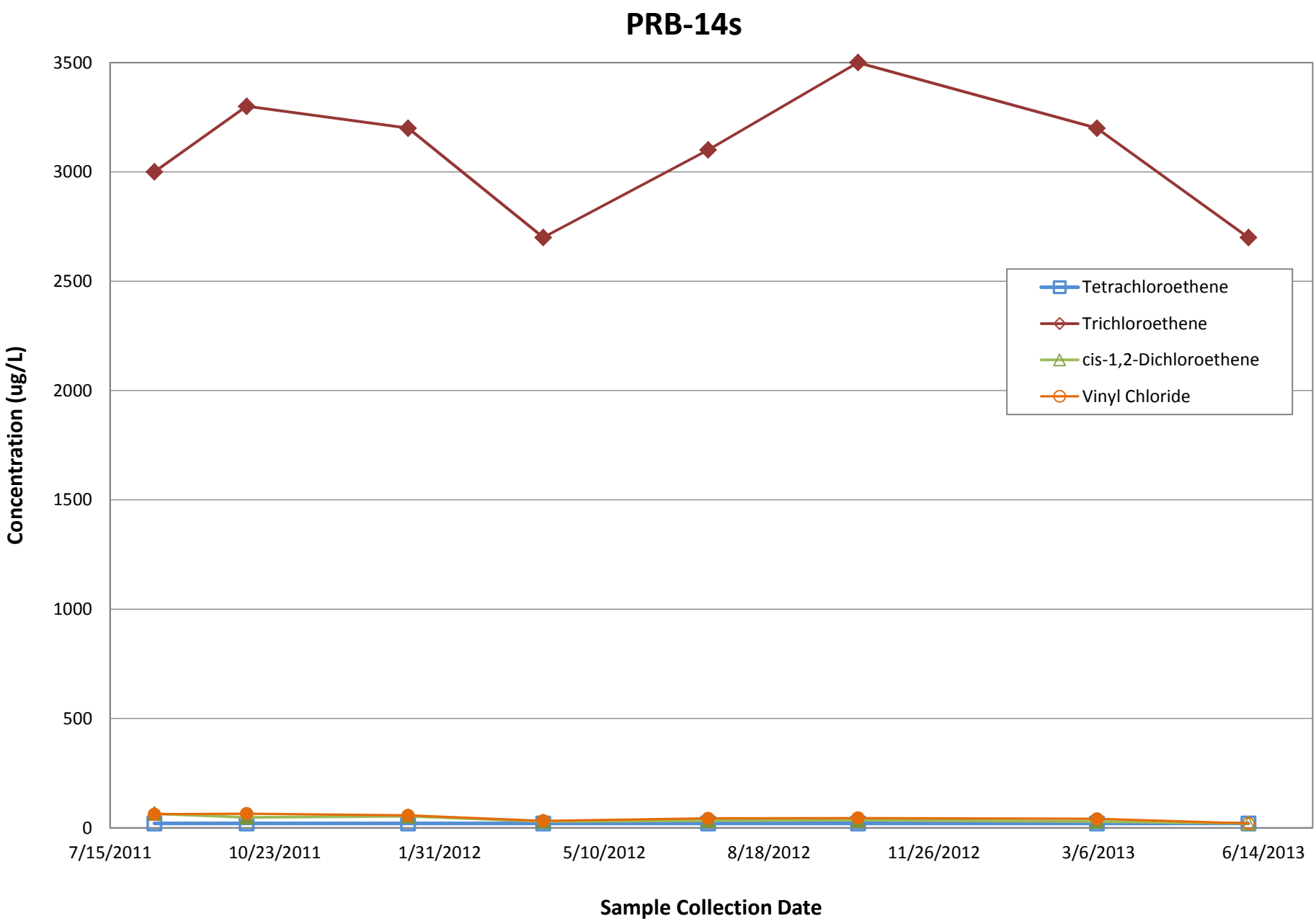

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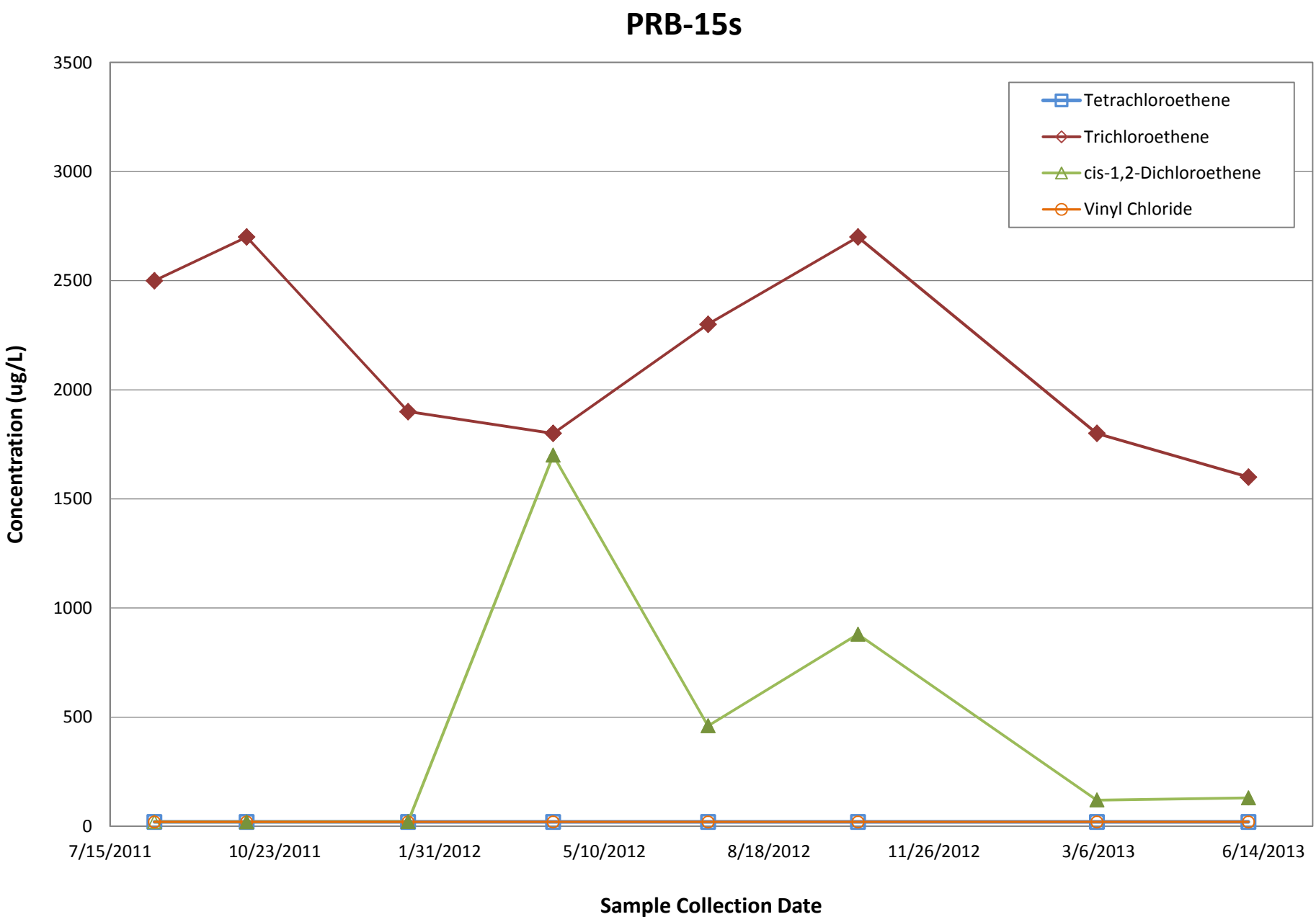

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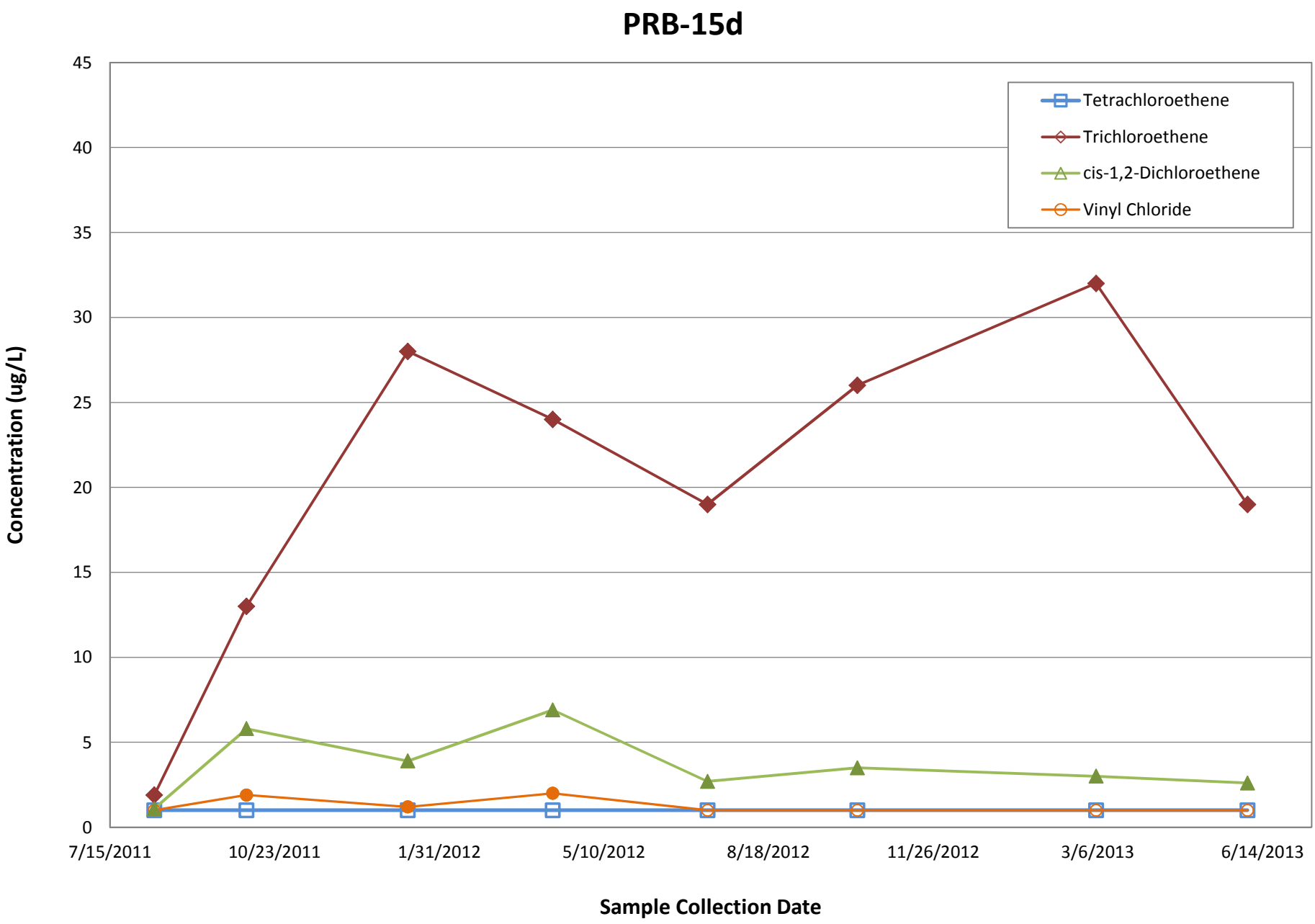

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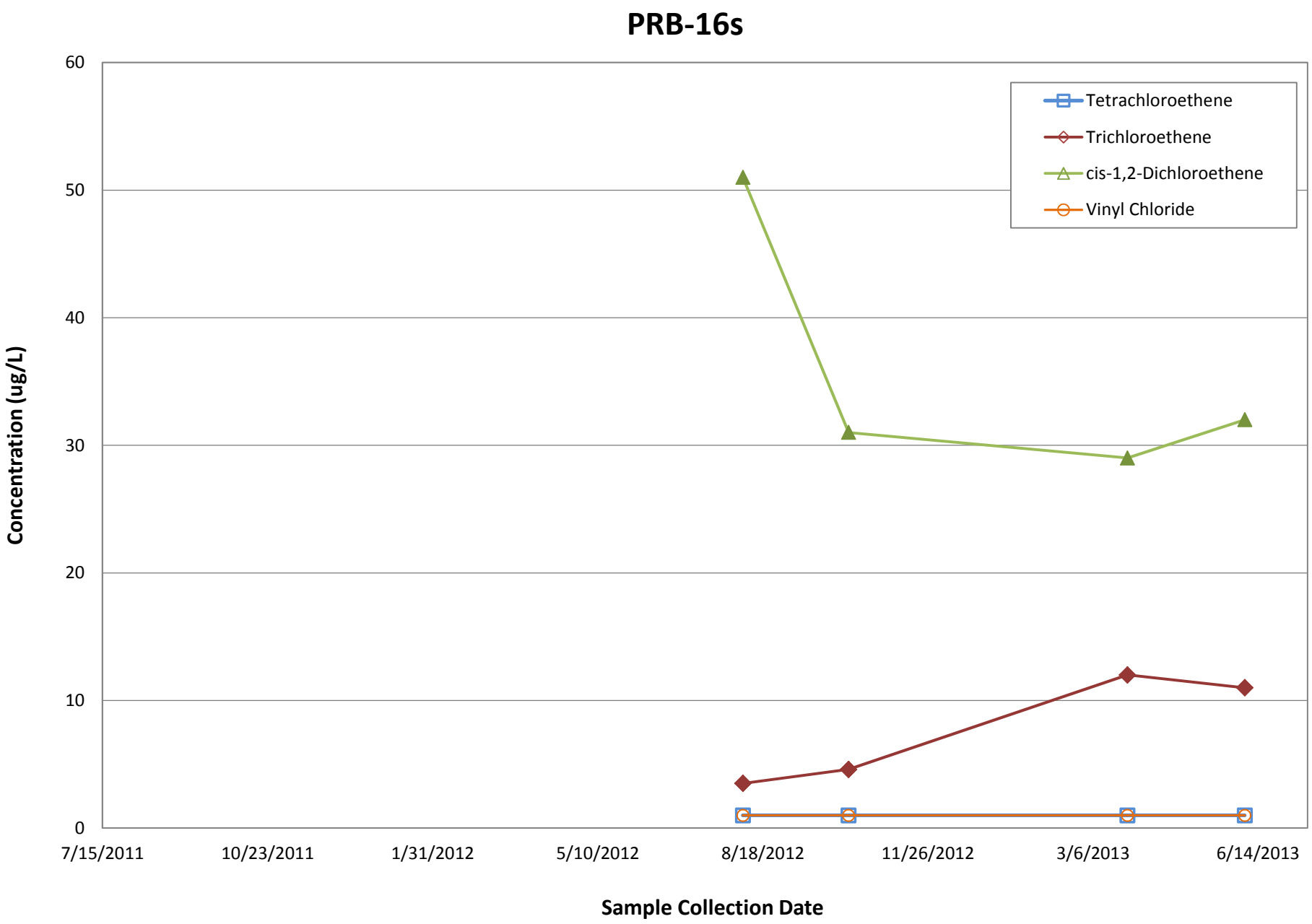

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Chlorinated Ethane Trend Charts

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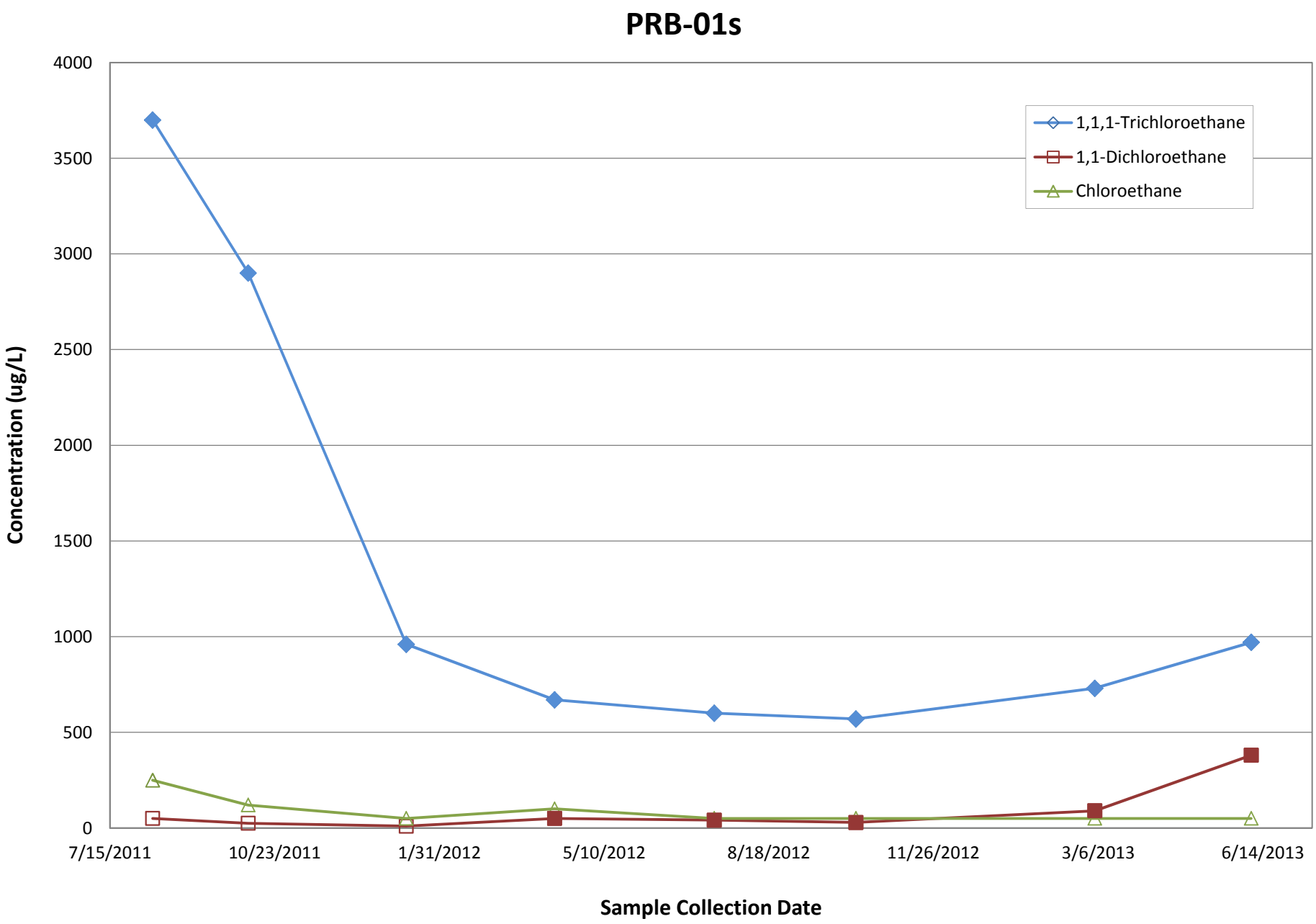

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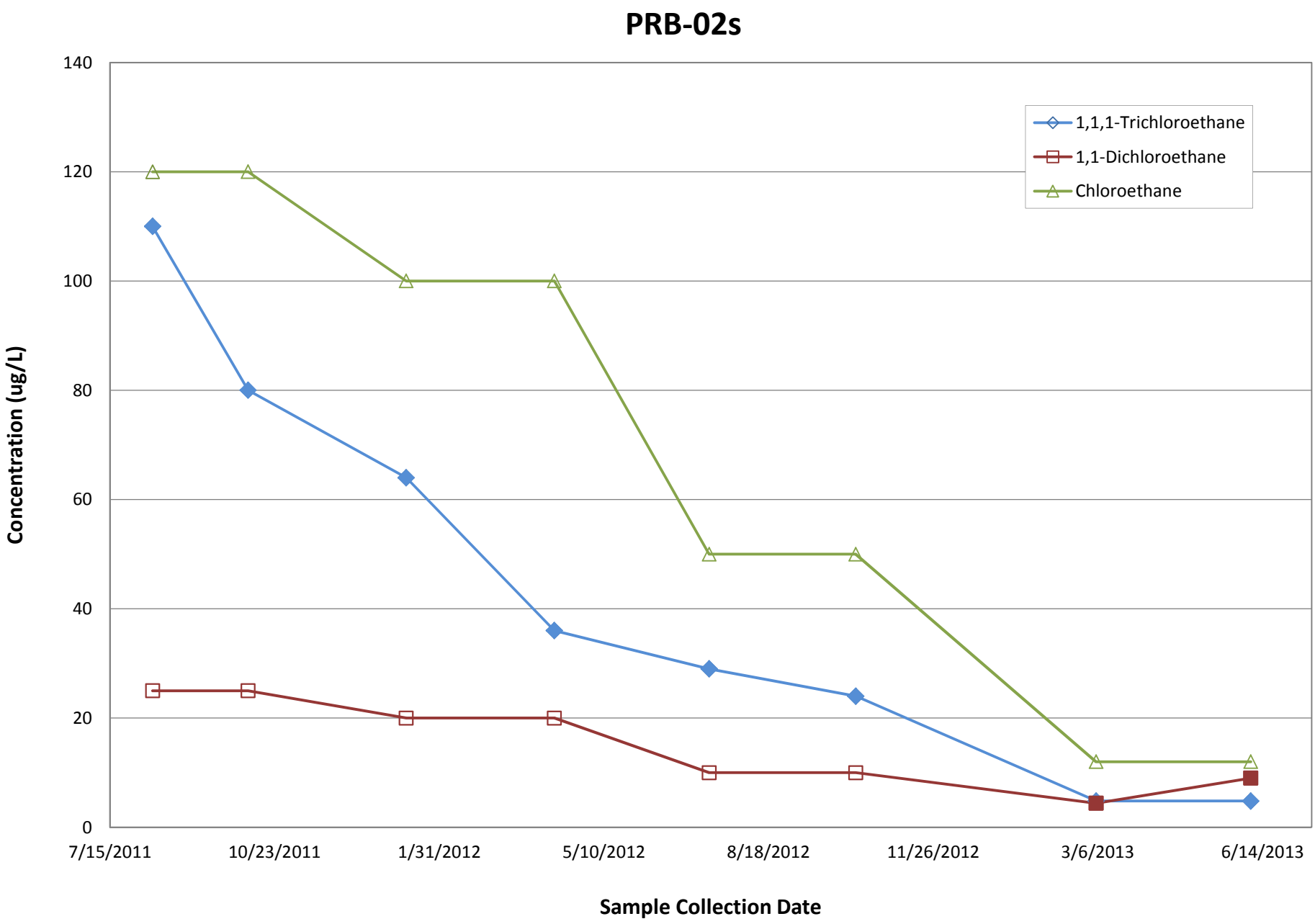

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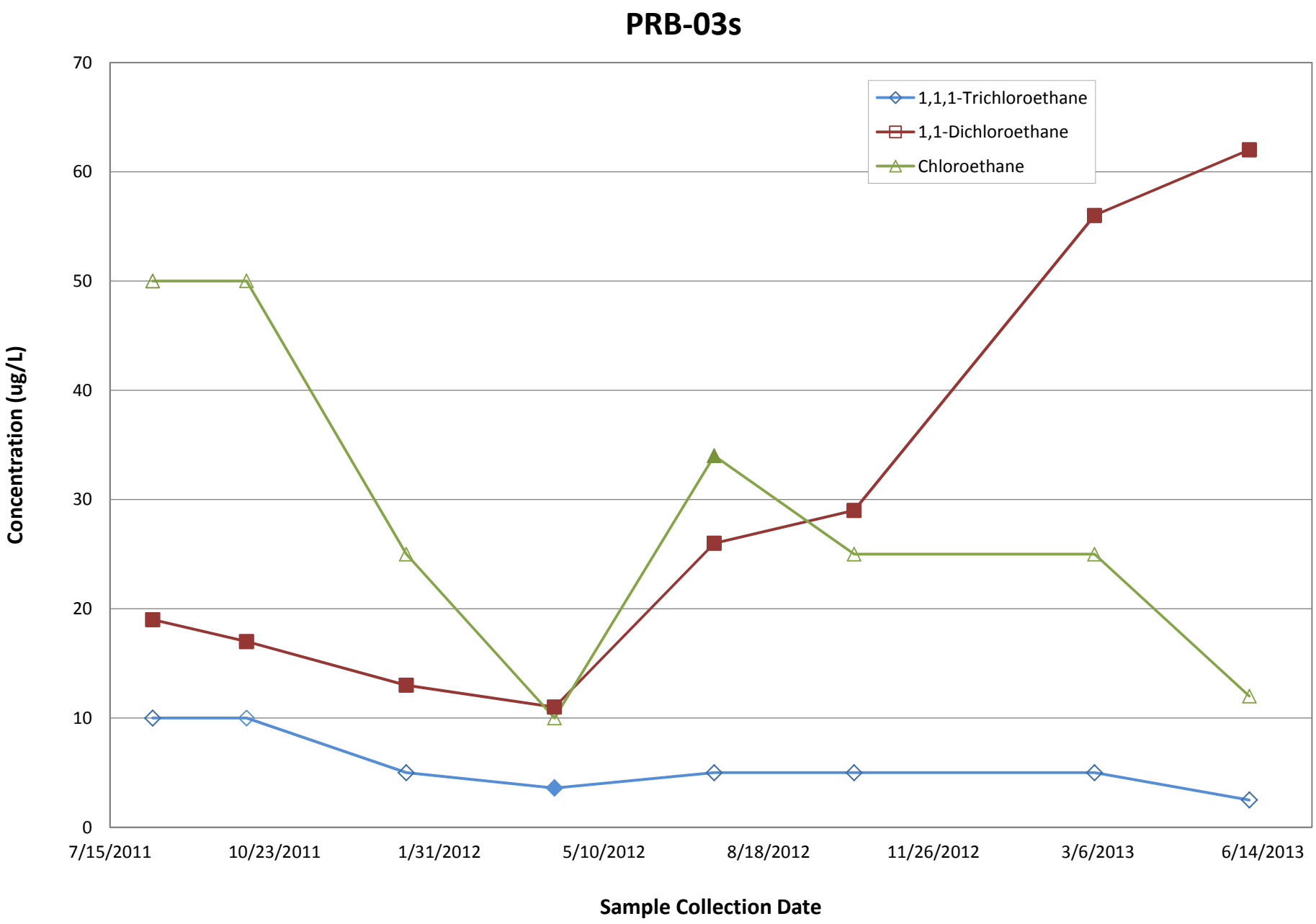

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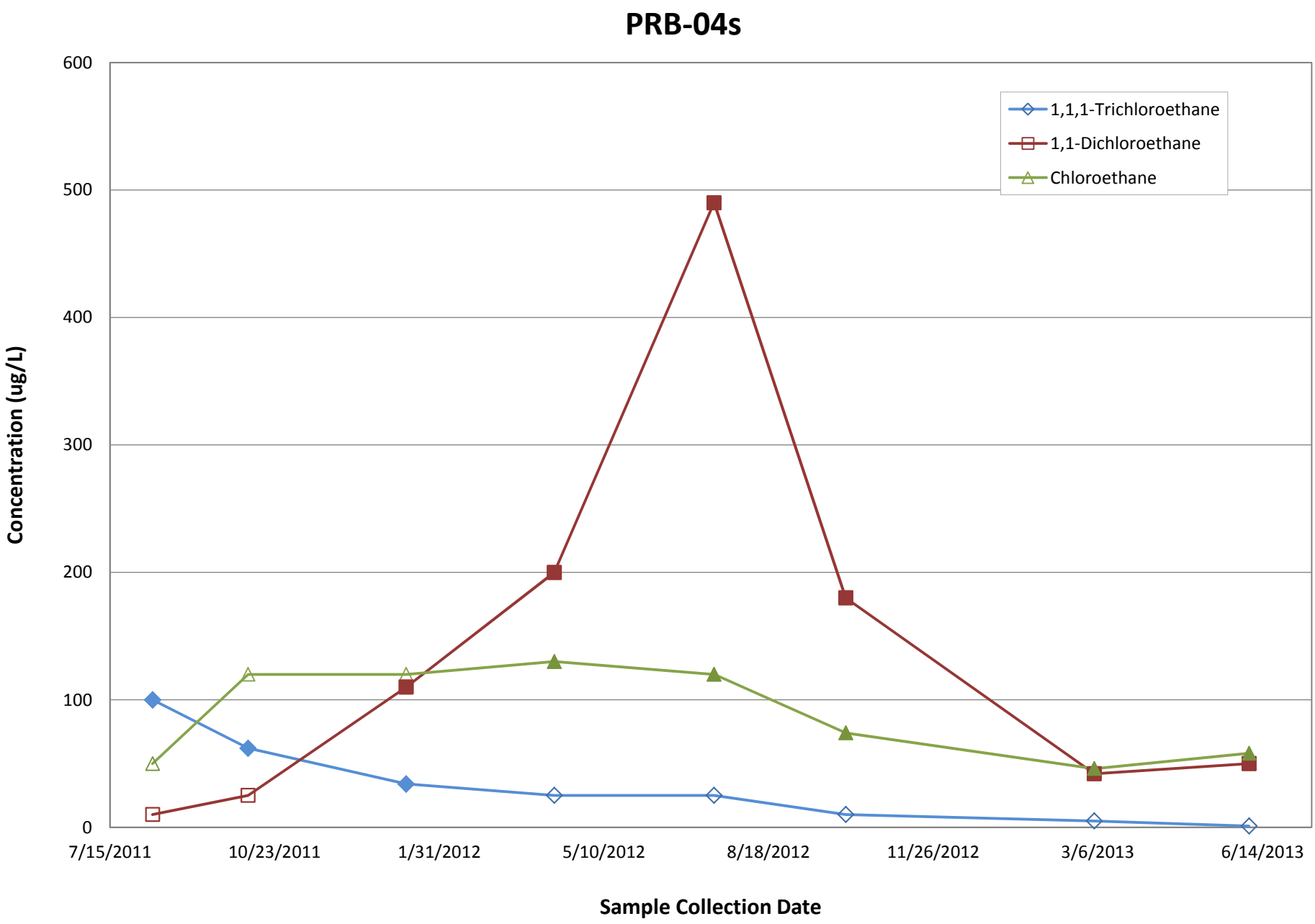

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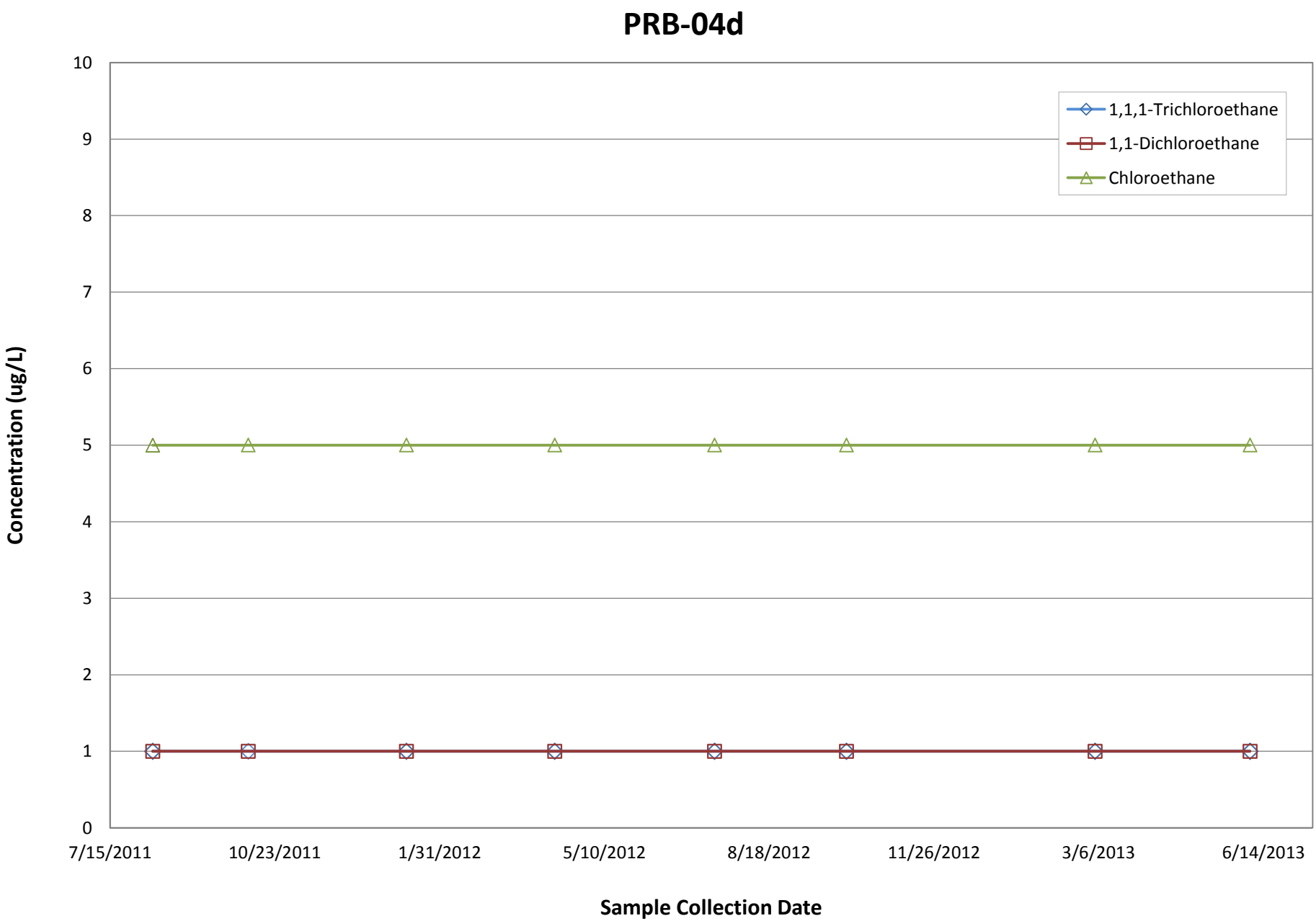

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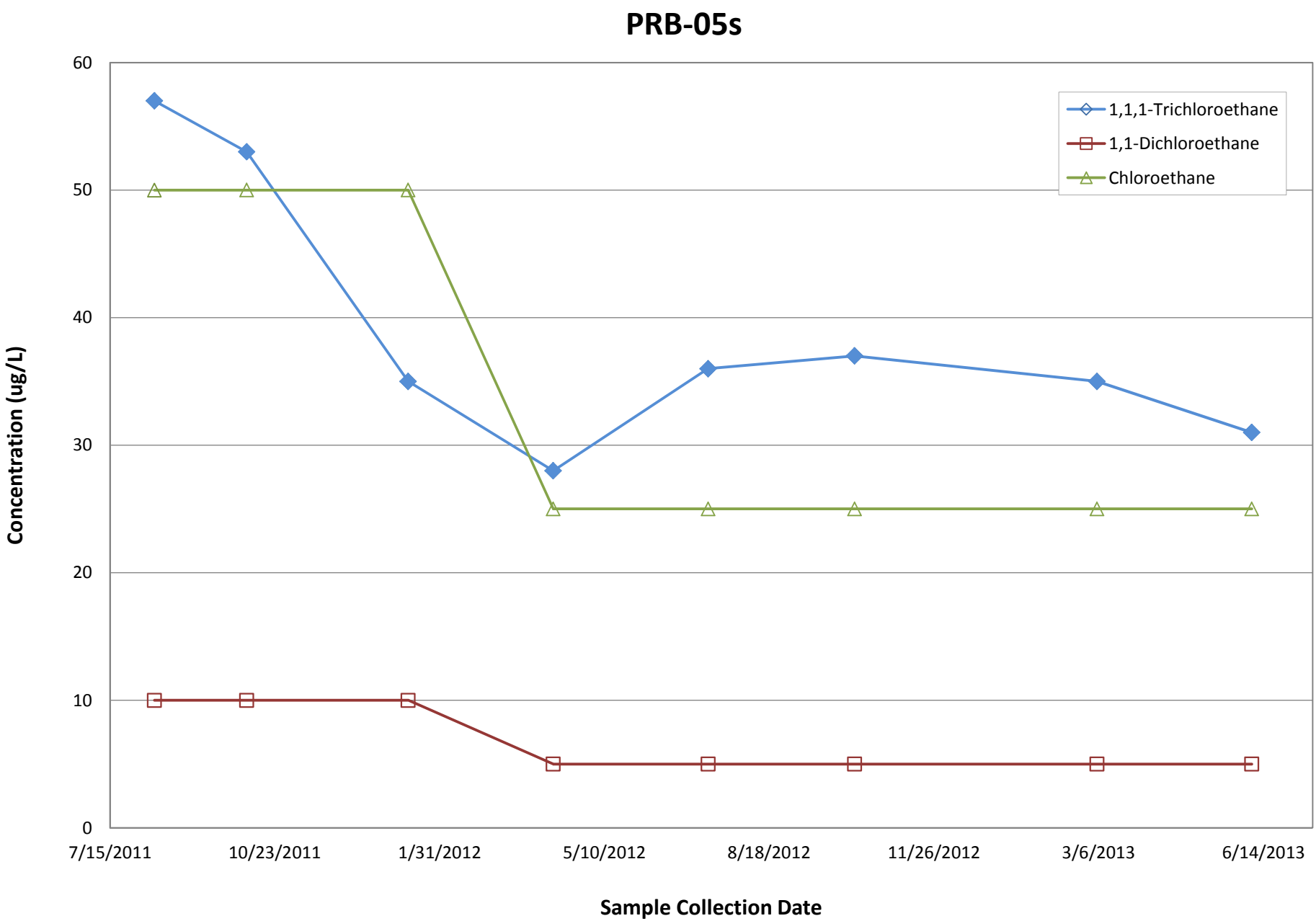

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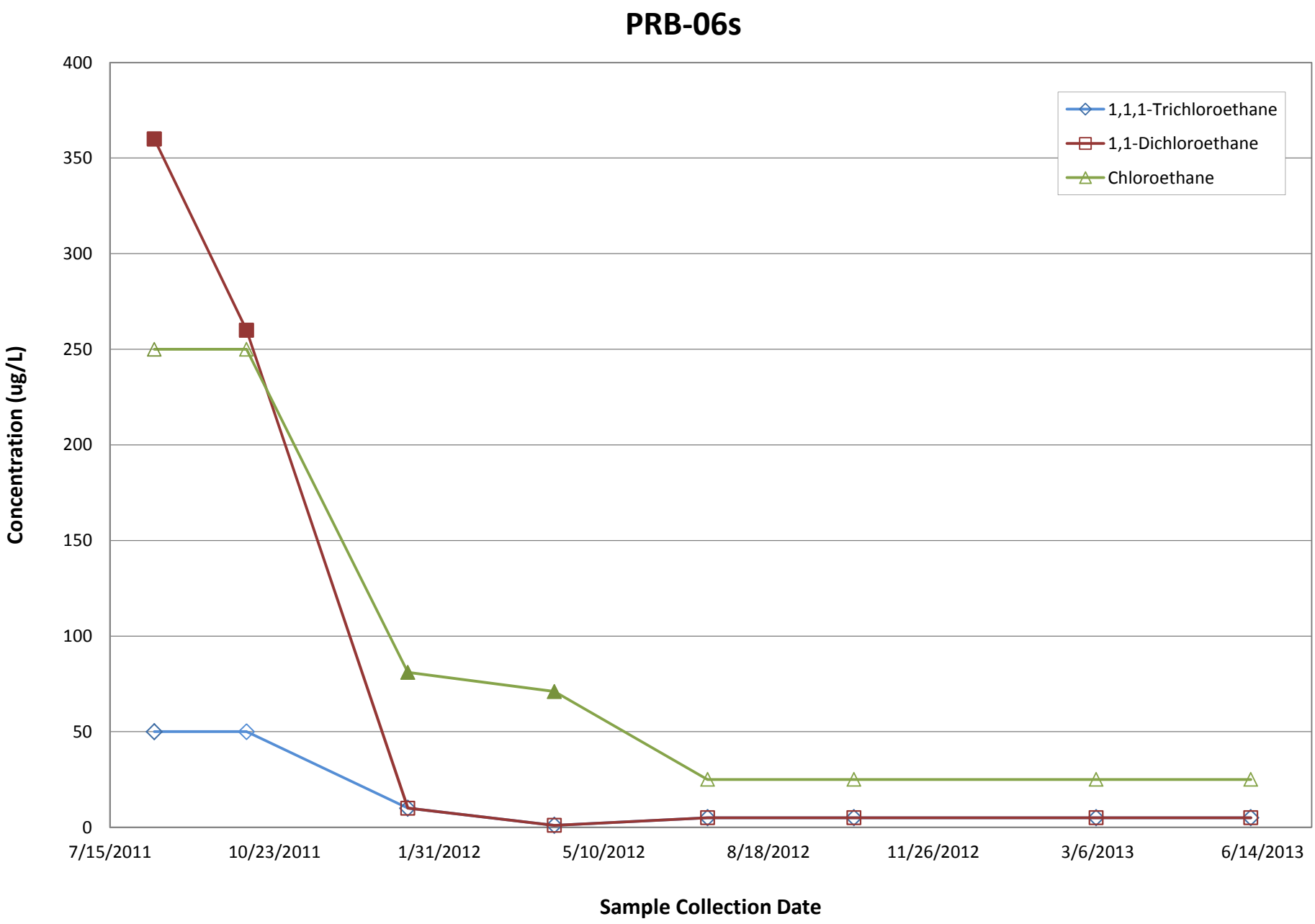

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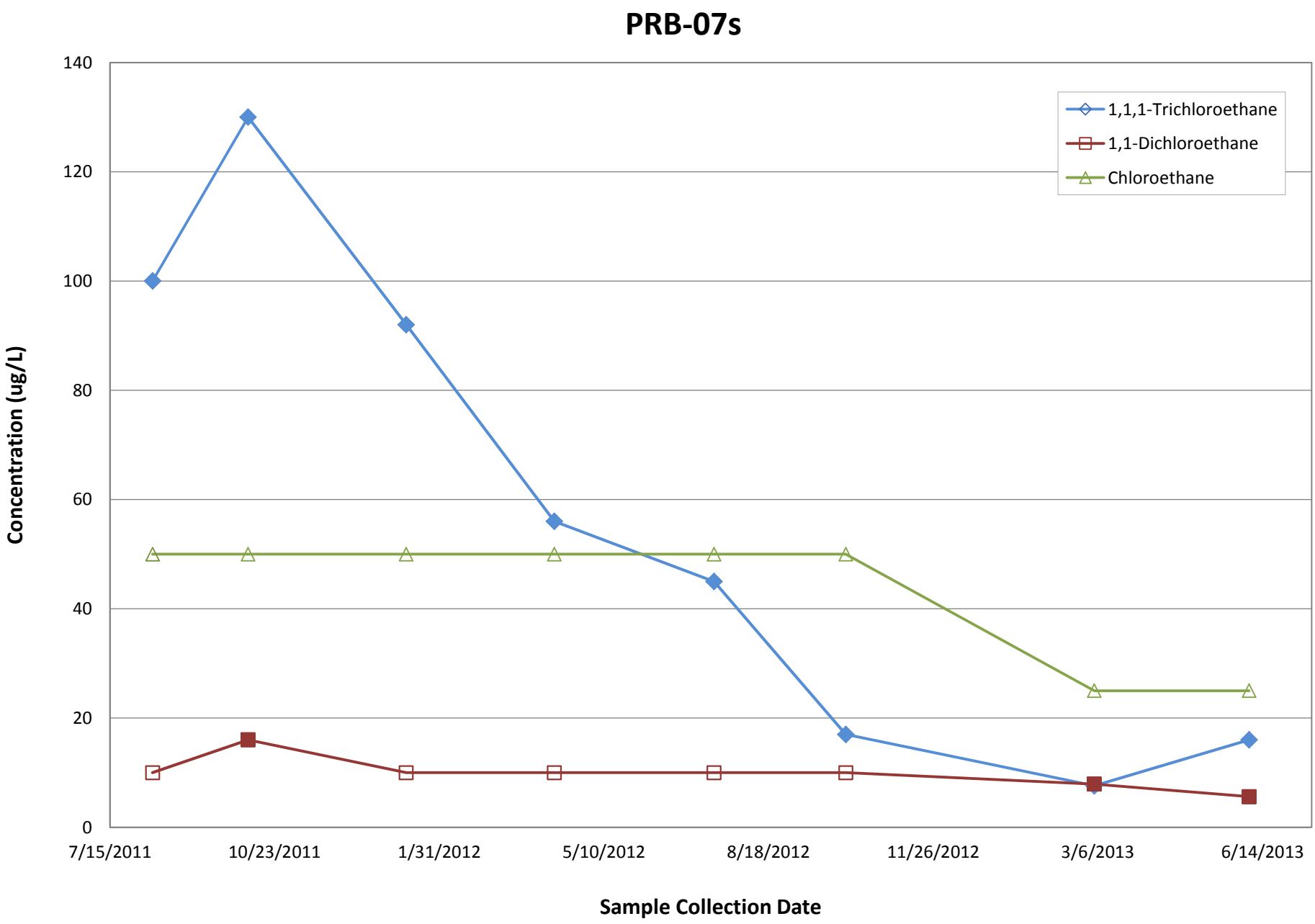

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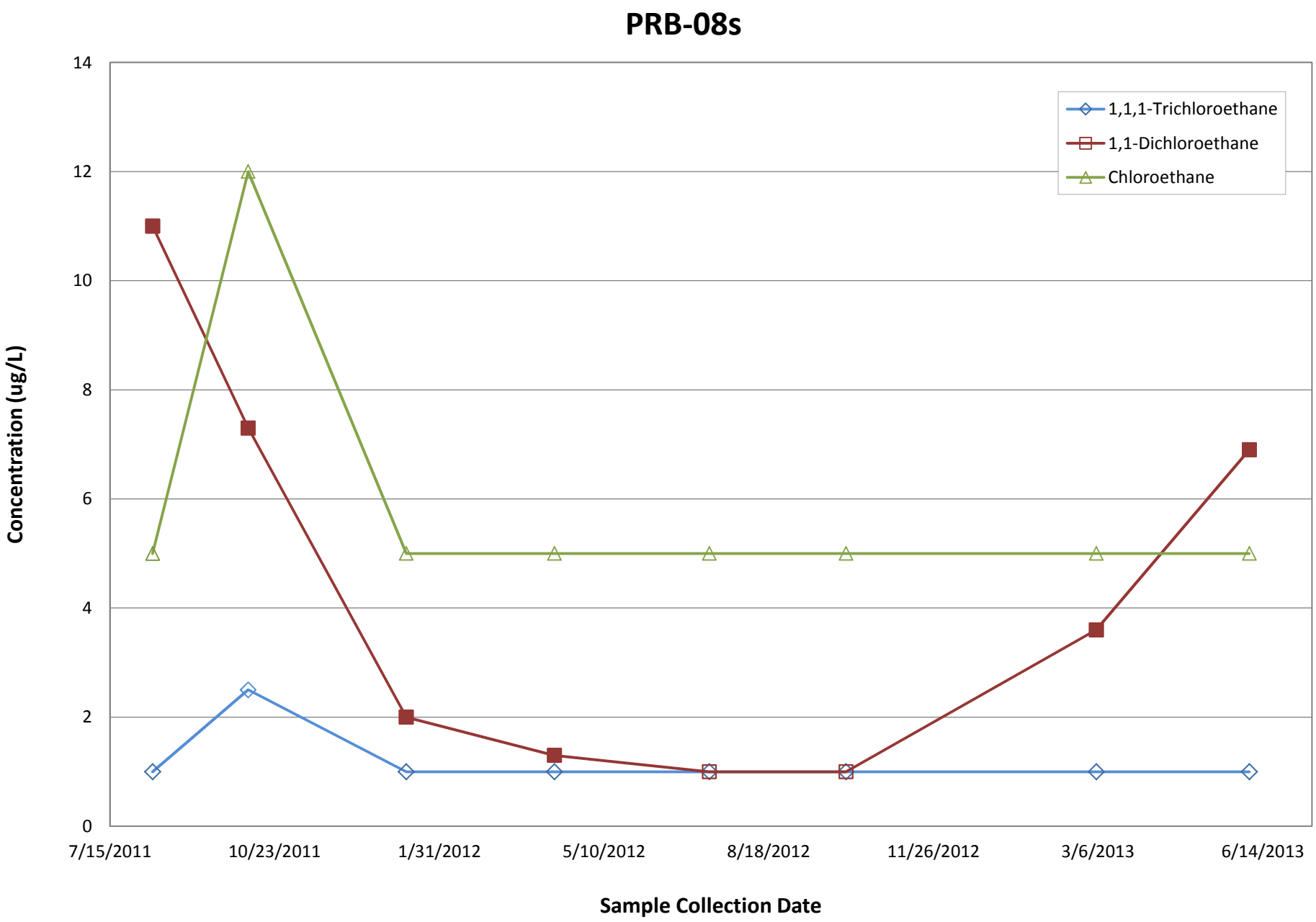

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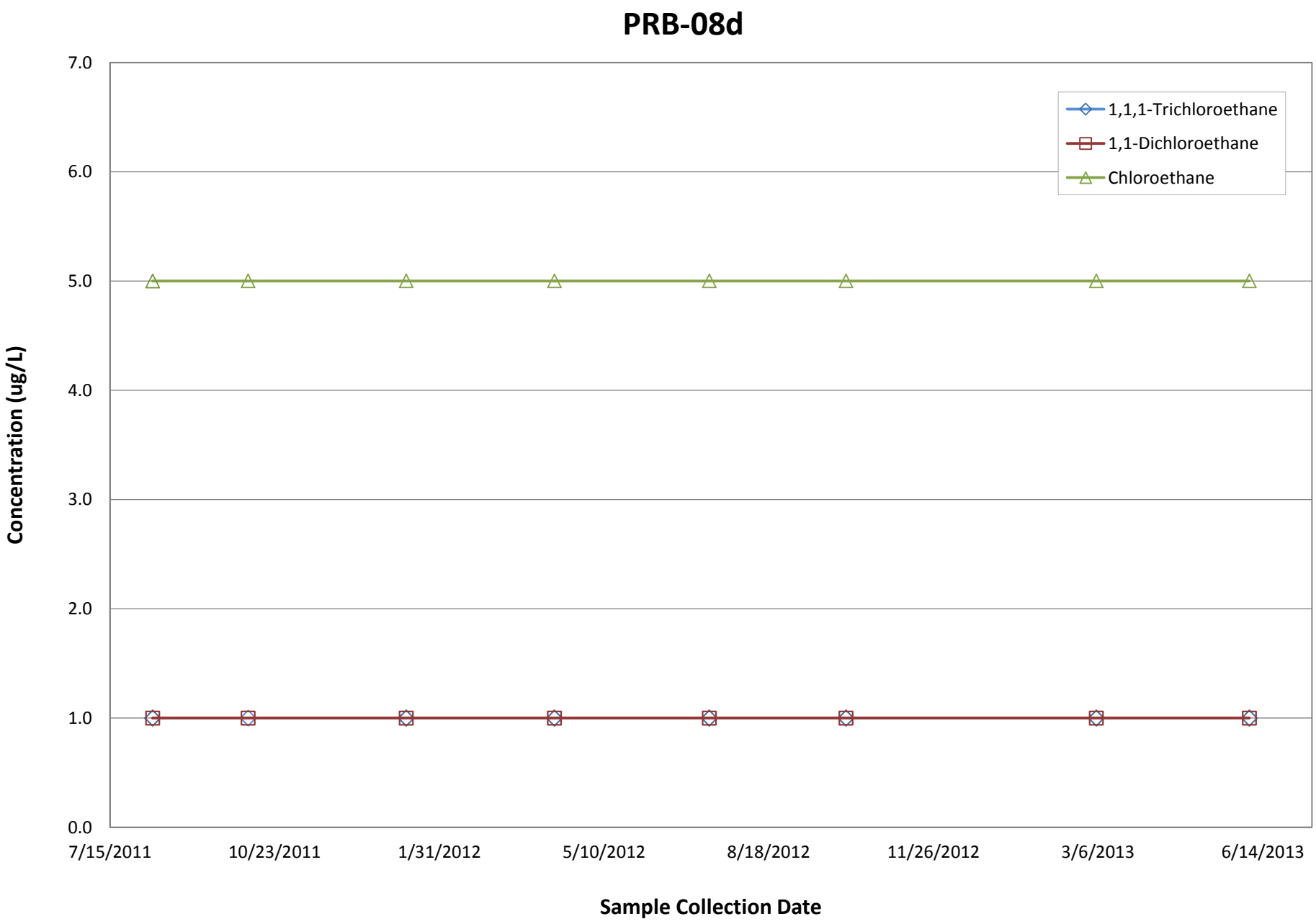

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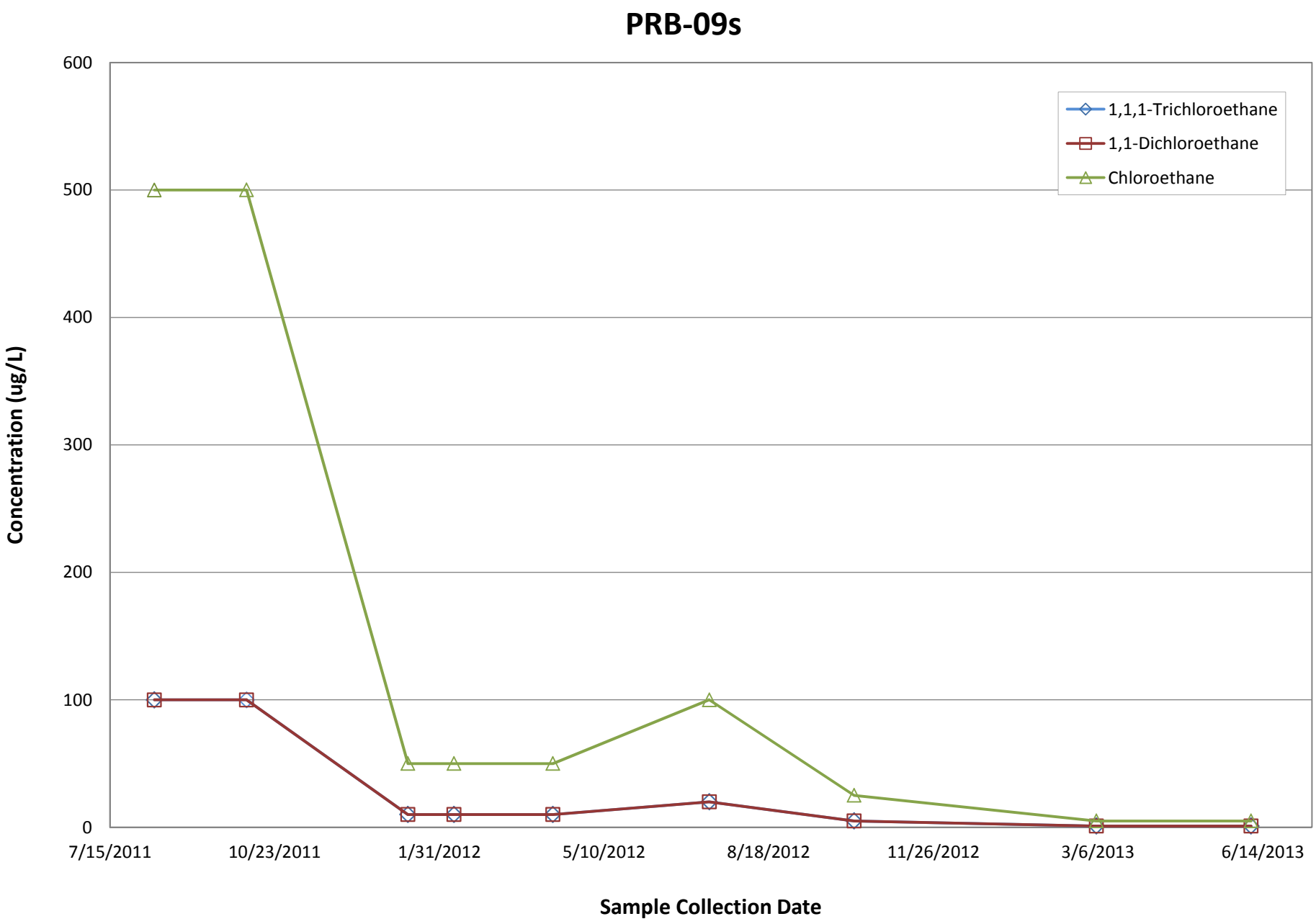

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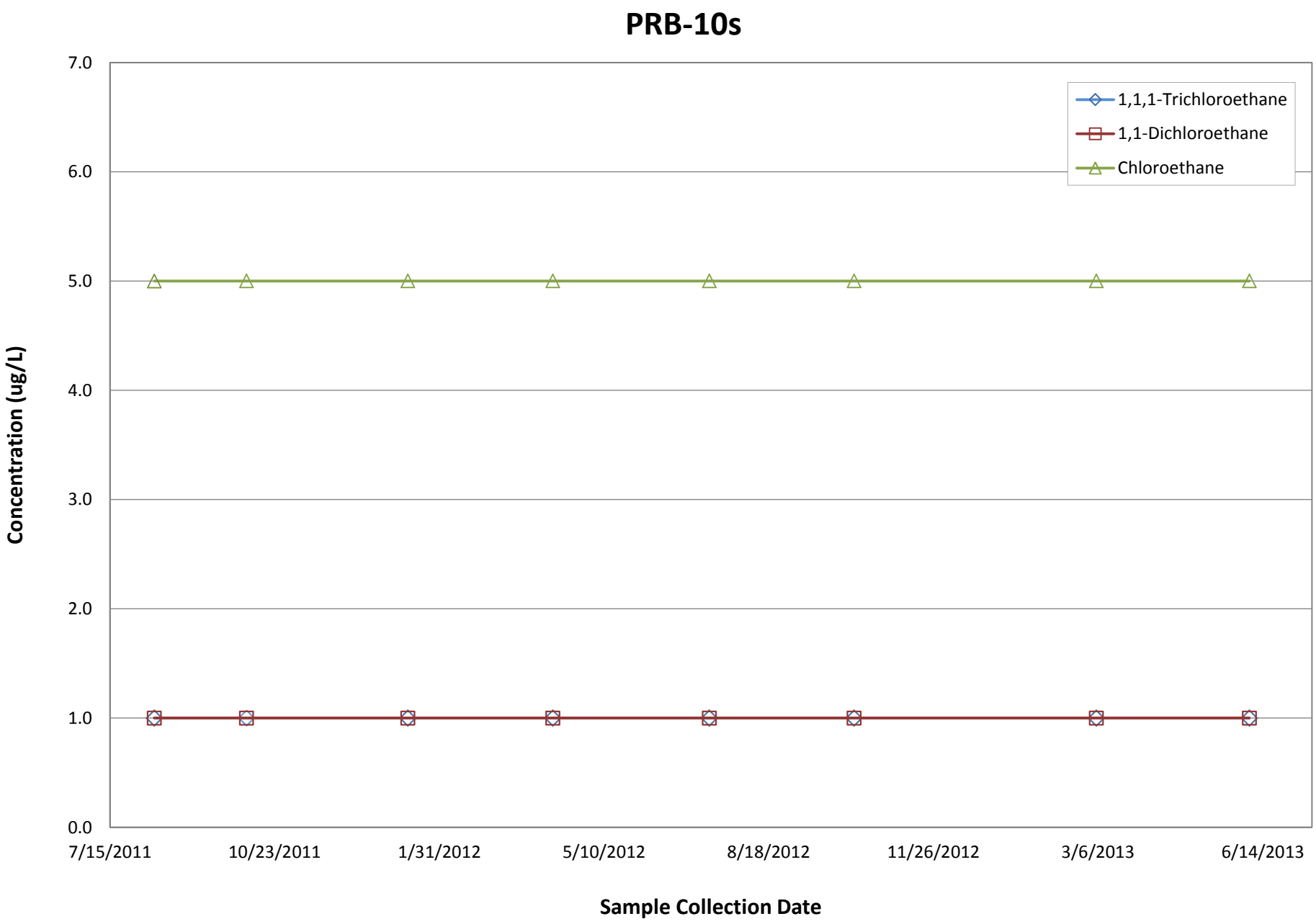

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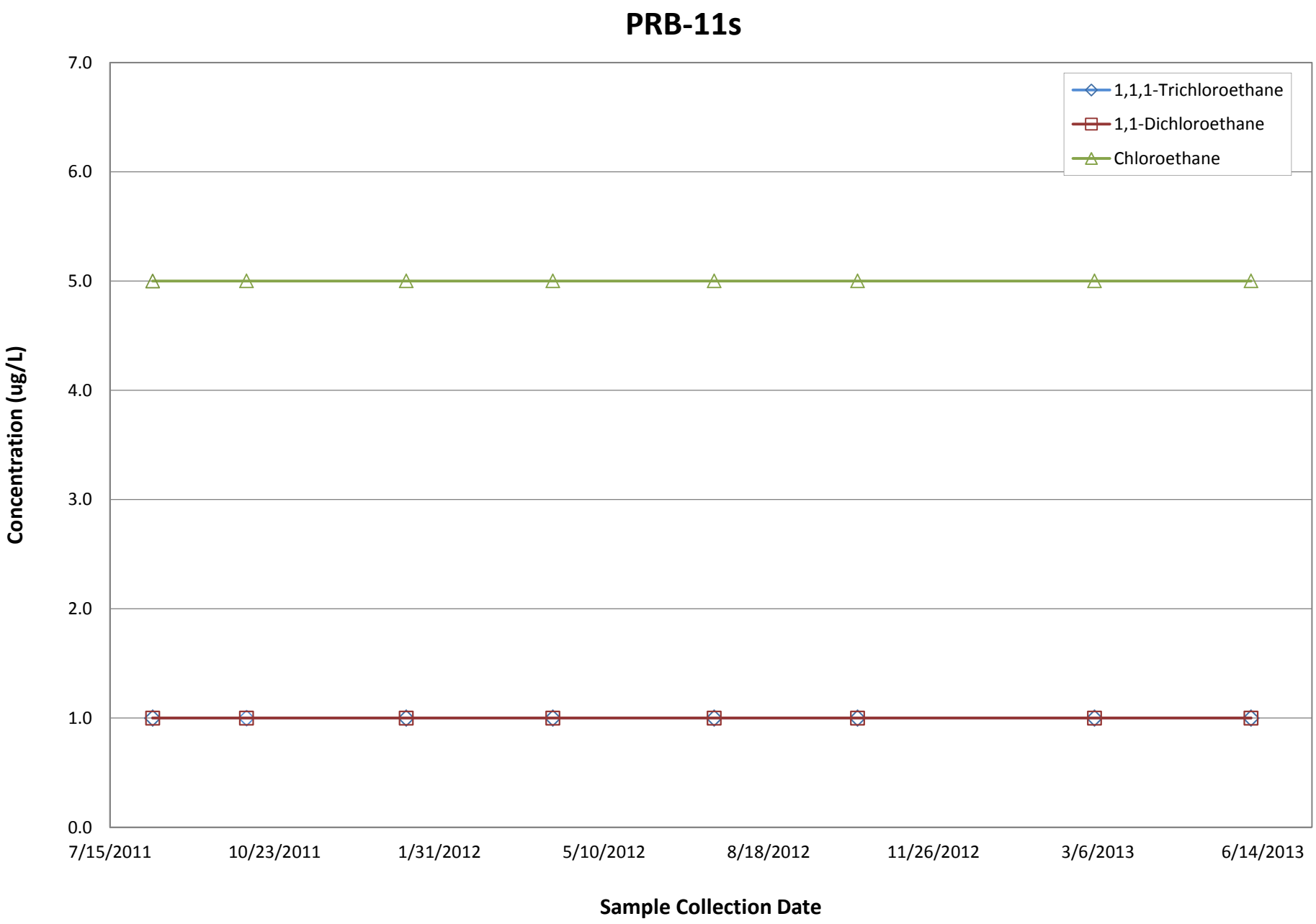

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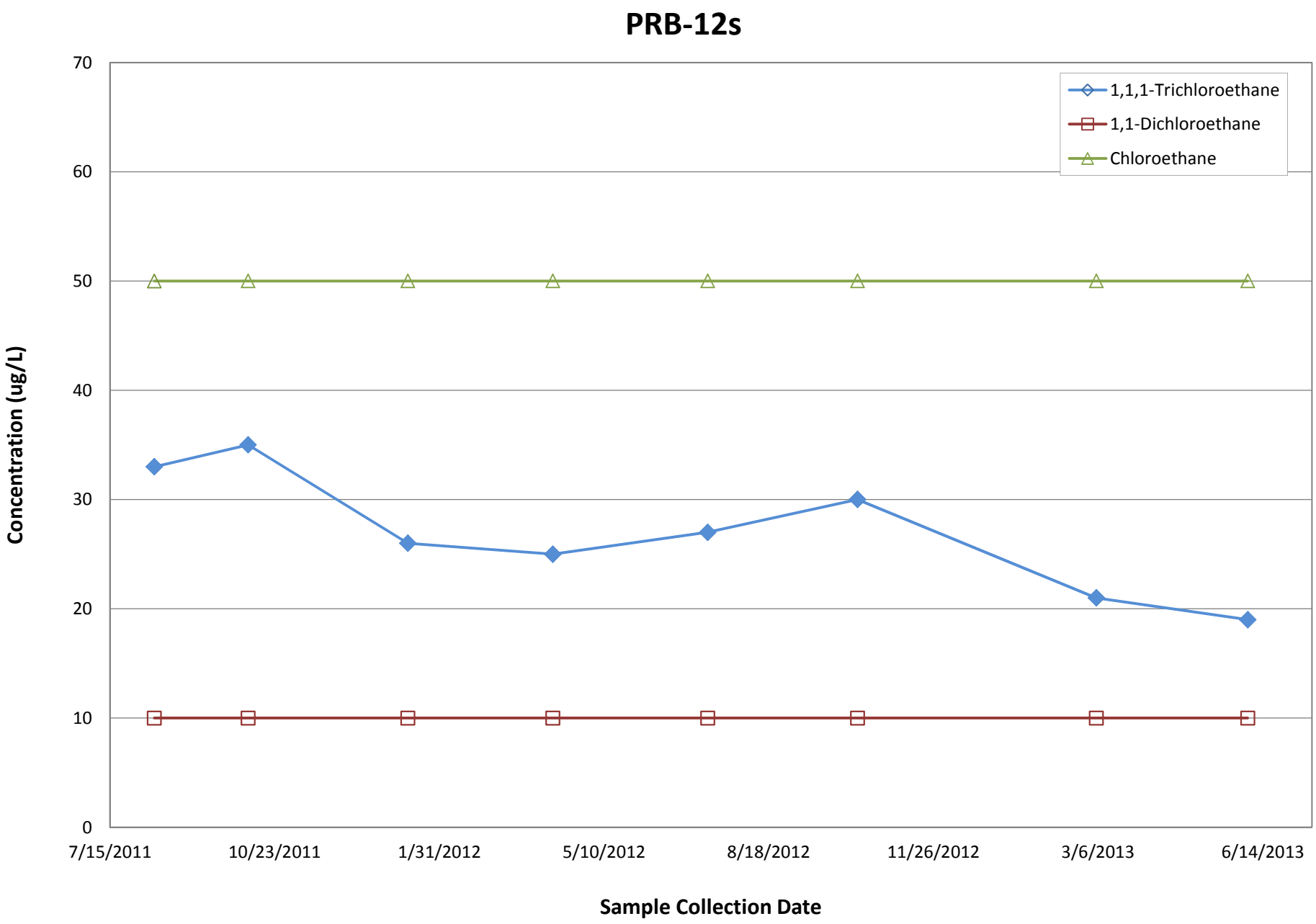

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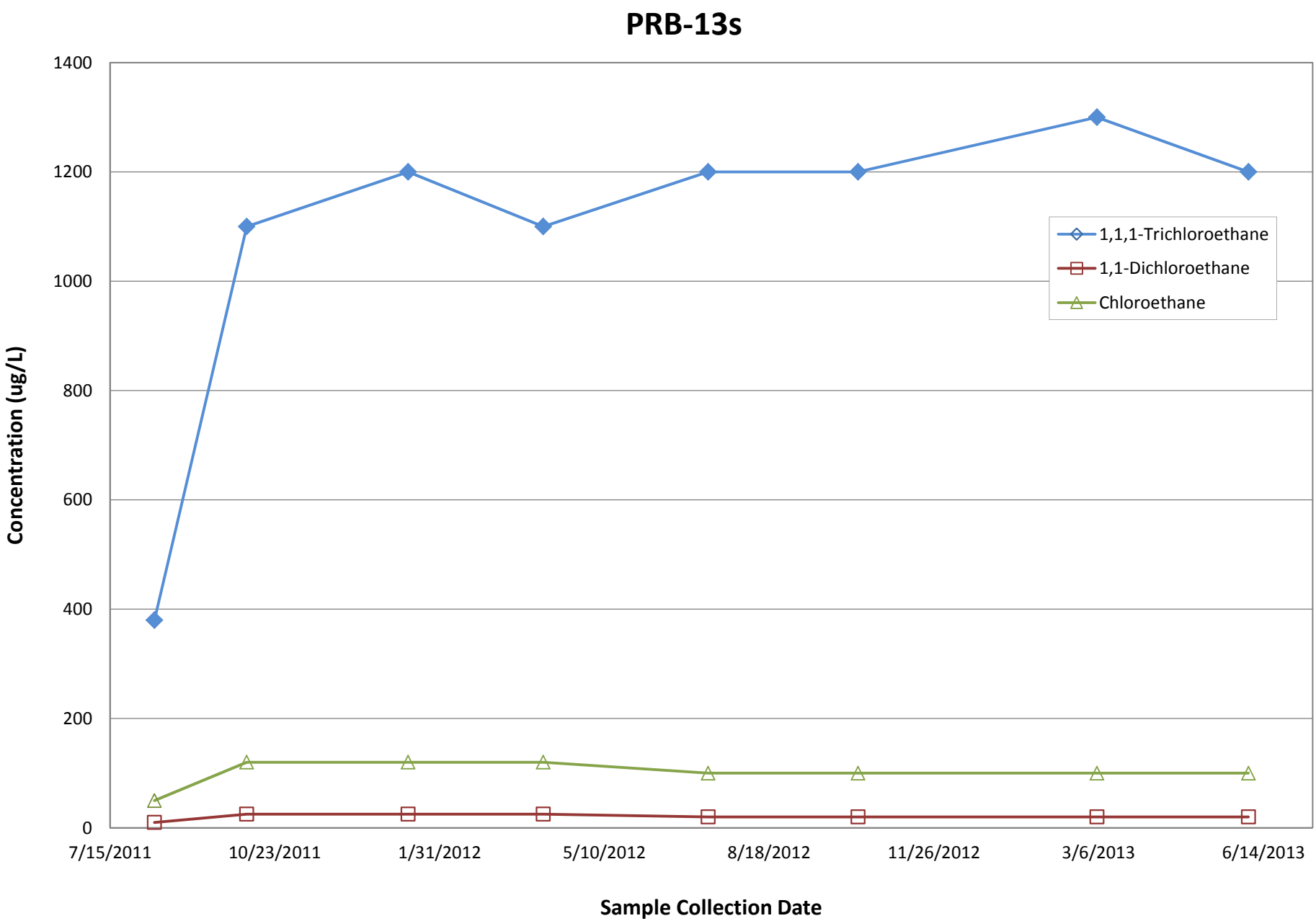

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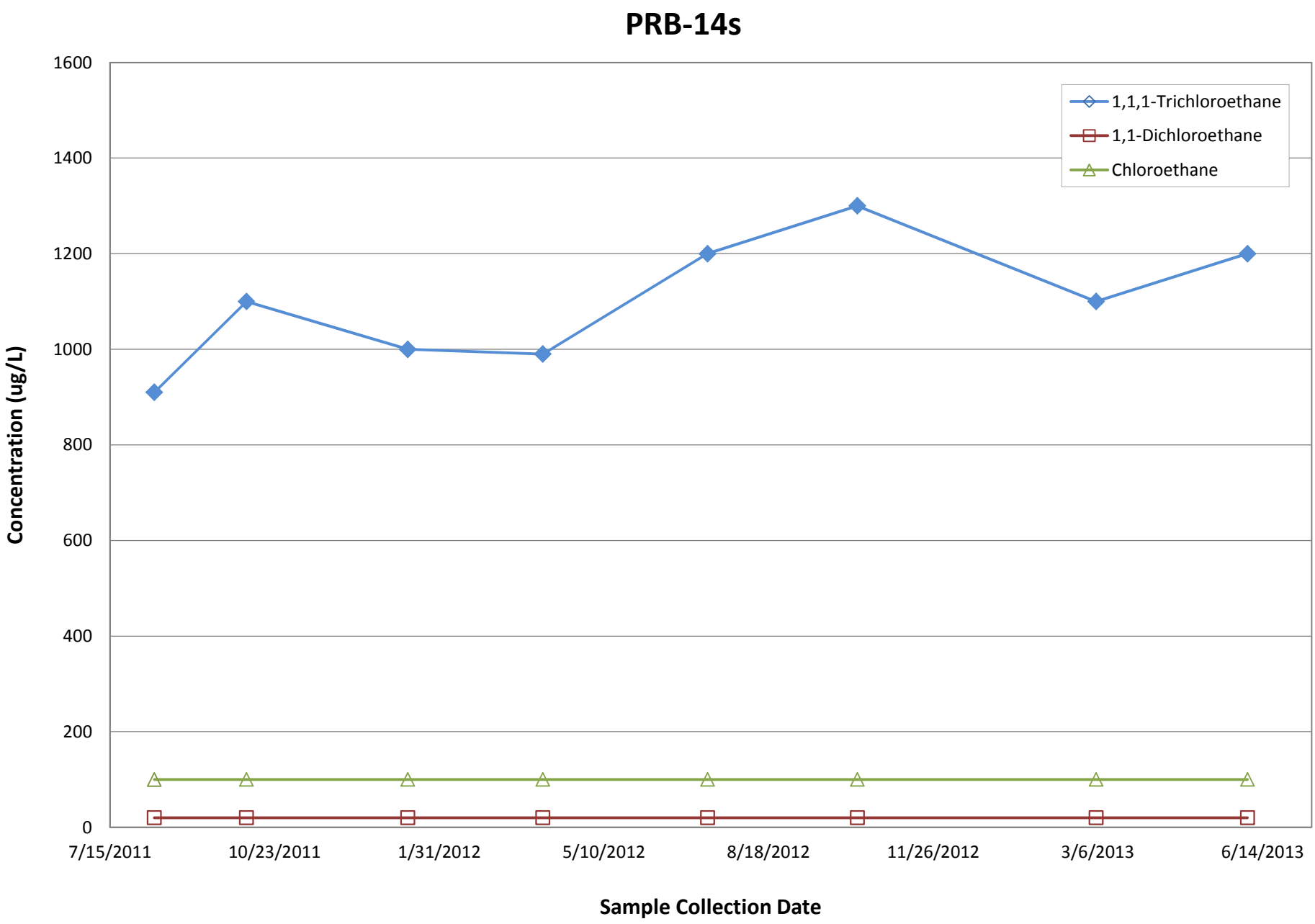

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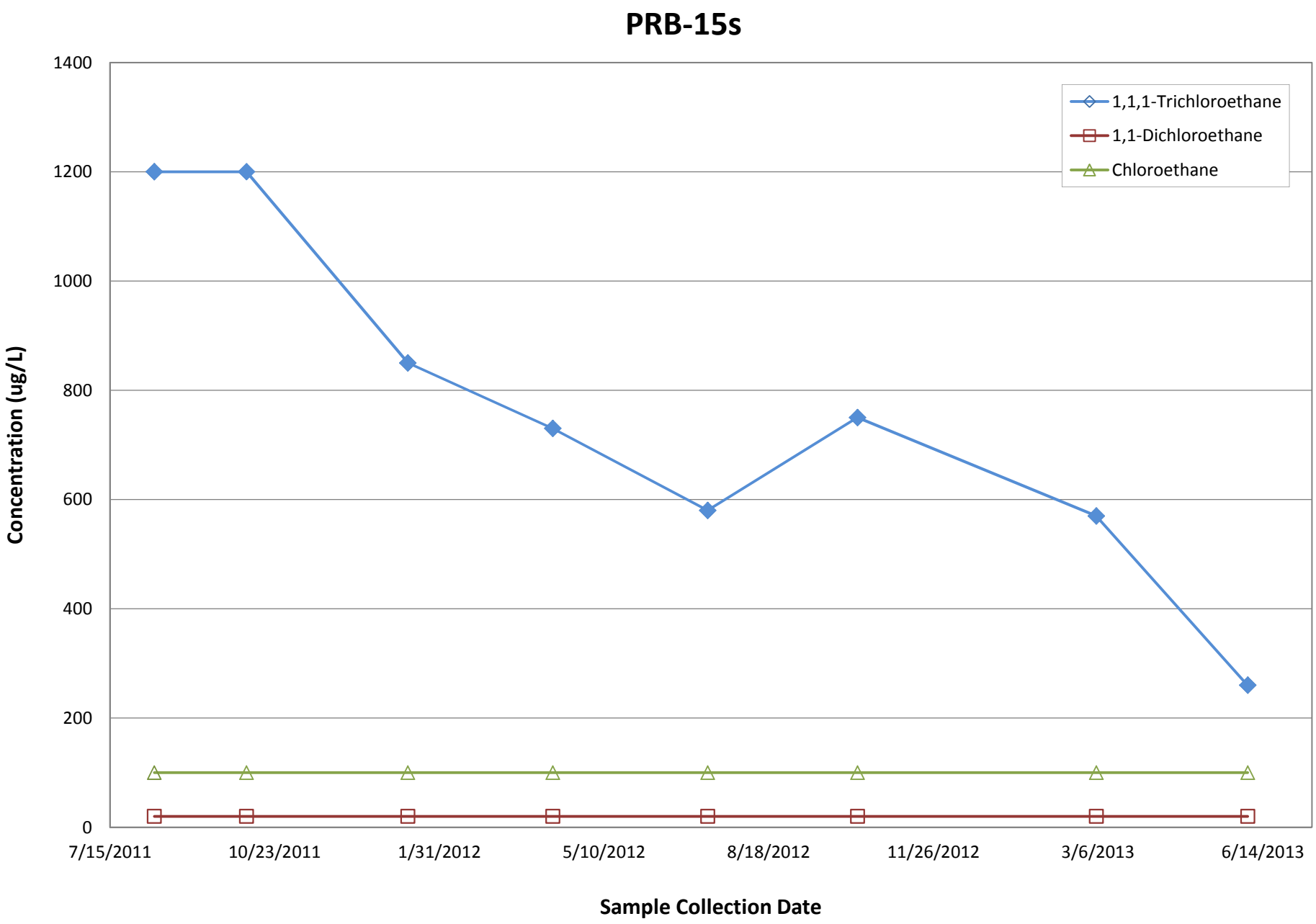

Note: Closed symbols indicate a detection of the specified compound. Open symbols indicate that the compound was not detected above the concentration specified (i.e. the reporting limit).

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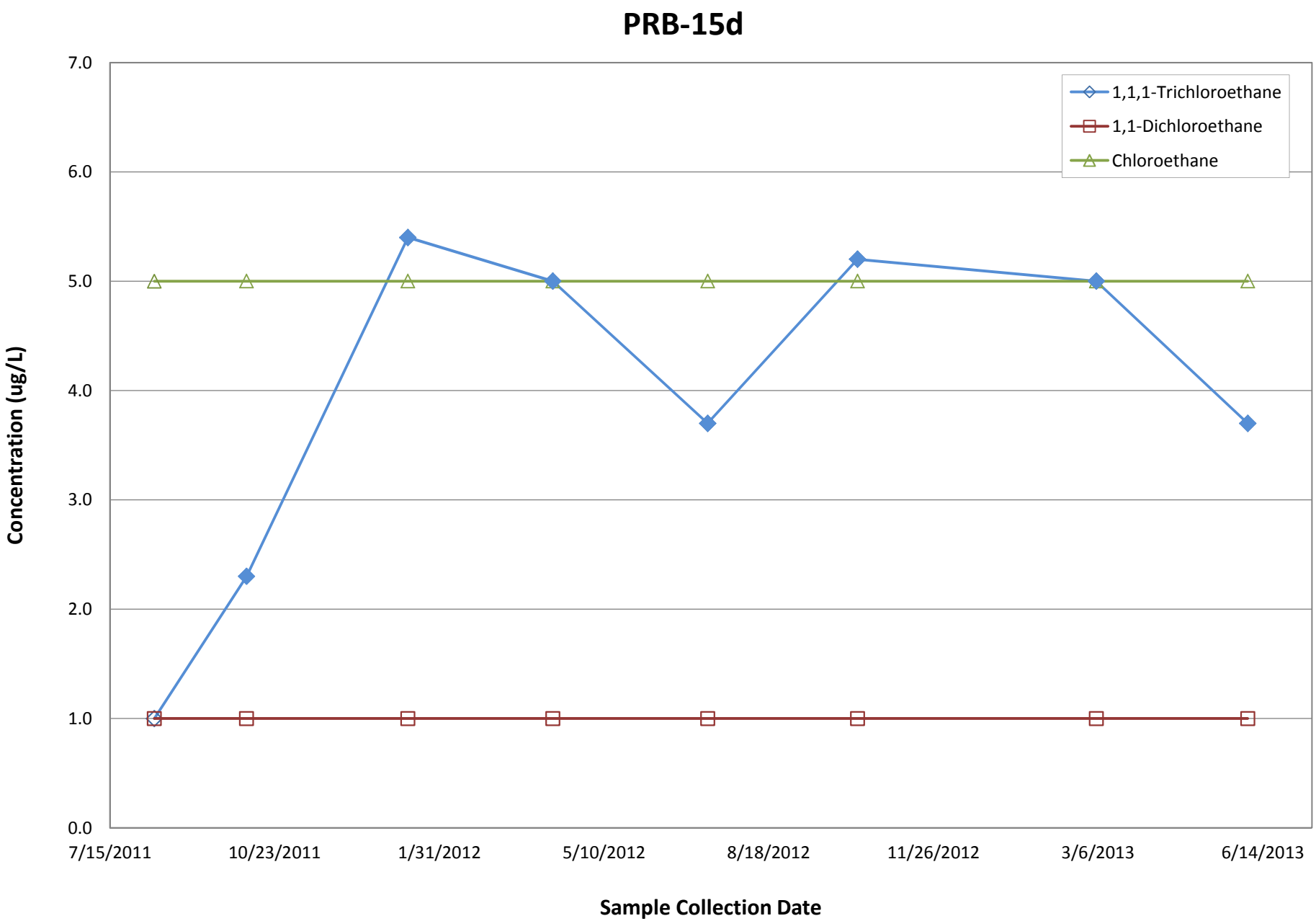

Note: Closed symbols indicate a detection of the specified compound. Open symbols indicate that the compound was not detected above the concentration specified (i.e. the reporting limit).

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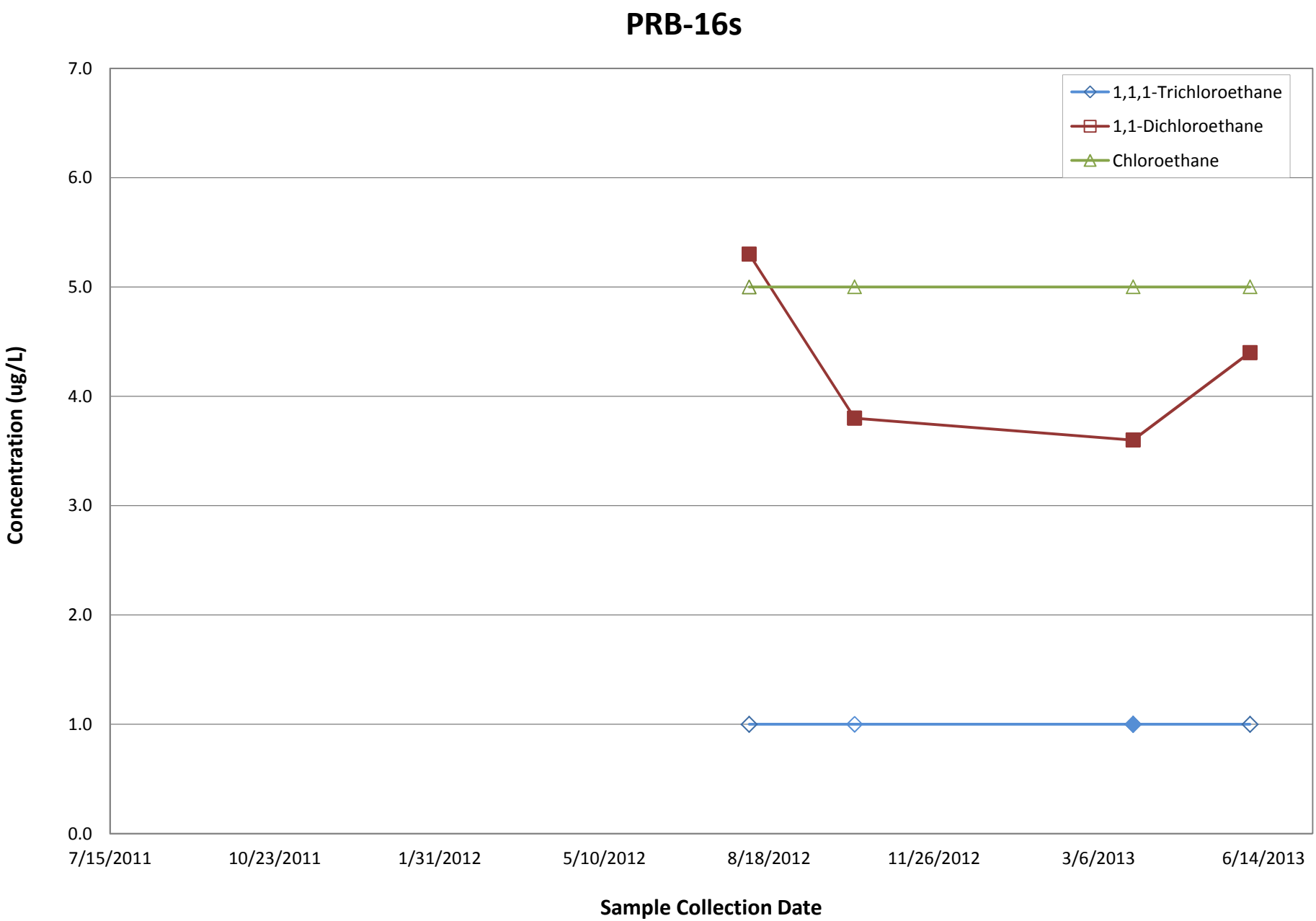

Note: Closed symbols indicate a detection of the specified compound. Open symbols indicate that the compound was not detected above the concentration specified (i.e. the reporting limit).

Appendix D
Supporting Tables for Isoconcentration Maps

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Table 5
Summary of Detected Volatile Organic Compounds at Compliance Monitoring Well Locations
Former Tecumseh Products Company Site
Tecumseh, Michigan

Analyte		2-Butanone	Chloroethane	1,1-Dichloroethane	1,1-Dichloroethene[2]	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Tetrachloroethene	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Trichloroethene	Trichloro-fluoromethane	Vinyl Chloride
Residential DW Criteria		13,000	430	880	7.0	70	100	5.0	200	5.0	5.0	2,600	2.0
Non-Residential DW Criteria		38,000	1,700	2,500	7.0	70	100	5.0	200	5.0	5.0	7,300	2.0
GSI Criteria		2,200	1,100	740	130	620	1,500[1]	60[1]	89	330[1]	200[1]	NC	13[1]
Residential GWSLs for Vapor Intrusion		4.5E+06	NC	130	390	440	330	11	15,000	NC	9.9	370	5.0
Non-Residential GWSLs for Vapor Intrusion		1.9E+07	NC	670	1,600	1,800	1,400	55	63,000	NC	42	1,600	50
Groundwater Contact Criteria		2.4E+08	4.4E+05	2.4E+06	11,000	2.0E+05	2.2E+05	12,000	1.3E+06	21,000	13,000[3]	1.1E+06	1,000
Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW-01s (16-21') Depth to Groundwater Approx. 16 - 19'	3/13/2009	<100	<100	<20	<20	<20	<20	<20	**750**	<20	**2,700**	<20	<20
	4/20/2009	NA	<500	<100	<100	<100	<100	<100	**1,100**	<100	**2,200**	NA	<100
	12/9/2009	<100	<100	<20	<20	<20	<20	<20	**1,000**	<20	**3,400**	<20	<20
	3/17/2010	<100	<100	<20	<20	<20	<20	<20	**1,400**	<20	**2,500**	<20	<20
	5/18/2010	<100	<100	<20	<20	<20	<20	<20	**1,000**	<20	**2,700**	<20	<20
	9/10/2010	<100	<100	<20	<20	<20	<20	<20	**750**	<20	**2,400**	<20	<20
	12/28/2010	<100	<100	<20	<20	<20	<20	<20	**1,100**	<20	**2,500**	<20	<20
	2/25/2011	<50	<50	<10	<10	<10	<10	<10	**560**	<10	**1,300**	<10	<10
	5/11/2011[4]	<50	<50	<10	<10	<10	<10	<10	**860**	<10	**1,900**	<10	<10
	7/28/2011	<100	<100	<20	<20	<20	<20	<20	**500**	<20	**1,900**	<20	<20
	10/6/2011	<100	<100	<20	<20	<20	<20	<20	**540**	<20	**2,000**	<20	<20
	1/9/2012	<100	<100	<20	<20	**31**	<20	<20	**530**	<20	**2,000**	<20	<20
	4/4/2012	<100	<100	<20	<20	**38**	<20	<20	**480**	<20	**1,900**	<20	<20
	7/11/2012	<100	<100	<20	<20	<20	<20	<20	**560**	<20	**2,100**	<20	<20
	10/8/2012	<100	<100	<20	<20	<20	<20	<20	**650**	<20	**2,000**	<20	<20
	6/11/2013	<100	<100	<20	<20	<20	<20	<20	**470**	<20	**1,400**	<20	<20
DUP-01 (MW-01s)	3/13/2009	<20	<20	<20	<20	<20	<20	<20	**720**	<20	**2,700**	<20	<20
MW-02s (23-28') Depth to Groundwater Approx. 22 - 24'	3/13/2009	<10	<10	<2.0	<2.0	**2.4**	<2.0	**2.2**	**2.5**	<2.0	**280**	<2.0	<2.0
	4/20/2009	NA	<50	<10	<10	<10	<10	<10	<10	<10	**130**	NA	<10
	12/9/2009	<10	<10	<2.0	<2.0	**3.7**	<2.0	**2.7**	**2.9**	<2.0	**250**	<2.0	<2.0
	3/17/2010	**13**	<10	<2.0	<2.0	**4.1**	<2.0	**2.3**	**3.1**	<2.0	**290**	<2.0	<2.0
	5/18/2010	<10	<10	<2.0	<2.0	**2.3**	<2.0	**2.4**	**2.6**	<2.0	**210**	<2.0	<2.0
	9/10/2010	<10	<10	<2.0	<2.0	**2.3**	<2.0	**2.3**	**2.3**	<2.0	**220**	<2.0	<2.0
	12/22/2010	<10	<10	<2.0	<2.0	**2.4**	<2.0	**2.3**	**3.1**	<2.0	**240**	<2.0	<2.0
	2/24/2011	<10	<10	<2.0	<2.0	**2.0**	<2.0	<2.0	**2.6**	<2.0	**240**	<2.0	<2.0
	5/10/2011[4]	<10	<10	<2.0	<2.0	<2.0	<2.0	<2.0	**2.3**	<2.0	**250**	<2.0	<2.0
	7/28/2011[5]	<10	<10	<2.0	<2.0	**2.0**	<2.0	**2.2**	**2.4**	<2.0	**280**	<2.0	<2.0
	10/7/2011	<10	<10	<2.0	<2.0	<2.0	<2.0	**2.5**	**2.5**	<2.0	**220**	<2.0	<2.0
	1/10/2012	<10	<10	<2.0	<2.0	<2.0	<2.0	**2.8**	**2.5**	<2.0	**190**	<2.0	<2.0
	4/5/2012	<10	<10	<2.0	<2.0	**2.7**	<2.0	**3.5**	**3.4**	<2.0	**210**	<2.0	<2.0
	7/11/2012	<10	<10	<2.0	<2.0	**2.2**	<2.0	**2.5**	**3.5**	<2.0	**330**	<2.0	<2.0
	10/25/2012	<10	<10	<2.0	<2.0	<2.0	<2.0	<2.0	**2.6**	<2.0	**270**	<2.0	<2.0
	6/11/2013	<10	<10	<2.0	<2.0	<2.0	<2.0	<2.0	**2.8**	<2.0	**300**	<2.0	<2.0

Notes:
Health-Based Residential and Non-Residential Drinking Water (DW) Criteria, Groundwater/Surface Water Interface (GSI) Criteria and Groundwater Contact Criteria from MDEQ RRD Op Memo 1 Part 201 Generic Cleanup Criteria/Part 213 Risk Based Cleanup Levels, September 28, 2012. Groundwater Screening Levels (GWSLs) for Vapor Intrusion were calculated in accordance with the MDEQ Remediation and Redevelopment Division Program Redesign 2009 document titled Background Document: Draft Proposed Vapor Intrusion Indoor Air Criteria (IAC), Soil Gas Criteria (SGC), and Groundwater Screening Levels (GW_{VI}SLs) for Vapor Intrusion using both residential and non-residential exposure scenarios and the most recent chemical specific toxicity values accepted and/or published by the United States Environmental Protection Agency (USEPA) as of February 1, 2012.
ug/L = micrograms per liter; NC = No criteria; NA = Not analyzed
Bold font denotes concentrations detected above laboratory reporting limits
Denotes concentrations above one or more criteria
* An asterisk indicates that the depth to groundwater intersects or may periodically intersect an overlaying clay unit. The depth to the bottom of the upper clay unit is approximately 7.0 feet below ground surface (ft bgs) at MW-09s, 8.0 ft bgs at MW-20s (based on boring log for nearby soil boring B-29), 15.0 ft bgs at MW-23, 9.0 ft bgs at MW-27s, 20.5 ft bgs at MW-29d, and 14.0 ft bgs at MW-30s and MW-30d.
1) Criterion is not protective for surface water used as a drinking water source as described in footnote {X} of MDEQ Op Memo 1 Part 201, Attachment 1.
2) Compound may exhibit characteristic ignitability as defined in 40 C.F.R. § 261.21
3) At the request of USEPA, a site-specific groundwater contact criteria for trichloroethene (TCE) was recalculated to reflect revised TCE toxicity data which was published by USEPA on September 28, 2011.
4) The average temperature in this sample shipment exceeded the recommended temperature range. Sample results are approximate.
5) Quality control results for trichloroethene are outside the established control limits, the result is approximate.
6) Headspace present in the sample, results are approximate.

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Table 5
Summary of Detected Volatile Organic Compounds at Compliance Monitoring Well Locations
Former Tecumseh Products Company Site
Tecumseh, Michigan

Analyte		2-Butanone	Chloroethane	1,1-Dichloroethane	1,1-Dichloroethene[2]	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Tetrachloroethene	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Trichloroethene	Trichloro-fluoromethane	Vinyl Chloride
Residential DW Criteria		13,000	430	880	7.0	70	100	5.0	200	5.0	5.0	2,600	2.0
Non-Residential DW Criteria		38,000	1,700	2,500	7.0	70	100	5.0	200	5.0	5.0	7,300	2.0
GSI Criteria		2,200	1,100	740	130	620	1,500[1]	60[1]	89	330[1]	200[1]	NC	13[1]
Residential GWSLs for Vapor Intrusion		4.5E+06	NC	130	390	440	330	11	15,000	NC	9.9	370	5.0
Non-Residential GWSLs for Vapor Intrusion		1.9E+07	NC	670	1,600	1,800	1,400	55	63,000	NC	42	1,600	50
Groundwater Contact Criteria		2.4E+08	4.4E+05	2.4E+06	11,000	2.0E+05	2.2E+05	12,000	1.3E+06	21,000	13,000[3]	1.1E+06	1,000
Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW-03s (9-14') Depth to Groundwater Approx. 8 - 10'	3/13/2009	<10	<10	**9.1**	<2.0	**240**	**9.1**	<2.0	<2.0	<2.0	<2.0	<2.0	**140**
	4/20/2009	NA	<50	**18**	<10	**490**	**18**	<10	<10	<10	<10	NA	**210**
	12/8/2009	<120	<120	**46**	<25	**2,200**	**83**	<25	<25	<25	<25	<25	**130**
	3/17/2010	<25	<25	**11**	<5.0	**460**	**17**	<5.0	<5.0	<5.0	<5.0	<5.0	**42**
	5/18/2010	<25	<25	**14**	<5.0	**630**	**24**	<5.0	<5.0	<5.0	<5.0	<5.0	**34**
	9/10/2010	<50	<50	**29**	<10	**1,600**	**63**	<10	<10	<10	<10	<10	**83**
	12/22/2010	<50	<50	**32**	<10	**1,800**	**82**	<10	<10	<10	<10	<10	**70**
	2/25/2011	<100	<100	**33**	<20	**2,200**	**110**	<20	<20	<20	<20	<20	**75**
	5/10/2011[4]	<100	<100	**25**	<20	**1,600**	**77**	<20	<20	<20	<20	<20	**52**
	7/28/2011	<100	<100	**23**	<20	**1,700**	**78**	<20	<20	<20	<20	<20	**65**
	10/6/2011	<100	<100	**24**	<20	**2,100**	**100**	<20	<20	<20	<20	<20	**91**
	1/10/2012	<50	<50	**22**	<10	**1,300**	**81**	<10	<10	<10	<10	<10	**51**
	4/4/2012	<100	<100	<20	<20	**1,600**	**84**	<20	<20	<20	**20**	<20	**170**
	7/11/2012	<100	<100	**23**	<20	**2,500**	**120**	<20	<20	<20	**25**	<20	**210**
	10/8/2012	<100	<100	<20	<20	**1,700**	**93**	<20	<20	<20	<20	<20	**100**
	6/3/2013	<100	<100	**24**	<20	**2,000**	**120**	<20	<20	<20	<20	<20	**220**
DUP-01 (MW-03s)	12/8/2009	<120	<120	**42**	<25	**2,000**	**73**	<25	<25	<25	<25	<25	**120**
MW-04s (15-20') Depth to Groundwater Approx. 15 - 17'	3/13/2009	<120	<120	<25	<25	**2,100**	**70**	<25	<25	<25	**5,000**	<25	**460**
	4/20/2009	NA	<500	<100	<100	**1,700**	<100	<100	<100	<100	**4,000**	NA	**520**
	12/9/2009	<250	<250	<50	<50	**2,500**	**90**	<50	<50	<50	**7,100**	<50	**270**
	3/17/2010	<250	<250	<50	<50	**2,900**	**82**	<50	<50	<50	**7,500**	<50	**520**
	5/18/2010	<250	<250	<50	<50	**2,100**	**58**	<50	<50	<50	**4,700**	<50	**280**
	9/17/2010	<250	<250	<50	<50	**2,400**	**70**	<50	<50	<50	**5,200**	<50	**200**
	12/22/2010	<250	<250	<50	<50	**2,700**	**91**	<50	<50	<50	**6,700**	<50	**270**
	2/25/2011	<250	<250	<50	<50	**2,500**	**82**	<50	<50	<50	**5,900**	<50	**280**
	5/11/2011[4]	<250	<250	<50	<50	**1,900**	**58**	<50	<50	<50	**4,600**	<50	**270**
	7/28/2011	<250	<250	<50	<50	**1,700**	**50**	<50	<50	<50	**4,600**	<50	**190**
	10/6/2011	<250	<250	<50	<50	**2,000**	**58**	<50	<50	<50	**4,600**	<50	**190**
	1/10/2012	<250	<250	<50	<50	**1,800**	**72**	<50	<50	<50	**4,800**	<50	**190**
	4/4/2012	<250	<250	<50	<50	**1,600**	**54**	<50	<50	<50	**4,300**	<50	**170**
	7/11/2012	<250	<250	<50	<50	**2,100**	**65**	<50	<50	<50	**5,600**	<50	**200**
	10/8/2012	<250	<250	<50	<50	**2,200**	**66**	<50	<50	<50	**6,700**	<50	**200**
	6/3/2013	<250	<250	<50	<50	**1,900**	**63**	<50	<50	<50	**5,700**	<50	**140**

Notes:

Health-Based Residential and Non-Residential Drinking Water (DW) Criteria, Groundwater/Surface Water Interface (GSI) Criteria and Groundwater Contact Criteria from MDEQ RRD Op Memo 1 Part 201 Generic Cleanup Criteria/Part 213 Risk Based Cleanup Levels, September 28, 2012. Groundwater Screening Levels (GWSLs) for Vapor Intrusion were calculated in accordance with the MDEQ Remediation and Redevelopment Division Program Redesign 2009 document titled Background Document: Draft Proposed Vapor Intrusion Indoor Air Criteria (IAC), Soil Gas Criteria (SGC), and Groundwater Screening Levels (GW_{VI}SLs) for Vapor Intrusion using both residential and non-residential exposure scenarios and the most recent chemical specific toxicity values accepted and/or published by the United States Environmental Protection Agency (USEPA) as of February 1, 2012.

ug/L = micrograms per liter; NC = No criteria; NA = Not analyzed

Bold font denotes concentrations detected above laboratory reporting limits

Denotes concentrations above one or more criteria

* An asterisk indicates that the depth to groundwater intersects or may periodically intersect an overlaying clay unit. The depth to the bottom of the upper clay unit is approximately 7.0 feet below ground surface (ft bgs) at MW-09s, 8.0 ft bgs at MW-20s (based on boring log for nearby soil boring B-29), 15.0 ft bgs at MW-23, 9.0 ft bgs at MW-27s, 20.5 ft bgs at MW-29d, and 14.0 ft bgs at MW-30s and MW-30d.

1) Criterion is not protective for surface water used as a drinking water source as described in footnote {X} of MDEQ Op Memo 1 Part 201, Attachment 1.
2) Compound may exhibit characteristic ignitability as defined in 40 C.F.R. § 261.21
3) At the request of USEPA, a site-specific groundwater contact criteria for trichloroethene (TCE) was recalculated to reflect revised TCE toxicity data which was published by USEPA on September 28, 2011.
4) The average temperature in this sample shipment exceeded the recommended temperature range. Sample results are approximate.
5) Quality control results for trichloroethene are outside the established control limits, the result is approximate.
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Residential DW Criteria		13,000	430	880	7.0	70	100	5.0	200	5.0	5.0	2,600	2.0
Non-Residential DW Criteria		38,000	1,700	2,500	7.0	70	100	5.0	200	5.0	5.0	7,300	2.0
GSI Criteria		2,200	1,100	740	130	620	1,500[1]	60[1]	89	330[1]	200[1]	NC	13[1]
Residential GWSLs for Vapor Intrusion		4.5E+06	NC	130	390	440	330	11	15,000	NC	9.9	370	5.0
Non-Residential GWSLs for Vapor Intrusion		1.9E+07	NC	670	1,600	1,800	1,400	55	63,000	NC	42	1,600	50
Groundwater Contact Criteria		2.4E+08	4.4E+05	2.4E+06	11,000	2.0E+05	2.2E+05	12,000	1.3E+06	21,000	13,000[3]	1.1E+06	1,000
Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW-04i (21.5-26.5') Depth to Groundwater Approx. 16-17'	4/3/2013	<250	<250	<50	<50	**3,100**	**100**	<50	<50	<50	**5,000**	<50	**53**
	6/3/2013	<250	<250	<50	<50	**3,400**	**96**	<50	<50	<50	**4,900**	<50	**53**
MW-05s (25-30') Depth to Groundwater Approx. 25 - 27'	3/13/2009	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	**3.5**	<1.0	<1.0	**120**	<1.0	<1.0
	4/20/2009	NA	<25	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	**140**	NA	<5.0
	12/10/2009	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	**5.3**	<1.0	<1.0	**190**	<1.0	<1.0
	3/17/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	**6.3**	<1.0	<1.0	**160**	<1.0	<1.0
	5/17/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	**4.6**	<1.0	<1.0	**160**	<1.0	<1.0
	9/9/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	**4.6**	<1.0	<1.0	**140**	<1.0	<1.0
	12/21/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	**4.9**	<1.0	<1.0	**160**	<1.0	<1.0
	2/24/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	**4.4**	<1.0	<1.0	**130**	<1.0	<1.0
	5/13/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	**4.9**	<1.0	<1.0	**160**	<1.0	<1.0
	7/27/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	**4.8**	<1.0	<1.0	**150**	<1.0	<1.0
	10/10/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	**5.1**	<1.0	<1.0	**150**	<1.0	<1.0
	1/9/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	**5.8**	<1.0	<1.0	**150**	<1.0	<1.0
	4/9/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	**5.7**	<1.0	<1.0	**160**	<1.0	<1.0
	7/10/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	**5.8**	<1.0	<1.0	**160**	<1.0	<1.0
	10/25/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	**3.8**	<1.0	<1.0	**130**	<1.0	<1.0
MW-06s (24-29') Depth to Groundwater Approx. 23 - 26'	3/16/2009	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**21**	<1.0	<1.0
	4/20/2009	NA	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**23**	NA	<1.0
	12/9/2009	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**37**	<1.0	<1.0
	3/18/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**31**	<1.0	<1.0
	5/17/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**33**	<1.0	<1.0
	9/10/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**29**	<1.0	<1.0
	12/21/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**34**	<1.0	<1.0
	2/18/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**35**	<1.0	<1.0
	5/10/2011[4]	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**27**	<1.0	<1.0
	7/27/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**27**	<1.0	<1.0
	10/5/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**30**	<1.0	<1.0
	1/9/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**31**	<1.0	<1.0
	4/3/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**32**	<1.0	<1.0
	7/10/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**32**	<1.0	<1.0
	10/4/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**28**	<1.0	<1.0

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ug/L = micrograms per liter; NC = No criteria; NA = Not analyzed

Bold font denotes concentrations detected above laboratory reporting limits

Denotes concentrations above one or more criteria

* An asterisk indicates that the depth to groundwater intersects or may periodically intersect an overlaying clay unit. The depth to the bottom of the upper clay unit is approximately 7.0 feet below ground surface (ft bgs) at MW-09s, 8.0 ft bgs at MW-20s (based on boring log for nearby soil boring B-29), 15.0 ft bgs at MW-23, 9.0 ft bgs at MW-27s, 20.5 ft bgs at MW-29d, and 14.0 ft bgs at MW-30s and MW-30d.

1) Criterion is not protective for surface water used as a drinking water source as described in footnote {X} of MDEQ Op Memo 1 Part 201, Attachment 1.
2) Compound may exhibit characteristic ignitability as defined in 40 C.F.R. § 261.21
3) At the request of USEPA, a site-specific groundwater contact criteria for trichloroethene (TCE) was recalculated to reflect revised TCE toxicity data which was published by USEPA on September 28, 2011.
4) The average temperature in this sample shipment exceeded the recommended temperature range. Sample results are approximate.
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6) Headspace present in the sample, results are approximate.

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Table 5
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Former Tecumseh Products Company Site
Tecumseh, Michigan

Analyte		2-Butanone	Chloroethane	1,1-Dichloroethane	1,1-Dichloroethene[2]	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Tetrachloroethene	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Trichloroethene	Trichloro-fluoromethane	Vinyl Chloride
Residential DW Criteria		13,000	430	880	7.0	70	100	5.0	200	5.0	5.0	2,600	2.0
Non-Residential DW Criteria		38,000	1,700	2,500	7.0	70	100	5.0	200	5.0	5.0	7,300	2.0
GSI Criteria		2,200	1,100	740	130	620	1,500[1]	60[1]	89	330[1]	200[1]	NC	13[1]
Residential GWSLs for Vapor Intrusion		4.5E+06	NC	130	390	440	330	11	15,000	NC	9.9	370	5.0
Non-Residential GWSLs for Vapor Intrusion		1.9E+07	NC	670	1,600	1,800	1,400	55	63,000	NC	42	1,600	50
Groundwater Contact Criteria		2.4E+08	4.4E+05	2.4E+06	11,000	2.0E+05	2.2E+05	12,000	1.3E+06	21,000	13,000[3]	1.1E+06	1,000
Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW-07s (23.5-28.5') Depth to Groundwater Approx. 24 - 26'	3/16/2009	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	**2.1**	<1.0	**10**	<1.0	<1.0
	4/20/2009	NA	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	**1.6**	<1.0	**11**	NA	<1.0
	12/10/2009	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	**1.8**	<1.0	**14**	<1.0	<1.0
	3/17/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	**1.9**	<1.0	**13**	<1.0	<1.0
	5/17/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	**1.9**	<1.0	**13**	<1.0	<1.0
	9/10/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	**1.4**	<1.0	**12**	<1.0	<1.0
	12/21/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	**2.1**	<1.0	**16**	<1.0	<1.0
	2/24/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	**1.6**	<1.0	**12**	<1.0	<1.0
	5/13/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	**1.5**	<1.0	**12**	<1.0	<1.0
	7/27/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	**1.2**	<1.0	**11**	<1.0	<1.0
	10/10/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	**1.4**	<1.0	**13**	<1.0	<1.0
	1/9/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	**1.6**	<1.0	**14**	<1.0	<1.0
	4/9/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	**1.3**	<1.0	**12**	<1.0	<1.0
	7/10/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	**1.4**	<1.0	**14**	<1.0	<1.0
	10/19/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	**1.5**	<1.0	**14**	<1.0	<1.0
MW-08s (23.5-28.5') Depth to Groundwater 23 - 26'	3/16/2009	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**11**	<1.0	<1.0
	4/20/2009	NA	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**10**	NA	<1.0
	12/10/2009	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**11**	<1.0	<1.0
DUP-01 (MW-08s)	4/20/2009	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**10**	NA	<1.0
MW-08d (40-45') Depth to Groundwater Approx. 26 - 27'	4/2/2013	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	6/11/2013	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
DUP-01 (MW-08d)	4/2/2013	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-09s (7-12') Depth to Groundwater* Approx. 5 - 8'	3/16/2009	<100	<100	<20	<20	<20	<20	<20	**160**	<20	**1,700**	<20	<20
	4/20/2009	NA	<500	<100	<100	<100	<100	<100	**220**	<100	**2,100**	NA	<100
	12/9/2009	<100	<100	<20	<20	<20	<20	<20	**150**	<20	**2,400**	<20	<20
	3/18/2010	<100	<100	<20	<20	<20	<20	<20	**120**	<20	**1,500**	<20	<20
	5/18/2010	<100	<100	<20	<20	<20	<20	<20	**120**	<20	**1,700**	<20	<20
	9/17/2010	<100	<100	<20	<20	<20	<20	<20	**120**	<20	**1,700**	<20	<20
	2/25/2011	<50	<50	<10	<10	<10	<10	<10	**84**	<10	**1,100**	<10	<10
	5/11/2011[4]	<50	<50	<10	<10	<10	<10	<10	**83**	<10	**1,200**	<10	<10

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Residential DW Criteria		13,000	430	880	7.0	70	100	5.0	200	5.0	5.0	2,600	2.0
Non-Residential DW Criteria		38,000	1,700	2,500	7.0	70	100	5.0	200	5.0	5.0	7,300	2.0
GSI Criteria		2,200	1,100	740	130	620	1,500[1]	60[1]	89	330[1]	200[1]	NC	13[1]
Residential GWSLs for Vapor Intrusion		4.5E+06	NC	130	390	440	330	11	15,000	NC	9.9	370	5.0
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Groundwater Contact Criteria		2.4E+08	4.4E+05	2.4E+06	11,000	2.0E+05	2.2E+05	12,000	1.3E+06	21,000	13,000[3]	1.1E+06	1,000
Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW-10s (8-13') Depth to Groundwater Approx. 7 - 9'	5/15/2009	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	12/9/2009	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	3/16/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	5/12/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	9/3/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	12/16/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	2/15/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	5/9/2011[4]	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	7/20/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	10/4/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	1/4/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	4/2/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	7/5/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	10/3/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	6/12/2013	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
DUP-02 (MW-10s)	5/15/2009	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-10d (14-19') Depth to Groundwater Approx. 9 -10'	12/9/2009	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-11s (29-34') Depth to Groundwater Approx. 29 - 32'	5/14/2009	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	1/13/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	3/15/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	5/14/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	9/3/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	12/17/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	2/17/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	5/12/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	7/22/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	10/7/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	1/4/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	4/5/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	7/6/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	10/12/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
DUP-02 (MW-11s)	5/14/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
DUP-01 (MW-11s)	9/3/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0

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Table 5
Summary of Detected Volatile Organic Compounds at Compliance Monitoring Well Locations
Former Tecumseh Products Company Site
Tecumseh, Michigan

Analyte		2-Butanone	Chloroethane	1,1-Dichloroethane	1,1-Dichloroethene[2]	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Tetrachloroethene	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Trichloroethene	Trichloro-fluoromethane	Vinyl Chloride
Residential DW Criteria		13,000	430	880	7.0	70	100	5.0	200	5.0	5.0	2,600	2.0
Non-Residential DW Criteria		38,000	1,700	2,500	7.0	70	100	5.0	200	5.0	5.0	7,300	2.0
GSI Criteria		2,200	1,100	740	130	620	1,500[1]	60[1]	89	330[1]	200[1]	NC	13[1]
Residential GWSLs for Vapor Intrusion		4.5E+06	NC	130	390	440	330	11	15,000	NC	9.9	370	5.0
Non-Residential GWSLs for Vapor Intrusion		1.9E+07	NC	670	1,600	1,800	1,400	55	63,000	NC	42	1,600	50
Groundwater Contact Criteria		2.4E+08	4.4E+05	2.4E+06	11,000	2.0E+05	2.2E+05	12,000	1.3E+06	21,000	13,000[3]	1.1E+06	1,000
Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW-12s (12-17') Depth to Groundwater Approx. 13 - 15'	5/15/2009	NA	<1.0	<1.0	<1.0	<1.0	<1.0	**1.4**	<1.0	<1.0	<1.0	<1.0	<1.0
	12/30/2009	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	**1.4**	<1.0	<1.0	<1.0	<1.0	<1.0
	3/15/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	5/14/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	**1.0**	<1.0	<1.0	<1.0	<1.0	<1.0
	9/3/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	**1.6**	<1.0	<1.0	<1.0	<1.0	<1.0
	12/14/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	2/14/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	5/12/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	**1.6**	<1.0	<1.0	<1.0	<1.0	<1.0
	7/20/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	**1.4**	<1.0	<1.0	<1.0	<1.0	<1.0
	10/7/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	**1.9**	<1.0	<1.0	<1.0	<1.0	<1.0
	1/4/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	**2.2**	<1.0	<1.0	<1.0	<1.0	<1.0
	4/5/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	**1.2**	<1.0	<1.0	<1.0	<1.0	<1.0
	7/9/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	**1.2**	<1.0	<1.0	<1.0	<1.0	<1.0
	10/12/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	5/30/2013	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-12d (33-38') Depth to Groundwater Approx. 13 - 15'	3/18/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	5/14/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	9/3/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	12/14/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	2/14/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	5/12/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	7/20/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	10/7/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	1/4/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	4/5/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	7/9/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	10/12/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	5/31/2013	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0

Notes:
Health-Based Residential and Non-Residential Drinking Water (DW) Criteria, Groundwater/Surface Water Interface (GSI) Criteria and Groundwater Contact Criteria from MDEQ RRD Op Memo 1 Part 201 Generic Cleanup Criteria/Part 213 Risk Based Cleanup Levels, September 28, 2012. Groundwater Screening Levels (GWSLs) for Vapor Intrusion were calculated in accordance with the MDEQ Remediation and Redevelopment Division Program Redesign 2009 document titled Background Document: Draft Proposed Vapor Intrusion Indoor Air Criteria (IAC), Soil Gas Criteria (SGC), and Groundwater Screening Levels (GW_{VI}SLs) for Vapor Intrusion using both residential and non-residential exposure scenarios and the most recent chemical specific toxicity values accepted and/or published by the United States Environmental Protection Agency (USEPA) as of February 1, 2012.
ug/L = micrograms per liter; NC = No criteria; NA = Not analyzed
Bold font denotes concentrations detected above laboratory reporting limits
Denotes concentrations above one or more criteria
* An asterisk indicates that the depth to groundwater intersects or may periodically intersect an overlaying clay unit. The depth to the bottom of the upper clay unit is approximately 7.0 feet below ground surface (ft bgs) at MW-09s, 8.0 ft bgs at MW-20s (based on boring log for nearby soil boring B-29), 15.0 ft bgs at MW-23, 9.0 ft bgs at MW-27s, 20.5 ft bgs at MW-29d, and 14.0 ft bgs at MW-30s and MW-30d.
1) Criterion is not protective for surface water used as a drinking water source as described in footnote {X} of MDEQ Op Memo 1 Part 201, Attachment 1.
2) Compound may exhibit characteristic ignitability as defined in 40 C.F.R. § 261.21
3) At the request of USEPA, a site-specific groundwater contact criteria for trichloroethene (TCE) was recalculated to reflect revised TCE toxicity data which was published by USEPA on September 28, 2011.
4) The average temperature in this sample shipment exceeded the recommended temperature range. Sample results are approximate.
5) Quality control results for trichloroethene are outside the established control limits, the result is approximate.
6) Headspace present in the sample, results are approximate.

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Former Tecumseh Products Company Site
Tecumseh, Michigan

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Residential DW Criteria		13,000	430	880	7.0	70	100	5.0	200	5.0	5.0	2,600	2.0
Non-Residential DW Criteria		38,000	1,700	2,500	7.0	70	100	5.0	200	5.0	5.0	7,300	2.0
GSI Criteria		2,200	1,100	740	130	620	1,500[1]	60[1]	89	330[1]	200[1]	NC	13[1]
Residential GWSLs for Vapor Intrusion		4.5E+06	NC	130	390	440	330	11	15,000	NC	9.9	370	5.0
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Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW-13s (13-18') Depth to Groundwater Approx. 15 - 17'	5/15/2009	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	12/10/2009	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	3/15/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	5/14/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	9/3/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	12/14/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	2/14/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	5/12/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	7/20/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	10/10/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	1/4/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	4/9/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	7/10/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	10/12/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	5/31/2013	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-14s (4-9') Depth to Perched Groundwater Approx. 3 - 7'	5/14/2009	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	12/8/2009	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	3/15/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	5/12/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	9/3/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	12/20/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	2/16/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	5/11/2011[4]	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	7/21/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	10/7/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	1/4/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	4/5/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
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Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW-14d (37.5-42.5') Depth to Groundwater Approx. 30 - 31'	3/23/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	5/14/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	9/3/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	12/16/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	2/16/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	5/9/2011[4]	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	7/21/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	10/5/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	1/4/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	4/2/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	7/3/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	10/4/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	6/12/2013	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
DUP-01 (MW-14d)	2/16/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	5/9/2011[4]	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	7/21/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	10/5/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	1/4/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	4/2/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	7/3/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	10/4/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
DUP-02 (MW-14d)	6/12/2013	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-15s (30-35') Depth to Groundwater Approx. 30 - 32'	5/15/2009	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	12/30/2009	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	3/15/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	5/14/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	9/8/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	12/17/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	2/17/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	5/12/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	7/25/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	10/7/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	1/5/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	4/5/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	7/9/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	10/2/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0

Notes:
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1) Criterion is not protective for surface water used as a drinking water source as described in footnote {X} of MDEQ Op Memo 1 Part 201, Attachment 1.
2) Compound may exhibit characteristic ignitability as defined in 40 C.F.R. § 261.21
3) At the request of USEPA, a site-specific groundwater contact criteria for trichloroethene (TCE) was recalculated to reflect revised TCE toxicity data which was published by USEPA on September 28, 2011.
4) The average temperature in this sample shipment exceeded the recommended temperature range. Sample results are approximate.
5) Quality control results for trichloroethene are outside the established control limits, the result is approximate.
6) Headspace present in the sample, results are approximate.

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Table 5
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Former Tecumseh Products Company Site
Tecumseh, Michigan

Analyte		2-Butanone	Chloroethane	1,1-Dichloroethane	1,1-Dichloroethene(2)	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Tetrachloroethene	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Trichloroethene	Trichloro-fluoromethane	Vinyl Chloride
Residential DW Criteria		13,000	430	880	7.0	70	100	5.0	200	5.0	5.0	2,600	2.0
Non-Residential DW Criteria		38,000	1,700	2,500	7.0	70	100	5.0	200	5.0	5.0	7,300	2.0
GSI Criteria		2,200	1,100	740	130	620	1,500(1)	60(1)	89	330(1)	200(1)	NC	13(1)
Residential GWSLs for Vapor Intrusion		4.5E+06	NC	130	390	440	330	11	15,000	NC	9.9	370	5.0
Non-Residential GWSLs for Vapor Intrusion		1.9E+07	NC	670	1,600	1,800	1,400	55	63,000	NC	42	1,600	50
Groundwater Contact Criteria		2.4E+08	4.4E+05	2.4E+06	11,000	2.0E+05	2.2E+05	12,000	1.3E+06	21,000	13,000(3)	1.1E+06	1,000
Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW-17s (3-8') Depth to Groundwater Approx. 6'	7/23/2009	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	12/7/2009	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	3/18/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	5/12/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	9/8/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	12/16/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	2/15/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	5/11/2011(4)	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	7/21/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	10/4/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	1/5/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	4/2/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	7/3/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	10/3/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-18s (26-31') Depth to Groundwater Approx. 25 - 27'	12/8/2009	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	3/16/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	5/12/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	9/8/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	12/20/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	2/17/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	5/9/2011(4)	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	7/22/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	10/5/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	1/5/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	4/3/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	7/6/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	10/4/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0

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2) Compound may exhibit characteristic ignitability as defined in 40 C.F.R. § 261.21
3) At the request of USEPA, a site-specific groundwater contact criteria for trichloroethene (TCE) was recalculated to reflect revised TCE toxicity data which was published by USEPA on September 28, 2011.
4) The average temperature in this sample shipment exceeded the recommended temperature range. Sample results are approximate.
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Tecumseh, Michigan

Analyte		2-Butanone	Chloroethane	1,1-Dichloroethane	1,1-Dichloroethene[2]	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Tetrachloroethene	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Trichloroethene	Trichloro-fluoromethane	Vinyl Chloride
Residential DW Criteria		13,000	430	880	7.0	70	100	5.0	200	5.0	5.0	2,600	2.0
Non-Residential DW Criteria		38,000	1,700	2,500	7.0	70	100	5.0	200	5.0	5.0	7,300	2.0
GSI Criteria		2,200	1,100	740	130	620	1,500[1]	60[1]	89	330[1]	200[1]	NC	13[1]
Residential GWSLs for Vapor Intrusion		4.5E+06	NC	130	390	440	330	11	15,000	NC	9.9	370	5.0
Non-Residential GWSLs for Vapor Intrusion		1.9E+07	NC	670	1,600	1,800	1,400	55	63,000	NC	42	1,600	50
Groundwater Contact Criteria		2.4E+08	4.4E+05	2.4E+06	11,000	2.0E+05	2.2E+05	12,000	1.3E+06	21,000	13,000[3]	1.1E+06	1,000
Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW-19s (25-30') Depth to Groundwater Approx. 24 - 26'	12/8/2009	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	**1.8**	<1.0	**31**	<1.0	<1.0
	1/13/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	**1.2**	**2.3**	<1.0	**36**	<1.0	<1.0
	3/16/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	**1.1**	**1.7**	<1.0	**36**	<1.0	<1.0
	5/18/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	**1.6**	<1.0	**32**	<1.0	<1.0
	9/10/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	**1.2**	**1.8**	<1.0	**33**	<1.0	<1.0
	12/20/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	**1.8**	<1.0	**37**	<1.0	<1.0
	2/18/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	**1.1**	**1.8**	<1.0	**41**	<1.0	<1.0
	5/10/2011[4]	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	**1.5**	<1.0	**28**	<1.0	<1.0
	7/25/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	**1.0**	**1.4**	<1.0	**27**	<1.0	<1.0
	10/5/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	**1.1**	**1.7**	<1.0	**28**	<1.0	<1.0
	1/9/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	**1.2**	**1.9**	<1.0	**34**	<1.0	<1.0
	4/3/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	**1.1**	**1.5**	<1.0	**32**	<1.0	<1.0
	7/10/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	**1.6**	**2.3**	<1.0	**32**	<1.0	<1.0
	10/4/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	**1.6**	<1.0	**31**	<1.0	<1.0
DUP-03 (MW-19s)	9/10/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	**1.0**	**1.7**	<1.0	**32**	<1.0	<1.0
DUP-02 (MW-19s)	2/18/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	**1.1**	**1.8**	<1.0	**39**	<1.0	<1.0
	5/10/2011[4]	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	**1.6**	<1.0	**29**	<1.0	<1.0
	7/25/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	**1.1**	**1.4**	<1.0	**27**	<1.0	<1.0
	10/5/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	**1.1**	**1.6**	<1.0	**28**	<1.0	<1.0
	1/9/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	**1.2**	**1.8**	<1.0	**34**	<1.0	<1.0
	4/3/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	**1.1**	**1.6**	<1.0	**32**	<1.0	<1.0
	7/10/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	**1.6**	**2.3**	<1.0	**32**	<1.0	<1.0
	10/4/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	**1.3**	<1.0	**27**	<1.0	<1.0

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Non-Residential DW Criteria		38,000	1,700	2,500	7.0	70	100	5.0	200	5.0	5.0	7,300	2.0
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Groundwater Contact Criteria		2.4E+08	4.4E+05	2.4E+06	11,000	2.0E+05	2.2E+05	12,000	1.3E+06	21,000	13,000[3]	1.1E+06	1,000
Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW-19d (40-45') Depth to Groundwater Approx. 24 - 26'	12/8/2009	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	3/16/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	5/12/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	9/8/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	12/20/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	2/18/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	5/10/2011[4]	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	7/25/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	10/5/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	1/5/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	4/3/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	7/10/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	10/4/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
DUP-01 (MW-19d)	5/12/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-20s (8-13') Depth to Groundwater* Approx. 4 - 6'	12/30/2009	<5.0	<5.0	**48**	**4.0**	**9.6**	<1.0	<1.0	**150**	<1.0	**71**	**2.9**	<1.0
	1/13/2010	<5.0	<5.0	**50**	**3.5**	**9.0**	<1.0	<1.0	**170**	<1.0	**70**	**2.8**	<1.0
	3/17/2010	<5.0	<5.0	**51**	**3.8**	**9.4**	<1.0	<1.0	**160**	<1.0	**64**	**3.2**	<1.0
	5/18/2010	<10	<10	**58**	**5.1**	**12**	<2.0	<2.0	**210**	<2.0	**94**	**3.4**	<2.0
	9/10/2010	<10	<10	**34**	**4.2**	**9.7**	<2.0	<2.0	**230**	<2.0	**110**	**3.8**	<2.0
	12/21/2010	<10	<10	**24**	**3.6**	**6.1**	<2.0	<2.0	**200**	<2.0	**89**	**3.6**	<2.0
	2/18/2011	<10	<10	**19**	**3.3**	**5.5**	<2.0	<2.0	**190**	<2.0	**93**	**3.5**	<2.0
	5/13/2011	<10	<10	**14**	**2.8**	**4.1**	<2.0	<2.0	**190**	<2.0	**91**	**2.9**	<2.0
	7/25/2011	<10	<10	**6.5**	<2.0	**2.4**	<2.0	<2.0	**190**	<2.0	**100**	**2.3**	<2.0
	10/10/2011	<10	<10	**5.8**	<2.0	<2.0	<2.0	<2.0	**190**	<2.0	**110**	**3.1**	<2.0
	1/9/2012	<5.0	<5.0	**6.0**	**1.4**	**1.9**	<1.0	<1.0	**190**	<1.0	**100**	**3.2**	<1.0
	4/9/2012	<5.0	<5.0	**11**	**1.1**	**2.0**	<1.0	<1.0	**180**	<1.0	**100**	**2.6**	<1.0
	7/10/2012	<10	<10	**17**	<2.0	**2.5**	<2.0	<2.0	**190**	<2.0	**100**	**2.3**	<2.0
	10/19/2012	<10	<10	**24**	<2.0	**3.8**	<2.0	<2.0	**190**	<2.0	**98**	**2.0**	<2.0
	5/31/2013	<10	<10	**18**	**2.6**	**6.7**	<2.0	<2.0	**240**	<2.0	**120**	<2.0	<2.0

Notes:
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ug/L = micrograms per liter; NC = No criteria; NA = Not analyzed
Bold font denotes concentrations detected above laboratory reporting limits
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3) At the request of USEPA, a site-specific groundwater contact criteria for trichloroethene (TCE) was recalculated to reflect revised TCE toxicity data which was published by USEPA on September 28, 2011.
4) The average temperature in this sample shipment exceeded the recommended temperature range. Sample results are approximate.
5) Quality control results for trichloroethene are outside the established control limits, the result is approximate.
6) Headspace present in the sample, results are approximate.

US EPA ARCHIVE DOCUMENT

Table 5
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Former Tecumseh Products Company Site
Tecumseh, Michigan

Analyte		2-Butanone	Chloroethane	1,1-Dichloroethane	1,1-Dichloroethene[2]	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Tetrachloroethene	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Trichloroethene	Trichloro-fluoromethane	Vinyl Chloride
Residential DW Criteria		13,000	430	880	7.0	70	100	5.0	200	5.0	5.0	2,600	2.0
Non-Residential DW Criteria		38,000	1,700	2,500	7.0	70	100	5.0	200	5.0	5.0	7,300	2.0
GSI Criteria		2,200	1,100	740	130	620	1,500[1]	60[1]	89	330[1]	200[1]	NC	13[1]
Residential GWSLs for Vapor Intrusion		4.5E+06	NC	130	390	440	330	11	15,000	NC	9.9	370	5.0
Non-Residential GWSLs for Vapor Intrusion		1.9E+07	NC	670	1,600	1,800	1,400	55	63,000	NC	42	1,600	50
Groundwater Contact Criteria		2.4E+08	4.4E+05	2.4E+06	11,000	2.0E+05	2.2E+05	12,000	1.3E+06	21,000	13,000[3]	1.1E+06	1,000
Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW-20d (38.5-43.5') Depth to Groundwater Approx. 12 - 16'	12/30/2009	<5.0	<5.0	**1.2**	<1.0	**86**	<1.0	<1.0	**1.9**	<1.0	<1.0	<1.0	**3.5**
	1/13/2010	<5.0	<5.0	<1.0	<1.0	**94**	**2.0**	<1.0	<1.0	<1.0	<1.0	<1.0	**3.7**
	3/17/2010	<5.0	<5.0	<1.0	<1.0	**85**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**4.4**
	5/18/2010	<5.0	<5.0	<1.0	<1.0	**120**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**3.7**
	9/10/2010	<5.0	<5.0	<1.0	<1.0	**95**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	12/21/2010	<5.0	<5.0	<1.0	<1.0	**200**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**3.5**
	2/18/2011	<10	<10	<2.0	<2.0	**190**	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	**3.2**
	5/13/2011	<10	<10	<2.0	<2.0	**170**	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	**2.6**
	7/25/2011	<5.0	<5.0	<1.0	<1.0	**170**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**2.6**
	10/10/2011	<10	<10	<2.0	<2.0	**200**	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	**2.5**
	1/9/2012	<5.0	<5.0	<1.0	<1.0	**140**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**6.0**
	4/9/2012	<5.0	<5.0	<1.0	<1.0	**190**	<1.0	<1.0	<1.0	<1.0	**1.0**	<1.0	**10**
	7/10/2012	<10	<10	<2.0	<2.0	**230**	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	**14**
	10/19/2012	<10	<10	<2.0	<2.0	**180**	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	**43**
	6/3/2013	<10	<10	<2.0	<2.0	**250**	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	**67**
DUP-03 (MW-20d)	5/18/2010	<5.0	<5.0	<1.0	<1.0	**120**	**1.0**	<1.0	<1.0	<1.0	<1.0	<1.0	**3.7**
MW-21 (28.5-33.5') Depth to Groundwater Approx. 29 - 30'	12/8/2009	<50	<50	**31**	<10	**59**	<10	<10	**54**	<10	**840**	<10	<10
	1/13/2010	<50	<50	**28**	<10	**62**	<10	<10	**56**	<10	**730**	<10	<10
	3/23/2010	<5.0	<5.0	**33**	**2.2**	**81**	**7.5**	<1.0	**62**	<1.0	**850**	<1.0	<1.0
	5/18/2010	<50	<50	**35**	<10	**89**	<10	<10	**63**	<10	**830**	<10	<10
	10/15/2010	<50	<50	**26**	<10	**80**	<10	<10	**59**	<10	**810**	<10	<10
	12/22/2010	<50	<50	**25**	<10	**69**	<10	<10	**55**	<10	**730**	<10	<10
	2/24/2011	<50	<50	**25**	<10	**66**	<10	<10	**52**	<10	**730**	<10	<10
	5/11/2011[4]	<50	<50	**24**	<10	**65**	<10	<10	**49**	<10	**740**	<10	<10
	7/28/2011	<50	<50	**22**	<10	**77**	<10	<10	**54**	<10	**1,000**	<10	<10
	10/6/2011	<50	<50	**22**	<10	**74**	<10	<10	**55**	<10	**960**	<10	<10
	1/10/2012	<50	<50	**27**	<10	**79**	<10	<10	**64**	<10	**990**	<10	<10
	4/4/2012	<50	<50	**25**	<10	**81**	<10	<10	**55**	<10	**980**	<10	<10
	7/11/2012	**58**	<50	**25**	<10	**85**	<10	<10	**63**	<10	**1,000**	<10	<10
	10/8/2012	<50	<50	**22**	<10	**65**	<10	<10	**47**	<10	**850**	<10	<10
	3/6/2013	<50	<50	**26**	<10	**90**	<10	<10	**50**	<10	**760**	<10	<10
	6/11/2013	<50	<50	**26**	<10	**100**	<10	<10	**60**	<10	**1,100**	<10	<10
DUP-02 (MW-21)	3/23/2010	<5.0	<5.0	**33**	**2.2**	**79**	**7.8**	<1.0	**61**	<1.0	**810**	<1.0	<1.0

Notes:

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ug/L = micrograms per liter; NC = No criteria; NA = Not analyzed

Bold font denotes concentrations detected above laboratory reporting limits

Denotes concentrations above one or more criteria

* An asterisk indicates that the depth to groundwater intersects or may periodically intersect an overlaying clay unit. The depth to the bottom of the upper clay unit is approximately 7.0 feet below ground surface (ft bgs) at MW-09s, 8.0 ft bgs at MW-20s (based on boring log for nearby soil boring B-29), 15.0 ft bgs at MW-23, 9.0 ft bgs at MW-27s, 20.5 ft bgs at MW-29d, and 14.0 ft bgs at MW-30s and MW-30d.

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4) The average temperature in this sample shipment exceeded the recommended temperature range. Sample results are approximate.
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Former Tecumseh Products Company Site
Tecumseh, Michigan

Analyte		2-Butanone	Chloroethane	1,1-Dichloroethane	1,1-Dichloroethene[2]	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Tetrachloroethene	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Trichloroethene	Trichloro-fluoromethane	Vinyl Chloride
Residential DW Criteria		13,000	430	880	7.0	70	100	5.0	200	5.0	5.0	2,600	2.0
Non-Residential DW Criteria		38,000	1,700	2,500	7.0	70	100	5.0	200	5.0	5.0	7,300	2.0
GSI Criteria		2,200	1,100	740	130	620	1,500[1]	60[1]	89	330[1]	200[1]	NC	13[1]
Residential GWSLs for Vapor Intrusion		4.5E+06	NC	130	390	440	330	11	15,000	NC	9.9	370	5.0
Non-Residential GWSLs for Vapor Intrusion		1.9E+07	NC	670	1,600	1,800	1,400	55	63,000	NC	42	1,600	50
Groundwater Contact Criteria		2.4E+08	4.4E+05	2.4E+06	11,000	2.0E+05	2.2E+05	12,000	1.3E+06	21,000	13,000[3]	1.1E+06	1,000
Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
DUP-03 (MW-21)	2/24/2011	<50	<50	**24**	<10	**66**	<10	<10	**50**	<10	**740**	<10	<10
	5/11/2011[4]	<50	<50	**24**	<10	**66**	<10	<10	**49**	<10	**750**	<10	<10
	7/28/2011	<50	<50	**23**	<10	**78**	<10	<10	**57**	<10	**1,000**	<10	<10
	10/6/2011	<50	<50	**21**	<10	**73**	<10	<10	**52**	<10	**910**	<10	<10
	1/10/2012	<50	<50	**27**	<10	**85**	<10	<10	**66**	<10	**1,000**	<10	<10
	4/4/2012	<50	<50	**24**	<10	**81**	<10	<10	**61**	<10	**970**	<10	<10
	7/11/2012	<50	<50	**25**	<10	**80**	<10	<10	**59**	<10	**1,000**	<10	<10
	6/11/2013	<50	<50	**26**	<10	**110**	<10	<10	**76**	<10	**1,100**	<10	<10
MW-22 (25-30') Depth to Groundwater Approx. 25 - 26'	12/7/2009	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**10**
	3/18/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**8.5**
	5/18/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**2.0**
	9/10/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**4.3**
	12/22/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**3.0**
	2/24/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**2.3**
	5/11/2011[4]	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**1.4**
	7/21/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**2.8**
	10/4/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**6.2**
	1/9/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**8.4**
	4/5/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**12**
	7/3/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**13**
	10/3/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**18**
	5/29/2013	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**21**

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Former Tecumseh Products Company Site
Tecumseh, Michigan

Analyte		2-Butanone	Chloroethane	1,1-Dichloroethane	1,1-Dichloroethene[2]	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Tetrachloroethene	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Trichloroethene	Trichloro-fluoromethane	Vinyl Chloride
Residential DW Criteria		13,000	430	880	7.0	70	100	5.0	200	5.0	5.0	2,600	2.0
Non-Residential DW Criteria		38,000	1,700	2,500	7.0	70	100	5.0	200	5.0	5.0	7,300	2.0
GSI Criteria		2,200	1,100	740	130	620	1,500[1]	60[1]	89	330[1]	200[1]	NC	13[1]
Residential GWSLs for Vapor Intrusion		4.5E+06	NC	130	390	440	330	11	15,000	NC	9.9	370	5.0
Non-Residential GWSLs for Vapor Intrusion		1.9E+07	NC	670	1,600	1,800	1,400	55	63,000	NC	42	1,600	50
Groundwater Contact Criteria		2.4E+08	4.4E+05	2.4E+06	11,000	2.0E+05	2.2E+05	12,000	1.3E+06	21,000	13,000[3]	1.1E+06	1,000
Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW-23 (17-22') Depth to Groundwater* Approx. 8 - 10'	12/8/2009	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**3.2**
	1/13/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**7.6**
	3/16/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**4.0**
	5/18/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**6.1**
	9/10/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**9.0**
	12/21/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**17**
	2/18/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**18**
	5/10/2011[4]	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**25**
	7/25/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**23**
	10/5/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**56**
	11/4/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**11**
	1/9/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**48**
	4/3/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**85**
	7/10/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**63**
	10/8/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**47**
	5/31/2013	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**88**
MW-24s (18.5'-23.5') Depth to Groundwater Approx. 19 - 21'	12/8/2009	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	3/15/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	5/12/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	9/8/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	12/14/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	2/14/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	5/9/2011[4]	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	7/19/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	10/4/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	1/5/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	4/2/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	7/5/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	10/3/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	5/29/2013	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0

Notes:

Health-Based Residential and Non-Residential Drinking Water (DW) Criteria, Groundwater/Surface Water Interface (GSI) Criteria and Groundwater Contact Criteria from MDEQ RRD Op Memo 1 Part 201 Generic Cleanup Criteria/Part 213 Risk Based Cleanup Levels, September 28, 2012. Groundwater Screening Levels (GWSLs) for Vapor Intrusion were calculated in accordance with the MDEQ Remediation and Redevelopment Division Program Redesign 2009 document titled Background Document: Draft Proposed Vapor Intrusion Indoor Air Criteria (IAC), Soil Gas Criteria (SGC), and Groundwater Screening Levels ($GW_{VI}SLs$) for Vapor Intrusion using both residential and non-residential exposure scenarios and the most recent chemical specific toxicity values accepted and/or published by the United States Environmental Protection Agency (USEPA) as of February 1, 2012.

ug/L = micrograms per liter; NC = No criteria; NA = Not analyzed

Bold font denotes concentrations detected above laboratory reporting limits

Denotes concentrations above one or more criteria

* An asterisk indicates that the depth to groundwater intersects or may periodically intersect an overlaying clay unit. The depth to the bottom of the upper clay unit is approximately 7.0 feet below ground surface (ft bgs) at MW-09s, 8.0 ft bgs at MW-20s (based on boring log for nearby soil boring B-29), 15.0 ft bgs at MW-23, 9.0 ft bgs at MW-27s, 20.5 ft bgs at MW-29d, and 14.0 ft bgs at MW-30s and MW-30d.

1) Criterion is not protective for surface water used as a drinking water source as described in footnote {X} of MDEQ Op Memo 1 Part 201, Attachment 1.
2) Compound may exhibit characteristic ignitability as defined in 40 C.F.R. § 261.21
3) At the request of USEPA, a site-specific groundwater contact criteria for trichloroethene (TCE) was recalculated to reflect revised TCE toxicity data which was published by USEPA on September 28, 2011.
4) The average temperature in this sample shipment exceeded the recommended temperature range. Sample results are approximate.
5) Quality control results for trichloroethene are outside the established control limits, the result is approximate.
6) Headspace present in the sample, results are approximate.

US EPA ARCHIVE DOCUMENT

Table 5
Summary of Detected Volatile Organic Compounds at Compliance Monitoring Well Locations
Former Tecumseh Products Company Site
Tecumseh, Michigan

Analyte		2-Butanone	Chloroethane	1,1-Dichloroethane	1,1-Dichloroethene[2]	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Tetrachloroethene	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Trichloroethene	Trichloro-fluoromethane	Vinyl Chloride
Residential DW Criteria		13,000	430	880	7.0	70	100	5.0	200	5.0	5.0	2,600	2.0
Non-Residential DW Criteria		38,000	1,700	2,500	7.0	70	100	5.0	200	5.0	5.0	7,300	2.0
GSI Criteria		2,200	1,100	740	130	620	1,500[1]	60[1]	89	330[1]	200[1]	NC	13[1]
Residential GWSLs for Vapor Intrusion		4.5E+06	NC	130	390	440	330	11	15,000	NC	9.9	370	5.0
Non-Residential GWSLs for Vapor Intrusion		1.9E+07	NC	670	1,600	1,800	1,400	55	63,000	NC	42	1,600	50
Groundwater Contact Criteria		2.4E+08	4.4E+05	2.4E+06	11,000	2.0E+05	2.2E+05	12,000	1.3E+06	21,000	13,000[3]	1.1E+06	1,000
Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW-24d (39-44') Depth to Groundwater Approx. 19 - 21'	12/8/2009	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	3/15/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	5/12/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	9/8/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	12/14/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	2/14/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	5/9/2011[4]	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	7/19/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	10/4/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	1/5/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	4/2/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	7/5/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	10/3/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	5/30/2013	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-25s (20-25') Depth to Groundwater Approx. 18 - 20'	12/10/2009	<5.0	<5.0	**1.7**	<1.0	**8.8**	<1.0	<1.0	**4.8**	<1.0	<1.0	<1.0	<1.0
	3/16/2010	<5.0	<5.0	**1.2**	<1.0	<1.0	<1.0	<1.0	**17**	<1.0	**1.1**	<1.0	<1.0
	5/14/2010	<5.0	<5.0	**1.2**	<1.0	<1.0	<1.0	<1.0	**18**	<1.0	**1.0**	<1.0	<1.0
	9/8/2010	<5.0	<5.0	**1.0**	<1.0	<1.0	<1.0	<1.0	**19**	<1.0	**1.4**	<1.0	<1.0
	12/22/2010	<5.0	<5.0	**1.2**	<1.0	<1.0	<1.0	<1.0	**26**	<1.0	**2.4**	<1.0	<1.0
	2/24/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	**19**	<1.0	**2.2**	<1.0	<1.0
	5/13/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	**21**	<1.0	**2.2**	<1.0	<1.0
	7/28/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	**19**	<1.0	**2.5**	<1.0	<1.0
	10/10/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	**20**	<1.0	**2.8**	<1.0	<1.0
	1/5/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	**20**	<1.0	**3.0**	<1.0	<1.0
	4/9/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	**20**	<1.0	**3.6**	<1.0	<1.0
	7/11/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	**21**	<1.0	**4.2**	<1.0	<1.0
	10/25/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	**19**	<1.0	**4.6**	<1.0	<1.0
	6/3/2013	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	**19**	<1.0	**6.1**	<1.0	<1.0
DUP-01 (MW-25s)	3/16/2010	<5.0	<5.0	**1.3**	<1.0	<1.0	<1.0	<1.0	**18**	<1.0	**1.0**	<1.0	<1.0

Notes:
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ug/L = micrograms per liter; NC = No criteria; NA = Not analyzed
Bold font denotes concentrations detected above laboratory reporting limits
Denotes concentrations above one or more criteria
* An asterisk indicates that the depth to groundwater intersects or may periodically intersect an overlaying clay unit. The depth to the bottom of the upper clay unit is approximately 7.0 feet below ground surface (ft bgs) at MW-09s, 8.0 ft bgs at MW-20s (based on boring log for nearby soil boring B-29), 15.0 ft bgs at MW-23, 9.0 ft bgs at MW-27s, 20.5 ft bgs at MW-29d, and 14.0 ft bgs at MW-30s and MW-30d.
1) Criterion is not protective for surface water used as a drinking water source as described in footnote {X} of MDEQ Op Memo 1 Part 201, Attachment 1.
2) Compound may exhibit characteristic ignitability as defined in 40 C.F.R. § 261.21
3) At the request of USEPA, a site-specific groundwater contact criteria for trichloroethene (TCE) was recalculated to reflect revised TCE toxicity data which was published by USEPA on September 28, 2011.
4) The average temperature in this sample shipment exceeded the recommended temperature range. Sample results are approximate.
5) Quality control results for trichloroethene are outside the established control limits, the result is approximate.
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Residential DW Criteria		13,000	430	880	7.0	70	100	5.0	200	5.0	5.0	2,600	2.0
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Groundwater Contact Criteria		2.4E+08	4.4E+05	2.4E+06	11,000	2.0E+05	2.2E+05	12,000	1.3E+06	21,000	13,000[3]	1.1E+06	1,000
Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW-26s (28-33') Depth to Groundwater Approx. 26 - 28'	4/6/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	5/14/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	9/8/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	12/17/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	2/17/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	5/12/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	7/25/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	10/7/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	1/5/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	4/5/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	7/9/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	10/2/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-27s (7-12') Depth to Groundwater* Approx. 3 - 4'	3/23/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	5/17/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**3.0**	<1.0	<1.0
	9/9/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	12/20/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	2/16/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**1.4**	<1.0	<1.0
	5/9/2011[4]	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**1.1**	<1.0	<1.0
	7/21/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	10/5/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	1/6/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	4/3/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	7/5/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	10/4/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	6/12/2013	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
DUP-02 (MW-27s)	9/9/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0

Notes:

Health-Based Residential and Non-Residential Drinking Water (DW) Criteria, Groundwater/Surface Water Interface (GSI) Criteria and Groundwater Contact Criteria from MDEQ RRD Op Memo 1 Part 201 Generic Cleanup Criteria/Part 213 Risk Based Cleanup Levels, September 28, 2012. Groundwater Screening Levels (GWSLs) for Vapor Intrusion were calculated in accordance with the MDEQ Remediation and Redevelopment Division Program Redesign 2009 document titled Background Document: Draft Proposed Vapor Intrusion Indoor Air Criteria (IAC), Soil Gas Criteria (SGC), and Groundwater Screening Levels (GW_{VI}SLs) for Vapor Intrusion using both residential and non-residential exposure scenarios and the most recent chemical specific toxicity values accepted and/or published by the United States Environmental Protection Agency (USEPA) as of February 1, 2012.

ug/L = micrograms per liter; NC = No criteria; NA = Not analyzed

Bold font denotes concentrations detected above laboratory reporting limits

Denotes concentrations above one or more criteria

* An asterisk indicates that the depth to groundwater intersects or may periodically intersect an overlaying clay unit. The depth to the bottom of the upper clay unit is approximately 7.0 feet below ground surface (ft bgs) at MW-09s, 8.0 ft bgs at MW-20s (based on boring log for nearby soil boring B-29), 15.0 ft bgs at MW-23, 9.0 ft bgs at MW-27s, 20.5 ft bgs at MW-29d, and 14.0 ft bgs at MW-30s and MW-30d.

1) Criterion is not protective for surface water used as a drinking water source as described in footnote {X} of MDEQ Op Memo 1 Part 201, Attachment 1.
2) Compound may exhibit characteristic ignitability as defined in 40 C.F.R. § 261.21
3) At the request of USEPA, a site-specific groundwater contact criteria for trichloroethene (TCE) was recalculated to reflect revised TCE toxicity data which was published by USEPA on September 28, 2011.
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5) Quality control results for trichloroethene are outside the established control limits, the result is approximate.
6) Headspace present in the sample, results are approximate.

US EPA ARCHIVE DOCUMENT

Table 5
Summary of Detected Volatile Organic Compounds at Compliance Monitoring Well Locations
Former Tecumseh Products Company Site
Tecumseh, Michigan

Analyte		2-Butanone	Chloroethane	1,1-Dichloroethane	1,1-Dichloroethene[2]	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Tetrachloroethene	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Trichloroethene	Trichloro-fluoromethane	Vinyl Chloride
Residential DW Criteria		13,000	430	880	7.0	70	100	5.0	200	5.0	5.0	2,600	2.0
Non-Residential DW Criteria		38,000	1,700	2,500	7.0	70	100	5.0	200	5.0	5.0	7,300	2.0
GSI Criteria		2,200	1,100	740	130	620	1,500[1]	60[1]	89	330[1]	200[1]	NC	13[1]
Residential GWSLs for Vapor Intrusion		4.5E+06	NC	130	390	440	330	11	15,000	NC	9.9	370	5.0
Non-Residential GWSLs for Vapor Intrusion		1.9E+07	NC	670	1,600	1,800	1,400	55	63,000	NC	42	1,600	50
Groundwater Contact Criteria		2.4E+08	4.4E+05	2.4E+06	11,000	2.0E+05	2.2E+05	12,000	1.3E+06	21,000	13,000[3]	1.1E+06	1,000
Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW-27d (37.5-42.5') Depth to Groundwater Approx. 24 - 25'	3/23/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	5/17/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	9/9/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	12/20/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	2/16/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	5/9/2011[4]	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	7/22/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	10/5/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	1/6/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	4/3/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	7/5/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	10/4/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	6/12/2013	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-28s (25-30') Depth to Groundwater Approx. 25 - 27'	3/23/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	5/17/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	9/9/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	12/17/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	2/16/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	5/12/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	7/22/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	10/7/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	1/6/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**1.1**	<1.0	<1.0
	4/5/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	7/6/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	10/12/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0

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2) Compound may exhibit characteristic ignitability as defined in 40 C.F.R. § 261.21
3) At the request of USEPA, a site-specific groundwater contact criteria for trichloroethene (TCE) was recalculated to reflect revised TCE toxicity data which was published by USEPA on September 28, 2011.
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Residential DW Criteria		13,000	430	880	7.0	70	100	5.0	200	5.0	5.0	2,600	2.0
Non-Residential DW Criteria		38,000	1,700	2,500	7.0	70	100	5.0	200	5.0	5.0	7,300	2.0
GSI Criteria		2,200	1,100	740	130	620	1,500[1]	60[1]	89	330[1]	200[1]	NC	13[1]
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Groundwater Contact Criteria		2.4E+08	4.4E+05	2.4E+06	11,000	2.0E+05	2.2E+05	12,000	1.3E+06	21,000	13,000[3]	1.1E+06	1,000
Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW-28d (49-54') Depth to Groundwater Approx. 25 - 27'	3/23/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	5/17/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	9/9/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	12/17/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	2/16/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	5/12/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	7/22/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	10/7/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	1/6/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	4/5/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	7/6/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	10/19/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
DUP-03 (MW-28d)	10/19/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-29s (13-18') Depth to Groundwater Approx. 15 - 16'	3/18/2010	<5.0	<5.0	<1.0	<1.0	**1.3**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	5/17/2010	<5.0	<5.0	<1.0	<1.0	**1.2**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	9/9/2010	<5.0	<5.0	<1.0	<1.0	**1.4**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	12/15/2010	<5.0	<5.0	<1.0	<1.0	**1.5**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	2/15/2011	<5.0	<5.0	<1.0	<1.0	**1.7**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	5/12/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	7/20/2011	<5.0	<5.0	<1.0	<1.0	**1.1**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	10/10/2011	<5.0	<5.0	<1.0	<1.0	**1.3**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	1/6/2012	<5.0	<5.0	<1.0	<1.0	**1.2**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	4/5/2012	<5.0	<5.0	<1.0	<1.0	**1.1**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	7/9/2012	<5.0	<5.0	<1.0	<1.0	**1.1**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	10/12/2012	<5.0	<5.0	<1.0	<1.0	**1.5**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	5/30/2013	<5.0	<5.0	<1.0	<1.0	**1.2**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0

Notes:

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Residential DW Criteria		13,000	430	880	7.0	70	100	5.0	200	5.0	5.0	2,600	2.0
Non-Residential DW Criteria		38,000	1,700	2,500	7.0	70	100	5.0	200	5.0	5.0	7,300	2.0
GSI Criteria		2,200	1,100	740	130	620	1,500[1]	60[1]	89	330[1]	200[1]	NC	13[1]
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Groundwater Contact Criteria		2.4E+08	4.4E+05	2.4E+06	11,000	2.0E+05	2.2E+05	12,000	1.3E+06	21,000	13,000[3]	1.1E+06	1,000
Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW-29d (58.5-63.5') Depth to Groundwater* Approx. 18 - 19'	3/18/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	5/17/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	9/9/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	12/15/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	2/15/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	5/12/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	7/20/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	10/10/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	1/6/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	4/5/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	7/9/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	10/19/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	5/30/2013	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-30s (11-16') Depth to Groundwater* Approx. 9 - 11'	3/23/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	5/17/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	9/9/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	12/16/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	2/15/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	5/13/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	7/20/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	10/10/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	1/6/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	4/9/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	7/9/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	10/19/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	5/30/2013	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0

Notes:

Health-Based Residential and Non-Residential Drinking Water (DW) Criteria, Groundwater/Surface Water Interface (GSI) Criteria and Groundwater Contact Criteria from MDEQ RRD Op Memo 1 Part 201 Generic Cleanup Criteria/Part 213 Risk Based Cleanup Levels, September 28, 2012. Groundwater Screening Levels (GWSLs) for Vapor Intrusion were calculated in accordance with the MDEQ Remediation and Redevelopment Division Program Redesign 2009 document titled Background Document: Draft Proposed Vapor Intrusion Indoor Air Criteria (IAC), Soil Gas Criteria (SGC), and Groundwater Screening Levels (GW_{VI}SLs) for Vapor Intrusion using both residential and non-residential exposure scenarios and the most recent chemical specific toxicity values accepted and/or published by the United States Environmental Protection Agency (USEPA) as of February 1, 2012.

ug/L = micrograms per liter; NC = No criteria; NA = Not analyzed

Bold font denotes concentrations detected above laboratory reporting limits

Denotes concentrations above one or more criteria

* An asterisk indicates that the depth to groundwater intersects or may periodically intersect an overlaying clay unit. The depth to the bottom of the upper clay unit is approximately 7.0 feet below ground surface (ft bgs) at MW-09s, 8.0 ft bgs at MW-20s (based on boring log for nearby soil boring B-29), 15.0 ft bgs at MW-23, 9.0 ft bgs at MW-27s, 20.5 ft bgs at MW-29d, and 14.0 ft bgs at MW-30s and MW-30d.

1) Criterion is not protective for surface water used as a drinking water source as described in footnote {X} of MDEQ Op Memo 1 Part 201, Attachment 1.
2) Compound may exhibit characteristic ignitability as defined in 40 C.F.R. § 261.21
3) At the request of USEPA, a site-specific groundwater contact criteria for trichloroethene (TCE) was recalculated to reflect revised TCE toxicity data which was published by USEPA on September 28, 2011.
4) The average temperature in this sample shipment exceeded the recommended temperature range. Sample results are approximate.
5) Quality control results for trichloroethene are outside the established control limits, the result is approximate.
6) Headspace present in the sample, results are approximate.

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Table 5
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Former Tecumseh Products Company Site
Tecumseh, Michigan

Analyte		2-Butanone	Chloroethane	1,1-Dichloroethane	1,1-Dichloroethene[2]	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Tetrachloroethene	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Trichloroethene	Trichloro-fluoromethane	Vinyl Chloride
Residential DW Criteria		13,000	430	880	7.0	70	100	5.0	200	5.0	5.0	2,600	2.0
Non-Residential DW Criteria		38,000	1,700	2,500	7.0	70	100	5.0	200	5.0	5.0	7,300	2.0
GSI Criteria		2,200	1,100	740	130	620	1,500[1]	60[1]	89	330[1]	200[1]	NC	13[1]
Residential GWSLs for Vapor Intrusion		4.5E+06	NC	130	390	440	330	11	15,000	NC	9.9	370	5.0
Non-Residential GWSLs for Vapor Intrusion		1.9E+07	NC	670	1,600	1,800	1,400	55	63,000	NC	42	1,600	50
Groundwater Contact Criteria		2.4E+08	4.4E+05	2.4E+06	11,000	2.0E+05	2.2E+05	12,000	1.3E+06	21,000	13,000[3]	1.1E+06	1,000
Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW-30d (25.5-30.5') Depth to Groundwater* Approx. 9 - 11'	3/23/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	5/17/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	9/9/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	12/16/2010	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	2/15/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	5/13/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	7/20/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	10/10/2011	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	1/6/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	4/9/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	7/9/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	10/19/2012	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	5/30/2013	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-31 (33.3-38.3') Depth to Groundwater Approx. 32 - 33'	6/18/2010	<5.0	<5.0	**14**	<1.0	**19**	**2.2**	<1.0	**20**	<1.0	**180**	<1.0	<1.0
	9/17/2010	<10	<10	<2.0	<2.0	**15**	<2.0	<2.0	**48**	<2.0	**220**	<2.0	**2.5**
	12/22/2010[5]	<10	<10	**16**	<2.0	**29**	**2.9**	<2.0	**27**	<2.0	**260**	<2.0	<2.0
	2/24/2011	<10	<10	**16**	<2.0	**31**	**3.1**	<2.0	**26**	<2.0	**300**	<2.0	<2.0
	5/11/2011[4]	<10	<10	**15**	<2.0	**24**	**3.0**	<2.0	**22**	<2.0	**250**	<2.0	<2.0
	7/21/2011	<5.0	<5.0	**7.4**	<1.0	**14**	**1.2**	<1.0	**11**	<1.0	**130**	<1.0	<1.0
	10/4/2011	<5.0	<5.0	**18**	<1.0	**40**	**3.4**	<1.0	**28**	<1.0	**340**	<1.0	<1.0
	1/10/2012	<10	<10	**17**	<2.0	**35**	**3.1**	<2.0	**24**	<2.0	**290**	<2.0	<2.0
	4/5/2012	<10	<10	**16**	<2.0	**36**	**3.1**	<2.0	**24**	<2.0	**290**	<2.0	<2.0
	7/17/2012	<20	<20	**16**	<4.0	**34**	<4.0	<4.0	**23**	<4.0	**310**	<4.0	<4.0
	10/3/2012	**16**	<12	**15**	<2.5	**40**	**3.4**	<2.5	**26**	<2.5	**340**	<2.5	<2.5
	3/6/2013	<12	<12	**13**	<2.5	**32**	**2.9**	<2.5	**23**	<2.5	**270**	<2.5	<2.5
	5/29/2013	<12	<12	**15**	<2.5	**39**	**2.9**	<2.5	**23**	<2.5	**300**	<2.5	<2.5
DUP-01 (MW-31)	6/18/2010	<5.0	<5.0	**12**	<1.0	**19**	**2.3**	<1.0	**21**	<1.0	**170**	<1.0	<1.0

Notes:
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ug/L = micrograms per liter; NC = No criteria; NA = Not analyzed
Bold font denotes concentrations detected above laboratory reporting limits
Denotes concentrations above one or more criteria
* An asterisk indicates that the depth to groundwater intersects or may periodically intersect an overlaying clay unit. The depth to the bottom of the upper clay unit is approximately 7.0 feet below ground surface (ft bgs) at MW-09s, 8.0 ft bgs at MW-20s (based on boring log for nearby soil boring B-29), 15.0 ft bgs at MW-23, 9.0 ft bgs at MW-27s, 20.5 ft bgs at MW-29d, and 14.0 ft bgs at MW-30s and MW-30d.
1) Criterion is not protective for surface water used as a drinking water source as described in footnote {X} of MDEQ Op Memo 1 Part 201, Attachment 1.
2) Compound may exhibit characteristic ignitability as defined in 40 C.F.R. § 261.21
3) At the request of USEPA, a site-specific groundwater contact criteria for trichloroethene (TCE) was recalculated to reflect revised TCE toxicity data which was published by USEPA on September 28, 2011.
4) The average temperature in this sample shipment exceeded the recommended temperature range. Sample results are approximate.
5) Quality control results for trichloroethene are outside the established control limits, the result is approximate.
6) Headspace present in the sample, results are approximate.

US EPA ARCHIVE DOCUMENT

Table 5
Summary of Detected Volatile Organic Compounds at Compliance Monitoring Well Locations
Former Tecumseh Products Company Site
Tecumseh, Michigan

Analyte		2-Butanone	Chloroethane	1,1-Dichloroethane	1,1-Dichloroethene[2]	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Tetrachloroethene	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Trichloroethene	Trichloro-fluoromethane	Vinyl Chloride
Residential DW Criteria		13,000	430	880	7.0	70	100	5.0	200	5.0	5.0	2,600	2.0
Non-Residential DW Criteria		38,000	1,700	2,500	7.0	70	100	5.0	200	5.0	5.0	7,300	2.0
GSI Criteria		2,200	1,100	740	130	620	1,500[1]	60[1]	89	330[1]	200[1]	NC	13[1]
Residential GWSLs for Vapor Intrusion		4.5E+06	NC	130	390	440	330	11	15,000	NC	9.9	370	5.0
Non-Residential GWSLs for Vapor Intrusion		1.9E+07	NC	670	1,600	1,800	1,400	55	63,000	NC	42	1,600	50
Groundwater Contact Criteria		2.4E+08	4.4E+05	2.4E+06	11,000	2.0E+05	2.2E+05	12,000	1.3E+06	21,000	13,000[3]	1.1E+06	1,000
Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW-32s (23-28') Depth to Groundwater Approx. 23 - 25'	9/17/2010	<100	<100	**150**	<20	**270**	**26**	<20	**220**	<20	**2,400**	<20	<20
	11/18/2010	<100	<100	<20	<20	**190**	<20	<20	**560**	<20	**2,800**	<20	<20
	12/28/2010	<100	<100	<20	<20	**200**	<20	<20	**510**	<20	**2,300**	<20	<20
	2/25/2011	<100	<100	<20	<20	**190**	<20	<20	**420**	<20	**2,300**	<20	<20
	5/10/2011[4]	<100	<100	<20	<20	**170**	<20	<20	**380**	<20	**2,300**	<20	**31**
	7/28/2011	<100	<100	<20	<20	**140**	<20	<20	**380**	<20	**2,400**	<20	<20
	10/6/2011	<100	<100	<20	<20	**160**	<20	<20	**350**	<20	**2,200**	<20	<20
	1/10/2012	<100	<100	<20	<20	**170**	<20	<20	**400**	<20	**2,300**	<20	<20
	4/4/2012	<100	<100	<20	<20	**130**	<20	<20	**340**	<20	**2,200**	<20	<20
	7/11/2012	<100	<100	<20	<20	**85**	<20	<20	**370**	<20	**2,200**	<20	<20
	10/10/2012	<100	<100	<20	<20	**89**	<20	<20	**280**	<20	**1,600**	<20	<20
	5/20/2013	<100	<100	<20	<20	**89**	<20	<20	**220**	<20	**1,400**	<20	<20
MW-32d (35-40') Depth to Groundwater Approx. 23 - 24'	5/20/2013	<5.0	<5.0	<1.0	<1.0	**2.0**	**3.2**	<1.0	<1.0	<1.0	**53**	<1.0	<1.0
MW-33s (21-26') Depth to Groundwater Approx. 20 - 22'	9/17/2010	<5.0	<5.0	**12**	<1.0	**13**	<1.0	<1.0	<1.0	<1.0	**76**	<1.0	**64**
	11/18/2010	<5.0	<5.0	**14**	<1.0	**22**	<1.0	<1.0	**1.1**	<1.0	**150**	<1.0	**56**
	12/22/2010	<5.0	<5.0	**14**	<1.0	**22**	**1.2**	<1.0	**1.0**	<1.0	**130**	<1.0	**57**
	2/24/2011	<5.0	<5.0	**12**	<1.0	**20**	**1.0**	<1.0	<1.0	<1.0	**110**	<1.0	**60**
	5/10/2011[4]	<10	<10	**11**	<2.0	**21**	<2.0	<2.0	<2.0	<2.0	**220**	<2.0	**55**
	7/28/2011	<10	<10	**8.9**	<2.0	**18**	<2.0	<2.0	<2.0	<2.0	**260**	<2.0	**22**
	10/6/2011	<10	<10	**11**	<2.0	**19**	<2.0	<2.0	<2.0	<2.0	**220**	<2.0	**48**
	1/9/2012[6]	<5.0	**8.9**	**15**	<1.0	**20**	**1.0**	<1.0	**1.3**	<1.0	**170**	<1.0	**51**
	4/4/2012	<5.0	**5.6**	**17**	<1.0	**21**	<1.0	<1.0	**1.2**	<1.0	**170**	<1.0	**48**
	7/11/2012	<5.0	**13**	**25**	<1.0	**32**	**1.3**	<1.0	<1.0	<1.0	**130**	<1.0	**52**
	10/10/2012	<5.0	**12**	**23**	<1.0	**31**	**1.2**	<1.0	<1.0	<1.0	**120**	<1.0	**57**
	5/20/2013	<5.0	**9.4**	**16**	<1.0	**23**	<1.0	<1.0	<1.0	<1.0	**98**	<1.0	**100**
DUP-01 (MW-33s)	11/18/2010	<5.0	<5.0	**14**	<1.0	**23**	<1.0	<1.0	**1.2**	<1.0	**150**	<1.0	**55**

Notes:

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Residential DW Criteria		13,000	430	880	7.0	70	100	5.0	200	5.0	5.0	2,600	2.0
Non-Residential DW Criteria		38,000	1,700	2,500	7.0	70	100	5.0	200	5.0	5.0	7,300	2.0
GSI Criteria		2,200	1,100	740	130	620	1,500[1]	60[1]	89	330[1]	200[1]	NC	13[1]
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Groundwater Contact Criteria		2.4E+08	4.4E+05	2.4E+06	11,000	2.0E+05	2.2E+05	12,000	1.3E+06	21,000	13,000[3]	1.1E+06	1,000
Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW-34s (23-28') Depth to Groundwater Approx. 23 - 25'	9/17/2010	<100	<100	<20	<20	<20	<20	<20	**1,600**	<20	**1,100**	<20	<20
	11/18/2010	<100	<100	<20	<20	<20	<20	<20	**1,600**	<20	**1,200**	<20	<20
	12/28/2010	<50	<50	<10	**13**	<10	<10	<10	**1,400**	<10	**1,000**	<10	<10
	2/25/2011	<50	<50	<10	<10	<10	<10	<10	**1,100**	<10	**900**	<10	<10
	5/10/2011[4]	<50	<50	<10	<10	<10	<10	<10	**1,200**	<10	**970**	<10	<10
	7/28/2011	<50	<50	<10	<10	<10	<10	<10	**1,300**	<10	**1,100**	<10	<10
	10/6/2011	<50	<50	<10	<10	<10	<10	<10	**1,200**	<10	**1,000**	<10	<10
	1/10/2012	<50	<50	<10	**14**	<10	<10	<10	**1,500**	<10	**1,100**	<10	<10
	4/4/2012	<50	<50	<10	<10	<10	<10	<10	**1,400**	<10	**1,200**	<10	<10
	7/11/2012	<50	<50	<10	<10	<10	<10	<10	**1,400**	<10	**1,100**	<10	<10
	10/10/2012	<50	<50	<10	<10	<10	<10	<10	**1,400**	<10	**1,100**	<10	<10
	5/20/2013	<50	<50	<10	<10	<10	<10	<10	**720**	<10	**730**	<10	<10
DUP-01 (MW-34s)	5/20/2013	<50	<50	<10	<10	<10	<10	<10	**730**	<10	**730**	<10	<10
MW-34d (45-50') Depth to Groundwater Approx. 23 - 24'	5/20/2013	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-35i (20.5-22.5') Depth to Groundwater Approx. 16 - 17'	10/29/2012	<250	<250	<50	**94**	<50	<50	<50	**4,500**	<50	**3,000**	<50	<50
	3/27/2013	<250	<250	<50	**110**	<50	<50	<50	**4,500**	<50	**2,700**	<50	<50
	6/5/2013	<250	<250	<50	**160**	<50	<50	<50	**6,400**	<50	**4,300**	<50	<50
MW-35d (42.5-44.5') Depth to Groundwater Approx. 15 - 16'	7/24/2012	<5.0	<5.0	<1.0	<1.0	**180**	**53**	<1.0	**1.5**	<1.0	**20**	<1.0	**22**
	10/25/2012	<5.0	<5.0	<1.0	<1.0	**3.8**	**1.2**	<1.0	<1.0	<1.0	**2.2**	<1.0	**19**
	3/6/2013	<5.0	<5.0	<1.0	<1.0	**1.6**	<1.0	<1.0	<1.0	<1.0	**1.6**	<1.0	**24**
	6/11/2013	<5.0	<5.0	<1.0	<1.0	**2.3**	<1.0	<1.0	<1.0	<1.0	**1.7**	<1.0	**23**
MW-36s (16.5-21.5') Depth to Groundwater Approx. 16 - 17'	4/3/2013	<12	**19**	**15**	**2.7**	**140**	**18**	<2.5	**35**	**2.9**	**260**	<2.5	**12**
	5/31/2013	<12	**20**	**14**	**2.6**	**150**	**18**	<2.5	**29**	<2.5	**280**	<2.5	**11**
MW-36d (31-36') Depth to Groundwater Approx. 16 - 17'	4/2/2013	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	6/11/2013	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-37s (25.5-30.5') Depth to Groundwater Approx. 25 - 26'	4/3/2013	<25	<25	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	**570**	<5.0	<5.0
	6/3/2013	<25	<25	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	**580**	<5.0	<5.0
MW-38s (9-14') Depth to Groundwater Approx. 9 - 10'	4/3/2013	<10	<10	**13**	<2.0	**22**	**2.7**	<2.0	**18**	<2.0	**210**	<2.0	**16**
	6/3/2013	<10	<10	**15**	<2.0	**30**	**2.6**	<2.0	**18**	<2.0	**230**	<2.0	**16**
MW-38d (29-34') Depth to Groundwater Approx. 30 - 32'	4/3/2013	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**11**	<1.0	<1.0
	6/12/2013	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**1.8**	<1.0	<1.0

Notes:

Health-Based Residential and Non-Residential Drinking Water (DW) Criteria, Groundwater/Surface Water Interface (GSI) Criteria and Groundwater Contact Criteria from MDEQ RRD Op Memo 1 Part 201 Generic Cleanup Criteria/Part 213 Risk Based Cleanup Levels, September 28, 2012. Groundwater Screening Levels (GWSLs) for Vapor Intrusion were calculated in accordance with the MDEQ Remediation and Redevelopment Division Program Redesign 2009 document titled Background Document: Draft Proposed Vapor Intrusion Indoor Air Criteria (IAC), Soil Gas Criteria (SGC), and Groundwater Screening Levels (GW_{VI}SLs) for Vapor Intrusion using both residential and non-residential exposure scenarios and the most recent chemical specific toxicity values accepted and/or published by the United States Environmental Protection Agency (USEPA) as of February 1, 2012.

ug/L = micrograms per liter; NC = No criteria; NA = Not analyzed

Bold font denotes concentrations detected above laboratory reporting limits

Denotes concentrations above one or more criteria

* An asterisk indicates that the depth to groundwater intersects or may periodically intersect an overlaying clay unit. The depth to the bottom of the upper clay unit is approximately 7.0 feet below ground surface (ft bgs) at MW-09s, 8.0 ft bgs at MW-20s (based on boring log for nearby soil boring B-29), 15.0 ft bgs at MW-23, 9.0 ft bgs at MW-27s, 20.5 ft bgs at MW-29d, and 14.0 ft bgs at MW-30s and MW-30d.

1) Criterion is not protective for surface water used as a drinking water source as described in footnote {X} of MDEQ Op Memo 1 Part 201, Attachment 1.
2) Compound may exhibit characteristic ignitability as defined in 40 C.F.R. § 261.21
3) At the request of USEPA, a site-specific groundwater contact criteria for trichloroethene (TCE) was recalculated to reflect revised TCE toxicity data which was published by USEPA on September 28, 2011.
4) The average temperature in this sample shipment exceeded the recommended temperature range. Sample results are approximate.
5) Quality control results for trichloroethene are outside the established control limits, the result is approximate.
6) Headspace present in the sample, results are approximate.

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Table 5
Summary of Detected Volatile Organic Compounds at Compliance Monitoring Well Locations
Former Tecumseh Products Company Site
Tecumseh, Michigan

Analyte		2-Butanone	Chloroethane	1,1-Dichloroethane	1,1-Dichloroethene[2]	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Tetrachloroethene	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Trichloroethene	Trichloro-fluoromethane	Vinyl Chloride
Residential DW Criteria		13,000	430	880	7.0	70	100	5.0	200	5.0	5.0	2,600	2.0
Non-Residential DW Criteria		38,000	1,700	2,500	7.0	70	100	5.0	200	5.0	5.0	7,300	2.0
GSI Criteria		2,200	1,100	740	130	620	1,500[1]	60[1]	89	330[1]	200[1]	NC	13[1]
Residential GWSLs for Vapor Intrusion		4.5E+06	NC	130	390	440	330	11	15,000	NC	9.9	370	5.0
Non-Residential GWSLs for Vapor Intrusion		1.9E+07	NC	670	1,600	1,800	1,400	55	63,000	NC	42	1,600	50
Groundwater Contact Criteria		2.4E+08	4.4E+05	2.4E+06	11,000	2.0E+05	2.2E+05	12,000	1.3E+06	21,000	13,000[3]	1.1E+06	1,000
Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW-39s (15.5-20.5') Depth to Groundwater Approx. 15 - 16'	4/3/2013	<50	<50	**86**	**17**	**56**	<10	<10	**86**	<10	**810**	<10	<10
	6/3/2013	<50	<50	**90**	**18**	**71**	<10	<10	**84**	<10	**870**	<10	<10
MW-39d (34-39') Depth to Groundwater Approx. 15 - 16'	4/2/2013	<5.0	<5.0	<1.0	<1.0	**2.6**	**2.5**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	6/11/2013	<5.0	<5.0	<1.0	<1.0	**3.2**	**2.5**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-40s (20-25') Depth to Groundwater Approx. 22 - 23'	4/3/2013	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	6/12/2013	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-40d (37.5-42.5') Depth to Groundwater Approx. 21 - 22'	4/3/2013	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	6/12/2013	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0

Notes:

Health-Based Residential and Non-Residential Drinking Water (DW) Criteria, Groundwater/Surface Water Interface (GSI) Criteria and Groundwater Contact Criteria from MDEQ RRD Op Memo 1 Part 201 Generic Cleanup Criteria/Part 213 Risk Based Cleanup Levels, September 28, 2012. Groundwater Screening Levels (GWSLs) for Vapor Intrusion were calculated in accordance with the MDEQ Remediation and Redevelopment Division Program Redesign 2009 document titled Background Document: Draft Proposed Vapor Intrusion Indoor Air Criteria (IAC), Soil Gas Criteria (SGC), and Groundwater Screening Levels (GW_{VI}SLs) for Vapor Intrusion using both residential and non-residential exposure scenarios and the most recent chemical specific toxicity values accepted and/or published by the United States Environmental Protection Agency (USEPA) as of February 1, 2012.

ug/L = micrograms per liter; NC = No criteria; NA = Not analyzed

Bold font denotes concentrations detected above laboratory reporting limits

Denotes concentrations above one or more criteria

* An asterisk indicates that the depth to groundwater intersects or may periodically intersect an overlaying clay unit. The depth to the bottom of the upper clay unit is approximately 7.0 feet below ground surface (ft bgs) at MW-09s, 8.0 ft bgs at MW-20s (based on boring log for nearby soil boring B-29), 15.0 ft bgs at MW-23, 9.0 ft bgs at MW-27s, 20.5 ft bgs at MW-29d, and 14.0 ft bgs at MW-30s and MW-30d.

1) Criterion is not protective for surface water used as a drinking water source as described in footnote {X} of MDEQ Op Memo 1 Part 201, Attachment 1.
2) Compound may exhibit characteristic ignitability as defined in 40 C.F.R. § 261.21
3) At the request of USEPA, a site-specific groundwater contact criteria for trichloroethene (TCE) was recalculated to reflect revised TCE toxicity data which was published by USEPA on September 28, 2011.
4) The average temperature in this sample shipment exceeded the recommended temperature range. Sample results are approximate.
5) Quality control results for trichloroethene are outside the established control limits, the result is approximate.
6) Headspace present in the sample, results are approximate.

US EPA ARCHIVE DOCUMENT

Table 2
Summary of Detected Volatile Organic Compounds at Source Area Grab Groundwater Sample Locations
Former Tecumseh Products Company Site
Tecumseh, Michigan

Analyte			Benzene[1]	n-Butyl-benzene	Chloroethane	Chloroform	1,1-Dichloro-ethane	1,1-Dichloro-ethene[1]	cis-1,2-Dichloro-ethene	trans-1,2-Dichloro-ethene	Ethyl-benzene[1]	Naphthalene	n-Propyl-benzene[1]	Tetra-chloroethene	Toluene[1]	1,1,1-Tri-chloroethane	1,1,2-Tri-chloroethane	Trichloro-ethene	1,2,4-Trimethyl-benzene[1]	1,3,5-Trimethyl-benzene[1]	Vinyl Chloride	Total Xylenes
Health-Based Residential DW Criteria			5.0	80	430	80	880	7.0	70	100	700	520	80	5.0	1,000	200	5.0	5.0	1,000	1,000	2.0	10,000
Health-Based Non-Residential DW Criteria			5.0	230	1,700	80	2,500	7.0	70	100	700	1,500	230	5.0	1,000	200	5.0	5.0	2,900	2,900	2.0	10,000
Residential GWSL for Vapor Intrusion			NC	NC	NC	NC	130	390	440	330	NC	NC	NC	11	NC	15,000	NC	9.9	NC	NC	5.0	NC
Non-Residential GWSL for Vapor Intrusion			NC	NC	NC	NC	670	1,600	1,800	1,400	NC	NC	NC	55	NC	63,000	NC	42	NC	NC	50	NC
GSI Criteria			200[2]	NC	1,100[2]	350	740	130	620	1,500[2]	18	11	NC	60[2]	270	89	330[2]	200[2]	17	45	13[2]	41
Groundwater Contact Criteria			11,000	5,900	4.4E+05	1.5E+05	2.4E+06	11,000	2.0E+05	2.2E+05	1.7E+05	31,000	15,000	12,000	5.3E+05	1.3E+06	21,000	13,000[4]	56,000	61,000	1,000	1.90E+05
Units			ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sample Location and Screen Interval	Sample Collection Date	Approx. Depth to Groundwater (ft)[3]																				
GP-01 (26-30')	12/15/2008	25.0	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<3
GP-02 (20-24')	12/15/2008	23.0	<1	<1	<1	<1	**11**	**17**	**210**	**4**	<1	<5	<1	**2**	<1	**16**	<1	**920**	<1	<1	<1	<3
GP-03 (20-24')	12/15/2008	23.0	<1	<1	**43**	<1	**25**	**2**	**760**	**27**	<1	<5	<1	<1	<1	<1	<1	**510**	<1	<1	<1	<3
GP-04 (25-29')	12/15/2008	23.0	<1	<1	**9**	<1	**18**	**4**	**240**	**22**	<1	<5	<1	<1	<1	<1	<1	**320**	<1	<1	<1	<3
GP-05 (25-29')	12/15/2008	23.0	<1	<1	**23**	<1	**160**	**10**	**510**	**12**	<1	<5	<1	<1	<1	<1	<1	**660**	<1	<1	<1	<3
GP-06 (25-29')	12/15/2008	23.0	**3**	<1	**11**	<1	**84**	**70**	**120**	**1**	<1	<5	<1	<1	<1	**60**	<1	**550**	<1	<1	<1	<3
GP-07 (25-29')	12/16/2008	23.0	<1	<1	**5**	<1	<1	**3**	**4**	<1	<1	<5	<1	<1	<1	**3**	<1	**300**	<1	<1	<1	<3
GP-08 (26-30')	12/16/2008	27.0	<1	<1	<1	<1	**9**	<1	**160**	**11**	<1	**10**	<1	<1	<1	<1	<1	**49**	<1	<1	<1	<3
GP-09 (25-29')	12/16/2008	27.0	<1	<1	<1	<1	**89**	**26**	**9**	**2**	<1	<5	<1	<1	<1	**31**	<1	**540**	<1	<1	<1	<3
GP-10 (20-24')	12/16/2008	19.0	<1	<1	<1	**1**	**3**	**76**	**36**	<1	<1	<5	<1	<1	<1	**34**	**4**	**370**	<1	<1	<1	<3
GP-11 (20-24')	12/16/2008	20.0	<1	**3**	<1	<1	<1	**3**	**15**	<1	**3**	<5	**7**	<1	<1	**4**	<1	**100**	**64**	**35**	<1	<3
GP-12 (20-24')	12/16/2008	19.0	<1	<1	<1	**3**	**3**	**320**	**7**	<1	<1	<5	<1	<1	<1	**390**	<1	**530**	<1	<1	<1	<3
GP-13 (25-29')	12/16/2008	25.0	<1	<1	<1	<1	<1	**6**	**1**	<1	<1	<5	<1	<1	<1	**6**	<1	**210**	<1	<1	<1	<3
GP-14 (25-29')	12/22/2008	24.0	<1	<1	<1	<1	**8**	**31**	<1	<1	<1	<5	<1	**12**	<1	**260**	**1**	**190**	<1	<1	<1	<3
GP-15 (20-24')	12/22/2008	23.0	<1	<1	<1	<1	**31**	**12**	**120**	**3**	<1	<5	<1	**3**	<1	**150**	<1	**450**	<1	<1	<1	<3
GP-16 (25-29')	12/22/2008	24.0	**9**	<1	<1	<1	**30**	**2**	**3**	**1**	**3**	<5	<1	<1	**3**	**16**	**2**	**8**	**4**	**1**	<1	**10**
GP-17 (25-29')	12/22/2008	23.5	<1	<1	<1	<1	**47**	**18**	<1	<1	<1	<5	<1	**1**	<1	**200**	<1	**200**	<1	<1	<1	<3
GP-18 (20-24')	12/22/2008	22.0	<1	<1	<1	<1	<1	<1	**1**	<1	<1	<5	<1	**1**	<1	**3**	<1	**190**	<1	<1	<1	<3
GP-19 (25-29')	12/22/2008	22.0	<1	<1	<1	<1	<1	**11**	<1	<1	<1	<5	<1	<1	<1	**71**	<1	**86**	<1	<1	<1	<3
GP-21 (20-24')	1/14/2009	23.0	<20	<20	<20	<20	**47**	**920**	<20	<20	<20	<5	<20	<20	<20	**8,500**	<20	**1,700**	<20	<20	<20	<60
GP-22 (22-26')	1/14/2009	22.0	<20	<20	<20	<20	**160**	**210**	**160**	<20	<20	<5	<20	<20	<20	**3,500**	<20	**1,600**	<20	<20	<20	<30
GP-22 (41-45')	1/14/2009	22.0	<1	<1	<1	<1	**6**	**10**	**81**	**21**	<1	<5	<1	<1	<1	**38**	<1	**560**	<1	<1	<1	<3
GP-23 (22-26')	1/14/2009	19.0	<1	<1	<1	<1	**32**	<1	**430**	**27**	<1	<5	<1	<1	<1	<1	<1	**300**	<1	<1	<1	<3
GP-23 (31-35')	1/14/2009	19.0	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<3
GP-24 (10-14')	1/14/2009	8.0*	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	**48**	<1	<1	<1	<3
GP-25 (25-29')	1/15/2009	22.0	<1	<1	<1	<1	**87**	<1	**170**	**10**	<1	<5	<1	<1	<1	<1	<1	**240**	<1	<1	<1	<3
GP-26 (25-29')	1/15/2009	25.0	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<3
GP-27 (25-29')	1/15/2009	24.0	<1	<1	<1	<1	<1	**14**	<1	<1	<1	<5	<1	<1	<1	**120**	<1	**170**	<1	<1	<1	<3
GP-28 (22-26')	1/15/2009	23.0	<1	<1	<1	<1	**23**	**36**	<1	<1	<1	<5	<1	**5**	<1	**540**	<1	**110**	<1	<1	<1	<3
GP-28 (41-45')	1/15/2009	23.0	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<3
GP-29 (22-26')	1/15/2009	23.0	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	**34**	<1	<1	<1	<3

Notes:
Health-Based Residential and Non-Residential Drinking Water (DW) Criteria, Groundwater/Surface Water Interface (GSI) Criteria and Groundwater Contact Criteria from MDEQ RRD Op Memo 1 Part 201 Generic Cleanup Criteria/Part 213 Risk Based Cleanup Levels, March 25, 2011. Groundwater Screening Levels (GWSLs) for Vapor Intrusion were calculated in accordance with the MDEQ Remediation and Redevelopment Division Program Redesign 2009 document titled Background Document: Draft Proposed Vapor Intrusion Indoor Air Criteria (IAC), Soil Gas Criteria (SGC), and Groundwater Screening Levels (GW_{VI}SLs) for Vapor Intrusion using both residential and non-residential exposure scenarios and the most recent chemical specific toxicity values accepted and/or published by the United States Environmental Protection Agency (USEPA) as of February 1, 2012.
ug/L = micrograms per liter
NC = No criteria
-- = Not analyzed
Bold font denotes concentrations detected above laboratory reporting limits
Denotes concentrations above one or more criteria
* An asterisk indicates that the observed depth to groundwater intersects or near an overlaying clay unit that may act as a localized confining unit. The true piezometric surface may have a depth less than the recorded depth to groundwater.
1) Compound may exhibit characteristic ignitability as defined in 40 C.F.R. § 261.21
2) Criterion is not protective for surface water used as a drinking water source as described in footnote {X} of MDEQ Op Memo 1 Part 201, Attachment 1.
3) The approximate depth to groundwater is taken from soil boring logs. For sample locations with no soil boring log, approximate depth to groundwater is estimated using depth to groundwater data from nearby monitoring well and soil boring locations. Perched water, if present, is designated with a "p".
4) At the request of USEPA, a site-specific groundwater contact criteria for trichloroethene (TCE) was recalculated to reflect revised TCE toxicity data which was published by USEPA on September 28, 2011.

Table 2
Summary of Detected Volatile Organic Compounds at Source Area Grab Groundwater Sample Locations
Former Tecumseh Products Company Site
Tecumseh, Michigan

Analyte	Benzene[1]	n-Butyl-benzene	Chloroethane	Chloroform	1,1-Dichloro-ethane	1,1-Dichloro-ethene[1]	cis-1,2-Dichloro-ethene	trans-1,2-Dichloro-ethene	Ethyl-benzene[1]	Naphthalene	n-Propyl-benzene[1]	Tetra-chloroethene	Toluene[1]	1,1,1-Tri-chloroethane	1,1,2-Tri-chloroethane	Trichloro-ethene	1,2,4-Trimethyl-benzene[1]	1,3,5-Trimethyl-benzene[1]	Vinyl Chloride	Total Xylenes
Health-Based Residential DW Criteria	5.0	80	430	80	880	7.0	70	100	700	520	80	5.0	1,000	200	5.0	5.0	1,000	1,000	2.0	10,000
Health-Based Non-Residential DW Criteria	5.0	230	1,700	80	2,500	7.0	70	100	700	1,500	230	5.0	1,000	200	5.0	5.0	2,900	2,900	2.0	10,000
Residential GWSL for Vapor Intrusion	NC	NC	NC	NC	130	390	440	330	NC	NC	NC	11	NC	15,000	NC	9.9	NC	NC	5.0	NC
Non-Residential GWSL for Vapor Intrusion	NC	NC	NC	NC	670	1,600	1,800	1,400	NC	NC	NC	55	NC	63,000	NC	42	NC	NC	50	NC
GSI Criteria	200[2]	NC	1,100[2]	350	740	130	620	1,500[2]	18	11	NC	60[2]	270	89	330[2]	200[2]	17	45	13[2]	41
Groundwater Contact Criteria	11,000	5,900	4.4E+05	1.5E+05	2.4E+06	11,000	2.0E+05	2.2E+05	1.7E+05	31,000	15,000	12,000	5.3E+05	1.3E+06	21,000	13,000[4]	56,000	61,000	1,000	1.90E+05
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sample Location and Screen Interval	**Sample Collection Date**	**Approx. Depth to Groundwater (ft)**																			
NS-01 (20-24')	4/17/2009	20.0	<20	<20	<100	<20	<20	<20	**260**	<20	<20	<100	<20	<20	<20	<20	<20	**830**	<20	<20	<20	<40
NS-02 (20-24')	4/17/2009	19.5	<50	<50	<250	<50	<50	<50	**590**	<50	<50	<250	<50	<50	<50	<50	<50	**1,700**	<50	<50	**430**	<100
NS-03 (16-20')	4/15/2009	16.0	<4.0	<4.0	<20	<4.0	<4.0	<4.0	**23**	<4.0	<4.0	<20	<4.0	<4.0	<4.0	<4.0	<4.0	**45**	<4.0	<4.0	**41**	<8.0
NS-03 (37-41')	4/15/2009	16.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	**9.8**	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	**19**	<1.0	<1.0	**480**	<2.0
NS-04 (14-18')	4/16/2009	14.0	<1.0	<1.0	<5.0	<1.0	**1.4**	<1.0	**11**	**1.0**	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
NS-04 (32-36')	4/16/2009	14.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	**5.9**	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
NS-05 (20-24')	4/20/2009	21.0	<200	<200	<1,000	<200	<200	<200	<200	<200	<200	<1,000	<200	<200	<200	<200	<200	**2,900**	<200	<200	<200	<400
NS-06 (22-26')	4/20/2009	21.0	<100	<100	<500	<100	<100	<100	**220**	<100	<100	<500	<100	<100	<100	**100**	<100	**4,500**	<100	<100	<100	<200
NS-07 (20-24')	4/21/2009	22.0	<20	<20	<100	<20	<20	<20	**34**	<20	<20	<100	<20	**30**	<20	<20	<20	**710**	<20	<20	<20	<40
NS-08 (20-24')	4/21/2009	22.0	<20	<20	<100	<20	**21**	<20	**100**	<20	<20	<100	<20	**28**	<20	<20	<20	**960**	<20	<20	**27**	<40
NS-08 (20-24') DUP-09	4/21/2009	22.0	<20	<20	<100	<20	**22**	<20	**100**	<20	<20	<100	<20	**29**	<20	<20	<20	**950**	<20	<20	**30**	<40
NS-09 (20-24')	4/21/2009	21.0	<1.0	<1.0	**5.8**	**1.1**	**46**	<1.0	**110**	**5.0**	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	**16**	**1.3**	<1.0	**140**	<2.0
NS-10 (21-25')	4/21/2009	21.0	<10	<10	<50	<10	**26**	<10	**380**	**13**	<10	<50	<10	<10	<10	<10	<10	<10	**17**	<10	**45**	<20
NS-11 (23-28')	9/15/2010	23.75	<10	<10	<50	<10	<10	<10	**13**	<10	<10	<50	<10	<10	<10	**15**	<10	**1,500**	<10	<10	<10	<30
NS-12 (23-28')	9/15/2010	24.0	<10	<10	<50	<10	**31**	**14**	**330**	<10	<10	<50	<10	<10	<10	<10	<10	**720**	<10	<10	**120**	<30
NS-13 (23-28')	9/16/2010	23.5	<10	<10	<50	<10	<10	<10	**71**	<10	<10	<50	<10	<10	<10	**13**	<10	**980**	<10	<10	<10	<30
NS-13 (23-28') DUP-02	9/16/2010	23.5	<1.0	<1.0	<50	<10	<10	<10	**69**	<10	<1.0	<5	<1.0	<10	<1.0	**12**	<1.0	**970**	<10	<1.0	<10	<2.0
NS-14 (23-28')	9/17/2010	23.75	<10	<10	<50	<10	**28**	<10	**120**	<10	<10	<50	<10	<10	<10	**280**	<10	**1,300**	<10	<10	<10	<30
NS-15 (22-27')	9/17/2010	22.0	<10	<10	<50	<10	**57**	<10	**1,300**	**62**	<10	<50	<10	<10	<10	<10	<10	**87**	<10	<10	**660**	<30
NS-16 (19-24')	9/17/2010	22.0	<5.0	<5.0	<25	<5.0	**25**	<5.0	**150**	**6.2**	<5.0	<25	<5.0	<5.0	<5.0	<5.0	<5.0	**530**	<5.0	<5.0	**210**	<15
NS-17 (23-28')	9/17/2010	23.75	<1.0	<1.0	**7.0**	<1.0	**19**	<1.0	**2.2**	<1.0	<1.0	<5.0	<1.0	**1.6**	<1.0	**35**	<1.0	**120**	<1.0	<1.0	<1.0	<3.0
NS-18 (20-25')	7/25/2012	20.0	<10	<10	<50	<10	**19**	<10	**58**	<10	<10	<50	<10	<10	<10	**11**	<10	**900**	<10	<10	<10	<30
NS-18 (30-35')	7/25/2012	20.0	<25	<25	<120	<25	<25	<25	**600**	**140**	<25	<120	<25	<25	<25	<25	<25	**2,600**	<25	<25	**26**	<75
NS-18 (30-35') DUP-01	7/25/2012	20.0	<25	<25	<120	<25	<25	<25	**610**	**140**	<25	<120	<25	<25	<25	<25	<25	**2,600**	<25	<25	**26**	<75
NS-18 (39-44')	7/25/2012	20.0	<2.0	<2.0	<10	<2.0	<2.0	<2.0	**200**	**30**	<2.0	<10	<2.0	<2.0	<2.0	<2.0	<2.0	**33**	<2.0	<2.0	<2.0	<6.0
NS-19 (24-29')	7/27/2012	25.0	<10	<10	<50	<10	<10	<10	**69**	<10	<10	<50	<10	<10	<10	**30**	<10	**900**	<10	<10	**53**	<30
NS-19 (34-39')	7/27/2012	25.0	<5.0	<5.0	<25	<5.0	<5.0	<5.0	**91**	**26**	<5.0	<25	<5.0	<5.0	<5.0	<5.0	<5.0	**630**	<5.0	<5.0	<5.0	<15
NS-19 (43.5-48.5')	7/27/2012	25.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	**2.1**	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	**27**	<1.0	<1.0	<1.0	<3.0
NS-20 (23-28')	7/31/2012	24.0	<25	<25	<120	<25	<25	<25	**120**	<25	<25	<120	<25	<25	<25	**830**	<25	**2,600**	<25	<25	<25	<75
NS-20 (29-34')	7/31/2012	24.0	<1.0	<1.0	<5.0	<1.0	**22**	**2.3**	**17**	**1.5**	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	**18**	<1.0	<1.0	**130**	<3.0
NS-20 (35-40')	7/31/2012	24.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	**1.6**	**2.4**	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	**59**	<1.0	<1.0	<1.0	<3.0

Notes:

Health-Based Residential and Non-Residential Drinking Water (DW) Criteria, Groundwater/Surface Water Interface (GSI) Criteria and Groundwater Contact Criteria from MDEQ RRD Op Memo 1 Part 201 Generic Cleanup Criteria/Part 213 Risk Based Cleanup Levels, March 25, 2011. Groundwater Screening Levels (GWSLs) for Vapor Intrusion were calculated in accordance with the MDEQ Remediation and Redevelopment Division Program Redesign 2009 document titled Background Document: Draft Proposed Vapor Intrusion Indoor Air Criteria (IAC), Soil Gas Criteria (SGC), and Groundwater Screening Levels ($GW_{VI}SLs$) for Vapor Intrusion using both residential and non-residential exposure scenarios and the most recent chemical specific toxicity values accepted and/or published by the United States Environmental Protection Agency (USEPA) as of February 1, 2012.

ug/L = micrograms per liter

NC = No criteria

-- = Not analyzed

Bold font denotes concentrations detected above laboratory reporting limits

Denotes concentrations above one or more criteria

* An asterisk indicates that the observed depth to groundwater intersects or near an overlaying clay unit that may act as a localized confining unit. The true piezometric surface may have a depth less than the recorded depth to groundwater.

1) Compound may exhibit characteristic ignitability as defined in 40 C.F.R. § 261.21

2) Criterion is not protective for surface water used as a drinking water source as described in footnote {X} of MDEQ Op Memo 1 Part 201, Attachment 1.

3) The approximate depth to groundwater is taken from soil boring logs. For sample locations with no soil boring log, approximate depth to groundwater is estimated using depth to groundwater data from nearby monitoring well and soil boring locations. Perched water, if present, is designated with a "p".

4) At the request of USEPA, a site-specific groundwater contact criteria for trichloroethene (TCE) was recalculated to reflect revised TCE toxicity data which was published by USEPA on September 28, 2011.

Table 2
Summary of Detected Volatile Organic Compounds at Source Area Grab Groundwater Sample Locations
Former Tecumseh Products Company Site
Tecumseh, Michigan

Analyte			Benzene[1]	n-Butyl-benzene	Chloroethane	Chloroform	1,1-Dichloro-ethane	1,1-Dichloro-ethene[1]	cis-1,2-Dichloro-ethene	trans-1,2-Dichloro-ethene	Ethyl-benzene[1]	Naphthalene	n-Propyl-benzene[1]	Tetra-chloroethene	Toluene[1]	1,1,1-Tri-chloroethane	1,1,2-Tri-chloroethane	Trichloro-ethene	1,2,4-Trimethyl-benzene[1]	1,3,5-Trimethyl-benzene[1]	Vinyl Chloride	Total Xylenes
Health-Based Residential DW Criteria			5.0	80	430	80	880	7.0	70	100	700	520	80	5.0	1,000	200	5.0	5.0	1,000	1,000	2.0	10,000
Health-Based Non-Residential DW Criteria			5.0	230	1,700	80	2,500	7.0	70	100	700	1,500	230	5.0	1,000	200	5.0	5.0	2,900	2,900	2.0	10,000
Residential GWSL for Vapor Intrusion			NC	NC	NC	NC	130	390	440	330	NC	NC	NC	11	NC	15,000	NC	9.9	NC	NC	5.0	NC
Non-Residential GWSL for Vapor Intrusion			NC	NC	NC	NC	670	1,600	1,800	1,400	NC	NC	NC	55	NC	63,000	NC	42	NC	NC	50	NC
GSI Criteria			200[2]	NC	1,100[2]	350	740	130	620	1,500[2]	18	11	NC	60[2]	270	89	330[2]	200[2]	17	45	13[2]	41
Groundwater Contact Criteria			11,000	5,900	4.4E+05	1.5E+05	2.4E+06	11,000	2.0E+05	2.2E+05	1.7E+05	31,000	15,000	12,000	5.3E+05	1.3E+06	21,000	13,000[4]	56,000	61,000	1,000	1.90E+05
Units			ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sample Location and Screen Interval	Sample Collection Date	Approx. Depth to Groundwater (ft)																				
SS-1 (24-28')	4/15/2009	23.5	<200	<200	<1,000	<200	<200	<200	<200	<200	<200	<1,000	<200	<200	<200	**1,500**	<200	**1,500**	<200	<200	<200	<400
SS-1 (45-49')	4/15/2009	23.5	<1.0	<1.0	<5.0	<1.0	**2.5**	<1.0	**9.9**	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	**2.7**	<1.0	**5.8**	<1.0	<1.0	<1.0	<2.0
SS-2 (20-24')	4/16/2009	20.5	<100	<100	<500	<100	<100	<100	<100	<100	<100	<500	<100	<100	<100	**2,200**	<100	**1,000**	<100	<100	<100	<200
SS-2 (42-46')	4/16/2009	20.5	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	**4.5**	<1.0	**5.3**	<1.0	<1.0	<1.0	<2.0
SS-3 (20-24')	4/16/2009	19.75	<50	<50	<250	<50	<50	<50	<50	<50	<50	<250	<50	**120**	<50	**600**	<50	**430**	<50	<50	<50	<100
SS-4 (22-24')	4/17/2009	22.0	<100	<100	<500	<100	<100	<100	<100	<100	<100	<500	<100	<100	<100	**2,500**	<100	**1,100**	<100	<100	<100	<200
SS-5 (22-26')	4/17/2009	22.0	<100	<100	<500	<100	<100	<100	<100	<100	<100	<500	<100	<100	<100	**2,200**	<100	**1,300**	<100	<100	<100	<200
SS-6 (23-27')	4/17/2009	23.5	<200	<200	<1,000	<200	<200	<200	<200	<200	<200	<1,000	<200	<200	<200	**2,600**	<200	**1,100**	<200	<200	<200	<400
SS-7 (22-26')	4/20/2009	22.0	<100	<100	<500	<100	<100	<100	<100	<100	<100	<500	<100	<100	<100	**1,300**	<100	**1,400**	<100	<100	<100	<200
SS-8 (23-27')	4/21/2009	23.5	<100	<100	<500	<100	<100	<100	<100	<100	<100	<500	<100	<100	<100	**4,100**	<100	**2,300**	<100	<100	<100	<200
SS-9 (23-28')	8/2/2012	24.0	<10	<10	<50	<10	<10	<10	<10	<10	<10	<50	<10	**11**	<10	**790**	<10	**560**	<10	<10	<10	<30
SS-9 (34-39')	8/2/2012	24.0	<1.0	<1.0	<5.0	<1.0	**8.0**	<1.0	**37**	**5.4**	<1.0	<5.0	<1.0	<1.0	<1.0	**2.6**	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0
SS-9 (45-50')	8/2/2012	24.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0
SS-10 (22.5-27.5')	8/2/2012	23.5	<10	<10	<50	<10	<10	<10	<10	<10	<10	<50	<10	<10	<10	**160**	<10	**770**	<10	<10	<10	<30
SS-10 (33-38')	8/2/2012	23.5	<1.0	<1.0	<5.0	<1.0	**8.2**	<1.0	**24**	**1.7**	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	**78**	<1.0	<1.0	<1.0	<3.0
SS-10 (50-55')	8/3/2012	23.5	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	**15**	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0

Notes:

Health-Based Residential and Non-Residential Drinking Water (DW) Criteria, Groundwater/Surface Water Interface (GSI) Criteria and Groundwater Contact Criteria from MDEQ RRD Op Memo 1 Part 201 Generic Cleanup Criteria/Part 213 Risk Based Cleanup Levels, March 25, 2011. Groundwater Screening Levels (GWSLs) for Vapor Intrusion were calculated in accordance with the MDEQ Remediation and Redevelopment Division Program Redesign 2009 document titled Background Document: Draft Proposed Vapor Intrusion Indoor Air Criteria (IAC), Soil Gas Criteria (SGC), and Groundwater Screening Levels (GW_{VI}SLs) for Vapor Intrusion using both residential and non-residential exposure scenarios and the most recent chemical specific toxicity values accepted and/or published by the United States Environmental Protection Agency (USEPA) as of February 1, 2012.

ug/L = micrograms per liter

NC = No criteria

-- = Not analyzed

Bold font denotes concentrations detected above laboratory reporting limits

Denotes concentrations above one or more criteria

* An asterisk indicates that the observed depth to groundwater intersects or is near an overlaying clay unit that may act as a localized confining unit. The true piezometric surface may have a depth less than the recorded depth to groundwater.

1) Compound may exhibit characteristic ignitability as defined in 40 C.F.R. § 261.21

2) Criterion is not protective for surface water used as a drinking water source as described in footnote {X} of MDEQ Op Memo 1 Part 201, Attachment 1.

3) The approximate depth to groundwater is taken from soil boring logs. For sample locations with no soil boring log, approximate depth to groundwater is estimated using depth to groundwater data from nearby monitoring well and soil boring locations. Perched water, if present, is designated with a "p".

4) At the request of USEPA, a site-specific groundwater contact criteria for trichloroethene (TCE) was recalculated to reflect revised TCE toxicity data which was published by USEPA on September 28, 2011.

Table 4
Summary of Detected Volatile Organic Compounds at Perimeter and Off-Site Grab Groundwater Sample Locations
Former Tecumseh Products Company Site
Tecumseh, Michigan

Analyte			Carbon Disulfide	Dichloro-difluoromethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene[1]	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Ethylbenzene[1]	Tetra-chloroethene	Toluene[1]	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Trichloroethene	Vinyl Chloride	Total Xylenes[1]
Residential DW Criteria			800	1,700	880	5.0	7.0	70	100	700	5.0	1,000	200	5.0	5.0	2.0	10,000
Non-Residential DW Criteria			2,300	4,800	2,500	5.0	7.0	70	100	700	5.0	1,000	200	5.0	5.0	2.0	10,000
Residential GWSL for Vapor Intrusion			NC	NC	130	47	390	440	330	NC	11	NC	15,000	NC	9.9	5.0	NC
Non-Residential GWSL for Vapor Intrusion			NC	NC	670	240	1,600	1,800	1,400	NC	55	NC	63,000	NC	42	50	NC
GSI Criteria			NC	NC	740	360[2]	130	620	1,500[2]	18	60[2]	270	89	330[2]	200[2]	13[2]	41
Groundwater Contact Criteria			1.2E+06	3.0E+05	2.4E+06	19,000	11,000	2.0E+05	2.2E+05	1.7E+05	12,000	5.3E+05	1.3E+06	21,000	13,000[4]	1,000	1.9E+05
Units			ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sample Location and Screen Interval	Sample Collection Date	Approx. Depth to Groundwater (ft)[3]															
B-01 (26-30')	3/9/2009	16.5	<1.0	<1.0	**26**	**1.0**	**5.9**	**120**	**12**	<1.0	<1.0	**5.3**	<1.0	<1.0	**200**	<1.0	<3.0
B-01 (46-50')	3/9/2009	16.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**4.2**	<1.0	<1.0	**6.8**	**5.0**	<3.0
B-02 (22-26')	3/10/2009	7.0*	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**1.8**	**27**	<3.0
B-02 (33-37')	3/10/2009	7.0*	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**4.0**	**16**	<3.0
B-03 (26-30')	3/9/2009	7.0*	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**2.6**	<1.0	<1.0	<1.0	**1.4**	<3.0
B-03 (38-42')	3/9/2009	7.0*	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**2.2**	<1.0	<1.0	<1.0	<1.0	<3.0
B-04 (19-23')	3/10/2009	7.0*	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**12**	<3.0
B-04 (19-23') DUP-01	3/10/2009	7.0*	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**12**	<3.0
B-04 (29-33')	3/10/2009	7.0*	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0
B-05 (14-18')	3/10/2009	7.0*	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**11**	<3.0
B-05 (22-26')	3/10/2009	7.0*	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**3.7**	<3.0
B-06 (44-48')	3/13/2009	23.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**3.5**	<1.0	<1.0	<1.0	<1.0	<3.0
B-07 (44-48')	3/16/2009	24.0	**3.5**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0
B-08 (44-48')	3/13/2009	24.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0
B-10 (24-28')	4/16/2009	26.0	--	--	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**57**	<1.0	<2.0
B-11 (29-33')	4/16/2009	26.0	--	--	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
B-12 (24-28')	4/16/2009	26.0	--	--	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**2.5**	<1.0	<2.0
B-12 (24-28') DUP-05	4/16/2009	26.0	--	--	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**2.2**	<1.0	<2.0
B-13 (29-33')	4/17/2009	28.0	--	--	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
B-13 (46-50')	4/16/2009	28.0	--	--	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
B-14 (16-20')	4/14/2009	16.0	--	--	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	**1,100**	<100	<200
B-14 (36-40')	4/14/2009	16.0	--	--	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**2.4**	<1.0	<2.0
B-15 (24-28')	4/20/2009	24.0	--	--	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**1.5**	<1.0	**9.9**	<1.0	**2.8**	<1.0	<2.0
B-15 (44-48')	4/20/2009	24.0	--	--	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**8.7**	<1.0	<2.0
B-17 (24-28')	4/20/2009	26.0	--	--	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
B-18 (22-26')	4/14/2009	21.5	--	--	<1.0	<1.0	<1.0	**2.3**	<1.0	<1.0	<1.0	**1.4**	<1.0	<1.0	<1.0	<1.0	<2.0
B-18 (32-36')	4/14/2009	21.5	--	--	<1.0	<1.0	<1.0	**1.4**	<1.0	<1.0	<1.0	**1.4**	<1.0	<1.0	<1.0	<1.0	<2.0
B-19 (12-16')	4/15/2009	5.5 p, 12.0*	--	--	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**11**	<2.0
B-19 (29-33')	4/15/2009	5.5 p, 12.0*	--	--	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**1.0**	<1.0	<1.0	<1.0	**10**	<2.0
B-20 (8-12')	4/15/2009	5.0 p, 9.5*	--	--	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
B-20 (18-22')	4/15/2009	5.0 p, 9.5*	--	--	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
B-21 (6-10')	4/15/2009	6.0	--	--	**3.3**	<1.0	<1.0	**3.6**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**6.9**	**1.0**	<2.0

Notes:
Health-Based Residential and Non-Residential Drinking Water (DW) Criteria, Groundwater/Surface Water Interface (GSI) Criteria and Groundwater Contact Criteria from MDEQ RRD Op Memo 1 Part 201 Generic Cleanup Criteria/Part 213 Risk Based Cleanup Levels, March 25, 2011. Groundwater Screening Levels (GWSLs) for Vapor Intrusion were calculated in accordance with the MDEQ Remediation and Redevelopment Division Program Redesign 2009 document titled Background Document: Draft Proposed Vapor Intrusion Indoor Air Criteria (IAC), Soil Gas Criteria (SGC), and Groundwater Screening Levels (GW_{VI}SLs) for Vapor Intrusion using both residential and non-residential exposure scenarios and the most recent chemical specific toxicity values accepted and/or published by the United States Environmental Protection Agency (USEPA) as of February 1, 2012.
ug/L = micrograms per liter
NC = No criteria
-- = Not analyzed
Bold font denotes concentrations detected above laboratory reporting limits
Denotes concentrations above one or more criteria
* An asterisk indicates that the observed depth to groundwater intersects or is near an overlaying clay unit that may act as a localized confining unit. The true piezometric surface may have a depth less than the recorded depth to groundwater.
1) Compound may exhibit characteristic ignitability as defined in 40 C.F.R. § 261.21
2) Criterion is not protective for surface water used as a drinking water source as described in footnote {X} of MDEQ Op Memo 1 Part 201, Attachment 1.
3) The approximate depth to groundwater is taken from soil boring logs. For sample locations with no soil boring log, approximate depth to groundwater is estimated using depth to groundwater data from nearby monitoring well and soil boring locations. Perched water, if present, is designated with a "p".
4) At the request of USEPA, a site-specific groundwater contact criteria for trichloroethene (TCE) was recalculated to reflect revised TCE toxicity data which was published by USEPA on September 28, 2011.
5) Sample locations designated with a "b" following the boring location number, for example B-27b, were collected from the utility corridor.

US EPA ARCHIVE DOCUMENT

Table 4
Summary of Detected Volatile Organic Compounds at Perimeter and Off-Site Grab Groundwater Sample Locations
Former Tecumseh Products Company Site
Tecumseh, Michigan

Analyte			Carbon Disulfide	Dichloro-difluoromethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene(1)	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Ethylbenzene(1)	Tetra-chloroethene	Toluene(1)	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Trichloroethene	Vinyl Chloride	Total Xylenes(1)
Residential DW Criteria			800	1,700	880	5.0	7.0	70	100	700	5.0	1,000	200	5.0	5.0	2.0	10,000
Non-Residential DW Criteria			2,300	4,800	2,500	5.0	7.0	70	100	700	5.0	1,000	200	5.0	5.0	2.0	10,000
Residential GWSL for Vapor Intrusion			NC	NC	130	47	390	440	330	NC	11	NC	15,000	NC	9.9	5.0	NC
Non-Residential GWSL for Vapor Intrusion			NC	NC	670	240	1,600	1,800	1,400	NC	55	NC	63,000	NC	42	50	NC
GSI Criteria			NC	NC	740	360(2)	130	620	1,500(2)	18	60(2)	270	89	330(2)	200(2)	13(2)	41
Groundwater Contact Criteria			1.2E+06	3.0E+05	2.4E+06	19,000	11,000	2.0E+05	2.2E+05	1.7E+05	12,000	5.3E+05	1.3E+06	21,000	13,000(4)	1,000	1.9E+05
Units			ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sample Location and Screen Interval	Sample Collection Date	Approx. Depth to Groundwater (ft)(3)															
B-21 (13-17')	4/15/2009	6.0	--	--	**8.1**	<1.0	<1.0	**13**	**2.2**	<1.0	<1.0	<1.0	**3.6**	<1.0	**30**	**58**	<2.0
B-22 (18-23')	4/14/2009	19.0	--	--	<20	<20	<20	<20	<20	<20	<20	<20	**53**	<20	**190**	<20	<40
B-22 (40-44')	4/14/2009	19.0	--	--	<1.0	<1.0	<1.0	**13**	<1.0	<1.0	<1.0	<1.0	**1.4**	<1.0	**3.0**	<1.0	<2.0
B-23 (14-18')	4/13/2009	13.0	--	--	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	**4.8**	<2.0	<2.0	**23**	<2.0	<6.0
B-23 (14-18') DUP 01	4/13/2009	13.0	--	--	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	**5.0**	<2.0	<2.0	**26**	<2.0	<6.0
B-23 (30-34')	4/13/2009	13.0	--	--	<250	<250	<250	**5,500**	<250	<250	<250	<250	<250	<250	**1,700**	<250	<750
B-23b (14-16')(5)	4/15/2009	14.0	--	--	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**1.7**	<1.0	<1.0	<1.0	**8.9**	<1.0	<2.0
B-24 (6-10')	4/13/2009	6.0*	--	--	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	**150**	<5.0	<15
B-24 (28-32')	4/13/2009	6.0*	--	--	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**1.6**	**6.7**	<2.0
B-24b (5-7')(5)	4/16/2009	5.0*	--	--	<20	<20	<20	<20	<20	<20	<20	<20	**29**	<20	**740**	<20	<40
B-24b (5-7') DUP-04	4/16/2009	5.0*	--	--	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	**770**	<50	<100
B-25 (7-11')	4/17/2009	8.0 p, 14.0*	--	--	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
B-25 (7-11') DUP-06	4/17/2009	8.0 p, 14.0*	--	--	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
B-25 (31-35')	4/17/2009	8.0 p, 14.0*	--	--	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
B-26 (16-20')	4/14/2009	15.0	--	--	<1.0	<1.0	<1.0	**3.2**	<1.0	<1.0	<1.0	**1.2**	<1.0	<1.0	<1.0	**3.1**	<2.0
B-26 (29-33')	4/14/2009	15.0	--	--	<1.0	<1.0	<1.0	**7.3**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**140**	<2.0
B-27b (8-10')(5)	4/15/2009	7.0*	--	--	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**9.2**	<1.0	<2.0
B-28b (16-18')(5)	4/16/2009	16.0*	--	--	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**1.7**	<2.0
B-29 (8-12')	4/13/2009	5.0 p, 8.0*	--	--	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
B-29 (38-42')	4/13/2009	5.0 p, 8.0*	--	--	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**1.3**	**1.1**
B-29b(5)	11/24/2009	5.0 p, 8.0*	<2.0	<10	**27**	<2.0	<2.0	**6.2**	<2.0	<2.0	**210**	<2.0	**77**	<2.0	**76**	<2.0	<6.0
B-30 (6-11')	4/14/2009	6.5*	--	--	**2.4**	<1.0	<1.0	**36**	**4.2**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
B-30 (30-34')	4/14/2009	6.5*	--	--	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**1.1**
B-30 (30-34') DUP-02	4/14/2009	6.5*	--	--	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
B-31 (10-14')	4/13/2009	7.5 p, 10.0*	--	--	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**7.4**	<1.0	<1.0	<1.0	**8.1**	<2.0
B-31 (25-29')	4/13/2009	7.5 p, 10.0*	--	--	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**1.7**	<1.0	<1.0	<1.0	**390**	<2.0
B-32 (10-14')	4/14/2009	8.0*	--	--	<1.0	<1.0	<1.0	**13**	<1.0	<1.0	<1.0	**1.6**	<1.0	<1.0	<1.0	**430**	<2.0
B-32 (25-29')	4/14/2009	8.0*	--	--	<100	<100	<100	**1,200**	<100	<100	<100	<100	<100	<100	<100	**360**	<200
B-32b (8.5-10.5')(5)	4/15/2009	8.0*	--	--	<1.0	<1.0	<1.0	**3.4**	<1.0	<1.0	**1.7**	<1.0	**2.1**	<1.0	**13**	**1.6**	<2.0
B-33 (4-8')	4/15/2009	3.5 p, 7.0*	--	--	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
B-33 (4-8') DUP-03	4/15/2009	3.5 p, 7.0*	--	--	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
B-33 (17-21')	4/15/2009	3.5 p, 7.0*	--	--	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0

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Residential DW Criteria			800	1,700	880	5.0	7.0	70	100	700	5.0	1,000	200	5.0	5.0	2.0	10,000
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Residential GWSL for Vapor Intrusion			NC	NC	130	47	390	440	330	NC	11	NC	15,000	NC	9.9	5.0	NC
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GSI Criteria			NC	NC	740	360[2]	130	620	1,500[2]	18	60[2]	270	89	330[2]	200[2]	13[2]	41
Groundwater Contact Criteria			1.2E+06	3.0E+05	2.4E+06	19,000	11,000	2.0E+05	2.2E+05	1.7E+05	12,000	5.3E+05	1.3E+06	21,000	13,000[4]	1,000	1.9E+05
Units			ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sample Location and Screen Interval	Sample Collection Date	Approx. Depth to Groundwater (ft)[3]															
B-33b [5]	11/24/2009	3.5 p, 7.0*	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**4.7**	<1.0	<3.0
B-34 (14-18')	4/20/2009	12.5	--	--	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
B-34 (41-45')	4/20/2009	12.5	--	--	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
B-35 (5-9')	4/20/2009	6.0 p, 13.0	--	--	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**1.1**	<2.0
B-35 (5-9') DUP-07	4/20/2009	6.0 p, 13.0	--	--	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**1.1**	<2.0
B-35 (11-16')	9/17/2010	6.0 p, 13.0	<1.0	<5.0	**1.1**	<1.0	<1.0	**69**	**5.9**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0
B-35 (30-34')	4/20/2009	6.0 p, 13.0	--	--	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	**450**	<20
B-36 (12-16')	5/13/2009	6.0 p, 12.0*	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0
B-36 (16-20')	5/13/2009	6.0 p, 12.0*	<1.0	**1.0**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0
B-36 (16-20') DUP-01	5/13/2009	6.0 p, 12.0*	<1.0	**1.1**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0
B-37 (38.5-42.5')	5/12/2009	6.0 p, 12.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**1.3**	<1.0	<1.0	<1.0	<1.0	<3.0
B-38 (15-19')	5/13/2009	6.0 p, 16.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**1.1**	<1.0	<1.0	<1.0	<1.0	<3.0
B-38 (36-40')	5/13/2009	6.0 p, 16.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0
B-39 (15-19')	5/13/2009	6.0 p, 16.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0
B-40 (16-20')	5/15/2009	5.5 p, 16.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0
B-40 (42-46')	5/15/2009	5.5 p, 16.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0
B-45 (10-12')	2/22/2011	10.0*	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0
B-45 (14-16')	2/22/2011	10.0*	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**33**	<3.0
B-45 (22-24')	2/22/2011	10.0*	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**2.1**	<3.0
B-46 (8-10')	2/22/2011	8.0*	<1.0	<5.0	<1.0	<1.0	<1.0	**8.2**	**1.2**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0
B-46 (14-16')	2/22/2011	8.0*	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**2.1**	<3.0
B-46 (21-23')	2/22/2011	8.0*	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**1.9**	<3.0
B-47 (7.75-9.75')	2/22/2011	7.75*	<1.0	<5.0	**15**	<1.0	**1.1**	**73**	**6.7**	<1.0	<1.0	<1.0	<1.0	**6.4**	**100**	<1.0	**2.3**
B-47 (7.75-9.75') DUP-01	2/22/2011	7.75*	<1.0	<5.0	**14**	<1.0	<1.0	**71**	**6.9**	<1.0	<1.0	<1.0	<1.0	**6.8**	**97**	<1.0	<3.0
B-47 (14-16')	2/22/2011	7.75*	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**23**	<3.0
B-47 (21-23')	2/22/2011	7.75*	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**28**	<3.0
B-48 (7-9')	2/22/2011	7.0*	<1.0	<5.0	**6.2**	<1.0	<1.0	**34**	**2.9**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0
B-48 (13-15')	2/22/2011	7.0*	<1.0	<5.0	**16**	<1.0	**2.1**	**110**	**11**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**32**	<3.0
B-48 (19.5-21.5')	2/22/2011	7.0*	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**47**	<3.0
B-49 (13-15')	2/22/2011	7.0*	<5.0	<25	**8.2**	<5.0	<5.0	**33**	<5.0	<5.0	<5.0	<5.0	**9.0**	<5.0	**760**	<5.0	<15
B-49 (19.5-21.5')	2/22/2011	7.0*	<10	<50	<10	<10	<10	**31**	<10	<10	<10	<10	**49**	<10	**1,600**	<10	<30
B-50 (7-9')	2/23/2011	7.0*	<5.0	<25	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	**33**	<5.0	**710**	<5.0	<15

Notes:
Health-Based Residential and Non-Residential Drinking Water (DW) Criteria, Groundwater/Surface Water Interface (GSI) Criteria and Groundwater Contact Criteria from MDEQ RRD Op Memo 1 Part 201 Generic Cleanup Criteria/Part 213 Risk Based Cleanup Levels, March 25, 2011. Groundwater Screening Levels (GWSLs) for Vapor Intrusion were calculated in accordance with the MDEQ Remediation and Redevelopment Division Program Redesign 2009 document titled Background Document: Draft Proposed Vapor Intrusion Indoor Air Criteria (IAC), Soil Gas Criteria (SGC), and Groundwater Screening Levels (GW_{VI}SLs) for Vapor Intrusion using both residential and non-residential exposure scenarios and the most recent chemical specific toxicity values accepted and/or published by the United States Environmental Protection Agency (USEPA) as of February 1, 2012.
ug/L = micrograms per liter
NC = No criteria
-- = Not analyzed
Bold font denotes concentrations detected above laboratory reporting limits
Denotes concentrations above one or more criteria
* An asterisk indicates that the observed depth to groundwater intersects or is near an overlaying clay unit that may act as a localized confining unit. The true piezometric surface may have a depth less than the recorded depth to groundwater.
1) Compound may exhibit characteristic ignitability as defined in 40 C.F.R. § 261.21
2) Criterion is not protective for surface water used as a drinking water source as described in footnote {X} of MDEQ Op Memo 1 Part 201, Attachment 1.
3) The approximate depth to groundwater is taken from soil boring logs. For sample locations with no soil boring log, approximate depth to groundwater is estimated using depth to groundwater data from nearby monitoring well and soil boring locations. Perched water, if present, is designated with a "p".
4) At the request of USEPA, a site-specific groundwater contact criteria for trichloroethene (TCE) was recalculated to reflect revised TCE toxicity data which was published by USEPA on September 28, 2011.
5) Sample locations designated with a "b" following the boring location number, for example B-27b, were collected from the utility corridor.

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Table 4
Summary of Detected Volatile Organic Compounds at Perimeter and Off-Site Grab Groundwater Sample Locations
Former Tecumseh Products Company Site
Tecumseh, Michigan

Analyte			Carbon Disulfide	Dichloro-difluoromethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene[1]	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Ethylbenzene[1]	Tetra-chloroethene	Toluene[1]	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Trichloroethene	Vinyl Chloride	Total Xylenes[1]
Residential DW Criteria			800	1,700	880	5.0	7.0	70	100	700	5.0	1,000	200	5.0	5.0	2.0	10,000
Non-Residential DW Criteria			2,300	4,800	2,500	5.0	7.0	70	100	700	5.0	1,000	200	5.0	5.0	2.0	10,000
Residential GWSL for Vapor Intrusion			NC	NC	130	47	390	440	330	NC	11	NC	15,000	NC	9.9	5.0	NC
Non-Residential GWSL for Vapor Intrusion			NC	NC	670	240	1,600	1,800	1,400	NC	55	NC	63,000	NC	42	50	NC
GSI Criteria			NC	NC	740	360[2]	130	620	1,500[2]	18	60[2]	270	89	330[2]	200[2]	13[2]	41
Groundwater Contact Criteria			1.2E+06	3.0E+05	2.4E+06	19,000	11,000	2.0E+05	2.2E+05	1.7E+05	12,000	5.3E+05	1.3E+06	21,000	13,000[4]	1,000	1.9E+05
Units			ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sample Location and Screen Interval	Sample Collection Date	Approx. Depth to Groundwater (ft)[3]															
B-50 (13-15')	2/23/2011	7.0*	<50	<250	<50	<50	<50	<50	<50	<50	<50	<50	**100**	<50	**5,400**	<50	<150
B-50 (20-22')	2/23/2011	7.0*	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**1.3**	**6.5**	<3.0
B-50 (20-22') DUP-02	2/23/2011	7.0*	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**1.3**	**7.0**	<3.0
B-51 (7-9')	2/23/2011	7.0*	<5.0	<25	<5.0	<5.0	<5.0	**13**	<5.0	<5.0	<5.0	<5.0	**25**	<5.0	**580**	<5.0	<15
B-51 (13-15')	2/23/2011	7.0*	<10	<50	**36**	<10	**140**	**87**	<10	<10	<10	<10	**260**	<10	**1,600**	<10	<30
B-51 (20-22')	2/23/2011	7.0*	<10	<50	<10	<10	<10	**23**	**24**	<10	<10	<10	<10	<10	**970**	**62**	<30
B-52 (7-9')	2/23/2011	7.0*	<500	<2,500	**930**	<500	<500	**520**	<500	**4,400**	<500	**85,000**	**2,900**	<500	**2,900**	<500	**43,000**
B-52 (13-15')	2/23/2011	7.0*	<10	<50	**57**	<10	<10	**71**	<10	**430**	<10	**120**	<10	<10	**30**	**270**	**1,326**
B-52 (20-22')	2/23/2011	7.0*	<5.0	<25	<5.0	<5.0	<5.0	**140**	**16**	<5.0	<5.0	<5.0	<5.0	<5.0	**440**	<5.0	<15
B-53 (18-20')	2/23/2011	17.5	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**120**	<1.0	<3.0
B-53 (24-26')	2/23/2011	17.5	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0
B-54 (18-20')	2/23/2011	18.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**1.2**	<1.0	<3.0
B-54 (26-28')	2/23/2011	18.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0
B-58 (7-12')	4/1/2011	7.0*	--	--	--	--	--	--	--	**620**	--	**16**	--	--	--	--	**5,300**
B-59 (7-12')	4/1/2011	7.25*	--	--	--	--	--	--	--	**2,500**	--	**41,000**	--	--	--	--	**24,000**
B-60 (7-12')	4/1/2011	7.25*	--	--	--	--	--	--	--	**4,700**	--	**55,000**	--	--	--	--	**48,000**
B-61 (7-12')	4/1/2011	7.0*	--	--	--	--	--	--	--	**5,200**	--	**61,000**	--	--	--	--	**41,000**
B-62 (7-12')	4/1/2011	7.0*	--	--	--	--	--	--	--	**1.4**	--	<1.0	--	--	--	--	<3.0
B-63 (7-12')	4/1/2011	7.0*	--	--	--	--	--	--	--	**3,800**	--	**21,000**	--	--	--	--	**30,000**
B-63 (7-12') DUP-01	4/1/2011	7.0*	--	--	--	--	--	--	--	**3,800**	--	**21,000**	--	--	--	--	**31,000**
B-64 (7-12')	4/1/2011	7.25*	--	--	--	--	--	--	--	**9,300**	--	**18,000**	--	--	--	--	**59,000**
B-65 (7-12')	4/1/2011	7.0*	--	--	--	--	--	--	--	**3,200**	--	**90**	--	--	--	--	**23,000**
B-66 (7-12')	4/1/2011	7.0*	--	--	--	--	--	--	--	**2,500**	--	<50	--	--	--	--	**28,000**
B-67 (7-12')	4/1/2011	7.0*	--	--	--	--	--	--	--	**140**	--	<5.0	--	--	--	--	**1,300**
B-68 (14.5-16.5')	7/24/2012	15.0	<20	<100	<20	<20	<20	**28**	<20	<20	<20	<20	**1,200**	<20	**1,900**	<20	<60
B-68 (20.7-22.7')	7/24/2012	15.0	<50	<250	<50	<50	**130**	<50	<50	<50	<50	<50	**5,300**	<50	**4,200**	<50	<150
B-68 (27.7-29.7')	7/24/2012	15.0	<25	<125	<25	<25	<25	**51**	**89**	<25	<25	<25	<25	<25	**2,800**	<25	<75
MW-25 (46-51')	12/1/2009	19.0	<1.0	<5.0	<1.0	<1.0	<1.0	**37**	**1.4**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0

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NC = No criteria
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