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November 5, 2015

Project #: 155349 / 06022110

Massachusetts Department of Environmental Protection
Northeast Regional Office
205B Lowell Street
Wilmington, Massachusetts 01887

Subject: Phase V Remedy Operation Status - Inspection & Monitoring Report
April 1, 2015 - September 30, 2015
Former Varian Facility Site
Beverly, Massachusetts
MADEP # 3-0485

To Whom It May Concern:

On behalf of Varian Medical Systems, Inc., CB&I Environmental and Infrastructure, Inc. has prepared the enclosed Phase V Remedy Operation Status - Inspection & Monitoring Report summarizing the activities conducted from April 1, 2015 - September 30, 2015 for the former Varian Facility Site in Beverly, Massachusetts. A copy of this report has also been provided to the Varian Public Involvement Plan (PIP) repository at the Beverly City Library, the City of Beverly Board of Health, and the Beverly Conservation Commission. A notice of availability for this document has also been issued to the PIP mailing list established for this Site.

If you have any questions regarding the report, please do not hesitate to contact me.

Sincerely,

Raymond J. Cadorette
Project Manager
CB&I Environmental and Infrastructure, Inc.

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Enclosure: BWSC-125
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Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC125

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Release Tracking Number: 3 - 485

Pursuant to 310 CMR 40.0015 (7) and 310 CMR 40.0009

A. SITE LOCATION:

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2. Street Address: 150 Sohier Road
3. City/Town: Beverly, MA
4. ZIP Code: 01915-0000

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☐ 5. BWSC106 Release Abatement Measure Transmittal Form
☐ 6. BWSC107 Tier Classification Transmittal Form
☑ 7. BWSC108 CRA Transmittal Form & Phase I CS
☐ 8. BWSC111 Audit Plan & Post Audit Completion Statement
☐ 9. BWSC112 Bill of Lading
☐ 10. BWSC113 Activity and Use Limitation(AUL) Form
☐ 11. BWSC115 Downgradient Property Status Form
☐ 12. BWSC119 URAM Transmittal Form
☐ 13. BWSC120 Homeowner Certification Transmittal Form
☐ 14. BWSC121 Notif. of Delay in Response Deadlines

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Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC125

Release Tracking Number
3 - 485

NOTIFICATION OF A NON-EDEP ELECTRONIC SUBMITTAL

Pursuant to 310 CMR 40.0015 (7) and 310 CMR 40.0009

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3. Title: LSP 4. Date: 11/3/15 (mm/dd/yyyy)

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RTN: 3-485
Location: VARIAN-MICROWAVE DIV
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John R Buchanan

Additional Forms Submitted
BWSCRMRA Remedial Monitoring Report( )
BWSCRMRA Remedial Monitoring Report( )
BWSCRMRA Remedial Monitoring Report( )

Ancillary Document Uploaded/Mailed
BWSC-108 Ques.B18 - ROS Status Report - By Mail
BWSC-108 Ques.F1 - Statement of Provisions - By Mail

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MASSACHUSETTS CONTINGENCY PLAN
PHASE V REMEDY OPERATION STATUS
INSPECTION & MONITORING REPORT
April 1, 2015- September 30, 2015

FORMER VARIAN FACILITY SITE
150 SOHIER ROAD
BEVERLY, MASSACHUSETTS 01915

MADEP Site # 3-0485

October 30, 2015

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1.0 INTRODUCTION AND BACKGROUND

1.1 Introduction

On behalf of Varian Medical Systems, Inc. (Varian), CB&I Environmental and Infrastructure, Inc. (CB&I), has prepared this semi-annual Remedy Operation Status (ROS) Inspection and Monitoring Report for the former Varian facility located at 150 Sohier Road as well as other properties located in the vicinity (the Site) in Beverly, Massachusetts. This report is being submitted for Release Tracking Number (RTN) 3-0485 in accordance with the requirements of the Massachusetts Contingency Plan (MCP; 310 CMR 40.000). A Site Location Map illustrating the location of the former Varian facility is attached as **Figure 1,** and a Site Plan is attached as **Figure 2**.

This semi-annual report summarizes activities conducted during the period April 1, 2015 through September 30, 2015. Results of remedial activities and monitoring conducted during this reporting period are presented in this report. As required, the Massachusetts Department of Environmental Protection (MADEP) Comprehensive Response Action Transmittal Form (BWSC108) and Remedial Monitoring Reports (RMR) associated with this submittal were submitted electronically to MADEP. Copies of BWSC108 and the RMRs are included in **Appendix A**. This Inspection and Monitoring Report has been formatted to reference the requirements outlined in Section 310 CMR 40.0892(2) of the MCP.

1.2 Background Information

Based on the Phase II Comprehensive Site Assessment (CSA) completed in 2000 (IT, 2000), a condition of No Significant Risk existed at the Site with the exception of potential future significant risk associated with groundwater use in the area identified as a Potentially Productive Aquifer (PPA) north of Route 128. Groundwater concentrations in this PPA area were above applicable Massachusetts Drinking Water Standards. As a result, one of the stated remedial action goals in the December 2001 Phase IV Remedial Implementation Plan (Phase IV Plan) submitted to MADEP for the Site, was to achieve Drinking Water Standards in this area of the site (IT, 2001).

The Phase IV Plan proposed remedial actions for addressing volatile organic compounds (VOCs) in soil and groundwater at the subject Site. *In situ* oxidation of VOCs in soil and groundwater using permanganate solution was chosen as the best remedial alternative for the Site. The Phase IV Plan proposed treatment in the “source areas” to achieve these objectives. The Potential Source Location (PSL) areas at the former facility identified in the Phase IV Plan as potentially affecting the PPA area are listed below:

- PSL 5 – Potential former septic tank near Building 3
- PSL 6 –Potential former septic tank/leach field at Building 6
- PSL 9 – Inspection pit near Building 3
- PSL 11 –Chemical laboratory at Building 3
- PSL 12 – Potential former lime pit near Building 3

Other PSL areas that do not impact the PPA and certain other downgradient areas have been included in the *in situ* oxidation program to expedite groundwater cleanup. These areas include PSL 7--Building 5

Chem Lab, PSL 10--open field at south end of 150 Sohier Road, and downgradient treatment areas at 31 Tozer Road and in the Longview/Hill Street area.

Implementation of the Comprehensive Response Actions, including the injection of permanganate solution, began in July 2002 and a Phase IV As-Built and Final Inspection Report (Shaw, 2002a) detailing initial Phase IV activities including permitting, well installation, construction of the remedial treatment system, and initial implementation of remedial actions was submitted to MADEP in October 2002. The Phase IV As Built and Final Inspection Report also provided results of additional soil and groundwater analyses, identified minor modifications made to the Phase IV Plan, and documented the final inspection of the remedial system.

In December 2002, Varian submitted a Remedy Operation Status Opinion (Shaw, 2002b), which stated that the performance standards for ROS, as specified in 310 CMR 40.0893(2), have been achieved and will be maintained at the Site. A Permanent Solution has not yet been achieved at the Site, and the operation and maintenance of the remedial action will proceed under Remedy Operation Status.

The sodium permanganate treatment conducted at the Site since 2002 has produced significant reductions in chlorinated VOC levels at multiple depths in groundwater across the Site. These remedial activities are reported to MADEP in regular semi-annual ROS reports. As detailed in the October 2006 status report, bioremediation was proposed as a supplemental remedial approach to address two small VOC impacted areas in the northeast corner of the Site (Shaw, 2006). The first area includes shallow groundwater with residual trichloroethene (TCE) impacts located close to the Unnamed Stream to the northeast of Building 9 (**Figure 3**). Bioremediation was used to address the shallow groundwater near the Unnamed Stream in lieu of permanganate because permanganate treatment may affect the stream. The second bioremediation area is northeast of Building 3 where deep overburden groundwater is impacted with residual 1,1,1-trichloroethane (TCA), which is not effectively treated with permanganate.

Subsequent to the start of Comprehensive Response Actions, the PPA designation for the area to the north of Route 128 was removed by MADEP and, as a result, Drinking Water Standards no longer apply to this area. Therefore, the Remedial Action Goal specified in the Phase IV Plan to achieve drinking water standards in downgradient wells in the PPA area such as BR-1 is no longer applicable. As presented in the October 30, 2010 ROS report (Shaw, 2010b), the following updated remedial action goals will be used for ongoing response actions being conducted under Phase V ROS at the Site:

- Maintain compliance with Upper Concentration Limits (UCLs);
- Achieve a condition of No Significant Risk for site workers in site buildings by remediating, where necessary, elevated VOC concentrations in soil and groundwater beneath buildings;
- Limit rebound in VOC source areas such that potential impacts to indoor air in downgradient areas continue to pose No Significant Risk;
- Demonstrate that VOC concentrations in groundwater at the Site do not represent an uncontrolled source for impacts to surface water; and
- Demonstrate that VOC concentrations in soil and groundwater at the Site continue to pose No Significant Risk in accordance with current MADEP requirements.

To achieve these goals, the previously proposed remediation planning criteria will continue to be applied to focus remediation activities at the Site. These remediation planning criteria include the decrease of target VOC concentrations in certain source area wells to 50 percent or less of the UCL and the reduction of target VOC concentrations (including breakdown products) in treatment areas by at least 50 percent below pretreatment levels in order to mitigate potential post-remediation rebound effects. These remediation planning criteria are consistent with MADEP guidance (Policy #WSC-04-160) on the feasibility of achieving background concentrations which indicates that a reduction of risk to 50% of a level where No Significant Risk is achieved will be considered approaching background conditions and appropriate site closure criteria with Presumptive Certainty (MADEP, 2004b).

In December 2012, CB&I submitted a modification of the Phase III Remedial Action Plan (RAP) and Phase IV Plan for RTN 3-0485 (Shaw, 2012c). This modification addressed the Building 5 remedial area, located in the central portion of the former Varian facility (**Figure 2**). The Building 5 treatment area was not previously included in the original Phase III RAP and Phase IV Plan submitted to MADEP in 2001 (IT, 2001). The Phase III RAP was modified to identify, evaluate, and select remedial action alternatives to reduce potential risk associated with indoor air exposure in the Building 5 area. Soil vapor extraction (SVE) was selected as the preferred remedial alternative. The goal of the selected remedial action alternative in the Modified Phase III RAP was to control exposures and reduce VOC concentrations remaining in shallow soil that have the potential to migrate into the indoor air of Building 5. The Modified Phase IV Plan provided detail engineering designs, waste management plans, and initial operation and maintenance activities for the selected SVE remedial alternative (Shaw, 2012c). Details regarding the Building 5 SVE installation, including a Final Licensed Site Professional (LSP) Inspection and Phase IV Completion Statement, were included in the October 2013 status report (Shaw, 2013c).

Remediation in the Building 3 area, located in the northeast corner of the former Varian facility (**Figure 2**), has been conducted under ROS (to address groundwater impacts) and as an Immediate Response Action (IRA) under RTN 3-28531 (to address potential vapor intrusion). IRA activities included installation of a SVE system in December 2009. Phase II CSA and Phase III Remedial Action Plan reports were submitted for RTN 3-28531 in May 2012 (Shaw, 2012a and Shaw, 2012b). The Phase II and Method 3 Risk Assessment (Shaw, 2012a) concluded that a Condition of No Significant Risk had been achieved with the operation of the existing Building 3 SVE system which is effectively reducing VOC levels in indoor air in the Building 3 area. An Immediate Response Action Completion Report was submitted for RTN 3-28531 in February 2013 (Shaw, 2013a). The IRA Completion Report concluded that the primary objective of the IRA (to assess and mitigate the potential impacts to indoor air in the Building 3 area and thereby eliminate the potential for an Imminent Hazard) had been met by conducting IRA activities. Response actions for RTN 3-28531 had been effective in decreasing indoor air concentrations to below levels that would constitute an Imminent Hazard. However, continued operation of the SVE system is necessary to maintain a level of No Significant Risk in the Building 3 area. The IRA Completion Report linked RTN 3-28531 to RTN 3-0485 and also included a Phase IV Remedy Implementation Plan, Phase IV Completion Report, and Phase V Remedy Operation Status Opinion. The combined report for RTN 3-28531 closed this RTN and concluded that continued response actions (including the operation of the Building 3 SVE system) would be conducted in conjunction with Comprehensive Response Actions under Phase V ROS for RTN 3-0485. Building 3 remedial activities are therefore included as part of this ROS report.

2.0 DESCRIPTION OF OPERATION, MAINTENANCE, AND/OR MONITORING ACTIVITIES (310 CMR 40.0892 (2)(a))

The following sections summarize Phase V ROS activities that were conducted during the reporting period of April 1, 2015 through September 30, 2015.

2.1 Groundwater Permanganate Treatment Program

Permanganate injections in 2015 began in the prior reporting period on January 26, 2015 and were conducted through June 6, 2015 in the current reporting period. Permanganate treatment included injection at the following wells;

- AP32-DO (angled well beneath Building 3 Chemistry Lab),
- OB37-DO,(deep overburden well located inside Building 6),
- BLDG3-SVE1 (SVE well beneath northeast corner of Building 3),
- BLDG3-SVE3 (SVE well beneath northeast corner of Building 3); and
- BLDG3-SVE4 (SVE well beneath the Building 3 Chemistry Lab).

Permanganate treatment was conducted at wells OB32-DO and OB37-DO to address increased VOC concentrations observed during the November 2014 sampling event. Permanganate injections were conducted at the three Building 3 horizontal SVE wells in an effort to provide some treatment in the capillary fringe and shallow groundwater beneath Building 3. This treatment is expected to reduce potential VOC migration into indoor air.

2.1.1 Permanganate Injection Activities

From January 26, 2015 to June 9, 2015, a total of approximately 989 gallons of permanganate were injected at the target wells. Of that total, approximately 306 gallons of permanganate were injected during this reporting period. Volumes of sodium permanganate injected at each well during this reporting period are summarized on **Table 1**.

Prior to this reporting period, 40 percent sodium permanganate solution was delivered to the Site in 250-gallon totes which were stored in an on-site storage shed with secondary containment. Prior to conducting treatment activities, the permanganate was diluted to an approximate 20 percent solution. The diluted permanganate was transported in portable 5-gallon containers to a well location and then allowed to flow by gravity into the wells.

The permanganate totes, drums, hoses, portable containers, pumps, and associated equipment were periodically inspected during this reporting period to ensure no leaks occurred. Additionally, the spill containment features of the storage shed were inspected periodically during this monitoring period. No problems or releases were reported.

Personal protective equipment (PPE) generated during permanganate injections as well as absorbent pads used for cleanup during permanganate injection equipment were placed into 55-gallon polyethylene drums onsite. Materials were neutralized with a solution of hydrogen peroxide, vinegar and water prior to

storing in the drum. This drum was transported off site on August 20, 2015 by Enpro Services of Newburyport, MA with a Non-Hazardous waste manifest. The manifest is included in **Appendix B**

2.1.2 Permanganate Parameter Monitoring and Results

The Phase IV Plan (IT, 2001) detailed monitoring activities for the various permanganate treatment areas of the Site. As discussed in previous monitoring reports, monitoring activities have been adjusted, based upon changing site conditions. Groundwater physical parameters were monitored monthly during permanganate injection in select monitoring wells in active treatment areas. Monitoring activities typically completed during the permanganate treatment program include:

- visual observation of groundwater color for identification of residual permanganate;
- depth-to-groundwater measurements; and
- measurement of oxidation-reduction potential (ORP), and pH using a down-well water parameter probe (if no residual permanganate is observed, which could damage the probe).

Results of water quality parameter measurements collected from monitoring wells during this reporting period are presented in **Appendix C**.

Sampling for analytical parameters associated with permanganate treatment during this monitoring period was completed in May 2015. Groundwater samples were collected from select wells in May 2015 for bench-top colorimetric permanganate concentration analysis. The permanganate analysis results are provided in **Table 2**. As would be expected, samples from wells where permanganate injection was conducted in 2015 indicated residual permanganate was present in May 2015. For example, permanganate injections were conducted in OB37-DOin 2015 and the concentration of permanganate at this well was 250,000 milligrams per liter (mg/L) in May 2015.

Typically, the dissolved iron concentrations (**Table 3**) are expected to decrease in treatment areas due to the oxidizing nature of permanganate and associated iron precipitation from the treated groundwater. Results of monitoring in areas where permanganate treatment has occurred generally demonstrate low or non-detectable dissolved iron concentrations. For example, in AP32-DO located beneath Building 3, where permanganate injections were conducted in 2015, dissolved iron was non-detectable in May 2015.

Generally, elevated dissolved manganese concentrations (**Table 3**) are noted where unreacted permanganate was observed. For example, at well AP32-DO, located North of Building 3, permanganate was present at approximately 4,000 mg/L in May 2015. Dissolved manganese was detected at a concentration of 2,000 mg/L in May 2015. Outside of the permanganate treatment areas, dissolved manganese concentrations are generally low or non-detectable. For example, at deep overburden well OB-12-DO, just downgradient of the permanganate treatment at AP32-DO, the dissolved manganese concentration was 3.3 mg/L in May 2015.

Baseline chloride concentrations at the site were highly variable. As a result of permanganate treatment, chloride levels in groundwater typically increase from the destruction of the chlorinated VOCs. An example of this is observed at OB37-DO, located inside Building 6, where permanganate injections were conducted in early 2015. In May 2015, the TCE concentration at OB36-DO decreased to non-detectable

and chloride had increased to 86,000 mg/L from 66 mg/L during the baseline sampling, in April 2014 **(Table 3**).

2.2 Bioremediation Program

The original bioremediation program proposed for a portion of the Site was detailed in the October 2006 ROS report and included treatment at shallow wells in the Building 9 area near the Unnamed Stream, as shown on **Figure 3**. As noted above, the bioremediation program has significantly reduced concentrations of TCE, tetrachloroethene (PCE) and TCA in the shallow overburden in this area. The bioremediation program appears to have successfully addressed the shallow overburden impact of TCE and PCE in the area of the Unnamed Stream. Based on an evaluation of groundwater data collected through January 2015, active reductive dechlorination is continuing to address residual VOC daughter products in the shallow overburden near the Unnamed Stream. The data suggest that additional active bioremediation in the shallow overburden in this area is not warranted at this time.

The bioremediation program in the deep overburden near Building 3 most recently included injection of emulsified vegetable oil and culture in November 2014. As discussed in section 2.3 below, results of groundwater samples collected in May 2015 and August 2015 continue to indicate that reductive dechlorination is occurring in this treatment area. Other than monitoring, active bioremediation activities were not conducted in the Building 3 area during this reporting period. Monitoring data from the deep overburden treatment area near Building 3 are discussed section 2.3.

As discussed in the previous ROS report, data from the Building 5 area (e.g., elevated VOC concentrations at shallow well OB44-S) indicate that indoor air impacts may result directly from shallow groundwater, rather than from residual VOCs in vadose zone soil. Bioremediation was proposed to treat shallow groundwater impacts beneath Building 5. Shallow bioremediation activities were conducted during this reporting period in the Building 5 area and are discussed below.

2.2.1 Building 5 Bioremediation Injection Activities

The Building 5 bioremediation injection program was conducted from April 4, 2015 through June 9, 2015. The program included the application of *Dehalococcoides sp.* bacteria (DHC) cultures seeded into a lactate solution. Based on Site data, an estimated 2,440 pounds of lactate would provide sufficient treatment of VOC in the area of target well OB44-S. Batches of lactate solution were created by diluting lactate with groundwater from wells in the treatment area and potable water in an aboveground storage tank. The lactate mixture was seeded with DHC cultures, and provided one to three days for the culture to become active. Once an active culture was established, the lactate was applied into target wells using a pump. Application was performed beneath Building 5 at soil vapor extraction wells BLDG5-SVE2 and BLDG5-SVE3 to facilitate complete reductive dechlorination of TCE and PCE in the area of OB44-S. A total of 6,316 gallons of lactate solution were applied in the treatment area during this reporting period. This included roughly half of the proposed dose of lactate for the treatment area. Application of lactate was limited due to slow recharge of the solution into the soil beneath the building. A summary of the volumes of solution injected by well during this reporting period is provided in **Table 4**.

The tank, hoses, portable containers, pump, and associated equipment were periodically inspected during injection activities and rinsed with potable water prior to each injection event. No problems or releases were noted with the tanks and hoses during bioremediation activities.

2.2.2 Bioremediation Parameter Monitoring Results

As part of the bioremediation in both the Building 3 and Building 5 areas, field parameters such as ORP, pH and DO were monitored to assess if appropriate conditions for reductive dechlorination were present in the treatment area. VOCs and bioremediation parameters (methane, ethane, ethene and total organic carbon) in groundwater samples are analyzed quarterly to monitor reductive dechlorination processes. During this reporting period, sampling was conducted in the deep overburden east of Building 3 in May 2015 and August 2015. The August 2015 sampling event also included wells in the Building 5 treatment area. Bioremediation parameters are summarized on **Table 5**.

As discussed in section 2.3, results of groundwater samples collected in May 2015 and August 2015 continue to indicate that reductive dechlorination is occurring in the Building 3 deep overburden treatment area. Reduced concentrations of TCE, the presence of DHC and TCE daughter products, and the detection of ethene in groundwater provide a strong indication of reductive dechlorination at wells AP24-DO, APAP34-DO and AP35-DO. Although TCE levels remain elevated, the presence of DHC, VOC daughter products, and ethene in groundwater indicate that reductive dechlorination is occurring at wells AP23-DO and AP33-DO.

The May 2015 shallow groundwater results from the Building 5 area indicate some success resulting from the bioremediation that was started in April 2015. At target well OB44-S, located inside Building 5, the PCE concentration decreased from 30 mg/l in March 2015 to <0.5 mg/l in May 2015, though it did rebound to 29 mg/L in August 2015. As indicated in **Table 5,** the May 2015 analytical results showed a DHC population was present in shallow overburden groundwater of the treatment area. This further suggests that conditions favorable to reductive dechlorination have been established in the area. However, it appears that the available carbon in the treatment area was consumed prior to achieving groundwater concentrations that would eliminate concerns. This is not unexpected because only about half of the estimated lactate dose was applied to the treatment area. As result, additional lactate injections are planned in October 2015. Additionally, when compared to pretreatment data, an increased sulfate level was detected at OB-44S during the May and August 2015 sampling events. Sulfate may be a limiting factor in reductive dechlorination at this well.

2.3 Site-Wide Groundwater and Surface Water Sampling

2.3.1 Sample Collection and Analysis

Groundwater sampling to monitor groundwater conditions across the Site and the progress of both the permanganate and bioremediation programs was conducted in May 2015 and August 2015. The May 2015 sampling was the annual event which monitored VOC trends and groundwater conditions at select wells across the Site. The August 2015 sampling event included quarterly bioremediation sampling focused on monitoring the reductive dechlorination progress following the November 2014 injection of emulsified vegetable oil (EVO) in the deep overburden near Building 3 and the application of lactate in the

shallow overburden in the Building 5 area during this reporting period. A summary of samples collected during these monitoring events and sampling rationale is provided in **Tables 6A** and **6B**. The May 2015 sampling event also included select stream surface water locations previously requested by the Beverly Conservation Commission in various Orders of Condition (Beverly, 2002; 2003; 2004). Sampling locations are shown on **Figures 2** and **3**.

Groundwater and surface water samples collected in May were submitted to ALS Environmental Laboratory (ALS). The groundwater samples collected in August were submitted to Absolute Resource Associates (ARA). Laboratory analysis of samples included site specific VOCs (by EPA Method 8260B), dissolved iron and manganese, nitrate and sulfate, methane, ethane, ethene, total organic carbon, and chloride as outlined on **Tables 6A** and **6B**. Additionally, groundwater samples collected from select bioremediation wells were submitted for analysis of DHC at CB&I's Technology Development Laboratory in Lawrenceville, New Jersey.

Groundwater VOC sampling of monitoring and application wells during this reporting period utilized passive diffusion bag (PDB) samplers, with the exception of stream monitoring points and certain wells where alternative sampling methods were used, as discussed below. For wells sampled utilizing the PDB method, the sampling apparatus was deployed in each groundwater monitoring well for a minimum two-week equilibration period, after which the samples were collected.

Monitoring wells BR-1, BR-3, BR-6, BR-7 and CL8 are bedrock wells utilizing a packer system in order to provide discrete groundwater sampling from up to three separate fracture zones. These wells use a Waterloo™ system, which collects groundwater samples in each packer zone by using dedicated dual-valve pumps driven by compressed nitrogen. Surface water stream samples were collected directly from the sample locations with a bailer or laboratory-supplied containers.

At locations where analyses of dissolved metals (manganese and/or iron), nitrate, sulfate, and chloride were performed, samples were collected using a conventional bailer, since these constituents cannot be accurately assessed using PDB samplers. Dissolved manganese and iron samples were field-filtered using a 0.45-micron filter prior to laboratory analysis consistent with MADEP policy.

During the May 2015 sampling event, groundwater samples from select permanganate injection and monitoring wells were also collected for bench-top colorimetric permanganate concentration analysis. These groundwater samples were field filtered using a 0.45-micron filter prior to permanganate concentration analysis. Samples that were collected for colorimetric analysis of residual permanganate concentrations were analyzed by CB&I using a Hach DR/890 colorimeter. The colorimeter utilizes a spectrophotometric method to determine the permanganate concentration based on a permanganate color calibration standard.

Groundwater monitoring at select wells for depth-to-groundwater and total-well-depth measurements, as well as for the potential presence of dense non-aqueous phase liquid (DNAPL) was performed in May and August 2015 when the PDB samplers were deployed. The electronic interface probe used during these monitoring activities did not detect DNAPL at monitoring wells gauged during this reporting period.

Water level monitoring data from the May and August 2015 sampling events are summarized in **Appendix C**.

VOC analytical results from the May and August 2015 sampling event are summarized in **Table 7**. Results of chloride, iron, and manganese samples collected during the May and August 2015 sampling events are summarized in **Table 3**. Results of bioremediation parameter analyses (i.e., nitrate, sulfate, methane, ethane, ethene, total organic carbon, and DHC bacteria) are summarized in **Table 5**. Results of bench-top colorimetric analysis of residual permanganate are included in **Table 2**. Complete laboratory analytical reports for samples collected in May and August 2015 are provided in **Appendix D**. Sampling results are discussed below.

Depth to groundwater measurements collected during the May 2015 sampling event (**Appendix C**) were used to develop groundwater contour maps for the shallow overburden, deep overburden, and bedrock aquifers (**Figures 4, 5**, and **6**). These figures show that the majority of Site groundwater in each aquifer generally flows to the west/southwest, following the regional groundwater flow pattern, which is south and west toward Shoe Pond and the Bass River. The gradient in each aquifer is moderate to steep east of Tozer Road and very flat to the west of Tozer Road. In the shallow and deep overburden, there are indications of limited northerly and easterly groundwater flow in the contours at the northern end of the Site. Overall, the groundwater gradients shown on these figures are consistent with historical data from the Site.

Analytical results of target VOCs from the May 2015 groundwater sampling event were used to generate VOC iso-concentration maps for the shallow overburden, deep overburden, and bedrock aquifers (**Figures 7, 8,** and **9,** respectively). The "total" VOC numbers consider concentrations of the Site-related VOCs, which include; TCE, PCE, TCA, cis- and trans-dichloroethene (DCE), 1,1-dichloroethane (DCA), 1,1-DCE, 1,2-DCA, and vinyl chloride.

Recent groundwater sampling results support the following overall observations regarding the three aquifers present at the Site:

- In the shallow overburden aquifer (**Figure 7**), the May 2015 data demonstrate that an area with a total VOC concentration greater than 10 mg/L was present beneath Building 5. This area is characterized by a total VOC concentration of 23 mg/L at well OB44-S which was installed in December 2013 beneath Building 5. Shallow impacts in the Building 5 area appear to extend to 30 Tozer Road, where total VOC at OB42-S were 2.09 mg/L in May 2015. In the Building 3 area to the north, prior to the start of permanganate injection at the Site in 2002, an area of VOC concentrations greater than 10 mg/L extended over an area from OB9-S by the Unnamed Stream west to AP12-S, located adjacent to the east side of Building 6. A second area of shallow VOCs greater than 10 mg/L was historically observed at AP14-S, adjacent to the north side of Building 3 (Shaw, 2002a). **Figure 7** indicates total VOCs concentrations in May 2015 were below 1 mg/L in the shallow overburden near Buildings 3 and 6.

- In the deep overburden aquifer (**Figure 8**), the May 2015 data demonstrate the area of total VOC concentrations greater than 100 mg/L is limited to the northeast corner beneath Building 3. Prior to the start of permanganate injection at the Site, the area of the deep overburden plume with VOC concentrations greater than 100 mg/L extended significantly farther to the

west, downgradient from Buildings 3 and 6, to the area just west of Building 7 (Shaw, 2002a). Pretreatment total VOC levels in the Building 5 source area were also greater than 100 mg/L. However, recent total VOC concentrations in the Building 5 area have been reduced through permanganate treatment to approximately 39 mg/L at OB35-DO in May 2015. Total VOC levels in the PSL 10 area to the south of the former Varian facility have been reduced from a concentration greater than 50 mg/L before treatment began in 2002 and remained reduced during the May 2015 sampling round (0.043 mg/L at AP-21). To the west of PSL 10, at the 32 Tozer Road property, the total VOC concentration has been reduced to 1.96 mg/L at well MW2-32Tozer in May 2015.

- Before treatment started in the bedrock aquifer in 2002, total VOC concentrations greater than 50 mg/L extended from the Building 3 and 9 areas west nearly to Tozer Road (Shaw, 2002a). The May 2015 data documents reduced bedrock levels, with total VOC concentrations greater than 10 mg/L limited to a smaller area at OB27-BR on the west side of Building 7 **(Figure 9).**

In summary, recent groundwater sampling results shown on **Figures 7, 8,** and **9** continue to demonstrate overall decreases in the concentrations and extent of VOCs in each aquifer. A more detailed discussion of VOC trends and monitoring results for the various treatment areas at the Site is presented below.

2.3.2 VOC Monitoring Results

In general, the analytical results of groundwater samples collected during the May and August 2015 sampling events (**Table 7**) show decreasing or consistent concentrations of TCE and PCE at monitoring wells across the Site. Concentrations of cis-1,2- DCE continue to be variable. This variability may be due to the higher mobility of cis-1,2-DCE in groundwater compared to TCE and PCE and the generation of this daughter compound during natural attenuation and/or treatment processes.

Graphs illustrating concentration trends over time for the primary Site contaminants, including TCE, PCE, cis-1,2-DCE, TCA, and vinyl chloride for numerous injection and monitoring wells are provided in **Appendix E**. Graphs for shallow overburden, deep overburden, and bedrock monitoring wells that are located in proximity to each other are grouped together for comparative purposes. These graphs indicate that data from many of the wells monitored continue to show decreasing concentration trends or sustained reductions in VOC concentrations as a result of Varian's remedial activities. These trends indicate that the remedial program is effectively treating groundwater and the Site is progressing toward a Permanent Solution as defined by the MCP.

A discussion of VOC trends and monitoring results for the various treatment areas at the Site is presented below. This discussion is supported by the VOC trend graphs provided in **Appendix E**.

Building 3/6 Treatment Area

Permanganate injections have been conducted at multiple wells from 2002 into 2015 with treatment at fewer wells over recent years. During the previous reporting period, permanganate injections were conducted in AP32-DO (north of Building 3), OB37-DO (inside Building 6), and three of the horizontal SVE wells located beneath Building 3. Bioremediation has also occurred in the area in the shallow overburden near the Unnamed stream and deep overburden aquifer east of Building 3. VOC trend graphs are included in **Appendix E** for 34 monitoring wells located in the Building 3/6 treatment area. The VOC trend graphs provided in **Appendix E** generally indicate three different trends for seen at

different wells in this treatment area; (1) initial decreasing trends without rebound; (2) initial decreasing trends with rebounding concentration trends; and (3) continued elevated VOC trends, as discussed below.

The first VOC trend represents wells that have been successfully treated by permanganate injections or bioremediation. In these wells, VOC concentrations remain below the remedial planning criteria. This includes well OB32-DO, located on the north side of Building 3, where the pretreatment TCE concentration was 710 mg/L and PCE was 68 mg/L. Permanganate injection was conducted at OB32-DO in 2004 and VOC concentrations have remained well below the remedial planning criteria. In May 2015, the TCE concentration at OB32-DO was non-detectable, PCE was reported at 0.0029 mg/L, and TCA was detected at 0.0022 mg/L. In the shallow overburden near the Unnamed Stream, a similar VOC trend is noted at OB9-S, where bioremediation was conducted beginning in 2006. Pretreatment sampling indicated a TCE concentration of 53 mg/L and a PCE concentration of 30 mg/L at OB9-S. The May 2015 groundwater sample results indicated TCE and PCE were non-detectable, and vinyl chloride was detected at 0.0062 mg/L at OB9-S. Wells BW-8, AP14-S, AP25-DO, and MW-9 also show VOC trends indicating successful treatment.

At several wells in the Building 3/6 Treatment Area, the initial permanganate treatment resulted in significant VOC concentration reductions (e.g., 99 percent reduction in TCE). However, concentrations of VOC have rebounded to above the remedial planning criteria in these wells, resulting in the need to implement additional permanganate treatment events. This rebound effect is often observed due to the permanganate injections solubilizing VOC bound to soil particles. The soluble VOCs are treated by the residual permanganate in the formation. However, once the residual permanganate in the area is consumed, VOC concentrations increase. For example, in April 2014, groundwater sampling indicated the TCE concentration increased to 28 mg/L at OB12-DO, located north of Building 3 near Route 128. In response to permanganate treatment in 2014, TCE decreased to non-detectable in October 2014 and remained non-detectable in the May 2015 sampling event. A rebound in cis-1,2-DCE concentration to above the remedial planning criteria was observed at bedrock well OB25-BR, located west of Building 1 in April 2014. VOC concentrations at OB25-BR responded well to treatment and October 2014 analytical data indicated that VOC concentrations had decreased to non-detectable. The May 2015 analytical data from OB25-BR also indicated the VOC concentrations remained non-detectable.

Additional wells where VOC trends indicate periodic VOC rebound to concentrations above the remedial planning criteria, warranting subsequent permanganate treatment, include AP12-DO, AP12-BR, AP26-DO, MW-13, OB19-DO, OB27-BR and OB36-DO. The VOC rebound observed at these wells indicates potential migration of VOC from under the existing building. VOC concentration rebound was noted in the Building 3/6 area in May 2015, at bedrock well OB27-BR, west of former Building 7, and deep overburden wells AP30R-DO and AP31-DO, located on the north side of Building 3. Analytical data indicated that the concentration of TCE increased from non-detectable in October 2014 to 18 mg/L in May 2015 at bedrock well OB27-BR. Permanganate treatment was last conducted at OB27-BR in 2012. The TCE concentration detected in May 2015 at OB27-BR is approaching the remedial planning criteria, suggesting that additional treatment is warranted. In May 2015, TCE was detected at 48 mg/L and 21 mg/L at wells AP30R-DO and AP 31-DO, respectively. Both these concentrations exceed the remedial planning criteria, indicating additional treatment is warranted.

Results of groundwater samples collected in May 2015 continue to indicate that reductive dechlorination is occurring in the deep overburden bioremediation treatment area near Building 3. TCE and PCE concentrations at target wells AP24-DO, AP34-DO and AP35-DO continued to reflect lower concentrations compared to before the November 2014 bioremediation injections. Well AP24-DO exhibits the most significant decrease with the PCE concentration decreasing from 39 mg/L in August 2014 to non-detect (<2 mg/L) in January and May 2015, and the TCE concentration decreasing from 560 mg/l to 2.2 mg/L over the same period. In addition, concentrations of TCE and PCE reflected a decrease at well AP33-DO in May 2015. Between the January 2015 and May 2015 sampling events, TCE at AP33-DO decreased from 340 mg/L to 89 mg/L and PCE reduced from 62 mg/L to 17 mg/L. The May 2015 sample results also indicate elevated levels of ethene in six out of the eight wells monitored, suggesting that complete degradations of chlorinated VOC is occurring. Organic carbon remains high enough in each target wells to sustain reductive dechlorination.

At the deep overburden wells located at the northeast corner of Building 3, the graphs in **Appendix E** indicate a trend of continued elevated VOC concentrations above the remedial planning criteria. These wells include AP13-DO, AP23-DO and AP24-DO. Unlike other areas of the Site, groundwater sampling results also indicate elevated impacts of TCA and acetone in this area in addition to TCE and PCE. TCA and acetone are more effectively treated by bioremediation. Lactate injections began in this area in 2006 to address elevated VOC. Application of EVO was conducted in November 2014 to continue reductive dechlorination. In May and August 2015, the concentration of TCE at AP13-DO and AP23-DO remain above the remedial planning criteria (up to 400 mg/L at AP23-DO in August 2015). Concentrations of TCA at AP13-DO (26 mg/L), AP24-DO (31 mg/L) and AP33-DO (48 mg/L) remain elevated in August 2015. However, concentrations of acetone at AP13-DO decreased from 43 mg/Lin May 2015 to 7.1 mg/L in August 2015. In addition, the concentration of acetone at well AP23-DO decreased from 54 mg/L in May 2015 to 10 mg/L in August 2015. This indicates some initial positive effects from the bioremediation program at these wells.

Building 5 Treatment Area

Permanganate application to groundwater in the Building 5 treatment area was conducted at well AP27-DO, located east of Building 5, in 2004, 2005, and 2012, and at OB-35DO, located beneath Building 5, from 2005 to 2008, in 2011, 2012, and 2014.

Trend graphs provided for wells in the Building 5 area include AP27-DO and OB35-DO in **Appendix E**. The VOC trend graph for deep overburden well AP27-DO indicates a significant VOC decrease after the first treatment in 2004. In October 2011 and April 2012, the TCE concentration increased to 12 mg/L and 13 mg/L, respectively. To address the increased level of TCE noted at AP27-DO and nearby well OB35-DO, permanganate treatment was conducted at AP27-DO in 2012. VOC concentrations responded to treatment, with TCE at AP27-DO decreasing to non-detectable in November 2012. The TCE concentration at this well increased to 15 mg/L in October 2014 and remained consistent at 15 mg/L in May 2015. In August 2015 TCE concentration at AP27-DO increased to 22 mg/L. These concentrations remain below the remedial planning criterion, although it is noted that the TCE concentration in August 2015 is approaching the criterion.

Permanganate treatment at deep overburden well OB35-DO, located inside Building 5, has had mixed results. Treatment reduced the concentration of TCE at OB35-DO from 440 mg/L in May 2005 to consistently below the remedial planning criteria (e.g., 5.2 mg/L May 2015 and 0.14 mg/L August 2015). However, permanganate treatment has not consistently reduced the concentration of PCE at OB35-DO to below the remedial planning criteria. In May 2015 the PCE concentration at well OB35-DO was 29 mg/L compared to a pretreatment concentration of 11 mg/L. PCE tends to adhere to the soil matrix more than TCE, so the continued detection of PCE at this well may be the result of the permanganate desorbing PCE bound to soil particles, where it is then is treated by the oxidizer. However, a significant decrease in the PCE concentration was noted at OB35-DO between May 2015 (29 mg/L) and August 2015 (0.18 mg/L). In addition, the cis-1,2-DCE concentrations at OB35-DO increased from 1.0 mg/L in May 2015 to 40 mg/L in August 2015. Additionally an increase in vinyl chloride was also noted between May 2015 (0.0057 mg/L) and August 2015 (0.23 mg/L). These decreases in PCE and the corresponding increase in daughter products are likely the result of shallow bioremediation being conducted in the area of deep well OB35-DO. The cis-1,2-DCE concentration detected in May 2015 at OB35-DO is approaching the remedial planning criterion, suggesting that additional treatment is warranted.

Shallow overburden wells OB44-S is located inside Building 5. This well was first sampled in January 2014, and indicated the presence of TCE (24 mg/L) and PCE (47 mg/L) with cis-1,2-DCE reported as non-detectable. In April 2015 shallow overburden lactate injections were conducted just up gradient of this well to reduce VOC in shallow groundwater beneath Building 5. In May 2015, TCE and PCE concentrations decreased to non-detect, while the cis-1,2-DCE concentration was reported at 23 mg/L. In addition, ethene and DHC were present in groundwater during the May 2015 sampling event. These results indicate that reductive dechlorination was occurring in shallow groundwater below Building 5. In August 2015, TCE and PCE concentrations increased to 5.7 mg/L and 29 mg/L, respectively, while cis-1,2-DCE concentration was reported at 1.1 mg/L. As noted above, this increase was not unexpected because only about half of the estimated lactate dose was applied to the treatment area. Therefore, further treatment, as discussed in Section 2.2, is planned in the shallow overburden at Building 5.

PSL 10 Treatment Area

This area is located to the south of the Building 5 area, adjacent to the 32 Tozer Road property. Permanganate injections were conducted in this area from 2002 to 2004, from 2006 through 2008, and in 2011. Permanganate treatment was conducted in this area in May 2014 to help reduce increased VOC concentrations observed at wells AP-19 through AP-22 and to improve the decreasing VOC trend noted at well MW2-32Tozer located downgradient on the 32 Tozer Road property. As exhibited by the decreased VOC concentrations in November 2014 at the application wells, the wells did respond to treatment. VOC concentrations in May 2015 at well AP-19 indicated only a slight increase for TCE (0.019 mg/L) and PCE (0.0029 mg/L) when compared to the November 2014 sample round. Analytical results from AP-20 also indicate a slight increase in the PCE (0.019 mg/L) and TCE (0.058 mg/L) concentrations when compared to the November 2014 results. Analytical results from AP-21 and AP-22 in May 2015 indicated PCE and TCE concentrations remain non-detect for the last two sampling rounds.

Trend graphs provided for wells in the PLS10 area include the CL4 well cluster, the CL10 well cluster and MW2-32Tozer in **Appendix E**. VOC concentrations at shallow overburden well CL10-S, located just downgradient of the PSL 10 treatment wells on the 32 Tozer Road property, continue to exhibit seasonal

fluctuations. Higher concentrations of PCE are noted in the spring sampling, with lower levels observed in the fall. For example, the PCE concentration increased from 0.018 mg/L in October 2014 to 0.77mg/L in May 2015. Overall the PCE concentrations at CL10-S do not indicate a trend. TCE and PCE concentrations remained non-detectable in May 2015 at deep overburden well CL10-DO and bedrock well CL10-BR.

Deep overburden monitoring well MW2-32Tozer was installed west of the PSL10 injection wells on the 32 Tozer Road property in 2011. Overall, the PCE concentrations at this well indicate a decreasing trend, with concentrations of PCE decreasing from a high of 16 mg/L in November 2012 to 1.0mg/L in May 2015.

October 2015 analytical data from this area will be evaluated to determine if further treatment is warranted in the PSL10 Area. Note that potential indoor air impacts at the 32 Tozer Road property are being monitored by sampling of indoor air as described in section 2.7.

North of Route 128

Historically, VOC concentrations in the area north of Route 128 have been low or non-detectable in the shallow and deep overburden aquifers. Impacts have been noted in the bedrock aquifer north of Route 128. Permanganate injection has not been performed directly in this area, but source area treatment beginning in 2002 south of Route 128 was conducted to address downgradient groundwater impacts north of the former Varian facility.

Trend graphs provided for wells in the area north of Route 128 include the BR-1_zone 3, the OB17 well cluster and CL9-ZONE3 in **Appendix E**. As shown in the graphs, an overall decreasing VOC trend is occurring in deep overburden and bedrock wells OB17-DO and OB17-BR north of route 128. In addition, VOC concentrations remain low in bedrock well BR-1_zone3, located on Walden Street. Over the last three sampling events, VOCs have been non-detectable in the shallowest zone of this bedrock well. At bedrock well CL9-ZONE3, located on Commons Drive, TCE, PCE and cis-1,2-DCE concentrations have all decreased for the last three sampling rounds. The concentrations of TCE, PCE and cis-1,2-DCE at CL09-ZONE3 were detected at 0.041 mg/L, 0.016 mg/L and 0.72 mg/L, respectively in May 2015.

Tozer Road Treatment Area South of 128

Initial permanganate injections were performed at 28 Tozer Road in 2006 and additional injections were conducted at CL3-DO in 2013 to address a TCE concentration rebound to 30 mg/L in April 2013, above the remedial planning criteria. Following the 2013 treatment, VOC concentrations decreased, with TCE being non-detectable in October 2013, and have remained non-detect for the last three sampling rounds, including May 2015. .

Trend graphs provided for wells in the area south of Route 128 include the BR-5_Zone3, the CL3 well cluster, OB5-DO and the OB6 well cluster in **Appendix E**. At bedrock well BR-5_Zone3, located at 28 Tozer Road, VOC concentrations continue to fluctuate. In May 2015, concentrations were higher, with TCE, PCE and cis-1,2-DCE detected at concentrations of 0.12 mg/L, 0.012mg/L and 3.3 mg/L, respectively, at BR-5_Zone3. Although a trend graph is not provided for deep overburden well MW-36,

located at 28 Tozer Road, analytical results from this well indicate higher VOC concentrations since May 2013. In May 2015, TCE was detected at 2.9 mg/L and cis-1,2-DCE was reported at 2.1 mg/L at MW-36.

Downgradient of 28 Tozer Road, the trend graph for bedrock well OB5-BR located at 27 Tozer Road indicates an overall decreasing VOC trends for PCE and TCE. In May 2015, PCE remained non-detect and TCE decreased to non-detect. At the adjacent deep overburden well OB5-DO, lower VOC concentrations were observed after treatment began in 2002. However, an increasing VOC trend began in 2009 and since April 2010, generally consistent, higher VOC concentrations had been noted. However, in October 2014 and May 2015, lower VOC concentrations were observed. In May 2015, TCE, PCE, and cis-1,2-DCE were detected at concentrations of 1.2 mg/L, 0.44 mg/L and 0.73 mg/L, respectively.

At deep overburden well OB06-DO, located on Sonning Road, VOC concentrations appear to be exhibiting a decreasing trend over the last four sampling events. In May 2015, TCE was detected at 0.54 mg/L and cis-1,2-DCE was detected at 0.32mg/L at OB06-DO. In the adjacent bedrock well OB06-BR, VOC concentrations illustrate an overall decreasing trend since the start of treatment upgradient at 28 Tozer Road in 2002. For example, TCE decreased from 1.8 mg/L in 2002 to 0.085 mg/L in May 2015.

31 Tozer Road Treatment Area

Shallow groundwater treatment was conducted in 2002 and 2003 and deep overburden permanganate injection occurred in this area in 2004.

Monitoring wells in this area of the site are sampled to monitor shallow overburden impacts and thereby assess potential impacts to indoor air at commercial buildings along Tozer Road. During this reporting period these wells include OB18-S (31 Tozer Road), OB41-S (39 Tozer Road), OB42-S (30 Tozer Road), OB43-S (27 Tozer Road) AP-15S (31 Tozer Road). The trend graphs for these wells in **Appendix E** indicate an overall decreasing VOC trend or generally consistent VOC concentrations. Well OB18-S had no detects for PCE and TCE in May 2015. AP-15S generally indicates the lowest detected VOC concentrations. For example TCE and cis-1,2-DCE were detected at 0.016 mg/L and 0.0055mg/L, respectively in May 2015. Well OB41-S (30 Tozer Road) exhibits the highest VOC concentrations, with PCE, TCE and cis-1,2-DCE detected at 0.070 mg/L, 0.31 mg/L and 0.14 mg/L, respectively in May 2015. Additional discussion regarding potential impacts to indoor air at 30 Tozer Road is provided in section 4.3 of this report.

Longview/Hill Street Treatment Area

In the Longview/Hill Street area, permanganate injections were conducted at wells AP3-DO and AP4-DO during 2004, and at AP3-DO and AP3-BR in 2005.

Trend graphs provided in **Appendix E** for wells in the Longview/Hill Street treatment area include BR6-Zone3, the OB20 well cluster and P-20R. At bedrock well BR6, located on Hill Street, TCE and PCE concentrations have been non-detectable in each zone over multiple years. Concentrations of vinyl chloride and cis-1,2-DCE at this well have fluctuated within each zone at relatively low levels. In May 2015, Zone 3, the shallowest interval, was sampled and cis-1,2-DCE and vinyl chloride were detected at 0.13 mg/L and 0.055mg/L, respectively.

In this downgradient area of the Site, well P-19A on Hill Street and P-20R were sampled during this reporting period to monitor shallow impacts. Concentrations of PCE, TCE and cis-1,2-DCE are typically low at well P-19A. In May 2015, PCE and TCE were reported at 0.004 mg/L and 0.021 mg/L and cis-1,2-DCE was reported at 0.16 mg/L. VOC concentrations at well P-20R were non-detectable in May 2015. Well P-9R on Hill Street was proposed as a downgradient well to be sampled but the well was dry during the May 2015 sampling event.

At deep overburden well OB20-DO, TCE and PCE concentrations are generally low or non-detectable with higher cis-1,2-DCE concentrations. In May 2015, TCE and cis-1,2-DCE were reported at concentrations of 0.0068 mg/L and 0.2 mg/L, respectively, and PCE was non-detectable at OB20-DO. At the adjacent bedrock well OB20-BR, TCE and cis-1,2-DCE concentrations remained consistent over the last four sampling events. However, concentration of both VOC decreased in May 2015. At OB20-BR, TCE and cis-1,2-DCE were detected at 0.0027 mg/L and 0.024 mg/L, respectively in May 2015.

2.4 Building 3 SVE System

The Building 3 SVE system, including extraction wells BLDG3-SVE1 and BLDG3-SVE-2, was installed in December 2009 and system startup was completed in January 2010 (Shaw, 2010a). The SVE system was designed to reduce VOC concentrations in the vadose zone soil beneath Building 3 as well as to control potential vapor intrusion into the building. Two additional horizontal extraction wells BLDG3-SVE3 and BLDG3-SVE4 were installed in 2014.

The SVE system consists of the following components:

- four horizontal soil vapor extraction wells (BLDG3-SVE1, BLDG3-SVE2, BLDG3-SVE3, and BLDG3-SVE4) installed beneath Building 3;
- one 5 horsepower blower;
- one moisture knock-out drum; and
- two 2,000-pound carbon vessels piped in series (with a spare third 2,000 pound carbon vessel)

The locations of the four SVE wells and the treatment system trailer are shown on **Figures 10** and **11** The March 2010 IRA status report included an Operation & Maintenance (O&M) Manual developed to ensure that the system is operated properly to meet the intended design criteria and achieve site remedial goals (Shaw, 2010a). The O&M Manual includes manufacturer's literature and specific procedures for individual components for proper operation and maintenance. As-built drawings for the SVE system, a site-specific data collection form, preventive maintenance charts for key equipment and appropriate system start-up and shutdown procedures were also included.

The Building 3 sub-slab SVE system is part of the Remedy Operation Status for the Site and meets the definition of an Active Exposure Pathway Mitigation Measure (AEPMM) established in the June 2014 revisions to the MCP. The MCP requires that an AEPMM Remedy Operation Status employ remote monitoring technology that will alert the owner and operator of the building protected by the AEPMM and MADEP immediately upon failure of the system. The Building 3 SVE sub-slab system includes a remote monitoring system to provide notice as required by the MCP. The Building 3 sub-slab SVE system was registered with MADEP on December 22, 2014.

The following section presents data regarding the operation of the Building 3 SVE system during this reporting period, including a round of soil vapor and indoor air sampling.

2.4.1 Building 3 SVE System Operation and Maintenance

During this monitoring period, regular twice-monthly O&M site visits were performed by CB&I personnel. Activities performed during regular O&M visits include checking and recording information from SVE system alarms, gauges and meters, and screening soil vapor recovered by the system with a photoionization detector (PID) to assess VOC recovery and off-gas treatment removal efficiency. The results of regular O&M system monitoring conducted from April 8, 2015 through September 29, 2015 are summarized in **Table 8**. During this monitoring period the average total flow rate for the SVE system was approximately 138 cubic feet per minute (cfm), with an average pretreatment total VOC concentration of 6.7 parts per million (ppm). Screening of soil vapor from the SVE wells indicates the highest VOC recovery is from well BLDG3-SVE3, with an average concentration of approximately 4.6ppm during this reporting period.

Table 8 also includes calculated off-gas removal efficiency. **Table 8** demonstrates, except as noted below, that greater than 95 percent removal of VOCs from the vapor discharge was maintained by the carbon vessels during this reporting period as required by MADEP (MADEP, 1994).

During O&M site visits, the applied vacuum on the SVE wells was adjusted to optimize VOC recovery from beneath Building 3. This included increasing or decreasing applied vacuum on the individual SVE wells or adjusting the ambient air dilution valve to increase or decrease the total applied vacuum. During this monitoring period, the well packers at BLDG3-SVE1 and BLDG3-SVE 2 were removed from the wells. This was done to enable permanganate injection at well BLDG3-SVE1 and to allow vapor recovery over the entire well screen at well BLDG3-SVE2. Other activities performed during this reporting period included draining condensation from lines in the system and monitoring vacuum influence at the sub-slab soil vapor points inside Building 3

On April 8, 2015, PID screening of soil vapor from the carbon vessel effluents indicated potential breakthrough of both the primary and the secondary carbon vessels (**Table 8**). The carbon vessels were reconfigured to bring the stand-by carbon vessel into service as the new secondary treatment. The SVE system was then reactivated and monitoring of the secondary carbon effluent (discharge to atmosphere) on this date indicated greater than 95 percent treatment of VOC.

On May 22, 2015, approximately 2,000 pounds of spent carbon were removed from the off-line vessel and new carbon was installed. The spent Building 3 carbon was transported off site for regeneration at Evoqua Water Technologies in Parker, Arizona. A copy of the Uniform Hazardous Waste Manifest for the shipment of carbon is provided in **Appendix B**. The off-line vessel with new carbon remained on site as a stand-by in the event that vapor screening indicates carbon breakthrough.
On May 29, 2015, PID screening of soil vapor from the carbon vessel effluents indicated potential breakthrough of both the primary and the secondary carbon vessels (**Table 8**). The carbon vessels were reconfigured to bring the stand-by carbon vessel into service as the new secondary treatment. The SVE system was then reactivated and monitoring of the secondary carbon effluent (discharge to atmosphere) on this date indicated greater than 95 percent treatment of VOC.

On June 9, 2015, approximately 2,000 pounds of spent carbon were removed from the off-line vessel and new carbon was installed. The off-line vessel with new carbon remained on site as a stand-by in the event that vapor screening indicates carbon breakthrough. The spent Building 3 carbon was stored on site while disposal was arranged.

On June 26, 2016, PID screening of soil vapor from the carbon vessel effluents indicated potential breakthrough the primary carbon vessel (**Table 8**). Monitoring of the secondary carbon effluent (discharge to atmosphere) on this date indicated greater than 95 percent treatment of VOC. The carbon vessels were reconfigured to bring the stand-by carbon vessel into service as the new secondary treatment vessel and the secondary vessel as the new primary treatment vessel. The SVE system was then reactivated and monitoring of the secondary carbon effluent (discharge to atmosphere) on this date continued to indicate greater than 95 percent treatment of VOC.

On July 9, 2015, PID screening of soil vapor from the carbon vessel effluents indicated potential breakthrough the primary carbon vessels (**Table 8**). Monitoring of the secondary carbon effluent (discharge to atmosphere) on this date indicated greater than 95 percent treatment of VOC. A carbon service had not yet been conducted; therefore, the stand-by vessel still contained spent carbon. Because monitoring data still indicated greater than 95 percent treatment of VOC, system modifications were not conducted on this date.

On July 21, 2015 approximately 4,000 pounds of spent carbon were removed from the off-line vessel and the in service primary carbon vessel. New carbon was installed in both vessels. The spent Building 3 carbon was transported off site along with the carbon generated on June 9, 2015 for regeneration at Evoqua Water Technologies in Parker, Arizona. A copy of the Uniform Hazardous Waste Manifest for the shipment of carbon is provided in **Appendix B**. The off-line vessel with new carbon remained on site as a stand-by in the event that vapor screening indicates carbon breakthrough. The SVE system was then reactivated and monitoring of the secondary carbon effluent (discharge to atmosphere) on this date continued to indicate greater than 95 percent treatment of VOC.

A temporary shutdown of the Building 3 SVE system was conducted from August 4, 2015 until August 20, 2015. At the end of the temporary system shutdown, soil vapor and indoor air samples were collected to assess static conditions with the building and in soil vapor beneath the building (see 2.4.2). Following sample collection, the SVE system was reactivated.

During this reporting period, no system alarms were received. However, test alarms during O&M visits and periodic automated test alarms were received from the Building 3 SVE system.

2.4.2 Building 3 Soil Vapor and Indoor Air Sampling

On July 2, 2015, sub-slab soil vapor samples were collected from four vapor points, one in the basement of Building 2 (BLDG2-SV1) and three beneath Building 3 (BLDG3-VP1, BLDG3-VP2, and BLDG3-VP3). The sub-slab soil vapor sampling points are illustrated on **Figure 10**. Each sample was collected using evacuated Summa® canisters over a four-hour sampling interval. The sub-slab soil vapor samples collected were submitted to ALS for laboratory analysis of select VOCs referencing EPA Method TO-15

(MADEP Method WSC-CAM-IXB). Analytical results of the soil vapor samples are summarized on **Table 9**. A complete copy of the laboratory analytical report is provided in **Appendix D**.

Analytical results of the July 2, 2015 sub-slab soil vapor samples collected beneath Building 2 and 3 indicated:

- TCE was detected at concentrations ranging from non-detect at BLDG3-VP2 to 38 micrograms per meter cubed (ug/m^3) at BLDG2-SV1;
- PCE was detected at concentrations ranging from non-detect at BLDG3-VP2 to 60 ug/m^3 at BLDG2-SV1; and
- cis-1,2- DCE was detected at 5.0 ug/m^3 at BLDG2-SV1.

Additional VOCs detected in sub-slab soil vapor samples collected from beneath Building 2 and 3 in July 2015 included acetone (up to 3,370 ug/m^3), dichloromethane (up to 45 ug/m^3), trans-1,2-dichloroethene (up to 4 ug/m^3), and chloroform (up to 3 ug/m^3).

July 2015 analytical data indicated a decrease in VOC concentrations in all four sub-slab soil vapor locations since the prior sampling round conducted during system operation (January 2015). Concentrations were the greatest in BLDG2-SV1, but exhibited a significant decrease compared to January 2015. For example, PCE detected at BLDG2-SV1 decreased from 18,000 ug/m^3 in January 2015 to 60 ug/m^3 in July 2015. This suggests that the permanganate application conducted at BLDG3-SVE4 between January and March 2015 has reduced VOCs beneath the Building 3 Chemical laboratory.

On July 1, 2015, the day before sub-slab soil vapor sampling, indoor air samples were collected from the Building 2 basement and in Building 3. These locations included BLDG2-6 (Building 2 Basement), BLDG3-1 (Main Chemical Laboratory), BLDG3-3 (MID Stock Room), and BLDG3-4 (Building 3 Machine Shop). The indoor air samples were collected using evacuated Summa® canisters over an eight-hour sampling interval. The indoor air sampling locations are also illustrated on **Figure 10**. The indoor air samples were submitted to ALS for laboratory analysis of select VOCs referencing EPA Method TO-15 (MADEP Method WSC-CAM-IXB). Analytical results of the indoor air samples are summarized on **Table 10**. A complete copy of the laboratory analytical report is provided in **Appendix D**.

Analytical results of the July 1, 2015 indoor air samples collected in the Building 2 basement and Building 3 indicate:

- TCE was not detected above reporting limits in the indoor air samples
- PCE was not detected above reporting limits in the indoor air samples

VOCs detected in indoor air samples collected from the Building 2 basement and Building 3 on July 2 , 2015 include acetone (up to 590 ug/m3), 2-butanone (up to 11 ug/m3), and dichloromethane (up to 9 ug/m3). Note that acetone is used in the manufacturing process throughout the building.

Indoor air sampling results from the Building 2 basement and Building 3 indicate TCE and PCE concentrations below the reporting limit at each location for the first time. Based on the lower concentrations of VOC in indoor air, lower VOC levels in soil vapor recovered by the Building 3 SVE

system, and lower levels of VOCs detected in soil vapor beneath the northeast portion of Building 3, a temporary shutdown of the Building 3 SVE system was conducted from August 4, 2015 until August 20, 2015. At the end of the temporary system shutdown, soil vapor and indoor air samples were collected to assess static conditions in the building and in soil vapor beneath the building. Following sample collection, the SVE system was reactivated.

On August 20, 2015, sub-slab soil vapor samples were collected from four sub-slab soil vapor points (BLDG2-SV1, BLDG3-VP1, BLDG3-VP2 and BLDG3-VP3). The sub-slab soil vapor sampling points are illustrated on **Figure 10**. Each sample was collected using evacuated Summa® canisters over a four-hour sampling interval. The sub-slab soil vapor samples collected were submitted to Accutest for laboratory analysis of VOCs referencing EPA Method TO-15 (MADEP Method WSC-CAM-IXB). Analytical results of the sub-slab soil vapor samples are summarized on **Table 9**. A complete copy of the laboratory analytical report is provided in **Appendix D**. Analytical results of the August 20, 2015 sub-slab soil vapor samples collected beneath Building 3 indicated:

- TCE was detected at concentrations ranging from 2.1 ug/m^3 at BLDG2-SV1 to 25 ug/m^3 at BLDG3-VP2;
- PCE was detected at concentrations ranging from 3.5 ug/m^3 at BLDG2-VP1 to 106 ug/m^3 at BLDG3-VP3; and

Additional VOCs detected in sub-slab soil vapor samples collected from beneath Building 3 on August 20, 2015 include acetone ranging from 356 ug/m^3 at BLDG3-VP1 to 9070 ug/m^3 at BLDG2-SV1. Chloroform and chloromethane were also detected in BLDG2-SV1 at concentrations of 2.4 ug\m^3 and 1.8 ug/m^3, respectively.

On August 19, 2015, the day before sub-slab soil vapor sampling, indoor air samples were collected from the Building 2 basement and in Building 3. These locations included BLDG2-6 (Building 2 Basement), BLDG3-2 (Chemical laboratory bench testing room), BLDG3-3 (MID Stock Room), and BLDG3-4 (Building 3 Machine Shop). The indoor air samples were collected using evacuated Summa® canisters over an eight-hour sampling interval. The indoor air sampling locations are also illustrated on **Figure 10**. The indoor air samples were submitted to Accutest for laboratory analysis of select VOCs referencing EPA Method TO-15 (MADEP Method WSC-CAM-IXB). Analytical results of the indoor air samples are summarized on **Table 10**. A complete copy of the laboratory analytical report is provided in **Appendix D**. The analytical results from the August 19, 2015 indoor air samples collected indicated:

- TCE was detected at concentrations ranging from 3.2 ug/m^3 at BLDG3-4 to 5.9 ug/m^3 at BLDG3-3
- PCE was detected at concentrations ranging from 3.3 ug/m^3 at BLDG3-2 to 61 ug/m^3 at BLDG3-3
- trans-1,2-DCE was detected at concentrations ranging from 1.7 ug/m3 at BLDG2-6 to 2.3 ug/m3 at BLDG3-2
- 1,1,1-TCA was detected at BLDG3-3 (2.2 ug/m^3) and BLDG3-2 (2.1 ug/m^3)

Additional VOCs detected in sub-slab soil vapor samples collected from beneath Building 3 on August 19, 2015 include acetone ranging from 204 ug/m^3 at BLDG2-6 to 3370 ug/m^3 at BLDG3-2. Chloromethane was also detected at up to 1.2 ug\m^3.

Based on the August 19, 2015 indoor air sampling results, static TCE and PCE concentrations at each indoor air sampling location increased when compared to the July 2015 results with the system operating. As expected most indoor air concentrations indicated a modest increase. For example, PCE in the Building 2 Basement (BLDG2-6) increased from <1.0 ug/m^3 to 3.9 ug/m^3 and TCE increased from < 1.0 ug/m^3 to 4.7 ug/m^3. The TCE concentration in August 2015 at BLDG3-3 and each of the indoor air sampling locations was below the MassDEP's long-term remediation target of 8 ug/m3 for workplace indoor. However, at BLDG3-3 (MID Stockroom) PCE increased from <1.0 ug/m^3 in July 2015 to 61 ug/m^3 in August 2015. The August 2015 PCE concentrations at BLDG3-3 remained below pretreatment levels (750 ug/m^3) and would not pose an Immanent Hazard, but would potentially pose a long term hazard if the Building 3 SVE system was not operating. Based on the August 2015 indoor air results, it is recommended that the Building 3 SVE system continue operating.

2.4.3 Building 3 SVE System Performance

Monitoring of applied vacuum beneath the Building 3 floor is conducted at the sub-slab vapor monitoring points installed inside Building 3. The results of this monitoring are provided on **Table 8** for the current reporting period and the locations of the sub-slab vapor monitoring are illustrated on **Figure 10**. Results of this monitoring indicate that vacuum influence from operation of the SVE system is present beneath Building 3, including point BLDG3-VP6, which is located approximately 22 feet to the south of BLDG3-SVE2. These data demonstrate soil vapor control is maintained by operation of the Building 3 SVE system beneath this portion of the Building 3 floor slab.

Measured VOC concentrations in soil vapor recovered by the Building 3 SVE system using a PID are evaluated to approximate the VOC mass removed by the treatment system. Both the VOC mass removal rate and total VOC mass removed by the Building 3 SVE system are presented in **Table 11** and illustrated in **Figure 12**. Since the SVE system was activated in December 2009, it has removed an estimated 1,741 pounds of VOCs from beneath Building 3. During this reporting period, a total of approximately 86 pounds of VOCs were removed by the Building 3 SVE system.

Based on the August 2015 indoor air results, we recommend continued operation of the Building 3 SVE system. Additionally while SVE continues, permanganate injections are planned at BLDG3-SVE3. Once those injections are complete, it is recommended that permanganate injections also be completed at BLDG3-SVE1. This additional treatment should reduce VOC concentrations in soil and shallow groundwater beneath the building and thereby reduce potential impacts to indoor air within Building 3. Once permanganate treatment in complete at BLDG3-SVE3 and BLDG3-SVE1, another controlled shutdown of the Building 3 SVE system to assess VOC levels in indoor air under static conditions is recommended.

As required by the AEPMM provisions in the MCP, the Building 3 sub-slab system was designed to ensure a level of No Significant Risk is maintained for the receptor of concern under normal operating conditions. Monitoring and maintenance activities regularly conducted for the Building 3 sub-slab SVE system continue to demonstrate that the system is operating in accordance with the OMM Plan (Shaw, 2010a) and effectively mitigating the exposure pathway.

2.5 Building 5 SVE System

The Building 5 SVE system was installed in December 2012 and system startup was completed in March 2013. The SVE system was designed to reduce VOC concentrations in the vadose zone soil beneath Building 5 as well as to control potential vapor intrusion into the building.

The system was expanded to include horizontal extraction wells BLDG5-SVE3 and BLDG5-SVE4 during the previous reporting period. As discussed in the previous ROS status report, extraction wells BLDG5-SVE3 and BLDG5-SVE4 were connected to SVE system on August 11, 2014. **Figure 13** illustrates the location of the horizontal extraction wells.

The SVE system consists of the following components:

- four horizontal soil vapor extraction wells (BLDG5-SVE1, BLDG5-SVE2, BLDG5-SVE3, and BLDG5-SVE4) installed beneath Building 5;
- one 5 horsepower regenerative blower;
- one moisture knock-out drum; and
- two 2,000-pound carbon vessels piped in series (with a spare third 2,000 pound carbon vessel).

The October 2013 ROS report included an O&M Manual developed to ensure that the system is operated properly to meet the intended design criteria and achieve site remedial goals (Shaw, 2013c). The O&M Manual includes manufacturer's literature and specific procedures for individual components for proper operation and maintenance. As-built drawings for the SVE system, a site-specific data collection form, preventive maintenance charts for key equipment and appropriate system start-up and shutdown procedures were also included.

The Building 5 sub-slab SVE system is part of the Remedy Operation Status for the Site and meets the definition of an AEPMM established in the June 2014 revisions to the MCP. The MCP requires that an AEPMM implemented as part of a Temporary Solution or Remedy Operation Status employ remote monitoring technology that will alert the owner and operator of the building protected by the AEPMM and MADEP immediately upon failure of the system. The Building 5 sub-slab SVE system includes a remote monitoring system to provide notice as required by the MCP. The Building 5 sub-slab SVE system was registered with MADEP on December 22, 2014.

The following section presents data regarding the operation of the Building 5 SVE system during this reporting period.

2.5.1 Building 5 SVE System Operation and Maintenance

During this monitoring period, regular twice-monthly O&M site visits were performed by CB&I personnel. Activities performed during regular O&M visits include checking and recording information from SVE system alarms, gauges and meters, and screening soil vapor recovered by the system with a PID to assess VOC recovery and off-gas treatment removal efficiency. During this reporting period, only soil vapor extraction wells BLDG5-SVE1 and BLDG5-SVE4 were operational. Wells BLDG5-SVE2 and BLDG5-SVE3 were inactive to enable bioremediation injection. These two wells remained deactivated following the bioremediation injections to limit introduction of air into the formation during the anaerobic

bioremediation process. The results of regular O&M system monitoring conducted from April 8, 2015 through September 29, 2015 are summarized in **Table 12**. From April 1, 2015 through September 30, 2015 the average total flow rate for the SVE system was approximately 133 cfm, with an average pretreatment total VOC concentration of 0.9 ppm. VOC recovery continues to be higher at vapor extraction well BLDG5-SVE1, with an average concentration of approximately 3.8 ppm during this reporting period.

Table 12 also includes calculated off-gas treatment removal efficiency, which demonstrates greater than 95 percent removal of VOCs from the SVE system discharge was maintained during this reporting period by the carbon treatment vessels as required by MADEP (MADEP, 1994), with the exceptions noted below. As discussed below, when this condition was identified, the stand-by carbon vessel was promptly brought on line and greater than 95 percent VOC removal was documented.

During O&M site visits, the applied vacuum on the SVE wells was adjusted to optimize VOC recovery from beneath Building 5. This included increasing or decreasing applied vacuum on the individual SVE wells or adjusting the ambient air dilution valve to increase or decrease the total applied vacuum. Other activities performed during this reporting period included draining condensation from lines in the system and monitoring vacuum influence at the sub-slab soil vapor points inside Building 5.

On April 8, 2015, PID screening of soil vapor from the carbon vessel effluents indicated a potential breakthrough of the carbon treatment. However, PID screening results on this data were likely affected by moisture becoming trapped in the PID, which resulted in inaccurate readings. This was confirmed by bringing the stand-by carbon vessel on line and monitoring the effluent from this vessel which contained new carbon. Vapor screening on April 24, 2015 with a new PID provided further confirmation that the April 8, 2015 PID screening results were inaccurate.

On May 29, 2015, PID screening of soil vapor from the carbon effluents indicated potential breakthrough of the primary and secondary carbon (**Table 12**). During the previous O&M visit, PID readings between carbon vessels had indicated VOC concentrations were non-detectable. Based on the May 29, 2015 monitoring results, the primary carbon vessel was taken offline and the stand-by carbon vessel was brought into service as the new secondary treatment vessel and the secondary treatment vessel configured as the primary treatment vessel. The SVE system was then reactivated and monitoring of the secondary carbon effluent (discharge to atmosphere) on this date indicated greater than 95 percent VOC treatment.

On July 21, 2015, approximately 2,000 pounds of spent carbon were removed from the off-line vessel and new carbon was installed. The spent Building 5 carbon was transported off site for regeneration at Evoqua Water Technologies in Parker, Arizona (along with drums of carbon onsite from the Building 3 SVE system). A copy of the Uniform Hazardous Waste Manifest for the shipment of carbon is provided in **Appendix B**. The off-line vessel with new carbon remained on site as a stand-by in the event that vapor screening indicates carbon breakthrough.

On July 27, 2015, a temporary power outage was scheduled as part of maintenance for the property. Following the restoration of electrical power, the SVE system was restarted and observed to be operating normally.

A temporary shutdown of the Building 5 SVE system was conducted from September 15, 2015 until September 29, 2015. At the end of the temporary system shutdown, soil vapor and indoor air samples were collected to assess static conditions with the building and in soil vapor beneath the building. Following sample collection, the SVE system was reactivated. Results from this data are still pending and will be discussed during the next reporting period.

During this reporting period no system alarms were received. However, test alarms during O&M visits and periodic automated test alarms were received from the Building 5 SVE system.

2.5.2 Building 5 Soil Vapor and Indoor Air Sampling

On June, 11, 2015 indoor air samples were collected from three locations inside Building 5, including BLDG5-1 (QA Area), BLDG5-2 (Shipping area) and BLDG5-3 (Sanding Room). The sampling was conducted to assess the impact of bioremediation activities in the area of OB44-S on indoor air conditions within Building 5. The samples were collected using evacuated Summa® canisters over an eight-hour sampling interval. The indoor air sampling locations are illustrated on **Figure 13**. The indoor air samples collected were submitted to ALS for laboratory analysis of VOCs by EPA Method TO-15. Analytical results of the indoor air samples are summarized on **Table 13**. Complete copies of the laboratory analytical reports are provided in **Appendix D.**

Analytical results of the June 11, 2015 indoor air samples collected from within Building 5 indicate:

- TCE was detected at concentrations ranging from 2 ug/m3 in BLDG5-3 to 7 ug/m3 in BLDG5-2;
- PCE was detected at 2 ug/m3 in BLDG5-1 and BLDG5-3, and 6 ug/m3 in BLDG5-2; and
- Acetone was detected at concentrations ranging from 370 ug/m3 in BLDG5-2 to 870 ug/m3 in BLDG5-3

Note that acetone is used in the manufacturing process throughout the building. Several additional VOCs were reported at low levels in indoor air samples collected from the Building 5 in June 11, 2015, including 2-butanone, dichloromethane, ethylbenzene, trans-1,2-DCE, 4-methyl-2-pentenone, naphthalene, toluene and xylenes.

The results of the June 11, 2015 indoor air samples from Building 5 indicate concentrations of target VOCs such as TCE and PCE that were similar or lower than those previously detected in the Building 5 treatment area. This suggested that the shallow bioremediation being conducted in the Building 5 area has not yet reduced VOC concentrations in indoor air.

On June 12, 2015, sub-slab soil vapor samples were collected from three soil vapor points beneath Building 5 (BLDG5-SV1, BLDG5-SV3, and BLDG5-SV5, **Figure 13**). The samples were collected to evaluate current VOC concentrations beneath the building following the start of shallow bioremediation. The vapor samples were collected using an evacuated Summa® canister over a four-hour sampling

interval and submitted to ALS for laboratory analysis of select VOCs by EPA Method TO-15. Analytical results of the June 12, 2015 sub-slab soil vapor samples are summarized on **Table 14**. Complete copies of the laboratory analytical reports are provided in **Appendix D**.
Analytical results of the June 12, 2015 sub-slab soil vapor samples collected beneath Building 5 indicated:

- TCE was detected at concentrations ranging from 2 ug/m^3 in BLDG5-SV5 to 230 ug/m^3 in BLDG5-SV3;
- PCE was detected at concentrations ranging from 5 ug/m^3 in BLDG5-SV5 to 50 ug/m^3 in BLDG5-SV3;
- cis-1,2-DCE was detected at a concentration of 1.0 ug/m^3 in BLDG5-SV3;
- TCA was detected at a concentration of 1 ug/m^3 in BLDG5-SV3;

Additional VOCs reported above detection limits in sub-slab soil vapor samples collected from beneath Building 5 in June 2015 included: 1,3-dichlorobenzene (up to 23 ug/m^3); 2-butanone (up to 270 ug/m^3); 4-methyl-2-pentanone (up to 3.0 ug/m^3); acetone (up to 230 ug/m^3); benzene (up to 2.0 ug/m^3); chloroform (at 12 ug/m^3); dichloromethane (up to 46 ug/m^3); ethylbenzene (up to 5.0 ug/m^3); naphthalene (at 1.0 ug/m^3); toluene (up to 34 ug/m^3); and xylenes (up to 22 ug/m^3) .

Analytical results of sub-slab soil vapor samples from June 2015 continue to reflect a significant decrease in TCE and PCE concentrations compared to analytical results from before the Building 5 SVE system was activated. Data from soil vapor sampling in June 2015 indicated that TCE and PCE concentrations increased at BLDG5-SV1 when compared with the prior sampling event in June 2014. For example, the TCE concentration detected at BLDG5-SV1 increased from 8.7 ug/m3 to 28 ug/m3. BLDG5-SV3 exhibited similar TCE and PCE concentrations and BLDG5-SV5 indicated decreased concentrations of PCE and TCE when compared to the last round of soil vapor sampling. The changes noted in the VOC concentrations detected in sub-slab vapor samples are likely fluctuation rather than an indication of a trend.

On September 29, 2015, sub-slab soil vapor samples were collected from all six soil vapor points beneath Building 5 (BLDG5-SV1, BLDG5-SV2, BLDG5-SV3, BLDG5-SV4, BLDG5-SV5 and BLDG5-SV6 **Figure 13**). The samples were collected to evaluate the static TCE and PCE concentrations beneath the building. Results are still pending and will be included in the next reporting period.

2.5.3 Building 5 SVE System Performance

Monitoring the vacuum beneath the Building 5 floor is conducted at six sub-slab vapor monitoring points (BLDG5-SV1, BLDG5-SV2, BLDG5-SV3, BLDG5-SV4, BLDG5-SV5 and BLDG5-SV6) installed inside the building (**Figure 13**). The monitoring data (**Table 12**) indicates that vacuum influence from operation of the SVE system is observed at most of the monitoring vapor monitoring locations demonstrating vapor control beneath this portion of the Building 5 floor slab.

Measured VOC concentrations in soil vapor recovered by the SVE system using a PID are evaluated to approximate the VOC mass removed by the treatment system. Both the mass removal rate and total mass removed by the Building 5 SVE system are presented in **Table 15** and illustrated in **Figure 14**. Since the Building 5 SVE system was activated on March 11, 2013, through the end of this reporting

period, it has removed an estimated 107 pounds of VOCs from beneath Building 5. During this reporting period a total of 11.3pounds of VOCs were removed from beneath Building 5.

As required by the AEPMM provisions in the MCP, the Building 5 sub-slab SVE system was designed to ensure a level of No Significant Risk is maintained for the receptor of concern under normal operating conditions. Monitoring and maintenance activities regularly conducted for the Building 5 sub-slab SVE system continue to demonstrate that the system is operating in accordance with the OMM Plan (Shaw, 2013c) and effectively mitigating the exposure pathway.

2.6 32 Tozer Road Soil Vapor and Indoor Air Sampling

32 Tozer Road is located adjacent to and downgradient of the PSL10 treatment area where permanganate treatment was conducted most recently in 2014. Previously collected data, including indoor air sampling results, indicated a condition of No Significant Risk exists at the 32 Tozer Road building. Building renovations by the owner that resulted significant changes to the 32 Tozer Road building floor plan were completed in May 2013. To confirm that a condition of No Significant Risk still existed at this property following these renovations, CB&I completed soil vapor and indoor air sampling within the 32 Tozer Road building in May 2013, October 2013, February 2014, April 2014, October 2014, and during this reporting period in April 2015.

On April 16, 2015, three sub-slab soil vapor samples (32Tozer-SV3, 32Tozer-SV4, and 32Tozer-SV5) were collected from beneath the building floor at 32 Tozer Road using evacuated Summa® canisters over a four-hour sampling interval. The locations of soil vapor sampling points are shown on **Figure 15.** These samples were submitted to ALS for analysis of select VOCs by EPA Method TO-15.

Analytical results of the sub-slab soil vapor samples collected beneath the 32 Tozer Road building on April 16, 2015 are summarized in **Table 16**. A complete copy of the laboratory analytical report is included in **Appendix D**. The April 16, 2015 soil vapor analytical results indicated the following:

- TCE was detected at concentrations ranging from 4 ug/m3 in 32 Tozer-SV4 to 150 ug/m^3 in 32 Tozer-SV3;
- PCE was detected at concentrations ranging from 8 ug/m3 in 32 Tozer-SV4 to 54 ug/m^3 in 32 Tozer-SV3;
- cis-1,2-DCE was reported at concentrations ranging from 12 ug/m^3 in 32 Tozer-SV4 to 1,900 ug/m^3 in 32 Tozer-SV3;
- 1,1-dichloroethane was detected at concentrations ranging from non-detect in 32 Tozer-SV4 to 16 ug/m^3 in 32 Tozer-SV3;
- trans-1,2-dichloroethane was detected at concentrations ranging from non-detect in 32 Tozer-SV4 to 13 ug/m^3 in 32 Tozer-SV3; and
- vinyl chloride was detected at concentrations ranging from non-detect in 32 Tozer-SV5 to 4 ug/m^3 in 32 Tozer-SV3.

Data from the April 2015 soil vapor samples indicate an increase in VOC concentrations from the October 2014 sampling rounds. However, the VOC concentrations are well below the levels noted in April 2014. For example, the TCE concentration at 32Tozer-SV3 in April 2014 was 4,500 ug/m^3, compared to 150 ug/m^3 in April 2015. April 2015 soil vapor sampling results for 32 Tozer-SV3 indicated a concentration of

TCE slightly above Commercial/Industrial Sub-Slab Soil Gas Screening Values, which are screening criteria recommended by the MADEP for initial evaluation of soil vapor data in a commercial or industrial setting.

In conjunction with the sub-slab soil vapor sampling, three indoor air samples (32Tozer-1, 32Tozer-2, and 32Tozer-3) were collected from 32 Tozer Road using evacuated Summa® canisters over an eight-hour sampling interval. The locations of indoor air sampling points are shown on **Figure 15**. These samples were submitted to ALS for analysis of select VOCs by EPA Method TO-15.

Analytical results of the indoor air samples collected in the 32 Tozer Road building on April 16, 2015 are summarized in **Table 16**. A complete copy of the laboratory analytical report is included in **Appendix D**. The April 16, 2015 indoor air analytical results indicated the following:

- PCE was detected at concentrations ranging from non-detectable in 32 Tozer-3 to 7 ug/m^3 in 32 Tozer-1; and
- cis-1,2-DCE was reported as non-detectable in 32 Tozer-3 and was detected at a concentration 2 ug/m^3 in 32 Tozer-1 and 32 Tozer-2;

April 2015 indoor air analytical data indicated VOC concentrations stayed consistent with the October 2014 results at all three locations. However, the detected VOC concentrations were lower than the concentrations detected in April 2014. For example, the detected PCE concentration at 32Tozer-1 decreased from 18 ug/m^3 in April 2014 to 7 ug/m^3 in April 2015. The April 2015 PCE concentrations at 32 Tozer-1 exceeded the Commercial/ Industrial Threshold Value. These threshold values are screening criterion recommended by the MADEP for initial evaluation of indoor air data in a commercial or industrial setting. Further evaluation of potential risk associated with indoor air at 32 Tozer Road was therefore conducted and is discussed in section 4.3. Given the consistency of VOC concentrations in soil vapor and indoor air at 32 Tozer Road, future planned groundwater monitoring will be sufficient to monitor for potential changes in site condition. No additional indoor air sampling is planned.

2.7 Quality Assurance/Quality Control (QA/QC)

In general, the environmental data collected by CB&I during these remedial monitoring activities meets the “presumptive certainty” criteria described in MADEP guidance (MADEP, 2004a). To make this determination, the laboratory reports were reviewed by CB&I to confirm that each sample was analyzed within holding times and to ensure that surrogate recoveries and internal laboratory standards were within QA/QC limits. Based on a data usability assessment of the laboratory analytical reports, the data are appropriate for use in this ROS report. Copies of Data Usability Worksheets that document this review are included with each laboratory analytical report in **Appendix D**. If applicable, results from samples reported beyond the calibration range of the laboratory instrument are flagged with an “E” (exceeds calibration range) qualifier in the laboratory analytical report. However, these samples were reanalyzed by the laboratory as a secondary diluted sample. A “D” (diluted) qualifier in the laboratory analytical report and on the data tables indicates compounds that are reported from a secondary diluted sample. Potential QA/QC issues identified during this reporting period included percent recoveries outside of control limits for certain compounds in laboratory control samples (LCS)/laboratory control sample

duplicates (LCSD) in ALS submission numbers R1504068, as a result of this, a “J” (estimated) qualifier was assigned to positive detects in applicable samples while non-detect results were not qualified.

In ARA submission number 33961, certain samples required analysis at a dilution due to interferences from the unusual matrix and some relative percent difference (RPD) values between the analytical replicates were outside the acceptable range. As a result, a “J” (estimated) qualifier was assigned to detect and non-detectable results for Total Organic Carbon.

In ALS submission number R1504217, some samples were analyzed for nitrate outside the holding time. Results were non-detectable for this analyte and were qualified “UJ” (non-detect, estimated).

In ALS submission number R1504068, Samples were over the temperature limit. Results were flagged “J” and estimated due to the elevated cooler temperature.

In ALS submission R1503935 all Blank Spike (LCS)/Blank Spike Duplicate (LCSD) recoveries were within QC limits. All RPD's were acceptable except chloroethane in the May 30, 2015 LCS/LCSD. No qualification was necessary as the results were non-detect.

In ALS submission R1504236, all Blank Spike (LCS)/Blank Spike Duplicate (LCSD) recoveries were within QC limits. All RPD's were acceptable except acetone in the June 10, 2015 LCS/LCSD and has been flagged with an "*" in the lab report (samples API2-DO (48), AP12-BR (73). No qualification was necessary for acetone as the results were non-detect.

In ALS submission number R1504425, samples were over the temperature limit. Results were flagged “J” and estimated due to the elevated cooler temperature.

In summary, no data collected during this reporting period were rejected and the data generally meet the QA/QC requirements of the MCP.

3.0 SIGNIFICANT MODIFICATIONS TO THE OPERATION, MAINTENANCE, AND/OR MONITORING PROGRAM (310 CMR 40.0892 (2)(b))

No major modifications to the remediation or monitoring plans for the Site were made during this reporting period.

The original Phase IV Plan (IT, 2001) detailed groundwater remediation and monitoring activities for the various permanganate treatment areas of the Site. Plans for the bioremediation monitoring activities have been presented in previous ROS status reports. The operation, maintenance and monitoring plan for the Building 3 SVE system was submitted to the MADEP in a March 2010 IRA status report (Shaw 2010a). The operation, maintenance and monitoring plan for the Building 5 SVE system was presented in the modified Phase IV Plan (Shaw, 2012c). Minor adjustments to these remedial monitoring plans will continue to be made as site conditions warrant and will be reported in subsequent ROS reports.

4.0 EVALUATION OF THE PERFORMANCE OF REMEDIAL ACTIVITIES (310 CMR 40.0892 (2)(c))

As described in the preceding sections, remedial activities are progressing at the former Varian Facility Site in general accordance with the Phase IV Plan (IT, 2001) and the Modified Phase IV Plan (Shaw 2012c). Generally lower VOC levels and decreasing VOC concentration trends in groundwater have been observed at monitoring wells across the Site as a result of the permanganate injection program.

In addition, the bioremediation program which began at the Site in 2006 has resulted in significant decreases in VOC levels in shallow groundwater near the Unnamed Stream, where permanganate application is not appropriate.

As discussed above, results of groundwater samples collected in May 2015 and August 2015 provide moderate to strong indication that reductive dechlorination is occurring in the Building 3 deep overburden treatment area. Significant reductions in TCE concentrations have been observed in this treatment area. Future monitoring data will be evaluated and the treatment program adjusted based on those results.

The Building 3 and Building 5 SVE systems are being operated in accordance with their respective Phase IV O&M plans (Shaw, 2012c and Shaw, 2013a). Monitoring of vacuum beneath the building floor in each area is conducted to demonstrate that soil vapor control is maintained beneath Buildings 3 and 5.

Permanganate injections were conducted beneath Building 3 in BLDG3-SVE1 and BLDG3-SVE3 during this reporting period to treat VOC impacts in shallow soil and groundwater. In addition, permanganate injections were conducted at OB37-DO and AP32-DO to address increased VOC concentrations in groundwater. Furthermore, permanganate treatment is planned for the next reporting period. The additional 2015 permanganate treatment plan includes injection designed to reduce VOC source material and to limit potential migration from source areas at the Site. Specifically, wells with VOC concentrations that exceed the remedial planning criteria will be treated. Based on the results of the May 2015 sampling event, wells that exhibit concentrations of VOCs that exceed the remedial planning criteria include AP30R-DO, an angled well located beneath the Building 3 lab, and OB35-DO, located inside Building 5. Permanganate applications are recommended at these two wells. VOC increases were noted at four additional wells, but those concentrations remained below the remedial planning criteria. These include AP31-DO, an angled well located beneath the Building 3 lab, OB27-BR, located on the west side of former Building 7, AP27-DO, located just east of Building 5, and AP12-DO, located at the southeast corner of Building 6. Permanganate treatment is recommended AP31-DO and OB27-BR to help reduce potential downgradient migration of VOC in groundwater. Permanganate injection is also recommended at AP27-DO to help reduce VOC levels in the nearby well OB35-DO. Additional permanganate treatment is recommended at Bldg3-SVE3 and BLDG3-SVE1. This treatment is proposed to further reduce shallow VOC impacted soil and groundwater beneath Building 3 which appears to be impacting indoor air and is contributing to VOC migration towards wells surrounding the buildings. After this additional treatment is conducted, further groundwater, soil vapor and indoor air sampling will be conducted in the Building 3 area to evaluate remedial progress.

The May 2015 shallow groundwater results from the Building 5 area indicate positive results from the bioremediation that was started in April 2015. At target well OB44-S, located inside Building 5, the PCE concentration decreased. Additionally, microbes and ethene were present in May 2015 groundwater samples from OB44-S, suggesting that complete reductive dechlorination is occurring. These results are very encouraging considering that not all of the proposed lactate volume could be applied in the current reporting period in the Building 5 area due slow recharge. Additional lactate applications are planned for October 2015. Results of future groundwater and indoor air samples will be used to make adjustment to the Building 5 shallow bioremediation program.

The following sections present an updated evaluation, including new data collected during this monitoring period as it pertains to potential risk posed by oil or hazardous materials associated with the Site and potential receptors.

4.1 Building 3 Indoor Air Evaluation

The Phase II CSA for the Building 3 remedial area (Shaw, 2012a) included an evaluation of exposure to indoor air with the SVE system operating, considering four rounds of indoor air data collected from February 2011 to January 2012. The conclusion of the Phase II evaluation was that a Condition of No Significant Risk has been achieved with the operation of the SVE system. A subsequent round of indoor air samples in November 2013 confirmed that the SVE system is continuing to maintain a Condition of No Significant Risk. In addition, no conditions of Imminent Hazard have been identified. In particular, concentrations of TCE in indoor air with the system operating have been consistently below the Imminent Hazard value set by MADEP for occupational settings of 24 ug/m^3 (MADEP, 2014). It should be noted that, even during the temporary shutdown of the Building 3 system in August 2015, TCE concentrations in indoor air remained below MADEP's long-term remediation target of 8 ug/m^3 for workplace indoor.

4.2 Building 5 Indoor Air Evaluation

As shown in **Table 14**, soil vapor VOC concentrations beneath Building 5 have decreased substantially with the operation of the SVE system. Indoor air concentrations were relatively low prior to the installation of the SVE system and have also declined (**Table 13**), though not to the same degree as soil vapor. The April 2014 ROS report included a risk evaluation which considered four rounds of indoor air data collected since the installation of the Building 5 SVE system (CB&I, 2014). The risk evaluation concluded that the SVE system has achieved a condition of No Significant Risk (and no Imminent Hazard) while in operation. No new evaluation was conducted on analytical results collected during this reporting period. However, indoor air results from June 2015 indicated VOC concentrations consistent with the data evaluated in the April 2014 ROS report. Therefore, the SVE system continues to maintain a condition of No Significant Risk (and no Imminent Hazard) while in operation. Data collected at the end the September 2015 during the system shutdown will be evaluated to assess the conditions without the SVE system operating. Based on the result of that evaluation, recommendations will be made regarding the continued operation of the Building 5 SVE system.

4.3 Evaluation of Off-Site Properties

4.3.1 32 Tozer Road

In April 2015, CB&I conducted the sixth round of indoor air and soil vapor sampling at the 32 Tozer Road property since the completion of building renovations in April 2013. The results of the first four rounds of indoor air sampling (May 2013, October 2013, February 2014 and April 2014) were evaluated in accordance with the MCP to conservatively estimate potential risk from VOCs in indoor air due to vapor intrusion. Based on this evaluation, the data demonstrated a condition of No Significant Risk exists at the 32 Tozer Road property in accordance with MADEP criteria (CB&I, 2014). The April 2015 soil vapor and indoor air data indicated VOC concentrations lower than the levels assessed in this earlier evaluation. Therefore, a condition of No Significant Risk is still maintained.

4.3.2 30 Tozer Road

The April 2013 ROS report included an indoor air evaluation for 30 Tozer Road, which concluded that a condition of No Significant Risk associated with VOCs from the former Varian Site existed at the 30 Tozer Road property (Shaw, 2013b). The ROS report stated that additional indoor air sampling at 30 Tozer Road may be conducted if increased VOC concentrations are observed at shallow monitoring well OB42-S, located adjacent to the 30 Tozer Road Building (**Figure 2**). May 2015 groundwater analytical results indicate VOC concentrations similar to previous sampling rounds in OB42-S. Therefore, a condition of No Significant Risk would still be expected.

The current owner of 30 Tozer Road is completing building renovations and as part of that work has installed a sub-slab depressurization system under a Release Abatement Measure (RAM) Plan. Varian will collect soil vapor and indoor air samples at the 30 Tozer Road building once the planned building renovations are completed at this property. This sampling is intended to confirm the conclusion that potential impacts to indoor air at 30 Tozer Road pose No Significant Risk. One winter sampling is proposed to evaluate indoor air quality during potential worse case conditions for vapor migration. The data collected will be included in the next reporting period.

4.3.3 39 Tozer Road

The April 2013 ROS report included an indoor air evaluation for 39 Tozer Road, which concluded that a condition of No Significant Risk associated with VOCs from the former Varian Site existed at the 39 Tozer Road property (Shaw, 2013b). The ROS report stated that additional indoor air sampling at 39 Tozer Road may be conducted if increased VOC concentrations are observed at shallow monitoring well OB41-S, located adjacent to the 39 Tozer Road Building (**Figure 2**). May 2015 groundwater analytical results indicate VOC concentrations similar to previous sampling rounds in OB41-S. Therefore, a condition of No Significant Risk would still be expected.

5.0 MEASURES TAKEN TO ADDRESS PROBLEMS AFFECTING THE PERFORMANCE OF THE REMEDIAL ACTION (310 CMR 40.0892 (2)(d))

No significant problems affecting the performance of the selected remedial actions were identified during this reporting period. As demonstrated by the analytical data contained in this ROS report, significant remedial progress continues to be made with lower VOC concentrations measured across the Site. The performance of on-going remedial actions will continue to be documented in future ROS reports.

6.0 REFERENCES

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7.0 LIMITATIONS ON WORK PRODUCT

The information contained in this report, including its conclusions, is based upon the information that was made available to CB&I Environmental and Infrastructure, Inc. (CB&I) during the investigation and obtained from the services described, which were performed within time and budgetary restraints.

CB&I makes no representation concerning the legal significance of its findings or of the value of the property investigated. CB&I has no contractual liability to any third parties for the information or opinions contained in this report.

Unless and until the parties agree otherwise in writing, the use of this report or any information contained therein by any third party shall be at such third party's sole risk. Such use shall constitute an agreement to release, defend and indemnify Varian Medical Systems, Inc. and CB&I from and against any and all liability in connection therewith.

TABLES

Table 1
2015 Permanganate Injection Totals
Varian/Beverly, 150 Sohier Rd

	Well ID	Location	4/6/2015	4/9/2015	4/21/2015	5/1/2015	6/4/2015	6/9/2015	Total Injected
Injection Wells	OB37-DO	Inside building 6	1.5	1.5	2	2	2	2.5	11.5
	AP32-DO	Beneath building 3	35	35	30	40	24	10	174
	BLDG3-SVE4	SVE building 3	0	0	0	0	0	0	0
	BLDG3-SVE3	SVE building 3	0	0	0	0	40	15	55
	BLDG3-SVE1	SVE building 3	5	0	15	20	15	10	65
		Totals	41.5	36.5	47	62	81	37.5	305.5

Table 2
Permanganate Concentrations in Groundwater
Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

	October-November 2011		April 2012		November 2012		April-May 2013		October 2013		April 2014		October 2014		May 2015	
Well ID	**NaMnO4 Result (mg/L)**	**Result (percent)**	**NaMnO4 Result (mg/L)**	**Result (percent)**	**NaMnO4 Result (mg/L)**	**Result (percent)**	**NaMnO4 Result (mg/L)**	**Result (percent)**	**NaMnO4 Result (mg/L)**	**Result (percent)**	**NaMnO4 Result (mg/L)**	**Result (percent)**	**NaMnO4 Result (mg/L)**	**Result (percent)**	**NaMnO4 Result (mg/L)**	**Result (percent)**
AP-12-BR	9,900	1.0	19,000	1.9	8,000	0.8	2,800	0.3	1100	0.1	ND(<0.1)	NA	---	---	---	---
AP-12-DO	ND(<0.2)	NA	0.2	0.00002	9,100	0.9	17,000	1.7	180	0.02	1.5	0.0002	---	---	---	---
AP-12-S	---	---	ND(<0.2)	NA	---	---	0.5	0.00005	---	---	---	---	---	---	---	---
AP-14-S	---	---	---	---	---	---	---	---	---	---	---	---			2.9	0.00029
AP-19	ND(<0.2)	NA	ND(<0.2)	NA	ND(<0.2)	NA	ND(<0.2)	NA	ND(<0.1)	NA	ND(<0.1)	NA	25	0.003	0.62	0.000062
AP-20	ND(<0.2)	NA	ND(<0.2)	NA	ND(<0.2)	NA	0.1	0.00001	ND(<0.1)	NA	ND(<0.1)	NA	31000	3.1	ND(<0.1)	NA
AP-21	1,000	0.1	2,200	0.2	1,900	0.2	500	0.05	ND(<0.1)	NA	ND(<0.1)	NA	58000	5.8	7300	0.73
AP-22	3,200	0.3	10,000	1.0	9,700	1.0	400	0.04	1300	0.1	110	0.01	59000	5.9	5300	0.53
AP-26-DO	ND(<0.2)	NA	ND(<0.2)	NA	17.0	0.002	ND(<0.2)	NA	12	0.001	5.6	0.0006	0.36	0.00004	0.15	0.000015
AP-27-DO	0.4	0.00004	ND(<0.2)	NA	57.0	0.006	0.3	0.00003	ND(<0.1)	NA	ND(<0.1)	NA	---	---	8.0	0.0008
AP-30-DO	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
AP-30R-DO	84,000	8.4	19,000	1.9	---	---	7,700	0.8	---	---	---	---	---	---	---	---
AP-31-DO	2,400	0.2	0.2	0.00002	---	---	100.0	0.01	120	0.01	5.0	0.0005	ND(<0.1)	NA	0.25	0.000025
AP-32-DO	ND(<0.2)	NA	0.2	0.00002	---	---	ND(<0.2)	NA	590	0.06	240	0.02	ND(<0.1)	NA	4000	0.40
B-2	---	---	---	---	ND(<0.2)	NA	---	---	---	---	---	---	---	---	---	---
BR-5_ZONE3	---	---	---	---	---	---	---	---	---	---	ND(<0.1)	NA	---	---	---	---
CL03-DO	---	---	---	---	---	---	---	---	---	---	0.7	0.00007	32	0.003	---	---
CL10-BR	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
CL10-DO	7.1	0.0007	44.0	0.004	---	---	85.0	0.009	140	0.01	430	0.04	1500	0.2	120	0.012
CL10-S	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-013	1,200	0.1	1,300	0.1	440	0.04	610	0.06	140	0.01	57	0.006	15	0.0015	---	---
MW-2_32-Tozer	---	---	---	---	---	---	---	---	---	---	---	---	ND(<0.1)	NA	---	---
OB-05-DO	---	---	---	---	---	---	---	---	---	---	2.5	0.0003	---	---	---	---
OB-06-DO	---	---			---	---			---	---	0.3	0.00003	---	---	---	---
OB-10-S	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
OB-12-DO	190	0.02	ND(<0.2)	NA	2,000	0.2	47	0.005	ND(<0.1)	NA	1.3	0.0001	8200	0.8	22	0.0022
OB-19-DO	ND(<0.2)	NA	---	---	---	---	ND(<0.2)	NA	ND(<0.1)	NA	1.9	0.0002	---	---	1.4	0.00014
OB-25-BR	---	---	ND(<0.2)	NA	17,000	1.7	1,200	0.1	ND(<0.1)	NA	0.2	0.00002	150000	15	47000	4.70
OB-26-BR	---	---	0.2	0.00002	12,000	1.2	ND(<0.2)	NA	ND(<0.1)	NA	---	---	---	---	---	---
OB-26-DO	---	---	---	---			---	---	---	---	---	---	---	---	---	---
OB-27-BR	1,500	0.2	5,700	0.6	---	---	2,000	0.2	1200	0.1	1030	0.1	1500	0.2	---	---
OB-28-BR	---	---	ND(<0.2)	NA	---	---	0.5	0.00005	---	---	---	---	---	---	---	---
OB-32-DO	670	0.07	630	0.06	470	0.05	300	0.03	180	0.02	150	0.02	590	0.06	1.4	0.00014
OB-34-DO	ND(<0.2)	NA	31	0.003	31	0.003	18	0.002	20	0.002	---	---	---	---	---	---
OB 35-DO	ND(<0.2)	NA	ND(<0.2)	NA	ND(<0.2)	NA	ND(<0.2)	NA	20	0.002	14	0.001	2.8	0.0003	0.64	0.000064
OB-36-DO	---	---	0.3	0.00003	ND(<0.2)	NA	---	---	---	---	5300	0.5	360	0.04	---	---
OB-37-DO	34	0.003	9,700	1.0	60	0.01	84	0.008	ND(<0.1)	NA	ND(<0.1)	NA	---	---	250000	25

Notes:

Color Key:

Sample Dark Purple	No color indicates groundwater sample was clear
Sample Medium Purple	--- = sample not collected
Sample Light Purple	ND (<0.2) = Not detected at estimated detection limit.
Sample Pink	NA = Not applicable or value does not appear when reporting to 2 significant figures.
Sample Pale Pink	mg NaMnO4/L = milligrams of sodium permanganate per liter
Light Brown	

TABLE 3
Water Quality Data - Chloride, Dissolved Iron and Dissolved Manganese Results
2009 to Present
Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

SITE_ID	DATE	Chloride Total (mg/l)	Iron Dissolved (mg/l)	Manganese Dissolved (mg/l)
AP-12-BR	4/20/2010	1200	25	26000
	10/14/2010	33100	ND(3.0)	24000
	4/14/2011	10400	8.7	12000
	10/28/2011	225	ND(5.0)	3900
	4/6/2012	890	ND(2.5)	9000
	11/27/2012	420	ND(1.0)	3300
	4/18/2013	192	ND(0.50)	1400
	10/23/2013	137	ND(0.50)	230
	4/10/2014	75.5	0.9	0.56
AP-12-DO	4/20/2010	34.4	0.47	5.4
	11/27/2012	538	9.2	3400
	4/18/2013	156	ND(0.50)	720
	10/23/2013	109	ND(0.10)	36
	4/10/2014	124	ND(0.10)	0.32
AP-13-DO	1/14/2009	150	0.26	9.3
	4/2/2009	273	0.2	13
	8/14/2014	---	ND(0.10)	25.3
	1/20/2015	---	0.16	22
AP-14S	5/26/2015	52.8	ND(0.10)	0.28
AP-19	10/27/2009	4.1	ND(0.10)	ND(0.010)
	4/21/2010	18.7	ND(0.10)	0.095
	10/14/2010	17.2	ND(0.10)	0.029
	4/6/2011	24.8	ND(0.10)	0.061
	10/27/2011	ND(1.0)	ND(0.10)	0.012
	4/5/2012	29	ND(0.10)	0.12
	11/13/2012	20.4	ND(0.10)	ND(0.010)
	5/2/2013	28.2	ND(0.10)	0.021
	10/24/2013	26.3	0.12	1.0
	4/11/2014	25.4	ND(0.10)	1.1
	10/16/2014	2.6	ND(0.10)	ND(0.010)
	5/20/2015	5.2	ND(0.10)	0.027
AP-20	10/27/2009	11.1	ND(0.10)	6.9
	4/21/2010	31.3	ND(0.10)	0.011
	10/14/2010	29.4	ND(0.10)	0.012
	4/6/2011	15.4	ND(0.10)	ND(0.010)
	10/27/2011	2	ND(0.10)	0.028
	4/5/2012	86	ND(0.10)	23
	11/13/2012	68.2	0.39	8.5
	5/2/2013	45	ND(0.10)	2.1
	10/24/2013	109	ND(0.10)	0.17
	4/11/2014	14.1	ND(0.10)	4.0
	10/16/2014	4120	ND(100)	10000
	5/20/2015	28.4	ND(0.10)	0.077

TABLE 3
Water Quality Data - Chloride, Dissolved Iron and Dissolved Manganese Results
2009 to Present
Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

SITE_ID	DATE	Chloride Total (mg/l)	Iron Dissolved (mg/l)	Manganese Dissolved (mg/l)
AP-21	11/23/2009	850	8.5	14000
	4/21/2010	900	10	15000
	10/14/2010	1690	ND(2.0)	9000
	4/14/2011	450	3.2	3400
	10/27/2011	190	ND(2.5)	1100
	4/5/2012	286	ND(1.0)	970
	11/13/2012	271	ND(0.10)	640
	5/2/2013	275	ND(0.10)	190
	10/24/2013	323	ND(0.10)	0.24
	4/11/2014	227	ND(0.10)	0.51
	10/16/2014	10100	ND(100)	14000
	5/20/2015	67	ND(1.0)	1400
AP-22	10/27/2009	378	ND(0.50)	3800
	4/21/2010	489	ND(1.0)	73
	10/14/2010	491	ND(1.0)	240
	4/14/2011	208	ND(0.10)	0.37
	10/27/2011	225	ND(2.5)	1200
	4/5/2012	1360	ND(2.0)	2000
	11/13/2012	794	ND(1.0)	4100
	4/17/2013	425	ND(0.10)	150
	10/24/2013	892	ND(0.50)	440
	4/11/2014	919	0.26	51
	10/16/2014	10700	ND(100)	12000
	5/20/2015	1200	ND(1.0)	1600
AP-23-DO	1/14/2009	43.6	1.7	6.4
	4/2/2009	60.7	3.2	19
	8/6/2014	---	0.57	7.6
	1/20/2015	---	12	1.2
	5/28/2015	---	4.0	0.45
AP-24-DO	1/14/2009	117	0.48	7.5
	4/2/2009	283	0.25	11
	8/6/2014	---	1.7	1.2
	1/20/2015	---	38	20
	5/28/2015	---	1.8	0.63
AP-25-DO	1/14/2009	34.9	0.28	0.24
	4/2/2009	61.1	ND(0.10)	0.11
AP-26-DO	11/26/2012	33.5	ND(0.10)	8.5
	4/15/2013	39.4	ND(0.10)	0.01
	10/23/2013	91.2	ND(0.10)	3.9
	4/16/2014	43	ND(0.10)	0.81
	5/26/2015	52.2	ND(0.10)	0.14
AP-27-DO	4/9/2009	57.8	ND(0.10)	0.098
	10/28/2009	13.7	ND(0.10)	0.1
	4/21/2010	29.4	ND(0.10)	0.1
	10/14/2010	11.2	ND(0.10)	0.42
	4/7/2011	387J	ND(0.10)	0.046

TABLE 3
Water Quality Data - Chloride, Dissolved Iron and Dissolved Manganese Results
2009 to Present
Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

SITE_ID	DATE	Chloride Total (mg/l)	Iron Dissolved (mg/l)	Manganese Dissolved (mg/l)
AP-27-DO (Cont.)	10/26/2011	140	ND(0.10)	2.8
	4/6/2012	450	ND(0.10)	0.053
	11/27/2012	624	ND(0.10)	9.1
	4/16/2013	79.6	ND(0.10)	0.073
	10/23/2013	50	ND(0.10)	0.095
	4/11/2014	342	ND(0.10)	0.19
	10/15/2014	242	ND(0.10)	3.6
	5/27/2015	341	ND(0.10)	1.5
Dup.	5/27/2015	---	ND(0.10)	1.5
AP-30-DO	4/18/2013	3860	ND(0.50)	3500
AP-30R-DO	4/7/2011	1000J	6	7900
	11/7/2011	2730	ND(50)	20000
	4/17/2012	1070	ND(5.0)	6400
AP-31-DO	4/6/2011	3380J	2.5	2200
	11/7/2011	3240	ND(1.0)	780
	4/17/2012	2650	ND(0.10)	0.58
	4/18/2013	742	ND(0.10)	67
	10/24/2013	907	ND(0.10)	23
	4/16/2014	720	ND(0.10)	0.86
	5/26/2015	481	ND(0.10)	0.044B
AP-32-DO	4/7/2011	1440J	ND(1.0)	75
	11/7/2011	979	ND(0.10)	0.055
	4/17/2012	631	ND(0.10)	0.072
	4/18/2013	565	ND(0.10)	0.012
	10/24/2013	624	ND(0.10)	99
	4/16/2014	608	ND(0.10)	110
	5/26/2015	493	ND(1.0)	2000
AP-33-DO	8/6/2014	---	4.3	1.9
	1/20/2015	---	59	10
	5/28/2015	---	24	4.2
	8/11/2015	---	1.4	0.15
AP-34-DO	8/6/2014	---	0.89	9.1
	1/20/2015	---	200	38
	5/28/2015	---	15	3.0
AP-35-DO	8/6/2014	---	0.82	0.31
	1/20/2015	---	19	5.7
	5/28/2015	---	53	11
	8/11/2015	---	6.2	1.3
BR-5_ZONE3	4/11/2014	136	ND(0.10)	3.1
BW-01	1/13/2009	86.1	2.1	2.3
	4/2/2009	67.3	3.8	3.2
BW-02	1/13/2009	87.2	8.2	2.3
	4/2/2009	97.8	6.4	2.4
BW-03	1/13/2009	80.8	13	5.6
	4/2/2009	91.3	18	8
BW-04	1/13/2009	96.5	9.5	3.8
	4/2/2009	95.1	10	3.2

TABLE 3
Water Quality Data - Chloride, Dissolved Iron and Dissolved Manganese Results
2009 to Present
Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

SITE_ID	DATE	Chloride Total (mg/l)	Iron Dissolved (mg/l)	Manganese Dissolved (mg/l)
BW-05	1/13/2009	205	20	4.7
	4/2/2009	130	27	4.9
BW-08	1/13/2009	124	18	5.3
	4/2/2009	104	27	7.9
BW-09	1/13/2009	131	20	7.1
	4/2/2009	174	41	11
CL03-DO	10/23/2013	302	ND(0.50)	300
	4/9/2014	12.4	ND(0.10)	0.099
	10/15/2014	16.3	ND(0.10)	1.2
CL10-DO	10/23/2013	25.1	ND(0.10)	510
	4/10/2014	50.1	ND(0.10)	180
	10/15/2014	40.8	ND(1.0)	84
	5/20/2015	258	ND(0.10)	41
MW-009	1/14/2009	822	60	7
	4/2/2009	711	70	6
MW-013	4/21/2010	586	2.4	2300
	10/14/2010	928	ND(1.0)	4800
	4/14/2011	1920	2.8	3100
	10/27/2011	1410	ND(0.50)	510
	4/5/2012	930	ND(0.50)	560
	11/26/2012	647	ND(1.0)	210
	4/17/2013	635	ND(0.10)	210
	10/24/2013	491	ND(0.10)	31
	4/9/2014	506	ND(0.10)	23
MW-030	4/9/2009	135	0.16	0.012
MW-2_32-Tozer	11/8/2011	489	2.58	---
	10/15/2014	595	2.4	19500
OB-05-DO	4/8/2014	32.4	0.3	0.23
OB-06-DO	4/9/2014	32.7	0.11	0.13
OB-09-BR	1/14/2009	16	1.5	0.17
	4/9/2009	20	1.5	0.24
OB-09-DO	1/13/2009	32.6	ND(0.10)	ND(0.010)
	4/9/2009	44.6	ND(0.10)	ND(0.010)
OB-09-S	4/9/2009	122	16	2
OB-12-DO	10/27/2009	116	ND(0.50)	1100
	10/26/2011	87.6	ND(0.50)	54
	11/26/2012	120	ND(1.0)	790
	4/17/2013	62.8	ND(0.10)	22
	10/24/2013	53.8	ND(0.10)	0.11
	4/9/2014	39.4	ND(0.10)	0.18
	10/16/2014	1440	ND(100)	6400
	5/26/2015	73.2	ND(0.10)	3.3
OB-19-DO	10/13/2010	15.9	ND(0.10)	1.1
	4/4/2011	24	0.84	2.6
	10/26/2011	34	0.78	3.2
	4/5/2012	25.8	ND(0.10)	5.8

TABLE 3
Water Quality Data - Chloride, Dissolved Iron and Dissolved Manganese Results
2009 to Present
Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

SITE_ID	DATE	Chloride Total (mg/l)	Iron Dissolved (mg/l)	Manganese Dissolved (mg/l)
OB-19-DO (Cont.)	11/26/2012	26.7	0.13	4.9
	4/15/2013	28.3	ND(0.10)	0.061
	10/23/2013	30.4	ND(0.10)	2.3
	4/16/2014	33	ND(0.10)	0.11
	10/16/2014	33.2	0.35	2.5
	5/26/2015	36	1.5	3.4
OB-25-BR	11/26/2012	812	ND(1.0)	7300
	10/23/2013	151	ND(0.10)	0.64
Dup.	10/23/2013	145	ND(0.10)	0.63
	4/16/2014	114	ND(0.10)	6.4
	10/16/2014	14100	ND(100)	35000
	5/26/2015	174	ND(10)	14000
OB-27-BR	4/22/2010	214	1.9	1800
	10/14/2010	421	ND(1.0)	4800
	4/14/2011	690	5.2	6700
	10/28/2011	94	ND(0.50)	300
	4/6/2012	273	ND(0.50)	2200
	11/26/2012	540	ND(1.0)	4400
	4/15/2013	113	ND(0.50)	770
	10/24/2013	117	ND(0.50)	200
	4/11/2014	36.6	0.76	370
OB-32-DO	4/20/2010	74	ND(1.0)	540
	10/14/2010	211	ND(1.0)	690
	4/14/2011	262	ND(1.0)	520
	10/28/2011	175	ND(0.50)	290
	4/5/2012	204	ND(0.20)	190
	11/27/2012	209	ND(1.0)	220
	4/18/2013	203	ND(0.10)	140
	10/24/2013	132	ND(0.10)	40
	4/21/2014	107	ND(0.10)	60
	5/27/2015	52.7	ND(0.10)	54
OB-34-DO	10/27/2009	38.7	ND(0.50)	10
OB-35-DO	4/9/2009	79.1	ND(0.10)	0.03
	10/28/2009	328	ND(0.10)	ND(0.010)
	4/22/2010	73.2	ND(0.10)	0.2
	10/14/2010	193	ND(0.10)	0.074
	4/7/2011	112J	ND(0.10)	0.023
	10/27/2011	84.3	ND(0.10)	0.066
	4/6/2012	78.4	ND(0.10)	0.028
	11/27/2012	83.5	ND(0.10)	4.2
	4/15/2013	135	ND(0.10)	0.37
	10/24/2013	91.5	ND(0.10)	15
	4/21/2014	96.1	ND(0.10)	6.2
	10/16/2014	94.2	ND(0.10)	0.14
	5/27/2015	90.1	ND(0.10)	3.2

TABLE 3
Water Quality Data - Chloride, Dissolved Iron and Dissolved Manganese Results
2009 to Present
Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

SITE_ID	DATE	Chloride Total (mg/l)	Iron Dissolved (mg/l)	Manganese Dissolved (mg/l)
OB-36-DO	4/21/2014	419	0.13	2200
	5/27/2015	1020	ND(50)	86000
	6/2/2015	1130J	ND(0.10)UJ	230J
OB-37-DO	5/7/2010	47.3	ND(1.0)	63
	10/13/2010	621	ND(1.0)	3800
	4/7/2011	10800J	11	18000
	10/28/2011	890	ND(10)	15000
	4/6/2012	438	ND(1.5)	3200
	11/27/2012	14.4	0.56	20
	4/15/2013	181	ND(0.10)	66
OB-38-DO	4/9/2009	459	ND(0.10)	0.14
	10/28/2009	31.7	ND(0.10)	0.025
OB-39-DO	4/9/2009	15.5	ND(0.10)	ND(0.010)
OB-40-DO	4/9/2009	48.2	ND(0.10)	ND(0.010)
OB-44-S	3/17/2015	---	0.39	0.54
	5/28/2015	---	ND(0.10)	1.1
	8/21/2015	---	0.09	0.78
OB-46-S	3/17/2015	---	ND(0.10)	0.013
	5/28/2015	---	ND(0.10)	0.28
	8/11/2015	---	0.06	0.03
STR-03	1/13/2009	1790	1.4	0.58
	4/9/2009	1320	3.5	2.6
UNNAMED_STREAM	1/14/2009	1460	48	6.9
	4/9/2009	1170	22	6.1
MW-2_32-TOZER	11/8/2011	489	2.58	---

Notes:
mg/l = milligrams per liter
--- = not analyzed
ND(0.05) = non detect (method detection limit)
Dup. = Duplicate sample
J = Estimated value.

Table 4
2015 Building 5 Bioremediation Injection Totals
Varian/Beverly, 150 Sohier Rd

	Injected Volume (Gallons of seeded lactate solution)																
Date	**4/20/15**	**4/21/15**	**4/25/15**	**4/30/15**	**5/2/15**	**5/4/15**	**5/9/15**	**5/12/15**	**5/14/15**	**5/17/15**	**5/19/15**	**5/22/15**	**5/29/15**	**6/2/15**	**6/4/15**	**6/9/15**	**Total Injected**
BLDG5-SVE2	420	919	764	990	454	0	0	272	87	0	0	0	136	163	203	230	4638
BLDG5-SVE3	198	0	141	0	255	220	133	164	0	104	57	59	118	100	81	48	1678
Totals	618	919	905	990	709	220	133	436	87	104	57	59	254	263	284	278	6316

TABLE 5
Water Quality Data
Bioremediation Parameters
2009 to Present
Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

CONSTITUENT	UNITS	AP-13-DO 1/14/2009	AP-13-DO 4/2/2009	AP-13-DO 4/22/2010	AP-13-DO 7/14/2010	AP-13-DO 10/12/2010	AP-13-DO 1/4/2011	AP-13-DO 4/5/2011	AP-13-DO 7/28/2011	AP-13-DO 10/25/2011	AP-13-DO 1/17/2012	AP-13-DO 4/3/2012	AP-13-DO 1/20/2014	AP-13-DO 4/8/2014	AP-13-DO 8/14/2014	AP-13-DO 1/20/2015	AP-13-DO 5/28/2015	AP-13-DO 8/11/2015
Dissolved Metals																		
Iron	mg/L	0.26	0.2	---	---	---	---	---	---	---	---	---	---	---	<0.1	0.16	---	---
Manganese	mg/L	9.27	13	---	---	---	---	---	---	---	---	---	---	---	25.3	21.8	---	---
Sulfate	mg/L	<2.0	2.6	---	---	---	---	---	---	---	---	---	---	---	319	144	156	92
Nitrate	mg/L	<0.50	---	---	---	---	---	---	---	---	---	---	---	---	---	---	<1.0UJ	<10HUJ
Nitrate/Nitrogen	mg/L	---	<0.50	---	---	---	---	---	---	---	---	---	---	---	<1.0	<10	---	---
Metabolic Acids																		
Acetic acid	mg/L	78	180	460	630J	980	2500	1600	2700	2500	1300	1200	---	---	---	---	---	---
Lactic Acid	mg/L	<1.0	<1.0	<5.0	<10J	360	16000	930	35000	6300	740	290	---	---	---	---	---	---
n-Butanoic acid	mg/L	<2.0	6.3	<10	<20J	18	<200	68	<400	<100	<40	20	---	---	---	---	---	---
Propionic acid	mg/L	26	48	74	85J	150	220	93	270	210	41	16	---	---	---	---	---	---
Pyruvic Acid	mg/L	<0.50	<0.50	<2.5	<5.0J	14	<50	7.7	<100	<25	<10	<5.0	---	---	---	---	---	---
Miscellaneous Analyses																		
Methane	ug/L	<2.0	2.8	83	18J	6.6	5.4	2.7	8.6	3.6	3	2.3	<1.0	<1.0	2.3	7.7	5	<10
Ethane	ug/L	<1.0	<1.0	<1.0	<1.0J	<1.0	<1.0	<1.0	1.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	3.6	16	<20
Ethene	ug/L	<1.0	<1.0	17	5.6J	17	21	5	71	35	7.8	3.3	1.9	9.9	57	510D	33	<20
Chloride	mg/L	150	273	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
TOC	mg/L	65.1	106	---	---	----	---	---	---	---	---	---	484	569	616	10200	47200	46000J
Dehalococcoides sp.	cells/ml	7,400	<77	1,200,000	44,000	110,000	40,000	12,000	63J	710	<28	<42	<92	11J	42	1,002,400	<167	232,000
Field Parameters																		
pH	--	8.15	8.83	---	7.81	7.19	7.28	7.17	---	---	---	---	6.52	---	---	4.86	4.80	---
ORP	mV	-170	-153.5	---	-32	-71	-181.9	-354	---	---	---	---	-7	---	---	-76.2	149.9	---
Dissolved Oxygen	mg/L	0.32	0.44	---	0.39	0.22	0.79	0.43	---	---	---	---	3.86	---	---	1.94	2.29	---
Specific Conductivity	ms/cm	8.547	12.369	---	9.527	9.191	11.269	9.699	---	---	---	---	0.071	---	---	0.68	0.803	---

TABLE 5
Water Quality Data
Bioremediation Parameters
2009 to Present
Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

CONSTITUENT	UNITS	AP-23-DO 1/14/2009	AP-23-DO 4/2/2009	AP-23-DO 1/28/2010	AP-23-DO 4/22/2010	AP-23-DO 7/14/2010	AP-23-DO 10/12/2010	AP-23-DO 1/4/2011	AP-23-DO 4/5/2011	AP-23-DO 7/28/2011	AP-23-DO 10/25/2011	AP-23-DO 1/17/2012	AP-23-DO 4/3/2012	AP-23-DO 1/20/2014	AP-23-DO 4/8/2014	AP-23-DO 8/6/2014	AP-23-DO 8/6/2014	AP-23-DO 1/20/2015	AP-23-DO 5/28/2015	AP-23-DO 8/11/2015
Dissolved Metals																				
Iron	mg/L	1.73	3.2	---	---	---	---	---	---	---	---	---	---	---	---	0.57	--	11.7	4	---
Manganese	mg/L	6.44	19	---	---	---	---	---	---	---	---	---	---	---	---	7.6	--	1.24	0.45	---
Sulfate	mg/L	<2.0	5.2	---	---	---	---	---	---	---	---	---	---	---	---	6.6	---	52	25.7	63
Nitrate	mg/L	<0.50	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	<1.0UJ	<10
Nitrate/Nitrogen	mg/L	---	<0.50	---	---	---	---	---	---	---	---	---	---	---	---	<1.0	---	<10UJ	---	---
Metabolic Acids																				
Acetic acid	mg/L	220	290	28	320	260J	620	2800	2000	920	220	26	190	---	---	---	---	---	---	---
Lactic Acid	mg/L	6.1	33	5.7	15	<10J	<10	20000	11000	150	5.5	6	4.1	---	---	---	---	---	---	---
n-Butanoic acid	mg/L	36	77	3.1	22	41J	240	<400	1200	140	25	<2.0	17	---	---	---	---	---	---	---
Propionic acid	mg/L	500	670D	41	770	620J	1100	5200	3100	1800	390	42	290	---	---	---	---	---	---	---
Pyruvic Acid	mg/L	<2.5	<0.50	<0.50	<2.5	<5.0J	<5.0	430	<50	19	<1.0	<0.50	<1.0	---	---	---	---	---	---	---
Miscellaneous Analyses																				
Methane	ug/L	3.9	36	27	14	19J	700D	200	240	340	120	26	130	120J	280	110	---	20	77	24
Ethane	ug/L	2.2	2.1	<2.0	<1.0	<1.0J	2.5	<10	<10	<10U	<2.0	<2.0	<4.0	17J	<5.0	<10	---	1.3	38	<20
Ethene	ug/L	22	36	170	65	65J	310D	2500D	640	500	65	230D	510D	4700DJ	610D	750	---	91	300	75
Chloride	mg/L	43.6	60.7	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
TOC	mg/L	324	417	---	---	---	---	---	---	---	---	---	---	2270	387	231	---	9700	58000	18000J
Dehalococcoides sp.	cells/ml	3,100,000	45,000	35,000	100,000	36,000	710,000	60,000	370,000	21,000	2,700,000	550,000	14,000,000	3,160	9J	3,170	---	14,700	<167	4,450
Field Parameters																				
pH	--	7.66	8.1	8.31	8.44	7.3	7.28	6.52	7.2	---	---	---	---	6.52	---	6.52	6.67	5.89	5.63	---
ORP	mV	54.3	-36.3	-231	-390	-156	-200	-348.6	-360	---	---	---	---	-238.2	---	-130.6	-169.5	-269	-4.4	---
Dissolved Oxygen	mg/L	0.92	0.65	0.2	0.16	0.43	0.21	0.21	0.35	---	---	---	---	0.87	---	0.38	1.01	1.71	0.27	---
Specific Conductivity	ms/cm	28.13	25.632	20.055	19.235	16.707	17.112	16.25	16.20	---	---	---	---	3.162	---	5.327	2.070	2.216	1.679	---

TABLE 5
Water Quality Data
Bioremediation Parameters
2009 to Present
Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

CONSTITUENT	UNITS	AP-24-DO 1/14/2009	AP-24-DO 4/2/2009	AP-24-DO 1/28/2010	AP-24-DO 4/22/2010	AP-24-DO 7/14/2010	AP-24-DO 10/12/2010	AP-24-DO 1/4/2011	AP-24-DO 4/5/2011	AP-24-DO 7/28/2011	AP-24-DO 10/25/2011	AP-24-DO 4/3/2012	AP-24-DO 1/20/2014	AP-24-DO 4/8/2014	AP-24-DO 8/6/2014	AP-24-DO 8/6/2014	AP-24-DO 1/20/2015	AP-24-DO 5/28/2015	AP-24-DO 8/11/2015
Dissolved Metals																			
Iron	mg/L	0.48	0.25	---	---	---	---	---	---	---	---	---	---	---	1.7	---	38.5	1.8	---
Manganese	mg/L	7.46	11	---	---	---	---	---	---	---	---	---	---	---	1.2	---	20.2	0.63	---
Sulfate	mg/L	<2.0	48.4	---	---	---	---	---	---	---	---	---	---	---	13.4	---	39.6	6.2	<50
Nitrate	mg/L	<0.50	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	<1.0UJ	<10HUJ
Nitrate/Nitrogen	mg/L	---	0.58	---	---	---	---	---	---	---	---	---	---	---	<1.0	---	<1.0	---	---
Metabolic Acids																			
Acetic acid	mg/L	440	780D	73	260	190J	480	2500	480	280	780	380	---	---	---	---	---	---	---
Lactic Acid	mg/L	<10	4600D	4.8	340	<1.0J	<5.0	11000	33	20000	750	<5.0	---	---	---	---	---	---	---
n-Butanoic acid	mg/L	53	130	11	21	16J	15	250	120	<400U	710	54	---	---	---	---	---	---	---
Propionic acid	mg/L	930	1200D	48	330	200J	340	4900	740	<200U	1600	420	---	---	---	---	---	---	---
Pyruvic Acid	mg/L	<5.0	2.5	<0.50	<1.0	<0.50J	<2.5	89	<5.0	<100U	6.5	<2.5	---	---	---	---	---	---	---
Miscellaneous Analyses																			
Methane	ug/L	59	110	<4.0	<20	<20J	<50	<100	<100	<40U	<8.0	<8.0	2.1	<1.0	<1.0	---	5.1	14	12
Ethane	ug/L	<1.0	<2.0	<2.0	<10	<10J	<25	<50	<50	<20U	<4.0	<4.0	1.1	<1.0	<1.0	---	4.6	62	35
Ethene	ug/L	1.6	3.9	160	680	1900DJ	4600D	4500	2600	1400	300	5100D	100D	16	10	---	96	20	<20
Chloride	mg/L	117	283	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
TOC	mg/L	629	1950	---	---	---	---	---	---	---	---	---	1520	38.2	13.6	---	9750	10700	8300
Dehalococcoides sp.	cells/ml	32,000	6,200	51,000	2,100,000	88,000	180,000	150,000	1,800,000	8,000	34,000	22,000,000	---	3J	5.6J	---	<10	176	3,290
Field Parameters																			
pH	--	7.83	7.74	8.38	8.05	7.29	7.1	6.35	7.27	---	---	---	6.6	---	7.28	6.62	5.48	5.12	---
ORP	mV	-238.3	-92.7	-223	-195	-33	-191	-133.1	-360	---	---	---	-7.6	---	-165.7	-123.5	-247.3	24.1	---
Dissolved Oxygen	mg/L	0.28	0.69	0.32	0.49	0.41	0.39	0.39	0.59	---	---	---	4.27	---	0.44	0.44	1.75	0.26	---
Specific Conductivity	ms/cm	14.33	8.644	3.816	3.262	3.473	3.415	12.112	3.542	---	---	---	1.834	---	2.152	0.501	0.66	0.588	---

TABLE 5
Water Quality Data
Bioremediation Parameters
2009 to Present
Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

CONSTITUENT	UNITS	AP-25-DO 1/14/2009	AP-25-DO 4/2/2009	AP-25-DO 1/28/2010	AP-25-DO 1/4/2011	AP-25-DO 4/5/2011	AP-25-DO 10/22/2013	AP-25-DO 1/20/2014	AP-25-DO 4/8/2014	AP-25-DO 8/6/2014	AP-25-DO 8/6/2014	AP-25-DO 1/20/2015	AP-25-DO 5/29/2015	AP-25-DO 8/11/2015	AP-33-DO 1/20/2014	AP-33-DO 4/8/2014	AP-33-DO 8/6/2014	AP-33-DO 10/17/2014	AP-33-DO 1/20/2015	AP-33-DO 5/28/2015	AP-33-DO 8/11/2015
Dissolved Metals																					
Iron	mg/L	0.28	<0.10	---	---	---	---	---	---	---	---	---	---	---	--	---	4.3	---	59	24	1.4
Manganese	mg/L	0.24	0.11	---	---	---	---	---	---	---	---	---	---	---	--	---	1.9	---	10	4.2	0.15
Sulfate	mg/L	<2.0	7.9	---	---	---	---	---	---	---	---	---	---	---	---	---	<2.0	---	18.8	<2.0	<10
Nitrate	mg/L	<0.50	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	<1.0UJ	<2.0HUJ
Nitrate/Nitrogen	mg/L	---	<0.50	---	---	---	---	---	---	---	---	---	---	---	---	---	<1.0	---	<1.0	---	---
Metabolic Acids																					
Acetic acid	mg/L	24	59	<1.0	8.2	---	--	---	---	---	---	---	---	---	--	---	---	---	---	---	---
Lactic Acid	mg/L	<1.0	1.9	<1.0	<1.0	---	--	---	---	---	---	---	---	---	--	---	---	---	---	---	---
n-Butanoic acid	mg/L	<2.0	<2.0	<2.0	<2.0	---	--	---	---	---	---	---	---	---	--	---	---	---	---	---	---
Propionic acid	mg/L	5.8	15	<1.0	<1.0	---	--	---	---	---	---	---	---	---	--	---	---	---	---	---	---
Pyruvic Acid	mg/L	<0.50	<0.50	<0.50	<0.50	---	--	---	---	---	---	---	---	---	--	---	---	---	---	---	---
Miscellaneous Analyses																					
Methane	ug/L	<10	57	16	130D	---	5.7	13J	9.1	<1.0	---	8.6	20	<10	61J	60	24	---	97	91	<10
Ethane	ug/L	<5.0	<20	<1.0	<1.0	---	<1.0	<1.0UJ	<1.0	<1.0	---	<1.0	3.3	<20	100DJ	<50	13	---	37	<10	<20
Ethene	ug/L	440	1100	18	320D	---	<1.0	110DJ	47	<1.0	---	290D	670D	<20	4800DJ	2400	850D	---	2500D	2200D	21
Chloride	mg/L	34.9	61.1	---	---	---	---	---	---	---	---	---	---	---	--	---	---	---	---	---	---
TOC	mg/L	19.3	32.2	---	---	---	1.8	3.3	2.5	4.4	---	2.2	6.9	5.8	3100	625	177	---	495	111	49
Dehalococcoides sp.	cells/ml	950,000	23,000	26,000	11,000	---	---	---	---	---	---	---	---		12JD	<92	<10	---	1,520	278	1,100
Field Parameters																					
pH	--	7.03	8.17	8.04	7.62	10.02	8.02	7.13	---	7.97	8.30	6.82	9.18	7.08	6.57	---	6.73	6.67	5.92	7.41	5.78
ORP	mV	-110.3	-133.5	-165	-175.9	-351	111.1	-73.9	---	-114.4	-89.2	25.8	207.4	13.5	-205.7	---	-135	-149.1	-101.2	219.7	-36.7
Dissolved Oxygen	mg/L	0.2	0.22	0.13	0.38	0.8	2.05	0.52	---	0.77	9.71	2.05	11.05	3.4	0.49	---	0.94	0.90	4.17	10.24	0.74
Specific Conductivity	ms/cm	0.357	0.495	0.185	0.271	0.116	0.106	3.503	---	0.275	0.096	0.185	0.043	0.109	9.869	---	2.591	1.920	2.192	0.085	1.336

TABLE 5
Water Quality Data
Bioremediation Parameters
2009 to Present
Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

CONSTITUENT	UNITS	AP-34-DO 1/20/2014	AP-34-DO 4/8/2014	AP-34-DO 8/6/2014	AP-34-DO 1/20/2015	AP-34-DO 5/28/2015	AP-34-DO 8/11/2015	AP-35-DO 1/20/2014	AP-35-DO 4/8/2014	AP-35-DO 8/6/2014	AP-35-DO 1/20/2015	AP-35-DO 5/28/2015	AP-35-DO 8/11/2015	BW-01 1/13/2009	BW-01 4/2/2009	BW-01 7/14/2009	BW-01 10/27/2009	BW-01 1/28/2010	BW-01 4/22/2010
Dissolved Metals																			
Iron	mg/L	--	---	0.89	200	15	---	--	--	0.82	18.6	53	6.2	2.1	3.8	---	---	---	---
Manganese	mg/L	--	---	9.1	37.5	3	---	--	--	0.31	5.7	11	1.3	2.3	3.2	---	---	---	---
Sulfate	mg/L	---	---	3.1	10.5	65.4	<50	---	---	2.2	<2.0	<2.0	<10	16.1	8.6	---	---	---	---
Nitrate	mg/L	---	---	---	---	<1.0UJ	<10	---	---	---	---	<1.0UJ	<2.0	<0.50	---	---	---	---	---
Nitrate/Nitrogen	mg/L	---	---	<1.0	<1.0	---	---	---	---	1.8	<1.0UJ	---	---	---	1.03	---	---	---	---
Metabolic Acids																			
Acetic acid	mg/L	--	---	---	---	---	---	--	--	---	---	---	---	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Lactic Acid	mg/L	--	---	---	---	---	---	--	--	---	---	---	---	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
n-Butanoic acid	mg/L	--	---	---	---	---	---	--	--	---	---	---	---	<2.0	<2.0	---	<2.0	<2.0	<2.0
Propionic acid	mg/L	--	---	---	---	---	---	--	--	---	---	---	---	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Pyruvic Acid	mg/L	--	---	---	---	---	---	--	--	---	---	---	---	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Miscellaneous Analyses																			
Methane	ug/L	19J	25	43	140D	100D	78	24	62	19	65	6300D	620	1700	260	170	77	54	1300
Ethane	ug/L	39J	<4.0	<1.0	49	84	26	4.3	4.3	1.0	14	31	<20	<20U	<5.0	<2.0	<1.0	<1.0	<25
Ethene	ug/L	240DJ	210	42	630D	280D	170	36	38	5.6	380D	1200D	110	<20U	<5.0	<2.0	<1.0	<1.0	<25
Chloride	mg/L	--	---	---	---	---	---	--	--	---	---	---	---	86.1	67.3	---	---	---	---
TOC	mg/L	1010	215	112	6440	5790	4000J	1330	670	7.7	396	320	19	2.4	1.6	---	---	---	---
Dehalococcoides sp.	cells/ml	23JD	<85	2.4J	42,500	<50	3,420	3,680D	<92	7.3J	<10	1660	359	570	12,000	3,200	11,000	7,800	8,600
Field Parameters																			
pH	--	6.59	---	6.69	5.76	5.35	---	7.49	--	6.16	6.34	5.81	5.78	6.15	6.46	6.01	6.21	---	---
ORP	mV	-153.7	---	-149.6	-131.6	-11.8	---	-56.0	--	-138.4	-29.3	74.0	-64.1	-45.5	35.3	59	-0.8	---	---
Dissolved Oxygen	mg/L	0.48	---	0.53	1.01	0.57	---	10.51	--	0.60	3.41	9.26	0.62	0.29	5.5	0.27	0.17	---	---
Specific Conductivity	ms/cm	5.261	---	2.169	2.274	1.600	---	0.061	--	6.626	1.745	0.026	1.592	0.348	0.174	0.216	0.253	---	---

TABLE 5
Water Quality Data
Bioremediation Parameters
2009 to Present
Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

CONSTITUENT	UNITS	BW-02 1/13/2009	BW-02 4/2/2009	BW-02 7/14/2009	BW-02 10/27/2009	BW-02 1/28/2010	BW-02 4/22/2010	BW-03 1/13/2009	BW-03 4/2/2009	BW-03 7/14/2009	BW-03 10/27/2009	BW-03 1/28/2010	BW-03 4/22/2010	BW-04 1/13/2009	BW-04 4/2/2009	BW-04 7/14/2009	BW-04 10/27/2009	BW-04 1/28/2010	BW-04 4/22/2010	BW-04 7/14/2010	BW-04 10/12/2010
Dissolved Metals																					
Iron	mg/L	8.2	6.4	---	---	---	---	12.6	18	---	---	---	---	9.5	10	---	---	---	---	---	---
Manganese	mg/L	2.3	2.4	---	---	---	---	5.6	8	---	---	---	---	3.8	3.2	---	---	---	---	---	---
Sulfate	mg/L	16.4	14.6	---	---	---	---	14.8	13.3	---	---	---	---	7.7	3.2	---	---	---	---	---	---
Nitrate	mg/L	<0.50	---	---	---	---	---	<0.50	---	---	---	---	---	<0.50	---	---	---	---	---	---	---
Nitrate/Nitrogen	mg/L	---	0.6	---	---	---	---	---	0.59	---	---	---	---	---	<0.50	---	---	---	---	---	---
Metabolic Acids																					
Acetic acid	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.9	<1.0	86	<1.0	<1.0	2	280J	3.9
Lactic Acid	mg/L	<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	<1.0	<1.0	<10J	<1.0
n-Butanoic acid	mg/L	<2.0	<2.0	---	<2.0	<2.0	<2.0	<2.0	<2.0	---	<2.0	<2.0	<2.0	<2.0	<2.0	---	<2.0	<2.0	<2.0	35J	<2.0
Propionic acid	mg/L	<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	110	<1.0	<1.0	<1.0	660J	<1.0
Pyruvic Acid	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.58	<5.0J	<0.50
Miscellaneous Analyses																					
Methane	ug/L	1900	1300	71	100	170	1400	1900	2300	1300	45	800	2000	4800	9200	2700	2300	37	1800	2200J	3200D
Ethane	ug/L	<20	<25	<1.0	<1.0	<2.0	<25	<20	<40	<20	<1.0	<10	<20	<50	<100	<50	130	<1.0	<25	68J	99
Ethene	ug/L	<20	<25	1.9	<1.0	<2.0	<25	<20	<40	<20	<1.0	<10	<20	99	1300	1100	550	26	830	950J	66
Chloride	mg/L	87.2	97.8	---	---	---	---	80.8	91.3	---	---	---	---	96.5	95.1	---	---	---	---	---	---
TOC	mg/L	2.3	3.8	---	---	---	---	3.8	2.8	---	---	---	---	22.1	15.2	---	---	---	---	---	---
Dehalococcoides sp.	cells/ml	1,400	4,600	9,500	16,000	7,600	<10	2000	1,500	17,000	10,000	---*	<29	62,000	<22	2,400,000	76,000	14,000	<29	250,000	<800
Field Parameters																					
pH	--	6.12	6.46	6.11	6.25	---	---	6.43	6.67	6.19	6.43	---	---	7.17	7.38	6.81	6.9	---	---	---	---
ORP	mV	-49.5	11.4	4	13.9	---	---	-102.1	-16.7	-84	-53.7	---	---	-154	-140.4	-138	-116.7	---	---	---	---
Dissolved Oxygen	mg/L	0.35	2.53	0.48	0.22	---	---	0.62	1.27	0.25	0.12	---	---	0.39	0.36	0.13	0.2	---	---	---	---
Specific Conductivity	ms/cm	0.361	0.219	0.192	0.213	---	---	0.398	0.237	0.29	0.279	---	---	1.134	0.821	1.186	0.701	---	---	---	

TABLE 5
Water Quality Data
Bioremediation Parameters
2009 to Present
Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

CONSTITUENT	UNITS	BW-04 1/4/2011	BW-04 4/5/2011	BW-04 7/28/2011	BW-04 10/25/2011	BW-04 1/18/2012	BW-04 4/3/2012	BW-04 8/21/2012	BW-04 11/28/2012	BW-04 2/6/2013	BW-04 4/11/2013	BW-05 1/13/2009	BW-05 4/2/2009	BW-05 7/14/2009	BW-05 10/27/2009	BW-05 1/28/2010	BW-05 4/22/2010	BW-05 7/14/2010
Dissolved Metals																		
Iron	mg/L	---	---	---	---	---	---	---	---	---	---	20.1	27	---	---	---	---	---
Manganese	mg/L	---	---	---	---	---	---	---	---	---	---	4.7	4.9	---	---	---	---	---
Sulfate	mg/L	---	---	---	---	---	---	---	---	---	---	<2.0	3.2	---	---	---	---	---
Nitrate	mg/L	---	---	---	---	---	---	---	---	---	---	<0.50	---	---	---	---	---	---
Nitrate/Nitrogen	mg/L	---	---	---	---	---	---	---	---	---	---	---	0.57	---	---	---	---	---
Metabolic Acids																		
Acetic acid	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	---	---	---		81	41	44	1.7	<1.0	43	56J
Lactic Acid	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	---	---	---		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0J
n-Butanoic acid	mg/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	---	---	---		2.1	<2.0	---	<2.0	<2.0	<2.0	4.8J
Propionic acid	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	---	---	---		140	43	34	<1.0	<1.0	43	88J
Pyruvic Acid	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---	---		<0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50J
Miscellaneous Analyses																		
Methane	ug/L	2000	1100	590	240	17	1200D	960	970D	1200D	3100D	<100	210	340	260	490	<100	1600J
Ethane	ug/L	110	40	62	19	<1.0	28	60	140	14	23	<50	<100	<50	23	<40	<50	<25J
Ethene	ug/L	110	370	330	130	5.1	70	310	180	<5.0U	<20	4400	5100	3600	1900	2300	4700	1900J
Chloride	mg/L	---	---	---	---	---	---	---	---	---	---	205	130	---	---	---	---	---
TOC	mg/L	---	---	---	---	---	---	5.5	3.9	15.3	6.8	106	42.1	---	---	---	---	---
Dehalococcoides sp.	cells/ml	2,300	<63	140	55,000	18,000	<11	<37	4,100,000	<100	<12	33,000	18,000	120,000	45,000	34,000	1,100,000	24,000
Field Parameters																		
pH	--	---	7.52	7.17	7.1	---	---	---	6.79	6.79	---	7.2	7.41	7.18	7.22	---	---	---
ORP	mV	---	-367	-179.5	-141	---	---	---	-89.1	-93.5	---	-171.3	-165.6	-185	-138.8	---	---	---
Dissolved Oxygen	mg/L	---	0.24	0.24	0.43	---	---	---	0.26	0.32	---	1.11	0.27	0.34	0.43	---	---	---
Specific Conductivity	ms/cm	---	0.69	0.484	0.567	---	---	---	0.602	0.635	---	0.952	0.862	0.692	0.571	---	---	---

TABLE 5
Water Quality Data
Bioremediation Parameters
2009 to Present
Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

CONSTITUENT	UNITS	BW-05 10/12/2010	BW-05 1/4/2011	BW-05 4/5/2011	BW-05 7/28/2011	BW-05 10/25/2011	BW-05 1/18/2012	BW-05 4/3/2012	BW-05 8/21/2012	BW-05 11/28/2012	BW-05 2/6/2013	BW-05 4/11/2013	BW-05 10/17/2014	BW-06 7/28/2011	BW-06 10/25/2011	BW-06 1/18/2012	BW-06 4/3/2012	BW-06 8/21/2012	BW-06 11/28/2012
Dissolved Metals																			
Iron	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Manganese	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Sulfate	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Nitrate	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Nitrate/Nitrogen	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Metabolic Acids																			
Acetic acid	mg/L	32	<1.0	20	89	53	30	<1.0	---	---	---	---	---	180	1.5	110	63	---	---
Lactic Acid	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	---	---	---	---	---	<2.0	<1.0	<1.0	<1.0	---	---
n-Butanoic acid	mg/L	<2.0	<2.0	<2.0	6.6	<2.0	<2.0	<2.0	---	---	---	---	---	8.7	<2.0	2.6	<2.0	---	---
Propionic acid	mg/L	1.5	<1.0	<1.0	120	20	<1.0	<1.0	---	---	---	---	---	300	<1.0	58	<1.0	---	---
Pyruvic Acid	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---	---	---	---	<1.0	<0.50	<0.50	<0.50	---	---
Miscellaneous Analyses																			
Methane	ug/L	1400	8900D	200	970	110	710	600D	4800D	11000D	20000	18000	---	210D	51	270	1700	350	6300D
Ethane	ug/L	130	1000	<50	31	<25	<25	67	49	<50	<200U	<200	---	<1.0	<5.0	<5.0	62	20	68
Ethene	ug/L	700	59	3700	1500	1700	4000D	750D	170	<50	<200U	<200	---	2800D	380	3900D	3500	77	140
Chloride	mg/L	---	---	---	---	---	---	---	---	---		---	---	---	---		---	---	---
TOC	mg/L	---	---	---	---	---	---	---	800	700	105	180	---	---	---	---	---	271	167
Dehalococcoides sp.	cells/ml	8,700	650	59,000	550	190,000	12,000	<10	<3,300	1,200,000	<120	<14	---	9,900	25,000	31,000	120,000	<3,300	<46
Field Parameters																			
pH	--	---	---	7.67	7.34	7.36	---	---	---	6.34	6.55	---	6.46	7.15	7.29	---	---	---	---
ORP	mV	---	---	-366	-170.8	-145.5	---	---	---	-135.6	15.4	---	-74.1	-157	-87.9	---	---	---	---
Dissolved Oxygen	mg/L	---	---	0.34	0.43	0.66	---	---	---	0.21	0.52	---	0.49	0.16	0.92	---	---	---	---
Specific Conductivity	ms/cm	---	---	0.617	0.816	0.64	---	---	---	2.559	2.078	---	1.010	1.174	0.508	---	---	---	---

TABLE 5
Water Quality Data
Bioremediation Parameters
2009 to Present
Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

CONSTITUENT	UNITS	BW-06 2/6/2013	BW-06 4/11/2013	BW-08 1/13/2009	BW-08 4/2/2009	BW-08 7/14/2009	BW-08 10/27/2009	BW-08 1/28/2010	BW-08 4/22/2010	BW-08 7/14/2010	BW-08 10/12/2010	BW-08 1/5/2011	BW-08 4/5/2011	BW-08 7/28/2011	BW-08 10/25/2011	BW-08 1/18/2012	BW-08 4/3/2012	BW-08 8/21/2012	BW-08 11/28/2012
Dissolved Metals																			
Iron	mg/L	---	---	18.5	27	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Manganese	mg/L	---	---	5.3	7.9	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Sulfate	mg/L	---	---	3.7	2.5	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Nitrate	mg/L	---	---	<0.50	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Nitrate/Nitrogen	mg/L	---	---	---	<0.50	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Metabolic Acids																			
Acetic acid	mg/L	---	---	7	39	160	57	<1.0	<1.0	130J	270	290	21	220	1.8	12	100	---	---
Lactic Acid	mg/L	---	---	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0J	<2.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	---	---
n-Butanoic acid	mg/L	---	---	<2.0	<2.0	---	<2.0	<2.0	<2.0	22J	4.8	5.9	<2.0	11	<2.0	<2.0	<2.0	---	---
Propionic acid	mg/L	---	---	2.5	26	140	1.9	<1.0	<1.0	260J	110	120	<1.0	250	<1.0	<1.0	2.2	---	---
Pyruvic Acid	mg/L	---	---	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0J	<1.0	<1.0	<0.50	<1.0	<0.50	<0.50	<0.50	---	---
Miscellaneous Analyses																			
Methane	ug/L	11000D	13000D	220	350	520	1000	81	210	1500DJ	4900D	16000D	8900	2800	250	1600D	4300D	1700	15000D
Ethane	ug/L	<100U	<100	<20	<100	<100	<100	12	<10	29J	75	1700	650	<100	17	20	82	40	40
Ethene	ug/L	<100U	<100	1500	7300	6900	5900	280	620	3800DJ	1300D	250	1900	4800	1000D	760	3400D	39	<20
Chloride	mg/L	---	---	124	104	---	---	---	---	---	---	---	---	---	---	---	---	---	---
TOC	mg/L	34.1	72.2	10.1	34.4	---	---	---	---	---	---	---	---	---	---	---	---	194	630
Dehalococcoides sp.	cells/ml	<110	<24	450	1,300	140,000	560,000	48,000	<26	23,000	10,000	<10	37,000	210	46,000	290,000	180,000	<37	<31
Field Parameters																			
pH	--	6.3	---	6.95	7.36	7.1	7.39	---	---	---	---	---	7.5	7.21	7.43	---	---	---	6.15
ORP	mV	-62.5	---	-160.2	-138.4	-162	-191.5	---	---	---	---	---	-373	-167.6	-116.7	---	---	---	-88.1
Dissolved Oxygen	mg/L	0.41	---	0.2	0.16	0.14	0.06	---	---	---	---	---	0.22	0.36	0.82	---	---	---	0.26
Specific Conductivity	ms/cm	0.525	---	0.659	0.647	1.122	0.96	---	---	---	---	---	0.608	1.408	0.565	---	---	---	2.384

TABLE 5
Water Quality Data
Bioremediation Parameters
2009 to Present
Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

CONSTITUENT	UNITS	BW-08 2/6/2013	BW-08 4/11/2013	BW-08 10/17/2014	BW-09 1/13/2009	BW-09 4/2/2009	BW-09 7/14/2009	BW-09 10/27/2009	BW-09 1/28/2010	BW-09 4/22/2010	BW-09 7/28/2011	BW-09 10/25/2011	BW-09 1/18/2012	BW-09 4/3/2012	BW-09 8/21/2012	BW-09 11/28/2012	BW-09 2/6/2013	BW-09 4/11/2013
Dissolved Metals																		
Iron	mg/L	---	---	---	19.6	41	---	---	---	---	---	---	---	---	---	---	---	---
Manganese	mg/L	---	---	---	7.1	11	---	---	---	---	---	---	---	---	---	---	---	---
Sulfate	mg/L	---	---	---	10.3	2.4	---	---	---	---	---	---	---	---	---	---	---	---
Nitrate	mg/L	---	---	---	<0.50	---	---	---	---	---	---	---	---	---	---	---	---	---
Nitrate/Nitrogen	mg/L	---	---	---	---	<0.50	---	---	---	---	---	---	---	---	---	---	---	---
Metabolic Acids																		
Acetic acid	mg/L	---	---	---	5.6	17	260	56	<1.0	<1.0	530	<1.0	32	85	---	---	---	---
Lactic Acid	mg/L	---	---	---	<1.0	<1.0	<2.0	1.5	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	---	---	---	---
n-Butanoic acid	mg/L	---	---	---	<2.0	<2.0	---	<2.0	<2.0	<2.0	31	<2.0	<2.0	<2.0	---	---	---	---
Propionic acid	mg/L	---	---	---	<1.0	2.2	250	<1.0	<1.0	<1.0	680	<1.0	4.1	4.2	---	---	---	---
Pyruvic Acid	mg/L	---	---	---	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50	<2.5	<0.50	<0.50	<0.50	---	---	---	---
Miscellaneous Analyses																		
Methane	ug/L	21000D	19000	---	650	660	2500	2800	370	640	7500D	7400	2200	4500D	9400D	17000D	22000D	17000
Ethane	ug/L	<200U	<200	---	42	<20	74	140	57	<10	200	1500	160	350	450	<100	<200U	<200
Ethene	ug/L	<200U	<200	---	1200	2000	4600	4600	830	900	3500D	280	1100	4100D	370	<100	<200U	<200
Chloride	mg/L	---	---	---	131	174	---	---	---	---	---	---	---	---	---	---	---	---
TOC	mg/L	181	52	---	9.8	13.8	---	---	---	---	---	---	---	---	1010	630	124	144
Dehalococcoides sp.	cells/ml	<83	3,300	---	1,900	6,700	40,000	120,000	83,000	<24	51	1,200	150,000	310,000	<31	<31	<77	<31
Field Parameters																		
pH	--	6.59	---	6.43	7.06	7.34	7.24	7.51	---	---	6.71	7.17	---	---	---	6.3	6.55	6.55
ORP	mV	-106.3	---	-92.1	-167.1	-106.5	-174	-197.9	---	---	-163.4	-113.6	---	---	---	-111.7	-118.1	-101.7
Dissolved Oxygen	mg/L	0.72	---	0.60	0.22	0.2	0.11	0.14	---	---	0.62	0.55	---	---	---	0.15	0.22	0.56
Specific Conductivity	ms/cm	1.754	---	1.765	0.724	0.699	1.463	1.094	---	---	3.207	0.636	---	---	---	2.362	1.725	1.896

TABLE 5
Water Quality Data
Bioremediation Parameters
2009 to Present
Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

CONSTITUENT	UNITS	MW-009 1/14/2009	MW-009 4/2/2009	MW-009 7/14/2009	MW-009 10/27/2009	MW-009 1/28/2010	MW-009 4/22/2010	MW-009 7/14/2010	MW-009 10/12/2010	MW-009 1/4/2011	MW-009 4/5/2011	MW-009 7/28/2011	MW-009 10/25/2011	MW-009 1/17/2012	MW-009 4/3/2012	MW-009 8/21/2012	MW-009 11/28/2012	MW-009 2/6/2013	MW-009 4/11/2013
Dissolved Metals																			
Iron	mg/L	59.5	70	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Manganese	mg/L	7.0	6	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Sulfate	mg/L	<2.0	<2.0	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Nitrate	mg/L	<0.50	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Nitrate/Nitrogen	mg/L	---	<0.50	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Metabolic Acids																			
Acetic acid	mg/L	190D	390	1000	500	250	600	320J	6.1	<1.0	6	<1.0U	<1.0	<1.0	<1.0	---	---	---	---
Lactic Acid	mg/L	<1.0	<1.0	370	<5.0	<2.0	<5.0	<2.0J	<1.0	<1.0	<1.0	<1.0U	<1.0	<1.0	<1.0	---	---	---	---
n-Butanoic acid	mg/L	4.9	11	---	30	12	63	11J	<2.0	<2.0	<2.0	<2.0U	<2.0	<2.0	<2.0	---	---	---	---
Propionic acid	mg/L	7.7	17	2900	810	200	370	74J	<1.0	<1.0	1.6	<1.0U	<1.0	<1.0	<1.0	---	---	---	---
Pyruvic Acid	mg/L	<0.50	<0.50	<20	<2.5	<1.0	<2.5	<1.0J	<0.50	<0.50	<0.50	<0.50U	<0.50	<0.50	<0.50	---	---	---	---
Miscellaneous Analyses																			
Methane	ug/L	15000	17000	9500	14000	16000	15000	15000J	12000	20000D	24000	15000	9500	17000D	16000	16000	20000	23000	15000
Ethane	ug/L	1300	1900	360	330	870	1200	1200J	930	1500	1900	1400	830	1900	2000	2500	2600	2200	1200
Ethene	ug/L	<250	<250	1600	690	<250	1000	<250J	220	430	910	1400	1100	2000	1200	1600	2700	6800	5400
Chloride	mg/L	822	711	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
TOC	mg/L	109	183	---	---	---	---	---	---	---	---	---	---	---	---	28000	11900	7200	5800
Dehalococcoides sp.	cells/ml	8,800	15,000	270,000	120,000	25,000	560,000	9,000	<64	3,300	150,000	210	---	<40	<37	<3,300	<10	<3,300	<3,300
Field Parameters																			
pH	--	6.83	6.87	6.51	6.51	---	---	---	---	---	7.17	7.07	7.05		---	---	---	5.43	---
ORP	mV	-168.2	-143.3	-116	-105.1	---	---	---	---	---	-368	-169.8	-128.4		---	---	---	12	---
Dissolved Oxygen	mg/L	0.52	0.74	0.74	0.31	---	---	---	---	---	0.59	0.2	0.39		---	---	---	1.56	---
Specific Conductivity	ms/cm	3.53	3.435	7.494	5.223	---	---	---		---	5.494	4.105	2.545		---	---	---	3.539	---

TABLE 5
Water Quality Data
Bioremediation Parameters
2009 to Present
Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

CONSTITUENT	UNITS	MW-009 10/22/2013	MW-009 1/20/2014	MW-009 4/8/2014	MW-009 8/6/2014	MW-009 10/15/2014	MW-009 1/20/2015	MW-009 5/29/2015	OB-09-BR 1/14/2009	OB-09-BR 4/9/2009	OB-09-BR 7/14/2009	OB-09-BR 10/28/2009	OB-09-BR 1/28/2010	OB-09-BR 4/22/2010	OB-09-BR 7/14/2010	OB-09-BR 10/12/2010	OB-09-BR 1/5/2011	OB-09-BR 4/6/2011	OB-09-BR 7/28/2011
Dissolved Metals																			
Iron	mg/L	---	---	---	---	---	---	---	1.5	1.5	---	---	---	---	---	---	---	---	---
Manganese	mg/L	---	---	---	---	---	---	---	0.166	0.24	---	---	---	---	---	---	---	---	---
Sulfate	mg/L	---	---	---	---	---	---	---	<2.0	<2.0	---	---	---	---	---	---	---	---	---
Nitrate	mg/L	---	---	---	---	---	---	---	<0.50	---	---	---	---	---	---	---	---	---	---
Nitrate/Nitrogen	mg/L	---	---	---	---	---	---	---	---	<0.50	---	---	---	---	---	---	---	---	---
Metabolic Acids																			
Acetic acid	mg/L	---	---	---	---	---	---	---	<1.0	<1.0	<1.0	1.1	<1.0	<1.0	2.7J	2.4	6	2.8	8.6
Lactic Acid	mg/L	---	---	---	---	---	---	---	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0J	<1.0	<1.0	<1.0	<1.0
n-Butanoic acid	mg/L	---	---	---	---	---	---	---	<2.0	<2.0	---	<2.0	<2.0	<2.0	<2.0J	<2.0	<2.0	<2.0	<2.0
Propionic acid	mg/L	---	---	---	---	---	---	---	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.3J	<1.0	<1.0	<1.0	<1.0
Pyruvic Acid	mg/L	---	---	---	---	---	---	---	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50J	<0.50	<0.50	<0.50	<0.50
Miscellaneous Analyses																			
Methane	ug/L	15000	12000	13000	9600	8000	17000D	18000D	210	12000	170	500	170	340	560DJ	490	1300D	720	1600D
Ethane	ug/L	1000	690	670	540	550	990	1100	<2.5	<200	<2.5	<5.0	<2.0	<5.0	<5.0J	<10	<10	<10	<10
Ethene	ug/L	3000	4000	5300	1500	990	3000	3700	4.5	<200	6.4	8.4	3	8.1	16J	13	28	20	34
Chloride	mg/L	---	---	---	---	---	---	---	16	20	---	---	---	---	---	---	---	---	---
TOC	mg/L	1910	1370	1110	890	750	646	744	6.5	4.1	---	---	---	---	---	---	---	---	---
Dehalococcoides sp.	cells/ml	200,000	---	19J	---	---	---	---	27,000	<32	8,500	18,000	<67	<31,000	---	---	3,600	---	---
Field Parameters																			
pH	--	6.06	6.26	---	---	6.27	6.64	---	9.18	7.69	7.91	8.83	7.48	---	8.51	7.65	8.51	8.10	---
ORP	mV	41.3	-89.2	---	---	-58.1	-75.5	---	-335.4	-156	-323	-415.7	-174	---	-63	-311	-405.5	-363	---
Dissolved Oxygen	mg/L	0.89	0.78	---	---	1.40	3.66	---	1.2	0.36	0.11	0.86	0.36	---	0.26	0.31	0.67	0.31	---
Specific Conductivity	ms/cm	5.052	4.527	---	---	4.840	5.107	---	0.111	0.136	0.139	0.144	0.146	---	0.157	0.17	0.173	0.190	---

TABLE 5
Water Quality Data
Bioremediation Parameters
2009 to Present
Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

CONSTITUENT	UNITS	OB-09-BR 10/25/2011	OB-09-BR 1/18/2012	OB-09-BR 4/3/2012	OB-09-BR 8/21/2012	OB-09-BR 11/28/2012	OB-09-BR 2/6/2013	OB-09-BR 4/11/2013	OB-09-DO 1/13/2009	OB-09-DO 4/9/2009	OB-09-DO 4/27/2009	OB-09-DO 7/14/2009	OB-09-DO 10/28/2009	OB-09-DO 1/28/2010	OB-09-DO 4/22/2010	OB-09-DO 7/14/2010	OB-09-DO 10/12/2010
Dissolved Metals																	
Iron	mg/L	---	---	---	---	---	---	---	<0.100	<0.10	---	---	---	---	---	---	---
Manganese	mg/L	---	---	---	---	---	---	---	<0.0100	<0.010	---	---	---	---	---	---	---
Sulfate	mg/L	---	---	---	---	---	---	---	2.4	4.7	---	---	---	---	---	---	---
Nitrate	mg/L	---	---	---	---	---	---	---	1.12	---	---	---	---	---	---	---	---
Nitrate/Nitrogen	mg/L	---	---	---	---	---	---	---	---	1.63	---	---	---	---	---	---	---
Metabolic Acids																	
Acetic acid	mg/L	1.5	110	6.2	---	---	---	---	<1.0	---	<1.0J	<1.0	2.8	<1.0	72	4.0J	3.7
Lactic Acid	mg/L	<1.0	<1.0	<1.0	---	---	---	---	<1.0	---	<1.0J	<1.0	<1.0	<1.0	<1.0	<1.0J	<1.0
n-Butanoic acid	mg/L	<2.0	2.7	<2.0	---	---	---	---	<2.0	---	<2.0J	---	<2.0	<2.0	2.5	<2.0J	<2.0
Propionic acid	mg/L	<1.0	58	<1.0	---	---	---	---	<1.0	---	<1.0J	<1.0	<1.0	<1.0	140	<1.0J	<1.0
Pyruvic Acid	mg/L	<0.50	<0.50	<0.50	---	---	---	---	<0.50	---	<0.50J	<0.50	<0.50	<0.50	<0.50	<0.50J	<0.50
Miscellaneous Analyses																	
Methane	ug/L	1200	660	1700D	2500D	2100	2300	1800	<2.0	10000	---	2100	610	180	4500	13000DJ	3000
Ethane	ug/L	<20	<10	<10	<20	<50	<25U	<25	<1.0	320	---	130	16	<2.0	140	240J	80
Ethene	ug/L	<20	11	42	66	57	64	58	<1.0	370	---	73	31	<2.0	110	210J	57
Chloride	mg/L	---	---	---	---	---	---	---	32.6	44.6	---	---	---	---	---	---	---
TOC	mg/L	---	---	---	12.3	13.2	10.3	11.5	5.7	4.4	---	---	---	---	---	---	---
Dehalococcoides sp.	cells/ml	---	1,500	---	---	---	---	---	<20	<10	---	300,000	350,000	5,100	610,000	---	---
Field Parameters																	
pH	--	---	---	---	---	---	7.53	---	6.48	6.22	6.52	6.95	6.69	6.52	---	6.71	6.75
ORP	mV	---	---	---	---	---	-172.1	---	7.6	-41	37.9	-126	-130.7	-65	---	-34	-135
Dissolved Oxygen	mg/L	---	---	---	---	---	0.4	---	0.77	0.14	0.34	0.12	0.32	0.26	---	0.19	0.27
Specific Conductivity	ms/cm	---	---	---	---	---	0.31	---	0.105	0.233	0.161	0.21	0.226	0.124	---	0.266	0.259

TABLE 5
Water Quality Data
Bioremediation Parameters
2009 to Present
Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

CONSTITUENT	UNITS	OB-09-DO 1/5/2011	OB-09-DO 4/6/2011	OB-09-DO 7/28/2011	OB-09-DO 10/25/2011	OB-09-DO 1/18/2011	OB-09-DO 4/3/2012	OB-09-DO 8/21/2012	OB-09-DO 11/28/2012	OB-09-DO 2/6/2013	OB-09-DO 4/11/2013	OB-09-S 4/9/2009	OB-09-S 4/27/2009	OB-09-S 7/14/2009	OB-09-S 10/28/2009	OB-09-S 1/28/2010	OB-09-S 4/22/2010	OB-9-S 7/14/2010	OB-09-S 10/12/2010	OB-09-S 1/5/2011
Dissolved Metals																				
Iron	mg/L	---	---	---	---	---	---	---	---	---	---	16	---	---	---		---	---	---	---
Manganese	mg/L	---	---	---	---	---	---	---	---	---	---	2	---	---	---		---	---	---	---
Sulfate	mg/L	---	---	---	---	---	---	---	---	---	---	<2.0	---	---	---	---	---	---	---	---
Nitrate	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Nitrate/Nitrogen	mg/L	---	---	---	---	---	---	---	---	---	---	<0.50	---	---	---	---	---	---	---	---
Metabolic Acids																				
Acetic acid	mg/L	1.5	1.2	2.1	7.8	1.4	<1.0	---	---	---	---	---	150J	660	92	53	310	160J	250	870
Lactic Acid	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	---	---	---	---	---	<1.0J	<20	<1.0	<1.0	290	220J	<2.0	<10
n-Butanoic acid	mg/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	---	---	---	---	---	31J	---	16	9	100	17J	8.5	270
Propionic acid	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	---	---	---	---	---	230J	1700	110	57	830	210J	170	1700
Pyruvic Acid	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---	---	---	---	<0.50J	<10	<0.50	<0.50	<2.5	<1.0J	<1.0	<5.0
Miscellaneous Analyses																				
Methane	ug/L	12000D	3000	600	1800D	1200	1200	1800	330	240	840D	10000	---	10000	3700	12000	12000	13000J	9000	25000D
Ethane	ug/L	410	100	<10	<10	<25	<20	<20	<5.0	<5.0U	<5.0	<200	---	<200	<50	320	<200	240J	370	470
Ethene	ug/L	330	80	11	37	<25	<20	<20	<5.0	<5.0U	5.6	4300	---	2000	580	820	1300	1700J	290	1000
Chloride	mg/L	---	---	---	---	---	---	---	---	---	---	122	---	---	---	---	---	---	---	---
TOC	mg/L	---	---	---	---	---	---	29.7	8.8	6.4	5.5	231	---	---	---	---	---	---	---	---
Dehalococcoides sp.	cells/ml	240,000	---	---	---	180,000	---	---	---	---	---	---	10,000	960,000	2,400,000	150,000	960,000	<100	7,200	8,100
Field Parameters																				
pH	--	6.82	6.43	---	---	---	---	---	6	6.54	---	6.43	6.43	6.3	---	6.45	---	6.42	6.3	6.16
ORP	mV	-171.6	-390	---	---	---	---	---	-99.2	-16.1	---	-126	-106.4	-100	-102	-102	---	-43	-98	-144.9
Dissolved Oxygen	mg/L	0.32	0.16	---	---	---	---	---	0.15	2.26	---	0.53	0.24	0.17	0.31	1.49	---	0.44	0.19	0.40
Specific Conductivity	ms/cm	0.225	0.105	---	---	---	---	---	0.212	0.112	---	14	11.583	10.859	7.857	12.945	---	6.045	6.144	---

TABLE 5
Water Quality Data
Bioremediation Parameters
2009 to Present
Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

CONSTITUENT	UNITS	OB-09-S 4/5/2011	OB-09-S 7/28/2011	OB-09-S 10/25/2011	OB-09-S 1/18/2012	OB-09-S 4/3/2012	OB-09-S 8/21/2012	OB-09-S 11/28/2012	OB-09-S 2/6/2013	OB-09-S 4/11/2013	OB-09-S 10/22/2013	OB-09-S 1/21/2014	OB-09-S 4/9/2014	OB-09-S 8/6/2014	OB-09-S 10/15/2014	OB-09-S 1/20/2015	OB-09-S 5/29/2015	OB-09-S 7/27/2015
Dissolved Metals																		
Iron	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Manganese	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Sulfate	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Nitrate	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Nitrate/Nitrogen	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Metabolic Acids																		
Acetic acid	mg/L	390	940	360	<1.0	54	---	---	---	---	---	---	---	---	---	---	---	---
Lactic Acid	mg/L	<5.0	<10	<2.0	<1.0	<1.0	---	---	---	---	---	---	---	---	---	---	---	---
n-Butanoic acid	mg/L	100	48	74	<2.0	<2.0	---	---	---	---	---	---	---	---	---	---	---	---
Propionic acid	mg/L	510	1100	300	<1.0	19	---	---	---	---	---	---	---	---	---	---	---	---
Pyruvic Acid	mg/L	<2.5	<5.0	<1.0	<0.50	<0.50	---	---	---	---	---	---	---	---	---	---	---	---
Miscellaneous Analyses																		
Methane	ug/L	25000	21000D	18000	18000	27000D	13000	15000	21000D	18000	10000	16000D	15000	14000	16000J	23000	26000	---
Ethane	ug/L	<500	330	290	310	690	<200	<200	<200U	<200	<200	170	<250	<250	<250J	530	370	---
Ethene	ug/L	1000	<200	<250	<250	<250	<200	<200	<200U	<200	<200	<130	<250	<250	<250J	<250	<250	---
Chloride	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
TOC	mg/L	---	---	---	---	---	210	32.7	23	34.9	81	28.1	26.4	29.8	35.7J	26.7	36.5	---
Dehalococcoides sp.	cells/ml	940,000	1,600	490,000	48,000	640,000	<3,300	<91	<97	<120	<68	---	---	---	---	---	---	---
Field Parameters																		
pH	--	6.8	---	---	---	---	---	5.8	6.43	---	6.52	6.65	---	---	6.62	6.65	---	6.37
ORP	mV	-367	---	---	---	---	---	-62.2	-77.9	---	-34.8	-90.8	---	---	-69.2	-65	---	-79.9
Dissolved Oxygen	mg/L	0.54	---	---	---	---	---	0.08	0.3	---	3.11	0.93	---	---	0.43	2.72	---	0.48
Specific Conductivity	ms/cm	11.86	---	---	---	---	---	0.276	1.539	---	2.151	1.88	---	---	1.646	1.75	---	2.29

TABLE 5
Water Quality Data
Bioremediation Parameters
2009 to Present
Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

CONSTITUENT	UNITS	OB-15-S 7/14/2009	OB-15-S 1/28/2010	OB-15-S 4/22/2010	OB-15-S 10/12/2010	OB-15-S 1/4/2011	OB-15-S 7/28/2011	OB-15-S 10/25/2011	OB-15-S 1/17/2012	OB-15-S 4/3/2012	OB-15-S 8/21/2012	OB-15-S 11/28/2012	OB-15-S 2/6/2013	OB-15-S 4/11/2013	OB-15-S 10/22/2013	OB-15-S 1/21/2014	OB-15-S 4/8/2014	OB-15-S 8/6/2014	OB-15-S 10/15/2014	OB-15-S 1/20/2015	OB-15-S 5/29/2015	OB-15-S 7/27/2015
Dissolved Metals																						
Iron	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Manganese	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Sulfate	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Nitrate	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Nitrate/Nitrogen	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Metabolic Acids																						
Acetic acid	mg/L	180	<1.0	12	12	120	670	230	57	9.4	---	---	---	---	---	---	---	---	---	---	---	---
Lactic Acid	mg/L	420	<1.0	490	<1.0	<1.0	<10	<2.0	<1.0	<1.0	---	---	---	---	---	---	---	---	---	---	---	---
n-Butanoic acid	mg/L	---	<2.0	<10	<2.0	4.6	120	37	<2.0	<2.0	---	---	---	---	---	---	---	---	---	---	---	---
Propionic acid	mg/L	310	<1.0	24	11	110	1200	310	31	<1.0	---	---	---	---	---	---	---	---	---	---	---	---
Pyruvic Acid	mg/L	<1.3U	<0.50	<2.5	<0.50	<0.50	<5.0	<1.0	<0.50	<0.50	---	---	---	---	---	---	---	---	---	---	---	---
Miscellaneous Analyses																						
Methane	ug/L	55	92	390	5400D	12000D	8100	11000D	21000D	21000	21000	18000	24000	15000	13000	12000	11000	15000D	9500J	22000	340	---
Ethane	ug/L	<1.0U	<1.0	<5.0	<5.0	150	<100	210	400	370	300	300	280	280	340	310	340	440	220J	980	5.2	---
Ethene	ug/L	90	24	170	540D	210	230	480	160	310	280	<250	<250U	<250	<250U	210	160	<130	<130J	<250	5.8	---
Chloride	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
TOC	mg/L	---	---	---	---	---	---	---	---	---	1750	1670	620	543	187	59	17.5	36.5	36.7J	33.5	10.5	---
Dehalococcoides sp.	cells/ml	85,000	5,200	<77	88,000	110,000	61	18,000,000	<66	750,000	<3,300	<170	<110	110,000	<86	---	<150	---	---	---	---	---
Field Parameters																						
pH	--	6.64	---	---	---	---	6.29	6.52	6.52	---	---	---	6.48	---	6.65	6.61	---	---	6.65	6.64	---	6.19
ORP	mV	-163	---	---	---	---	-145	-94.2	-94.2	---	---	---	-96.5	---	-105.2	-40.3	---	---	-93.4	-49.3	---	-33.7
Dissolved Oxygen	mg/L	0.37	---	---	---	---	0.24	0.41	0.41	---	---	---	0.99	---	0.2	2.09	---	---	0.55	2.45	---	0.61
Specific Conductivity	ms/cm	9.071	---	---	---	---	14.038	3.543	3.543	---	---	---	2.18	---	2.505	1.046	---	---	1.060	1.398	---	1.311

TABLE 5
Water Quality Data
Bioremediation Parameters
2009 to Present
Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

CONSTITUENT	UNITS	OB-44-S 3/17/2015	OB-44-S 5/28/2015	OB-44-S 6/18/2015	OB-44-S 8/21/2015	OB-46-S 3/17/2015	OB-46-S 5/28/2015	OB-46-S 6/18/2015	OB-46-S 8/11/2015	STR-03 1/13/2009	STR-03 4/9/2009	STR-03 7/14/2009	STR-03 10/27/2009	STR-03 1/28/2010	STR-03 4/22/2010	STR-03 7/14/2010	STR-03 10/12/2010	STR-03 1/5/2011	STR-03 4/5/2011	STR-03 7/28/2011	STR-03 10/25/2011
Dissolved Metals																					
Iron	mg/L	0.39	<0.10	---	0.09	<0.10	<0.10	---	0.06	1.4	3.5	---	---	---	---	---	---	---	---	---	---
Manganese	mg/L	0.54	1.1	---	0.78	0.013	0.28	---	0.03	0.58	2.6	---	---	---	---	---	---	---	---	---	---
Sulfate	mg/L	56.8	80.5	---	76	49.6	35.7	---	<10	32.6	22	---	---	---	---	---	---	---	---	---	---
Nitrate	mg/L	---	<1.0UJ	---	<0.1	---	<1.0UJ	---	<2.0	1.58	---	---	---	---	---	---	---	---	---	---	---
Nitrate/Nitrogen	mg/L	<1.0	---	---	---	<1.0	---	---	---	---	0.86	---	---	---	---	---	---	---	---	---	---
Metabolic Acids																					
Acetic acid	mg/L	---	---	---	---	---	---	---	---	<1.0	<1.0	<1.0	<1.0	1.8	<1.0	1.5J	<1.0	<1.0	<1.0	<1.0	<1.0
Lactic Acid	mg/L	---	---	---	---	---	---	---	---	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0J	<1.0	<1.0	<1.0	<1.0	<1.0
n-Butanoic acid	mg/L	---	---	---	---	---	---	---	---	<2.0	<2.0	---	<2.0	<2.0	<2.0	<2.0J	<2.0	<2.0	<2.0	<2.0	<2.0
Propionic acid	mg/L	---	---	---	---	---	---	---	---	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0J	<1.0	<1.0	<1.0	<1.0	<1.0
Pyruvic Acid	mg/L	---	---	---	---	---	---	---	---	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50J	<0.50	<0.50	<0.50	<0.50	<0.50
Miscellaneous Analyses																					
Methane	ug/L	---	---	2.7	<10	---	---	36	<10	20	39	270	4.5	24	46	4.3J	<2.0	5.5	2	5	49
Ethane	ug/L	---	---	5.8	<20	---	---	18	<20	<1.0	1.3	13	<1.0	1.1	1.5	<1.0J	<1.0	<1.0	<1.0	<1.0	2.5
Ethene	ug/L	---	---	10	<20	---	---	26	<20	<1.0	6.2	13	<1.0	3.6	3.5	<1.0J	<1.0	<1.0	<1.0	<1.0	7.8
Chloride	mg/L	---	---	---	---	---	---	---	---	1790	1320	---	---	---	---	---	---	---	---	---	---
TOC	mg/L	---	---	---	16	---	---	---	8.1	1.7	1.6	---	---	---	---	---	---	---	---	---	---
Dehalococcoides sp.	cells/ml	---	24.4	---	<10	---	---	<1.0	271	<10	590	<10	20,000	5,200	<22	4,200	<64	1,600	3,100	<10	4,800
Field Parameters																					
pH	--	7.52	7.20	7.39	6.98	12.32	9.00	8.99	7.15	---	---	---	---	---	---	---	---	---	---	---	---
ORP	mV	-65.3	25.3	11.8	-35.4	-66.4	62.9	-98.5	-76.8	---	---	---	---	---	---	---	---	---	---	---	---
Dissolved Oxygen	mg/L	0.6	3.39	2.07	1.55	3.87	9.45	0.21	1.22	---	---	---	---	---	---	6.05	8.02	---	10.12	2.87	---
Specific Conductivity	ms/cm	0.609	0.548	0.531	0.618	6.280	0.098	5.638	6.412	---	---	---	---	---	---	---	---	---	---	---	---

TABLE 5
Water Quality Data
Bioremediation Parameters
2009 to Present
Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

CONSTITUENT	UNITS	STR-03 1/18/2011	STR-03 4/3/2012	UNNAMED STREAM 1/14/2009	UNNAMED STREAM 4/9/2009	UNNAMED STREAM 7/14/2009	UNNAMED STREAM 10/27/2009	UNNAMED STREAM 1/28/2010	UNNAMED STREAM 4/22/2010	UNNAMED STREAM 10/12/2010	UNNAMED STREAM 1/4/2011	UNNAMED STREAM 4/5/2011	UNNAMED STREAM 10/25/2011	UNNAMED STREAM 1/17/2012	UNNAMED STREAM 4/3/2012	UNNAMED STREAM 8/21/2012	UNNAMED STREAM 2/6/2013	UNNAMED STREAM 4/11/2013
Dissolved Metals																		
Iron	mg/L	---	---	47.8	22	---	---	---	---	---	---	---	---	---	---	---	---	---
Manganese	mg/L	---	---	6.89	6.1	---	---	---	---	---	---	---	---	---	---	---	---	---
Sulfate	mg/L	---	---	20.8	20.7	---	---	---	---	---	---	---	---	---	---	---	---	---
Nitrate	mg/L	---	---	<0.50	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Nitrate/Nitrogen	mg/L	---	---	---	<0.50	---	---	---	---	---	---	---	---	---	---	---	---	---
Metabolic Acids																		
Acetic acid	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	4.5	<1.0	<1.0	<1.0	<1.0	<1.0	---	---	---
Lactic Acid	mg/L	<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	---	---	---
n-Butanoic acid	mg/L	<2.0	<2.0	<2.0	<2.0	---	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	---	---	---
Propionic acid	mg/L	<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	---	---	---
Pyruvic Acid	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	1.4	<0.50	<0.50	<0.50	<0.50	<0.50	---	---	---
Miscellaneous Analyses																		
Methane	ug/L	170D	7.7	470	240	240	2300	360	260	<2.0	780D	290	620D	200	350D	160	540D	370D
Ethane	ug/L	10	<1.0	37	15	14	110	31	11	<1.0	57	19	52	12	26	14	33	17
Ethene	ug/L	36	<1.0	37	24	65	61	70	46	<1.0	61	21	32	9.6	49	55	100	35
Chloride	mg/L	---	---	1460	1170	---	---	---	---	---	---	---	---	---	---	---	---	---
TOC	mg/L	---	---	16.7	3.7	---	---	---	---	---	---	---	---	---	---	16.2	4.5	13.8
Dehalococcoides sp.	cells/ml	15,000	---	6,700	380	120,000	21,000	970	<22	1,600	520	<10	140,000	<40	4,500	<50	<59,000J	<11
Field Parameters								---										
pH	--	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
ORP	mV	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Dissolved Oxygen	mg/L	---	---	---	---	---	---	---	---	8.48	---	4.39	---	---	---	---	---	---
Specific Conductivity	ms/cm	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Notes: < = Less than detection limit
--- = Not analyzed
mg/L = Milligrams per liter
ug/L = Micrograms per liter
mV = Millivolt
ms/cm = Millisiemen per centimeter
TOC = total organic carbon
cells/ml = cells per milliliter
D = Result reported is from a diluted sample
Field parameter results reported are from the closest date to the analytical sampling
(1) = results from RNA analysis
(2) = results from biotraps analysis by Microbial Insights (cells/grams of beads)
(3) = results from biotraps analysis by Shaw (cells/grams of beads)
* = Sample BW-03 collected on 1/28/2010 but was broken in transit, not analyzed.
J - Estimated concentration

Table 6A
Water Quality Sample Summary
May and June 2015
Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

Sample Location	Location	Rationale for Sampling	Analysis Performed
Building 3/6 Treatment Areas			
AP-12-BR	East Building 6	Monitor injection & Site conditions	VOC
AP-12-DO	East Building 6	Monitor injection & Site conditions	VOC
AP-13-DO	East Building 3	Monitor remediation and VOC trends	VOC, Chloride, TOC, methane, ethane, ethene, Dehalococcoides sp.
AP-14-S	North Building 3	Monitor injection & Site conditions	VOC, Chloride, Fe & Mn, permanganate
AP-23-DO	East Building 3	Monitor remediation and VOC trends	VOC, , TOC, methane, ethane, ethene, Fe & Mn, Dehalococcoides sp.
AP-24-DO	East Building 3	Monitor remediation and VOC trends	VOC, TOC, methane, ethane, ethene, Fe & Mn, Dehalococcoides sp.
AP-25-DO	East Building 3	Monitor VOC trends and confirm no adverse downgradient impacts	VOC, TOC, methane, ethane, ethene,
AP-26-DO	West Building 1 & 2	Monitor remediation and VOC trends	VOC, Chloride, Fe & Mn, permanganate
AP-30R-DO	Beneath Building 3	Monitor VOC trends and confirm no adverse downgradient impacts	VOC
AP-31-DO	Beneath Building 3	Monitor remediation and VOC trends	VOC, Chloride, Fe & Mn, permanganate
AP-32-DO	Beneath Building 3	Monitor remediation and VOC trends	VOC, Chloride, Fe & Mn, permanganate
AP-33-DO	East Building 3	Monitor remediation and VOC trends	VOC, TOC, methane, ethane, ethene, Fe & Mn, Dehalococcoides sp.
AP-34-DO	East Building 3	Monitor remediation and VOC trends	VOC, TOC, methane, ethane, ethene, Fe & Mn, Dehalococcoides sp.
AP-35-DO	East Building 3	Monitor remediation and VOC trends	VOC, TOC, methane, ethane, ethene, Fe & Mn, Dehalococcoides sp.
BW-05	By Unnamed Stream	Monitor shallow VOC trends	VOC
BW-08	By Unnamed Stream	Monitor shallow VOC trends	VOC
CL02-BR	16 Tozer	Monitor remediation and VOC trends	VOC
CL05-DOA	East Building 6 Area	Monitor VOC trends	VOC
CL11-DO	Southwest Building 7	Monitor VOC trends	VOC
CL11-S	Southwest Building 7	Monitor VOC trends	VOC
MW-009	Near Bldg. 9 and Unnamed Stream	Monitor remediation and VOC trends	VOC, TOC, methane, ethane, ethene,
MW-009A	By Unnamed Stream	Monitor injection and Site conditions	VOC
MW-013	North Building 3 by Rte. 128	Monitor injection and Site conditions	VOC
MW-014A	North Building 1	Monitor injection and Site conditions	VOC
OB-09-BR	By Unnamed Stream	Monitor VOC trends and confirm no adverse downgradient impacts	VOC
OB-09-DO	By Unnamed Stream	Monitor VOC trends and confirm no adverse downgradient impacts	VOC
OB-09-S	Near Bldg. 9 and Unnamed Stream	monitor VOC trends in shallow bioremediation area	VOC, TOC, methane, ethane, ethene,
OB-10-BR	East Building 4	Monitor injection and Site conditions	VOC
OB-10-S	East Building 4	Monitor VOC trends and confirm no adverse downgradient impacts	VOC
OB-11-BR	North Building 3 by Rte. 128	Monitor injection & Site conditions	VOC
OB-11-DO	North Building 3 by Rte. 128	Monitor injection & Site conditions	VOC
OB-12-DO	North Building 3 by Rte. 128	Monitor remediation	VOC, Chloride, Fe & Mn, permanganate
OB-14-DO	North Building 1	Monitor injection & Site conditions	VOC
OB-15-S	Near Bldg. 9 and Unnamed Stream	Monitor VOC trends in shallow bioremediation area	VOC, TOC, methane, ethane, ethene,
OB-19-DO	West Building 1 & 2	Monitor remediation	VOC, Chloride, Fe & Mn, permanganate

Table 6A
Water Quality Sample Summary
May and June 2015
Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

Sample Location	Location	Rationale for Sampling	Analysis Performed
OB-19-S	West Building 1 & 2	Monitor injection & Site conditions	VOC
OB-25-BR	West Building 1 & 2	Monitor remediation and VOC trends	VOC, Chloride, Fe & Mn, permanganate
OB-25-DO	West Building 1 & 2	Monitor VOC trends and confirm no adverse downgradient impacts	VOC
OB-26-BR	West Building 1 & 2	Monitor remediation and VOC trends	VOC
OB-26-DO	West Building 1 & 2	Monitor remediation and VOC trends	VOC
OB-27-BR	West Building 7	Monitor VOC trends by Building 7	VOC
OB-28-BR	West Building 1 & 2	Monitor injection & Site conditions	VOC
OB-32-DO	North Building 3	Monitor VOC trends	VOC, Chloride, Fe & Mn, permanganate
OB-34-DO	North Building 3	Monitor VOC trends	VOC
OB-36-DO	Inside Building 6	Monitor VOC trends	VOC, Chloride, Fe & Mn
OB-37-DO	Inside Building 6	Monitor VOC trends	permanganate
RW-01_MW-18	East Building 3	Monitor deep overburden VOC trends and confirm no adverse downgradient impacts.	VOC, TOC, methane, ethane, ethene
RW-22	North Building 1	Monitor injection & Site conditions	VOC
Building 5 Treatment Area			
OB-35-DO	Inside Building 5	Monitor remediation and VOC trends	VOC, Chloride, Fe & Mn, permanganate
OB-38-DO	East Building 5	Monitor residual permanganate and VOC trends	VOC
OB-44-S	Inside Building 5	Monitor remediation and shallow overburden VOC trends	VOC, Chloride, Fe & Mn, Methane, ethane, ethene,Dehalococcoides sp.
OB-45-DO	West corner of Building 5	Monitor VOC trends downgradient of shallow bioremediation area	VOC
OB-45-S	West corner of Building 5	Monitor shallow VOC trends downgradient of shallow bioremediation	VOC
OB-46-S	East Building 5	Monitor remediation and shallow overburden VOC trends	VOC, Chloride, Fe & Mn,Methane, ethane, ethene, Dehalococcoides sp.
OB-47-S	North corner of Building 5	Monitor shallow VOC trends	VOC
AP-27-DO	East Building 5	Monitor residual permanganate and VOC trends	VOC, Chloride, Fe & Mn, permanganate
PSL 10 Treatment Area			
AP-19	PSL 10	Monitor residual permanganate and VOC trends	VOC, Chloride, Fe & Mn, permanganate
AP-20	PSL 10	Monitor residual permanganate and VOC trends	VOC, Chloride, Fe & Mn, permanganate
AP-21	PSL 10	Monitor residual permanganate and VOC trends	VOC, Chloride, Fe & Mn, permanganate
AP-22	PSL 10	Monitor residual permanganate and VOC trends	VOC, Chloride, Fe & Mn, permanganate
MW-2_32-TOZER	32 Tozer Road	Monitor VOC trends	VOC
MW-033B	Baseball field	Monitor Site conditions	VOC
CL10-BR	32 Tozer Road	Monitor VOC trends	VOC
CL10-DO	32 Tozer Road	Monitor VOC trends	VOC, Chloride, Fe & Mn, permanganate
CL10-S	32 Tozer Road	Monitor VOC trends	VOC
CL04-BR	30 Tozer Road	Monitor VOC trends	VOC
CL04-DO	30 Tozer Road	Monitor VOC trends	VOC
Tozer Road South Area			
MW-036	28 Tozer Road	Monitor Site conditions	VOC
CL03-DO	28 Tozer	Monitor VOC trends	VOC
CL03-S	28 Tozer	Monitor VOC trends	VOC
BR-5_ZONE3	28 Tozer	Monitor Site conditions	VOC
CL08-BR_ZONE1	Longmeadow Road	Sentry Wells	VOC
CL08-BR_ZONE2	Longmeadow Road	Sentry Wells	VOC
CL08-BR_ZONE3	Longmeadow Road	Sentry Wells	VOC
CL08-DO	Longmeadow Road	Sentry Wells	VOC
OB-04-DO	28 Tozer Road	Monitor Site conditions	VOC
OB-05-BR	27 Tozer Road	Monitor Site conditions	VOC

Table 6A
Water Quality Sample Summary
May and June 2015
Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

Sample Location	Location	Rationale for Sampling	Analysis Performed
OB-05-DO	27 Tozer Road	Monitor Site conditions	VOC
OB-06-BR	Sonning Road	Monitor Site conditions	VOC
OB-06-DO	Sonning Road	Monitor Site conditions	VOC
OB-42-S	30 Tozer Road	Monitor shallow VOC trends	VOC
OB-43-S	30 Tozer Road	Monitor shallow VOC trends	VOC
Tozer Road North Area			
CL06-BR	Walden Street	Added to confirm VOC concentrations	VOC
CL06-DO	Walden Street	Added to confirm VOC concentrations	VOC
CL09-BR_ZONE3	Commons Drive	Monitor Site conditions	VOC
BR-1_ZONE3	Walden Street	Monitor VOC trends	VOC
BR-3_ZONE1	Devon Street	Sentry Wells	VOC
BR-3_ZONE2	Devon Street	Sentry Wells	VOC
BR-3_ZONE3	Devon Street	Sentry Wells	VOC
MW-003R	16 Tozer Road	Monitor current VOC concentrations	VOC
MW-005R	16 Tozer Road	Monitor current VOC concentrations	VOC
OB-17-DO	Commons Drive	Monitor Site conditions	VOC
OB-17-BR	Commons Drive	Monitor Site conditions	VOC
OB-23-BR	16 Tozer Road	Monitor Site conditions	VOC
31 Tozer Road Treatment Area			
GZ-4	31 Tozer Road	Monitor Site conditions	VOC
MW-34	39 Tozer Road	Monitor Site conditions	VOC (June)
OB-08-DO	29 Tozer Road	Monitor Site conditions	VOC
OB-18-DO	31 Tozer Road	Monitor Site conditions	VOC
OB-18-S	31 Tozer Road	Monitor Site conditions	VOC
OB-41-S	39 Tozer Road	Monitor shallow VOC trends	VOC
AP-15-S	31 Tozer Road	Monitor shallow VOC trends	VOC
BR-7_ZONE1	29 Tozer Road	Sentry Wells	VOC
BR-7_ZONE2	29 Tozer Road	Sentry Wells	VOC
BR-7_ZONE3	29 Tozer Road	Sentry Wells	VOC
STRHA-07A	29 Tozer Road	Monitor VOC trends in surface water	VOC
STRHA-07B	29 Tozer Road	Monitor VOC trends in surface water	VOC
CULVERT_OUTFALL	29 Tozer Road	Sentry Wells	VOC
Longview/Hill Street Treatment Area			
BR-6_ZONE3	Hill Street	Monitor VOC trends	VOC
P-11R	Longview Terrace	Monitor VOC trends	VOC
P-19A	Hill Street	Monitor VOC trends	VOC
P-20R	East of Longview Terrace	Monitor VOC trends	VOC
OB-20-BR	East of Longview Terrace	Monitor VOC trends	VOC
OB-20-DO	East of Longview Terrace	Monitor VOC trends	VOC
STRM-A-SCDS	East of Longview Terrace	Monitor VOC trends in surface water	VOC

Notes:
TOC = Total Organic Carbon, analysis by EPA Method 5310C
Dissolved Iron and Manganese, analysis by Method 6010C
VOCs = Volatile Organic Compounds, analysis by EPA Method 8260C
Methane, ethane, ethene analysis by RSK-175 Method
Permanganate - bench-top colorimetric permanganate concentration analysis using a Hach DR/890 colorimeter
Dehalococcoides sp. analysis by polymerase chain reaction (PCR)
Chloride, analysis by EPA Method 300.0

Table 6B
Water Quality Sample Summary
August 2015
Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

Sample Location	Location	Rationale for Sampling	Analysis Performed
Building 3/6 Treatment Areas			
AP-25-DO	East Building 3	Monitor VOC trends and confirm no adverse downgradient impacts	VOC, TOC, methane, ethane, ethene
RW-03	East Building 3	Monitor VOC trends and confirm no adverse downgradient impacts	VOC, methane, ethane, ethene
AP-13-DO	East Building 3	Monitor remediation and VOC trends	VOC, TOC, Chloride, methane, ethane, ethene, Dehalococcoides sp.
RW-01_MW-18	East Building 3	Monitor deep overburden VOC trends and confirm no adverse downgradient impacts.	VOC, TOC, methane, ethane, ethene
AP-23-DO	East Building 3	Monitor remediation and VOC trends	VOC, TOC, methane, ethane, ethene, Dehalococcoides sp.
AP-35-DO	East Building 3	Monitor remediation and VOC trends	VOC, TOC, Fe & Mn, methane, ethane, ethene, Dehalococcoides sp.
AP-34-DO	East Building 3	Monitor remediation and VOC trends	VOC, TOC, methane, ethane, ethene, Dehalococcoides sp.
AP-33-DO	East Building 3	Monitor remediation and VOC trends	VOC, TOC, Fe & Mn, methane, ethane, ethene, Dehalococcoides sp.
AP-24-DO	East Building 3	Monitor remediation and VOC trends	VOC, TOC, methane, ethane, ethene, Dehalococcoides sp.
OB-25-DO	West Building 1 & 2	Monitor VOC trends and confirm no adverse downgradient impacts	VOC
Building 5 Treatment Area			
AP-27-DO	East Building 5	Monitor residual permanganate and VOC trends	VOC
OB-35-DO	Inside Building 5	Monitor remediation and VOC trends	VOC, methane, ethane, ethene
OB-44-S	Inside Building 5	Monitor remediation and shallow overburden VOC trends	VOC, TOC, Fe & Mn, methane, ethane, ethene, Dehalococcoides sp.
OB-45-S	West corner of Building 5	Monitor shallow VOC trends downgradient of shallow bioremediation	VOC
OB-46-S	East Building 5	Monitor remediation and shallow overburden VOC trends	VOC, TOC, Fe & Mn, methane, ethane, ethene, Dehalococcoides sp.
OB-47-S	North corner of Building 5	Monitor shallow VOC trends	VOC

Notes:
TOC = Total Organic Carbon, analysis by EPA Method 5310C
Dissolved Iron and Manganese, analysis by Method 6010C
VOCs = Volatile Organic Compounds, analysis by EPA Method 8260C
Methane, ethane, ethene analysis by EPA Method 8015B
Permanganate - bench-top colorimetric permanganate concentration analysis using a Hach DR/890 colorimeter
Dehalococcoides sp. analysis by polymerase chain reaction (PCR)
Chloride, analysis by EPA Method 300.0

Table 7
Water Quality Data - VOC Results
2009 to Present
Former Varian Facility Site
150 Sohier Road, Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Acetone (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2-DCE (mg/l)	trans-1,2-DCE (mg/l)
AP-02	4/3/2009	24	0.16	0.023	<0.0020	<0.0020	---	0.042	<0.0020	0.028	<0.0020	<0.0020	0.032	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
AP-06-BR	4/1/2009	93	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0022	<0.0010	0.024	0.059	<0.0010
AP-12-BR	4/3/2009	84	<0.20	<0.20	<0.20	<0.20	---	<0.20	<0.20	<0.20	<0.20	<0.20	0.47	24	<0.20	<0.20	9.4	<0.20
	10/26/2009	65	<0.20	<0.20	<0.20	<0.20	---	<0.20	<0.20	<0.20	<0.20	<0.20	0.59	17	<0.20	<0.20	4.6	<0.20
	10/26/2009	76	<0.13	<0.13	<0.13	<0.13	---	<0.13	<0.13	<0.13	<0.13	<0.13	0.48	12	<0.13	<0.13	3.6	<0.13
	4/20/2010	81	0.0011	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	0.0091	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	10/14/2010	81	<0.0020	<0.0020	<0.0020	<0.0020	---	<0.0020	<0.0020	0.0046	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/14/2011	78	<0.0020	<0.0020	<0.0020	<0.0020	0.013	<0.0020	<0.0020	0.0021	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	10/28/2011	74	<0.0020	<0.0020	<0.0020	<0.0020	0.01	<0.0020	<0.0020	0.0031	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/6/2012	80	0.0022J	<0.0020J	<0.0020J	<0.0020J	<0.010J	<0.0020J	<0.0020J	0.0036J	<0.0020J	<0.0020J	<0.0020J	<0.0020J	<0.0020J	<0.0020J	<0.0020J	<0.0020J
	11/27/2012	81	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/18/2013	81	<0.0020	<0.0020	<0.0020	<0.0020	0.018	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	10/23/2013	81	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/10/2014	73	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.016	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	10/15/2014	73	<0.0020	<0.0020	0.0064	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.12	1.4D	<0.0020	0.006	2.1D	0.018
	5/29/2015	73	<0.0040	<0.0040	<0.0040	<0.0040	<0.020	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	0.017	0.093	<0.0040	<0.0040	0.19	<0.0040
AP-12-DO	4/3/2009	50	<0.010	<0.010	<0.010	<0.010	---	<0.010	<0.010	0.033	<0.010	<0.010	0.94	<0.010	<0.010	<0.010	<0.010	<0.010
	10/26/2009	50	<0.0025	<0.0025	<0.0025	<0.0025	---	0.004	<0.0025	0.019	<0.0025	<0.0025	0.33	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025
	4/20/2010	57	<0.050	<0.050	<0.050	<0.050	---	<0.050	<0.050	<0.050	<0.050	<0.050	7.1	0.53	<0.050	<0.050	<0.050	<0.050
	10/14/2010	37	<0.10	<0.10	<0.10	<0.10	---	<0.10	<0.10	<0.10	<0.10	<0.10	7.7	0.57	<0.10	<0.10	<0.10	<0.10
	4/14/2011	48	<0.10	<0.10	<0.10	<0.10	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10	8.8	4.6	<0.10	<0.10	0.16	<0.10
	10/28/2011	44	<0.10	<0.10	<0.10	<0.10	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10	10D	27D	<0.10	<0.10	2.7	<0.10
	4/5/2012	56	<0.50	<0.50	<0.50	<0.50	<2.5	<0.50	<0.50	<0.50	<0.50	<0.50	14	39	<0.50	<0.50	4.2	<0.50
	11/27/2012	57	0.003	<0.0020	<0.0020	<0.0020	<0.010	0.013	<0.0020	0.083	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/18/2013	35	0.0046	<0.0020	<0.0020	<0.0020	0.023	0.042	<0.0020	0.12	<0.0020	<0.0020	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	10/23/2013	57	0.0038	<0.0020	<0.0020	<0.0020	<0.010	0.017	<0.0020	0.093	<0.0020	<0.0020	0.0022	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/10/2014	48	0.0032	<0.0020	<0.0020	<0.0020	<0.010	0.0074	<0.0020	0.11	<0.0020	<0.0020	1.9D	0.012	<0.0020	<0.0020	<0.0020	<0.0020
	10/15/2014	48	<0.020	<0.020	<0.020	<0.020	<0.10	<0.020	<0.020	0.1	<0.020	<0.020	4.8D	0.88	<0.020	<0.020	0.13	<0.020
	5/29/2015	48	<0.10	<0.10	<0.10	<0.10	<0.50	<0.10	<0.10	0.1	<0.10	<0.10	11D	11D	<0.10	<0.10	3.3	<0.10
AP-12-S	4/3/2009	26	0.011	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	0.0032	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	4/20/2010	29	0.0088	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	0.0035	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	4/14/2011	31	0.008	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	0.0044	<0.0020	<0.0020	0.0027	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/5/2012	26	0.0062	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	0.0032	<0.0020	<0.0020	0.016	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/12/2013	22	0.0049	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	0.0034	<0.0020	<0.0020	0.26DJ	0.11	<0.0020	<0.0020	0.25D	0.0034
	4/10/2014	26	0.0043	<0.0040	<0.0040	<0.0040	<0.020	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	1.9D	1.8D	<0.0040	<0.0040	0.38	0.0067
	10/15/2014	26	<0.040	<0.040	<0.040	<0.040	<0.20	<0.040	<0.040	<0.040	<0.040	<0.040	2.4	2.1	<0.040	<0.040	0.4	<0.040
AP-13-DO	1/14/2009	47	25	<2.0	<2.0	<2.0	---	<2.0	<2.0	<2.0	<2.0	<2.0	87	170	<2.0	<2.0	<2.0	<2.0
	4/2/2009	51	28	<2.0	<2.0	<2.0	---	<2.0	<2.0	<2.0	<2.0	<2.0	86	200	<2.0	<2.0	<2.0	<2.0
	10/26/2009	52	29	<2.0	<2.0	<2.0	---	<2.0	<2.0	<2.0	<2.0	<2.0	84	200	<2.0	<2.0	5.2	<2.0
	4/22/2010	60	27	<4.0	<4.0	<4.0	---	<4.0	<4.0	<4.0	<4.0	<4.0	72	290	<4.0	<4.0	<4.0	<4.0
	7/14/2010	60	28J	<2.0UJ	<2.0UJ	<2.0UJ	---	<2.0UJ	<2.0UJ	<2.0UJ	<2.0UJ	<2.0UJ	70J	290J	<2.0UJ	<2.0UJ	5.8J	<2.0UJ
	10/12/2010	51	28	<5.0	<5.0	<5.0	28	<5.0	<5.0	<5.0	<5.0	<5.0	75	350	<5.0	<5.0	<5.0	<5.0
	1/4/2011	61	13	<2.0	<2.0	<2.0	5.5J	<2.0	<2.0	<2.0	<2.0	<2.0	40	160	<2.0	<2.0	14	<2.0
	4/5/2011	51.2	18	<4.0	<4.0	<4.0	12J	<4.0	<4.0	<4.0	<4.0	<4.0	46	200	<4.0	<4.0	5.8	<4.0
	7/28/2011	51	13	<2.0	<2.0	<2.0	41	<2.0	<2.0	<2.0	<2.0	<2.0	23	150	<2.0	<2.0	3.8	<2.0
	10/25/2011	60	19	<2.0	<2.0	<2.0	<10	<2.0	<2.0	<2.0	<2.0	<2.0	44	230D	<2.0	<2.0	7.2	<2.0
	1/17/2012	51	29	<2.0	<2.0	<2.0	10	<2.0	<2.0	<2.0	<2.0	<2.0	53	360D	<2.0	<2.0	3.7	<2.0
	4/3/2012	51	25	<4.0	<4.0	<4.0	<20	<4.0	<4.0	<4.0	<4.0	<4.0	59	320	<4.0	<4.0	<4.0	<4.0

Table 7
Water Quality Data - VOC Results
2009 to Present
Former Varian Facility Site
150 Sohier Road, Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Acetone (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2-DCE (mg/l)	trans-1,2-DCE (mg/l)
AP-13-DO (Cont.)	5/2/2013	47.5	26	<4.0	<4.0	<4.0	62	<4.0	<4.0	<4.0	<4.0	<4.0	60	330	<4.0	<4.0	<4.0	<4.0
	1/20/2014	41	26	<4.0	<4.0	<4.0	20	<4.0	<4.0	<4.0	<4.0	<4.0	87	350	<4.0	<4.0	7.6	<4.0
	4/8/2014	51	25	<4.0	<4.0	<4.0	24	<4.0	<4.0	<4.0	<4.0	<4.0	85	340	<4.0	<4.0	5.4	<4.0
	8/6/2014	49	26	<4.0	<4.0	<4.0	28	<4.0	<4.0	<4.0	<4.0	<4.0	92	320	<4.0	<4.0	11	<4.0
	1/20/2015	50.7	23	<4.0	<4.0	<4.0	23	<4.0	<4.0	<4.0	<4.0	<4.0	93	340	<4.0	5.5	15	<4.0
	5/28/2015	51	19	<4.0	<4.0	<4.0	43	<4.0	<4.0	<4.0	<4.0	<4.0	85	310	<4.0	<4.0	6.9	<4.0
	8/11/2015	51	26	1.6	1.7	<0.40	7.1	<0.40	<0.40	1.1	<0.40	<0.40	82	310	<0.40	3.7	11	<0.40
AP-13-S	4/3/2009	16	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0019	0.0021	<0.0010	<0.0010	<0.0010	<0.0010
	4/20/2010	17	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0037	0.0034	<0.0010	<0.0010	<0.0010	<0.0010
	4/4/2011	16.1	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	10/26/2011	16	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0036	0.002	<0.0020	<0.0020	<0.0020	<0.0020
	1/17/2012	16	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/5/2012	16	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/15/2013	16	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	1/21/2014	16	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.015	0.026	<0.0020	<0.0020	0.0034	<0.0020
	4/10/2014	16	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0087	0.0059	<0.0020	<0.0020	0.0022	<0.0020
AP-14-S	4/3/2009	32	0.19	<0.0025	<0.0025	<0.0025	---	0.14	<0.0025	0.0091	<0.0025	<0.0025	0.28	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025
	4/21/2010	34	0.12	<0.010	<0.010	<0.010	---	0.1	<0.010	0.055	<0.010	<0.010	1.2	1.2	<0.010	<0.010	<0.010	<0.010
	4/6/2011	29.1	0.080J	<0.020UJ	<0.020UJ	<0.020UJ	<0.10UJ	0.047J	<0.020UJ	<0.020UJ	<0.020UJ	<0.020UJ	1.6J	0.58J	<0.020UJ	<0.020UJ	<0.020UJ	<0.020UJ
	4/5/2012	29	0.0093	<0.0050	<0.0050	<0.0050	<0.025	0.0064	<0.0050	<0.0050	<0.0050	<0.0050	0.35	0.048	<0.0050	<0.0050	<0.0050	<0.0050
	5/2/2013	29	<0.0040	<0.0040	<0.0040	<0.0040	<0.020	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	0.21	0.022	<0.0040	<0.0040	<0.0040	<0.0040
	4/21/2014	29	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.14	0.028	<0.0020	<0.0020	<0.0020	<0.0020
	5/26/2015	29	<0.0080	<0.0080	<0.0080	<0.0080	<0.040	<0.0080	<0.0080	<0.0080	<0.0080	<0.0080	0.44	0.011	<0.0080	<0.0080	<0.0080	<0.0080
AP-15-S	4/2/2009	16	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	10/27/2009	12	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.01	0.054	<0.0010	<0.0010	0.017	<0.0010
	4/20/2010	14	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.012	0.036	<0.0010	<0.0010	0.0089	<0.0010
	10/14/2010	12	<0.0020	<0.0020	<0.0020	<0.0020	---	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0036	0.025	<0.0020	<0.0020	0.0061	<0.0020
	4/5/2011	12	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	10/25/2011	12	<0.0020	<0.0020	<0.0020	<0.0020	0.023	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/5/2012	12	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	11/12/2012	14	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/12/2013	12.2	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	10/23/2013	12.2	<0.0020	<0.0020	<0.0020	<0.0020	0.013	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020UJ	<0.0020	<0.0020	<0.0020
	4/8/2014	12	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	5/23/2015	12	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	0.012J	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	0.016J	<0.0020UJ	<0.0020UJ	0.0055J	<0.0020UJ
AP-19	4/6/2009	27	<0.0050	<0.0050	<0.0050	<0.0050	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.4	0.06	<0.0050	<0.0050	<0.0050	<0.0050
	10/27/2009	27	<0.0025	<0.0025	<0.0025	<0.0025	---	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	0.32	0.054	<0.0025	<0.0025	<0.0025	<0.0025
	4/21/2010	29	<0.010	<0.010	<0.010	<0.010	---	<0.010	<0.010	<0.010	<0.010	<0.010	1.1	0.13	<0.010	<0.010	<0.010	<0.010
	10/14/2010	28	<0.0040	<0.0040	<0.0040	<0.0040	---	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	0.22	0.024	<0.0040	<0.0040	<0.0040	<0.0040
	4/6/2011	27.5	<0.010	<0.010	<0.010	<0.010	<0.050	<0.010	<0.010	<0.010	<0.010	<0.010	0.71	0.071	<0.010	<0.010	<0.010	<0.010
	10/27/2011	29	<0.0040	<0.0040	<0.0040	<0.0040	<0.020	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	0.26	0.036	<0.0040	<0.0040	<0.0040	<0.0040
	4/5/2012	27	<0.010	<0.010	<0.010	<0.010	<0.050	<0.010	<0.010	<0.010	<0.010	<0.010	0.94	0.085	<0.010	<0.010	<0.010	<0.010
	11/13/2012	19	<0.0040	<0.0040	<0.0040	<0.0040	<0.020	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	0.28	0.03	<0.0040	<0.0040	<0.0040	<0.0040
	5/2/2013	27	<0.0040	<0.0040	<0.0040	<0.0040	<0.020	<0.0040	<0.0040	<0.0040	<0.0040UJ	<0.0040	1.3D	0.12	<0.0040	<0.0040	<0.0040	<0.0040
	10/24/2013	24.3	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.17D	0.026	<0.0020UJ	<0.0020	<0.0020	<0.0020
	4/11/2014	25	<0.0040	<0.0040	<0.0040	<0.0040	<0.020	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	0.39	0.077	<0.0040	<0.0040	0.081	<0.0040
	10/16/2014	29	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0022	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	5/20/2015	24	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.019	0.0029	<0.0020	<0.0020	<0.0020	<0.0020

Table 7
Water Quality Data - VOC Results
2009 to Present
Former Varian Facility Site
150 Sohier Road, Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Acetone (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2-DCE (mg/l)	trans-1,2-DCE (mg/l)
AP-20	4/6/2009	18	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	10/27/2009	16	0.0021	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	4/21/2010	19	<0.0050	<0.0050	<0.0050	<0.0050	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.45	0.012	<0.0050	<0.0050	<0.0050	<0.0050
	10/14/2010	15	<0.010	<0.010	<0.010	<0.010	---	<0.010	<0.010	<0.010	<0.010	<0.010	1	0.14	<0.010	<0.010	<0.010	<0.010
	4/6/2011	15.1	<0.0040	<0.0040	<0.0040	<0.0040	<0.020	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	0.25	0.017	<0.0040	<0.0040	0.01	<0.0040
	10/27/2011	19	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.007	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/5/2012	15	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.96D	0.1	<0.0020	<0.0020	0.06	<0.0020
	11/13/2012	19	<0.020	<0.020	<0.020	<0.020	<0.10	<0.020	<0.020	<0.020	<0.020	<0.020	2.1D	0.41	<0.020	<0.020	0.038	<0.020
	5/2/2013	15	<0.0050	<0.0050	<0.0050	<0.0050	<0.025	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.39	0.038	<0.0050	<0.0050	0.03	<0.0050
	10/24/2013	15	<0.040	<0.040	<0.040	<0.040	<0.20	<0.040	<0.040	<0.040	<0.040	<0.040	7.9D	0.37	<0.040UJ	<0.040	0.2	<0.040
	4/11/2014	16	<0.010	<0.010	<0.010	<0.010	<0.050	<0.010	<0.010	<0.010	<0.010	<0.010	0.55	0.069	<0.010	<0.010	0.097	<0.010
	10/16/2014	29	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	0.0031	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	5/20/2015	14	0.0087	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.019	0.058	<0.0020	<0.0020	0.015	<0.0020
AP-21	4/6/2009	28	<0.0010	0.002	<0.0010	<0.0010	---	<0.0010	<0.0010	0.0081	<0.0010	<0.0010	<0.0010	<0.0010	0.0029	<0.0010	<0.0010	<0.0010
	11/23/2009	28	<0.0010	0.075	<0.0010	<0.0010	---	<0.0010	<0.0010	0.0043	<0.0010	<0.0010	<0.0010	<0.0010	0.058	<0.0010	<0.0010	<0.0010
	4/21/2010	29	<0.0010	0.13	<0.0010	<0.0010	---	<0.0010	0.0014	0.002	<0.0010	<0.0010	<0.0010	<0.0010	0.068	<0.0010	<0.0010	<0.0010
	10/14/2010	29	<0.0020	0.17	<0.0020	<0.0020	---	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/14/2011	24	<0.0040	0.19	<0.0040	<0.0040	<0.020	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040
	10/27/2011	29	<0.0020	0.19	<0.0020	<0.0020	0.013	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/5/2012	22.2	<0.0020	0.14	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	11/13/2012	29	<0.0020	0.15	<0.0020	<0.0020	0.01	<0.0020	0.0022	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	5/2/2013	27	<0.0020	0.13	<0.0020	<0.0020	0.01	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	10/24/2013	22	<0.0020	0.13	<0.0020	<0.0020	<0.010	<0.0020	0.0022	<0.0020	<0.0020	<0.0020	0.19	0.048	<0.0020UJ	<0.0020	0.26D	<0.0020
	4/11/2014	23	<0.010	0.11	0.035	<0.010	<0.050	<0.010	<0.010	<0.010	<0.010	<0.010	0.83	0.47	<0.010	<0.010	4.9D	<0.010
	10/16/2014	29	<0.0020	0.074	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	0.0062	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	5/20/2015	29	<0.0020	0.043	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
AP-22	4/6/2009	13	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	0.001	0.0023	<0.0010	<0.0010	<0.0010	<0.0010	0.001	<0.0010	<0.0010	<0.0010
	10/27/2009	17	<0.0010	0.015	<0.0010	<0.0010	---	<0.0010	0.0031	0.0011	<0.0010	<0.0010	<0.0010	<0.0010	0.0099	<0.0010	<0.0010	<0.0010
	4/21/2010	19	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	0.0035	<0.0010	<0.0010	<0.0010	0.0013	<0.0010	0.0019	<0.0010	<0.0010	<0.0010
	10/14/2010	19	<0.0020	0.017	<0.0020	<0.0020	---	<0.0020	0.0055	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/14/2011	19	<0.0020	<0.0020	<0.0020	<0.0020	0.014	<0.0020	0.0063	<0.0020	<0.0020	<0.0020	1.4D	0.15	<0.0020	<0.0020	0.33D	<0.0020
	10/27/2011	19	<0.0020	<0.0020	<0.0020	<0.0020	0.015	<0.0020	<0.0020	0.0028	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/5/2012	18	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	0.0036	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	11/13/2012	19	<0.0020	0.009	<0.0020	<0.0020	<0.010	<0.0020	0.0052	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/17/2013	20	<0.0020	<0.0020	<0.0020	<0.0020	0.012	<0.0020	0.0047	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	10/24/2013	20.8	<0.0020	0.0062	<0.0020	<0.0020	<0.010	<0.0020	0.0053	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020UJ	<0.0020	<0.0020	<0.0020
	4/11/2014	20	<0.0020	0.0024	<0.0020	<0.0020	<0.010	<0.0020	0.005	<0.0020	<0.0020	<0.0020	0.025	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	10/16/2014	29	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	0.011	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	5/20/2015	19	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	0.0027	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
AP-23-DO	1/14/2009	51	<1.0	<1.0	<1.0	<1.0	---	<1.0	<1.0	<1.0	<1.0	<1.0	35	140	<1.0	<1.0	8.2	<1.0
	4/2/2009	47	<2.0	<2.0	<2.0	<2.0	---	<2.0	<2.0	<2.0	<2.0	<2.0	34	210	<2.0	<2.0	7	<2.0
	10/26/2009	48	<2.0	<2.0	<2.0	<2.0	---	<2.0	<2.0	<2.0	<2.0	<2.0	41	210	<2.0	4.2	29	<2.0
	1/28/2010	51	<1.0	<1.0	<1.0	<1.0	---	<1.0	<1.0	1	<1.0	<1.0	32	150	<1.0	4.8	30	<1.0
	4/22/2010	51	<2.0	<2.0	<2.0	<2.0	---	<2.0	<2.0	<2.0	<2.0	<2.0	40	270	<2.0	<2.0	7.1	<2.0
	7/14/2010	14	<2.0UJ	<2.0UJ	<2.0UJ	<2.0UJ	---	<2.0UJ	<2.0UJ	<2.0UJ	<2.0UJ	<2.0UJ	50J	330J	<2.0UJ	<2.0UJ	12J	<2.0UJ
	10/12/2010	47	<4.0	<4.0	<4.0	<4.0	30	<4.0	<4.0	<4.0	<4.0	<4.0	46	270	<4.0	<4.0	17	<4.0
	1/4/2011	51	<1.0	<1.0	<1.0	<1.0	2.5J	<1.0	<1.0	<1.0	<1.0	<1.0	11	86	<1.0	5.2	20	<1.0
	4/5/2011	47.4	<4.0	<4.0	<4.0	<4.0	14J	<4.0	<4.0	<4.0	<4.0	<4.0	20	230	<4.0	<4.0	6.2	<4.0

Table 7
Water Quality Data - VOC Results
2009 to Present
Former Varian Facility Site
150 Sohier Road, Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Acetone (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2-DCE (mg/l)	trans-1,2-DCE (mg/l)
AP-23-DO (Cont.)	7/28/2011	47	<2.0	<2.0	<2.0	<2.0	2.9J	<2.0	<2.0	2	<2.0	<2.0	20	140	<2.0	2.7	7.4	<2.0
	10/25/2011	51	<2.0	<2.0	<2.0	<2.0	<10	<2.0	<2.0	<2.0	<2.0	<2.0	23	240D	<2.0	3.3	9.6	<2.0
	1/17/2012	47.5	<2.0	<2.0	<2.0	<2.0	<10	<2.0	<2.0	<2.0	<2.0	<2.0	41	490D	<2.0	<2.0	4.7	<2.0
	4/3/2012	47	<4.0	<4.0	<4.0	<4.0	<20	<4.0	<4.0	<4.0	<4.0	<4.0	21	350	<4.0	<4.0	<4.0	<4.0
	5/2/2013	47.4	<4.0	<4.0	<4.0	<4.0	79	<4.0	<4.0	<4.0	<4.0UJ	<4.0	47	510D	<4.0	<4.0	<4.0	<4.0
	1/20/2014	47.6	<4.0	<4.0	<4.0	<4.0	23	<4.0	<4.0	<4.0	<4.0	<4.0	40	390	<4.0	4.7	41	<4.0
	4/8/2014	48	<4.0	<4.0	<4.0	<4.0	21	<4.0	<4.0	<4.0	<4.0	<4.0	41	360	<4.0	5.2	32	<4.0
	8/6/2014	46	<4.0	<4.0	<4.0	<4.0	76	<4.0	<4.0	<4.0	<4.0	<4.0	61	440D	<4.0	<4.0	<4.0	<4.0
	1/20/2015	47.8	<10	<10	<10	<10	<50	<10	<10	<10	<10	<10	32	400	<10	<10	<10	<10
	5/28/2015	47	<10	<10	<10	<10	54	<10	<10	<10	<10	<10	41	460	<10	<10	<10	<10
	8/11/2015	48	0.86	<0.40	0.25	<0.40	10	<0.40	<0.40	1.6	<0.40	<0.40	26	400	<0.40	<0.40	1	<0.40
AP-24-DO	1/14/2009	52	22	<2.0	<2.0	<2.0	---	<2.0	<2.0	<2.0	<2.0	<2.0	41	210	<2.0	<2.0	10	<2.0
	4/2/2009	47	36	<2.0	<2.0	<2.0	---	<2.0	<2.0	<2.0	<2.0	<2.0	54	270	<2.0	<2.0	19	<2.0
	10/26/2009	48	62	<2.0	<2.0	<2.0	---	<2.0	<2.0	<2.0	<2.0	<2.0	32	270	<2.0	4.2	44	<2.0
	1/28/2010	52	41	<2.0	<2.0	<2.0	---	<2.0	<2.0	<2.0	<2.0	<2.0	39	240	<2.0	6	14	<2.0
	4/22/2010	52	52	<2.0	<2.0	<2.0	---	<2.0	<2.0	<2.0	<2.0	<2.0	21	270	<2.0	3.7	14	<2.0
	7/14/2010	15.5	38J	<2.0UJ	<2.0UJ	<2.0UJ	---	<2.0UJ	<2.0UJ	<2.0UJ	<2.0UJ	<2.0UJ	26J	260J	<2.0UJ	15J	65J	<2.0UJ
	10/12/2010	47	27	<4.0	<4.0	<4.0	<20	<4.0	<4.0	<4.0	<4.0	<4.0	13	190	<4.0	27	41	<4.0
	1/4/2011	52	9.5	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	19	9.8D	<1.0	30	75	<1.0
	4/5/2011	47.3	43	<4.0	<4.0	<4.0	<20	<4.0	<4.0	<4.0	<4.0	<4.0	24	300	<4.0	10	28	<4.0
	7/28/2011	47	1.2	<0.20	<0.20	<0.20	0.10J	<0.20	<0.20	0.22	<0.20	<0.20	1.7	16	<0.20	0.94	1.7	<0.20
	10/25/2011	52	35D	<0.20	1.2	<0.20	<1.0	<0.20	<0.20	0.74	<0.20	<0.20	31D	350D	<0.20	6.9	12	<0.20
	4/3/2012	47	27	<4.0	<4.0	<4.0	<20	<4.0	<4.0	<4.0	<4.0	<4.0	26	240	<4.0	26	80	<4.0
	1/20/2014	51.1	21	<4.0	<4.0	<4.0	<20	<4.0	<4.0	<4.0	<4.0	<4.0	27	280	<4.0	4.2	45	<4.0
	4/8/2014	47	30	<4.0	<4.0	<4.0	<20	<4.0	<4.0	<4.0	<4.0	<4.0	31	340	<4.0	7.9	64	<4.0
	8/6/2014	46	120	<4.0	<4.0	<4.0	<20	<4.0	<4.0	<4.0	<4.0	<4.0	39	560D	<4.0	<4.0	12	<4.0
	1/20/2015	47.8	10	<2.0	<2.0	<2.0	<10	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	10	<2.0	<2.0	81	<2.0
	5/28/2015	47	20	<2.0	<2.0	<2.0	<10	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.2	<2.0	<2.0	150	<2.0
	8/11/2015	47	31	0.58	2.4	<0.20	<1.0	<0.20	<0.20	0.34	<0.20	<0.20	<0.20	3.6	<0.20	1.2	---	0.56
AP-25-DO	1/14/2009	51	0.021	0.006	<0.0050	<0.0050	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0059	<0.0050	0.56	0.62	<0.0050
	4/2/2009	47	<0.20	<0.20	<0.20	<0.20	---	<0.20	<0.20	<0.20	<0.20	<0.20	0.24	1.6	<0.20	2.2	17	<0.20
	10/26/2009	48	0.029	0.025	<0.0050	<0.0050	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0056	<0.0050	<0.0050	0.48	0.74	0.0073
	1/28/2010	51	0.005	0.0054	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0025	0.01	<0.0010	0.047	0.13	<0.0010
	7/14/2010	51	0.14J	<0.10UJ	<0.10UJ	<0.10UJ	---	<0.10UJ	<0.10UJ	<0.10UJ	<0.10UJ	<0.10UJ	<0.10UJ	<0.10UJ	<0.10UJ	2.3J	12J	<0.10UJ
	10/12/2010	47	0.054	0.052	<0.040	<0.040	---	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	1.8	3.7	<0.040
	1/4/2011	51	0.029	0.065	<0.010	<0.010	---	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.8	0.66	<0.010
	4/5/2011	46.7	0.011	<0.010	<0.010	<0.010	<0.050	<0.010	<0.010	<0.010	<0.010	<0.010	0.012	0.062	<0.010	0.13	0.45	<0.010
	7/28/2011	46	<0.10	<0.10	<0.10	<0.10	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	2.6	5.4	<0.10
	10/25/2011	51	<0.040	<0.040	<0.040	<0.040	<0.20	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	1.6	2.7	<0.040
	1/17/2012	46	<0.040	<0.040	<0.040	<0.040	<0.20	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	0.049	<0.040	0.73	2.1	<0.040
	4/3/2012	47	<0.040	<0.040	<0.040	<0.040	<0.20	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	1.1	7.5D	<0.040
	10/22/2013	46.75	<0.10	<0.10	<0.10	<0.10	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	3.9	9.1	<0.10
	1/20/2014	46.8	<0.10	<0.10	<0.10	<0.10	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	1.5	6.1	<0.10
	4/8/2014	46	<0.040	<0.040	<0.040	<0.040	<0.20	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	0.19	<0.040	0.12	2.4	<0.040
	8/6/2014	44	0.11	<0.040	0.05	<0.040	<0.20	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	3.4	11D	<0.040
	1/20/2015	46.8	<0.020	<0.020	<0.020	<0.020	<0.10	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.13	<0.020	0.41	1.5	<0.020
	5/29/2015	46	<0.10	<0.10	<0.10	<0.10	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.55	5.8	<0.10
	8/11/2015	47	0.012	0.016	0.008	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.002	<0.0020	<0.0020	0.7	2.2	0.007

Table 7
Water Quality Data - VOC Results
2009 to Present
Former Varian Facility Site
150 Sohier Road, Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Acetone (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2-DCE (mg/l)	trans-1,2-DCE (mg/l)
AP-26-DO	4/3/2009	61	<0.20	<0.20	<0.20	<0.20	---	<0.20	<0.20	<0.20	<0.20	<0.20	8.7	16	<0.20	<0.20	0.42	<0.20
	10/26/2009	62	<0.10	<0.10	<0.10	<0.10	---	<0.10	<0.10	<0.10	<0.10	<0.10	4.4	7.2	<0.10	<0.10	<0.10	<0.10
	4/22/2010	64	<0.20	<0.20	<0.20	<0.20	---	<0.20	<0.20	<0.20	<0.20	<0.20	13	25	<0.20	<0.20	<0.20	<0.20
	7/14/2010	64	<0.20UJ	<0.20UJ	<0.20UJ	<0.20UJ	---	<0.20UJ	<0.20UJ	<0.20UJ	<0.20UJ	<0.20UJ	9.2J	19J	<0.20UJ	<0.20UJ	<0.20UJ	<0.20UJ
	10/13/2010	61	<0.40	<0.40	<0.40	<0.40	---	<0.40	<0.40	<0.40	<0.40	<0.40	8.7	21	<0.40	<0.40	<0.40	<0.40
	4/5/2011	61.1	<0.20	<0.20	<0.20	<0.20	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	13	27D	<0.20	<0.20	<0.20	<0.20
	10/26/2011	64	<0.20	<0.20	<0.20	<0.20	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	11	25D	<0.20	<0.20	<0.20	<0.20
	4/5/2012	61	<0.40	<0.40	<0.40	<0.40	<2.0	<0.40	<0.40	<0.40	<0.40	<0.40	11	27	<0.40	<0.40	<0.40	<0.40
	11/26/2012	64	<0.0040	<0.0040	<0.0040	<0.0040	<0.020	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	0.35	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040
	4/15/2013	67	<0.20	<0.20	<0.20	<0.20	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	7.4J	17	<0.20	<0.20	<0.20	<0.20
	10/23/2013	64	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	0.041	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/16/2014	60	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	0.01	<0.0020	<0.0020	0.44D	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	10/16/2014	60	<0.0050	<0.0050	<0.0050	<0.0050	<0.025	<0.0050	<0.0050	0.033	<0.0050	<0.0050	1.7D	2.5D	<0.0050	<0.0050	<0.0050	<0.0050
	5/26/2015	60	<0.050	<0.050	<0.050	<0.050	<0.25	<0.050	<0.050	<0.050	<0.050	<0.050	2.2	7.4D	<0.050	<0.050	<0.050	<0.050
AP-27-DO	4/9/2009	60	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.003	0.019	<0.0010	<0.0010	0.0023	<0.0010
	10/28/2009	57	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0017	0.022	<0.0010	<0.0010	0.001	<0.0010
	4/21/2010	61	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0036	<0.0010	<0.0010	<0.0010	<0.0010
	10/14/2010	57.5	<0.0020	<0.0020	<0.0020	<0.0020	---	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.009	1.2D	<0.0020	<0.0020	0.01	0.0049
	4/7/2011	57.2	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.010UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	0.0027J	0.027J	<0.0020UJ	<0.0020UJ	0.010J	<0.0020UJ
	10/26/2011	61	<0.0020	<0.0020	0.0027	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.17	12D	<0.0020	0.0031	0.08	0.037
	4/6/2012	57	<0.20	<0.20	<0.20	<0.20	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	13	<0.20	<0.20	<0.20	<0.20
	11/27/2012	61	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/16/2013	59	<0.0020	<0.0020	<0.0020	<0.0020	0.016	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.023	0.0039	<0.0020	<0.0020	<0.0020	<0.0020
	10/23/2013	59	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.33D	5.5D	<0.0020	<0.0020	0.014	<0.0020
	4/11/2014	56	<0.0020	<0.0020	0.003	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.24D	11D	<0.0020	0.0023	0.072	0.023
	10/15/2014	56	<0.0020	<0.0020	0.0049	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.16	15D	<0.0020	0.0042	0.12	0.04
	5/27/2015	56	<0.20	<0.20	<0.20	<0.20	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	0.59	15	<0.20	<0.20	<0.20	<0.20
	8/11/2015	57	<0.020	<0.020	<0.010	<0.020	<0.10	<0.020	<0.020	<0.020	<0.020	<0.020	0.52	22	<0.020	<0.020	0.16	0.042
AP-29-DO	4/2/2009	42	<0.010	<0.010	0.011	<0.010	---	<0.010	<0.010	<0.010	<0.010	<0.010	0.36	1.2	<0.010	<0.010	0.31	<0.010
AP-30-DO	2/12/2010	NA	<1.2	<1.6	<1.5	<1.1	<4.0	<0.90	<1.1	<0.45	<0.88	<2.4	82	330	---	<1.3	<1.2	<1.2
	5/24/2010	NA	<2.5	<2.5	<2.5	<2.5	---	<2.5	<2.5	<2.5	<2.5	<2.5	59	680D	<2.5	<2.5	<2.5	<2.5
AP-30R-DO	4/7/2011	67	2.4J	<0.050UJ	<0.050UJ	<0.050UJ	<0.25UJ	6.4DJ	<0.050UJ	5.5DJ	<0.050UJ	<0.050UJ	0.47J	0.082J	<0.050UJ	<0.050UJ	<0.050UJ	<0.050UJ
	11/7/2011	27	0.085	<0.0020	<0.0020	<0.0020	0.013	0.19D	<0.0020	0.18	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/17/2012	88	0.22	<0.010	<0.010	<0.010	<0.050	0.7	<0.010	0.27	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
	11/27/2012	28	0.95	0.017	<0.010	<0.010	<0.050	1.9D	<0.010	3.5D	<0.010	<0.010	0.073	<0.010	<0.010	<0.010	<0.010	<0.010
	4/18/2013	50	0.72	<0.040	<0.040	<0.040	<0.20	1.1	<0.040	2.3	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
	11/8/2013	35	0.7	<0.040	<0.040	<0.040	<0.20	1.1	<0.040	2.6	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
	1/21/2014	30	0.67	<0.040	<0.040	<0.040	<0.20	0.56	<0.040	2.1	<0.040	<0.040	3.9D	17D	<0.040	<0.040	0.52	<0.040
	4/8/2014	30	0.53	<0.10	<0.10	<0.10	<0.50	0.47	<0.10	1.4	<0.10	<0.10	3.1	4.8	<0.10	<0.10	0.25	<0.10
	8/6/2014	50	0.27	<0.10	<0.10	<0.10	<0.50	0.23	<0.10	1.2	<0.10	<0.10	1.1	8.3	<0.10	<0.10	0.71	<0.10
	2/19/2015	85	0.52	<0.10	<0.10	<0.10	<0.50	1.1	<0.10	5.1	<0.10	<0.10	0.11	<0.10	<0.10	<0.10	<0.10	<0.10
	5/29/2015	40	0.38	<0.10	<0.10	<0.10	<0.50	0.51	<0.10	1.6	<0.10	<0.10	7.6D	48D	<0.10	<0.10	2.3	<0.10
AP-31-DO	2/11/2010	NA	<1.2	<1.6	<1.5	<1.1	<4.0	<0.90	<1.1	<0.45	<0.88	<2.4	71	940D	---	<1.3	<1.2	<1.2
	10/18/2010	89	1.3D	0.011	<0.0040	<0.0040	---	0.97D	<0.0040	1.6D	<0.0040	0.0062	0.053	0.015	0.0049	<0.0040	<0.0040	<0.0040
	4/6/2011	30	1.6J	0.034J	<0.0020UJ	<0.0020UJ	0.062J	0.68DJ	0.0028J	2.1DJ	<0.0020UJ	0.0070J	0.082J	0.0099J	0.0090J	<0.0020UJ	<0.0020UJ	<0.0020UJ
	11/7/2011	38	1.8	0.041	<0.020	<0.020	<0.10	0.52	<0.020	1.9	<0.020	<0.020	0.043	<0.020	<0.020	<0.020	<0.020	<0.020
	4/17/2012	88	1.3	0.045	<0.040	<0.040	<0.20	0.27	<0.040	1.7	<0.040	<0.040	1.9	43D	<0.040	<0.040	<0.040	<0.040

Table 7
Water Quality Data - VOC Results
2009 to Present
Former Varian Facility Site
150 Sohier Road, Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Acetone (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2-DCE (mg/l)	trans-1,2-DCE (mg/l)
AP-31-DO (Cont.)	11/27/2012	28	1.4	<0.020	<0.020	<0.020	<0.10	0.49	<0.020	0.66	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
	4/18/2013	50	1.2	<0.020	0.022	<0.020	<0.10	0.28	<0.020	2	<0.020	<0.020	2.1D	4.4D	<0.020	<0.020	0.046	<0.020
	10/24/2013	35	0.98	<0.020	<0.020	<0.020	<0.10	0.25	<0.020	0.91	<0.020	<0.020	0.62	<0.020	<0.020	<0.020	<0.020	<0.020
	4/16/2014	30	0.6	<0.020	<0.020	<0.020	<0.10	0.15	<0.020	0.8	<0.020	<0.020	7.4D	4.6D	<0.020	<0.020	<0.020	<0.020
	10/16/2014	30	0.23	<0.10	<0.10	<0.10	<0.50	<0.10	<0.10	0.27	<0.10	<0.10	4.9	2.0	<0.10	<0.10	<0.10	<0.10
	5/26/2015	48	0.35	<0.10	<0.10	<0.10	<0.50	<0.10	<0.10	0.73	<0.10	<0.10	8.6	21D	<0.10	<0.10	<0.10	<0.10
AP-32-DO	2/11/2010	NA	<1.2	<1.6	<1.5	<1.1	<4.0	<0.90	<1.1	<0.45	<0.88	<2.4	91	950D	---	<1.3	<1.2	<1.2
	10/18/2010	89	2.3	<0.10	<0.10	<0.10	---	1.2	<0.10	6.8	<0.10	<0.10	0.2	<0.10	<0.10	<0.10	<0.10	<0.10
	4/7/2011	60	2.1J	<0.10UJ	<0.10UJ	<0.10UJ	<0.50UJ	0.87J	<0.10UJ	5.7J	<0.10UJ	<0.10UJ	6.2J	0.15J	<0.10UJ	<0.10UJ	<0.10UJ	<0.10UJ
	11/7/2011	34	1.8	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	3.3	<1.0	<1.0	41	81D	<1.0	<1.0	<1.0	<1.0
	4/17/2012	88	1.4	<0.10	<0.10	<0.10	<0.50	0.55	<0.10	2.4	<0.10	<0.10	62D	140D	<0.10	<0.10	<0.10	<0.10
	11/27/2012	25	<2.0	<2.0	<2.0	<2.0	<10	<2.0	<2.0	3	<2.0	<2.0	31	170	<2.0	<2.0	<2.0	<2.0
	4/18/2013	50	2	<2.0	<2.0	<2.0	<10	<2.0	<2.0	3.5	<2.0	<2.0	56	370D	<2.0	<2.0	<2.0	<2.0
	10/24/2013	35	1.8	<0.040	<0.040	<0.040	<0.20	0.83	<0.040	2.6	<0.040	<0.040	0.27	0.049	<0.040	<0.040	<0.040	<0.040
	4/16/2014	30	1.2	<0.020	<0.020	<0.020	<0.10	0.45	<0.020	1.6	<0.020	<0.020	1.6	0.036	<0.020	<0.020	<0.020	<0.020
	10/16/2014	30	0.83	<0.020	0.036	<0.020	<0.10	0.29	<0.020	1.1	<0.020	<0.020	11D	48D	<0.020	<0.020	<0.020	<0.020
	5/26/2015	48	1.1	<0.020	<0.020	<0.020	<0.10	0.38	<0.020	1.4	<0.020	<0.020	0.11	<0.020	<0.020	<0.020	<0.020	<0.020
AP-33-DO	9/11/2013	NA	19	<0.50	0.85	<0.50	<2.5	<0.50	<0.50	<0.50	<0.50	<0.50	24	26	<0.50	0.74	4.6	<0.50
	1/20/2014	37.5	75D	6.2	0.71	<0.50	<2.5	<0.50	<0.50	<0.50	<0.50	<0.50	99D	400D	<0.50	6	150D	<0.50
	4/8/2014	36	60	<5.0	<5.0	<5.0	<25	<5.0	<5.0	<5.0	<5.0	<5.0	69	290	<5.0	10	290	<5.0
	8/6/2014	35	82	<5.0	<5.0	<5.0	<25	<5.0	<5.0	<5.0	<5.0	<5.0	66	330	<5.0	5.6	170	<5.0
	1/20/2015	36	79	<5.0	<5.0	<5.0	<25	<5.0	<5.0	<5.0	<5.0	<5.0	62	340	<5.0	5.2	160	<5.0
	5/28/2015	36	29	<5.0	<5.0	<5.0	<25	<5.0	<5.0	<5.0	<5.0	<5.0	17	89	<5.0	5.2	210	<5.0
	8/11/2015	36	48	1.3	0.75	<0.20	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	16	180	<0.20	4.7	220	<0.20
AP-34-DO	9/11/2013	NA	<0.50	<0.50	<0.50	<0.50	<2.5	<0.50	<0.50	<0.50	<0.50	<0.50	35	25	<0.50	<0.50	0.73	<0.50
	1/20/2014	36	7	1.1	0.77	<0.50	<2.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	2.4	<0.50	1.1	46	<0.50
	4/8/2014	36	8.1	1.0	0.92	<0.50	<2.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.64	<0.50	2.1	55D	<0.50
	8/6/2014	33	1.1	<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	77	<1.0
	1/20/2015	37.7	<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	57	<1.0
	5/28/2015	35	<1.0	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	2.6	<1.0	<1.0	150D	<1.0
	8/11/2015	36	0.66	0.83	0.48	<0.20	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	0.27	2.0	<0.20	0.71	180	0.36
AP-35-DO	9/12/2013	NA	<2.0	<2.0	<2.0	<2.0	<10	<2.0	<2.0	<2.0	<2.0	<2.0	77	98	<2.0	2.1	19	<2.0
	1/20/2014	35.8	<2.0	<2.0	<2.0	<2.0	<10	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	6.3	<2.0	<2.0	82	<2.0
	4/8/2014	35	<2.0	<2.0	<2.0	<2.0	<10	<2.0	<2.0	<2.0	<2.0	<2.0	2.1	25	<2.0	<2.0	130	<2.0
	8/6/2014	33	0.81	<0.40	<0.40	<0.40	<2.0	<0.40	<0.40	0.59	<0.40	<0.40	1.8	46D	<0.40	0.53	230D	1.8
	1/20/2015	36	<2.0	<2.0	<2.0	<2.0	<10	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	91	<2.0
	5/28/2015	35	<2.0	<2.0	<2.0	<2.0	<10	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.1	<2.0	<2.0	180	<2.0
	8/11/2015	35	<0.20	<0.20	0.41	<0.20	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	1.0	<0.20	1.1	280	0.63
APBIO-01	4/6/2009	78	<0.0020	0.007	0.003	<0.0020	---	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.027	<0.0020	0.092	0.29	0.0022
	4/23/2010	78	<0.010	<0.010	<0.010	<0.010	---	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.045	<0.010	0.12	0.77	<0.010
	4/6/2011	77	<0.010	<0.010	<0.010	<0.010	<0.050	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.023	<0.010	0.16	0.8	<0.010
	4/6/2012	77	<0.0050	0.0084	0.012	<0.0050	<0.025	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.024	0.076	<0.0050	0.065	1.1D	<0.0050
	4/12/2013	77	<0.010	<0.010	<0.010	<0.010	<0.050	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.021	<0.010	0.22	0.54	<0.010
	4/21/2014	77	<0.010	<0.010	0.015	<0.010	<0.050	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.14	<0.010	0.15	0.87	<0.010
B-2	4/9/2009	11	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.019	<0.0010	<0.0010	0.022	<0.0010
	10/26/2009	11	<0.0025	<0.0025	0.0026	<0.0025	---	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	0.091	<0.0025	<0.0025	0.32	0.0049
	4/21/2010	12	<0.0050	<0.0050	<0.0050	<0.0050	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.29	<0.0050	0.022	0.46	0.0056

Table 7
Water Quality Data - VOC Results
2009 to Present
Former Varian Facility Site
150 Sohier Road, Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Acetone (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2-DCE (mg/l)	trans-1,2-DCE (mg/l)
B-2 (Cont.)	10/14/2010	12	<0.010	<0.010	<0.010	<0.010	---	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.011	<0.010	0.03	1.2D	0.016
	4/6/2011	15.7	<0.0040UJ	0.0044J	<0.0040UJ	<0.0040UJ	<0.020UJ	<0.0040UJ	<0.0040UJ	<0.0040UJ	<0.0040UJ	<0.0040UJ	<0.0040UJ	0.092J	<0.0040UJ	<0.0040UJ	0.23J	0.0070J
	10/27/2011	11.5	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.017	<0.0020	0.19	0.18	0.0053
	4/6/2012	11.5	<0.0020	<0.0020	0.0025	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0069	0.27D	<0.0020	<0.0020	0.26D	0.0038
	11/27/2012	12	<0.0040	<0.0040	<0.0040	<0.0040	<0.020	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	0.0055	0.22	<0.0040	<0.0040	0.32	<0.0040
	4/16/2013	12	<0.0040	<0.0040	0.0052	<0.0040	<0.020	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	0.015	0.56D	<0.0040	<0.0040	0.53D	0.0081
	10/23/2013	12	<0.0020	0.0022	0.0042	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.011	0.40D	<0.0020	<0.0020	0.49D	0.0077
	4/11/2014	11	<0.0050	<0.0050	<0.0050	<0.0050	<0.025	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.074	<0.0050	0.015	0.33	<0.0050
B-3	4/3/2009	12.5	0.09	0.0017	0.0023	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.02	0.015	<0.0010	<0.0010	0.0011	<0.0010
	10/26/2009	12.5	0.044	0.0016	0.0014	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.013	0.0095	<0.0010	<0.0010	<0.0010	<0.0010
	4/21/2010	14	0.056	0.001	0.0014	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0062	0.01	<0.0010	<0.0010	<0.0010	<0.0010
	10/12/2010	12.5	0.049	0.0021	0.0028	<0.0020	---	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.016	0.011	<0.0020	<0.0020	<0.0020	<0.0020
	4/4/2011	12.5	0.042	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.015	0.0068	<0.0020	<0.0020UJ	<0.0020	<0.0020
	10/26/2011	12	0.069	<0.0020	0.0028	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.016	0.013	<0.0020	<0.0020	<0.0020	<0.0020
	4/3/2012	12.5	0.065	<0.0020	0.004	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.023	0.011	<0.0020	<0.0020	<0.0020	<0.0020
	11/13/2012	14	0.043	<0.0020	0.0027	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.018	0.0088	<0.0020	<0.0020	<0.0020	<0.0020
	4/15/2013	12.5	0.036	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.014J	0.0043	<0.0020	<0.0020	<0.0020	<0.0020
	4/10/2014	12	0.034	<0.0020	0.0021	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.016	0.0061	<0.0020	<0.0020	<0.0020	<0.0020
BR-1_ZONE1	4/6/2009	205	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0016	0.0016	<0.0010
	10/29/2009	205	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.028	0.067	<0.0010	0.083	0.20D	0.009
	4/22/2010	205	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	10/18/2010	205	<0.0020	<0.0020	<0.0020	<0.0020	---	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.013	0.042	<0.0020	0.036	0.11	0.0033
	4/14/2011	205	<0.020	<0.020	<0.020	<0.020	<0.10	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.056	<0.020	0.43	1.5	0.027
	10/24/2011	205	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.01	0.035	<0.0020	0.041	0.19	0.0031
	4/2/2012	205	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/16/2013	205	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/21/2014	205	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
BR-1_ZONE2	4/6/2009	152	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	10/29/2009	152	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0013	<0.0010	0.0024	0.042	<0.0010
	4/22/2010	152	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	10/18/2010	152	<0.0020	<0.0020	<0.0020	<0.0020	---	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.002	<0.0020	0.013	0.23D	0.0065
	4/14/2011	152	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0046	<0.0020	0.012	0.095	<0.0020
	10/24/2011	152	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.005	<0.0020	0.016	0.2	0.0031
	4/2/2012	152	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/16/2013	152	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/21/2014	152	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
BR-1_ZONE3	10/29/2009	105	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	4/22/2010	105	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	10/18/2010	105	<0.0020	<0.0020	<0.0020	<0.0020	---	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/14/2011	105	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	10/24/2011	105	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/2/2012	105	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/16/2013	105	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/21/2014	105	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	5/19/2015	105	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020

Table 7
Water Quality Data - VOC Results
2009 to Present
Former Varian Facility Site
150 Sohier Road, Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Acetone (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2-DCE (mg/l)	trans-1,2-DCE (mg/l)
BR-3_ZONE1	4/6/2009	226	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	4/28/2010	226	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	4/14/2011	226	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/2/2012	226	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/16/2013	226	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/21/2014	226	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	5/19/2015	226	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
BR-3_ZONE2	4/3/2009	200	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	4/28/2010	200	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	4/14/2011	200	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/2/2012	200	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/16/2013	200	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/21/2014	200	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	5/19/2015	200	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
BR-3_ZONE3	4/3/2009	167	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	4/28/2010	167	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	4/14/2011	167	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/2/2012	167	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/16/2013	167	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/21/2014	167	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	5/19/2015	167	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
BR-5_ZONE1	4/7/2009	209	<0.0025	<0.0025	0.0069	<0.0025	---	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	0.055	<0.0025	0.062	0.077	<0.0025
	4/28/2010	209	<0.0010	0.0012	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0014	<0.0010
	4/14/2011	209	<0.0020	<0.0020	0.0055	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.047	<0.0020	0.039	0.094	<0.0020
	4/4/2012	209	<0.0050	<0.0050	0.021	<0.0050	<0.025	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.21	<0.0050	0.32	0.48D	<0.0050
	4/16/2013	209	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0029	0.006	<0.0020
	4/11/2014	209	<0.0020	<0.0020	0.0091	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.06	<0.0020	0.072	0.09	<0.0020
BR-5_ZONE2	4/7/2009	172	<0.0050	<0.0050	0.0095	<0.0050	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.17	<0.0050	0.18	0.43	<0.0050
	4/28/2010	172	<0.0010	0.0021	0.0045	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0013	0.078	<0.0010	0.089	0.064D	0.0013
	4/14/2011	172	<0.0020	0.0025	0.015	<0.0020	0.044	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0047	0.21D	<0.0020	0.21D	0.34D	0.002
	4/4/2012	172	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0025	<0.0020	0.0062	0.012	<0.0020
	4/16/2013	172	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0028	0.0052	<0.0020
	4/11/2014	172	<0.0020	<0.0020	0.018	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.17D	<0.0020	0.28D	0.63D	0.0035
BR-5_ZONE3	4/7/2009	133	<0.0025	0.0028	<0.0025	<0.0025	---	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	0.0063	0.048	<0.0025	0.029	0.18	<0.0025
	4/14/2011	133	<0.010	<0.010	<0.010	<0.010	<0.050	<0.010	<0.010	<0.010	<0.010	<0.010	0.14	0.77	<0.010	0.17	5.0D	0.013
	4/4/2012	133	<0.0020	0.0061	0.0039	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.064	0.27D	<0.0020	0.093	0.83D	0.0036
	4/16/2013	133	<0.0020	0.0077	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0055	0.0052	<0.0020	0.0054	0.074	<0.0020
	4/11/2014	133	<0.0020	0.0057	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0027	0.014	<0.0020	0.048	0.23D	<0.0020
	5/20/2015	133	<0.0020	0.0088	0.0094	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	0.0049	<0.0020	0.012	0.12	<0.0020	0.28D	3.3D	0.061
BR-6_ZONE1	4/7/2009	94	<0.0025	<0.0025	<0.0025	<0.0025	---	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	0.058	0.22	<0.0025
	11/2/2009	94	<0.0025	<0.0025	<0.0025	<0.0025	---	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	0.047	0.22	<0.0025
	4/28/2010	94	<0.0010	0.002	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0084	0.0075	0.0014
	10/18/2010	94	<0.0020	0.0021	<0.0020	<0.0020	---	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.015	0.17	<0.0020
	4/19/2011	94	<0.0050	<0.0050	<0.0050	<0.0050	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.024	0.26D	<0.0050
	10/27/2011	94	<0.0020	0.0023	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.024	0.20D	<0.0020
	4/2/2012	94	<0.0020	<0.0020	<0.0020	<0.0020	0.012	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0035	<0.0020
	4/16/2013	94	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0055	0.012	<0.0020
	10/24/2013	94	<0.0020	<0.0020	<0.0020	<0.0020	0.01	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020UJ	<0.0020	<0.0020	<0.0020
	4/11/2014	94	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.004	0.012	<0.0020

Table 7
Water Quality Data - VOC Results
2009 to Present
Former Varian Facility Site
150 Sohier Road, Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Acetone (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2-DCE (mg/l)	trans-1,2-DCE (mg/l)
BR-6_ZONE2	4/7/2009	62	<0.0025	0.0025	<0.0025	<0.0025	---	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	0.0052	<0.0025	0.013	0.31	<0.0025
	11/2/2009	62	<0.0025	<0.0025	<0.0025	<0.0025	---	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	0.04	0.21	<0.0025
	4/28/2010	62	<0.0025	<0.0025	<0.0025	<0.0025	---	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	0.014	0.3	<0.0025
	10/18/2010	62	<0.0050	<0.0050	<0.0050	<0.0050	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.046	0.31	<0.0050
	4/19/2011	62	<0.013	<0.013	<0.013	<0.013	<0.050	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	0.023	0.37	<0.013
	10/27/2011	62	<0.0050	<0.0050	<0.0050	<0.0050	<0.025	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.021	0.4	<0.0050
	4/2/2012	62	<0.0020	0.0022	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.11	0.19D	<0.0020
	4/16/2013	62	<0.0040	<0.0040	<0.0040	<0.0040	<0.020	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	0.024	0.34	<0.0040
	10/24/2013	62	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.019	0.14	<0.0020
	4/11/2014	62	<0.0020	0.0031	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.023	0.35D	<0.0020
BR-6_ZONE3	4/7/2009	42	<0.0020	<0.0020	<0.0020	<0.0020	---	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.06	0.15	0.0026
	11/2/2009	42	<0.0010	0.001	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0024	<0.0010
	4/28/2010	42	<0.0010	0.002	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.038	0.04	0.0012
	10/18/2010	42	<0.0020	<0.0020	<0.0020	<0.0020	---	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0035	0.0057	<0.0020
	4/19/2011	42	<0.0050	<0.0050	<0.0050	<0.0050	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0076	<0.0050
	10/27/2011	42	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.017	0.061	<0.0020
	4/2/2012	42	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/16/2013	42	<0.0020	<0.0020	<0.0020	<0.0020	0.018	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	10/24/2013	42	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020UJ	<0.0020	<0.0020	<0.0020
	4/11/2014	42	<0.0020	0.0021	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.078	0.17	<0.0020
	10/16/2014	42	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	5/22/2015	42	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.010UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	0.055J	0.13J	<0.0020UJ
BR-7_ZONE1	4/7/2009	152	<0.0010	0.0069	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.11	0.085	<0.0010
	4/28/2010	152	<0.0020	0.0072	<0.0020	<0.0020	---	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.18	0.13	<0.0020
	4/14/2011	152	<0.0020	0.0034	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.051	0.012	<0.0020
	4/4/2012	152	<0.0020	0.0069	<0.0020	<0.0020	0.018	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.12	0.0048	<0.0020
	4/16/2013	152	<0.0020	0.0027	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.007	0.0037	<0.0020
	4/21/2014	152	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	5/19/2015	152	<0.0020	0.006	<0.0020	<0.0020	0.024	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
BR-7_ZONE2	4/7/2009	112	<0.0050	0.0055	<0.0050	<0.0050	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.048	0.47	<0.0050
	4/28/2010	112	<0.0050	0.0054	<0.0050	<0.0050	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.039	0.5	<0.0050
	4/14/2011	112	<0.0040	0.0064	<0.0040	<0.0040	<0.020	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	0.15	0.2	<0.0040
	4/4/2012	112	<0.0040	0.0069	<0.0040	<0.0040	<0.020	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	0.2	0.0093	<0.0040
	4/16/2013	112	<0.0020	0.0085	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.16	0.0068	<0.0020
	4/21/2014	112	<0.0020	0.0038	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0097	0.0021	<0.0020
	5/19/2015	112	<0.0020	0.0075	<0.0020	<0.0020	0.021	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.03	0.0031	<0.0020
BR-7_ZONE3	4/7/2009	69	<0.010	<0.010	<0.010	<0.010	---	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.029	0.84	<0.010
	4/28/2010	69	<0.010	<0.010	0.012	<0.010	---	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.021	1.0	<0.010
	4/14/2011	69	<0.020	<0.020	<0.020	<0.020	<0.10	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.036	1.1	<0.020
	4/4/2012	69	<0.010	<0.010	0.01	<0.010	<0.050	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.069	0.74	<0.010
	4/16/2013	69	<0.020	<0.020	<0.020	<0.020	<0.10	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.024	<0.020	<0.020
	4/21/2014	69	<0.0020	0.0065	0.0037	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.02	0.015D	0.0038
	5/19/2015	69	<0.0040	0.0083	0.01	<0.0040	<0.020	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	0.021	0.96D	0.011
BW-01	1/13/2009	14	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0019	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	4/2/2009	12	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0016	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	7/14/2009	14	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0025	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	10/27/2009	12	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0036	0.002	<0.0010	<0.0010	<0.0010	<0.0010
	1/28/2010	12	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	4/22/2010	14	<0.0050	<0.0050	<0.0050	<0.0050	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.013	0.0073	<0.0050	0.13	0.44	<0.0050

Table 7
Water Quality Data - VOC Results
2009 to Present
Former Varian Facility Site
150 Sohier Road, Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Acetone (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2-DCE (mg/l)	trans-1,2-DCE (mg/l)
BW-02	1/13/2009	14	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	4/2/2009	13	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	7/14/2009	14	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0037	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	10/27/2009	13	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0028	0.0014	<0.0010	<0.0010	<0.0010	<0.0010
	1/28/2010	13	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0017	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	4/22/2010	14	<0.0050	<0.0050	<0.0050	<0.0050	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.12	0.4	<0.0050
BW-03	1/13/2009	15.5	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0017	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	4/2/2009	13	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	7/14/2009	15.5	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0026	<0.0010	<0.0010	<0.0010	0.0011	<0.0010
	10/27/2009	13	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.003	0.0018	<0.0010	0.0037	0.0029	<0.0010
	1/28/2010	13	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.002	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	4/22/2010	15.5	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0012	<0.0010	0.04	0.11	<0.0010
	8/21/2012	15.5	<0.0020	<0.0020	<0.0020	<0.0020	0.011	<0.0020	<0.0020	0.0087	0.0026	<0.0020	<0.0020	<0.0020	<0.0020	0.0064	0.0039	<0.0020
BW-04	1/13/2009	13	0.0011	0.0028	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0013	<0.0010	0.095	0.065	<0.0010
	4/2/2009	12	0.0054	<0.0050	<0.0050	<0.0050	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.54	0.48	<0.0050
	7/14/2009	13	0.0051	0.005	<0.0050	<0.0050	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.59	0.15	<0.0050
	10/27/2009	12	0.05	0.035	<0.0025	<0.0025	---	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	0.3	0.02	<0.0025
	1/28/2010	12	<0.0010	0.0019	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0013	<0.0010	<0.0010	0.012	0.016	<0.0010
	4/22/2010	13	0.022	<0.010	<0.010	<0.010	---	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.74	0.51	<0.010
	7/14/2010	13	<0.0010UJ	0.0016J	<0.0010UJ	<0.0010UJ	---	<0.0010UJ	<0.0010UJ	<0.0010UJ	<0.0010UJ	<0.0010UJ	<0.0010UJ	0.0014J	<0.0010UJ	0.013J	0.0075J	<0.0010UJ
	10/12/2010	13	<0.0020	<0.0020	<0.0020	<0.0020	---	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0027	0.0044	<0.0020
	1/4/2011	13	<0.0020	<0.0020	<0.0020	<0.0020	---	<0.0020	<0.0020	<0.0020	0.0024	<0.0020	<0.0020	<0.0020	<0.0020	0.016	0.0081	<0.0020
	4/5/2011	12.5	<0.0020	0.002	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.16	0.069	<0.0020
	7/28/2011	13	<0.0040	<0.0040	<0.0040	<0.0040	<0.020	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	0.21	0.066	<0.0040
	10/25/2011	12	0.095	0.032	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0023	<0.0020	<0.0020	0.098	0.0031	<0.0020
	1/18/2012	12.5	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/3/2012	12	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	8/21/2012	12.3	<0.0020	<0.0020	<0.0020	<0.0020	0.011	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.40D	0.16D	<0.0020
	11/28/2012	13	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.052	0.01	<0.0020
	2/6/2013	12.35	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	0.0084	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/11/2013	13	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
BW-05	1/13/2009	15	0.16	0.099	<0.050	<0.050	---	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	5.3	2.8	<0.050
	4/2/2009	9	0.019	0.018	<0.0010	<0.0010	---	<0.0010	<0.0010	0.004	<0.0010	<0.0010	0.0013	<0.0010	0.0045	0.021	0.015	<0.0010
	7/14/2009	15	0.018	0.011	<0.0010	0.0011	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0064	0.002	0.002	0.0013	<0.0010	<0.0010
	10/27/2009	9	0.0043	0.17	<0.0020	<0.0020	---	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0021	0.0025	<0.0020	<0.0020
	1/28/2010	9	<0.0010	0.02	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0013	<0.0010	0.0047	0.074	0.011	<0.0010
	4/22/2010	15	0.33	0.02	<0.010	<0.010	---	<0.010	<0.010	<0.010	<0.010	<0.010	0.014	<0.010	<0.010	0.73	0.67	<0.010
	7/14/2010	15	<0.0010UJ	0.0059J	<0.0010UJ	0.0023J	---	<0.0010UJ	<0.0010UJ	<0.0010UJ	<0.0010UJ	<0.0010UJ	0.0010J	0.0050J	<0.0010UJ	0.052J	0.066J	<0.0010UJ
	10/12/2010	10	<0.0020	0.0041	<0.0020	<0.0020	---	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	1/4/2011	15	<0.0020	<0.0020	<0.0020	<0.0020	---	<0.0020	<0.0020	<0.0020	0.0047	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/5/2011	9.5	0.022	0.013	<0.010	<0.010	<0.050	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.86	0.22	<0.010
	7/28/2011	9	<0.0020	0.0049	<0.0020	<0.0020	0.015	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	10/25/2011	9	1.5D	4.3D	0.02	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	0.0047	<0.0020	0.003	<0.0020	<0.0020	0.97D	0.064	<0.0020
	1/18/2012	9.5	<0.0020	0.021	<0.0020	<0.0020	0.018	<0.0020	<0.0020	<0.0020	0.024	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/3/2012	9	<0.0020	0.0021	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.005	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	8/21/2012	9.4	0.0022	<0.0020	<0.0020	<0.0020	0.014	<0.0020	<0.0020	0.019	<0.0020	<0.0020	0.0027	<0.0020	<0.0020	0.02	0.014	<0.0020
	11/28/2012	15	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.006	<0.0020
	2/6/2013	9.4	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0025	<0.0020

Table 7
Water Quality Data - VOC Results
2009 to Present
Former Varian Facility Site
150 Sohier Road, Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Acetone (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2-DCE (mg/l)	trans-1,2-DCE (mg/l)
BW-05 (Cont.)	4/11/2013	9	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0044	<0.0020
	10/22/2013	15	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/10/2014	9	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	10/15/2014	9	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	0.04	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	5/27/2015	9	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
BW-06	7/28/2011	13	0.024	0.038	<0.0020	<0.0020	0.016	<0.0020	<0.0020	0.005	<0.0020	<0.0020	0.0028	<0.0020	<0.0020	0.0059	<0.0020	<0.0020
	10/25/2011	13	3.5D	1.1D	0.06	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	0.017	<0.0020	0.027	0.019	<0.0020	0.92D	0.1	<0.0020
	1/18/2012	13	0.0027	0.14	<0.0020	0.0028	<0.010	<0.0020	<0.0020	<0.0020	1.1D	<0.0020	<0.0020	<0.0020	<0.0020	0.002	<0.0020	<0.0020
	4/3/2012	13	<0.0050	0.012	<0.0050	<0.0050	<0.025	<0.0050	<0.0050	<0.0050	0.38	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	8/21/2012	13.3	<0.0020	<0.0020	<0.0020	<0.0020	0.013	<0.0020	<0.0020	0.0065	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0045	0.0027	<0.0020
	11/28/2012	15	<0.0020	0.0023	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	0.0033	<0.0020	<0.0020	<0.0020	<0.0020	0.011	0.007	<0.0020
	2/6/2013	13.1	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0021	0.002	<0.0020
	4/11/2013	13	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0044	0.0023	<0.0020
	10/22/2013	14	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	0.0035	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0025	<0.0020
	4/10/2014	13	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
BW-08	1/13/2009	15	0.39	0.42	<0.010	<0.010	---	<0.010	<0.010	<0.010	0.096	<0.010	<0.010	<0.010	<0.010	0.78	0.072	<0.010
	4/2/2009	13	<0.0020	0.02	<0.0020	<0.0020	---	<0.0020	<0.0020	<0.0020	0.25	<0.0020	<0.0020	<0.0020	0.005	<0.0020	<0.0020	<0.0020
	7/14/2009	15	0.023	0.031	<0.0010	0.0026	---	<0.0010	<0.0010	<0.0010	0.13J	<0.0010	<0.0010	<0.0010	0.0088	<0.0010	<0.0010	<0.0010
	10/27/2009	13	<0.010	0.046	<0.010	<0.010	---	<0.010	<0.010	<0.010	1.0	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
	1/28/2010	13	0.0053	0.05	<0.0050	<0.0050	---	<0.0050	<0.0050	<0.0050	0.41	<0.0050	<0.0050	<0.0050	<0.0050	0.0058	<0.0050	<0.0050
	4/22/2010	15	2.4	0.12	0.13	<0.020	---	<0.020	<0.020	<0.020	0.047	<0.020	0.075	0.098	<0.020	1.8	2.2	<0.020
	7/14/2010	15	0.59J	0.56J	<0.0050UJ	<0.0050UJ	---	<0.0050UJ	<0.0050UJ	<0.0050UJ	0.090J	<0.0050UJ	<0.0050UJ	<0.0050UJ	<0.0050UJ	0.045J	0.024J	<0.0050UJ
	10/12/2010	14	<0.0020	0.013	<0.0020	<0.0020	---	<0.0020	<0.0020	<0.0020	0.045	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	1/5/2011	15	<0.0020	0.031	<0.0020	<0.0020	---	<0.0020	<0.0020	<0.0020	0.051	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/5/2011	13.7	0.09	0.037	<0.010	<0.010	<0.050	<0.010	<0.010	<0.010	0.053	<0.010	<0.010	<0.010	<0.010	0.72	0.19	<0.010
	7/28/2011	13	<0.0020	0.13	<0.0020	0.0031	0.014	<0.0020	<0.0020	<0.0020	0.14	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0023
	10/25/2011	13.5	0.12	0.73D	0.0031	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	0.24D	<0.0020	0.0096	0.017	<0.0020	0.30D	0.012	<0.0020
	1/18/2012	13.5	<0.0020	3.5D	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	0.95D	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/3/2012	13	0.018	0.077	<0.010	<0.010	<0.050	<0.010	<0.010	<0.010	2.0D	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
	8/21/2012	14	<0.0020	<0.0020	<0.0020	<0.0020	0.013	<0.0020	<0.0020	0.0054	0.018	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	11/28/2012	15	<0.0020	<0.0020	<0.0020	<0.0020	0.016	<0.0020	<0.0020	<0.0020	0.044	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.003	<0.0020
	2/6/2013	13.6	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	0.021	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/11/2013	17.5	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	0.015	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	10/22/2013	14	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	0.0033	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/10/2014	13	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	10/15/2014	14	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	0.011	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0057	<0.0020
	5/27/2015	13	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	0.0076	<0.0020	<0.0020	0.006	<0.0020	0.03	0.074	<0.0020
BW-09	1/13/2009	15	0.17	0.22	<0.0025	<0.0025	---	<0.0025	<0.0025	<0.0025	0.25	<0.0025	<0.0025	<0.0025	<0.0025	0.16	0.019	<0.0025
	4/2/2009	11	0.0022	0.015	<0.0020	<0.0020	---	<0.0020	<0.0020	<0.0020	0.19	<0.0020	<0.0020	<0.0020	0.0024	<0.0020	<0.0020	<0.0020
	7/14/2009	15	0.0051	0.017	<0.0010	0.0024	---	<0.0010	<0.0010	<0.0010	0.14J	<0.0010	<0.0010	<0.0010	0.0087	<0.0010	<0.0010	0.0013
	10/27/2009	11	<0.0050	0.017	<0.0050	<0.0050	---	<0.0050	<0.0050	<0.0050	0.62	<0.0050	<0.0050	<0.0050	0.0072	<0.0050	<0.0050	<0.0050
	1/28/2010	11	0.0062	0.07	<0.0050	<0.0050	---	<0.0050	<0.0050	<0.0050	0.46	<0.0050	<0.0050	<0.0050	<0.0050	0.018	<0.0050	<0.0050
	4/22/2010	15	0.33	0.16	0.026	<0.010	---	<0.010	<0.010	<0.010	0.059	<0.010	<0.010	0.022	<0.010	1.2	1	<0.010
	7/28/2011	12.5	<0.0040	0.13	<0.0040	<0.0040	<0.020	<0.0040	<0.0040	<0.0040	0.22	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040
	10/25/2011	12	0.0094	0.062	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	0.092	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	1/18/2012	12	0.012	1.1D	<0.0040	<0.0040	<0.020	<0.0040	<0.0040	<0.0040	3.6D	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040
	4/3/2012	12	0.0067	0.013	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	1.7D	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020

Table 7
Water Quality Data - VOC Results
2009 to Present
Former Varian Facility Site
150 Sohier Road, Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Acetone (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2-DCE (mg/l)	trans-1,2-DCE (mg/l)
BW-09 (Cont.)	8/21/2012	12	<0.0020	<0.0020	<0.0020	<0.0020	0.013	<0.0020	<0.0020	0.0046	0.11	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	11/28/2012	15	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	0.057	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	2/6/2013	12.2	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	0.021	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/11/2013	12.5	<0.0020	<0.0020	<0.0020	<0.0020	0.011	<0.0020	<0.0020	<0.0020	0.025	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	10/22/2013	14	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	0.0075	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/10/2014	12	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
CL02-BR	4/27/2009	42	<0.0020J	<0.0020J	<0.0020J	<0.0020J	---	<0.0020J	<0.0020J	<0.0020J	<0.0020J	<0.0020J	0.011J	0.086J	<0.0020J	<0.0020J	0.16J	<0.0020J
	10/26/2009	75	<0.0020	<0.0020	<0.0020	<0.0020	---	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.039	0.2	<0.0020
	4/21/2010	42	<0.0020	<0.0020	<0.0020	<0.0020	---	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.084	0.15	<0.0020
	10/18/2010	42	<0.0020	<0.0020	<0.0020	<0.0020	---	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0038	0.0033	<0.0020
	5/2/2011	80	<0.0050	<0.0050	<0.0050	<0.0050	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.017	<0.0050	<0.0050	0.018	<0.0050
	10/24/2011	42	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0097	0.035	<0.0020
	4/3/2012	41.5	<0.0040	<0.0040	<0.0040	<0.0040	<0.020	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	0.011	<0.0040	0.011	0.2	<0.0040
	11/12/2012	42	<0.0040	<0.0040	<0.0040	<0.0040	<0.020	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	0.17	<0.0040	<0.0040	0.29	<0.0040
	5/2/2013	79.6	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.043	0.057	<0.0020
	10/24/2013	79	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020UJ	0.016	0.021	<0.0020
	4/29/2014	80	<0.0020	<0.0020	<0.0020	<0.0020	0.069	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.015	<0.0020	0.0044J	0.36D	0.0034
	5/19/2015	80	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0028	0.023	<0.0020	0.041	0.091	0.0021
CL03-DO	4/2/2009	75	<0.0010	0.033	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	10/27/2009	75	<0.010	0.057	<0.010	<0.010	---	<0.010	<0.010	<0.010	<0.010	<0.010	0.43	0.23	<0.010	<0.010	0.072	<0.010
	4/20/2010	79	<0.0010	0.035	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.083	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	10/14/2010	76	<0.0020	0.036	<0.0020	<0.0020	---	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.028	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/4/2011	75	<0.0020	0.03	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.069	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	10/27/2011	79	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0089	<0.0020	<0.0020	0.0034	<0.0020
	4/6/2012	76	<0.020	0.035	0.024	<0.020	<0.10	<0.020	<0.020	<0.020	<0.020	<0.020	6.0D	15D	<0.020	0.29	6.9D	<0.020
	4/12/2013	76	<0.20	<0.20	<0.20	<0.20	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	10J	30D	<0.20	1.5J	13	<0.20
	10/23/2013	79	<0.0020	0.014	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	0.0082	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020UJ	<0.0020	<0.0020	<0.0020
	4/9/2014	71	<0.0020	0.016	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	10/15/2014	79	<0.0020	0.018	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	5/20/2015	75	<0.0020	0.023	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
CL03-S	4/20/2010	19	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0022	<0.0010	<0.0010	<0.0010	<0.0010
	4/4/2011	18	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0038	<0.0020	<0.0020	<0.0020	<0.0020
	4/6/2012	18	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0043	0.0075	<0.0020	<0.0020	<0.0020	<0.0020
	4/12/2013	18	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0075	0.012	<0.0020	<0.0020	<0.0020	<0.0020
	4/7/2014	18	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0097	0.017	<0.0020	<0.0020	<0.0020	<0.0020
	5/20/2015	18	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.013	0.02	<0.0020	<0.0020	0.0026	<0.0020
CL04-BR	4/3/2009	54	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0045	<0.0010	<0.0010	0.017	<0.0010
	4/21/2010	54	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0048	<0.0010	0.0014	0.023	<0.0010
	4/6/2011	54	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.023	<0.0020
	4/4/2012	54.5	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.036	0.0021
	4/15/2013	54	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.05	<0.0020
	4/10/2014	54	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.065	<0.0020
	5/20/2015	54	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0042	<0.0020	<0.0020	0.056	0.0021
CL04-DO	4/3/2009	27	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0015	0.019	<0.0010	<0.0010	<0.0010	<0.0010
	4/21/2010	28	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0014	0.0083	<0.0010	<0.0010	<0.0010	<0.0010
	4/6/2011	27	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.015	<0.0020	<0.0020	<0.0020	<0.0020
	4/4/2012	27.3	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0022	0.031	<0.0020	<0.0020	<0.0020	<0.0020
	4/15/2013	28	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.03	<0.0020	<0.0020	<0.0020	<0.0020

Table 7
Water Quality Data - VOC Results
2009 to Present
Former Varian Facility Site
150 Sohier Road, Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Acetone (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2-DCE (mg/l)	trans-1,2-DCE (mg/l)
CL04-DO (Cont.)	4/10/2014	28	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.045	<0.0020	<0.0020	0.0036	<0.0020
	5/20/2015	27	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.022	<0.0020	<0.0020	<0.0020	<0.0020
CL05-DOA	4/3/2009	49	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	4/20/2010	42	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	10/15/2014	49	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	5/29/2015	47	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
CL06-BR	4/2/2009	69	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	4/22/2010	69	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	4/4/2011	68	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/4/2012	68	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/15/2013	61	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/7/2014	68	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	5/19/2015	68	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
CL06-DO	4/2/2009	43	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	4/22/2010	43	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	4/4/2011	41	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/4/2012	41	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/15/2013	42	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/7/2014	41	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0045	<0.0020	<0.0020	<0.0020	<0.0020
	5/19/2015	41	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
CL08-BR_ZONE1	4/7/2009	159	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	4/28/2010	159	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	0.0028	0.0038	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	4/14/2011	159	<0.0020	<0.0020	<0.0020	<0.0020	0.35D	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/2/2012	159	<0.0020	<0.0020	<0.0020	<0.0020	0.12	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/16/2013	159	<0.010	<0.010	<0.010	<0.010	0.08	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
	4/11/2014	159	<0.010	<0.010	<0.010	<0.010	0.095	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
	5/20/2015	159	<0.0020	<0.0020	<0.0020	<0.0020	0.074	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
CL08-BR_ZONE2	4/7/2009	102	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	4/28/2010	102	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	4/14/2011	102	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/2/2012	102	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/16/2013	102	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/11/2014	102	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	5/20/2015	102	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
CL08-BR_ZONE3	4/7/2009	70	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0011	<0.0010	<0.0010	<0.0010	<0.0010
	4/28/2010	70	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.001	<0.0010	<0.0010	<0.0010	<0.0010
	4/14/2011	70	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/2/2012	70	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/16/2013	70	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/11/2014	70	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	5/20/2015	70	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
CL08-DO	4/6/2009	51	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0012	<0.0010	<0.0010	0.0013	<0.0010
	4/22/2010	52	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0013	<0.0010	<0.0010	0.0011	<0.0010
	4/6/2011	51	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/5/2012	51.5	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/12/2013	51.5	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/9/2014	51	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	5/20/2015	52	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020

Table 7
Water Quality Data - VOC Results
2009 to Present
Former Varian Facility Site
150 Sohier Road, Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Acetone (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2-DCE (mg/l)	trans-1,2-DCE (mg/l)
CL09-BR_ZONE1	4/6/2009	160	<0.025	<0.025	<0.025	<0.025	---	<0.025	<0.025	<0.025	<0.025	<0.025	1.3	2.2	<0.025	<0.025	0.4	<0.025
	11/2/2009	160	<0.010	<0.010	<0.010	<0.010	---	<0.010	<0.010	<0.010	<0.010	<0.010	0.58	1.1	<0.010	0.069	1	<0.010
	4/21/2010	160	<0.050	<0.050	<0.050	<0.050	---	<0.050	<0.050	<0.050	<0.050	<0.050	0.7	1.7	<0.050	<0.050	5.7	<0.050
	11/15/2010	160	<0.10	<0.10	<0.10	<0.10	---	<0.10	<0.10	<0.10	<0.10	<0.10	0.62	1.1	<0.10	0.13	11D	<0.10
	4/14/2011	160	<0.020	<0.020	<0.020	<0.020	<0.10	<0.020	<0.020	<0.020	<0.020	<0.020	0.97	1.8	<0.020	0.086	1.8	<0.020
	10/24/2011	160	<0.020	<0.020	<0.020	<0.020	<0.10	<0.020	<0.020	<0.020	<0.020	<0.020	0.83	2.0D	<0.020	<0.020	1	<0.020
	4/2/2012	160	<0.040	<0.040	<0.040	<0.040	<0.20	<0.040	<0.040	<0.040	<0.040	<0.040	0.66	1.4	<0.040	0.11	6.4D	<0.040
	5/2/2013	160	<0.10	<0.10	<0.10	<0.10	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10	0.56	1.8	<0.10	<0.10	4.8	<0.10
	4/11/2014	160	<0.10	<0.10	<0.10	<0.10	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10	0.11	0.23	<0.10	<0.10	4.9	<0.10
CL09-BR_ZONE2	4/6/2009	119	<0.050	<0.050	<0.050	<0.050	---	<0.050	<0.050	<0.050	<0.050	<0.050	0.81	1.5	<0.050	0.12	5.9	<0.050
	11/2/2009	119	<0.025	<0.025	<0.025	<0.025	---	<0.025	<0.025	<0.025	<0.025	<0.025	0.43	0.94	<0.025	0.078	2.9	<0.025
	4/21/2010	119	<0.050	<0.050	<0.050	<0.050	---	<0.050	<0.050	<0.050	<0.050	<0.050	0.68	1.3	<0.050	0.084	5.2	<0.050
	11/15/2010	119	<0.10	<0.10	<0.10	<0.10	---	<0.10	<0.10	<0.10	<0.10	<0.10	0.42	0.75	<0.10	0.12	7.7	<0.10
	4/14/2011	119	<0.10	<0.10	<0.10	<0.10	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10	0.42	0.76	<0.10	0.14	9.8	<0.10
	10/24/2011	119	<0.050	<0.050	<0.050	<0.050	<0.25	<0.050	<0.050	<0.050	<0.050	<0.050	0.33	1	<0.050	0.067	2.7	<0.050
	4/2/2012	119	<0.050	<0.050	<0.050	<0.050	<0.25	<0.050	<0.050	<0.050	<0.050	<0.050	0.38	0.96	<0.050	0.09	4.5	<0.050
	5/2/2013	119	<0.050	<0.050	<0.050	<0.050	<0.25	<0.050	<0.050	<0.050	<0.050	<0.050	0.54	1.6	<0.050	0.075	2.4	<0.050
	4/11/2014	119	<0.050	<0.050	<0.050	<0.050	<0.25	<0.050	<0.050	<0.050	<0.050	<0.050	0.25	0.4	<0.050	0.085	6.7D	<0.050
CL09-BR_ZONE3	4/6/2009	81	<0.050	<0.050	<0.050	<0.050	---	<0.050	<0.050	<0.050	<0.050	<0.050	0.56	0.84	<0.050	0.11	6.3	<0.050
	11/2/2009	81	<0.0050	<0.0050	<0.0050	<0.0050	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.21	0.29	<0.0050	0.75	0.62	<0.0050
	4/21/2010	81	<0.050	<0.050	<0.050	<0.050	---	<0.050	<0.050	<0.050	<0.050	<0.050	0.24	0.36	<0.050	<0.050	5.9	<0.050
	11/15/2010	81	<0.040	<0.040	<0.040	<0.040	---	<0.040	<0.040	<0.040	<0.040	<0.040	0.22	0.33	<0.040	0.75	4.1D	<0.040
	4/14/2011	81	<0.010	<0.010	<0.010	<0.010	<0.050	<0.010	<0.010	<0.010	<0.010	<0.010	0.048	0.036	<0.010	0.063	0.98	0.016
	10/24/2011	81	<0.010	<0.010	<0.010	<0.010	<0.050	<0.010	<0.010	<0.010	<0.010	<0.010	0.05	0.09	<0.010	1.2D	1.2D	0.014
	4/2/2012	81	<0.020	<0.020	<0.020	<0.020	<0.10	<0.020	<0.020	<0.020	<0.020	<0.020	0.12	0.31	<0.020	0.3	2.6D	<0.020
	5/2/2013	81	<0.050	<0.050	<0.050	<0.050	<0.25	<0.050	<0.050	<0.050	<0.050	<0.050	0.24	0.64	<0.050	0.32	2.6	<0.050
	4/11/2014	81	<0.020	<0.020	<0.020	<0.020	<0.10	<0.020	<0.020	<0.020	<0.020	<0.020	0.066	0.071	<0.020	0.052	1	<0.020
	5/19/2015	81	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.016	0.041	<0.0020	0.019	0.72D	0.0022
CL09-DO	4/2/2009	35	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.015	0.037	<0.0010	<0.0010	0.0012	<0.0010
	4/21/2010	35	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.024	0.061	<0.0010	<0.0010	0.0024	<0.0010
	4/4/2011	32	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020UJ	<0.0020	<0.0020
	4/2/2012	32.8	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.073	0.18	<0.0020	<0.0020	0.0061	<0.0020
	4/15/2013	32.8	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/7/2014	32	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	0.0051	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
CL09-S	9/24/2009	NA	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
CL10-BR	4/6/2009	44	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0011	0.0023	<0.0010	<0.0010	<0.0010	<0.0010
	10/27/2009	44	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	4/20/2010	46	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	10/14/2010	45	<0.0020	<0.0020	<0.0020	<0.0020	---	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/5/2011	44	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	10/25/2011	46	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0036	<0.0020	<0.0020	0.0027	<0.0020
	4/5/2012	44.5	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	11/12/2012	46	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/16/2013	45	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020UJ	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	10/23/2013	46	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0031	<0.0020UJ	<0.0020	<0.0020	0.0033
	4/10/2014	44	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	10/15/2014	46	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	5/20/2015	45	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020

Table 7
Water Quality Data - VOC Results
2009 to Present
Former Varian Facility Site
150 Sohier Road, Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Acetone (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2-DCE (mg/l)	trans-1,2-DCE (mg/l)
CL10-DO	4/6/2009	30	0.0026	0.0022	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	10/27/2009	30	0.0021	0.0019	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	4/20/2010	36	0.0045	0.0041	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0016	<0.0010	<0.0010	<0.0010
	10/14/2010	31	<0.0020	0.0021	<0.0020	<0.0020	---	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/5/2011	30	<0.0020	0.0027	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	10/27/2011	36	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/6/2012	30.5	<0.0020	0.0034	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	11/12/2012	36	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/16/2013	30	0.0023	0.0033	<0.0020	<0.0020	<0.010	<0.0020UJ	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	10/23/2013	36	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020UJ	<0.0020	<0.0020	<0.0020
	4/10/2014	30	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	10/15/2014	36	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	5/20/2015	36	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
CL10-S	4/6/2009	13	<0.020	<0.020	<0.020	<0.020	---	<0.020	<0.020	<0.020	<0.020	<0.020	1.4	0.12	<0.020	<0.020	0.048	<0.020
	10/27/2009	13	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0064	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	4/21/2010	15	<0.0050	<0.0050	<0.0050	<0.0050	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.64	0.041	<0.0050	<0.0050	0.024	<0.0050
	10/14/2010	13	<0.0020	<0.0020	<0.0020	<0.0020	---	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.013	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/5/2011	13	<0.010	<0.010	<0.010	<0.010	<0.050	<0.010	<0.010	<0.010	<0.010	<0.010	0.87	0.032	<0.010	<0.010	0.017	<0.010
	10/25/2011	15	<0.0020	<0.0020	<0.0020	<0.0020	0.011	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.045	0.0027	<0.0020	<0.0020	0.0096	<0.0020
	4/5/2012	13	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.13	0.0035	<0.0020	<0.0020	0.0032	<0.0020
	11/12/2012	15	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.013	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/16/2013	11	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020UJ	<0.0020	<0.0020	<0.0020	<0.0020	1.3D	0.15	<0.0020	<0.0020	0.033	0.0038
	10/23/2013	12	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.011	<0.0020	<0.0020UJ	<0.0020	<0.0020	<0.0020
	4/10/2014	12	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	1.8D	0.13	<0.0020	<0.0020	0.046	<0.0020
	10/15/2014	15	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.018	0.0098	<0.0020	<0.0020	0.004	<0.0020
	5/20/2015	12	<0.010	<0.010	<0.010	<0.010	<0.050	<0.010	<0.010	<0.010	<0.010	<0.010	0.77	0.055	<0.010	<0.010	0.06	<0.010
CL11-DO	4/3/2009	49	0.019	0.034	0.021	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0096	0.07	<0.0010	<0.0010	0.0016	<0.0010
	4/20/2010	50	0.011	0.024	0.017	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0096	0.067	<0.0010	<0.0010	0.0013	<0.0010
	4/6/2011	49.5	0.0087J	0.021J	0.019J	<0.0020UJ	0.012J	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	0.0076J	0.067J	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ
	4/6/2012	49.5	0.0043	0.0095	0.012	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0059	0.044	<0.0020	<0.0020	<0.0020	<0.0020
	4/15/2013	49	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0056	<0.0020	<0.0020	<0.0020	<0.0020
	4/11/2014	48	0.0028	0.005	0.0063	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0037	0.025	<0.0020	<0.0020	<0.0020	<0.0020
	5/23/2015	49	0.0039J	0.0061J	0.0063J	<0.0020UJ	<0.010UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	0.0055J	0.035J	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ
CL11-S	4/3/2009	24	0.011	0.0029	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.011	0.005	<0.0010	<0.0010	<0.0010	<0.0010
	4/20/2010	24	0.01	0.0026	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.014	0.0061	<0.0010	<0.0010	<0.0010	<0.0010
	4/6/2011	23.4	0.0057J	<0.0020UJ	<0.0020UJ	<0.0020UJ	0.011J	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	0.0086J	0.0037J	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ
	4/6/2012	23.5	0.0077	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.012	0.0063	<0.0020	<0.0020	<0.0020	<0.0020
	4/15/2013	22	0.0032	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.011J	0.0079	<0.0020	<0.0020	<0.0020	<0.0020
	4/11/2014	24	0.0049	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.01	0.0052	<0.0020	<0.0020	<0.0020	<0.0020
	5/23/2015	23	0.0058J	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.010UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	0.013J	0.0060J	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ
CL12-S1	4/2/2009	22	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0031	<0.0010	<0.0010	<0.0010	<0.0010
CULVERT_OUTFALL	11/10/1999	NA	<0.0020	<0.0020	0.002	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0050	<0.0020	0.017	0.079	<0.0050	<0.0020	0.051	<0.0020
	6/5/2000	NA	<0.0020	<0.0020	<0.0010	<0.0020	---	<0.0020	<0.0020	<0.0020	<0.010	<0.010	0.007	0.026	<0.0020	<0.0020	0.012	<0.0020
	12/11/2000	NA	<0.0020U	<0.0020U	<0.0010U	<0.0020U	---	<0.0020U	<0.0020U	<0.0020U	<0.010U	<0.010U	<0.0020U	0.003	<0.0020U	<0.0020U	0.004	<0.0020U
	6/4/2001	NA	<0.0020U	<0.0020U	<0.0010U	<0.0020U	---	<0.0020U	<0.0020U	<0.0020U	<0.010U	<0.010U	0.004	0.024	<0.0020U	<0.0020U	0.019	<0.0020U
	11/26/2001	NA	<0.0020U	0.002	0.002	<0.0020U	---	<0.0020U	<0.0020U	<0.0020U	<0.010U	<0.010U	0.012	0.079	<0.0020U	<0.0020U	0.055	<0.0020U
	5/15/2003	NA	<0.0020U	0.002	0.003	<0.0020U	---	<0.0020U	<0.0020U	<0.0020U	<0.010U	<0.010U	0.019	0.096	<0.0020U	<0.0020U	0.071	<0.0020U
	12/22/2003	NA	<0.0010U	0.0019	0.0019	<0.0010U	---	<0.0010U	<0.0020U	<0.0010U	<0.0020U	<0.0050U	0.02	0.091	<0.0010U	<0.0020U	0.063	<0.0010U

Table 7
Water Quality Data - VOC Results
2009 to Present
Former Varian Facility Site
150 Sohier Road, Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Acetone (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2-DCE (mg/l)	trans-1,2-DCE (mg/l)
CULVERT_OUTFALL	1/4/2005	NA	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0020	<0.0010	<0.0020	<0.0050	<0.0010	0.0013	<0.0010	<0.0020	0.0018	<0.0010
(Cont.)	1/4/2006	NA	<0.0010U	0.0013	<0.0010U	<0.0010U	---	<0.0010U	<0.0020U	<0.0010U	<0.0020U	<0.0050U	0.019	0.082	<0.0010U	<0.0020U	0.059	<0.0010U
	4/15/2007	NA	<0.0010U	<0.0010U	<0.0010U	<0.0010U	---	<0.0010U	<0.0020U	<0.0010U	<0.0020U	<0.0050U	0.0046	0.024	<0.0010U	<0.0020U	0.018	<0.0010U
	4/25/2008	NA	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0020	<0.0010	<0.0020	<0.0050	0.0088	0.04	<0.0010	<0.0020	0.034	<0.0010
	4/3/2009	NA	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.016	0.077	<0.0010	<0.0010	0.064	<0.0010
	4/28/2010	NA	<0.0010	0.0011	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.016	0.075	<0.0010	<0.0010	0.074	<0.0010
	4/6/2011	NA	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0021	<0.0020	<0.0020	0.0032	<0.0020
	4/6/2012	NA	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0021	<0.0020	<0.0020	0.0029	<0.0020
	4/15/2013	NA	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0093	0.056	<0.0020	<0.0020	0.058	<0.0020
	4/9/2014	NA	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0085	0.043	<0.0020	<0.0020	0.043	<0.0020
GZ-1	4/3/2009	12	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.001	0.016	<0.0010	<0.0010	0.0024	<0.0010
	4/20/2010	14	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.002	0.022	<0.0010	<0.0010	0.0062	<0.0010
	4/5/2011	12	0.0031	0.0044	0.0074	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.17	1.6D	<0.0020	0.0029	0.62D	0.0036
	4/5/2012	12.3	<0.010	<0.010	<0.010	<0.010	<0.050	<0.010	<0.010	<0.010	<0.010	<0.010	0.18	0.76D	<0.010	<0.010	0.35	<0.010
	4/12/2013	12.4	<0.020	<0.020	<0.020	<0.020	<0.10	<0.020	<0.020	<0.020	<0.020	<0.020	0.19J	1.3	<0.020	<0.020	0.32	<0.020
	4/8/2014	12	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.013	0.047	<0.0020	<0.0020	0.0089	<0.0020
GZ-2R	4/3/2009	10	<0.0025	<0.0025	<0.0025	<0.0025	---	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	0.0083	0.23	<0.0025	<0.0025	0.17	<0.0025
GZ-4	10/26/2009	14	<0.0010	0.003	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0039	0.029	<0.0010	0.0016	0.045	<0.0010
	4/20/2010	14	<0.0010	0.0015	0.0015	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0028	0.044	<0.0010	0.0037	0.069	<0.0010
	10/14/2010	14	<0.0020	0.0046	0.0045	<0.0020	---	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.047	0.24D	<0.0020	0.0028	0.43D	0.0028
	4/5/2011	14	<0.0050	0.0056	0.0072	<0.0050	<0.025	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.097	0.78D	<0.0050	0.006	0.55D	<0.0050
	10/25/2011	14	<0.0020	0.0027	0.002	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0037	0.003	<0.0020	0.11	0.36D	0.0021
	4/5/2012	14	<0.010	<0.010	0.01	<0.010	<0.050	<0.010	<0.010	<0.010	<0.010	<0.010	0.14	0.84	<0.010	<0.010	0.6	<0.010
	11/12/2012	14	<0.0020	0.0049	0.0036	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.2	0.54D	0.0034
	4/11/2013	12	<0.010	<0.010	<0.010	<0.010	<0.050	<0.010	<0.010	<0.010	<0.010	<0.010	0.11	0.71	<0.010	<0.010	0.7	<0.010
	10/23/2013	12	<0.0020	0.004	0.0068	<0.0020	0.014	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020UJ	0.042	0.75D	0.0044
	4/8/2014	12	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0045	0.0063	<0.0020	0.0044	0.055	<0.0020
	5/19/2015	11	<0.0020	0.0025	<0.0020	<0.0020	0.01	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.004	<0.0020	0.013	0.082	<0.0020
MW-001	4/3/2009	17	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
MW-001DO	4/3/2009	55	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
MW-002R	4/27/2009	13	<0.0010J	<0.0010J	<0.0010J	<0.0010J	---	<0.0010J	<0.0010J	<0.0010J	<0.0010J	<0.0010J	0.0020J	0.0070J	<0.0010J	<0.0010J	<0.0010J	<0.0010J
	4/21/2010	13	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	10/12/2010	10	<0.0020	<0.0020	<0.0020	<0.0020	---	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	5/2/2011	9	<0.0050	<0.0050	<0.0050	<0.0050	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	10/24/2011	9	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/2/2012	9.5	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	5/2/2013	9.8	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/29/2014	9	<0.0020	<0.0020	<0.0020	<0.0020	0.067	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
MW-003R	4/1/2009	30	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0041	<0.0010
	10/26/2009	30	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0021	<0.0010	0.014	0.0078	<0.0010
	4/21/2010	33	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	4/4/2011	30	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020UJ	<0.0020	<0.0020
	4/2/2012	30.2	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0035	<0.0020	0.0037	0.015	<0.0020
	4/11/2013	30.3	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	0.0051	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.006	0.007	<0.0020
	4/7/2014	30	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0023	<0.0020	<0.0020
	5/19/2015	30	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
MW-004	4/10/2014	25	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020

Table 7
Water Quality Data - VOC Results
2009 to Present
Former Varian Facility Site
150 Sohier Road, Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Acetone (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2-DCE (mg/l)	trans-1,2-DCE (mg/l)
MW-004R	4/27/2009	38	<0.0010J	<0.0010J	<0.0010J	<0.0010J	---	<0.0010J	<0.0010J	<0.0010J	<0.0010J	<0.0010J	<0.0010J	0.019J	<0.0010J	<0.0010J	0.0025J	<0.0010J
	4/21/2010	38	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.021	<0.0010	<0.0010	0.0023	<0.0010
	10/12/2010	35.5	<0.0020	<0.0020	<0.0020	<0.0020	---	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.066	<0.0020	<0.0020	0.0087	<0.0020
	5/2/2011	36	<0.0050	<0.0050	<0.0050	<0.0050	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.026	<0.0050	<0.0050	<0.0050	<0.0050
	10/24/2011	35.5	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.048	<0.0020	<0.0020	0.0065	<0.0020
	4/2/2012	35.5	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.066	<0.0020	<0.0020	0.0081	<0.0020
	5/2/2013	35.4	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0061	<0.0020	<0.0020	<0.0020	<0.0020
MW-005	10/23/2013	23	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0064	0.0022	<0.0020	<0.0020	<0.0020	<0.0020
	4/10/2014	21	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.016	0.0057	<0.0020	<0.0020	<0.0020	<0.0020
MW-005R	4/1/2009	17	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0033	0.0086	<0.0010	<0.0010	0.0023	<0.0010
	10/26/2009	17	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.008	0.019	<0.0010	<0.0010	0.011	<0.0010
	4/21/2010	21	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0042	0.011	<0.0010	<0.0010	0.0037	<0.0010
	4/4/2011	16	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.006	0.02	<0.0020	<0.0020UJ	0.0071	<0.0020
	4/2/2012	17.25	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0021	0.0054	<0.0020	<0.0020	<0.0020	<0.0020
	4/11/2013	17.2	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0061	0.019	<0.0020	<0.0020	0.0064	<0.0020
	4/7/2014	17	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0084	0.022	<0.0020	<0.0020	0.0051	<0.0020
	5/19/2015	17	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.013	0.032	<0.0020	<0.0020	0.0091	<0.0020
MW-007R	4/2/2009	24	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	4/28/2010	29	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
MW-008	4/3/2009	17	1.3	1.3	0.066	<0.050	---	<0.050	<0.050	<0.050	0.18	<0.050	<0.050	<0.050	<0.050	5.1	1.5	<0.050
	4/20/2010	19	3.0	0.38	0.15	<0.025	---	<0.025	<0.025	<0.025	<0.025	<0.025	0.07	0.087	<0.025	2.1	2.5	<0.025
	4/6/2011	16.9	0.92J	0.21J	0.055J	<0.020UJ	<0.10UJ	<0.020UJ	<0.020UJ	<0.020UJ	0.023J	<0.020UJ	<0.020UJ	<0.020UJ	<0.020UJ	1.3J	0.50J	<0.020UJ
	4/4/2012	17	0.1	0.9	<0.010	<0.010	<0.050	<0.010	<0.010	<0.010	0.64	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
	8/21/2012	16.8	0.034	0.24	<0.0050	<0.0050	<0.025	<0.0050	<0.0050	<0.0050	0.41	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	11/28/2012	19	<0.0040	0.084	<0.0040	<0.0040	<0.020	<0.0040	<0.0040	<0.0040	0.21	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040
	2/6/2013	16.8	0.45	0.4	0.014	<0.0050	<0.025	<0.0050	<0.0050	<0.0050	0.17	<0.0050	<0.0050	<0.0050	<0.0050	0.19	0.054	<0.0050
	4/11/2013	17.9	0.42	1.1D	0.029J	<0.0050	<0.025	<0.0050	<0.0050	<0.0050	0.32	<0.0050	0.044	0.029	<0.0050	0.93D	0.19	<0.0050
	4/10/2014	17	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
MW-009	1/14/2009	19	<0.0010	0.0025	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	0.014	<0.0010	<0.0010	0.0015	<0.0010	0.007	0.0061	<0.0010
	4/2/2009	20	<0.0010	0.003	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	0.0099	<0.0010	<0.0010	0.0015	<0.0010	0.0036	0.0053	<0.0010
	7/14/2009	19	0.0018	0.011	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0065	0.047	0.0018	0.026	0.043	0.0018
	10/27/2009	20	<0.0010	0.0028	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	0.0056	<0.0010	<0.0010	<0.0010	<0.0010	0.005	0.0059	0.0014
	1/28/2010	20	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	0.0023	<0.0010	<0.0010	<0.0010	<0.0010	0.0035	0.0058	<0.0010
	4/22/2010	19	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	0.0044	<0.0010	<0.0010	0.0013	<0.0010	0.0086	0.0036	<0.0010
	7/14/2010	19	<0.0010UJ	<0.0010UJ	<0.0010UJ	<0.0010UJ	---	<0.0010UJ	<0.0010UJ	<0.0010UJ	0.0025J	<0.0010UJ	<0.0010UJ	<0.0010UJ	<0.0010UJ	0.0026J	0.0039J	<0.0010UJ
	10/12/2010	20	<0.0020	<0.0020	<0.0020	<0.0020	---	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.002	0.0024	<0.0020
	1/4/2011	19	<0.0020	<0.0020	<0.0020	<0.0020	---	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0023	<0.0020	0.013	0.011	<0.0020
	4/5/2011	19.8	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	0.0028	<0.0020	<0.0020	<0.0020	<0.0020	0.003	0.0028	<0.0020
	7/28/2011	19	<0.0020	<0.0020	<0.0020	<0.0020	0.015	<0.0020	<0.0020	<0.0020	0.0056	<0.0020	<0.0020	<0.0020	<0.0020	0.03	0.023	<0.0020
	10/25/2011	20	<0.0020	<0.0020	<0.0020	<0.0020	0.011	<0.0020	<0.0020	<0.0020	0.0096	<0.0020	<0.0020	<0.0020	<0.0020	0.016	0.02	<0.0020
	1/17/2012	20	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	0.006	<0.0020	<0.0020	0.0034	<0.0020	0.0093	0.039	<0.0020
	4/3/2012	20	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	0.0029	<0.0020	<0.0020	0.0061	<0.0020	0.012	0.027	<0.0020
	8/21/2012	19.7	<0.0020	<0.0020	<0.0020	<0.0020	0.01	<0.0020	<0.0020	0.003	<0.0020	<0.0020	<0.0020	0.0027	<0.0020	0.0058	0.016	<0.0020
	11/28/2012	19	<0.0020	0.003	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	0.0048	<0.0020	0.0045	0.019	<0.0020	0.11	0.13D	0.0032
	2/6/2013	20	<0.0020	0.0083	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	0.0052	<0.0020	0.0058	0.023	<0.0020	0.45D	0.60D	0.0029
	4/11/2013	19	<0.010	<0.010	<0.010	<0.010	<0.050	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.022	<0.010	0.63	0.74	<0.010
	10/22/2013	20.21	<0.10	<0.10	<0.10	<0.10	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.46	1.2	<0.10
	1/20/2014	20.2	<0.010	0.015	<0.010	<0.010	<0.050	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	1.7D	3.0D	<0.010

Table 7
Water Quality Data - VOC Results
2009 to Present
Former Varian Facility Site
150 Sohier Road, Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Acetone (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2-DCE (mg/l)	trans-1,2-DCE (mg/l)
MW-009 (Cont.)	4/8/2014	20	<0.050	<0.050	<0.050	<0.050	<0.25	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	2.4	4.1D	<0.050
	8/6/2014	19	<0.040	<0.040	<0.040	<0.040	<0.20	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	0.69	2.6	<0.040
	10/15/2014	19	<0.040	<0.040	<0.040	<0.040	<0.20	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	1.2	1.7	<0.040
	1/20/2015	20	<0.0020	0.005	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	0.0034	<0.0020	<0.0020	<0.0020	<0.0020	0.19	0.096	<0.0020
	5/29/2015	15	<0.0020	0.012	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	0.0064	<0.0020	<0.0020	<0.0020	<0.0020	0.084	0.033	0.0026
MW-009A	4/3/2009	13	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	10/26/2009	13	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	4/20/2010	9	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.01	0.0084	<0.0010	<0.0010	0.016	<0.0010
	10/12/2010	9	<0.0020	<0.0020	<0.0020	<0.0020	---	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/4/2011	13.4	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0041	0.0049	<0.0020	0.0033	0.062	<0.0020
	10/26/2011	13	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0049	0.012	<0.0020	0.097	0.13	<0.0020
	4/3/2012	13	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0033	<0.0020
	11/13/2012	9	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/15/2013	13.3	<0.0020	<0.0020	<0.0020	<0.0020	0.012	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	10/23/2013	13.33	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/10/2014	13	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.032J	0.028	<0.0020
	10/15/2014	12	<0.0020	0.0037	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0023	<0.0020	0.017	0.082	<0.0020
	5/27/2015	13	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	0.0056	<0.0020	<0.0020	<0.0020	<0.0020	0.062	0.1	<0.0020
MW-013	4/3/2009	42	<0.20	<0.20	<0.20	<0.20	---	<0.20	<0.20	<0.20	<0.20	<0.20	21	12	<0.20	<0.20	<0.20	<0.20
	4/21/2010	54	1.2	<0.020	<0.020	<0.020	---	2.2	<0.020	0.24	<0.020	<0.020	0.074	<0.020	<0.020	<0.020	<0.020	<0.020
	10/14/2010	54	0.77D	0.0072	<0.0020	<0.0020	---	2.7D	0.014	0.30D	<0.0020	0.0061	0.0037	<0.0020	0.003	<0.0020	<0.0020	<0.0020
	4/14/2011	44	0.25D	0.0041	<0.0020	<0.0020	0.024	0.73D	0.0076	0.17	<0.0020	0.0022	0.062	0.0075	<0.0020	<0.0020	<0.0020	<0.0020
	10/27/2011	41	0.25	<0.0050	<0.0050	<0.0050	<0.025	0.42	0.0053	0.24	<0.0050	<0.0050	0.0066	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	4/5/2012	53	0.27	<0.0050	<0.0050	<0.0050	<0.025	0.38	0.0051	0.31	<0.0050	<0.0050	0.011	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	11/26/2012	54	0.39	<0.0050	<0.0050	<0.0050	<0.025	0.55D	0.0054	0.55D	<0.0050	<0.0050	0.058	0.026	<0.0050	<0.0050	<0.0050	<0.0050
	4/17/2013	41.8	0.25	<0.0050	<0.0050	<0.0050	<0.025	0.28	<0.0050	0.41	<0.0050	<0.0050	0.017	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	10/24/2013	50	0.29D	0.0051	<0.0020	<0.0020	0.011	0.42D	0.0052	0.48D	<0.0020	<0.0020	0.022	0.0061	<0.0020	<0.0020	<0.0020	<0.0020
	4/9/2014	41	0.19	0.0051	<0.0050	<0.0050	<0.025	0.23	0.0052	0.36	<0.0050	<0.0050	0.014	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	10/16/2014	54	0.25	0.0065	<0.0050	<0.0050	<0.025	0.35	<0.0050	0.55D	<0.0050	<0.0050	0.035	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	5/22/2015	41	0.041J	<0.010UJ	<0.010UJ	<0.010UJ	<0.050UJ	0.034J	<0.010UJ	0.050J	<0.010UJ	<0.010UJ	1.0DJ	<0.010UJ	<0.010UJ	<0.010UJ	<0.010UJ	<0.010UJ
MW-014A	4/3/2009	60	<0.0050	<0.0050	<0.0050	<0.0050	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.42	<0.0050	<0.0050	0.054	<0.0050
	4/20/2010	60	<0.0050	<0.0050	<0.0050	<0.0050	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.007	0.44	<0.0050	<0.0050	0.054	<0.0050
	4/4/2011	59	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.005	0.38D	<0.0020	<0.0020UJ	0.065	<0.0020
	4/5/2012	59	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0027	0.16D	<0.0020	0.0023	0.06	<0.0020
	4/17/2013	58.8	<0.0050	<0.0050	<0.0050	<0.0050	<0.025	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.41	<0.0050	<0.0050	0.087	<0.0050
	4/9/2014	58	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0031	0.057	<0.0020	<0.0020	0.19	<0.0020
	5/22/2015	58	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.010UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	0.081J	<0.0020UJ	0.0025J	0.12J	0.0093J
MW-016	10/23/2013	35	<0.0020	0.007	<0.0020	<0.0020	<0.010	<0.0020	0.0024	<0.0020	<0.0020	<0.0020	0.012	0.50D	<0.0020	<0.0020	0.12	<0.0020
	4/10/2014	35	<0.010	<0.010	<0.010	<0.010	<0.050	<0.010	<0.010	<0.010	<0.010	<0.010	0.058	1.7D	<0.010	<0.010	0.36	<0.010
MW-030	4/9/2009	20	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
MW-033B	4/9/2009	24	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	4/21/2010	24	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	4/5/2011	24.8	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/6/2012	24.5	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/15/2013	19	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/11/2014	25	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	5/20/2015	24	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020

Table 7
Water Quality Data - VOC Results
2009 to Present
Former Varian Facility Site
150 Sohier Road, Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Acetone (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2-DCE (mg/l)	trans-1,2-DCE (mg/l)
MW-034	4/9/2009	0	<0.010	<0.010	0.014	<0.010	---	<0.010	<0.010	<0.010	<0.010	<0.010	0.013	0.21	<0.010	0.013	1.1	<0.010
	4/28/2010	64	<0.010	<0.010	0.013	<0.010	---	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.11	<0.010	0.014	1.1	<0.010
	4/7/2011	64	<0.020UJ	<0.020UJ	<0.020UJ	<0.020UJ	<0.10UJ	<0.020UJ	<0.020UJ	<0.020UJ	<0.020UJ	<0.020UJ	<0.020UJ	0.14J	<0.020UJ	0.020J	1.2J	<0.020UJ
	4/4/2012	63	<0.020	<0.020	0.021	<0.020	<0.10	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.16	<0.020	0.022	1.3	<0.020
	4/16/2013	63	<0.020	<0.020	0.02	<0.020	<0.10	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.089	<0.020	0.026	1.6	<0.020
	4/9/2014	62	<0.020	<0.020	<0.020	<0.020	<0.10	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.13	<0.020	<0.020	1.3	<0.020
	6/9/2015	62	<0.020	<0.020	<0.020	<0.020	<0.10	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.1	<0.020	<0.020	1.5	<0.020
MW-035	4/1/2009	24	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
MW-036	4/2/2009	51	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0039	<0.0010	<0.0010	<0.0010	<0.0010
	4/20/2010	55	<0.0050	<0.0050	<0.0050	<0.0050	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.25	0.59	<0.0050	<0.0050	0.22	<0.0050
	4/4/2011	51	<0.010	<0.010	<0.010	<0.010	<0.050	<0.010	<0.010	<0.010	<0.010	<0.010	0.54	1.2D	<0.010	0.017	0.42	<0.010
	4/6/2012	51.8	<0.020	<0.020	<0.020	<0.020	<0.10	<0.020	<0.020	<0.020	<0.020	<0.020	0.75	1.8	<0.020	0.061	0.8	<0.020
	4/12/2013	51.7	<0.020	<0.020	<0.020	<0.020	<0.10	<0.020	<0.020	<0.020	<0.020	<0.020	1.2J	2.3D	<0.020	0.14J	1.2	<0.020
	4/7/2014	52	<0.040	<0.040	<0.040	<0.040	<0.20	<0.040	<0.040	<0.040	<0.040	<0.040	0.95	2.4	<0.040	0.18	1.4	<0.040
	5/20/2015	51	<0.040	<0.040	<0.040	<0.040	<0.20	<0.040	<0.040	<0.040	<0.040	<0.040	1.2	2.9	<0.040	0.26	2.1	<0.040
MW-1_32-TOZER	2/24/2011	NA	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.010	<0.010	0.013	0.62D	<0.0050	<0.0050	0.046	<0.0050
	4/6/2012	18	<0.0050	<0.0050	<0.0050	<0.0050	<0.025	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0067	0.41	<0.0050	<0.0050	0.098	<0.0050
	4/16/2013	12	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020UJ	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.11	<0.0020
MW-2_32-TOZER	2/24/2011	NA	<0.25	<0.25	<0.25	<0.25	<2.5	<0.25	<0.25	<0.25	<0.50	<0.50	11	1.8	<0.25	<0.25	3.4	<0.25
	11/8/2011	NA	<0.20	<0.20	<0.20	<0.20	<2.0	<0.20	<0.20	<0.20	<0.40	<0.40	10	1.5	<0.20	<0.20	3.7	<0.20
	4/6/2012	17.3	<0.20	<0.20	<0.20	<0.20	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	12	1.8	<0.20	<0.20	3.3	<0.20
	11/28/2012	19	<0.20	<0.20	<0.20	<0.20	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	16	4.3	<0.20	<0.20	4.6	<0.20
	4/16/2013	17	<0.10	<0.10	<0.10	<0.10	<0.50	<0.10UJ	<0.10	<0.10	<0.10	<0.10	6.7	3.8	<0.10	<0.10	4.6	<0.10
	10/23/2013	17	<0.10	<0.10	<0.10	<0.10	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10	8.1	1.2	<0.10UJ	<0.10	2.2	<0.10
	4/10/2014	17	<0.10	<0.10	<0.10	<0.10	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10	4.9	0.97	<0.10	<0.10	2.2	<0.10
	10/15/2014	19	<0.10	<0.10	<0.10	<0.10	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10	4.9	0.85	<0.10	<0.10	1.5	<0.10
	5/20/2015	17	<0.020	<0.020	<0.020	<0.020	<0.10	<0.020	<0.020	<0.020	<0.020	<0.020	1.0	0.38	<0.020	<0.020	0.58	<0.020
MW-3_32-TOZER	2/24/2011	NA	<0.0010	<0.0010	<0.0010	<0.0010	<0.010	<0.0010	<0.0010	<0.0010	<0.0020	<0.0020	0.039	0.012	<0.0010	<0.0010	0.013	<0.0010
	4/6/2012	18.5	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
MW-4_32-TOZER	11/8/2011	NA	<0.0010	<0.0010	<0.0010	<0.0010	<0.010	<0.0010	<0.0010	<0.0010	<0.0020	<0.0020	0.0044	0.0025	<0.0010	<0.0010	0.066	<0.0010
	11/12/2012	14	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/16/2013	14	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020UJ	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
MW-5_32-TOZER	11/8/2011	NA	<0.0010	0.0026	<0.0010	<0.0010	0.028	<0.0010	<0.0010	<0.0010	<0.0020	<0.0020	0.0051	0.019	<0.0010	<0.0010	0.0038	<0.0010
	11/12/2012	14	<0.0020	0.015	0.0052	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0053	0.041	<0.0020	<0.0020	0.12	<0.0020
	4/16/2013	14	<0.0020	0.0057	0.003	<0.0020	<0.010	<0.0020UJ	<0.0020	<0.0020	<0.0020	<0.0020	0.0043	0.029	<0.0020	<0.0020	0.043	<0.0020
OB-04-BR	4/1/2009	89	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	4/20/2010	89	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	4/4/2011	77	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/3/2012	88	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/12/2013	77.3	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
OB-04-DO	4/1/2009	69	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.035	0.07	<0.0010	<0.0010	0.038	<0.0010
	4/20/2010	69	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.054	0.1	<0.0010	<0.0010	0.027	<0.0010
	4/4/2011	67	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.04	0.094	<0.0020	<0.0020	0.043	<0.0020
	5/20/2015	67	<0.0040	<0.0040	<0.0040	<0.0040	<0.020	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	0.083	0.22	<0.0040	0.037	0.22	<0.0040
	4/3/2012	67	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.059	0.14	<0.0020	0.011	0.091	<0.0020
	4/12/2013	67	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.075	0.16	<0.0020	0.013	0.086	<0.0020
	4/7/2014	68	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.079	0.19	<0.0020	0.021	0.12	<0.0020
	10/15/2014	69	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.15	0.33D	<0.0020	0.097	0.54D	<0.0020

Table 7
Water Quality Data - VOC Results
2009 to Present
Former Varian Facility Site
150 Sohier Road, Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Acetone (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2-DCE (mg/l)	trans-1,2-DCE (mg/l)
OB-04-S	4/1/2009	23	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0016	<0.0010	<0.0010	<0.0010	<0.0010
	9/24/2009	NA	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0022	<0.0010	<0.0010	<0.0010	<0.0010
	4/20/2010	24	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	4/4/2011	23	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/3/2012	23.5	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/12/2013	23.5	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
OB-05-BR	4/1/2009	106	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.084	0.036	<0.0010
	10/26/2009	104	<0.0010	0.0013	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.067	0.026	<0.0010
	4/20/2010	109	<0.010	<0.010	<0.010	<0.010	---	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.24	1.2	<0.010
	10/12/2010	109	<0.0050	<0.0050	<0.0050	<0.0050	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.41	0.48	<0.0050
	4/4/2011	104	<0.0040	<0.0040	<0.0040	<0.0040	<0.020	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	0.004	<0.0040	0.22	0.032	<0.0040
	10/24/2011	109	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0042	<0.0020	0.086	0.013	<0.0020
	4/3/2012	104	<0.0020	0.0022	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.11	0.0069	<0.0020
	4/12/2013	104	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.012	0.0085	<0.0020
	4/8/2014	100	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0042	<0.0020	0.0084	0.016	<0.0020
	5/20/2015	104	<0.0020	0.0025	0.0095	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.46D	2.0D	0.014
OB-05-DO	4/1/2009	81	<0.0050	0.014	0.014	<0.0050	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.13	0.47	<0.0050	<0.0050	0.11	<0.0050
	10/26/2009	81	<0.0050	0.011	0.0096	<0.0050	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.16	0.69	<0.0050	<0.0050	0.23	<0.0050
	4/20/2010	85	<0.010	<0.010	<0.010	<0.010	---	<0.010	<0.010	<0.010	<0.010	<0.010	0.52	1.4	<0.010	<0.010	0.4	<0.010
	10/12/2010	81.5	<0.040	<0.040	<0.040	<0.040	---	<0.040	<0.040	<0.040	<0.040	<0.040	0.47	1.9	<0.040	<0.040	0.48	<0.040
	4/4/2011	81	<0.020	<0.020	<0.020	<0.020	<0.10	<0.020	<0.020	<0.020	<0.020	<0.020	0.87	3.0D	<0.020	<0.020UJ	0.76	<0.020
	10/24/2011	81	<0.010	<0.010	<0.010	<0.010	<0.050	<0.010	<0.010	<0.010	<0.010	<0.010	0.99	2.7D	<0.010	0.026	1.0D	<0.010
	4/3/2012	81.3	<0.020	<0.020	<0.020	<0.020	<0.10	<0.020	<0.020	<0.020	<0.020	<0.020	0.6	1.8	<0.020	<0.020	0.44	<0.020
	4/12/2013	81.5	<0.040	<0.040	<0.040	<0.040	<0.20	<0.040	<0.040	<0.040	<0.040	<0.040	0.85	3	<0.040	<0.040	0.72	<0.040
	4/8/2014	80	<0.020	<0.020	<0.020	<0.020	<0.10	<0.020	<0.020	<0.020	<0.020	<0.020	0.59	1.8	<0.020	0.078	1.7	<0.020
	10/15/2014	85	<0.020	<0.020	<0.020	<0.020	<0.10	<0.020	<0.020	<0.020	<0.020	<0.020	0.025	0.035	<0.020	<0.020	1.9D	<0.020
	5/20/2015	81	<0.020	<0.020	<0.020	<0.020	<0.10	<0.020	<0.020	<0.020	<0.020	<0.020	0.44	1.2	<0.020	0.025	0.73	<0.020
OB-05-S	4/1/2009	25	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.002	0.0068	<0.0010	<0.0010	<0.0010	<0.0010
	10/26/2009	25	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0019	<0.0010	<0.0010	<0.0010	<0.0010
	4/20/2010	29	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0043	0.014	<0.0010	<0.0010	0.0028	<0.0010
	10/12/2010	25	<0.0020	<0.0020	<0.0020	<0.0020	---	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0043	<0.0020	<0.0020	<0.0020	<0.0020
	4/4/2011	25	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0022	0.0036	<0.0020	<0.0020UJ	<0.0020	<0.0020
	10/24/2011	27	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0034	0.0053	<0.0020	<0.0020	<0.0020	<0.0020
	4/3/2012	25	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0024	<0.0020	<0.0020	<0.0020	<0.0020
OB-06-BR	4/2/2009	99	<0.0050	<0.0050	<0.0050	<0.0050	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.22	0.46	<0.0050	<0.0050	0.15	<0.0050
	10/26/2009	99	<0.0025	<0.0025	<0.0025	<0.0025	---	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	0.12	0.22	<0.0025	<0.0025	0.07	<0.0025
	4/22/2010	101	<0.0025	<0.0025	<0.0025	<0.0025	---	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	0.12	0.22	<0.0025	<0.0025	0.04	<0.0025
	10/12/2010	101	<0.0020	<0.0020	<0.0020	<0.0020	---	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.061	0.19	<0.0020	<0.0020	0.023	<0.0020
	4/5/2011	99	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0028	0.0025	<0.0020	0.029	0.074	<0.0020
	10/24/2011	101	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.07	0.14	<0.0020	<0.0020	0.019	<0.0020
	4/3/2012	89	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.049	0.14	<0.0020	<0.0020	0.023	<0.0020
	4/12/2013	100	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.069	0.11	<0.0020	<0.0020	0.038	<0.0020
	4/9/2014	99	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.039	0.11	<0.0020	<0.0020	0.017	<0.0020
	5/22/2015	99	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.010UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	0.029J	0.085J	<0.0020UJ	<0.0020UJ	0.019J	<0.0020UJ

Table 7
Water Quality Data - VOC Results
2009 to Present
Former Varian Facility Site
150 Sohier Road, Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Acetone (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2-DCE (mg/l)	trans-1,2-DCE (mg/l)
OB-06-DO	4/2/2009	65	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0039	0.015	<0.0010	0.0099	0.076	<0.0010
	10/26/2009	65	<0.020	<0.020	<0.020	<0.020	---	<0.020	<0.020	<0.020	<0.020	<0.020	0.044	0.1	<0.020	0.031	1.5	<0.020
	4/22/2010	75	<0.010	<0.010	<0.010	<0.010	---	<0.010	<0.010	<0.010	<0.010	<0.010	0.18	0.35	<0.010	0.013	0.97	<0.010
	10/12/2010	65.5	<0.020	<0.020	<0.020	<0.020	---	<0.020	<0.020	<0.020	<0.020	<0.020	0.045	0.096	<0.020	0.075	1.8	<0.020
	4/5/2011	65	<0.0020	<0.0020	0.0034	<0.0020	0.011	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.11D	0.31D	<0.0020	0.027	1.2D	0.0044
	10/24/2011	75	<0.010	<0.010	<0.010	<0.010	<0.050	<0.010	<0.010	<0.010	<0.010	<0.010	0.25	0.49	<0.010	0.014	0.77	<0.010
	4/3/2012	65.6	<0.010	<0.010	<0.010	<0.010	<0.050	<0.010	<0.010	<0.010	<0.010	<0.010	0.013	0.033	<0.010	0.15	0.59	<0.010
	4/12/2013	63.6	<0.010	<0.010	<0.010	<0.010	<0.050	<0.010	<0.010	<0.010	<0.010	<0.010	0.16	0.25	<0.010	0.012	0.57	<0.010
	4/9/2014	65	<0.0050	<0.0050	<0.0050	<0.0050	<0.025	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.051	0.14	<0.0050	0.013	0.39	<0.0050
	5/22/2015	65	<0.0050UJ	<0.0050UJ	<0.0050UJ	<0.0050UJ	<0.025UJ	<0.0050UJ	<0.0050UJ	<0.0050UJ	<0.0050UJ	<0.0050UJ	0.033J	0.057J	<0.0050UJ	0.014J	0.32J	<0.0050UJ
OB-07-DO	4/2/2009	36	<0.0050	0.0075	0.0092	<0.0050	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.16	0.54	<0.0050	<0.0050	0.2	<0.0050
OB-08-DO	4/3/2009	79	<0.020	<0.020	<0.020	<0.020	---	<0.020	<0.020	<0.020	<0.020	<0.020	0.51	2.6	<0.020	<0.020	1.4	<0.020
	10/27/2009	78	<0.020	<0.020	<0.020	<0.020	---	<0.020	<0.020	<0.020	<0.020	<0.020	0.46	2.2	<0.020	<0.020	1.5	<0.020
	4/28/2010	79	<0.020	<0.020	<0.020	<0.020	---	<0.020	<0.020	<0.020	<0.020	<0.020	0.46	2.3	<0.020	<0.020	1.1	<0.020
	10/18/2010	78	<0.020	<0.020	<0.020	<0.020	---	<0.020	<0.020	<0.020	<0.020	<0.020	0.42	2.5D	<0.020	<0.020	1.2	<0.020
	11/15/2010	77	<0.040	<0.040	<0.040	<0.040	---	<0.040	<0.040	<0.040	<0.040	<0.040	0.38	2.4	<0.040	<0.040	1.1	<0.040
	4/5/2011	77	<0.0020	0.013	0.02	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.26D	1.9D	<0.0020	0.0084	2.2D	0.0089
	10/25/2011	79	<0.040	<0.040	<0.040	<0.040	<0.20	<0.040	<0.040	<0.040	<0.040	<0.040	0.34	2.2	<0.040	<0.040	1.1	<0.040
	4/3/2012	77	<0.040	<0.040	<0.040	<0.040	<0.20	<0.040	<0.040	<0.040	<0.040	<0.040	0.37	2.5	<0.040	<0.040	1.2	<0.040
	4/11/2013	78	<0.0050	0.0061	0.015	<0.0050	<0.025	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.43	3.3D	<0.0050	0.0052	1.5D	0.0062
	4/8/2014	78	<0.040	<0.040	<0.040	<0.040	<0.20	<0.040	<0.040	<0.040	<0.040	<0.040	0.35	2.6	<0.040	<0.040	1.2	<0.040
	5/19/2015	77	<0.040	<0.040	<0.040	<0.040	<0.20	<0.040	<0.040	<0.040	<0.040	<0.040	0.35	2.3	<0.040	<0.040	1.3	<0.040
OB-08-S	4/3/2009	12	<0.0025	<0.0025	<0.0025	<0.0025	---	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	0.075	0.31	<0.0025	<0.0025	0.11	<0.0025
	10/27/2009	12	<0.0020	<0.0020	<0.0020	<0.0020	---	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.029	0.15	<0.0020	<0.0020	0.062	<0.0020
	4/28/2010	14	<0.0025	<0.0025	<0.0025	<0.0025	---	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	0.044	0.21	<0.0025	<0.0025	0.066	<0.0025
	10/18/2010	12	<0.0020	0.0028	0.0028	<0.0020	---	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.09	0.45D	<0.0020	<0.0020	0.23D	<0.0020
	11/15/2010	12	<0.0050	<0.0050	<0.0050	<0.0050	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.069	0.38	<0.0050	<0.0050	0.16	<0.0050
	4/5/2011	12	<0.0020	0.0022	0.0028	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.081	0.39D	<0.0020	<0.0020	0.12	<0.0020
	10/25/2011	12	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.038	0.15	<0.0020	<0.0020	0.042	<0.0020
	4/2/2012	12	<0.0050	<0.0050	<0.0050	<0.0050	<0.025	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.056	0.28	<0.0050	<0.0050	0.1	<0.0050
	11/12/2012	14	<0.0050	<0.0050	<0.0050	<0.0050	<0.025	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.058	0.27	<0.0050	<0.0050	0.12	<0.0050
	4/11/2013	12	<0.0050	<0.0050	<0.0050	<0.0050	<0.025	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.074	0.36	<0.0050	<0.0050	0.082	<0.0050
OB-09-BR	1/14/2009	121	<0.010	<0.010	<0.010	<0.010	---	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.23	0.91	<0.010
	4/9/2009	118	<0.0020	<0.0020	<0.0020	<0.0020	---	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.013	0.016	<0.0020	<0.0020	0.23	0.01
	7/14/2009	121	<0.025	<0.025	<0.025	<0.025	---	<0.025	<0.025	<0.025	<0.025	<0.025	0.068	0.069	<0.025	0.24	3.6	<0.025
	10/28/2009	121	<0.050	<0.050	<0.050	<0.050	---	<0.050	<0.050	<0.050	<0.050	<0.050	0.45	0.66	<0.050	0.1	5.3	<0.050
	1/28/2010	118	<0.0050	<0.0050	<0.0050	<0.0050	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.011	0.018	<0.0050	0.0081	0.4	0.015
	4/22/2010	121	<0.050	<0.050	<0.050	<0.050	---	<0.050	<0.050	<0.050	<0.050	<0.050	0.35	0.66	<0.050	0.14	5.5	<0.050
	7/14/2010	121	<0.025UJ	<0.025UJ	0.031J	<0.025UJ	---	<0.025UJ	<0.025UJ	<0.025UJ	<0.025UJ	<0.025UJ	0.049J	0.054J	<0.025UJ	0.23J	4.9J	0.031J
	10/12/2010	117	<0.10	<0.10	<0.10	<0.10	---	<0.10	<0.10	<0.10	<0.10	<0.10	0.18	0.27	<0.10	0.1	7.9	<0.10
	1/5/2011	121	<0.10	<0.10	<0.10	<0.10	---	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.22	6.5	<0.10
	4/6/2011	117.7	<0.010	<0.010	0.021	<0.010	<0.050	<0.010	<0.010	<0.010	<0.010	<0.010	0.025	0.01	<0.010	0.28	5.5D	<0.010
	7/28/2011	117	<0.10	<0.10	<0.10	<0.10	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10	0.55	1.2	<0.10	0.15	6.5	<0.10
	10/25/2011	121	<0.040	<0.040	<0.040	<0.040	<0.20	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	1.6	1.1	<0.040
	1/18/2012	121	<0.020	<0.020	<0.020	<0.020	<0.10	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.046	1.4	0.033
	4/3/2012	117	<0.040	<0.040	<0.040	<0.040	<0.20	<0.040	<0.040	<0.040	<0.040	<0.040	1.9	3.2	<0.040	<0.040	2.5	<0.040
	8/21/2012	100	<0.040	<0.040	<0.040	<0.040	<0.20	<0.040	<0.040	<0.040	<0.040	<0.040	1.6	2.1	<0.040	0.041	7.7D	<0.040

Table 7
Water Quality Data - VOC Results
2009 to Present
Former Varian Facility Site
150 Sohier Road, Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Acetone (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2-DCE (mg/l)	trans-1,2-DCE (mg/l)
OB-09-BR (Cont.)	11/28/2012	121	<0.050	<0.050	<0.050	<0.050	<0.25	<0.050	<0.050	<0.050	<0.050	<0.050	2.6	3.1	<0.050	<0.050	2.9	<0.050
	2/6/2013	101	<0.10	<0.10	<0.10	<0.10	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10	2.1	3.1	<0.10	<0.10	4.7	<0.10
	4/11/2013	120	<0.050	<0.050	<0.050	<0.050	<0.25	<0.050	<0.050	<0.050	<0.050	<0.050	2.4	3.1	<0.050	<0.050	2.7	<0.050
	10/22/2013	121	<0.050	<0.050	<0.050	<0.050	<0.25	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.21	5	<0.050
	4/10/2014	117	<0.050	<0.050	<0.050	<0.050	<0.25	<0.050	<0.050	<0.050	<0.050	<0.050	0.11	0.11	<0.050	0.74J	4.6	<0.050
	10/15/2014	119	<0.050	<0.050	<0.050	<0.050	<0.25	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	1.9	2.9	<0.050
	5/27/2015	117	<0.010	<0.010	<0.010	<0.010	<0.050	<0.010	<0.010	<0.010	<0.010	<0.010	0.012	<0.010	<0.010	0.15	0.57	<0.010
OB-09-DO	1/13/2009	95	<0.0050	<0.0050	<0.0050	<0.0050	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.59	0.12	<0.0050
	4/9/2009	92	<0.0010	0.0016	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0025	0.014	<0.0010	<0.0010	0.007	<0.0010
	7/14/2009	95	<0.010	<0.010	<0.010	<0.010	---	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.97	0.11	<0.010
	10/28/2009	95	<0.010	<0.010	<0.010	<0.010	---	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.87	0.06	<0.010
	1/28/2010	92	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0022	0.0043	<0.0010
	4/22/2010	95	<0.0025	<0.0025	<0.0025	<0.0025	---	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	0.3	0.21	<0.0025
	7/14/2010	95	<0.0010UJ	0.0033J	<0.0010UJ	<0.0010UJ	---	<0.0010UJ	<0.0010UJ	<0.0010UJ	<0.0010UJ	<0.0010UJ	<0.0010UJ	<0.0010UJ	<0.0010UJ	0.033J	0.0059J	<0.0010UJ
	10/12/2010	93	<0.0050	0.0071	<0.0050	<0.0050	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.42	0.064	<0.0050
	1/5/2011	95	<0.020	<0.020	<0.020	<0.020	---	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	1.3	0.35	<0.020
	4/6/2011	92.3	<0.010	<0.010	<0.010	<0.010	<0.050	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	1.4D	0.45	<0.010
	7/28/2011	92	<0.040	<0.040	<0.040	<0.040	<0.20	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	2	0.57	<0.040
	10/25/2011	92	<0.040	<0.040	<0.040	<0.040	<0.20	<0.040	<0.040	<0.040	<0.040	<0.040	0.41	1	<0.040	0.15	5.1D	<0.040
	1/18/2012	92	<0.040	<0.040	<0.040	<0.040	<0.20	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	1.9	1.6	<0.040
	4/3/2012	92	<0.040	<0.040	<0.040	<0.040	<0.20	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	1.9	2	<0.040
	8/21/2012	92	<0.020	<0.020	<0.020	<0.020	<0.10	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	1.8D	1.4	<0.020
	11/28/2012	95	<0.020	<0.020	<0.020	<0.020	<0.10	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	1.1	0.27	<0.020
	2/6/2013	87.2	<0.020	<0.020	<0.020	<0.020	<0.10	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	1.5	1.4	<0.020
	4/11/2013	94	<0.020	<0.020	<0.020	<0.020	<0.10	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	1.5	1.8	<0.020
	10/22/2013	95	<0.020	<0.020	0.023	<0.020	<0.10	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	1.3J	2.2D	<0.020
	4/10/2014	92	<0.040	<0.040	<0.040	<0.040	<0.20	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	1.9J	2.3	<0.040
	10/15/2014	91	<0.020	<0.020	<0.020	<0.020	<0.10	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	1.5	1.3	<0.020
	5/27/2015	92	<0.020	<0.020	<0.020	<0.020	<0.10	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.69	1.2	<0.020
OB-09-S	1/13/2009	29	0.039	0.38	<0.010	<0.010	---	<0.010	<0.010	<0.010	0.13	<0.010	0.012	0.062	<0.010	1.2	0.43	0.02
	4/9/2009	27.5	0.055	0.023	<0.020	<0.020	---	<0.020	<0.020	<0.020	0.024J	<0.020	<0.020	<0.020	<0.020	1.9	1.4	<0.020
	7/14/2009	29	0.002	0.049	<0.0010	0.0011	---	<0.0010	<0.0010	<0.0010	0.046J	<0.0010	0.0045	0.035	0.0049	0.073	0.025	0.0037
	10/28/2009	29	<0.0050	0.078	<0.0050	<0.0050	---	<0.0050	<0.0050	<0.0050	0.046	<0.0050	<0.0050	<0.0050	<0.0050	0.63	0.24	0.0056
	1/28/2010	27.5	<0.0050	0.097	<0.0050	<0.0050	---	<0.0050	<0.0050	<0.0050	0.042	<0.0050	<0.0050	0.009	<0.0050	0.49	0.15	0.0098
	4/22/2010	29	0.014	0.046	<0.0010	<0.0010	---	<0.0010	<0.0010	0.0036	0.029	<0.0010	0.0019	0.029	<0.0010	0.14	0.048	0.0047
	7/14/2010	29	0.019J	0.25DJ	<0.0010UJ	0.0024J	---	<0.0010UJ	<0.0010UJ	<0.0010UJ	0.087J	<0.0010UJ	0.0018J	0.0035J	<0.0010UJ	0.020J	0.020J	0.0024J
	10/12/2010	27	0.0045	0.053	<0.0020	<0.0020	---	<0.0020	<0.0020	<0.0020	0.12	<0.0020	<0.0020	<0.0020	<0.0020	0.023	0.061	0.0021
	1/5/2011	29	<0.0020	0.0089	<0.0020	<0.0020	---	<0.0020	<0.0020	<0.0020	0.04	<0.0020	<0.0020	0.0074	<0.0020	0.0054	0.0065	<0.0020
	4/5/2011	26.5	0.018	0.039	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	0.047	<0.0020	<0.0020	0.003	<0.0020	0.076	0.081	0.0028
	7/28/2011	26	<0.0020	<0.0020	<0.0020	0.0025	0.019	<0.0020	<0.0020	<0.0020	0.044	<0.0020	<0.0020	<0.0020	<0.0020	0.0031	0.0063	<0.0020
	10/25/2011	23	0.14	0.89D	0.0042	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	0.45D	<0.0020	<0.0020	<0.0020	<0.0020	0.095	0.018	<0.0020
	1/18/2012	23.5	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	0.56D	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0037	<0.0020
	4/3/2012	23	<0.0040	<0.0040	<0.0040	<0.0040	<0.020	<0.0040	<0.0040	<0.0040	0.27	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040
	8/21/2012	23	<0.0020	<0.0020	<0.0020	<0.0020	0.014	<0.0020	<0.0020	<0.0020	0.0059	<0.0020	<0.0020	0.0048	<0.0020	<0.0020	0.0027	<0.0020
	11/28/2012	29	<0.0020	<0.0020	<0.0020	<0.0020	0.01	<0.0020	<0.0020	<0.0020	0.0082	<0.0020	0.0077	0.033	<0.0020	0.0037	0.017	<0.0020
	2/6/2013	23.1	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	0.0056	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.019	<0.0020
	4/11/2013	23	<0.0020	0.0024	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	0.011	<0.0020	<0.0020	0.003	<0.0020	0.035	0.023	<0.0020

Table 7
Water Quality Data - VOC Results
2009 to Present
Former Varian Facility Site
150 Sohier Road, Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Acetone (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2-DCE (mg/l)	trans-1,2-DCE (mg/l)
OB-09-S (Cont.)	10/22/2013	29	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	0.008	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0033	<0.0020
	1/21/2014	23.1	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	0.0022	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/9/2014	23	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	0.0023	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0029	<0.0020
	8/6/2014	18	<0.0020	0.0043	0.0023	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	0.11	<0.0020	<0.0020	<0.0020	<0.0020	0.14	0.37D	<0.0020
	10/15/2014	20	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	0.081	<0.0020	<0.0020	<0.0020	<0.0020	0.0045	0.0049	<0.0020
	1/20/2015	20	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	0.086	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0026	<0.0020
	5/29/2015	20	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	0.032	<0.0020	<0.0020	<0.0020	<0.0020	0.0062	0.0081	<0.0020
OB-10-BR	4/3/2009	74	<0.020	<0.020	<0.020	<0.020	---	<0.020	<0.020	<0.020	<0.020	<0.020	0.31	1.7	<0.020	0.034	1.6	<0.020
	4/21/2010	75	<0.020	<0.020	<0.020	<0.020	---	<0.020	<0.020	<0.020	<0.020	<0.020	0.079	0.51	<0.020	0.04	2.9	<0.020
	4/5/2011	73.4	<0.0020	0.0032	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0043	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/6/2012	73	<0.020	<0.020	<0.020	<0.020	<0.10	<0.020	<0.020	<0.020	<0.020	<0.020	0.25	1.6	<0.020	<0.020	0.3	<0.020
	4/12/2013	71	<0.020	<0.020	<0.020	<0.020	<0.10	<0.020	<0.020	<0.020	<0.020	<0.020	2.0DJ	4.8D	<0.020	<0.020	0.51	<0.020
	4/10/2014	72	<0.10	<0.10	<0.10	<0.10	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10	0.89	4.9	<0.10	<0.10	0.76	<0.10
	10/15/2014	72	<0.10	<0.10	<0.10	<0.10	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10	0.9	4.4	<0.10	<0.10	0.82	<0.10
	5/23/2015	73	<0.10UJ	<0.10UJ	<0.10UJ	<0.10UJ	<0.50UJ	<0.10UJ	<0.10UJ	<0.10UJ	<0.10UJ	<0.10UJ	2.2J	6.0J	<0.10UJ	<0.10UJ	1.1J	<0.10UJ
OB-10-DO	1/13/2009	49	<0.0050	<0.0050	<0.0050	<0.0050	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.017	0.39	<0.0050	<0.0050	0.4	<0.0050
	4/1/2009	46	<0.010	<0.010	<0.010	<0.010	---	<0.010	<0.010	<0.010	<0.010	<0.010	0.034	1.1	<0.010	<0.010	0.66	<0.010
	7/14/2010	48.5	<0.010UJ	<0.010UJ	<0.010UJ	<0.010UJ	---	<0.010UJ	<0.010UJ	<0.010UJ	<0.010UJ	<0.010UJ	0.020J	1.2J	<0.010UJ	<0.010UJ	0.16J	0.014J
	10/13/2010	46	<0.010	<0.010	<0.010	<0.010	---	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	1.1D	0.014
	1/5/2011	48.5	<0.010	<0.010	<0.010	<0.010	---	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.37	<0.010	<0.010	0.69	0.014
	4/6/2011	46	<0.010	<0.010	<0.010	<0.010	<0.050	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.17	<0.010	<0.010	0.76	0.013
	7/28/2011	46	<0.010	<0.010	<0.010	<0.010	<0.050	<0.010	<0.010	<0.010	<0.010	<0.010	0.013	0.87	<0.010	<0.010	0.4	0.017
	10/26/2011	48.5	<0.010	<0.010	<0.010	<0.010	<0.050	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.25	<0.010	<0.010	0.81	0.019
	1/18/2012	46	<0.010	<0.010	<0.010	<0.010	<0.050	<0.010	<0.010	<0.010	<0.010	<0.010	0.013	0.92	<0.010	<0.010	0.38	0.023
	4/4/2012	46	<0.010	<0.010	<0.010	<0.010	<0.050	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.3	<0.010	<0.010	0.74	0.021
OB-10-S	1/13/2009	29	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	4/1/2009	29	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	7/14/2009	29	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	10/27/2009	29	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	1/28/2010	29	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	4/22/2010	29	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	7/14/2010	29	<0.0010UJ	<0.0010UJ	<0.0010UJ	<0.0010UJ	---	<0.0010UJ	<0.0010UJ	<0.0010UJ	<0.0010UJ	<0.0010UJ	<0.0010UJ	<0.0010UJ	<0.0010UJ	<0.0010UJ	<0.0010UJ	<0.0010UJ
	10/13/2010	29	<0.0020	<0.0020	<0.0020	<0.0020	---	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	1/5/2011	29	<0.0020	<0.0020	<0.0020	<0.0020	---	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/6/2011	31	<0.0020	<0.0020	<0.0020	<0.0020	0.01	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	7/28/2011	29	<0.0020	<0.0020	<0.0020	<0.0020	0.013	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	10/26/2011	29	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	1/18/2012	29	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/4/2012	29	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0081	0.02	<0.0020	<0.0020	<0.0020	<0.0020
	8/21/2012	29	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.011	<0.0020	<0.0020	0.004	<0.0020
	11/28/2012	29	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0038	0.03	<0.0020	<0.0020	0.0092	<0.0020
	2/6/2013	29.1	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0023	0.024	<0.0020	<0.0020	0.0079	<0.0020
	5/2/2013	29	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0051	0.032	<0.0020	<0.0020	0.0093	<0.0020
	4/10/2014	29	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0029	<0.0020	<0.0020	<0.0020	<0.0020
	5/23/2015	29	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.010UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	0.0028J	0.0085J	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ

Table 7
Water Quality Data - VOC Results
2009 to Present
Former Varian Facility Site
150 Sohier Road, Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Acetone (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2-DCE (mg/l)	trans-1,2-DCE (mg/l)
OB-11-BR	4/3/2009	85	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0031	<0.0010	0.004	0.022	0.0021
	4/6/2011	86.1	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.010UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	0.0064J	<0.0020UJ	0.0027J	0.036J	0.0045J
	4/5/2012	86	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0032	<0.0020	<0.0020	0.045	0.0051
	4/17/2013	82	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0037	<0.0020	<0.0020	0.047	0.0058
	4/9/2014	86	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0055	<0.0020	<0.0020	0.035	0.0067
	5/22/2015	86	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.010UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	0.0033J	<0.0020UJ	0.0022J	0.037J	0.0057J
OB-11-DO	4/3/2009	61	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.065	<0.0010	<0.0010	0.023	<0.0010
	4/6/2011	59.8	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.010UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	0.075J	<0.0020UJ	<0.0020UJ	0.021J	<0.0020UJ
	4/5/2012	59	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.083	<0.0020	<0.0020	0.021	<0.0020
	4/17/2013	60	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.084	<0.0020	<0.0020	0.027	<0.0020
	4/9/2014	60	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.091	<0.0020	<0.0020	0.02	<0.0020
	5/22/2015	59	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.010UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	0.078J	<0.0020UJ	<0.0020UJ	0.015J	<0.0020UJ
OB-11-S	4/3/2009	29	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
OB-12-BR	1/13/2009	87	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0016	0.023	<0.0010	0.0013	0.037	<0.0010
	4/1/2009	84	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0021	0.051	<0.0010	0.002	0.084	<0.0010
OB-12-DO	1/13/2009	59	<0.40	<0.40	<0.40	<0.40	---	<0.40	<0.40	<0.40	<0.40	<0.40	2.3	39	<0.40	<0.40	18	<0.40
	4/1/2009	50	<0.50	<0.50	<0.50	<0.50	---	<0.50	<0.50	<0.50	<0.50	<0.50	2.1	43	<0.50	<0.50	20	<0.50
	10/27/2009	50	<0.0010	0.0078	<0.0010	0.0027	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	5/7/2010	57	<0.0010	0.0075	<0.0010	0.0026	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.088	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	7/14/2010	59	<0.0010UJ	0.0084J	<0.0010UJ	0.0034J	---	<0.0010UJ	<0.0010UJ	<0.0010UJ	<0.0010UJ	<0.0010UJ	0.27DJ	0.0038J	<0.0010UJ	<0.0010UJ	<0.0010UJ	<0.0010UJ
	10/13/2010	46	<0.0020	0.0076	0.024	<0.0020	0.011	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	1.4D	21D	<0.0020	<0.0020	8.7D	0.014
	1/5/2011	59	<0.0050	0.0075	0.053	<0.0050	0.015J	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	2.2D	45D	<0.0050	0.0066	24D	0.018
	4/6/2011	49.1	<0.50	<0.50	<0.50	<0.50	<2.5	<0.50	<0.50	<0.50	<0.50	<0.50	2.1	33	<0.50	<0.50	17	<0.50
	7/28/2011	59	<0.0020	0.0068	<0.0020	0.0022	0.02	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	10/26/2011	48	<0.0020	0.0069	<0.0020	0.0022	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0034	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	1/17/2012	48.5	<0.0020	0.008	0.018	0.0021	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	1.8D	15D	<0.0020	<0.0020	5.5D	0.013
	4/4/2012	48	<0.40	<0.40	<0.40	<0.40	<2.0	<0.40	<0.40	<0.40	<0.40	<0.40	2.5	37	<0.40	<0.40	19	<0.40
	11/26/2012	59	<0.0020	0.0068	<0.0020	0.0024	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/17/2013	56	<0.0020	0.0076	<0.0020	<0.0020	0.014	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.086	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	10/24/2013	59	<0.0020	0.0057	0.025	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	1.8D	18D	<0.0020	<0.0020	7.5D	0.051
	4/9/2014	47	<0.0020	0.0059	0.059	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	2.0D	28D	<0.0020	0.0053	16D	0.11
	10/16/2014	59	<0.0020	0.0051	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	0.0024	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	5/26/2015	48	<0.0020	0.0052	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0091	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
OB-12-S	1/13/2009	29	0.0041	<0.0025	<0.0025	<0.0025	---	0.0051	<0.0025	<0.0025	<0.0025	<0.0025	0.25	0.18	<0.0025	<0.0025	<0.0025	<0.0025
	4/1/2009	26	0.0021	<0.0020	<0.0020	<0.0020	---	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.17	0.11	<0.0020	<0.0020	<0.0020	<0.0020
	7/14/2009	29	0.0048	<0.0025	<0.0025	<0.0025	---	0.0061	<0.0025	<0.0025	<0.0025	<0.0025	0.26	0.19	<0.0025	<0.0025	<0.0025	<0.0025
	10/27/2009	26	0.0012	<0.0010	<0.0010	<0.0010	---	0.0017	<0.0010	<0.0010	<0.0010	<0.0010	0.088	0.022	<0.0010	<0.0010	<0.0010	<0.0010
	1/28/2010	26	0.0022	<0.0010	<0.0010	<0.0010	---	0.002	<0.0010	<0.0010	<0.0010	<0.0010	0.072	0.015	<0.0010	<0.0010	<0.0010	<0.0010
	4/22/2010	29	0.0023	<0.0010	<0.0010	<0.0010	---	0.0017	<0.0010	<0.0010	<0.0010	<0.0010	0.089	0.055	<0.0010	<0.0010	<0.0010	<0.0010
	7/14/2010	29	0.0043J	<0.0010UJ	<0.0010UJ	<0.0010UJ	---	0.0039J	<0.0010UJ	0.0025J	<0.0010UJ	<0.0010UJ	0.22DJ	0.14J	<0.0010UJ	<0.0010UJ	<0.0010UJ	<0.0010UJ
	10/13/2010	26	0.005	<0.0040	<0.0040	<0.0040	0.0091J	0.0052	<0.0040	<0.0040	<0.0040	<0.0040	0.22	0.15	<0.0040	<0.0040	<0.0040	<0.0040
	1/5/2011	29	0.0038	<0.0020	<0.0020	<0.0020	0.012	0.0034	<0.0020	0.0026	<0.0020	<0.0020	0.17	0.098	<0.0020	<0.0020	<0.0020	<0.0020
	4/6/2011	27.7	<0.0020	<0.0020	<0.0020	<0.0020	0.0053J	0.002	<0.0020	<0.0020	<0.0020	<0.0020	0.15	0.071	<0.0020	<0.0020	<0.0020	<0.0020
	7/28/2011	26	0.0033	<0.0020	<0.0020	<0.0020	0.015	0.0025	<0.0020	0.0023	<0.0020	<0.0020	0.19	0.12	<0.0020	<0.0020	<0.0020	<0.0020
	10/26/2011	26	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.058	0.021	<0.0020	<0.0020	<0.0020	<0.0020
	1/17/2012	26.5	0.0041	<0.0020	<0.0020	<0.0020	<0.010	0.0037	<0.0020	0.0033	<0.0020	<0.0020	0.19	0.14	<0.0020	<0.0020	<0.0020	<0.0020
	4/4/2012	26	<0.0040	<0.0040	<0.0040	<0.0040	<0.020	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	0.2	0.11	<0.0040	<0.0040	<0.0040	<0.0040

Table 7
Water Quality Data - VOC Results
2009 to Present
Former Varian Facility Site
150 Sohier Road, Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Acetone (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2-DCE (mg/l)	trans-1,2-DCE (mg/l)
OB-12-S (Cont.)	8/21/2012	27.7	0.0042	<0.0040	<0.0040	<0.0040	<0.020	<0.0040	<0.0040	0.0043	<0.0040	<0.0040	0.19	0.13	<0.0040	<0.0040	<0.0040	<0.0040
	11/28/2012	29	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	2/6/2013	27.4	0.0061	<0.0040	<0.0040	<0.0040	<0.020	<0.0040	<0.0040	0.007	<0.0040	<0.0040	0.26	0.16	<0.0040	<0.0040	<0.0040	<0.0040
	4/12/2013	27	0.004	<0.0020	<0.0020	<0.0020	<0.010	0.0028	<0.0020	0.0038	<0.0020	<0.0020	0.18D	0.12	<0.0020	<0.0020	<0.0020	<0.0020
	4/9/2014	27	0.0022	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	0.0029	<0.0020	<0.0020	0.16	0.096	<0.0020	<0.0020	<0.0020	<0.0020
OB-14-DO	4/3/2009	55	<0.010	<0.010	<0.010	<0.010	---	<0.010	<0.010	<0.010	<0.010	<0.010	0.086	0.84	<0.010	<0.010	0.21	<0.010
	4/6/2011	55.4	<0.020UJ	<0.020UJ	<0.020UJ	<0.020UJ	<0.10UJ	<0.020UJ	<0.020UJ	<0.020UJ	<0.020UJ	<0.020UJ	0.096J	1.0J	<0.020UJ	<0.020UJ	0.17J	<0.020UJ
	4/5/2012	55	<0.020	<0.020	<0.020	<0.020	<0.10	<0.020	<0.020	<0.020	<0.020	<0.020	0.095	1.2	<0.020	<0.020	0.13	<0.020
	4/18/2013	56	<0.020	<0.020	<0.020	<0.020	<0.10	<0.020	<0.020	<0.020	<0.020	<0.020	0.094	1.1	<0.020	<0.020	0.15	<0.020
	4/9/2014	55	<0.020	<0.020	<0.020	<0.020	<0.10	<0.020	<0.020	<0.020	<0.020	<0.020	0.11	1.3	<0.020	<0.020	0.17	<0.020
	5/22/2015	55	<0.020UJ	<0.020UJ	<0.020UJ	<0.020UJ	<0.10UJ	<0.020UJ	<0.020UJ	<0.020UJ	<0.020UJ	<0.020UJ	0.093J	1.1J	<0.020UJ	<0.020UJ	0.13J	<0.020UJ
OB-15-S	1/13/2009	19	0.5	<0.050	<0.050	<0.050	---	<0.050	<0.050	<0.050	<0.050	<0.050	6.1	4.3	<0.050	<0.050	0.76	<0.050
	4/1/2009	18	0.25	<0.10	<0.10	<0.10	---	<0.10	<0.10	<0.10	<0.10	<0.10	4.4	4.4	<0.10	<0.10	7.6	<0.10
	7/14/2009	19	<0.10	<0.10	<0.10	<0.10	---	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.21	<0.10	0.78	9.5	<0.10
	10/27/2009	18	<0.050	<0.050	<0.050	<0.050	---	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.092	<0.050	1.3	4.4	<0.050
	1/28/2010	18	<0.050	<0.050	<0.050	<0.050	---	<0.050	<0.050	<0.050	<0.050	<0.050	0.13	0.27	<0.050	1.4	5.6	<0.050
	4/22/2010	19	<0.050	<0.050	<0.050	<0.050	---	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	1.2	3.7	<0.050
	7/14/2010	19	0.0044J	0.0054J	<0.0010UJ	<0.0010UJ	---	<0.0010UJ	<0.0010UJ	<0.0010UJ	<0.0010UJ	<0.0010UJ	<0.0010UJ	0.0011J	<0.0010UJ	0.0060J	0.0044J	0.0021J
	10/12/2010	19	0.0026	0.0085	<0.0020	<0.0020	---	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.013	0.014	<0.0020
	1/4/2011	19	<0.0020	0.0022	<0.0020	<0.0020	---	<0.0020	<0.0020	<0.0020	0.0065	<0.0020	<0.0020	<0.0020	<0.0020	0.1	0.11	0.0022
	4/6/2011	18.7	<0.010	<0.010	<0.010	<0.010	<0.050	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.05	<0.010	0.53	1.2D	<0.010
	7/28/2011	19	<0.0020	<0.0020	<0.0020	<0.0020	0.017	<0.0020	<0.0020	<0.0020	0.0028	<0.0020	<0.0020	0.012	<0.0020	0.04	0.026	<0.0020
	10/25/2011	18.5	<0.0020	0.0051	<0.0020	<0.0020	0.013	<0.0020	<0.0020	<0.0020	0.0054	<0.0020	<0.0020	<0.0020	<0.0020	0.18	0.15	<0.0020
	1/17/2012	18.5	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	0.0043	<0.0020	<0.0020	<0.0020	<0.0020	0.0052	0.0045	<0.0020
	4/3/2012	18.75	<0.020	<0.020	<0.020	<0.020	<0.10	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.64	1.4	<0.020
	8/21/2012	18.6	<0.0020	<0.0020	<0.0020	<0.0020	0.014	<0.0020	<0.0020	0.02	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0088	0.024	<0.0020
	11/28/2012	19	<0.0020	<0.0020	<0.0020	<0.0020	0.011	<0.0020	<0.0020	0.0056	0.0031	<0.0020	0.0074	0.01	<0.0020	0.067	0.055	<0.0020
	2/6/2013	18.8	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	0.0025	<0.0020	<0.0020	0.004	<0.0020	0.032	0.035	<0.0020
	4/11/2013	19	<0.0020	<0.0020	<0.0020	<0.0020	0.014	<0.0020	<0.0020	<0.0020	0.0035	<0.0020	<0.0020	<0.0020	<0.0020	0.15	0.024	<0.0020
	10/22/2013	18.47	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	0.0021	<0.0020	<0.0020	0.0023	<0.0020	0.057	0.017	<0.0020
	1/21/2014	19.7	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0036	<0.0020	0.095	0.0058	<0.0020
	4/8/2014	18	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.011	0.0029	<0.0020
	8/6/2014	17	<0.0020	0.0022	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	0.0029	<0.0020	<0.0020	<0.0020	<0.0020	0.0038	0.006	<0.0020
	10/15/2014	19	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	0.0037	<0.0020	<0.0020	<0.0020	<0.0020	0.0048	0.0038	<0.0020
	1/20/2015	18	<0.0020	0.004	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	0.0067	<0.0020	<0.0020	<0.0020	<0.0020	0.089	0.12	<0.0020
	5/29/2015	18	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.019	0.018	<0.0020
OB-16-BR	4/3/2009	32	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0055	<0.0010	<0.0010	<0.0010	<0.0010
	4/20/2010	32	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	4/5/2011	32	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/5/2012	32	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/16/2013	34	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020UJ	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/10/2014	20	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
OB-16-S	4/3/2009	15	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0013	0.0016	<0.0010	<0.0010	<0.0010	<0.0010
	4/20/2010	17	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0017	<0.0010	<0.0010	<0.0010	<0.0010
	4/6/2011	15	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/5/2012	15.5	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/16/2013	16	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020UJ	<0.0020	0.048	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/10/2014	15	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020

Table 7
Water Quality Data - VOC Results
2009 to Present
Former Varian Facility Site
150 Sohier Road, Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Acetone (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2-DCE (mg/l)	trans-1,2-DCE (mg/l)
OB-17-BR	4/1/2009	95	<0.0025	<0.0025	<0.0025	<0.0025	---	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	0.018	0.37	<0.0025
	4/21/2010	97	<0.0025	<0.0025	<0.0025	<0.0025	---	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	0.17	0.11	<0.0025
	4/4/2011	96	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0029	<0.0020	0.13	0.039	<0.0020
	4/2/2012	98	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.13	<0.0020	<0.0020
	4/12/2013	97	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020J	<0.0020	<0.0020	0.097J	0.016	<0.0020
	4/7/2014	95	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0021	<0.0020	0.012	0.006	<0.0020
	5/19/2015	95	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.002	<0.0020	0.0035	0.0031	<0.0020
OB-17-DO	4/1/2009	41	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.017	0.019	<0.0010	<0.0010	<0.0010	<0.0010
	4/21/2010	42	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.016	0.018	<0.0010	<0.0010	<0.0010	<0.0010
	4/4/2011	41	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.014	0.015	<0.0020	<0.0020UJ	<0.0020	<0.0020
	4/2/2012	41.24	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.013	0.015	<0.0020	<0.0020	<0.0020	<0.0020
	4/12/2013	41.4	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0094J	0.0096	<0.0020	<0.0020	<0.0020	<0.0020
	4/7/2014	41	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0066	0.0078	<0.0020	<0.0020	<0.0020	<0.0020
	5/19/2015	41	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0073	0.0087	<0.0020	<0.0020	<0.0020	<0.0020
OB-18-DO	4/2/2009	23	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0051	0.088	<0.0010	0.0016	0.056	<0.0010
	10/26/2009	23	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	0.0019	<0.0010	<0.0010	0.012	0.11	<0.0010	<0.0010	0.048	<0.0010
	4/20/2010	25	<0.010	<0.010	<0.010	<0.010	---	<0.010	<0.010	<0.010	<0.010	<0.010	0.071	0.7	<0.010	0.013	0.47	<0.010
	10/14/2010	24	<0.0020	0.0023	0.0038	<0.0020	---	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.035	0.36D	<0.0020	0.016	0.46D	0.0032
	4/5/2011	23	<0.0020	0.0027	0.0048	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.076	0.63D	<0.0020	0.051	0.66D	<0.0020
	10/25/2011	23	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.027	0.16	<0.0020	0.007	0.099	<0.0020
	4/5/2012	23.8	<0.0050	<0.0050	<0.0050	<0.0050	<0.025	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.018	0.23	<0.0050	0.024	0.37	<0.0050
	4/12/2013	23.8	<0.0050	<0.0050	0.0057	<0.0050	<0.025	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.039J	0.37	<0.0050	0.063J	0.43	<0.0050
	4/8/2014	23	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.017	<0.0020	<0.0020	0.013	<0.0020
	5/23/2015	23	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.010UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	0.015J	0.098J	<0.0020UJ
OB-18-S	4/2/2009	11	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	10/26/2009	11	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0011	<0.0010	<0.0010	<0.0010	<0.0010
	4/20/2010	14	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0013	<0.0010	<0.0010	0.0011	<0.0010
	10/14/2010	11	<0.0020	<0.0020	<0.0020	<0.0020	---	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0026	0.0082	<0.0020	0.019	0.07	0.0082
	4/5/2011	11	<0.0020	<0.0020	<0.0020	<0.0020	0.011	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	10/25/2011	11	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/5/2012	11.2	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0049	<0.0020	<0.0020	0.0026	<0.0020
	11/12/2012	14	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/12/2013	11.2	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	10/23/2013	11	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.013	<0.0020UJ	0.0087	0.086	0.0031
	4/8/2014	10	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	10/15/2014	14	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0021	<0.0020	<0.0020	0.0091	<0.0020
	5/23/2015	11	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.010UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ
OB-19-BR	1/13/2009	91	<0.10	<0.10	<0.10	<0.10	---	<0.10	<0.10	<0.10	<0.10	<0.10	0.85	9.4	<0.10	<0.10	4.7	<0.10
	4/9/2009	82	<0.10	<0.10	<0.10	<0.10	---	<0.10	<0.10	<0.10	<0.10	<0.10	1	12	<0.10	<0.10	6	<0.10
	7/14/2010	91	<0.050UJ	<0.050UJ	<0.050UJ	<0.050UJ	---	<0.050UJ	<0.050UJ	<0.050UJ	<0.050UJ	<0.050UJ	0.39J	6.3J	<0.050UJ	0.13J	5.8J	0.053J
OB-19-DO	1/13/2009	64	<0.20	<0.20	<0.20	<0.20	---	<0.20	<0.20	<0.20	<0.20	<0.20	8.7	17	<0.20	<0.20	2.3	<0.20
	4/9/2009	57	<0.20	<0.20	<0.20	<0.20	---	<0.20	<0.20	<0.20	<0.20	<0.20	8.1	17	<0.20	<0.20	2.1	<0.20
	7/14/2010	64	<0.020UJ	<0.020UJ	<0.020UJ	<0.020UJ	---	<0.020UJ	<0.020UJ	<0.020UJ	<0.020UJ	<0.020UJ	0.52J	2.6J	<0.020UJ	0.10J	1.4J	0.075J
	10/13/2010	57	<0.020	<0.020	<0.020	<0.020	---	<0.020	<0.020	<0.020	<0.020	<0.020	0.25	0.94	<0.020	0.085	1.9D	0.058
	1/5/2011	64	<0.040	<0.040	<0.040	<0.040	---	<0.040	<0.040	<0.040	<0.040	<0.040	0.87	3.2	<0.040	0.1	1.5	0.064
	4/4/2011	57	<0.020	<0.020	<0.020	<0.020	<0.10	<0.020	<0.020	<0.020	<0.020	<0.020	0.46	1.8	<0.020	0.066J	1.4	0.051
	7/28/2011	57	<0.040	<0.040	<0.040	<0.040	<0.20	<0.040	<0.040	<0.040	<0.040	<0.040	0.74	2.8	<0.040	0.11	1.7	0.061

Table 7
Water Quality Data - VOC Results
2009 to Present
Former Varian Facility Site
150 Sohier Road, Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Acetone (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2-DCE (mg/l)	trans-1,2-DCE (mg/l)
OB-19-DO (Cont.)	10/26/2011	64	<0.020	<0.020	<0.020	<0.020	<0.10	<0.020	<0.020	<0.020	<0.020	<0.020	0.72	3.2D	<0.020	0.079	1.3	0.053
	1/17/2012	56.5	<0.040	<0.040	<0.040	<0.040	<0.20	<0.040	<0.040	<0.040	<0.040	<0.040	0.82	3.1	<0.040	0.094	1.5	0.066
	4/4/2012	57	<0.040	<0.040	<0.040	<0.040	<0.20	<0.040	<0.040	<0.040	<0.040	<0.040	0.8	3.1	<0.040	0.1	1.5	0.066
	11/26/2012	64	<0.040	<0.040	<0.040	<0.040	<0.20	<0.040	<0.040	<0.040	<0.040	<0.040	12D	24D	<0.040	0.086	4.1	0.07
	4/15/2013	57	<0.050	<0.050	<0.050	<0.050	<0.25	<0.050	<0.050	<0.050	<0.050	<0.050	0.83J	3.8	<0.050	0.097	1.3	0.063
	10/23/2013	64	<0.040	<0.040	<0.040	<0.040	<0.20	<0.040	<0.040	<0.040	<0.040	<0.040	0.64	2.4	<0.040	0.044	0.8	0.051
	4/16/2014	56	<0.040	<0.040	<0.040	<0.040	<0.20	<0.040	<0.040	<0.040	<0.040	<0.040	0.41	2	<0.040	0.061J	0.83	0.057
	10/15/2014	56	<0.010	<0.010	<0.010	<0.010	<0.050	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.055	<0.010	0.011	0.81	0.016
	5/26/2015	56	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0021	0.0076	<0.0020	0.0086	0.17	0.02
OB-19-S	4/3/2009	34	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	4/20/2010	34	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	4/5/2011	32.7	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/5/2012	32	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/15/2013	32	<0.0020	<0.0020	<0.0020	<0.0020	0.012	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/21/2014	32	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	0.014	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	5/23/2015	32	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.010UJ	<0.0020UJ	<0.0020UJ	0.016J	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ
OB-20-BR	4/6/2009	95	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	10/27/2009	95	<0.0010	0.0014	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	4/28/2010	100	<0.0010	0.0014	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	10/13/2010	96	<0.0020	<0.0020	<0.0020	<0.0020	---	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0027	<0.0020	<0.0020	0.014	<0.0020
	4/6/2011	95	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.056	<0.0020	<0.0020	0.29D	<0.0020
	10/26/2011	97	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0031	0.13	<0.0020	0.0024	0.47D	0.002
	4/6/2012	94.75	<0.0040	<0.0040	<0.0040	<0.0040	<0.020	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	0.024	<0.0040	<0.0040	0.19	<0.0040
	4/15/2013	93.5	<0.0040	<0.0040	<0.0040	<0.0040	<0.020	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	0.11	<0.0040	0.0058	0.89D	0.011
	4/21/2014	94	<0.020	<0.020	<0.020	<0.020	<0.10	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.1	<0.020	<0.020	0.98	<0.020
	10/15/2014	100	<0.010	<0.010	<0.010	<0.010	<0.050	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.055	<0.010	0.011	0.81	0.016
	5/19/2015	94	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0027	<0.0020	<0.0020	0.024	<0.0020
OB-20-DO	4/6/2009	75	<0.0050	<0.0050	<0.0050	<0.0050	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.031	<0.0050	0.0075	0.42	<0.0050
	10/27/2009	75	<0.0025	<0.0025	<0.0025	<0.0025	---	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	0.0058	0.076	<0.0025	<0.0025	0.25	<0.0025
	4/23/2010	77	<0.0050	<0.0050	<0.0050	<0.0050	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.012	<0.0050	<0.0050	0.34	<0.0050
	10/13/2010	75	<0.0040	<0.0040	<0.0040	<0.0040	---	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	0.014	<0.0040	0.005	0.45D	<0.0040
	4/6/2011	75	<0.0020	<0.0020	<0.0020	<0.0020	0.011	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0036	0.023	<0.0020	<0.0020	0.19	<0.0020
	10/26/2011	75	<0.0050	<0.0050	<0.0050	<0.0050	<0.025	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.012	<0.0050	0.027	0.47	<0.0050
	4/6/2012	74.5	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/15/2013	73	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0079	<0.0020	0.013	0.30D	<0.0020
	4/21/2014	74	<0.0040	<0.0040	<0.0040	<0.0040	<0.020	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	0.022	0.19	<0.0040
	10/15/2014	73	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0065	<0.0020	0.0055	0.042	<0.0020
	5/19/2015	74	<0.0040	<0.0040	<0.0040	<0.0040	<0.020	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	0.0068	<0.0040	0.0059	0.2	<0.0040
OB-20-S	4/6/2009	11	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	10/27/2009	11	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	4/23/2010	12	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	10/13/2010	11	<0.0020	<0.0020	<0.0020	<0.0020	---	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/6/2011	11	<0.0020	<0.0020	<0.0020	<0.0020	0.011	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	10/26/2011	12	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/6/2012	10.9	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	11/12/2012	12	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/15/2013	11	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	10/23/2013	12	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.003	<0.0020UJ	<0.0020	0.0029	<0.0020
	4/21/2014	10	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020

Table 7
Water Quality Data - VOC Results
2009 to Present
Former Varian Facility Site
150 Sohier Road, Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Acetone (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2-DCE (mg/l)	trans-1,2-DCE (mg/l)
OB-21-BR	4/6/2009	97	<0.0050	0.008	0.0087	<0.0050	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.037	0.16	<0.0050	0.012	0.74	<0.0050
	10/27/2009	97	<0.010	<0.010	0.012	<0.010	---	<0.010	<0.010	<0.010	<0.010	<0.010	0.043	0.12	<0.010	0.014	1	<0.010
	4/28/2010	97	<0.010	<0.010	0.013	<0.010	---	<0.010	<0.010	<0.010	<0.010	<0.010	0.063	0.45	<0.010	0.014	1.1	<0.010
	10/13/2010	97	<0.020	<0.020	<0.020	<0.020	---	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.13	<0.020	0.03	1.6	<0.020
	4/6/2011	98.2	<0.0040	0.0092	0.011	<0.0040	<0.020	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	0.013	0.14	<0.0040	0.017	1.5D	0.0043
	10/26/2011	97	<0.020	<0.020	<0.020	<0.020	<0.10	<0.020	<0.020	<0.020	<0.020	<0.020	0.033	0.061	<0.020	0.022	1.5	<0.020
	4/6/2012	99.5	<0.010	<0.010	<0.010	<0.010	<0.050	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.49	<0.010
	4/15/2013	96	<0.0050	<0.0050	<0.0050	<0.0050	<0.025	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.024	<0.0050	<0.0050	<0.0050	0.31	<0.0050
	4/21/2014	98	<0.010	<0.010	<0.010	<0.010	<0.050	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.073	<0.010	0.027	0.86	<0.010
OB-21-DO	4/6/2009	79	<0.0050	0.0069	0.0074	<0.0050	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.21	0.71	<0.0050	<0.0050	0.27	<0.0050
	10/27/2009	79	<0.0050	0.0097	0.01	<0.0050	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.17	0.61	<0.0050	<0.0050	0.42	<0.0050
	4/28/2010	79	<0.010	<0.010	<0.010	<0.010	---	<0.010	<0.010	<0.010	<0.010	<0.010	0.32	1.1	<0.010	<0.010	0.49	<0.010
	10/13/2010	79	<0.020	<0.020	<0.020	<0.020	---	<0.020	<0.020	<0.020	<0.020	<0.020	0.32	1.4	<0.020	<0.020	0.47	<0.020
	4/6/2011	79	<0.020	<0.020	<0.020	<0.020	<0.10	<0.020	<0.020	<0.020	<0.020	<0.020	0.34	1.3	<0.020	<0.020	0.41	<0.020
	10/26/2011	79	<0.010	<0.010	0.011	<0.010	<0.050	<0.010	<0.010	<0.010	<0.010	<0.010	0.28	1.4D	<0.010	<0.010	0.51	<0.010
	4/6/2012	78.5	<0.020	<0.020	<0.020	<0.020	<0.10	<0.020	<0.020	<0.020	<0.020	<0.020	0.22	1	<0.020	<0.020	0.39	<0.020
	4/15/2013	78.6	<0.020	<0.020	<0.020	<0.020	<0.10	<0.020	<0.020	<0.020	<0.020	<0.020	0.31	1.1	<0.020	<0.020	0.33	<0.020
	4/21/2014	78	<0.020	<0.020	<0.020	<0.020	<0.10	<0.020	<0.020	<0.020	<0.020	<0.020	0.26	0.97	<0.020	<0.020	0.32	<0.020
OB-22-DO	4/6/2009	56	<0.0050	<0.0050	<0.0050	<0.0050	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.38	0.58	<0.0050	<0.0050	0.15	<0.0050
	10/27/2009	57	<0.0025	<0.0025	<0.0025	<0.0025	---	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	0.066	0.25	<0.0025	0.0039	0.28	<0.0025
	10/12/2010	56	<0.0040	<0.0040	<0.0040	<0.0040	---	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	0.023	0.054	<0.0040	0.032	0.40D	<0.0040
	10/25/2011	55	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0069	<0.0020	<0.0020	0.031	<0.0020
OB-23-BR	4/1/2009	95	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.01
	4/21/2010	97	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.001	<0.0010	0.071	0.065	<0.0010
	4/4/2011	83	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.062J	0.013	<0.0020
	4/5/2012	83.5	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.1	0.07	<0.0020
	4/12/2013	83	0.0069	<0.0020	<0.0020	<0.0020	<0.010	0.0047J	<0.0020	0.0064	<0.0020	<0.0020	0.26DJ	0.077	<0.0020	0.038J	0.0076	<0.0020
	4/7/2014	80	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	5/19/2015	84	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.028	0.033	<0.0020
OB-24-S	4/3/2009	NA	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	0.0018	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	4/21/2010	NA	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	4/5/2011	2	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/5/2012	NA	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/18/2013	NA	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/10/2014	2	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
OB-25-BR	4/3/2009	95	<0.50	<0.50	<0.50	<0.50	---	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	1.5	<0.50	18	64	<0.50
	4/20/2010	99	<0.50	<0.50	<0.50	<0.50	---	<0.50	<0.50	<0.50	<0.50	<0.50	0.51	3.8	<0.50	21	56	<0.50
	7/14/2010	99.5	<0.50UJ	<0.50UJ	<0.50UJ	<0.50UJ	---	<0.50UJ	<0.50UJ	<0.50UJ	<0.50UJ	<0.50UJ	<0.50UJ	2.9J	<0.50UJ	20J	65J	<0.50UJ
	10/13/2010	97	<0.50	<0.50	<0.50	<0.50	---	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	2.7	<0.50	21	67D	<0.50
	4/14/2011	101	<0.0020	0.023	<0.0020	<0.0020	0.018	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	10/26/2011	99.5	<0.40	<0.40	<0.40	<0.40	<2.0	<0.40	<0.40	<0.40	<0.40	<0.40	1.9	8.8	<0.40	4	22	<0.40
	4/5/2012	90	<0.0020	0.037	0.11	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.69D	7.8D	<0.0020	6.8D	30D	0.14
	11/26/2012	99	<0.0020	0.0026	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	0.014	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/15/2013	95	<0.0020	0.019	<0.0020	<0.0020	0.015	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	10/23/2013	99	<0.050	<0.050	<0.050	<0.050	<0.25	<0.050	<0.050	<0.050	<0.050	<0.050	0.11	1.1	<0.050	0.3	4.4	<0.050
	4/16/2014	86	<0.050	<0.050	0.064	<0.050	<0.25	<0.050	<0.050	<0.050	<0.050	<0.050	0.32	4.5	<0.050	5.6DJ	25D	0.056
	10/16/2014	99	<0.0020	0.0025	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	0.011	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	5/26/2015	90	<0.0020	0.0027	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020

Table 7
Water Quality Data - VOC Results
2009 to Present
Former Varian Facility Site
150 Sohier Road, Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Acetone (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2-DCE (mg/l)	trans-1,2-DCE (mg/l)
OB-25-DO	7/14/2010	69	<0.10UJ	<0.10UJ	<0.10UJ	<0.10UJ	---	<0.10UJ	<0.10UJ	<0.10UJ	<0.10UJ	<0.10UJ	1.0J	13J	<0.10UJ	<0.10UJ	1.3J	<0.10UJ
	11/8/2013	69	<0.10	<0.10	<0.10	<0.10	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10	0.46	8.4	<0.10	<0.10	0.21	<0.10
	1/21/2014	50.5	<0.10	<0.10	<0.10	<0.10	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10	0.46	15D	<0.10	<0.10	0.59	<0.10
	4/9/2014	46	<0.20	<0.20	<0.20	<0.20	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	0.47	17	<0.20	<0.20	0.48	<0.20
	8/6/2014	65	<0.20	<0.20	<0.20	<0.20	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	0.56	16	<0.20	<0.20	0.45	<0.20
	10/16/2014	67	<0.20	<0.20	<0.20	<0.20	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	0.43	12	<0.20	<0.20	0.35	<0.20
	1/21/2015	70	<0.020	<0.020	<0.020	<0.020	<0.10	<0.020	<0.020	<0.020	<0.020	<0.020	0.37	1.2	<0.020	<0.020	<0.020	<0.020
	5/29/2015	67	<0.20	<0.20	<0.20	<0.20	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	0.52	12	<0.20	<0.20	<0.20	<0.20
	8/11/2015	68	<0.010	<0.010	0.006	<0.010	<0.050	<0.010	<0.010	<0.010	<0.010	<0.010	0.26	9.7	<0.010	<0.010	0.26	<0.010
OB-26-BR	4/3/2009	93	<0.0050	<0.0050	<0.0050	<0.0050	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.019	0.48	<0.0050	<0.0050	0.19	<0.0050
	4/20/2010	95	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0016	<0.0010	<0.0010	<0.0010	<0.0010
	4/4/2011	93.1	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020UJ	<0.0020	<0.0020
	4/17/2012	95	<0.0020	<0.0020	<0.0020	<0.0020	0.011	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0039	0.031	<0.0020	0.011	0.28D	<0.0020
	4/15/2013	90	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0082	<0.0020	<0.0020	0.021	<0.0020
	4/16/2014	90	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0077	0.24D	<0.0020	0.0068J	0.13	<0.0020
	5/23/2015	93	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.010UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	0.0031J	<0.0020UJ	<0.0020UJ	0.015J	<0.0020UJ
OB-26-DO	10/23/2013	65	<0.050	<0.050	<0.050	<0.050	<0.25	<0.050	<0.050	<0.050	<0.050	<0.050	1.3	5	<0.050	<0.050	0.27	<0.050
	4/16/2014	59	<0.050	<0.050	<0.050	<0.050	<0.25	<0.050	<0.050	<0.050	<0.050	<0.050	1.8	6.6D	<0.050	<0.050	0.74	<0.050
	10/16/2014	58	<0.020	<0.020	<0.020	<0.020	<0.10	<0.020	<0.020	<0.020	<0.020	<0.020	0.31	1.6	<0.020	<0.020	0.19	<0.020
	5/23/2015	57	<0.020UJ	<0.020UJ	<0.020UJ	<0.020UJ	<0.10UJ	<0.020UJ	<0.020UJ	<0.020UJ	<0.020UJ	<0.020UJ	1.1J	6.2DJ	<0.020UJ	<0.020UJ	0.21J	<0.020UJ
OB-27-BR	4/3/2009	86	<0.20	<0.20	<0.20	<0.20	---	<0.20	<0.20	<0.20	<0.20	<0.20	10	26	<0.20	<0.20	7.7	<0.20
	10/27/2009	78.5	<0.20	<0.20	<0.20	<0.20	---	<0.20	<0.20	<0.20	<0.20	<0.20	10	24	<0.20	<0.20	7.6	<0.20
	4/22/2010	86	<0.0025	0.028	<0.0025	<0.0025	---	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	0.19	0.048	<0.0025	<0.0025	0.005	<0.0025
	10/14/2010	86	<0.0020	0.045	<0.0020	<0.0020	---	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/14/2011	81	<0.0020	0.017	<0.0020	<0.0020	0.01	<0.0020	<0.0020	0.0056	<0.0020	<0.0020	0.0026	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	10/28/2011	86	<0.0050	0.036	0.05	<0.0050	<0.025	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	7.4D	22D	<0.0050	0.03	4.9D	0.012
	4/6/2012	85	<0.0020	0.033	0.054	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	3.2D	20D	<0.0020	0.026	4.7D	0.028
	11/26/2012	86	<0.0020	0.037	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/15/2013	85	<0.0020	0.047	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.071J	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	10/24/2013	86	<0.0020	0.036	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0061	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/11/2014	74	<0.0020	0.014	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.057	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	10/16/2014	86	<0.0020	0.042	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.019	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	5/23/2015	86	<0.0020UJ	0.037J	0.053J	<0.0020UJ	<0.010UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	6.3DJ	18DJ	<0.0020UJ	0.84DJ	7.4DJ	0.14J
OB-27-DO	4/3/2009	61	<0.0010	0.0013	0.0029	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0028	<0.0010	<0.0010	<0.0010	<0.0010
OB-28-BR	4/6/2009	93	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.024	<0.0010	<0.0010	0.0011	<0.0010
	4/20/2010	93	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	5/27/2011	122	<0.0020	<0.0020	<0.0020	<0.0020	0.022	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/5/2012	89	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/15/2013	84	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.082	<0.0020	<0.0020	0.0059	<0.0020
	4/16/2014	89	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0042	0.98D	<0.0020	<0.0020	0.17	0.0026
	5/23/2015	90	<0.020UJ	<0.020UJ	<0.020UJ	<0.020UJ	<0.10UJ	<0.020UJ	<0.020UJ	<0.020UJ	<0.020UJ	<0.020UJ	<0.020UJ	1.4J	<0.020UJ	<0.020UJ	0.55J	<0.020UJ
OB-30-DO	4/6/2009	68	<0.0020	0.18	0.18	0.0025	---	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0025	0.18	<0.0020	<0.0020	0.0089	<0.0020
OB-32-DO	4/3/2009	60	2.4	<0.020	<0.020	<0.020	---	2	<0.020	0.85	<0.020	<0.020	0.16	0.03	<0.020	<0.020	<0.020	<0.020
	10/27/2009	60	1.5	<0.010	<0.010	<0.010	---	1.4	<0.010	0.53	<0.010	<0.010	0.059	<0.010	<0.010	<0.010	<0.010	<0.010
	11/23/2009	60	2	<0.020	<0.020	<0.020	---	1.7	<0.020	0.51	<0.020	<0.020	0.3	<0.020	<0.020	<0.020	<0.020	<0.020
	4/20/2010	60	1.5	<0.010	<0.010	<0.010	---	1.3	<0.010	0.36	<0.010	<0.010	0.046	<0.010	<0.010	<0.010	<0.010	<0.010
	10/14/2010	60	1.4D	<0.0020	<0.0020	<0.0020	---	1.2D	<0.0020	0.28D	<0.0020	0.0025	0.0021	<0.0020	0.004	<0.0020	<0.0020	<0.0020

Table 7
Water Quality Data - VOC Results
2009 to Present
Former Varian Facility Site
150 Sohier Road, Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Acetone (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2-DCE (mg/l)	trans-1,2-DCE (mg/l)
OB-32-DO (Cont.)	4/14/2011	52	0.57D	<0.0040	<0.0040	<0.0040	<0.020	0.50D	<0.0040	0.1	<0.0040	<0.0040	0.079	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040
	10/28/2011	60	0.43	<0.0050	<0.0050	<0.0050	<0.025	0.45	<0.0050	0.079	<0.0050	<0.0050	0.0068	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	4/5/2012	48	0.19	<0.0020	<0.0020	<0.0020	<0.010	0.19	<0.0020	0.041	<0.0020	<0.0020	0.042	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	12/18/2012	60	0.097	<0.00020	<0.00057	<0.00036	0.012	0.12	<0.00029	0.026	<0.00024	<0.00021	<0.00030	<0.00022	<0.00020	<0.00032	<0.00030	<0.00033
	4/18/2013	60	0.062	<0.0020	<0.0020	<0.0020	<0.010	0.067	<0.0020	0.019	<0.0020	<0.0020	0.014	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	10/24/2013	60	0.043	<0.0020	<0.0020	<0.0020	<0.010	0.057	<0.0020	0.015	<0.0020	<0.0020	0.055	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/21/2014	57	0.026	<0.0020	<0.0020	<0.0020	<0.010	0.037	<0.0020	0.014	<0.0020	<0.0020	0.063	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	10/16/2014	60	0.016	<0.0020	<0.0020	<0.0020	<0.010	0.024	<0.0020	0.015	<0.0020	<0.0020	0.018	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	5/27/2015	60	0.0022	<0.0020	<0.0020	<0.0020	<0.010	0.0028	<0.0020	0.0023	<0.0020	<0.0020	0.0029	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
OB-33-DO	4/6/2009	55	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
OB-34-DO	4/6/2009	63	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	0.0027	<0.0010	<0.0010	0.059	0.0022	<0.0010	<0.0010	<0.0010	<0.0010
	10/27/2009	62	<0.10	<0.10	<0.10	<0.10	---	<0.10	<0.10	<0.10	<0.10	<0.10	1.6	8.6	<0.10	<0.10	0.65	<0.10
	4/20/2010	63	<0.10	<0.10	<0.10	<0.10	---	<0.10	<0.10	<0.10	<0.10	<0.10	1.6	10	<0.10	<0.10	1.1	<0.10
	10/14/2010	63	<0.0050	<0.0050	<0.0050	<0.0050	---	<0.0050	<0.0050	0.0093	<0.0050	<0.0050	0.3	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	4/14/2011	61	<0.010	<0.010	<0.010	<0.010	<0.050	<0.010	<0.010	<0.010	<0.010	<0.010	0.9	0.37	<0.010	<0.010	0.011	<0.010
	10/28/2011	63	<0.0050	<0.0050	0.006	<0.0050	<0.025	<0.0050	<0.0050	0.0058	<0.0050	<0.0050	1.3D	11D	<0.0050	<0.0050	0.95D	<0.0050
	4/5/2012	62	<0.10	<0.10	<0.10	<0.10	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10	1.2	8.5	<0.10	<0.10	0.77	<0.10
	11/27/2012	63	<0.10	<0.10	<0.10	<0.10	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10	1.5	9.5D	<0.10	<0.10	0.83	<0.10
	4/17/2013	58.2	<0.10	<0.10	<0.10	<0.10	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10	1.2	7.6	<0.10	<0.10	0.58	<0.10
	10/24/2013	63	<0.10	<0.10	<0.10	<0.10	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10	1.3	10	<0.10	<0.10	0.78	<0.10
	10/16/2014	63	<0.010	<0.010	<0.010	<0.010	<0.050	<0.010	<0.010	<0.010	<0.010	<0.010	0.53	0.44	<0.010	<0.010	0.018	<0.010
	5/22/2015	58	<0.010UJ	<0.010UJ	<0.010UJ	<0.010UJ	<0.050UJ	<0.010UJ	<0.010UJ	<0.010UJ	<0.010UJ	<0.010UJ	1.1DJ	7.5DJ	<0.010UJ	<0.010UJ	0.67J	<0.010UJ
OB-35-DO	4/9/2009	57	<0.20	<0.20	<0.20	<0.20	---	<0.20	<0.20	<0.20	<0.20	<0.20	19	6.2	<0.20	<0.20	1.7	<0.20
	10/28/2009	57	<0.20	<0.20	<0.20	<0.20	---	<0.20	<0.20	<0.20	<0.20	<0.20	22	6.9	<0.20	<0.20	1.6	<0.20
	4/22/2010	62	<0.20	<0.20	<0.20	<0.20	---	<0.20	<0.20	<0.20	<0.20	<0.20	22	7.5	<0.20	<0.20	1.6	<0.20
	10/14/2010	49	<0.40	<0.40	<0.40	<0.40	---	<0.40	<0.40	<0.40	<0.40	<0.40	34	7.7	<0.40	<0.40	1.6	<0.40
	4/7/2011	48.7	<0.50UJ	<0.50UJ	<0.50UJ	<0.50UJ	<2.5UJ	<0.50UJ	<0.50UJ	<0.50UJ	<0.50UJ	<0.50UJ	32J	7.7J	<0.50UJ	<0.50UJ	1.6J	<0.50UJ
	10/27/2011	62	<0.40	<0.40	<0.40	<0.40	<2.0	<0.40	<0.40	<0.40	<0.40	<0.40	29	5	<0.40	<0.40	0.95	<0.40
	4/6/2012	48	<0.20	<0.20	<0.20	<0.20	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	19	5.4	<0.20	<0.20	0.79	<0.20
	11/27/2012	62	<0.20	<0.20	<0.20	<0.20	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	32D	4.8	<0.20	<0.20	0.78	<0.20
	4/15/2013	61	<0.40	<0.40	<0.40	<0.40	<2.0	<0.40	<0.40	<0.40	<0.40	<0.40	47D	8.6	<0.40	0.41	1.4	<0.40
	10/24/2013	56	<0.0020	0.009	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.007	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/21/2014	47	<0.20	<0.20	<0.20	<0.20	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	33D	5.2	<0.20	<0.20	0.94	<0.20
	10/16/2014	61	<0.0020	0.011	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0061	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	5/27/2015	46	<0.0020	0.0084	0.014	<0.0020	0.027	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	29D	5.2D	<0.0020	0.16	1.0D	0.0057
	8/20/2015	68	<0.040	<0.040	0.049	<0.040	<0.20	<0.040	<0.040	<0.040	<0.040	<0.040	0.18	0.14	<0.040	<0.040	40	0.23
OB-36-DO	1/14/2009	62	<0.10	<0.10	<0.10	<0.10	---	<0.10	<0.10	<0.10	<0.10	<0.10	4	8.2	<0.10	<0.10	<0.10	<0.10
	4/9/2009	54	<0.050	<0.050	<0.050	<0.050	---	<0.050	<0.050	<0.050	<0.050	<0.050	3.9	6.3	<0.050	<0.050	<0.050	<0.050
	10/26/2009	55	<0.25	<0.25	<0.25	<0.25	---	<0.25	<0.25	<0.25	<0.25	<0.25	7.9	29	<0.25	<0.25	<0.25	<0.25
	4/22/2010	61	<0.050	<0.050	<0.050	<0.050	---	<0.050	<0.050	<0.050	<0.050	<0.050	4.4	5.8	<0.050	<0.050	<0.050	<0.050
	10/13/2010	54	<0.20	<0.20	<0.20	<0.20	---	<0.20	<0.20	<0.20	<0.20	<0.20	6.4	15	<0.20	<0.20	<0.20	<0.20
	4/7/2011	53.9	<0.20UJ	<0.20UJ	<0.20UJ	<0.20UJ	<1.0UJ	<0.20UJ	<0.20UJ	<0.20UJ	<0.20UJ	<0.20UJ	7.0J	9.8J	<0.20UJ	<0.20UJ	0.24J	<0.20UJ
	10/28/2011	61	<0.10	<0.10	<0.10	<0.10	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10	6.6	5.2	<0.10	<0.10	<0.10	<0.10
	4/6/2012	41	<0.10	<0.10	<0.10	<0.10	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10	12D	10	<0.10	<0.10	<0.10	<0.10
	11/27/2012	61	<0.20	<0.20	<0.20	<0.20	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	10	9.1	<0.20	<0.20	<0.20	<0.20
	4/15/2013	46	<0.20	<0.20	<0.20	<0.20	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	8.1D	48D	<0.20	<0.20	<0.20	<0.20
	10/24/2013	51.5	0.02	0.013	<0.0020	<0.0020	0.021	<0.0020	<0.0020	0.0034	<0.0020	<0.0020	<0.0020	0.012	<0.0020	<0.0020	<0.0020	<0.0020
	4/21/2014	51	0.003	<0.0020	<0.0020	<0.0020	0.024	<0.0020	<0.0020	0.0026	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020

Table 7
Water Quality Data - VOC Results
2009 to Present
Former Varian Facility Site
150 Sohier Road, Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Acetone (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2-DCE (mg/l)	trans-1,2-DCE (mg/l)
OB-36-DO	10/16/2014	51	0.008	<0.0020	<0.0020	<0.0020	0.01	0.0029	<0.0020	0.017	<0.0020	<0.0020	0.0024	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	5/27/2015	61	<0.0020	<0.0020	<0.0020	<0.0020	0.079	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	6/2/2015	61	0.0065J	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.010UJ	0.0074J	<0.0020UJ	0.012J	<0.0020UJ	<0.0020UJ	0.0027J	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ
OB-37-DO	1/30/2009	61	<0.20	<0.20	<0.20	<0.20	---	<0.20	<0.20	<0.20	<0.20	<0.20	0.79	17	<0.20	<0.20	<0.20	<0.20
	4/9/2009	61	<0.20	<0.20	<0.20	<0.20	---	<0.20	<0.20	<0.20	<0.20	<0.20	2.4	23	<0.20	<0.20	<0.20	<0.20
	10/26/2009	49	<0.40	<0.40	<0.40	<0.40	---	<0.40	<0.40	<0.40	<0.40	<0.40	2.3	43	<0.40	<0.40	<0.40	<0.40
	4/22/2010	61	<0.010	<0.010	<0.010	<0.010	---	<0.010	<0.010	<0.010	<0.010	<0.010	0.36	0.98	<0.010	<0.010	<0.010	<0.010
	10/13/2010	61	<0.0050	<0.0050	<0.0050	<0.0050	---	0.007	<0.0050	0.019	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	4/7/2011	35	0.0031J	<0.0020UJ	<0.0020UJ	<0.0020UJ	0.016J	<0.0020UJ	<0.0020UJ	0.0093J	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ
	10/28/2011	61	0.0084	<0.0020	<0.0020	<0.0020	0.12	0.0033	<0.0020	0.007	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/6/2012	46	<0.0020J	<0.0020J	<0.0020J	<0.0020J	0.014J	<0.0020J	<0.0020J	<0.0020J	<0.0020J	<0.0020J	0.0028J	<0.0020J	<0.0020J	<0.0020J	<0.0020J	<0.0020J
	11/27/2012	61	0.039	0.01	<0.0020	<0.0020	0.02	<0.0020	<0.0020	0.0045	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/15/2013	53.7	0.05	0.018	<0.0020	<0.0020	0.025	<0.0020	<0.0020	0.0048	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	10/24/2013	59	0.0069	<0.0020	<0.0020	<0.0020	0.018	<0.0020	<0.0020	0.0084	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/21/2014	46	<0.0020	<0.0020	<0.0020	<0.0020	0.016	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.066	0.35D	<0.0020	<0.0020	<0.0020	<0.0020
	10/16/2014	46	0.042	0.016	0.087	<0.0050	<0.025	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	11D	74D	<0.0050	0.015	0.083	<0.0050
	5/27/2015	61	<0.0020	<0.0020	<0.0020	<0.0020	0.079	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
OB-38-DO	4/9/2009	47	<0.010	<0.010	<0.010	<0.010	---	<0.010	<0.010	<0.010	<0.010	<0.010	0.74	0.55	<0.010	<0.010	0.13	<0.010
	10/28/2009	47	<0.010	<0.010	<0.010	<0.010	---	<0.010	<0.010	<0.010	<0.010	<0.010	0.25	0.36	<0.010	<0.010	1.1	<0.010
	4/21/2010	54	<0.0025	<0.0025	<0.0025	<0.0025	---	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	0.25	0.27	<0.0025	<0.0025	0.056	<0.0025
	10/14/2010	45.5	<0.0050	<0.0050	<0.0050	<0.0050	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.43	0.32	<0.0050	0.0064	0.34	<0.0050
	4/5/2011	45	<0.0040	<0.0040	<0.0040	<0.0040	<0.020	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	0.27	0.22	<0.0040	<0.0040	0.037	<0.0040
	10/26/2011	45	<0.0050	<0.0050	<0.0050	<0.0050	<0.025	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.52D	0.39	<0.0050	0.0052	0.28	0.0057
	4/6/2012	44.5	<0.0050	<0.0050	<0.0050	<0.0050	<0.025	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.47	0.46	<0.0050	<0.0050	0.15	0.0067
	11/27/2012	54	<0.0050	<0.0050	<0.0050	<0.0050	<0.025	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.24	0.19	<0.0050	<0.0050	0.13	<0.0050
	4/15/2013	42	<0.0050	<0.0050	<0.0050	<0.0050	<0.025	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.45	0.62D	<0.0050	0.0061	0.12	0.0075
	10/23/2013	46	<0.0050	<0.0050	<0.0050	<0.0050	<0.025	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0094	0.014	<0.0050	<0.0050	0.54D	0.0074
	4/11/2014	44	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.057	0.099	<0.0020	<0.0020	0.045	0.0034
	10/15/2014	44	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.025	0.05	<0.0020	<0.0020	0.1	0.005
	5/22/2015	44	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.010UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	0.070J	0.11J	<0.0020UJ	<0.0020UJ	0.044J	0.0047J
OB-39-DO	4/9/2009	53	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0076	<0.0010	<0.0010	<0.0010	<0.0010
OB-40-DO	4/9/2009	68	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
OB-41-S	4/5/2011	13	<0.0040	<0.0040	<0.0040	<0.0040	<0.020	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	0.05	0.26	<0.0040	<0.0040	0.081	<0.0040
	10/25/2011	13	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.03	0.12	<0.0020	<0.0020	0.04	<0.0020
	4/5/2012	13.2	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.017	0.069	<0.0020	<0.0020	0.028	<0.0020
	11/12/2012	14	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.022	0.082	<0.0020	<0.0020	0.034	<0.0020
	4/12/2013	13.3	<0.0020	<0.0020	0.0024	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.071	0.29D	<0.0020	<0.0020	0.08	<0.0020
	10/23/2013	13.3	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.021	0.089	<0.0020UJ	<0.0020	0.035	<0.0020
	4/8/2014	13	<0.0020	<0.0020	0.0021	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.064	0.28D	<0.0020	<0.0020	0.082	<0.0020
	10/15/2014	14	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.029	0.11	<0.0020	<0.0020	0.039	<0.0020
	5/22/2015	13	<0.0020UJ	0.0026J	0.0035J	<0.0020UJ	<0.010UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	0.070J	0.31DJ	<0.0020UJ	<0.0020UJ	0.14J	<0.0020UJ
OB-42-S	4/5/2011	13	<0.040	<0.040	<0.040	<0.040	<0.20	<0.040	<0.040	<0.040	<0.040	<0.040	0.1	2.7	<0.040	<0.040	1.2	<0.040
	10/24/2011	13	<0.050	<0.050	<0.050	<0.050	<0.25	<0.050	<0.050	<0.050	<0.050	<0.050	0.096	3	<0.050	<0.050	1	<0.050
	4/4/2012	13.5	<0.040	<0.040	<0.040	<0.040	<0.20	<0.040	<0.040	<0.040	<0.040	<0.040	0.078	2.4	<0.040	<0.040	0.94	<0.040
	11/12/2012	14	<0.040	<0.040	<0.040	<0.040	<0.20	<0.040	<0.040	<0.040	<0.040	<0.040	0.11	2.6	<0.040	<0.040	0.79	<0.040
	4/12/2013	13.6	<0.040	<0.040	<0.040	<0.040	<0.20	<0.040	<0.040	<0.040	<0.040	<0.040	0.13J	3.5	<0.040	<0.040	1.4	<0.040
	10/23/2013	12.2	<0.040	<0.040	<0.040	<0.040	<0.20	<0.040	<0.040	<0.040	<0.040	<0.040	0.081	2.2	<0.040UJ	<0.040	0.6	<0.040

Table 7
Water Quality Data - VOC Results
2009 to Present
Former Varian Facility Site
150 Sohier Road, Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Acetone (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2-DCE (mg/l)	trans-1,2-DCE (mg/l)
OB-42-S (Cont.)	4/9/2014	14	<0.040	<0.040	<0.040	<0.040	<0.20	<0.040	<0.040	<0.040	<0.040	<0.040	0.082	2.4	<0.040	<0.040	0.96	<0.040
	10/15/2014	14	<0.0050	<0.0050	<0.0050	<0.0050	<0.025	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.11	2.3D	<0.0050	<0.0050	0.70D	0.0089
	5/20/2015	13	<0.020	<0.020	<0.020	<0.020	<0.10	<0.020	<0.020	<0.020	<0.020	<0.020	0.05	1.3	<0.020	<0.020	0.74	<0.020
OB-43-S	10/24/2011	16	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0052	0.007	<0.0020	<0.0020	<0.0020	<0.0020
	4/4/2012	15	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	11/12/2012	14	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0021	0.003	<0.0020	<0.0020	<0.0020	<0.0020
	4/12/2013	16	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0024	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	10/23/2013	16	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020UJ	<0.0020	<0.0020	<0.0020
	4/8/2014	15	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0037	0.004	<0.0020	<0.0020	<0.0020	<0.0020
	10/15/2014	16	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0037	0.0031	<0.0020	<0.0020	<0.0020	<0.0020
	5/20/2015	16	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0047	0.0064	<0.0020	<0.0020	<0.0020	<0.0020
OB-44-S	1/7/2014	NA	<1.0	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	47	24	<1.0	<1.0	<1.0	<1.0
	4/21/2014	17	<1.0	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	7.2	1.5	<1.0	<1.0	59	<1.0
	10/16/2014	17	<0.50	<0.50	<0.50	<0.50	<2.5	<0.50	<0.50	<0.50	<0.50	<0.50	15	8.8	<0.50	<0.50	31	<0.50
	3/17/2015	NA	<0.50	<0.50	<0.50	<0.50	<2.5	<0.50	<0.50	<0.50	<0.50	<0.50	30	9.4	<0.50	<0.50	20	<0.50
	5/28/2015	13	<0.50	<0.50	<0.50	<0.50	<2.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	23	<0.50
	8/20/2015	18	<0.020	<0.020	0.016	<0.020	<0.10	<0.020	<0.020	<0.020	<0.020	<0.020	29	5.7	<0.020	0.16	1.1	<0.020
OB-45-DO	4/15/2014	45	<0.0050	<0.0050	<0.0050	<0.0050	0.035	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0059	0.27	<0.0050	<0.0050	0.37	<0.0050
	10/16/2014	38	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	5/22/2015	39	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.010UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ
OB-45-S	4/15/2014	13	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	10/16/2014	14	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	5/22/2015	13	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.010UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ	0.0021J	<0.0020UJ	<0.0020UJ	<0.0020UJ	<0.0020UJ
	8/11/2015	14	<0.0020	<0.0020	<0.0010	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.002	<0.0020	<0.0020	<0.0020	<0.0020
OB-46-S	3/17/2015	NA	<0.010	<0.010	<0.010	<0.010	<0.050	<0.010	<0.010	<0.010	<0.010	<0.010	0.76	0.16	<0.010	<0.010	0.25	<0.010
	5/28/2015	10	<0.010	<0.010	<0.010	<0.010	<0.050	<0.010	<0.010	<0.010	<0.010	<0.010	1.8D	0.15	<0.010	<0.010	0.13	<0.010
	8/11/2015	14	<0.0020	<0.0020	0.003	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.019	0.006	<0.0020	0.014	1.6	0.005
OB-47-S	3/17/2015	NA	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.032	0.014	<0.0020	<0.0020	0.0026	<0.0020
	5/29/2015	20	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.015	0.012	<0.0020	<0.0020	<0.0020	<0.0020
	8/11/2015	24	<0.0020	<0.0020	<0.0010	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.007	0.008	<0.0020	<0.0020	<0.0020	<0.0020
OB-48-S	3/17/2015	NA	<0.0020	<0.0020	<0.0020	<0.0020	0.019	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.011	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
P-05R	4/27/2009	NA	<0.0010J	<0.0010J	<0.0010J	<0.0010J	---	<0.0010J	<0.0010J	<0.0010J	<0.0010J	<0.0010J	<0.0010J	<0.0010J	<0.0010J	<0.0010J	<0.0010J	<0.0010J
P-09R	4/6/2009	4.5	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.016	<0.0010
	10/27/2009	4.5	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	4/23/2010	4.5	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0036	<0.0010
	10/13/2010	4.5	<0.0020	<0.0020	<0.0020	<0.0020	---	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/6/2011	3.5	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0021	<0.0020
	10/24/2011	4.5	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	11/12/2012	5	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	5/2/2013	3.8	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	10/23/2013	4.5	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020UJ	<0.0020	<0.0020	<0.0020
	4/29/2014	4	<0.0020	<0.0020	<0.0020	<0.0020	0.074	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	10/16/2014	4	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
P-11R	4/27/2009	NA	<0.0010J	<0.0010J	<0.0010J	<0.0010J	---	<0.0010J	<0.0010J	<0.0010J	<0.0010J	<0.0010J	<0.0010J	<0.0010J	<0.0010J	<0.0010J	<0.0010J	<0.0010J
	4/22/2010	9	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	4/5/2011	8	<0.0020	<0.0020	<0.0020	<0.0020	0.01	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/5/2012	8.5	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/12/2013	8.75	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020

Table 7
Water Quality Data - VOC Results
2009 to Present
Former Varian Facility Site
150 Sohier Road, Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Acetone (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2-DCE (mg/l)	trans-1,2-DCE (mg/l)
P-11R (Cont.)	4/21/2014	9	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	5/19/2015	8.5	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	0.0037	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
P-19A	4/6/2009	10	<0.0020	<0.0020	<0.0020	<0.0020	---	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0037	0.025	<0.0020	<0.0020	0.28	<0.0020
	10/27/2009	10	<0.0020	<0.0020	<0.0020	<0.0020	---	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0067	0.031	<0.0020	<0.0020	0.28	<0.0020
	4/22/2010	10	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0019	<0.0010	<0.0010	0.033	<0.0010
	10/13/2010	10	<0.0020	<0.0020	<0.0020	<0.0020	---	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0065	0.037	<0.0020	<0.0020	0.47D	<0.0020
	4/6/2011	9	<0.0020	<0.0020	<0.0020	<0.0020	0.01	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0031	0.012	<0.0020	<0.0020	0.12	<0.0020
	10/24/2011	10	<0.0040	<0.0040	<0.0040	<0.0040	<0.020	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	0.0047	0.021	<0.0040	<0.0040	0.2	<0.0040
	4/6/2012	9.4	<0.0040	<0.0040	<0.0040	<0.0040	<0.020	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	0.0054	0.03	<0.0040	<0.0040	0.29	<0.0040
	11/12/2012	10	<0.0040	<0.0040	<0.0040	<0.0040	<0.020	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	0.0076	0.045	<0.0040	<0.0040	0.39	<0.0040
	4/12/2013	9.5	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.006	0.031	<0.0020	<0.0020	0.16	<0.0020
	10/23/2013	10	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020UJ	<0.0020	0.0063	<0.0020
	4/21/2014	10	<0.0040	<0.0040	<0.0040	<0.0040	<0.020	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	0.0048	0.027	<0.0040	<0.0040	0.2	<0.0040
	5/19/2015	9.3	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.004	0.021	<0.0020	<0.0020	0.16	<0.0020
P-20R	4/6/2009	10	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0024	0.014	<0.0010	<0.0010	0.0012	<0.0010
	4/22/2010	11	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	4/6/2011	10	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/6/2012	10	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	5/2/2013	10	<0.0020	<0.0020	<0.0020	<0.0020	0.012	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/21/2014	10	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0038	0.009	<0.0020	<0.0020	<0.0020	<0.0020
	5/19/2015	10	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
RW-01_MW-18	4/9/2009	39	0.32	0.017	<0.0025	<0.0025	---	0.027	<0.0025	0.21	<0.0025	<0.0025	0.051	0.1	<0.0025	<0.0025	0.12	<0.0025
	1/20/2014	37.1	<0.0050	0.014	0.025	<0.0050	<0.025	<0.0050	<0.0050	0.011	<0.0050	<0.0050	0.53D	1.1D	<0.0050	0.80D	8.7D	0.11
	4/9/2014	37	<0.050	<0.050	<0.050	<0.050	<0.25	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.48	4.3	<0.050
	8/6/2014	36	<0.050	<0.050	<0.050	<0.050	<0.25	<0.050	<0.050	<0.050	<0.050	<0.050	0.77	0.45	<0.050	0.49	7.7D	0.078
	1/20/2015	37.6	<0.10	<0.10	<0.10	<0.10	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10	1	0.8	<0.10	0.48	9.7D	0.11
	5/29/2015	38	<0.10	<0.10	<0.10	<0.10	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.49	<0.10	0.59	12D	0.11
	8/11/2015	38	<0.010	0.038	0.021	<0.010	<0.050	<0.010	<0.010	0.045	<0.010	<0.010	2.2	2.1	<0.010	0.56	14	0.3
RW-03	7/14/2009	70	0.047	<0.025	<0.025	<0.025	---	<0.025	<0.025	<0.025	<0.025	<0.025	0.32	0.34	<0.025	2.6	2.4	<0.025
	7/14/2009	15	<0.010	<0.010	<0.010	<0.010	---	<0.010	<0.010	<0.010	<0.010	<0.010	0.26	0.14	<0.010	0.56	0.85	<0.010
	10/26/2009	15	0.068	0.0071	<0.0050	<0.0050	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.052	0.025	<0.0050	0.67D	0.058	<0.0050
	10/26/2009	56	0.036	0.0069	<0.0050	<0.0050	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.055	0.093	<0.0050	0.62	0.14	<0.0050
	1/28/2010	55	0.014	0.0028	<0.0020	<0.0020	---	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.028	0.035	<0.0020	0.14	0.2	<0.0020
	1/28/2010	15	0.01	0.0026	<0.0020	<0.0020	---	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.02	0.016	<0.0020	0.14	0.19	<0.0020
	4/22/2010	55	0.022	<0.020	<0.020	<0.020	---	<0.020	<0.020	<0.020	<0.020	<0.020	0.46	0.6	<0.020	0.36	2.2	<0.020
	4/28/2010	15	<0.025	<0.025	<0.025	<0.025	---	<0.025	<0.025	<0.025	<0.025	<0.025	0.92	0.84	<0.025	0.56	3.5	<0.025
	7/14/2010	69	0.032J	<0.025UJ	<0.025UJ	<0.025UJ	---	<0.025UJ	<0.025UJ	<0.025UJ	<0.025UJ	<0.025UJ	0.62J	1.1J	<0.025UJ	3.2J	3.7J	<0.025UJ
	10/12/2010	55	0.78	<0.10	<0.10	<0.10	---	<0.10	<0.10	<0.10	<0.10	<0.10	0.59	1.1	<0.10	5.2	5.4	<0.10
	1/4/2011	55	0.29	<0.020	<0.020	<0.020	---	<0.020	<0.020	<0.020	<0.020	<0.020	0.098	0.2	<0.020	0.51	1.1	<0.020
	4/5/2011	54.7	0.01	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.079	0.15	<0.0020	0.0022	0.11	<0.0020
	8/11/2015	56	0.008	0.017	0.008	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	0.004	<0.0020	0.003	0.007	<0.0020	0.17	0.64	<0.0020
RW-22	4/3/2009	144	<0.0025	<0.0025	<0.0025	<0.0025	---	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	0.0086	0.12	<0.0025	<0.0025	0.36	<0.0025
	4/20/2010	144	<0.0050	<0.0050	<0.0050	<0.0050	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0063	0.094	<0.0050	<0.0050	0.38	<0.0050
	4/4/2011	105	<0.0040	<0.0040	<0.0040	<0.0040	<0.020	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	0.07	<0.0040	<0.0040UJ	0.36	<0.0040
	4/5/2012	62	<0.0040	<0.0040	<0.0040	<0.0040	<0.020	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	0.0061	0.047	<0.0040	<0.0040	0.34	<0.0040
	4/17/2013	106	<0.0040	<0.0040	<0.0040	<0.0040	<0.020	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	0.0062	0.04	<0.0040	<0.0040	0.26	<0.0040
	4/9/2014	104	<0.0040	<0.0040	<0.0040	<0.0040	<0.020	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	0.035	<0.0040	0.011	0.52D	<0.0040
	5/22/2015	104	<0.010UJ	<0.010UJ	<0.010UJ	<0.010UJ	<0.050UJ	<0.010UJ	<0.010UJ	<0.010UJ	<0.010UJ	<0.010UJ	<0.010UJ	0.027J	<0.010UJ	0.015J	0.57J	<0.010UJ

Table 7
Water Quality Data - VOC Results
2009 to Present
Former Varian Facility Site
150 Sohier Road, Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Acetone (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2-DCE (mg/l)	trans-1,2-DCE (mg/l)
STR-03	1/13/2009	NA	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0012	<0.0010	0.0013	0.011	<0.0010
	4/9/2009	NA	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0083	0.0072	<0.0010	0.012	0.085	0.0024
	7/14/2009	NA	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0013	<0.0010	0.0079	0.015	<0.0010
	10/27/2009	NA	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	1/28/2010	NA	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0067	0.0084	<0.0010	0.0053	0.047	<0.0010
	4/22/2010	NA	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0014	0.003	<0.0010
	7/14/2010	NA	<0.0010UJ	<0.0010UJ	<0.0010UJ	<0.0010UJ	---	<0.0010UJ	<0.0010UJ	<0.0010UJ	<0.0010UJ	<0.0010UJ	<0.0010UJ	<0.0010UJ	<0.0010UJ	<0.0010UJ	<0.0010UJ	<0.0010UJ
	10/12/2010	NA	<0.0020	<0.0020	<0.0020	<0.0020	---	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	1/5/2011	NA	<0.0020	<0.0020	<0.0020	<0.0020	---	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/5/2011	NA	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	7/28/2011	NA	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	10/25/2011	NA	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0067	0.027	<0.0020
	1/18/2012	NA	<0.0040	<0.0040	<0.0040	<0.0040	<0.020	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	0.011	0.02	<0.0040	0.041	0.21	<0.0040
	4/3/2012	NA	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	8/21/2012	NA	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	11/28/2012	NA	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	2/6/2013	NA	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.013	0.032	<0.0020	0.02	0.43D	<0.0020
	4/11/2013	NA	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.004	0.0083	<0.0020	0.0092	0.17	0.0037
	10/23/2013	NA	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	4/10/2014	NA	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0023	<0.0020
	10/15/2014	NA	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
STRHA-07A	4/7/2009	NA	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0015	<0.0010	<0.0010	0.0017	<0.0010
	10/27/2009	NA	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.013	0.058	<0.0010	<0.0010	0.051	<0.0010
	4/28/2010	NA	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0035	0.02	<0.0010	<0.0010	0.02	<0.0010
	10/14/2010	NA	<0.0020	<0.0020	<0.0020	<0.0020	---	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0061	0.036	<0.0020	<0.0020	0.035	<0.0020
	4/6/2011	NA	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0026	0.013	<0.0020	<0.0020	0.012	<0.0020
	10/25/2011	NA	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0021	0.011	<0.0020	<0.0020	0.011	<0.0020
	4/6/2012	NA	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0054	0.03	<0.0020	<0.0020	0.036	<0.0020
	11/13/2012	NA	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0068	0.033	<0.0020	<0.0020	0.032	<0.0020
	4/15/2013	NA	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.01	0.046	<0.0020	<0.0020	0.013	<0.0020
	10/23/2013	NA	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.006	0.035	<0.0020UJ	<0.0020	0.037	<0.0020
	4/10/2014	NA	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0088	<0.0020	<0.0020	0.0097	<0.0020
	10/15/2014	NA	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0061	0.029	<0.0020	<0.0020	0.036	<0.0020
	5/20/2015	NA	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0055	0.025	<0.0020	<0.0020	0.021	<0.0020
STRHA-07B	4/7/2009	NA	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	10/27/2009	NA	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0044	0.025	<0.0010	<0.0010	0.0091	<0.0010
	4/28/2010	NA	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0058	0.031	<0.0010	<0.0010	0.0098	<0.0010
	10/14/2010	NA	<0.0020	<0.0020	<0.0020	<0.0020	---	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.012	<0.0020	<0.0020	0.0052	<0.0020
	4/6/2011	NA	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0062	0.028	<0.0020	<0.0020	0.0089	<0.0020
	10/25/2011	NA	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0055	0.025	<0.0020	<0.0020	0.0076	<0.0020
	4/6/2012	NA	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0037	0.019	<0.0020	<0.0020	0.0071	<0.0020
	11/13/2012	NA	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0068	0.034	<0.0020	<0.0020	0.031	<0.0020
	4/15/2013	NA	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0073	0.035	<0.0020	<0.0020	0.017	<0.0020
	10/23/2013	NA	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0082	<0.0020UJ	<0.0020	0.0025	<0.0020
	4/10/2014	NA	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0099	0.042	<0.0020	<0.0020	0.013	<0.0020
	10/15/2014	NA	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0032	0.01	<0.0020	<0.0020	0.0044	<0.0020
	5/20/2015	**NA**	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0082	0.032	<0.0020	<0.0020	0.011	<0.0020

Table 7
Water Quality Data - VOC Results
2009 to Present
Former Varian Facility Site
150 Sohier Road, Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Acetone (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2-DCE (mg/l)	trans-1,2-DCE (mg/l)
STRM-A-SCDS	4/6/2009	NA	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0035	<0.0010	<0.0010	0.0012	<0.0010
	10/27/2009	NA	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.002	0.0079	<0.0010	<0.0010	0.0034	<0.0010
	4/22/2010	NA	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0016	0.0059	<0.0010	<0.0010	0.0044	<0.0010
	10/13/2010	NA	<0.0020	<0.0020	<0.0020	<0.0020	---	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0051	0.02	<0.0020	<0.0020	0.057	<0.0020
	4/6/2011	NA	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0033	<0.0020	<0.0020	0.0022	<0.0020
	10/26/2011	NA	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0025	<0.0020	<0.0020	<0.0020	<0.0020
	4/6/2012	NA	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0048	0.017	<0.0020	<0.0020	0.013	<0.0020
	11/12/2012	NA	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0038	0.012	<0.0020	<0.0020	0.0051	<0.0020
	4/15/2013	NA	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0055	<0.0020	<0.0020	0.0028	<0.0020
	10/23/2013	NA	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0057	0.019	<0.0020UJ	<0.0020	0.0092	<0.0020
	4/21/2014	NA	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	0.0038	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	10/15/2014	NA	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0049	0.017	<0.0020	<0.0020	0.0051	<0.0020
	5/19/2015	NA	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0059	0.018	<0.0020	<0.0020	0.012	<0.0020
UNNAMED_STREAM	1/14/2009	NA	<0.010	<0.010	<0.010	<0.010	---	<0.010	<0.010	<0.010	<0.010	<0.010	0.016	0.031	<0.010	0.18	1	<0.010
	4/9/2009	NA	<0.010	<0.010	<0.010	<0.010	---	<0.010	<0.010	<0.010	<0.010	<0.010	0.9	0.43	<0.010	0.081	0.82	<0.010
	7/14/2009	NA	<0.025	<0.025	0.033	<0.025	---	<0.025	<0.025	<0.025	<0.025	<0.025	1.7	0.95	<0.025	0.48	3.4	<0.025
	10/27/2009	NA	<0.0025	<0.0025	<0.0025	<0.0025	---	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	0.0027	0.015	<0.0025	0.1	0.31	<0.0025
	1/28/2010	NA	<0.020	<0.020	<0.020	<0.020	---	<0.020	<0.020	<0.020	<0.020	<0.020	1.4	1.2	<0.020	0.22	1.9	<0.020
	4/22/2010	NA	<0.010	<0.010	<0.010	<0.010	---	<0.010	<0.010	<0.010	<0.010	<0.010	0.29	0.17	<0.010	0.14	1	<0.010
	10/12/2010	NA	<0.0020	<0.0020	<0.0020	<0.0020	---	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.005	0.0053	<0.0020	<0.0020	0.016	<0.0020
	1/4/2011	NA	<0.0020	<0.0020	0.011	<0.0020	---	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.51D	0.24D	<0.0020	0.20D	1.4D	0.0094
	4/5/2011	NA	0.0022	<0.0020	0.015	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	1.1D	0.86D	<0.0020	0.083	2.3D	0.012
	10/25/2011	NA	<0.020	<0.020	<0.020	<0.020	<0.10	<0.020	<0.020	<0.020	<0.020	<0.020	0.91	0.59	<0.020	0.16	1.4	<0.020
	1/17/2012	NA	<0.010	<0.010	<0.010	<0.010	<0.050	<0.010	<0.010	<0.010	<0.010	<0.010	0.98	0.61	<0.010	0.037	0.48	<0.010
	4/3/2012	NA	<0.020	<0.020	<0.020	<0.020	<0.10	<0.020	<0.020	<0.020	<0.020	<0.020	1.2	0.73	<0.020	0.18	2	<0.020
	8/21/2012	NA	<0.010	<0.010	<0.010	<0.010	<0.050	<0.010	<0.010	<0.010	<0.010	<0.010	0.043	0.071	<0.010	0.11	0.56	<0.010
	2/6/2013	NA	<0.010	<0.010	0.019	<0.010	<0.050	<0.010	<0.010	<0.010	<0.010	<0.010	1.7D	1.5D	<0.010	0.18	2.2D	0.012
	4/11/2013	NA	<0.040	<0.040	<0.040	<0.040	<0.20	<0.040	<0.040	<0.040	<0.040	<0.040	0.065	0.071	<0.040	0.14	2.9	<0.040
	4/10/2014	NA	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0026	0.003	<0.0020	<0.0020	0.012	<0.0020
	10/15/2014	NA	<0.0020	<0.0020	<0.0020	<0.0020	0.069	<0.0020	<0.0020	0.005	<0.0020	<0.0020	0.012	0.0046	<0.0020	<0.0020	0.0096	<0.0020
W-1	10/26/2009	9	<0.0025	<0.0025	<0.0025	<0.0025	---	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	0.013	0.21	<0.0025	<0.0025	0.048	<0.0025
	4/21/2010	9	<0.0010	<0.0010	<0.0010	<0.0010	---	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0065	0.11	<0.0010	<0.0010	0.055	<0.0010
	10/14/2010	9	<0.0040	<0.0040	<0.0040	<0.0040	---	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	0.0066	0.23	<0.0040	<0.0040	0.028	<0.0040
	4/5/2011	11	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0072	0.095	<0.0020	<0.0020	0.056	<0.0020
	10/24/2011	9	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0066	<0.0020	<0.0020	<0.0020	<0.0020
	4/5/2012	11	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.039	1.0D	<0.0020	<0.0020	0.49D	0.0054
	11/12/2012	9	<0.0020	<0.0020	<0.0020	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0067	0.17	<0.0020	<0.0020	0.025	<0.0020
	5/2/2013	10.8	<0.0020	<0.0020	0.0021	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020UJ	<0.0020	0.055	1.3D	<0.0020	<0.0020	0.48D	0.007
	4/9/2014	10	<0.020	<0.020	<0.020	<0.020	<0.10	<0.020	<0.020	<0.020	<0.020	<0.020	0.033	0.98	<0.020	<0.020	0.42	<0.020

Table 7
Water Quality Data - VOC Results
2009 to Present
Former Varian Facility Site
150 Sohier Road, Beverly, Massachusetts

Notes:

Analytical results presented in milligrams per liter (mg/l).

Analytical results are reported by the laboratory in micrograms per liter (ug/l). Results are presented without changing the number of significant figures reported by the laboratory.

Bedrock wells BR-1 through BR-8, CL8-BR and CL9-BR each have a multilevel groundwater monitoring system present within the bedrock portion of the well. Zone 1 refers to the deepest sample interval, Zone 2 refers to the middle sampling zone and Zone 3 refers to the sampling zone closest to the ground surface.

1,1,2-Trichloroethane, 1,2-dichloropropane, dichloromethane and dichlorodifluoromethane are compounds which have been detected but are not included on the table.

Sample depths are in feet below grade. A sample depth of NA indicates that the sample was not collected at a discrete depth.

OB-32-DO(PURGE) = Duplicate sample collected by purge and grab method.

DCA - Dichloroethane

DCE - Dichloroethene

PCE - Tetrachloroethene

TCA - Trichloroethane

TCE - Trichloroethene

NA = discreet sample depth not applicable.

< = Not Detected at indicated detection limit

D - Indicates that the result is reported from a secondary dilute sample.

E - Estimated concentration

J - Estimated concentration

L - Sample analyzed outside of holding time.

N - Matrix interference

U - Determined to be non-detect through expert validation protocol.

Z - Sample results switched in May 7, 2004 status report.

--- Constituent not analyzed

Table 8
Operation and Maintenance Data
Building 3 Sub-Slab SVE System
Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

	Extraction Well BLD3-SVE1		Extraction Well BLD3-SVE2		Extraction Well BLD3-SVE3		Extraction Well BLD3-SVE4		BLDG3-VP1		BLDG3-VP2		BLDG3-VP3		BLDG3-VP5		BLDG3-VP6		BLDG3-VP7		Carbon Influent	Carbon Midpoint	Carbon Effluent	Total Flow Rate(3)	Effluent Percent Reduction (1)
	Vacuum ("wc)	VOC (ppm)	Vacuum ("wc)	VOC (ppm)	Vacuum ("wc)	VOC (ppm)	Vacuum ("wc)	VOC (ppm)	Vacuum ("wc)	VOC (ppm)	Vacuum ("wc)	VOC (ppm)	Vacuum ("wc)	VOC (ppm)	Vacuum ("wc)	VOC (ppm)	Vacuum ("wc)	VOC (ppm)	Vacuum ("wc)	VOC (ppm)	VOC (ppm)	VOC (ppm)	VOC (ppm)	cfm	
4/8/2015	OFF	OFF	4.74	3.5	4.8	8	OFF	OFF	--	--	--	--	--	--	--	--	--	--	--	--	8.1	1.2	1.1	150	86%
4/8/2015(2)	OFF	OFF	---	---	---	---	OFF	OFF	---	---	---	---	---	---	---	---	---	---	---	---	8.1	1.2	ND	150	<99%
4/24/2015	OFF	OFF	11.57	0.0	11.59	0	OFF	OFF	--	--	--	--	--	--	--	--	--	--	--	--	0.2	0.1	ND	150	<99%
5/6/2015	OFF	OFF	11.63	0.3	11.37	0.6	11.66	0	1.386	0.0	0.087	0.4	0.032	1.2	0.107	4.0	0.180	31.7	0.008	4.6	1.6	ND	ND	150	<99%
5/29/2015	OFF	OFF	OFF	OFF	17.16	2.6	17.45	0.3	0.566	0.2	0.102	0.2	0.037	0.3	0.040	0.8	0.049	18.9	+0.006	4.1	5.6	0.9	0.4	126	<99%
5/29/2015(2)	OFF	OFF	---	---	---	---	OFF	OFF	---	---	---	---	---	---	---	---	---	---	---	---	6.5	ND	ND	126	<99%
6/12/2015	OFF	OFF	12.95	0.9	OFF	OFF	13.03	0	--	--	--	--	--	--	--	--	--	--	--	--	4.9	ND	ND	126	<99%
6/26/2015	OFF	OFF	13.88	6.7	OFF	OFF	13.68	0.8	1.518	1.1	0.067	2.3	0.026	3.7	0.106	8.3	0.206	77.5	+0.017	3.7	11.2	0.7	ND	126	<99%
7/9/2015	OFF	OFF	9.64	2.8	9.25	5.4	9.53	3.5	--	--	--	--	--	--	--	--	--	--	--	--	5.8	0.8	ND	138	<99%
7/21/2015	OFF	OFF	14.45	4.1	14.01	3.5	14.29	1.7	1.512	1.0	0.650	2.0	0.290	3.8	0.110	8.5	0.201	75.6	+.01	2.9	11.0	0.2	ND	138	<99%
8/4/2015	OFF	OFF	14.25	3.8	14.03	3.7	14.15	1.5	1.517	0.9	0.610	2.1	0.250	3.2	0.108	8.3	0.192	68.4	+0.12	2.2	9.6	ND	ND	142	<99%
8/20/2015	OFF	OFF	13.91	2.8	13.77	2.9	13.95	1.2	--	--	--	--	--	--	--	--	--	--	--	--	7.5	ND	ND	140	<99%
9/2/2015	OFF	OFF	13.85	2.7	13.59	3.0	13.84	1	1.367	1.2	0.610	2.1	0.210	3.8	0.110	3.5	0.225	49.3	+0.009	2.4	7.1	ND	ND	140	<99%
9/15/2015	OFF	OFF	7.99	2.5	7.96	20.3	8.21	2.3	1.313	0.5	0.101	1.2	0.042	2.3	0.107	5.3	0.170	50.7	+0.011	0.1	13.7	ND	ND	138	<99%
9/29/2015	OFF	OFF	7.9	0.1	7.88	0.8	8.1	0.5	--	--	--	--	--	--	--	--	--	--	--	--	1.5	ND	ND	--	<99%

Notes:
-- not collected
"wc = inches of water column
VOC = volatile organic compounds measured with a photoionization detector
ppm = parts per million
cfm = cubic feet per minute
(1) = target off-gas VOC reduction is 95% per MassDEP policy (MADEP, 1994)
(2)= After carbon change out
(3)= Not adjusted for temperature
ND = not-detected above instrument detection limit (0.1 ppm)

TABLE 9
Sub-Sab Soil Vapor Analytical Results
Building 3 Area
Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

	BLDG2-SV1				BLDG2-SV2	BLDG3-VP1													
CONSTITUENT (ug/m3)	**4/10/2014 (2)**	**1/29/2015**	**7/2/2015**	**8/20/2015(3**	**4/10/2014 (2)**	**8/5/2010**	**11/22/2010**	**2/22/2011**	**6/27/2011**	**1/24/2012**	**3/5/2012 (1)**	**11/7/2012**	**3/29/2013**	**8/5/2013**	**11/1/2013**	**4/29/2014 (2)**	**1/29/2015**	**7/2/2015**	**8/20/2015 (3**
1,1,1-Trichloroethane	<11000	<11	<1	<1.1	<20	<19	<4.2	<26	<14	<13	<30	<17	<5.7	<45	<11	<260	<1	<1	<5.5
1,1,2,2-Tetrachloroethane	<2900	<14	<1	<1.4	<4.9	<4.7	<1.1	<6.5	<3.4	<3.3	<7.4	<4.2	<1.4	<11	<2.6	<66	<1	<1	<6.9
1,1,2-Trichloroethane	<11000	<11	<1	<1.1	<20	<19	<4.2	<26	<14	<13	<30	<17	<5.7	<45	<11	<260	<1	<1	<5.5
1,1-Dichloroethane	<8600	<8	<0.8	<0.81	<15	<14	<3.2	<20	<10	<10	<22	<13	<4.3	<34	<7.9	<200	<0.8	<0.8	<4.0
1,1-Dichloroethene	<8400	<8	<0.8	<0.79	<14	<14	<3.1	<19	<10	<9.7	<22	<12	<4.2	<33	<7.7	<190	<0.8	<0.8	<4.0
1,2-Dibromoethane (EDB)	---	---	<2	---	---	---	---	<7.4	<3.8	<3.8	<8.4	---	---	---	---	<74	---	<2	---
1,2-Dichlorobenzene	---	---	<1	---	---	---	---	<57	<30	<29	<66	---	---	---	---	<580	---	<1	---
1,2-Dichloroethane	<8600	<8	<0.8	<0.81	<15	<14	<3.2	<20	<10	<10	<22	<13	<4.3	<34	<7.9	<200	<0.8	<0.8	<4.0
1,2-Dichloropropane	<9700	<9	<0.9	<2.3	<17	<16	<3.6	<22	<12	<11	<25	<14	<4.8	<38	<9.0	<220	<0.9	<0.9	<12
1,3-Dichlorobenzene	---	---	<1	---	---	---	---	<57	<30	<29	<66	---	---	---	---	<580	---	<1	---
1,4-Dichlorobenzene	---	---	<1	---	---	---	---	<57	<30	<29	<66	---	---	---	---	<580	---	<1	---
1,4-Dioxane	---	---	<0.7	---	---	---	---	---	<110	<110	<250	---	---	---	---	<2200	---	<0.7	---
2-Butanone	---	---	5	---	---	---	---	<28	<15	15	<32	---	---	---	---	<280	---	4.0	---
2-Hexanone	---	---	<0.8	---	---	---	---	<20	<10	<10	<22	---	---	---	---	<200	---	<0.8	---
4-Methyl-2-pentanone	---	---	<0.8	---	---	---	---	<39	<20	<20	<45	---	---	---	---	<390	---	<0.8	---
Acetone	<95000	49	68	9070	<160	---	---	800	110	140	<250	150	120	<380	120	<2200	900	230	356
Benzene	---	---	<0.6	---	---	---	---	<15	<7.9	<7.8	<17	---	---	---	---	<150	---	<0.6	---
Bromodichloromethane	<2900	<13	<1	<3.3	<4.9	<4.7	<1.1	<6.5	<3.4	<3.3	<7.4	<4.2	<1.4	<11	<2.6	<66	<1	<1	<17
Bromoform	<22000	<21	<2	<5.2	<37	<36	<8.0	<50	<26	<25	<57	<32	<11	<86	<20	<500	<2	<2	<26
Bromomethane	<8200	<8	<0.8	<1.9	<14	<14	<3.0	<19	<9.7	<9.5	<21	<12	<4.1	<32	<7.6	<190	<0.8	<0.8	<9.7
Carbondisulfide	---	---	---	---	---	---	---	<15	---	---	---	---	---	---	---	---	---	---	---
Carbontetrachloride	<1300	<13	5.0	<1.3	<2.3	<2.2	0.64	<3.0	<1.6	<1.6	<3.5	<2.0	<0.66	<5.3	<1.2	<31	<1	<1	<6.3
Chlorobenzene	<9700	<9	<0.9	<2.3	<17	<16	<3.6	<22	<12	<11	<25	<14	<4.8	<38	<9.0	<220	<0.9	<0.9	<12
Chloroethane	<11000	<5	---	<0.53	<19	<18	<4.1	<25	---	---	---	<16	<5.5	<44	<10	---	<0.5	---	<2.6
Chloroform	<10000	<10	3.0	2.4	<18	<17	4.4	29	22	17	29	<15	9.5	<41	16	<240	1.0	<1	<12
Chloromethane	<8600	<4	---	1.8	<15	<14	<3.2	<20	---	---	---	<13	<4.3	<34	<7.9	---	<0.4	---	<5.2
cis-1,2-Dichloroethene	<8400	18	5.0	<0.79	<14	<14	<3.1	<19	<10	<9.7	<22	<12	<4.2	<33	<7.7	<190	<0.8	<0.8	<4.0
cis-1,3-Dichloropropene	<19000	<9	<0.9	<2.3	<33	<31	<7.0	<44	<23	<22	<50	<28	<9.5	<75	<18	<440	<0.9	<0.9	<11
Dibromochloromethane	<3600	<17	<2	<4.3	<6.2	<6.0	<1.3	<8.3	<4.3	<4.2	<9.4	<5.3	<1.8	<14	<3.3	<83	<2	<2	<21
Dichloromethane	<7200	10	45	<1.7	<12	<12	<2.7	<17	<8.6	<8.4	<19	<11	<3.6	<29	<6.7	<170	5.0	1.0	<8.7
Ethylbenzene	---	---	<0.9	---	---	---	---	160	240	150	120	79	26	---	---	<420	---	<0.9	---
Freon 113	---	---	---	---	---	---	---	<7.4	---	---	---	---	---	---	---	---	---	---	---
Hexachlorobutadiene	---	---	<2	---	---	---	---	---	<68	<66	<150	---	---	---	---	<1300	---	<2	---
Methyltert-butylether	---	---	<0.7	---	---	---	---	<34	<18	<18	<39	---	---	---	---	<350	---	<0.7	---
Naphthalene	---	---	<1	---	---	---	---	---	<45	<44	<99	---	---	---	---	<880	---	<1	---
Styrene	---	---	<0.8	---	---	---	---	<41	<21	<21	<47	---	---	---	---	<410	---	<0.8	---
Tetrachloroethene	1200000	18000	60	3.5	11	1600	480	2100	2100D	1100	2100	1300	500	3200	1000	19000	87	<1	50
Toluene	---	---	2.0	---	---	---	---	<18	<9.3	<9.1	<20	---	---	---	---	<180	---	1.0	---
trans-1,2-Dichloroethene	<8400	9.0	4.0	<0.79	<14	<14	<3.1	<19	<10	<9.7	<22	<12	<4.2	<33	<7.7	<190	<0.8	2	<4.0
Trans-1,3-Dichloropropene	<9500	<9	<0.9	<2.3	<16	<16	<3.5	<22	<11	<11	<25	<14	<4.7	<38	<8.8	<220	<0.9	<0.9	<11
Trichloroethene	48000	1700	38	2.1	31	510	130	1500	630	350	810	320	150	670	290	960	19	<1	<5.4
Trichlorofluoromethane	<12000	<11	---	<2.8	<20	<19	<4.4	<27	---	---	---	<17	<5.9	<47	<11	---	<1	---	<14
Vinyl acetate	---	---	---	---	---	---	---	<220	---	---	---	---	---	---	---	---	---	---	---
Vinyl chloride	<1100	<5	<0.5	<0.51	<2.0	<1.9	<0.42	<2.6	<1.4	<1.3	<3.0	<1.7	<0.57	<4.5	<1.1	<26	<0.5	<0.5	<2.6
m/p-xylene	---	---	2.0	---	---	---	---	610	990	600	480	340	100	---	---	<840	---	<2	---
o-Xylene	---	---	<0.9	---	---	---	---	57	87	57	<47	37	14	---	---	<420	---	<0.9	---
Xylene (total)	---	---	2.0	---	---	---	---	670	1100	660	480	380	110	---	---	<840	---	<2	---

TABLE 9
Sub-Sab Soil Vapor Analytical Results
Building 3 Area
Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

	BLDG3-VP2								BLDG3-VP3															
CONSTITUENT (ug/m3)	**11/7/2012**	**3/29/2013**	**8/5/2013**	**11/1/2013**	**4/29/2014 (2)**	**1/29/2015**	**7/2/2015**	**8/20/2015 (3)**	**8/5/2010**	**11/22/2010**	**2/22/2011**	**6/27/2011**	**10/6/2011**	**1/10/2012**	**3/5/2012 (1)**	**11/7/2012**	**3/29/2013**	**8/5/2013**	**11/1/2013**	**4/29/2014 (2)**	**1/29/2015**	**7/2/2015**	**8/20/2015 (3)**
1,1,1-Trichloroethane	<13	<9.5	<1.8	<2.0	<130	<1	<1	<5.5	<400	<39	<290	<260	<19	<67	<71	<19	<10	<7.7	<12	<26	<1	<1	<5.5
1,1,2,2-Tetrachloroethane	<3.2	<2.4	<0.44	<0.50	<32	<1	<1	<6.9	<100	<9.8	<72	<65	<4.7	<17	<18	<4.8	<2.6	<1.9	<2.9	<6.5	<1	<1	<6.9
1,1,2-Trichloroethane	<13	<9.5	<1.8	<2.0	<130	<1	<1	<5.5	<400	<39	<290	<260	<19	<67	<71	<19	<10	<7.7	<12	<26	<1	<1	<5.5
1,1-Dichloroethane	<9.7	<7.2	<1.3	<1.5	<95	<0.8	<0.8	<4.0	<300	<29	<220	<200	<14	<50	<53	<14	<7.9	<5.8	<8.7	<19	<0.8	<0.8	<4.0
1,1-Dichloroethene	<9.5	<7.0	<1.3	<1.5	<93	<0.8	<0.8	<4.0	<290	<29	<210	<190	<14	<49	<52	<14	<7.7	<5.6	<8.5	<19	<0.8	<0.8	<4.0
1,2-Dibromoethane (EDB)	---	---	---	---	<36	---	<2	---	---	---	<81	<74	---	<19	<20	---	---	---	---	<7.3	---	<2	---
1,2-Dichlorobenzene	---	---	---	---	<280	---	<1	---	---	---	<630	<570	---	<150	<160	---	---	---	---	<57	---	<1	---
1,2-Dichloroethane	<9.7	<7.2	<1.3	<1.5	<95	<0.8	<0.8	<4.0	<300	<29	<220	<200	<14	<50	<53	<14	<7.9	<5.8	<8.7	<19	<0.8	<0.8	<4.0
1,2-Dichloropropane	<11	<8.1	<1.5	<1.7	<110	<9	<0.9	<12	<340	<33	<240	<220	<16	<57	<60	<16	<8.9	<6.5	<9.9	<22	<0.9	<0.9	<12
1,3-Dichlorobenzene	---	---	---	---	<280	---	<1	---	---	---	<630	<570	---	<150	<160	---	---	---	---	<57	---	<1	---
1,4-Dichlorobenzene	---	---	---	---	<280	---	<1	---	---	---	<630	<570	---	<150	<160	---	---	---	---	<57	---	<1	---
1,4-Dioxane	---	---	---	---	<1100	---	<0.7	---	---	---	---	<2200	---	<560	<590	---	---	---	---	<220	---	<0.7	---
2-Butanone	---	---	---	---	<140	---	7.0	---	---	---	<310	<280	---	<73	<77	---	---	---	---	<28	---	4.0	---
2-Hexanone	---	---	---	---	<95	---	<0.8	---	---	---	<220	<200	---	<50	<53	---	---	---	---	<19	---	<0.8	---
4-Methyl-2-pentanone	---	---	---	---	<190	---	<0.8	---	---	---	<430	<390	---	<100	<110	---	---	---	---	<39	---	<0.8	---
Acetone	360	320	220D	140D	<1100	400	170	432	---	---	<2400	<2200	1300	<560	<590	260	140	160	160	<220	620	410	406
Benzene	---	---	---	---	<74	---	<0.6	---	---	---	<170	<150	---	<39	<41	---	---	---	---	<15	---	<0.6	---
Bromodichloromethane	<3.2	<2.4	<0.44	<0.50	<32	<1	<1	<17	<100	<9.8	<72	<65	<4.7	<17	<18	<4.8	<2.6	<1.9	<2.9	<6.5	<1	<1	<17
Bromoform	<25	<18	<3.4	<3.8	<240	<2	<2	<26	<760	<74	<550	<490	<36	<130	<130	<36	<20	<15	<22	<49	<2	<2	<26
Bromomethane	<9.2	<6.8	<1.3	<1.4	<91	<0.8	<0.8	<9.7	<290	<28	<210	<190	<14	<48	<51	<14	<7.5	<5.5	<8.3	<19	<0.8	<0.8	<9.7
Carbondisulfide	---	---	---	---	---	---	---	---	---	---	<160	---	---	---	---	---	---	---	---	---	---	---	---
Carbontetrachloride	<1.5	<1.1	0.52	0.54	<15	<1	<1	<6.3	<47	<4.6	<34	<30	<2.2	<7.8	<8.3	<2.2	<1.2	1.0	<1.4	<3.0	<1	<1	<6.3
Chlorobenzene	<11	<8.1	<1.5	<1.7	<110	<0.9	<0.9	<12	<340	<33	<240	<220	<16	<57	<60	<16	<8.9	<6.5	<9.9	<22	<0.9	<0.9	<12
Chloroethane	<12	<9.2	2.5	<1.9	---	<0.5	---	<2.6	<390	<38	<280	---	<18	---	---	<19	<10	<7.4	<11	---	<0.5	---	<2.6
Chloroform	19	13	25	14	<110	1.0	<1	<12	<360	<35	<260	<230	<17	<60	<64	20	17	14	15	24	2.0	<1	<12
Chloromethane	<9.7	<7.2	<1.3	<1.5	---	<0.4	---	<5.2	<300	<29	<220	---	<14	---	---	<14	<7.9	<5.8	<8.7	---	<0.4	---	<5.2
cis-1,2-Dichloroethene	<9.5	<7.0	<1.3	<1.5	<93	<0.8	<0.8	<4.0	<290	<29	<210	<190	<14	<49	<52	32	22	19	19	20	4.0	<0.8	<4.0
cis-1,3-Dichloropropene	<22	<16	<3.0	<3.3	<210	<0.9	<0.9	<11	<670	<65	<480	<430	<31	<110	<120	<32	<17	<13	<19	<43	<0.9	<0.9	<11
Dibromochloromethane	<4.1	<3.0	<0.56	<0.63	<40	<2	<2	<21	<130	<12	<91	<82	<6.0	<21	<22	<6.1	<3.3	<2.4	<3.7	<8.2	<2	<2	<21
Dichloromethane	<8.2	<6.0	<1.1	<1.3	<81	17	3.0	<8.7	<250	<25	<180	<160	<12	<42	<45	<12	<6.6	<4.9	<7.3	<16	18	2.0	<8.7
Ethylbenzene	24	<15	---	---	<200	---	<0.9	---	---	---	<460	<410	<30	<110	<110	<30	<17	---	---	<41	---	<0.9	---
Freon 113	---	---	---	---	---	---	---	---	---	---	130	---	---	---	---	---	---	---	---	---	---	---	---
Hexachlorobutadiene	---	---	---	---	<640	---	<2	---	---	---	---	<1300	---	<340	<360	---	---	---	---	<130	---	<2	---
Methyltert-butylether	---	---	---	---	<170	---	<0.7	---	---	---	<380	<340	---	<88	<93	---	---	---	---	<34	---	<0.7	---
Naphthalene	---	---	---	---	<420	---	<1	---	---	---	---	<870	---	<220	<240	---	---	---	---	<86	---	2.0	---
Styrene	---	---	---	---	<200	---	<0.8	---	---	---	<450	<410	---	<100	<110	---	---	---	---	<40	---	<0.8	---
Tetrachloroethene	61	26	130	31	9600	4.0	<1	50	36000	3000	51000	27000	410	4800	5000	2200	960	1200D	620	2000	86	<1	106
Toluene	---	---	---	---	<87	---	1.0	---	---	---	<200	<180	---	<46	<49	---	---	---	---	<18	---	2.0	---
trans-1,2-Dichloroethene	<9.5	<7.0	<1.3	<1.5	<93	<0.8	2.0	<4.0	<290	<29	<210	<190	<14	<49	<52	<14	<7.7	<5.6	<8.5	<19	1.0	2.0	<4.0
Trans-1,3-Dichloropropene	<11	<8.0	<1.5	<1.7	<110	<0.9	<0.9	<11	<330	<33	<240	<220	<16	<56	<59	<16	<8.7	<6.4	<9.7	<22	<0.9	<0.9	<11
Trichloroethene	12	11	25	11	820	2.0	<1	<5.4	3600	1000	4900	2100	42	640	620	600	390	380	270	460	31	<1	25
Trichlorofluoromethane	<13	<9.9	<1.8	<2.1	---	<1	---	<14	<410	<40	<300	---	<19	---	---	<20	<11	<7.9	<12	---	<1	---	<14
Vinyl acetate	---	---	---	---	---	---	---	---	---	---	<2400	---	---	---	---	---	---	---	---	---	---	---	---
Vinyl chloride	<1.3	<0.95	<0.18	<0.20	<13	<0.5	<0.5	<2.6	<40	<3.9	<29	<26	<1.9	<6.7	<7.1	<1.9	<1.0	<0.77	<1.2	<2.6	<0.5	<0.5	<2.6
m/p-xylene	86	<30	---	---	<410	---	<2	---	---	---	<920	<830	<60	<210	<230	110	<33	---	---	<82	---	<2	---
o-Xylene	32	<15	---	---	<200	---	<0.9	---	---	---	<460	<410	<30	<110	<110	38	<17	---	---	<41	---	<0.9	---
Xylene (total)	120	<30	---	---	<410	---	<2	---	---	---	<920	<830	<60	<210	<110	150	<33	---	---	<82	---	<2	---

TABLE 9
Sub-Sab Soil Vapor Analytical Results
Building 3 Area
Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

	BLDG3-VP5				BLDG3-VP6							BLDG3-VP7		BLDG6-SV1					
CONSTITUENT (ug/m3)	**10/6/2011**	**1/10/2012**	**3/5/2012 (1)**	**11/7/2012**	**8/5/2010**	**8/30/2010**	**11/22/2010**	**2/22/2011**	**6/27/2011**	**10/6/2011**	**1/10/2012**	**3/27/2012**	**4/10/2014 (2)**	**2/22/2011**	**6/3/2011**	**8/22/2011**	**10/6/2011**	**1/10/2012**	**4/10/2014 (2)**
1,1,1-Trichloroethane	<3200	<1700	<1400	<180	<57	<17	<11	<1700	<990	<8600	<8200	<95	<8.4	<1200	<2300	<1100	<280	<1600	<640
1,1,2,2-Tetrachloroethane	<810	<430	<340	<46	<14	<4.2	<2.8	<420	<250	<2200	<2000	<24	<2.1	<300	<570	<270	<69	<400	<160
1,1,2-Trichloroethane	<3200	<1700	<1400	<180	<57	<17	<11	<1700	<990	<8600	<8200	<95	<8.4	<1200	<2300	<1100	<280	<1600	<640
1,1-Dichloroethane	<2400	<1300	<1000	<140	<43	<13	<8.5	<1300	<740	<6500	<6100	<71	<6.3	<890	<1700	<820	<210	<1200	<480
1,1-Dichloroethene	<2400	<1200	<1000	<140	<42	<12	<8.3	<1200	<730	<6300	<6000	<69	<6.2	<870	<1700	<800	<200	<1200	<470
1,2-Dibromoethane (EDB)	---	<480	<390	---	---	<4.8	---	<480	<280	---	<2300	<27	---	<340	---	---	---	<450	---
1,2-Dichlorobenzene	---	<3700	<3000	---	---	<37	---	<3700	<2200	---	<18000	<210	---	<2600	---	---	---	<3500	---
1,2-Dichloroethane	<2400	<1300	<1000	<140	<43	<13	<8.5	<1300	<740	<6500	<6100	<71	<6.3	<890	<1700	<820	<210	<1200	<480
1,2-Dichloropropane	<2800	<1400	<1200	<160	<48	<14	<9.7	<1400	<840	<7300	<6900	<80	<7.1	<1000	<1900	<930	<230	<1300	<540
1,3-Dichlorobenzene	---	<3700	<3000	---	---	<37	---	<3700	<2200	---	<18000	<210	---	<2600	---	---	---	<3500	---
1,4-Dichlorobenzene	---	<3700	<3000	---	---	<37	---	<3700	<2200	---	<18000	<210	---	<2600	---	---	---	<3500	---
1,4-Dioxane	---	<14000	<11000	---	---	<140	---	---	<8300	---	<68000	<790	---	---	---	---	---	<13000	---
2-Butanone	---	<1800	<1500	---	---	<18	---	<1800	<1100	---	<8800	<100	---	<1300	---	---	---	<1700	---
2-Hexanone	---	<1300	<1000	---	---	<13	---	<1300	<740	---	<6100	<71	---	<890	---	---	---	<1200	---
4-Methyl-2-pentanone	---	<2600	<2000	---	---	<25	---	<2500	<1500	---	<12000	<140	---	<1800	---	---	---	<2400	---
Acetone	<27000	<14000	<11000	<1500	---	410	---	24000	<130000D	150000	<68000	<790	130	<9900	<19000	---	<2300	<13000	<5300
Benzene	---	<990	<790	---	---	<9.8	---	<980	<580	---	<4800	<55	---	<700	---	---	---	<920	---
Bromodichloromethane	<810	<430	<340	<46	<14	<4.2	<2.8	<420	<250	<2200	<2000	<24	1.6	<300	<570	<270	<69	<400	<160
Bromoform	<6200	<3200	<2600	<350	<110	<32	<22	<3200	<1900	<16000	<16000	<180	<16	<2300	<4300	<2100	<520	<3000	<1200
Bromomethane	<2300	<1200	<970	<130	<41	<12	<8.1	<1200	<710	<6200	<5800	<68	<6.0	<850	<1600	<790	<200	<1100	<460
Carbondisulfide	---	---	---	---	---	---	---	<950	---	---	---	---	---	<680	---	---	---	---	---
Carbontetrachloride	<380	<200	<160	<22	<6.6	<2.0	<1.3	<200	<120	<1000	<950	<11	<0.98	<140	<270	<130	<32	<180	<75
Chlorobenzene	<2800	<1400	<1200	<160	<48	<14	<9.7	<1400	<840	<7300	<6900	<80	<7.1	<1000	<1900	<930	<230	<1300	<540
Chloroethane	<3100	---	---	<180	<55	---	<11	<1600	---	<8400	---	---	<8.1	<1200	<2200	<1100	<270	---	<620
Chloroform	<2900	<1500	<1200	<170	<51	<15	<10	<1500	<890	<7800	<7300	<85	39	<1100	<2000	<990	<250	<1400	<570
Chloromethane	<2400	---	---	<140	<43	---	69	<1300	---	<6500	---	---	<6.3	<890	<1700	<820	<210	---	<480
cis-1,2-Dichloroethene	<2400	<1200	<1000	<140	<42	<12	<8.3	<1200	<730	<6300	<6000	<69	13	<870	<1700	<800	<200	<1200	<470
cis-1,3-Dichloropropene	<5400	<2800	<2300	<310	<94	<28	<19	<2800	<1700	<14000	<14000	<160	<14	<2000	<3800	<1800	<460	<2600	<1100
Dibromochloromethane	<1000	<540	<430	<59	<18	<5.3	<3.6	<530	<310	<2700	<2600	<30	<2.7	<380	<720	<350	<87	<500	<200
Dichloromethane	<2100	<1100	<860	<120	<36	<11	<7.2	<1100	<630	<5500	<5200	<60	<5.3	<750	<1400	<690	<170	<1000	<400
Ethylbenzene	120000	60000	36000	8100	---	40	---	190000D	300000D	200000	180000	4700	---	<1900	---	<1700	<440	<2500	---
Freon 113	---	---	---	---	---	---	---	<480	---	---	---	---	---	<340	---	---	---	---	---
Hexachlorobutadiene	---	<8500	<6800	---	---	<84	---	---	<5000	---	<41000	<470	---	---	---	---	---	<7900	---
Methyltert-butylether	---	<2200	<1800	---	---	<22	---	<2200	<1300	---	<11000	<120	---	<1600	---	---	---	<2100	---
Naphthalene	---	<5700	<4500	---	---	<56	---	---	<3300	---	<27000	<320	---	---	---	---	---	<5300	---
Styrene	---	<2700	<2100	---	---	<26	---	<2600	<1600	---	<13000	<150	---	<1900	---	---	---	<2500	---
Tetrachloroethene	<430	<230	350	62	8.9J	<2.2	<1.5	<220	<130	<1200	<1100	210	520	85000	130000	70000	32000	100000	48000
Toluene	---	<1200	<930	---	---	<11	---	<1100	1000	---	<5600	<65	---	<810	---	---	---	<1100	---
trans-1,2-Dichloroethene	<2400	<1200	<1000	<140	<42	<12	<8.3	<1200	<730	<6300	<6000	<69	<6.2	<870	<1700	<800	<200	<1200	<470
Trans-1,3-Dichloropropene	<2700	<1400	<1100	<150	<47	<14	<9.5	<1400	<830	<7200	<6800	<79	<7.0	<990	<1900	<910	<230	<1300	<530
Trichloroethene	<320	<170	<140	<18	<5.7	<1.7	1.2	<170	<99	<860	<820	170	95	34000	45000	40000	14000	41000	22000
Trichlorofluoromethane	<3300	---	---	<190	<59	---	<12	<1700	---	<8900	---	---	<8.7	<1200	<2400	<1100	<280	---	<660
Vinyl acetate	---	---	---	---	---	---	---	<14000	---	---	---	---	---	<9900	---	---	---	---	---
Vinyl chloride	<320	<170	<140	<18	<5.7	<1.7	<1.1	<170	<99	<860	<820	<9.5	<0.84	<120	<230	<110	<28	<160	<64
m/p-xylene	470000	240000	140000	40000D	---	240	---	680000D	1100000D	700000	640000	15000D	---	<3800	---	<3500	<880	<5000	---
o-Xylene	47000	29000	18000	5700	---	<27	---	68000	100000D	62000	61000	1200	---	<1900	---	<1700	<440	<2500	---
Xylene (total)	520000	270000	158000	46000D	---	240	---	748000D	1200000D	760000	700000	16000D	---	<3800	---	<3500	<880	<5000	---

Notes:

< indicates chemical not detected, and concentration is less than reporting limit (value shown)

ug/m^3 = micrograms per cubic meter.

J = Estimated concentration.

D = Result is from a diluted sample.

--- Constituent not analyzed

(1) = sample collected following scheduled temporary SVE system shutdown from 2/27/12 to 3/5/12

(2) = sample collected following scheduled temporary SVE system shutdown from 4/3/14 to 4/29/14

(3) = sample collected following scheduled temporary SVE system shutdown from 8/4/15 to 8/20/15

TABLE 10
Indoor Air Analytical Results
Building 3 Area
Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

	BLDG2-6																		
	Environmental Testing Room Building 2 Basement																		
CONSTITUENT (ug/m3)	**6/1/2009**	**10/8/2009**	**2/9/2010**	**5/19/2010**	**8/5/2010**	**11/22/2010**	**2/22/2011**	**6/27/2011**	**10/6/2011**	**1/10/2012**	**3/5/2012 (1)**	**11/7/2012**	**8/5/2013**	**11/1/2013**	**4/10/2014 (2)**	**4/29/2014 (2)**	**1/29/2015**	**7/1/2015**	**8/19/2015(3)**
1,1,1-Trichloroethane	<39	<0.88	<1.5	<1.2	<0.94	<1.1	0.87	<0.92	<1.4	<7.7	<1.1	<5.2	<1.1	<18	<1.1	<1.0	<1	<1	<1.1
1,1,2,2-Tetrachloroethane	<9.8	<0.22	<0.38	<0.31	<0.23	<0.28	<0.22	<0.23	<0.36	<1.9	<0.27	<1.3	<0.28	<4.4	<0.27	<0.26	<1	<1	<1.4
1,1,2-Trichloroethane	<39	<0.88	<1.5	<1.2	<0.94	<1.1	<0.86	<0.92	<1.4	<7.7	<1.1	<5.2	<1.1	<18	<1.1	<1.0	<1	<1	<1.1
1,1-Dichloroethane	<30	<0.66	<1.1	<0.93	<0.70	<0.84	<0.65	<0.69	<1.1	<5.8	<0.82	<3.9	<0.84	<13	<0.80	<0.78	<0.8	<0.8	<0.81
1,1-Dichloroethene	<29	<0.65	<1.1	<0.91	<0.69	<0.83	<0.63	<0.68	<1.0	<5.6	<0.80	<3.8	<0.82	<13	<0.79	<0.76	<0.8	<0.8	<0.79
1,2-Dibromoethane (EDB)	---	---	---	---	---	---	---	---	---	---	<0.31	---	---	---	---	<0.29	---	<2	---
1,2-Dichlorobenzene	---	---	---	---	---	---	---	---	---	---	<2.4	---	---	---	---	<2.3	---	<1	---
1,2-Dichloroethane	<30	<0.66	<1.1	<0.93	<0.70	<0.84	<0.65	<0.69	<1.1	<5.8	<0.82	<3.9	<0.84	<13	<0.80	<0.78	<0.8	<0.8	<0.81
1,2-Dichloropropane	<33	<0.75	<1.3	<1.1	<0.80	<0.96	<0.73	<0.79	<1.2	<6.5	<0.93	<4.4	<0.95	<15	<0.91	<0.88	<0.9	<0.9	<2.3
1,3-Dichlorobenzene	---	---	---	---	---	---	---	---	---	---	<2.4	---	---	---	---	<2.3	---	<1	---
1,4-Dichlorobenzene	---	---	---	---	---	---	---	---	---	---	<2.4	---	---	---	---	<2.3	---	<1	---
1,4-Dioxane	---	---	---	---	---	---	---	---	---	---	<9.1	---	---	---	---	<8.6	---	<0.7	---
2-Butanone	---	---	---	---	---	---	---	---	---	---	3.2	---	---	---	---	14	---	11	---
2-Hexanone	---	---	---	---	---	---	---	---	---	---	<0.82	---	---	---	---	<0.78	---	<0.8	---
4-Methyl-2-pentanone	---	---	---	---	---	---	---	---	---	---	<1.6	---	---	---	---	4.1	---	2.0	---
Acetone	---	---	---	---	---	---	---	330	290	240	210D	160	340D	440	95D	75D	110	120	204
Benzene	---	---	---	---	---	---	---	---	---	---	<0.64	---	---	---	---	<0.60	---	<0.6	---
Bromodichloromethane	<9.8	<0.22	<0.38	<0.31	<0.23	<0.28	<0.22	<0.23	<0.36	<1.9	<0.27	<1.3	<0.28	<4.4	<0.27	<0.26	<1	<1	<3.3
Bromoform	<75	<1.7	<2.9	<2.4	<1.8	<2.1	<1.6	<1.8	<2.7	<15	<2.1	<9.9	<2.1	<34	<2.0	<2.0	<2	<2	<5.2
Bromomethane	<28	<0.63	<1.1	<0.89	<0.67	<0.81	<0.62	<0.66	<1.0	<5.5	<0.78	<3.7	<0.80	<13	<0.77	<0.74	<0.8	<0.8	<1.9
Carbontetrachloride	<4.6	0.33	0.52	0.64	0.61	0.62	0.55	0.57	0.59	<0.90	0.57	<0.61	0.51	<2.1	0.48	0.49	<1	<1	<1.3
Chlorobenzene	<33	<0.75	<1.3	<1.1	<0.80	<0.96	<0.73	<0.79	<1.2	<6.5	<0.93	<4.4	<0.95	<15	<0.91	<0.88	<0.9	<0.9	<2.3
Chloroethane	<38	<0.85	<1.5	<1.2	<0.90	<1.1	<0.84	<0.89	<1.4	<7.4	---	<5.0	<1.1	<17	<1.0	---	<0.5	---	<0.53
Chloroform	<35	<0.79	<1.4	<1.1	<0.84	<1.0	<0.78	<0.83	<1.3	<6.9	<0.98	<4.7	<1.0	<16	<0.97	<0.93	<1	<1	<2.4
Chloromethane	<30	0.89	1.1	1.2	1.1	1.1	1.2	1.1	1.1	<5.8	---	<3.9	<0.84	<13	0.9	---	0.7	---	<1.0
cis-1,2-Dichloroethene	<29	<0.65	<1.1	<0.91	<0.69	<0.83	<0.63	<0.68	<1.0	<5.6	<0.80	<3.8	<0.82	<13	<0.79	<0.76	<0.8	<0.8	<0.79
cis-1,3-Dichloropropene	<66	<1.5	<2.6	<2.1	<1.6	<1.9	<1.4	<1.5	<2.4	<13	<1.8	<8.7	<1.9	<29	<1.8	<1.7	<0.9	<0.9	<2.3
Dibromochloromethane	<12	<0.28	<0.48	<0.39	<0.30	<0.36	<0.27	<0.29	<0.45	<2.4	<0.35	<1.7	<0.35	<5.6	<0.34	<0.33	<2	<2	<4.3
Dichloromethane	<25	<0.56	<0.97	0.9	1.2	1.5	<0.55	0.64	<0.90	<4.9	<0.62	<3.3	<0.71	<11	<0.68	<0.66	4.0	1.0	<1.7
Ethylbenzene	---	---	---	---	---	---	---	<1.5	<2.3	<12	<1.7	<8.3	---	---	---	<1.6	---	<0.9	---
Hexachlorobutadiene	---	---	---	---	---	---	---	---	---	---	<5.5	---	---	---	---	<5.2	---	<2	---
Methyltert-butylether	---	---	---	---	---	---	---	---	---	---	<1.4	---	---	---	---	<1.4	---	<0.7	---
Naphthalene	---	---	---	---	---	---	---	---	---	---	<3.6	---	---	---	---	<3.5	---	<1	---
Styrene	---	---	---	---	---	---	---	---	---	---	<1.7	---	---	---	---	<1.6	---	<0.8	---
Tetrachloroethene	12	3.3	40	12	9.0	8.9	9.3	13	3.1	1.7	2.9	5.4	7.5	22	4.0	3.2	2.0	<1	3.9
Toluene	---	---	---	---	---	---	---	---	---	---	1.8	---	---	---	---	1.3	---	1.0	---
trans-1,2-Dichloroethene	<29	<0.65	2.9	<0.91	<0.69	<0.83	<0.63	<0.68	<1.0	<5.6	2.5	<3.8	1.4	<13	<0.79	<0.76	<0.8	<0.8	1.7
Trans-1,3-Dichloropropene	<33	<0.74	<1.3	<1.0	<0.78	<0.94	<0.72	<0.77	<1.2	<6.4	<0.91	<4.4	<0.93	<15	<0.89	<0.86	<0.9	<0.9	<2.3
Trichloroethene	<3.9	1.1	3.1	2.6	2.2	3.1	2.0	2.7	1.5	1.2	1.9	1.9	2.3	5.7	0.96	0.55	4.0	<1	4.7
Trichlorofluoromethane	<41	1.1	1.7	2.1	2.0	1.6	1.4	1.9	1.7	<7.9	---	<5.4	1.8	<18	1.3	---	<1	---	<2.8
Vinyl chloride	<3.9	<0.088	<0.15	<0.12	<0.094	<0.090	<0.086	<0.092	<0.14	<0.77	<0.11	<0.52	<0.11	<1.8	<0.11	<0.10	<0.5	<0.5	<0.51
m/p-xylene	---	---	---	---	---	---	---	<2.9	<4.5	<24	<3.5	<17	---	---	---	<3.3	---	<2	---
o-Xylene	---	---	---	---	---	---	---	<1.5	<2.3	<12	<1.7	<8.3	---	---	---	<1.6	---	<0.9	---
Xylene (total)	---	---	---	---	---	---	---	<2.9	<4.5	<24	<1.7	<17	---	---	---	<3.3	---	<2	---

TABLE 10
Indoor Air Analytical Results
Building 3 Area
Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

	BLDG2-7	BLDG3-1								
	Storage Room Building 2 Basement	Main Chemical Laboratory								
CONSTITUENT (ug/m3)	4/10/2014 (2)	6/1/2009	10/8/2009	2/9/2010	5/19/2010	8/5/2010	11/22/2010	2/22/2011	3/5/2012 (1)	1/29/2015
1,1,1-Trichloroethane	<1.7	<75	<3.0	<4.6	<2.8	<1.5	<0.88	<0.91	<1.1	<1
1,1,2,2-Tetrachloroethane	<0.43	<19	<0.74	<1.2	<0.70	<0.38	<0.22	<0.23	<0.27	<1
1,1,2-Trichloroethane	<1.7	<75	<3.0	<4.6	<2.8	<1.5	<0.88	<0.91	<1.1	<1
1,1-Dichloroethane	<1.3	<56	<2.2	<3.5	<2.1	<1.1	<0.66	<0.68	<0.82	<0.8
1,1-Dichloroethene	<1.2	<55	<2.2	<3.4	<2.0	<1.1	<0.65	<0.67	<0.80	<0.8
1,2-Dibromoethane (EDB)	---	---	---	---	---	---	---	---	<0.31	---
1,2-Dichlorobenzene	---	---	---	---	---	---	---	---	<2.4	---
1,2-Dichloroethane	<1.3	<56	<2.2	<3.5	<2.1	<1.1	<0.66	<0.68	<0.82	<0.8
1,2-Dichloropropane	<1.4	<63	<2.5	<3.9	<2.4	<1.3	<0.75	<0.78	<0.93	<0.9
1,3-Dichlorobenzene	---	---	---	---	---	---	---	---	<2.4	---
1,4-Dichlorobenzene	---	---	---	---	---	---	---	---	<2.4	---
1,4-Dioxane	---	---	---	---	---	---	---	---	<9.1	---
2-Butanone	---	---	---	---	---	---	---	---	2.2	---
2-Hexanone	---	---	---	---	---	---	---	---	<0.82	---
4-Methyl-2-pentanone	---	---	---	---	---	---	---	---	<1.6	---
Acetone	87D	---	---	---	---	---	---	---	300D	850
Benzene	---	---	---	---	---	---	---	---	<0.64	---
Bromodichloromethane	<0.43	<19	<0.74	<1.2	<0.70	<0.38	<0.22	<0.23	<0.27	<1
Bromoform	<3.2	<140	<5.6	<8.8	<5.3	<2.9	<1.7	<1.7	<2.1	<2
Bromomethane	<1.2	<53	<2.1	<3.3	<2.0	<1.1	<0.63	<0.65	<0.78	<0.8
Carbontetrachloride	0.46	<8.7	0.36	<0.54	0.58	0.3	0.55	0.58	0.56	<1
Chlorobenzene	<1.4	<63	<2.5	<3.9	<2.4	<1.3	<0.75	<0.78	<0.93	<0.9
Chloroethane	<1.6	<72	<2.9	<4.5	<2.7	<1.5	<0.85	<0.88	---	<0.5
Chloroform	<1.5	<67	<2.7	<4.2	<2.5	<1.4	<0.79	<0.82	<0.98	<1
Chloromethane	<1.3	<56	<2.2	<3.5	<2.1	<1.1	1.1	1.2	---	0.6
cis-1,2-Dichloroethene	<1.2	<55	<2.2	<3.4	<2.0	<1.1	<0.65	<0.67	<0.80	<0.8
cis-1,3-Dichloropropene	<2.8	<120	<4.9	<7.7	<4.7	<2.5	<1.5	<1.5	<1.8	<0.9
Dibromochloromethane	<0.54	<24	<0.94	<1.5	<0.88	<0.48	<0.28	<0.29	<0.35	<2
Dichloromethane	<1.1	<47	<1.9	<2.9	<1.8	0.96	2.5	<0.58	<0.59	6.0
Ethylbenzene	---	---	---	---	---	---	---	---	<1.7	---
Hexachlorobutadiene	---	---	---	---	---	---	---	---	<5.5	---
Methyltert-butylether	---	---	---	---	---	---	---	---	<1.4	---
Naphthalene	---	---	---	---	---	---	---	---	<3.6	---
Styrene	---	---	---	---	---	---	---	---	<1.7	---
Tetrachloroethene	0.36	18	23	3.8	0.72	2.0	1.1	1.3	3.0	<1
Toluene	---	---	---	---	---	---	---	---	1.1	---
trans-1,2-Dichloroethene	<1.2	<55	<2.2	<3.4	<2.0	<1.1	0.67	<0.67	1.4	<0.8
Trans-1,3-Dichloropropene	<1.4	<62	<2.5	<3.9	<2.3	<1.3	<0.74	<0.76	<0.91	<0.9
Trichloroethene	0.37	<7.5	8.2	4.4	<0.28	0.61	0.37	0.13	0.31	<1
Trichlorofluoromethane	<1.8	<77	<3.1	<4.8	<2.9	<1.6	1.6	1.4	---	<1
Vinyl chloride	<0.17	<7.5	<0.30	<0.46	<0.28	<0.15	<0.088	0.16	<0.11	<0.5
m/p-xylene	---	---	---	---	---	---	---	---	<3.5	---
o-Xylene	---	---	---	---	---	---	---	---	<1.7	---
Xylene (total)	---	---	---	---	---	---	---	---	<3.5	---

TABLE 10
Indoor Air Analytical Results
Building 3 Area
Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

	BLDG3-2															
	Chemical Laboratory Bench Testing Room															
CONSTITUENT (ug/m3)	**6/1/2009**	**10/8/2009**	**2/9/2010**	**5/19/2010**	**8/5/2010**	**11/22/2010**	**2/22/2011**	**6/27/2011**	**10/6/2011**	**1/10/2012**	**3/5/2012 (1)**	**8/5/2013**	**11/1/2013**	**4/29/2014 (2)**	**7/1/2015**	**8/19/2015 (3)**
1,1,1-Trichloroethane	<100	<4.5	<9.2	<6.1	<1.8	<1.0	<1.5	<3.4	<1.5	<18	<1.1	<3.6	<4.0	<2.3	<1	2.1
1,1,2,2-Tetrachloroethane	<25	<1.1	<2.3	<1.5	<0.46	<0.26	<0.38	<0.85	<0.37	<4.6	<0.28	<0.90	<1.0	<0.57	<1	<1.4
1,1,2-Trichloroethane	<100	<4.5	<9.2	<6.1	<1.8	<1.0	<1.5	<3.4	<1.5	<18	<1.1	<3.6	<4.0	<2.3	<1	<1.1
1,1-Dichloroethane	<75	<3.4	<6.9	<4.6	<1.4	<0.78	<1.1	<2.6	<1.1	<14	<0.83	<2.7	<3.0	<1.7	<0.8	<0.81
1,1-Dichloroethene	<73	<3.3	<6.7	<4.5	<1.4	<0.77	<1.1	<2.5	<1.1	<13	<0.81	<2.6	<3.0	<1.7	<0.8	<0.79
1,2-Dibromoethane (EDB)	---	---	---	---	---	---	---	---	---	---	<0.31	---	---	<0.65	<2	---
1,2-Dichlorobenzene	---	---	---	---	---	---	---	---	---	---	<2.4	---	---	<5.1	<1	---
1,2-Dichloroethane	<75	<3.4	<6.9	<4.6	<1.4	<0.78	<1.1	<2.6	<1.1	<14	<0.83	<2.7	<3.0	<1.7	<0.8	<0.81
1,2-Dichloropropane	<85	<3.8	<7.8	<5.2	<1.6	<0.89	<1.3	<2.9	<1.2	<16	<0.94	<3.0	<3.4	<2.0	<0.9	<2.3
1,3-Dichlorobenzene	---	---	---	---	---	---	---	---	---	---	<2.4	---	---	<5.1	<1	---
1,4-Dichlorobenzene	---	---	---	---	---	---	---	---	---	---	<2.4	---	---	<5.1	<1	---
1,4-Dioxane	---	---	---	---	---	---	---	---	---	---	<9.2	---	---	<19	<0.7	---
2-Butanone	---	---	---	---	---	---	---	---	---	---	3.6	---	---	19	6.0	---
2-Hexanone	---	---	---	---	---	---	---	---	---	---	<0.83	---	---	<1.7	<0.8	---
4-Methyl-2-pentanone	---	---	---	---	---	---	---	---	---	---	<1.7	---	---	<3.4	<0.8	---
Acetone	---	---	---	---	---	---	---	1900	400	550	410D	2900D	1100D	2000D	560	3370
Benzene	---	---	---	---	---	---	---	---	---	---	<0.64	---	---	<1.3	<0.6	---
Bromodichloromethane	<25	<1.1	<2.3	<1.5	<0.46	<0.26	<0.38	<0.85	<0.37	<4.6	<0.28	<0.90	<1.0	<0.57	<1	<3.3
Bromoform	<190	<8.6	<17	<12	<3.5	<2.0	<2.9	<6.5	<2.8	<35	<2.1	<6.8	<7.6	<4.4	<2	<5.2
Bromomethane	<72	<3.2	<6.6	<4.4	<1.3	<0.75	<1.1	<2.4	<1.0	<13	<0.79	<2.6	<2.9	<1.6	<0.8	<1.9
Carbontetrachloride	<12	<0.53	<1.1	<0.71	0.4	0.63	0.54	0.53	0.62	<2.1	0.56	0.58	0.52	0.46	<1	<1.3
Chlorobenzene	<85	<3.8	<7.8	<5.2	<1.6	<0.89	<1.3	<2.9	<1.2	<16	<0.94	<3.0	<3.4	<2.0	<0.9	<2.3
Chloroethane	<97	<4.4	<8.9	<5.9	<1.8	<1.0	<1.5	<3.3	<1.4	<18	---	<3.5	<3.9	---	---	<0.53
Chloroform	<90	<4.1	<8.3	<5.5	<1.7	<0.94	<1.4	<3.1	<1.3	<17	<0.99	<3.2	<3.6	<2.1	<1	<2.4
Chloromethane	<75	<3.4	<6.9	<4.6	<1.4	1.2	1.2	<2.6	<1.1	<14	---	<2.7	<3.0	---	---	1.3
cis-1,2-Dichloroethene	<73	<3.3	<6.7	<4.5	<1.4	<0.77	<1.1	<2.5	<1.1	<13	<0.81	<2.6	<3.0	<1.7	<0.8	<0.79
cis-1,3-Dichloropropene	<170	<7.5	<15	<10	<3.1	<1.7	<2.5	<5.7	<2.4	<31	<1.8	<6.0	<6.7	<3.8	<0.9	<2.3
Dibromochloromethane	<32	<1.4	<2.9	<1.9	<0.59	<0.33	<0.48	<1.1	<0.46	<5.8	<0.35	<1.1	<1.3	<0.73	<2	<4.3
Dichloromethane	<63	<2.9	<5.8	<3.9	<1.2	0.82	<0.96	<2.2	<0.92	<12	<0.59	<2.3	<2.5	<1.5	1.0	<1.7
Ethylbenzene	---	---	---	---	---	---	---	<5.4	<2.3	<29	<1.7	---	---	<3.6	<0.9	---
Hexachlorobutadiene	---	---	---	---	---	---	---	---	---	---	<5.5	---	---	<11	<2	---
Methyltert-butylether	---	---	---	---	---	---	---	---	---	---	<1.4	---	---	<3.0	<0.7	---
Naphthalene	---	---	---	---	---	---	---	---	---	---	<3.7	---	---	<7.7	<1	---
Styrene	---	---	---	---	---	---	---	---	---	---	<1.7	---	---	<3.6	<0.8	---
Tetrachloroethene	46	6.4	3.7	2.0	2.3	3.1	1.3	1.2	1.0	<2.4	1.7	1.6	2.4	1.9	<1	3.3
Toluene	---	---	---	---	---	---	---	---	---	---	1.4	---	---	13	1.0	---
trans-1,2-Dichloroethene	<73	<3.3	<6.7	<4.5	<1.4	<0.77	<1.1	<2.5	<1.1	<13	3	<2.6	<3.0	<1.7	<0.8	2.3
Trans-1,3-Dichloropropene	<83	<3.8	<7.7	<5.1	<1.5	<0.87	<1.3	<2.8	<1.2	<15	<0.92	<3.0	<3.4	<1.9	<0.9	<2.3
Trichloroethene	19	3.2	5.3	0.79	0.6	1.6	0.42	0.93	1.3	<1.8	1.2	0.58	1	0.37	<1	3.3
Trichlorofluoromethane	<100	<4.7	<9.5	<6.3	<1.9	1.6	<1.6	<3.5	1.7	<19	---	<3.7	<4.2	---	---	<2.8
Vinyl chloride	<10	<0.45	<0.92	<0.61	<0.18	<0.10	<0.15	<0.34	<0.15	<1.8	<0.11	<0.36	<0.40	<0.23	<0.5	<0.51
m/p-xylene	---	---	---	---	---	---	---	<11	<4.6	<58	<3.5	---	---	<7.3	<2	---
o-Xylene	---	---	---	---	---	---	---	<5.4	<2.3	<29	<1.7	---	---	<3.6	<0.9	---
Xylene (total)	---	---	---	---	---	---	---	<11	<4.6	<58	<3.5	---	---	<7.3	<2	---

TABLE 10
Indoor Air Analytical Results
Building 3 Area
Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

	BLDG3-3																				
	MID Stockroom																				
CONSTITUENT (ug/m3)	**6/1/2009**	**10/8/2009**	**11/2/2009**	**11/12/2009**	**12/21/2009**	**2/9/2010**	**5/19/2010**	**8/5/2010**	**11/22/2010**	**2/22/2011**	**6/27/2011**	**10/6/2011**	**1/10/2012**	**3/5/2012 (1)**	**11/7/2012**	**8/5/2013**	**11/1/2013**	**4/29/2014 (2)**	**1/29/2015**	**7/1/2015**	**8/19/2015 (3)**
1,1,1-Trichloroethane	<9.5	<10	<8.8	<8.5	<4.6	<6.2	<0.91	<1.9	<0.85	<2.2	<1.7	<1.6	<11	<1.1	<2.2	<1.9	<1.8	<2.6	<1	<1	2.2
1,1,2,2-Tetrachloroethane	<2.4	<2.5	<2.2	<2.1	<1.2	<1.6	<0.23	<0.47	<0.21	<0.55	<0.43	<0.39	<2.7	<0.28	<0.54	<0.48	<0.45	<0.66	<1	<1	<1.4
1,1,2-Trichloroethane	<9.5	<10	<8.8	<8.5	<4.6	<6.2	<0.91	<1.9	<0.85	<2.2	<1.7	<1.6	<11	<1.1	<2.2	<1.9	<1.8	<2.6	<1	<1	<1.1
1,1-Dichloroethane	<7.1	<7.5	<6.6	<6.4	<3.5	<4.7	<0.68	<1.4	<0.64	<1.6	<1.3	<1.2	<8.1	<0.84	<1.6	<1.4	<1.4	<2.0	<0.8	<0.8	<0.81
1,1-Dichloroethene	<7.0	<7.3	<6.5	<6.2	<3.4	<4.6	<0.67	<1.4	<0.62	<1.6	<1.3	<1.2	<7.9	<0.82	<1.6	<1.4	<1.3	<1.9	<0.8	<0.8	<0.79
1,2-Dibromoethane (EDB)	---	---	---	---	---	---	---	---	---	---	---	---	---	<0.32	---	---	---	<0.74	---	<2	---
1,2-Dichlorobenzene	---	---	---	---	---	---	---	---	---	---	---	---	---	<2.5	---	---	---	<5.8	---	<1	---
1,2-Dichloroethane	<7.1	<7.5	<6.6	<6.4	<3.5	<4.7	<0.68	<1.4	<0.64	<1.6	<1.3	<1.2	<8.1	<0.84	<1.6	<1.4	<1.4	<2.0	<0.8	<0.8	<0.81
1,2-Dichloropropane	<8.1	<8.5	<7.5	<7.2	<3.9	<5.3	<0.78	<1.6	<0.72	<1.9	<1.5	<1.3	<9.2	<0.95	<1.8	<1.6	<1.5	<2.2	<0.9	<0.9	<2.3
1,3-Dichlorobenzene	---	---	---	---	---	---	---	---	---	---	---	---	---	<2.5	---	---	---	<5.8	---	<1	---
1,4-Dichlorobenzene	---	---	---	---	---	---	---	---	---	---	---	---	---	<2.5	---	---	---	<5.8	---	<1	---
1,4-Dioxane	---	---	---	---	---	---	---	---	---	---	---	---	---	<9.4	---	---	---	<22	---	<0.7	---
2-Butanone	---	---	---	---	---	---	---	---	---	---	---	---	---	4	---	---	---	5.1	---	2.0	---
2-Hexanone	---	---	---	---	---	---	---	---	---	---	---	---	---	<0.84	---	---	---	<2.0	---	<0.8	---
4-Methyl-2-pentanone	---	---	---	---	---	---	---	---	---	---	---	---	---	<1.4	---	---	---	<3.9	---	<0.8	---
Acetone	---	---	---	---	---	---	---	---	---	---	810	340	240	370D	1400D	860D	400D	880D	1800E	190	1340
Benzene	---	---	---	---	---	---	---	---	---	---	---	---	---	<0.65	---	---	---	<1.5	---	<0.6	---
Bromodichloromethane	<2.4	<2.5	<2.2	<2.1	<1.2	<1.6	<0.23	<0.47	<0.21	<0.55	<0.43	<0.39	<2.7	<0.28	<0.54	<0.48	<0.45	<0.66	<1	<1	<3.3
Bromoform	<18	<19	<17	<16	<8.8	<12	<1.7	<3.6	<1.6	<4.2	<3.3	<3.0	<20	<2.1	<4.1	<3.6	<3.4	<5.0	<2	<2	<5.2
Bromomethane	<6.8	<7.2	<6.3	<6.1	<3.3	<4.5	<0.65	<1.3	<0.61	<1.6	<1.2	<1.1	<7.7	<0.80	<1.5	<1.4	<1.3	<1.9	<0.8	<0.8	<1.9
Carbontetrachloride	<1.1	<1.2	<1.0	<0.99	<0.54	<0.73	0.5	0.52	0.57	0.54	0.54	0.55	<1.3	0.56	<0.25	0.52	0.58	0.45	<1	<1	<1.3
Chlorobenzene	<8.1	<8.5	<7.5	<7.2	<3.9	<5.3	<0.78	<1.6	<0.72	<1.9	<1.5	<1.3	<9.2	<0.95	<1.8	<1.6	<1.5	<2.2	<0.9	<0.9	<2.3
Chloroethane	<9.2	<9.6	<8.5	<8.2	<4.5	<6.0	<0.88	<1.8	<0.82	<2.1	<1.7	<1.5	<10	---	<2.1	<1.9	<1.7	---	<0.5	---	<0.53
Chloroform	<8.5	<9.0	<7.9	<7.7	<4.2	<5.6	<0.82	<1.7	<0.77	<2.0	<1.6	<1.4	<9.7	<1.0	<1.9	<1.7	<1.6	<2.4	<1	<1	<2.4
Chloromethane	<7.1	<7.5	<6.6	<6.4	<3.5	<4.7	0.96	<1.4	1.1	<1.6	<1.3	<1.2	<8.1	---	<1.6	<1.4	<1.4	---	0.7	---	1.2
cis-1,2-Dichloroethene	<7.0	<7.3	<6.5	<6.2	<3.4	<4.6	<0.67	<1.4	<0.62	<1.6	<1.3	<1.2	<7.9	<0.82	<1.6	<1.4	<1.3	<1.9	<0.8	<0.8	<0.79
cis-1,3-Dichloropropene	<16	<17	<15	<14	<7.7	<10	<1.5	<3.1	<1.4	<3.7	<2.9	<2.6	<18	<1.9	<3.6	<3.2	<3.0	<4.4	<0.9	<0.9	<2.3
Dibromochloromethane	<3.0	<3.2	<2.8	<2.7	<1.5	<2.0	<0.29	<0.59	<0.27	<0.69	<0.55	<0.50	<3.4	<0.36	<0.68	<0.61	<0.57	<0.83	<2	<2	<4.3
Dichloromethane	<6.0	<6.3	<5.6	<5.4	<2.9	<4.0	<0.58	<1.2	0.58	<1.4	<1.1	<1.0	<6.8	<0.60	<1.4	<1.2	<1.1	<1.7	5.0	2.0	<1.7
Ethylbenzene	---	---	---	---	---	---	---	---	---	---	<2.7	<2.5	<17	<1.8	<3.4	---	---	<4.2	---	<0.9	---
Hexachlorobutadiene	---	---	---	---	---	---	---	---	---	---	---	---	---	<5.6	---	---	---	<13	---	<2	---
Methyltert-butylether	---	---	---	---	---	---	---	---	---	---	---	---	---	<1.5	---	---	---	<3.5	---	<0.7	---
Naphthalene	---	---	---	---	---	---	---	---	---	---	---	---	---	<3.7	---	---	---	<8.7	---	2.0	---
Styrene	---	---	---	---	---	---	---	---	---	---	---	---	---	<1.8	---	---	---	<4.1	---	<0.8	---
Tetrachloroethene	23	750	520	470	2.1	3.7	0.63	1.2	1.0	0.86	0.83	0.83	<1.4	65	1.1	0.89	0.84	99	3.0	<1	61
Toluene	---	---	---	---	---	---	---	---	---	---	---	---	---	2.8	---	---	---	5.4	---	1.0	---
trans-1,2-Dichloroethene	<7.0	<7.3	<6.5	<6.2	<3.4	<4.6	<0.67	<1.4	<0.62	<1.6	<1.3	<1.2	<7.9	2.4	<1.6	<1.4	<1.3	<1.9	<0.8	<0.8	2.2
Trans-1,3-Dichloropropene	<7.9	<8.3	<7.4	<7.1	<3.9	<5.2	<0.76	<1.6	<0.71	<1.8	<1.4	<1.3	<9.0	<0.94	<1.8	<1.6	<1.5	<2.2	<0.9	<0.9	<2.3
Trichloroethene	8.6	360	220	180	0.69	4.4	0.42	0.32	0.41	0.34	0.35	0.7	<1.1	4.0	0.32	0.39	0.39	1.7	<1	<1	5.9
Trichlorofluoromethane	<9.8	<10	<9.1	<8.8	<4.8	<6.4	1.7	<1.9	1.5	<2.3	<1.8	<1.6	<11	---	<2.2	<2.0	<1.9	---	<11	---	<2.8
Vinyl chloride	<0.95	<1.0	<0.88	<0.85	<0.46	<0.62	<0.091	<0.19	<0.085	<0.22	<0.17	<0.16	<1.1	<0.11	<0.22	<0.19	<0.18	<0.26	<0.5	<0.5	<0.51
m/p-xylene	---	---	---	---	---	---	---	---	---	---	<5.5	<5.0	<34	<3.6	<6.9	---	---	<8.3	---	<2	---
o-Xylene	---	---	---	---	---	---	---	---	---	---	<2.7	<2.5	<17	<1.8	<3.4	---	---	<4.2	---	<0.9	---
Xylene (total)	---	---	---	---	---	---	---	---	---	---	<5.5	<5.0	<34	<13.6	<6.9	---	---	<8.3	---	<2	---

TABLE 10
Indoor Air Analytical Results
Building 3 Area
Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

	BLDG3-4															
	Building 3 Machine Shop															
CONSTITUENT (ug/m3)	**6/1/2009**	**7/16/2009**	**10/8/2009**	**2/9/2010**	**5/19/2010**	**8/5/2010**	**11/22/2010**	**2/22/2011**	**3/5/2012 (1)**	**11/7/2012**	**8/5/2013**	**11/1/2013**	**4/29/2014 (2)**	**1/29/2015**	**7/1/2015**	**8/19/2015 (3)**
1,1,1-Trichloroethane	<110	21	12	<18	<3.5	<1.9	<5.4	<8.9	<1.1	<2.8	<2.6	<3.2	<3.1	<1	<1	<1.1
1,1,2,2-Tetrachloroethane	<27	<1.2	<1.1	<4.6	<0.88	<0.48	<1.4	<2.2	<0.28	<0.70	<0.65	<0.81	<0.77	<1	<1	<1.4
1,1,2-Trichloroethane	<110	<4.6	<4.5	<18	<3.5	<1.9	<5.4	<8.9	<1.1	<2.8	<2.6	<3.2	<3.1	<1	<1	<1.1
1,1-Dichloroethane	<80	<3.5	<3.4	<14	<2.6	<1.4	<4.1	<6.7	<0.84	<2.1	<1.9	<2.4	<2.3	<0.8	<0.8	<0.81
1,1-Dichloroethene	<78	<3.4	<3.3	<14	<2.6	<1.4	<4.0	<6.6	<0.82	<2.1	<1.9	<2.4	<2.3	<0.8	<0.8	<0.79
1,2-Dibromoethane (EDB)	---	---	---	---	---	---	---	---	<0.32	---	---	---	<0.87	---	<2	---
1,2-Dichlorobenzene	---	---	---	---	---	---	---	---	<2.5	---	---	---	<6.8	---	<1	---
1,2-Dichloroethane	<80	<3.5	<3.4	<14	<2.6	<1.4	<4.1	<6.7	<0.84	<2.1	<1.9	<2.4	<2.3	<0.8	<0.8	<0.81
1,2-Dichloropropane	<90	<3.9	<3.8	<16	<3.0	<1.6	<4.6	<7.6	<0.95	<2.4	<2.2	<2.7	<2.6	<0.9	<0.9	<2.3
1,3-Dichlorobenzene	---	---	---	---	---	---	---	---	<2.5	---	---	---	<6.8	---	<1	---
1,4-Dichlorobenzene	---	---	---	---	---	---	---	---	<2.5	---	---	---	<6.8	---	<1	---
1,4-Dioxane	---	---	---	---	---	---	---	---	<9.3	---	---	---	<26	---	<0.7	---
2-Butanone	---	---	---	---	---	---	---	---	2.5	---	---	---	11	---	3.0	---
2-Hexanone	---	---	---	---	---	---	---	---	<0.84	---	---	---	<2.3	---	<0.8	---
4-Methyl-2-pentanone	---	---	---	---	---	---	---	---	<1.7	---	---	---	<4.6	---	<0.8	---
Acetone	---	---	---	---	---	---	---	---	870D	2100D	1000D	780D	2300D	2400E	590	2330
Benzene	---	---	---	---	---	---	---	---	<0.65	---	---	---	<1.8	---	<0.6	---
Bromodichloromethane	<27	<1.2	<1.1	<4.6	<0.88	<0.48	<1.4	<2.2	<0.28	<0.70	<0.65	<0.81	<0.77	<1	<1	<3.3
Bromoform	<200	<8.8	<8.6	<35	<6.7	<3.7	<10	<17	<2.1	<5.3	<4.9	<6.1	<5.8	<2	<2	<5.2
Bromomethane	<76	<3.3	<3.2	<13	<2.5	<1.4	<3.9	<6.4	<0.80	<2.0	<1.8	<2.3	<2.2	<0.8	<0.8	<1.9
Carbontetrachloride	<12	<0.54	<0.53	<2.2	0.52	0.56	<0.63	<1.0	0.55	0.41	0.56	0.52	0.43	<1	<1	<1.3
Chlorobenzene	<90	<3.9	<3.8	<16	<3.0	<1.6	<4.6	<7.6	<0.95	<2.4	<2.2	<2.7	<2.6	<0.9	<0.9	<2.3
Chloroethane	<100	<4.5	<4.4	<18	<3.4	<1.9	<5.3	<8.6	---	<2.7	<2.5	<3.1	---	<0.5	---	<0.53
Chloroform	<95	<4.2	<4.1	<17	<3.2	<1.7	<4.9	<8.0	<1.0	<2.5	<2.3	<2.9	<2.8	<1	<1	<2.4
Chloromethane	<80	<3.5	<3.4	<14	<2.6	<1.4	<4.1	<6.7	---	<2.1	<1.9	<2.4	---	0.7	---	1.1
cis-1,2-Dichloroethene	<78	<3.4	<3.3	<14	<2.6	<1.4	<4.0	<6.6	<0.82	<2.1	<1.9	<2.4	<2.3	<0.8	<0.8	<0.79
cis-1,3-Dichloropropene	<180	<7.7	<7.5	<31	<5.9	<3.2	<9.1	<15	<1.9	<4.7	<4.3	<5.4	<5.1	<0.9	<0.9	<2.3
Dibromochloromethane	<34	<1.5	<1.4	<5.9	<1.1	<0.61	<1.7	<2.8	<0.35	<0.89	<0.82	<1.0	<0.97	<2	<2	<4.3
Dichloromethane	<67	<2.9	<2.9	<12	<2.2	<1.2	<3.4	<5.7	<0.60	<1.8	<1.6	<2.0	<1.9	5.0	9.0	<1.7
Ethylbenzene	---	---	---	---	---	---	---	<14	<1.8	<4.5	---	---	<4.9	---	<0.9	---
Hexachlorobutadiene	---	---	---	---	---	---	---	---	<5.6	---	---	---	<15	---	<2	---
Methyltert-butylether	---	---	---	---	---	---	---	---	<1.5	---	---	---	<4.1	---	<0.7	---
Naphthalene	---	---	---	---	---	---	---	---	<3.7	---	---	---	<10	---	1.0	---
Styrene	---	---	---	---	---	---	---	---	<1.7	---	---	---	<4.8	---	<0.8	---
Tetrachloroethene	72	25	8.2	3.0	0.9	2.1	1.8	1.2	5.9	1.8	0.9	1.6	5.7	4.0	<1	3.8
Toluene	---	---	---	---	---	---	---	---	1.4	---	---	---	14	---	1.0	---
trans-1,2-Dichloroethene	<78	<3.4	<3.3	<14	<2.6	<1.4	<4.0	<6.6	2.4	<2.1	<1.9	<2.4	<2.3	<0.8	<0.8	2.1
Trans-1,3-Dichloropropene	<88	<3.9	<3.8	<15	<2.9	<1.6	<4.5	<7.5	<0.93	<2.3	<2.2	<2.7	<2.6	<0.9	<0.9	<2.3
Trichloroethene	30	10	5.4	2.1	0.4	0.25	0.7	<0.89	0.7	0.4	<0.26	0.55	<0.31	<1	<1	3.2
Trichlorofluoromethane	<110	<4.8	<4.7	<19	<3.6	<2.0	<5.6	<9.2	---	<2.9	<2.7	<3.3	---	<1	---	<2.8
Vinyl chloride	<11	<0.46	<0.45	<1.8	<0.35	<0.19	<0.54	<0.89	<0.11	<0.28	<0.26	<0.32	<0.31	<0.5	<0.5	<0.51
m/p-xylene	---	---	---	---	---	---	---	<28	<3.6	<8.9	---	---	<9.8	---	<2	---
o-Xylene	---	---	---	---	---	---	---	<14	<1.8	<4.5	---	---	<4.9	---	<0.9	---
Xylene (total)	---	---	---	---	---	---	---	<28	<3.6	<8.9	---	---	<9.8	---	<2	---

TABLE 10
Indoor Air Analytical Results
Building 3 Area
Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

	BLDG3-5								BLDG3-6
	Boiler room, Building 3 Basement								Building 3 Storage Room
CONSTITUENT (ug/m3)	6/1/2009	10/8/2009	2/9/2010	5/19/2010	8/5/2010	11/22/2010	2/22/2011	3/5/2012 (1)	6/27/2011
1,1,1-Trichloroethane	<0.91	<0.91	<0.88	<0.89	<1.8	<1.1	<0.88	<1.1	<1.8
1,1,2,2-Tetrachloroethane	<0.23	<0.23	<0.22	<0.22	<0.46	<0.26	<0.22	<0.26	<0.45
1,1,2-Trichloroethane	<0.91	<0.91	<0.88	<0.89	<1.8	<1.1	<0.88	<1.1	<1.8
1,1-Dichloroethane	<0.68	<0.68	<0.66	<0.67	<1.4	<0.79	<0.66	<0.79	<1.4
1,1-Dichloroethene	<0.66	<0.66	<0.65	<0.66	<1.3	<0.78	<0.65	<0.77	<1.3
1,2-Dibromoethane (EDB)	---	---	---	---	---	---	---	<0.30	---
1,2-Dichlorobenzene	---	---	---	---	---	---	---	<2.3	---
1,2-Dichloroethane	<0.68	<0.68	<0.66	<0.67	<1.4	<0.79	<0.66	<0.79	<1.4
1,2-Dichloropropane	<0.77	<0.77	<0.75	<0.76	<1.6	<0.90	<0.75	<0.90	<1.5
1,3-Dichlorobenzene	---	---	---	---	---	---	---	<2.3	---
1,4-Dichlorobenzene	---	---	---	---	---	---	---	<2.3	---
1,4-Dioxane	---	---	---	---	---	---	---	<8.8	---
2-Butanone	---	---	---	---	---	---	---	<1.1	---
2-Hexanone	---	---	---	---	---	---	---	<0.79	---
4-Methyl-2-pentanone	---	---	---	---	---	---	---	<1.6	---
Acetone	---	---	---	---	---	---	---	200D	800
Benzene	---	---	---	---	---	---	---	<0.61	---
Bromodichloromethane	<0.23	<0.23	<0.22	<0.22	<0.46	<0.26	<0.22	<0.26	<0.45
Bromoform	<1.7	<1.7	<1.7	<1.7	<3.5	<2.0	<1.7	<2.0	<3.4
Bromomethane	<0.65	<0.65	<0.63	<0.64	<1.3	<0.76	<0.63	<0.75	<1.3
Carbontetrachloride	0.77	0.46	0.65	0.45	0.46	0.64	0.59	0.55	0.55
Chlorobenzene	<0.77	<0.77	<0.75	<0.76	<1.6	<0.90	<0.75	<0.90	<1.5
Chloroethane	<0.88	<0.88	<0.85	<0.86	<1.8	<1.0	<0.85	---	<1.8
Chloroform	<0.82	<0.82	<0.79	<0.80	<1.7	<0.95	<0.79	<0.95	<1.6
Chloromethane	0.95	1.0	1.1	0.86	<1.4	1.3	1.2	---	<1.4
cis-1,2-Dichloroethene	<0.66	<0.66	<0.65	<0.66	<1.3	<0.78	<0.65	<0.77	<1.3
cis-1,3-Dichloropropene	<1.5	<1.5	<1.5	<1.5	<3.1	<1.8	<1.5	<1.8	<3.0
Dibromochloromethane	<0.29	<0.29	<0.28	<0.28	<0.58	<0.33	<0.28	<0.33	<0.57
Dichloromethane	<0.57	<0.57	<0.56	<0.57	1.9	<0.67	<0.56	<0.60	<1.1
Ethylbenzene	---	---	---	---	---	---	---	<1.7	<2.9
Hexachlorobutadiene	---	---	---	---	---	---	---	<5.3	---
Methyltert-butylether	---	---	---	---	---	---	---	<1.4	---
Naphthalene	---	---	---	---	---	---	---	<3.5	---
Styrene	---	---	---	---	---	---	---	<1.7	---
Tetrachloroethene	7.0	1.1	5.2	0.9	4.2	1.1	1.1	1.9	0.67
Toluene	---	---	---	---	---	---	---	0.88	---
trans-1,2-Dichloroethene	<0.66	<0.66	<0.65	<0.66	<1.3	<0.78	<0.65	0.98	<1.3
Trans-1,3-Dichloropropene	<0.76	<0.76	<0.74	<0.75	<1.5	<0.88	<0.74	<0.88	<1.5
Trichloroethene	2.5	0.38	5.0	<0.089	0.19	0.12	<0.088	0.22	0.4
Trichlorofluoromethane	1.7	1.2	1.7	1.6	<1.9	1.7	1.4	---	<1.9
Vinyl chloride	<0.091	<0.091	<0.088	<0.089	<0.18	<0.11	<0.088	<0.11	<0.18
m/p-xylene	---	---	---	---	---	---	---	<3.4	<5.8
o-Xylene	---	---	---	---	---	---	---	<1.7	<2.9
Xylene (total)	---	---	---	---	---	---	---	<3.4	<5.8

Notes

< indicates chemical not detected, and concentration is less than reporting limit (value shown).

ug/m^3 = micrograms per cubic meter.

--- = Not Sampled

D = Result is from a diluted sample.

System Startup occurred in December 2009

(1) = sample collected following scheduled temporary SVE system shutdown from 2/27/12 to 3/5/12

(2) = sample collected following scheduled temporary SVE system shutdown from 4/3/14 to 4/29/14

(3) = sample collected following scheduled temporary SVE system shutdown from 8/4/15 to 8/20/15

TABLE 11
VOC Mass Removal Estimate Summary
Building 3 Sub-Slab SVE System
Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

Sample Date	Vapor Influent Concentration (ppm(v))	Flow (scfm)	Days Operational	VOC Mass Removal Rate (lb./day)	Total VOC Mass Removed (lb.)
4/8/2015	8.1	141	1877	0.52	1,662
4/24/2015	0.2	138	1893	0.34	1,668
5/6/2015	1.6	138	1905	0.07	1,668
5/29/2015	5.6	114	1928	0.42	1,678
6/4/2015	0.8	114	1934	0.22	1,679
6/12/2015	4.9	114	1942	0.19	1,681
6/26/2015	11.2	115	1956	0.56	1,689
7/9/2015	5.8	125	1969	0.64	1,697
7/21/2015	11.0	126	1981	0.63	1,705
8/4/2015	9.6	129	1995	0.80	1,715
8/20/2015	7.5	128	1995	0.00	1,716
9/2/2015	7.1	127	2008	0.56	1,723
9/15/2015	13.7	126	2021	0.79	1,733
9/29/2015	1.5	126	2035	0.57	1,741

Notes:

ppm = parts per million

scfm = standard cubic feet per minute (see note 6)

lbs./day = pounds per day

lbs. = pounds

VOC = volatile organic compounds

1. Vapor influent concentrations as measured with a photoionization detector (PID).
2. Total VOC mass removed (lbs.) is calculated by multiplying the VOC Mass Removal Rate (lbs./day) on the sampling date by the # of operating days between visits.
3. VOS mass removal rate (lbs./day) = average VOC level between current and previous monitoring (ppm)/ 10E6 x 1 lbmole/379.4 cu ft. x (158lbs/lbmole) x flow (ft^3/min) x (1440 min/day)
4. 158 lbs./lbmole is the weighted average molecular weight of the primary contaminants in the soil vapor (80% Tetrachloroethene, 19% Trichloroethene, and 1% acetone based on analytical results from recovered soil vapor).
5. VOC concentration not monitored on 2/4/10, assumed concentration noted on 2/18/10.
6. Flow rate (scfm) is calculated with the following equation: 128.8 x Flow coefficient (K) x pipe diameter^2 (in) x sqrt (psia x differential pressure (IWC)/(Temp (F) + 460) x Sp Gr @ 60°F)to adjust for system operating temperature

System was shutdown from 8/4/2015 to 8/20/2015

Table 12
Operation and Maintenance Data
Building 5 Sub-Slab SVE System
Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

Date	Extraction Well BLDG5-SVE1		Extraction Well BLDG5-SVE2		Extraction Well BLDG5-SVE3		Extraction Well BLDG5-SVE4		BLDG5-SV1		BLDG5-SV2		BLDG5-SV3		BLDG5-SV4		BLDG5-SV5		BLDDG5-SV6		Carbon Influent	Carbon Midpoint	Carbon Effluent		VOC Off-gas Reduction [2]
	VOC (ppm)	Vacuum ("wc)	VOC (ppm)	Vacuum ("wc)	VOC (ppm)	Vacuum ("wc)	VOC (ppm)	Vacuum ("wc)	VOC (ppm)	Vacuum ("wc)	VOC (ppm)	Vacuum ("wc)	VOC (ppm)	Vacuum ("wc)	VOC (ppm)	Vacuum ("wc)	VOC (ppm)	Vacuum ("wc)	VOC (ppm)	Vacuum ("wc)	VOC (ppm)	VOC (ppm)	VOC (ppm)	Total Vapor Flow (cfm)[1]	
4/8/2015	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	3.9[4]	2.5[4]	1.6[4]	152	NA
4/24/2015	0.1	11.46	OFF	OFF	OFF	OFF	0	8.49	---	---	---	---	---	---	---	---	---	---	---	---	ND	ND	ND	143	>99%
5/6/2015	0	12.93	OFF	OFF	OFF	OFF	0.4	8.22	0.2	+0.003	0.2	0.011	1.3	0.002	1.7	+0.004	0.2	0.094	2.3	+0.018	0.9	ND	ND	143	>99%
5/29/2015[3]	1.3	12.6	OFF	OFF	OFF	OFF	0.3	7.95	3.2	+0.001	2.6	0.023	2.7	0.002	2.2	+0.003	1.7	0.093	5.2	+0.015	0.8	3.2	1.9	143	<0%
5/29/2015[3]	---	---	OFF	OFF	OFF	OFF	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1	3	ND	143	>99%
6/12/2015	2.8	12.6	OFF	OFF	OFF	OFF	0.8	8.01	3.2	+0.001			3.9	0.002			2.5	0.105			0.3	ND	ND	143	>99%
7/21/2015	4.7	13.01	OFF	OFF	OFF	OFF	2.1	8.2	3	0	0.4	0.012	5.8	0.004	1	+0.002	2	0.105	5.5	+0.02	0.2	ND	ND	143	>99%
8/4/2015	4.5	13.11	OFF	OFF	OFF	OFF	1.9	8.25	3.1	0	0.5	0.011	5.6	0.005	1.1	+0.001	2.1	0.104	5.3	+0.021	0.3	ND	ND	143	>99%
8/20/2015	4.1	13	OFF	OFF	OFF	OFF	1.8	8.4	2.9	+0.001	0.7	0.015	5.7	0.004	1	+0.001	2.3	0.1	5.5	+0.2	0.2	ND	ND	143	>99%
9/2/2015	4.8	13.5	OFF	OFF	OFF	OFF	1.5	8.51	2.5	+0.002	0.9	0.017	5.8	0.003	1.3	+0.002	2.6	0.105	2.6	+0.013	0.25	ND	ND	143	>99%
9/15/2015	15.1	12.75	OFF	OFF	OFF	OFF	1.6	8.02	2	+0.002	0.2	0.022	2.7	0.002	0.5	+0.005	1.2	0.113	3.6	+0.027	1.2	ND	ND	143	>99%
9/25/2015	0.8	12.51	OFF	OFF	OFF	OFF	0.1	7.96	---	---	---	---	---	---	---	---	---	---	---	---	0.2	ND	ND	---	>99%

Notes:

"wc = inches of water column

VOC = volatile organic compounds measured with a photoionization detector

ppm = parts per million

cfm = cubic feet per minute

(1) = Not adjusted for temperature

(2) = target off-gas VOC reduction is 95% per MassDEP policy (MADEP, 1994)

(3) = after carbon change out

--- = Not collected

ND = not detected above instrument detection limit (0.1 ppm)

Table 13
Indoor Air Analytical Results
Building 5 Area
Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

	BLDG5-1										BLDG5-2									
	QA Area										Shipping Area									
CONSTITUENT (ug/m3)	**8/22/2011**	**10/7/2011**	**1/9/2012**	**4/18/2013**	**8/5/2013**	**11/1/2013**	**1/27/2014**	**6/17/2014**	**9/24/2014**	**6/11/2015**	**8/22/2011**	**10/7/2011**	**1/9/2012**	**4/18/2013**	**8/5/2013**	**11/1/2013**	**1/27/2014**	**6/17/2014**	**9/24/2014**	**6/11/2015**
1,1,1-Trichloroethane	<3.1	<6.6	<9.3	<91	<41	<9.4	<4.7	<20	<1	<1	<1.4	<1.6	<94	<45	<16	<28	<6.2	<18	<1	<1
1,1,2,2-Tetrachloroethane	<0.78	<1.7	<2.3	<23	<10	<2.4	<1.2	<4.9	<1	<1	<0.34	<0.40	<24	<11	<4.1	<6.9	<1.6	<4.5	<1	<1
1,1,2-Trichloroethane	<3.1	<6.6	<9.3	<91	<41	<9.4	<4.7	<20	<1	<1	<1.4	<1.6	<94	<45	<16	<28	<6.2	<18	<1	<1
1,1-Dichloroethane	<2.3	<5.0	<7.0	<68	<31	<7.1	<3.5	<15	<0.8	<0.8	<1.0	<1.2	<71	<34	<12	<21	<4.7	<14	<0.8	<0.8
1,1-Dichloroethene	<2.3	<4.8	<6.8	<66	<30	<6.9	<3.5	<14	<0.8	<0.8	<1.0	<1.2	<69	<33	<12	<20	<4.5	<13	<0.8	<0.8
1,2-Dibromoethane (EDB)	---	---	---	---	---	---	<1.3	<5.5	<2	<2	---	---	---	---	---	---	<1.8	<5.1	<2	<2
1,2-Dichlorobenzene	---	---	---	---	---	---	<10	<43	<1	<1	---	---	---	---	---	---	<14	<40	<1	<1
1,2-Dichloroethane	<2.3	<5.0	<7.0	<68	<31	<7.1	<3.5	<15	<0.8	<0.8	<1.0	<1.2	<71	<34	<12	<21	<4.7	<14	<0.8	<0.8
1,2-Dichloropropane	<2.7	<5.6	<7.9	<77	<35	<8.0	<4.0	<17	<0.9	<0.9	<1.2	<1.4	<80	<38	<14	<23	<5.3	<15	<0.9	<0.9
1,3-Dichlorobenzene	---	---	---	---	---	---	<10	<43	<1	<1	---	---	---	---	---	---	<14	<40	<1	<1
1,4-Dichlorobenzene	---	---	---	---	---	---	<10	<43	<1	<1	---	---	---	---	---	---	<14	<40	<1	<1
1,4-Dioxane	---	---	---	---	---	---	<39	<160	<0.7	<0.7	---	---	---	---	---	---	<52	<150	<0.7	<0.7
2-Butanone	---	---	---	---	---	---	76	220	340	39	---	---	---	---	---	---	92	270	220	89
2-Hexanone	---	---	---	---	---	---	<3.5	<15	<0.8	<0.8	---	---	---	---	---	---	<4.7	<14	<0.8	<0.8
4-Methyl-2-pentanone	---	---	---	---	---	---	14	49	100	8.0	---	---	---	---	---	---	16	62	68	14
Acetone	---	9700	10000D	3300	1000	3400D	270D	4100D	310	550	---	2000	3300	1400	640	870	180	660	110	370
Benzene	---	---	---	---	---	---	<2.7	<11	<0.6	<0.6	---	---	---	---	---	---	<3.6	<11	<0.6	<0.6
Bromodichloromethane	<0.78	<1.7	<2.3	<23	<10	<2.4	<1.2	<4.9	<1	<1	<0.34	<0.40	<24	<11	<4.1	<6.9	<1.6	<4.5	<1	<1
Bromoform	<5.9	<13	<18	<170	<78	<18	<8.9	<37	<2	<2	<2.6	<3.1	<180	<85	<31	<52	<12	<34	<2	<2
Bromomethane	<2.2	<4.7	<6.7	<65	<29	<6.8	<3.4	<14	<0.8	<0.8	<0.97	<1.2	<68	<32	<12	<20	<4.4	<13	<0.8	<0.8
Carbontetrachloride	0.61	<0.77	<1.1	<11	<4.8	<1.1	<0.55	<2.3	<1	<1	0.59	0.63	<11	<5.2	<1.9	<3.2	<0.72	<2.1	<1	<1
Chlorobenzene	<2.7	<5.6	<7.9	<77	<35	<8.0	<4.0	<17	<0.9	<0.9	<1.2	<1.4	<80	<38	<14	<23	<5.3	<15	<0.9	<0.9
Chloroethane	<3.0	<6.4	<9.0	<88	<39	<9.1	---	---	---	---	<1.3	<1.6	<91	<43	<16	<27	---	---	---	---
Chloroform	<2.8	<5.9	<8.4	<81	<37	<8.5	<4.2	<18	<1	<1	<1.2	<1.5	<85	<40	<15	<25	<5.6	<16	<1	<1
Chloromethane	<2.3	<5.0	<7.0	<68	<31	<7.1	---	---	---	---	<1.0	<1.2	<71	<34	<12	<21	---	---	---	---
cis-1,2-Dichloroethene	<2.3	<4.8	<6.8	<66	<30	<6.9	<3.5	<14	1.0	<0.8	2.4	1.3	<69	<33	<12	<20	<4.5	<13	0.9	<0.8
cis-1,3-Dichloropropene	<5.2	<11	<16	<150	<68	<16	<7.9	<33	<0.9	<0.9	<2.3	<2.7	<160	<75	<27	<46	<10	<30	<0.9	<0.9
Dibromochloromethane	<0.99	<2.1	<2.9	<29	<13	<3.0	<1.5	<6.2	<2	<2	<0.43	<0.51	<30	<14	<5.2	<8.7	<2.0	<5.7	<2	<2
Dichloromethane	<2.0	<4.2	<5.9	6.5J	<26	<6.0	<3.0	<12	28	3.0	<0.86	<1.0	<60	3.6J	<10	<17	<3.9	<11	6.0	3.0
Ethylbenzene	<4.9	<10	<15	<140	---	---	<7.5	<31	2.0	2.0	<2.1	<2.6	<150	1.9J	---	---	<9.8	<29	1.0	5.0
Hexachlorobutadiene	---	---	---	---	---	---	<24	<98	<2	<2	---	---	---	---	---	---	<31	<90	<2	<2
Methyltert-butylether	---	---	---	---	---	---	<6.2	<26	<0.7	<0.7	---	---	---	---	---	---	<8.2	<24	<0.7	<0.7
Naphthalene	---	---	---	---	---	---	<16	<65	<1	<1	---	---	---	---	---	---	<21	<60	<1	1
Styrene	---	---	---	---	---	---	<7.4	<31	<0.8	<0.8	---	---	---	---	---	---	<9.7	<28	<0.8	<0.8
Tetrachloroethene	3.1	3.7	7.4	<12	6.3	7.3	1.2	6.9	8.0	2.0	12	7.5	14	2.9J	8.2	9.2	2.7	11	5.0	6.0
Toluene	---	---	---	---	---	---	<3.2	<13	2.0	3.0	---	---	---	---	---	---	<4.2	<12	2	4.0
trans-1,2-Dichloroethene	<2.3	<4.8	<6.8	<66	<30	<6.9	<3.5	<14	<0.8	<0.8	<1.0	<1.2	<69	<33	<12	<20	<4.5	<13	<0.8	<0.8
Trans-1,3-Dichloropropene	<2.6	<5.5	<7.8	<75	<34	<7.9	<3.9	<16	<0.9	<0.9	<1.1	<1.3	<79	<37	<14	<23	<5.2	<15	<0.9	<0.9
Trichloroethene	5.6	5.1	8.9	4.1J	11	12	2.2	7.2	9.0	3.0	14	8.4	17	4.4J	12	12	4.0	11	6.0	7.0
Trichlorofluoromethane	<3.2	<6.8	<9.6	<94	<42	<9.7	---	---	---	---	8.2	4.0	<97	4.1J	<17	<28	---	---	---	---
Vinyl chloride	<0.31	<0.66	<0.93	<9.1	<4.1	<0.94	<0.47	<2.0	<0.5	<0.5	<0.14	<0.16	<9.4	<4.5	<1.6	<2.8	<0.62	<1.8	<0.5	<0.5
m/p-xylene	<9.9	<21	<30	4.9J	---	---	<15	<62	8.0	10	5.6	8.0	<300	7.7J	---	---	<20	<57	5.0	23
o-Xylene	<4.9	<10	<15	<140	---	---	<7.5	<31	2.0	3.0	<2.1	<2.6	<150	2.3J	---	---	<9.8	<29	1.0	7.0
Xylene (total)	<9.9	<21	<15	4.9J	---	---	<15	<62	10	13	5.6	8.0	<300	10J	---	---	<20	<57	6.0	30

Notes: ug/m3 = Micrograms per cubic meter.
D = Result from a diluted sample.
J = Estimated value.
--- = not analyzed
<3.1 = not detected above listed detection limit.
SVE system startup in March 2013

Table 13
Indoor Air Analytical Results
Building 5 Area
Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

	BLDG5-3										BLDG5-4			BLDG5-5	BLDG5-6		BLDG8-1
	Sanding Room										Production Area			Cathode Spray Room	Office Area		BLDG 8 Basement
CONSTITUENT (ug/m3)	8/22/2011	10/7/2011	1/9/2012	4/18/2013	8/5/2013	11/1/2013	1/27/2014	6/17/2014	9/24/2014	6/11/2015	8/22/2011	10/7/2011	1/9/2012	4/1/2014	4/1/2014	9/24/2014	4/1/2014
1,1,1-Trichloroethane	<1.7	<1.6	<3.6	<29	<1.2	<8.2	<3.2	<10	<1	<1	<1.1	<1.8	<26	<2.6	<0.95	<1	<0.86
1,1,2,2-Tetrachloroethane	<0.44	<0.41	<0.91	<7.2	<0.30	<2.0	<0.80	<2.5	<1	<1	<0.28	<0.44	<6.6	<0.65	<0.24	<1	<0.22
1,1,2-Trichloroethane	<1.7	<1.6	<3.6	<29	<1.2	<8.2	<3.2	<10	<1	<1	<1.1	<1.8	<26	<2.6	<0.95	<1	<0.86
1,1-Dichloroethane	<1.3	<1.2	<2.7	<22	<0.91	<6.1	<2.4	<7.5	<0.8	<0.8	<0.83	<1.3	<20	<2.0	<0.71	<0.8	<0.65
1,1-Dichloroethene	<1.3	<1.2	<2.7	<21	<0.89	<6.0	<2.3	<7.3	<0.8	<0.8	<0.81	<1.3	<19	<1.9	<0.69	<0.8	<0.63
1,2-Dibromoethane (EDB)	---	---	---	---	---	---	<0.91	<2.8	<2	<2	---	---	---	<0.74	<0.27	<2	<0.24
1,2-Dichlorobenzene	---	---	---	---	---	---	<7.0	<22	<1	<1	---	---	---	<5.7	<2.1	<1	<1.9
1,2-Dichloroethane	<1.3	<1.2	<2.7	<22	<0.91	<6.1	<2.4	<7.5	<0.8	<0.8	<0.83	<1.3	<20	<2.0	<0.71	<0.8	<0.65
1,2-Dichloropropane	<1.5	<1.4	<3.1	<25	<1.0	<6.9	<2.7	<8.5	<0.9	<0.9	<0.94	<1.5	<22	<2.2	<0.80	<0.9	<0.73
1,3-Dichlorobenzene	---	---	---	---	---	---	<7.0	<22	<1	<1	---	---	---	<5.7	<2.1	<1	<1.9
1,4-Dichlorobenzene	---	---	---	---	---	---	<7.0	<22	<1	<1	---	---	---	<5.7	<2.1	<1	<1.9
1,4-Dioxane	---	---	---	---	---	---	<27	<83	<0.7	<0.7	---	---	---	<22	<7.9	<0.7	<7.2
2-Butanone	---	---	---	---	---	---	97	380	18	62	---	---	---	95	34	14	2.6
2-Hexanone	---	---	---	---	---	---	<2.4	<7.5	<0.8	<0.8	---	---	---	<2.0	<0.71	<0.8	<0.65
4-Methyl-2-pentanone	---	---	---	---	---	---	25	91	5.0	14	---	---	---	12	5.1	2.0	<1.3
Acetone	---	1200	3400D	1000	400D	2100D	330D	1000D	570	870	---	1000	670	3900D	440D	620	86D
Benzene	---	---	---	---	---	---	<1.9	<5.8	<0.6	<0.6	---	---	---	<1.5	<0.55	<0.6	<0.50
Bromodichloromethane	<0.44	<0.41	<0.91	<7.2	<0.30	<2.0	<0.80	<2.5	<1	<1	<0.28	<0.44	<6.6	<0.65	<0.24	<1	<0.22
Bromoform	<3.3	<3.1	<6.9	<55	<2.3	<15	<6.1	<19	<2	<2	<2.1	<3.3	<50	<4.9	<1.8	<2	<1.6
Bromomethane	<1.3	<1.2	<2.6	<21	<0.87	<5.8	<2.3	<7.1	<0.8	<0.8	<0.79	<1.3	<19	<1.9	<0.68	<0.8	<0.62
Carbontetrachloride	0.55	0.58	0.58	<3.4	0.53	<0.95	0.54	<1.2	<1	<1	0.59	0.63	<3.1	0.41	0.36	<1	0.28
Chlorobenzene	<1.5	<1.4	<3.1	<25	<1.0	<6.9	<2.7	<8.5	<0.9	<0.9	<0.94	<1.5	<22	<2.2	<0.80	<0.9	<0.73
Chloroethane	<1.7	<1.6	<3.5	<28	<1.2	<7.9	---	---	---	---	<1.1	<1.7	<25	---	---	---	---
Chloroform	<1.6	<1.5	<3.3	<26	<1.1	<7.3	<2.9	<9.0	<1	<1	<1.0	<1.6	<24	<2.3	<0.85	<1	<0.78
Chloromethane	<1.3	<1.2	<2.7	1.7J	<0.91	<6.1	---	---	---	---	1	<1.3	<20	---	---	---	---
cis-1,2-Dichloroethene	1.5	<1.2	<2.7	<21	<0.89	<6.0	<2.3	<7.3	<0.8	<0.8	<0.81	<1.3	<19	<1.9	1.7	<0.8	<0.63
cis-1,3-Dichloropropene	<2.9	<2.7	<6.0	<48	<2.0	<14	<5.3	<17	<0.9	<0.9	<1.8	<2.9	<44	<4.3	<1.6	<0.9	<1.4
Dibromochloromethane	<0.55	<0.52	<1.1	<9.2	<0.39	<2.6	<1.0	<3.2	<2	<2	<0.35	<0.56	<8.3	<0.82	<0.30	<2	<0.27
Dichloromethane	<1.1	<1.0	<2.3	5.6J	<0.77	6.4	<2.0	<6.3	57	1.0	<0.70	<1.1	<17	<1.6	<0.60	5.0	<0.55
Ethylbenzene	<2.8	<2.6	<5.7	1.5J	---	---	<5.1	<16	<0.9	3.0	<1.8	<2.8	<42	<4.1	<1.5	1.0	<1.4
Hexachlorobutadiene	---	---	---	---	---	---	<16	<50	<2	<2	---	---	---	<13	<4.7	<2	<4.3
Methyltert-butylether	---	---	---	---	---	---	<4.2	<13	<0.7	<0.7	---	---	---	<3.4	<1.2	<0.7	<1.1
Naphthalene	---	---	---	---	---	---	<11	<33	<1	<1	---	---	---	<8.7	<3.2	<1	<2.9
Styrene	---	---	---	---	---	---	<5.0	<16	<0.8	<0.8	---	---	---	<4.1	<1.5	<0.8	<1.4
Tetrachloroethene	3.8	3.1	4.2	<3.9	1.8	3.8	0.9	3.3	<1	2.0	0.78	1.0	<3.5	<0.35	0.81	<1	0.14
Toluene	---	---	---	---	---	---	<2.2	<6.8	2.0	4.0	---	---	---	<1.8	1.8	4.0	0.86
trans-1,2-Dichloroethene	<1.3	<1.2	<2.7	<21	<0.89	<6.0	<2.3	<7.3	<0.8	<0.8	<0.81	<1.3	<19	<1.9	1.9	<0.8	<0.63
Trans-1,3-Dichloropropene	<1.5	<1.4	<3.0	<24	<1.0	<6.8	<2.7	<8.3	<0.9	<0.9	<0.92	<1.5	<22	<2.2	<0.79	<0.9	<0.72
Trichloroethene	12	17	18	1.7J	8.5	10	2.1	3.5	<1	2.0	2.9	2.1	<2.6	0.79	5.2	<1	0.85
Trichlorofluoromethane	2.9	2.1	<3.7	2.2J	2.5	<8.4	---	---	---	---	1.7	<1.8	<27	---	---	---	---
Vinyl chloride	<0.17	<0.16	<0.36	<2.9	<0.12	<0.82	<0.32	<1.0	<0.5	<0.5	<0.11	<0.18	<2.6	<0.26	<0.095	<0.5	<0.086
m/p-xylene	7.1	<5.2	<12	5.9J	---	---	<10	<32	2.0	12	<3.5	<5.6	<83	<8.3	3.2	4.0	<2.8
o-Xylene	<2.8	<2.6	<5.7	2.1J	---	---	<5.1	<16	<0.9	3.0	<1.8	<2.8	<42	<4.1	<1.5	0.9	<1.4
Xylene (total)	7.1	<5.2	<5.7	8.0J	---	---	<10	<32	2.0	15	<3.5	<5.6	<83	<8.3	3.2	4.9	<2.8

Notes: ug/m3 = Micrograms per cubic meter.
D = Result from a diluted sample.
J = Estimated value.
--- = not analyzed
<3.1 = not detected above listed detection limit.
SVE system startup in March 2013

TABLE 14
Sub-Slab Soil Vapor Analytical Results
Building 5 Area
Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

	BLDG5-SV1											BLDG5-SV2							
	QA Area											Paint Mixing Storage Room							
CONSTITUENT (ug/m3)	**2/21/2011**	**6/4/2011**	**8/22/2011**	**10/7/2011**	**1/9/2012**	**4/18/2013**	**8/5/2013**	**11/1/2013**	**1/27/2014**	**6/17/2014**	**6/12/2015**	**2/21/2011**	**6/4/2011**	**8/22/2011**	**10/7/2011**	**1/9/2012**	**4/18/2013**	**8/5/2013**	**11/1/2013**
1,1,1-Trichloroethane	<31	<350	<290	<66	<80	<43	<3.0	<19	<1.2	<41	<1	<44	<25	<5.0	<3.5	<16	<1.2	<1.1	<1.9
1,1,2,2-Tetrachloroethane	<7.8	<88	<72	<16	<20	<11	<0.76	<4.8	<0.30	<10	<1	<11	<6.2	<1.2	<0.87	<4.0	<0.30	<0.27	<0.49
1,1,2-Trichloroethane	<31	<350	<290	<66	<80	<43	<3.0	<19	<1.2	<41	<1	<44	<25	<5.0	<3.5	<16	<1.2	<1.1	<1.9
1,1-Dichloroethane	<24	<260	<220	<49	<60	<33	<2.3	<14	<0.90	<31	<0.8	<33	<19	<3.7	<2.6	<12	<0.90	<0.81	<1.5
1,1-Dichloroethene	<23	<260	<210	<48	<59	<32	<2.2	<14	<0.88	<30	<0.8	<32	<18	<3.6	<2.5	<12	<0.88	<0.79	<1.4
1,2-Dibromoethane (EDB)	<8.9	---	---	---	<23	---	---	---	<0.34	<12	<2	<12	---	---	---	<4.5	---	---	---
1,2-Dichlorobenzene	<69	---	---	---	<180	---	---	---	<2.6	<90	<1	<97	---	---	---	<35	---	---	---
1,2-Dichloroethane	<24	<260	<220	<49	<60	<33	<2.3	<14	<0.90	<31	<0.8	<33	<19	<3.7	<2.6	<12	<0.90	<0.81	<1.5
1,2-Dichloropropane	<27	<300	<250	<56	<68	<37	<2.6	<16	<1.0	<35	<0.9	<37	<21	<4.2	<2.9	<14	<1.0	<0.92	<1.7
1,3-Dichlorobenzene	<69	---	---	---	<180	---	---	---	<2.6	<90	23	<97	---	---	---	<35	---	---	---
1,4-Dichlorobenzene	<69	---	---	---	<180	---	---	---	<2.6	<90	<1	<97	---	---	---	<35	---	---	---
1,4-Dioxane	---	---	---	---	<670	---	---	---	<10	<340	<0.7	---	---	---	---	<130	---	---	---
2-Butanone	60	---	---	---	<86	---	---	---	22	45	170	<48	---	---	---	300	---	---	---
2-Hexanone	<24	---	---	---	<60	---	---	---	2.3	<31	<0.8	<33	---	---	---	110	---	---	---
4-Methyl-2-pentanone	<47	---	---	---	<120	---	---	---	4.8	<62	0.9	<66	---	---	---	24	---	---	---
Acetone	<260	<2900	---	670	<670	1300	1500D	1500D	40	960	130	<370	<210	---	840	320	68D	45D	68
Benzene	<18	---	---	---	<47	---	---	---	<0.70	<24	2.0	<26	---	---	---	<9.3	---	---	---
Bromodichloromethane	<7.8	<88	<72	<16	<20	<11	<0.76	<4.8	<0.30	<10	<1	<11	<6.2	<1.2	<0.87	<4.0	<0.30	<0.27	<0.49
Bromoform	<60	<670	<550	<120	<150	<82	<5.8	<37	<2.3	<78	<2	<84	<47	<9.4	<6.6	<30	<2.3	<2.1	<3.7
Bromomethane	<22	<250	<210	<47	<57	<31	<2.2	<14	<0.86	<29	<0.8	<32	<18	<3.6	<2.5	<11	<0.86	<0.77	<1.4
Carbondisulfide	<18	---	---	---	---	---	---	---	---	---	---	<25	---	---	---	---	---	---	---
Carbontetrachloride	<3.7	<41	<34	<7.7	<9.3	<5.1	0.57	<2.3	0.52	<4.8	<1	<5.1	<2.9	<0.58	0.64	<1.9	0.62	0.52	0.53
Chlorobenzene	<27	<300	<250	<56	<68	<37	<2.6	<16	<1.0	<35	<0.9	<37	<21	<4.2	<2.9	<14	<1.0	<0.92	<1.7
Chloroethane	<30	<340	<280	<64	---	<42	<2.9	<19	---	---	---	<43	<24	<4.8	<3.4	---	<1.2	<1.0	<1.9
Chloroform	<28	<320	<260	<59	<72	<39	<2.7	<17	<1.1	<37	12	<40	<22	<4.5	<3.1	<14	<1.1	<0.97	<1.7
Chloromethane	<24	<260	<220	<49	---	<33	<2.3	<14	---	---	---	<33	<19	<3.7	<2.6	---	<0.90	<0.81	<1.5
cis-1,2-Dichloroethene	47	420	400	130	96	<32	<2.2	<14	<0.88	<30	<0.8	<32	<18	6.6	5.1	<12	<0.88	<0.79	<1.4
cis-1,3-Dichloropropene	<52	<580	<480	<110	<130	<72	<5.1	<32	<2.0	<68	<0.9	<74	<41	<8.3	<5.8	<27	<2.0	<1.8	<3.2
Dibromochloromethane	<9.9	<110	<92	<21	<25	<14	<0.96	<6.1	<0.38	<13	<2	<14	<7.8	<1.6	<1.1	<5.1	<0.38	<0.34	<0.62
Dichloromethane	<20	<220	<180	<42	<51	<27	<1.9	<12	<0.76	<26	3.0	<28	<16	<3.1	<2.2	<10	<0.76	<0.68	8.5
Ethylbenzene	<50	---	<460	<100	<130	<69	---	---	<1.9	<65	5.0	<70	---	<7.9	8.1	<25	2.5	---	---
Freon 113	<8.9	---	---	---	---	---	---	---	---	---	---	<12	---	---	---	---	---	---	---
Hexachlorobutadiene	---	---	---	---	<400	---	---	---	<6.0	<210	<2	---	---	---	---	<80	---	---	---
Methyltert-butylether	<41	---	---	---	<110	---	---	---	<1.6	<54	<0.7	<58	---	---	---	<21	---	---	---
Naphthalene	---	---	---	---	<270	---	---	---	<4.0	<140	1.0	---	---	---	---	<53	---	---	---
Styrene	<49	---	---	---	<130	---	---	---	<1.9	<64	<0.8	<69	---	---	---	<25	---	---	---
Tetrachloroethene	390	9900	5200	790	2700	<5.8	2.9	7.6	2.0	8.2	14	150	230	47	25	140	22	6.0	5.1
Toluene	44	---	---	---	<55	---	---	---	3.1	<28	29	<30	---	---	---	24	---	---	---
trans-1,2-Dichloroethene	<23	<260	<210	<48	<59	<32	<2.2	<14	<0.88	<30	<0.8	<32	<18	<3.6	<2.5	<12	<0.88	<0.79	<1.4
Trans-1,3-Dichloropropene	<26	<290	<240	<55	<67	<36	<2.5	<16	<1.0	<34	<0.9	<37	<21	<4.1	<2.9	<13	<1.0	<0.90	<1.6
Trichloroethene	2100	31000	26000	5100	5800	5.1	5.9	14	2.4	8.7	28	2300	2000	1200D	410D	1300D	80	17	17
Trichlorofluoromethane	<32	<360	<300	<68	---	<45	4.0	<20	---	---	---	<46	<26	<5.1	<3.6	---	2.6	3.3	3.1
Vinyl acetate	<260	---	---	---	---	---	---	---	---	---	---	<370	---	---	---	---	---	---	---
Vinyl chloride	<3.1	<35	<29	<6.6	<8.0	<4.3	<0.30	<1.9	<0.12	<4.1	<0.5	<4.4	<2.5	0.51	1.2	<1.6	<0.12	<0.11	<0.19
m/p-xylene	<100	---	<920	<210	<250	<140	---	---	4.5	<130	16	<140	---	17	28	<51	9.5	---	---
o-Xylene	<50	---	<460	<100	<130	<69	---	---	<1.9	<65	6.0	<70	---	<7.9	11	<25	2.3	---	---
Xylene (total)	<100	---	<920	<210	<250	<140	---	---	4.5	<130	22	<140	---	17	39	<51	12	---	---

Notes: ug/m3 = Micrograms per cubic meter.
D = Result reported from a diluted sample.
--- = Not sampled for.
<31 = not detected above listed detection limit.
SVE system startup in March 2013

TABLE 14
Sub-Slab Soil Vapor Analytical Results
Building 5 Area
Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

	BLDG5-SV2 (Cont.)			BLDG5-SV3												BLDG5-SV4		
	Paint Mixing Storage Room			Sanding Room												Hall		
CONSTITUENT (ug/m3)	1/27/2014	6/17/2014	9/24/2014	2/21/2011	6/4/2011	8/22/2011	10/7/2011	1/9/2012	4/18/2013	8/5/2013	11/1/2013	1/27/2014	6/17/2014	9/24/2014	6/12/2015	1/27/2014	6/17/2014	9/24/2014
1,1,1-Trichloroethane	<1.1	<4.0	<1	<2600	<8400	<5700	<220	<330	<24	<2.9	<9.5	<5.8	<17	<1	1.0	<0.89	<8.7	<1
1,1,2,2-Tetrachloroethane	<0.27	<1.0	<1	<640	<2100	<1400	<55	<84	<6.0	<0.74	<2.4	<1.5	<4.2	<1	<1	<0.22	<2.2	<1
1,1,2-Trichloroethane	<1.1	<4.0	<1	<2600	<8400	<5700	<220	<330	<24	<2.9	<9.5	<5.8	<17	<1	<1	<0.89	<8.7	<1
1,1-Dichloroethane	<0.82	<3.0	<0.8	<1900	<6300	<4300	<170	<250	<18	<2.2	<7.2	<4.4	<13	<0.8	<0.8	1.3	<6.5	<0.8
1,1-Dichloroethene	<0.80	<2.9	<0.8	<1900	<6200	<4200	<160	<240	<18	<2.2	<7.0	<4.3	<12	<0.8	<0.8	<0.66	<6.4	<0.8
1,2-Dibromoethane (EDB)	<0.31	<1.1	<2	<730	---	---	---	<95	---	---	---	<1.6	<4.8	<2	<2	<0.25	<2.5	<2
1,2-Dichlorobenzene	<2.4	<8.8	<1	<5600	---	---	---	<730	---	---	---	<13	<37	<1	<1	<2.0	<19	<1
1,2-Dichloroethane	<0.82	<3.0	<0.8	<1900	<6300	<4300	<170	<250	<18	<2.2	<7.2	<4.4	<13	<0.8	<0.8	<0.67	<6.5	<0.8
1,2-Dichloropropane	<0.93	<3.4	<0.9	<2200	<7100	<4900	<190	<280	<20	<2.5	<8.1	<4.9	<14	<0.9	<0.9	<0.76	<7.4	<0.9
1,3-Dichlorobenzene	<2.4	<8.8	6.0	<5600	---	---	---	<730	---	---	---	<13	<37	13	17	<2.0	<19	2
1,4-Dichlorobenzene	<2.4	<8.8	<1	<5600	---	---	---	<730	---	---	---	<13	<37	<1	<1	<2.0	<19	<1
1,4-Dioxane	<9.1	<33	<0.7	---	---	---	---	<2800	---	---	---	<48	<140	<0.7	<0.7	<7.5	<73	<0.7
2-Butanone	65D	200	230	<2800	---	---	---	<360	---	---	---	12	36	46	270	8.0	<9.4	17
2-Hexanone	6.8	15	3.0	<1900	---	---	---	<250	---	---	---	<4.4	<13	5.0	<0.8	0.91	<6.5	<0.8
4-Methyl-2-pentanone	63	98	62	<3800	---	---	---	<500	---	---	---	<8.7	<25	6.0	2.0	<1.3	<13	2
Acetone	39	91	190	<21000	<70000	---	<1800	<2800	840	190D	280D	95	360	300	230	<7.5	<73	52 J
Benzene	<0.64	<2.3	1.0	<1500	---	---	---	<190	---	---	---	<3.4	<9.9	2.0	2.0	<0.52	<5.1	<0.6
Bromodichloromethane	<0.27	<1.0	<1	<640	<2100	<1400	<55	<84	<6.0	<0.74	<2.4	<1.5	<4.2	<1	<1	0.23	<2.2	<1
Bromoform	<2.1	<7.6	<2	<4900	<16000	<11000	<420	<630	<46	<5.6	<18	<11	<32	<2	<2	<1.7	<17	<2
Bromomethane	<0.78	<2.9	<0.8	<1800	<6000	<4100	<160	<240	<17	<2.1	<6.8	<4.2	<12	<0.8	<0.8	<0.64	<6.2	<0.8
Carbondisulfide	---	---	---	<1500	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Carbontetrachloride	0.59	0.49	<1	<300	<980	<670	<26	<39	<2.8	0.56	<1.1	<0.68	<2.0	<1	<1	0.5	<1.0	<1
Chlorobenzene	<0.93	<3.4	<0.9	<2200	<7100	<4900	<190	<280	<20	<2.5	<8.1	<4.9	<14	<0.9	<0.9	<0.76	<7.4	<0.9
Chloroethane	---	---	---	<2500	<8100	<5500	<210	---	<23	<2.9	<9.2	---	---	---	---	---	---	---
Chloroform	<0.99	<3.6	<1	<2300	<7600	<5100	<200	<300	<22	<2.7	<8.6	<5.2	<15	<1	<1	5.6	<7.8	<1
Chloromethane	---	---	---	<1900	<6300	<4300	<170	---	<18	<2.2	<7.2	---	---	---	---	---	---	---
cis-1,2-Dichloroethene	0.84	<2.9	<0.8	<1900	<6200	<4200	<160	<240	<18	<2.2	<7.0	<4.3	<12	<0.8	1.0	16	<6.4	<0.8
cis-1,3-Dichloropropene	<1.8	<6.7	<0.9	<4300	<14000	<9500	<370	<560	<40	<4.9	<16	<9.7	<28	<0.9	<0.9	<1.5	<15	<0.9
Dibromochloromethane	<0.35	<1.3	<2	<810	<2700	<1800	<70	<110	<7.6	<0.93	<3.0	<1.8	<5.4	<2	<2	<0.28	<2.8	<2
Dichloromethane	<0.69	<2.5	5.0	<1600	<5300	<3600	<140	<210	<15	<1.9	9.2	<3.7	<11	5.0	2.0	<0.57	<5.5	350
Ethylbenzene	3.1	<6.3	10	<4100	---	<9100	<350	<530	<38	---	---	<9.2	<27	10	5.0	<1.4	<14	3.0
Freon 113	---	---	---	<730	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Hexachlorobutadiene	<5.5	<20	<2	---	---	---	---	<1700	---	---	---	<29	<85	<2	<2	<4.5	<44	<2
Methyltert-butylether	<1.4	<5.3	<0.7	<3400	---	---	---	<440	---	---	---	<7.7	<22	<0.7	<0.7	<1.2	<11	6.0
Naphthalene	<3.7	<13	<1	---	---	---	---	<1100	---	---	---	<19	<56	<1	<1	<3.0	<29	<1
Styrene	<1.7	<6.3	<0.8	<4000	---	---	---	<520	---	---	---	<9.1	<26	<0.8	<0.8	<1.4	<14	<0.8
Tetrachloroethene	25	8.1	4.0	5300	33000	14000	1400	2100	160	200	31	170	210	36	50	18	24	<1
Toluene	9.4	15	27	<1700	---	---	---	<230	---	---	---	16	24	29	31	3.1	<5.9	9.0
trans-1,2-Dichloroethene	<0.80	<2.9	<0.8	<1900	<6200	<4200	<160	<240	<18	<2.2	<7.0	<4.3	<12	<0.8	<0.8	<0.66	<6.4	<0.8
Trans-1,3-Dichloropropene	<0.91	<3.3	<0.9	<2100	<7000	<4800	<180	<280	<20	<2.5	<7.9	<4.8	<14	<0.9	<0.9	<0.75	<7.3	<0.9
Trichloroethene	73	10	13	130000	470000	340000	20000	22000	1100	720D	190	850D	580	220	230	29	14	7.0
Trichlorofluoromethane	---	---	---	<2600	<8700	<5900	<230	---	<25	<3.0	<9.9	---	---	---	---	---	---	---
Vinyl acetate	---	---	---	<21000	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Vinyl chloride	<0.11	<0.40	<0.5	<260	<840	<570	<22	<33	<2.4	<0.29	<0.95	<0.58	<1.7	<0.5	<0.5	<0.089	<0.87	<0.5
m/p-xylene	11	19	39	<8100	---	<18000	<700	<1100	<76	---	---	<19	<54	38	16	4.3	<28	11
o-Xylene	4.1	6.4	15	<4100	---	<9100	<350	<530	<38	---	---	<9.2	<27	15	6.0	1.9	<14	4.0
Xylene (total)	15	25	54	<8100	---	<18000	<700	<1100	<76	---	---	<19	<54	53	22	6.2	<28	15

Notes: ug/m3 = Micrograms per cubic meter.
D = Result reported from a diluted sample.
--- = Not sampled for.
<31 = not detected above listed detection limit.
SVE system startup in March 2013

TABLE 14
Sub-Slab Soil Vapor Analytical Results
Building 5 Area
Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

	BLDG5-SV5							BLDG5-SV6					
	Shipping Area							Shipping Area					
CONSTITUENT (ug/m3)	**4/18/2013**	**8/5/2013**	**11/1/2013**	**1/27/2014**	**6/17/2014**	**9/24/2014**	**6/12/2015**	**4/18/2013**	**8/5/2013**	**11/1/2013**	**1/27/2014**	**6/17/2014**	**9/24/2014**
1,1,1-Trichloroethane	<1.2	<3.6	<1.9	<1.4	<2.2	<1	<1	2000	1200	790	1900	680	490
1,1,2,2-Tetrachloroethane	<0.31	<0.90	<0.47	<0.34	<0.55	<1	<1	<25	<9.4	<6.7	<15	<8.8	<14
1,1,2-Trichloroethane	<1.2	<3.6	<1.9	<1.4	<2.2	<1	<1	<100	<38	<27	<59	<35	<11
1,1-Dichloroethane	<0.93	<2.7	<1.4	<1.0	<1.7	<0.8	<0.8	2700	1500	1300	3100	1600	1800
1,1-Dichloroethene	<0.91	<2.6	<1.4	<1.0	<1.6	<0.8	<0.8	480	340	270	690	280	350
1,2-Dibromoethane (EDB)	---	---	---	<0.39	<0.62	<2	<2	---	---	---	<17	<10	<15
1,2-Dichlorobenzene	---	---	---	<3.0	<4.9	<1	<1	---	---	---	<130	<78	<12
1,2-Dichloroethane	<0.93	<2.7	<1.4	<1.0	<1.7	<0.8	<0.8	<76	<28	<20	<44	<27	<8
1,2-Dichloropropane	<1.1	<3.1	<1.6	<1.2	<1.9	<0.9	<0.9	<86	<32	<23	<50	<30	<9
1,3-Dichlorobenzene	---	---	---	<3.0	<4.9	5.0	10	---	---	---	<130	<78	<12
1,4-Dichlorobenzene	---	---	---	<3.0	<4.9	<1	<1	---	---	---	<130	<78	<12
1,4-Dioxane	---	---	---	<11	<18	<0.7	<0.7	---	---	---	<490	<290	96
2-Butanone	---	---	---	20	27	150	270	---	---	---	<64	<38	30
2-Hexanone	---	---	---	3.2	<1.7	3	<0.8	---	---	---	<44	<27	<8
4-Methyl-2-pentanone	---	---	---	6.8	7.2	46	3.0	---	---	---	<88	<53	<8
Acetone	44	56	73D	35	41	140	210	<850	<310	<220	<490	<290	68 J
Benzene	---	---	---	2	<1.3	2	2.0	---	---	---	<34	<21	<6
Bromodichloromethane	<0.31	<0.90	<0.47	<0.34	<0.55	<1	<1	<25	<9.4	<6.7	<15	<8.8	<13
Bromoform	<2.4	<6.8	<3.5	<2.6	<4.2	<2	<2	<190	<71	<51	<110	<67	<21
Bromomethane	<0.89	<2.6	<1.3	<0.99	<1.6	<0.8	<0.8	<73	<27	<19	<42	<25	<8
Carbondisulfide	---	---	---	---	---	---	---	---	---	---	---	---	---
Carbontetrachloride	0.57	0.62	0.54	0.59	0.49	<1	<1	<12	<4.4	<3.1	<6.9	<4.1	<13
Chlorobenzene	<1.1	<3.1	<1.6	<1.2	<1.9	<0.9	<0.9	<86	<32	<23	<50	<30	<9
Chloroethane	<1.2	<3.5	<1.8	---	---	---	---	<98	<36	<26	---	---	---
Chloroform	<1.1	<3.2	<1.7	<1.2	<2.0	<1	<1	<92	<34	<24	<53	<32	<10
Chloromethane	<0.93	<2.7	<1.4	---	---	---	---	<76	<28	<20	---	---	---
cis-1,2-Dichloroethene	2.1	<2.6	<1.4	<1.0	<1.6	<0.8	<0.8	3200	1800	1200	1900	950	590
cis-1,3-Dichloropropene	<2.1	<6.0	<3.1	<2.3	<3.7	<0.9	<0.9	<170	<63	<45	<98	<59	<9
Dibromochloromethane	<0.39	<1.1	<0.59	<0.44	<0.70	<2	<2	<32	<12	<8.5	<19	<11	<17
Dichloromethane	<0.78	<2.3	5.9	<0.87	<1.4	3.0	46	<64	<24	<17	<37	<22	8.0
Ethylbenzene	11	---	---	11	10	7.0	4.0	<160	---	---	<93	<56	<9
Freon 113	---	---	---	---	---	---	---	---	---	---	---	---	---
Hexachlorobutadiene	---	---	---	<6.9	<11	<2	<2	---	---	---	<290	<180	<21
Methyltert-butylether	---	---	---	<1.8	<2.9	<0.7	0.8	---	---	---	<77	<47	<7
Naphthalene	---	---	---	<4.6	<7.4	<1	<1	---	---	---	<200	<120	<10
Styrene	---	---	---	11	18	<0.8	<0.8	---	---	---	<92	<55	<8
Tetrachloroethene	3.1	270	120	89	64	11	5.0	570	1200	440	640	420	97
Toluene	---	---	---	26	21	23	34	---	---	---	<40	<24	19
trans-1,2-Dichloroethene	<0.91	<2.6	<1.4	<1.0	<1.6	<0.8	<0.8	<75	<28	<20	<43	<26	<8
Trans-1,3-Dichloropropene	<1.0	<3.0	<1.6	<1.1	<1.8	<0.9	<0.9	<85	<31	<22	<49	<29	<9
Trichloroethene	3.5	5.9	14	5.1	6.0	4.0	2.0	9000	3300	1300	1900	970	390
Trichlorofluoromethane	2.7	<3.7	3.1	---	---	---	---	<110	<39	<28	---	---	---
Vinyl acetate	---	---	---	---	---	---	---	---	---	---	---	---	---
Vinyl chloride	0.18	<0.36	<0.19	0.16	<0.22	<0.5	<0.5	85	81	110	130	19	<5
m/p-xylene	35	---	---	34	35	25	13	<320	---	---	<190	<110	23
o-Xylene	15	---	---	14	15	10	5.0	<160	---	---	<93	<56	9.0
Xylene (total)	50	---	---	48	50	35	18	<320	---	---	<190	<110	32

Notes: ug/m3 = Micrograms per cubic meter.
D = Result reported from a diluted sample.
--- = Not sampled for.
<31 = not detected above listed detection limit.
SVE system startup in March 2013

TABLE 15
VOC Mass Removal Estimate Summary
Building 5 Sub-Slab SVE System
Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

Sample Date	Vapor Influent Concentration (ppm(v))	Flow (scfm)	Days Operational	VOC Mass Removal Rate (lb./day)	Total VOC Mass Removed (lb.)
4/8/2015	3.9	144	754	0.16	97.5
4/24/2015	0.0	133	770	0.13	99.6
5/6/2015	0.9	131	782	0.03	99.9
5/29/2015	0.8	132	805	0.06	101.3
6/12/2015	0.3	132	819	0.04	101.8
6/26/2015	1.0	133	833	0.04	102.4
7/9/2015	2.8	133	846	0.13	104.1
7/21/2015	0.2	132	858	0.10	105.3
8/4/2015	0.3	132	872	0.02	105.5
8/20/2015	0.2	132	888	0.02	105.8
9/2/2015	0.3	133	901	0.02	106.0
9/15/2015	1.2	132	914	0.05	106.6
9/29/2015(1)	0.2	132	914	0.00	106.6

Notes:
ppm = parts per million
scfm = standard cubic feet per minute (see note 5)
lbs./day = pounds per day
lbs. = pounds
VOC = volatile organic compounds
1. Vapor influent concentrations as measured with a photoionization detector (PID).
2. Total VOC mass removed (lbs.) is calculated by multiplying the VOC Mass Removal Rate (lbs./day) on the sampling date by the # of operating days between visits.
3. VOC mass removal rate (lbs./day) = average VOC level between current and previous monitoring (ppm)/ 10E6 x 1 lbmole/379.4 cu ft. x (134lbs/lbmole) x flow (ft^3/min) x (1440 min/day)
4. 134 lbs./lbmole is the weighted average molecular weight of the primary contaminants in the soil vapor (93% Trichloroethene and 7% Tetrachloroethene based on analytical results from recovered soil vapor).
5. Flow rate (scfm) is calculated with the following equation: 128.8 x Flow coefficient (K) x pipe diameter^2 (in) x sqrt (psia x differential pressure (IWC)/(Temp (F) + 460) x Sp Gr @ 60°F)to adjust for system operating temperature
(1)= system shut down from 9/15/2015 to 9/29/2015

Table 16
Sub-Slab Soil Vapor and Indoor Air Analytical Results
32 Tozer Road
Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

CONSTITUENT (ug/m3)	32 TOZER-1						32 TOZER-2						32 TOZER-3						MassDEP Commercial/ Industrial Indoor Air Threshold Value (1)
	5/28/2013 Indoor Air	10/24/2013 Indoor Air	2/6/2014 Indoor Air	4/17/2014 Indoor Air	10/20/2014 Indoor air	4/16/2015 Indoor air	5/28/2013 Indoor Air	10/24/2013 Indoor Air	2/6/2014 Indoor Air	4/17/2014 Indoor Air	10/20/2014 Indoor air	4/16/2015 Indoor air	5/28/2013 Indoor Air	10/24/2013 Indoor Air	2/6/2014 Indoor Air	4/17/2014 Indoor Air	10/20/2014 Indoor air	4/16/2015 Indoor air	
1,1,1-Trichloroethane	<0.94	<1.2	<0.95	<0.93	<1	<1	<1.0	<0.99	<0.99	<0.94	<1	<1	<0.98	<1.0	<0.92	<0.86	<1	<1	4,600
1,1-Dichloroethane	<0.71	<0.92	<0.71	<0.70	<0.8	<0.8	<0.76	<0.74	<0.74	<0.70	<0.8	<0.8	<0.74	<0.77	<0.69	<0.65	<0.8	<0.8	440
1,1-Dichloroethene	<0.69	<0.90	<0.70	<0.68	<0.8	<0.8	<0.74	<0.73	<0.73	<0.69	<0.8	<0.8	<0.72	<0.76	<0.67	<0.63	<0.8	<0.8	180
cis-1,2-Dichloroethene	**1.5**	**3.3**	**1.3**	**3.9**	<0.8	**2**	**1.8**	**2.2**	**1.1**	**1.7**	**1.0**	**2.0**	<0.72	<0.76	<0.67	<0.63	<0.8	<0.8	31
Tetrachloroethene	**6.5**	**11**	**6.6**	**18**	**2.0**	**7.0**	**12**	**3.9**	**1.3**	**3.8**	**2.0**	**3.0**	<0.13	**0.33**	**0.25**	**0.26**	<1	<1	4.1
trans-1,2-Dichloroethene	<0.69	<0.90	<0.70	<0.68	<0.8	<0.8	<0.74	<0.73	<0.73	<0.69	<0.8	<0.8	<0.72	<0.76	<0.67	<0.63	<0.8	<0.8	62
Trichloroethene	**0.96**	**1.5**	**0.81**	**1.9**	<1	<1	**1.3**	**0.67**	**0.29**	**0.55**	<1	<1	<0.098	<0.10	**0.092**	<0.086	<1	<1	1.8
Vinyl chloride	<0.094	<0.12	<0.095	<0.093	<0.5	<0.5	<0.10	<.099	<0.099	<0.094	<0.5	<0.5	<0.098	<0.10	<0.092	<0.086	<0.5	<0.5	1.3

CONSTITUENT (ug/m3)	32 TOZER-SV3						32 TOZER-SV4						32 TOZER-SV5						MassDEP Commercial/ Industrial Sub-Slab Soil Gas Screening
	5/28/2013 Soil Vapor	10/24/2013 Soil Vapor	2/6/2014 Soil Vapor	4/17/2014 Soil Vapor	10/20/2014 Soil Vapor	4/16/2015 Soil Vapor	5/28/2013 Soil Vapor	10/24/2013 Soil Vapor	2/6/2014 Soil Vapor	4/17/2014 Soil Vapor	10/20/2014 Soil Vapor	4/16/2015 Soil Vapor	5/28/2013 Soil Vapor	10/24/2013 Soil Vapor	2/6/2014 Soil Vapor	4/17/2014 Soil Vapor	10/20/2014 Soil Vapor	4/16/2015 Soil Vapor	
1,1,1-Trichloroethane	<270	<110	<110	<370	<1	<3	<20	<5.0	<7.2	<0.83	<1	<1	<20	<1.3	<1.2	<0.91	<1	<1	320,000
1,1-Dichloroethane	<210	<79	<80	<280	**2.0**	**16.0**	<15	<3.7	<5.4	**0.8**	<0.8	<0.8	<15	<0.95	<0.87	<0.68	<0.8	**2**	31,000
1,1-Dichloroethene	<200	<77	<79	<270	<0.8	**9**	<15	<3.7	<5.3	<0.61	<0.8	<0.8	<15	<0.93	<0.85	<0.67	<0.8	<0.8	13,000
cis-1,2-Dichloroethene	**8,900**	**3,100**	**4,300**	**17,000**	**640**	**1,900**	**130**	**80**	**83**	**45**	**21**	**12**	**38**	**7.9**	<0.85	<0.67	**1.0**	**260.0**	2,200
Tetrachloroethene	**8,600**	**8,100**	**7,600**	**14,000**	**5.0**	**54.0**	**300**	**610**	**460**	**160**	**10**	**8**	**32**	**24**	**1.3**	**1.4**	<1	**9**	290
trans-1,2-Dichloroethene	<200	<77	<79	<270	**3.0**	**13.0**	<15	<3.7	<5.3	<0.61	<0.8	<0.8	<15	<0.93	<0.85	<0.67	<0.8	**2**	4,300
Trichloroethene	**6,100**	**1,500**	**1,900**	**4,500**	**61**	**150**	**150**	**68**	**70**	**37**	**10**	**4**	**15**	**4.8**	**0.45**	**0.41**	<1	**28**	130
Vinyl chloride	<27	<11	<11	<37	<0.5	**4**	<2.0	**1.7**	**2.2**	**1.2**	**1.0**	**0.6**	<2.0	<0.13	<0.12	<0.091	<0.5	<0.5	91

Notes:

(1) Massachusetts DEP December 2011 Interim Final Vapor Intrusion Guidance (WSC-11-435) Table I.2 Commercial/Industrial Indoor Air Threshold Values (updated 3/7/13)

(2) Massachusetts DEP December 2011 Interim Final Vapor Intrusion Guidance (WSC-11-435) Table II.2 Commercial/Industrial Sub-Slab Soil Gas Screening Values (updated 3/7/13).

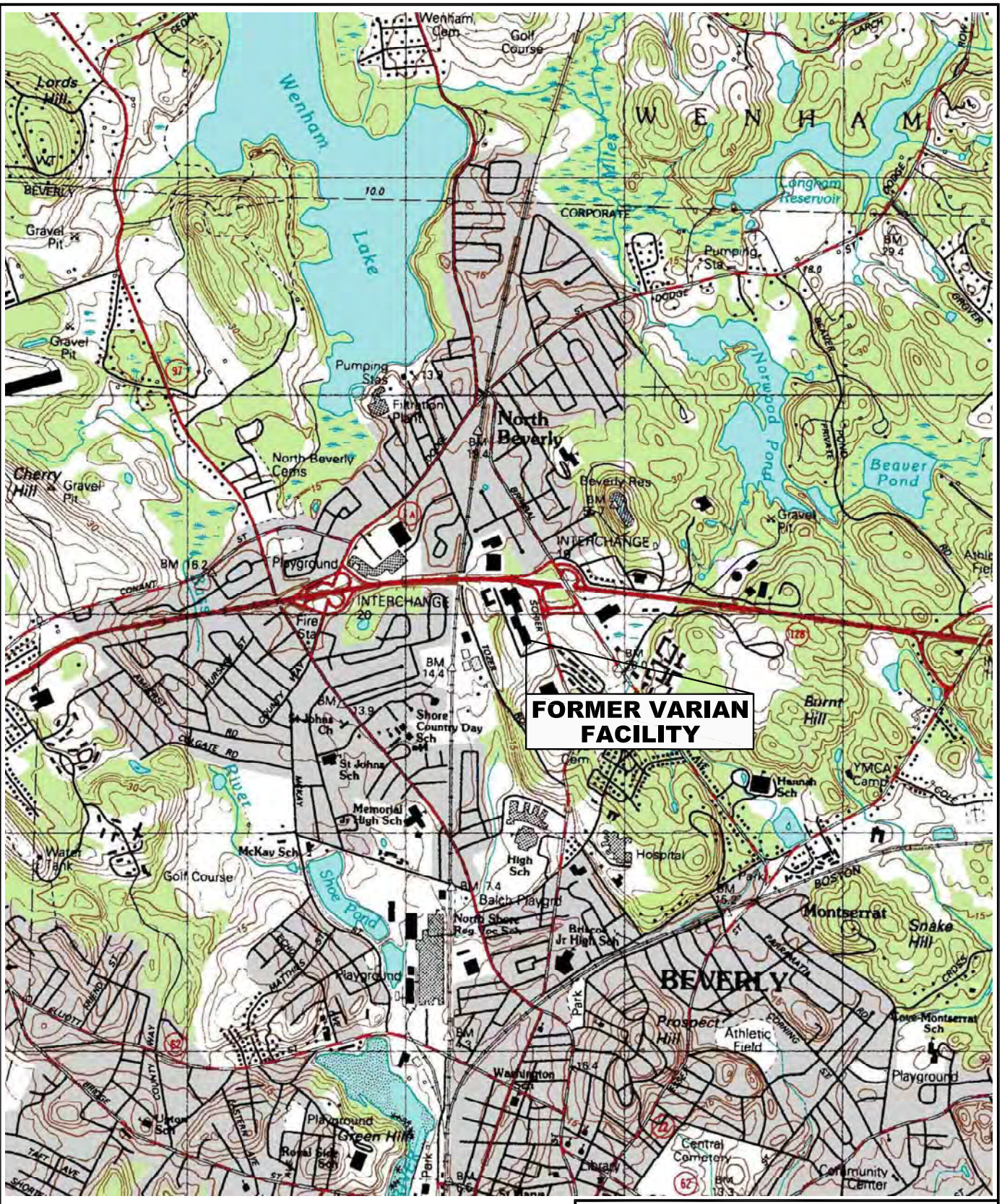
Detections are shown in bold.

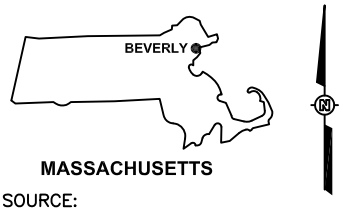
ug/m3 = Micrograms per cubic meter.

<3.1 = not detected above listed detection limit.

Shaded = Result exceeds applicable Massachusetts DEP threshold or screening value

FIGURES





SOURCE:

USGS 7.5 MIN. SERIES TARGET QUAD, 1985
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Y = 925017 m
MA STATE PLANE GRID (meters)

CB&I ENVIRONMENTAL & INFRASTRUCTURE, INC.
150 ROYALL STREET
CANTON, MASSACHUSETTS
(617) 589-5111

FIGURE 1
SITE LOCATION MAP

FORMER VARIAN FACILITY
150 SOHIER ROAD
BEVERLY, MASSACHUSETTS

OFFICE	DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
CANTON, MA	CD 04/02/14	RC 04/02/14	-- --	139340-01SITELOC

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DRAWN BY	CD	CHECKED BY	RC	04/01/15	DRAWING NAME SITE_PLAN22b
	04/01/15	APPROVED BY	RC	04/01/15	

SEE DETAIL

FORMER VARIAN FACILITY

BUILDING 3 AREA

BUILDING 5 AREA

24" STORM WATER DRAIN LINE

SAM'S DRY CLEANERS

NORTH BEVERLY FOOD MARKET

FLAIR CLEANERS

SHORT POND

STREAM A SCDS

UNNAMED STREAM

CULVERT OUTFALL

COLRD CULVERT

MARSH

DETAIL

BUILDING 3 AREA

LEGEND:

- TEMPORARY PERMANGANATE INJECTION POINT
- ABANDONED OR DESTROYED WELL
- PIEZOMETER (P)
- BENCHMARK LOCATION (MSL)
- RECOVERY WELL (RW)
- MONITORING WELL (MW)
- BIOREMEDIATION INJECTION WELL
- SURFACE WATER STREAM (STR) SAMPLE LOCATION
- CONE PENETROMETER TESTPOINT (CPT)
- HAND AUGER SAMPLE LOCATION (HA) ADJACENT TO A STREAM (STRHA)
- STRMH — MANHOLE ACCESS TO THE STREAM LOCATED WITHIN A CULVERT
- APPROXIMATE BUILDING LOCATION
- APPROXIMATE DRAIN MANHOLE LOCATION
- APPROXIMATE LOCATION OF STREAM IN CULVERT
- APPROXIMATE STREAM LOCATION
- WATER AND MARSH AREA

⊕ CL4–BR – WELL IDENTIFICATION

PAST AND CURRENT PERMANGANATE INJECTION WELLS SHOWN IN PURPLE

CL–9 CLUSTER WELL NUMBER
S=SHALLOW
DO=DEEP OVERBURDEN
BR=BEDROCK

STR–6	STREAM SAMPLE LOCATION NUMBER
STRHA–1	STREAM/SURFACE WATER SAMPLE
HA–1	HAND AUGER WELL LOCATION NUMBER
STRMH–1	STREAM/MANHOLE LOCATION NUMBER
MW–5	MONITORING WELL NUMBER
GZ–1	MONITORING WELL NUMBER
PLMW–1	MONITORING WELL NUMBER
BR–1	BEDROCK WELL NUMBER

BEDROCK WELLS BR–1 THROUGH BR–8 AND CL9–BR HAVE MULTILEVEL GROUNDWATER MONITORING SYSTEMS PRESENT WITHIN THE BEDROCK. ZONE 1 REFERS TO THE DEEPEST SAMPLING ZONE, ZONE 2 REFERS IS THE MIDDLE SAMPLING INTERVAL, AND ZONE 3 CLOSEST TO THE GROUND SURFACE.

THIS MAP HAS BEEN COMPILED FROM SURVEY DATA COLLECTED IN JULY 1994, MARCH 1995, OCTOBER 1995, SEPTEMBER 1996, MARCH 1997, DECEMBER 1997, SEPTEMBER 1998, JANUARY 2000, FEBRUARY 2001, JUNE 2002, SEPTEMBER 2002, JULY 2003, FEBRUARY 2004, OCTOBER 2004; 2005, JULY 2012, MAY 2014, FROM VARIOUS EXISTING PLANS, AND OBSERVATIONS MADE IN THE FIELD BY CB&I ENVIRONMENTAL & INFRASTRUCTURE, INC.

FIGURE 2
EXPANDED SITE PLAN
FORMER VARIAN FACILITY SITE – BEVERLY, MA.

PREPARED FOR: VARIAN MEDICAL FACILITY, INC.
PALO ALTO, CALIFORNIA

SCALE
0 250 500 FEET

DRAFTED BY: CD

DATE: 1 APRIL 2015

PROJECT NO.: 152780

PREPARED BY:

CB&I ENVIRONMENTAL & INFRASTRUCTURE, INC.

DRAWING NUMBER	APPROVED BY	CHECKED BY	DRAWN BY
BUILDING9_SITE_PLAN_rev1	--	04/01/15	04/01/15
	--	RC	CD

OFFICE
CANTON, MA

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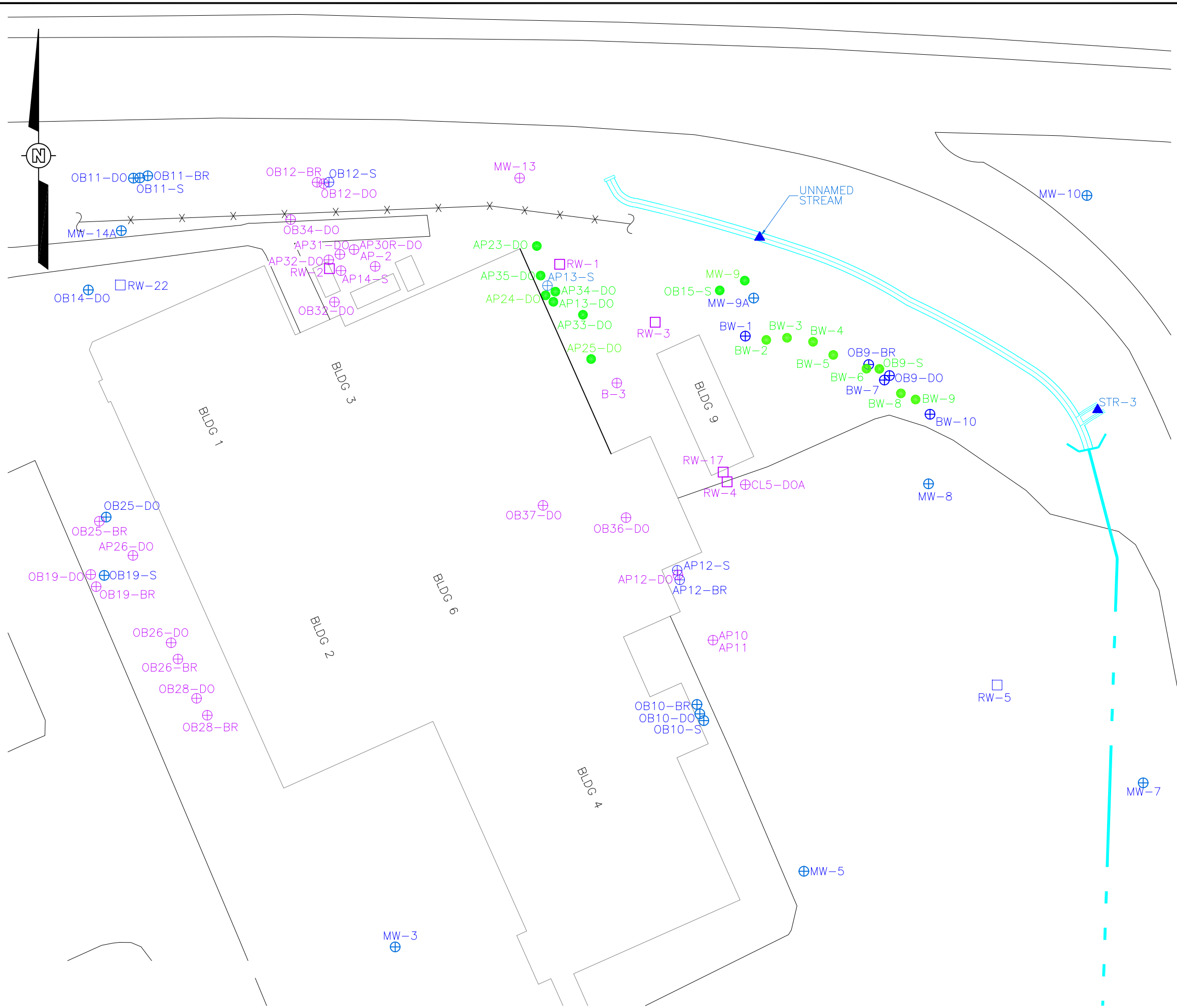
Plotted By: chris.desiata



LEGEND

- APPROXIMATE BUILDING LOCATION
- APPROXIMATE LOCATION OF STREAM IN CULVERT
- APPROXIMATE STREAM LOCATION
- RECOVERY WELL (RW)
- MONITORING WELL (MW)
- BIOREMEDIATION INJECTION WELL SHOWN IN GREEN (PERMAGANATE INJECTION WELLS SHOWN IN PURPLE)
- SURFACE WATER STREAM (STR) SAMPLE LOCATION
- CL4-BR – WELL IDENTIFICATION

CL-9	CLUSTER WELL NUMBER S=SHALLOW DO=DEEP OVERBURDEN BR=BEDROCK
STR-6	STREAM SAMPLE LOCATION NUMBER
STRHA-1	STREAM/SURFACE WATER SAMPLE
HA-1	HAND AUGER WELL LOCATION NUMBER
STRMH-1	STREAM/MANHOLE LOCATION NUMBER
MW-5	MONITORING WELL NUMBER
GZ-1	MONITORING WELL NUMBER
PLMW-1	MONITORING WELL NUMBER
BR-1	BEDROCK WELL NUMBER

BEDROCK WELLS BR-1 THROUGH BR-8 AND CL9-BR HAVE MULTILEVEL GROUNDWATER MONITORING SYSTEMS PRESENT WITHIN THE BEDROCK. ZONE 1 REFERS TO THE DEEPEST SAMPLING ZONE, ZONE 2 REFERS IS THE MIDDLE SAMPLING INTERVAL, AND ZONE 3 CLOSEST TO THE GROUND SURFACE.

THIS MAP HAS BEEN COMPILED FROM SURVEY DATA COLLECTED IN JULY 1994, MARCH 1995, OCTOBER 1995, SEPTEMBER 1996, MARCH 1997, DECEMBER 1997, SEPTEMBER 1998, JANUARY 2000, FEBRUARY 2001, JUNE 2002, SEPTEMBER 2002, JULY 2003, FEBRUARY 2004, OCTOBER 2004; 2005, JULY 2012, MAY 2014 FROM VARIOUS EXISTING PLANS, AND OBSERVATIONS MADE IN THE FIELD BY CB&I ENVIRONMENTAL & INFRASTRUCTURE, INC.

SCALE

0 50 100 FEET

CB&I ENVIRONMENTAL & AND INFRASTRUCTURE, INC.
150 ROYALL STREET
CANTON, MASSACHUSETTS
(617) 589-5111

FIGURE 3
BIOREMEDIATION INJECTION WELL LOCATIONS
VARIAN MEDICAL SYSTEMS, INC.
150 SOHIER ROAD
BEVERLY, MASSACHUSETTS

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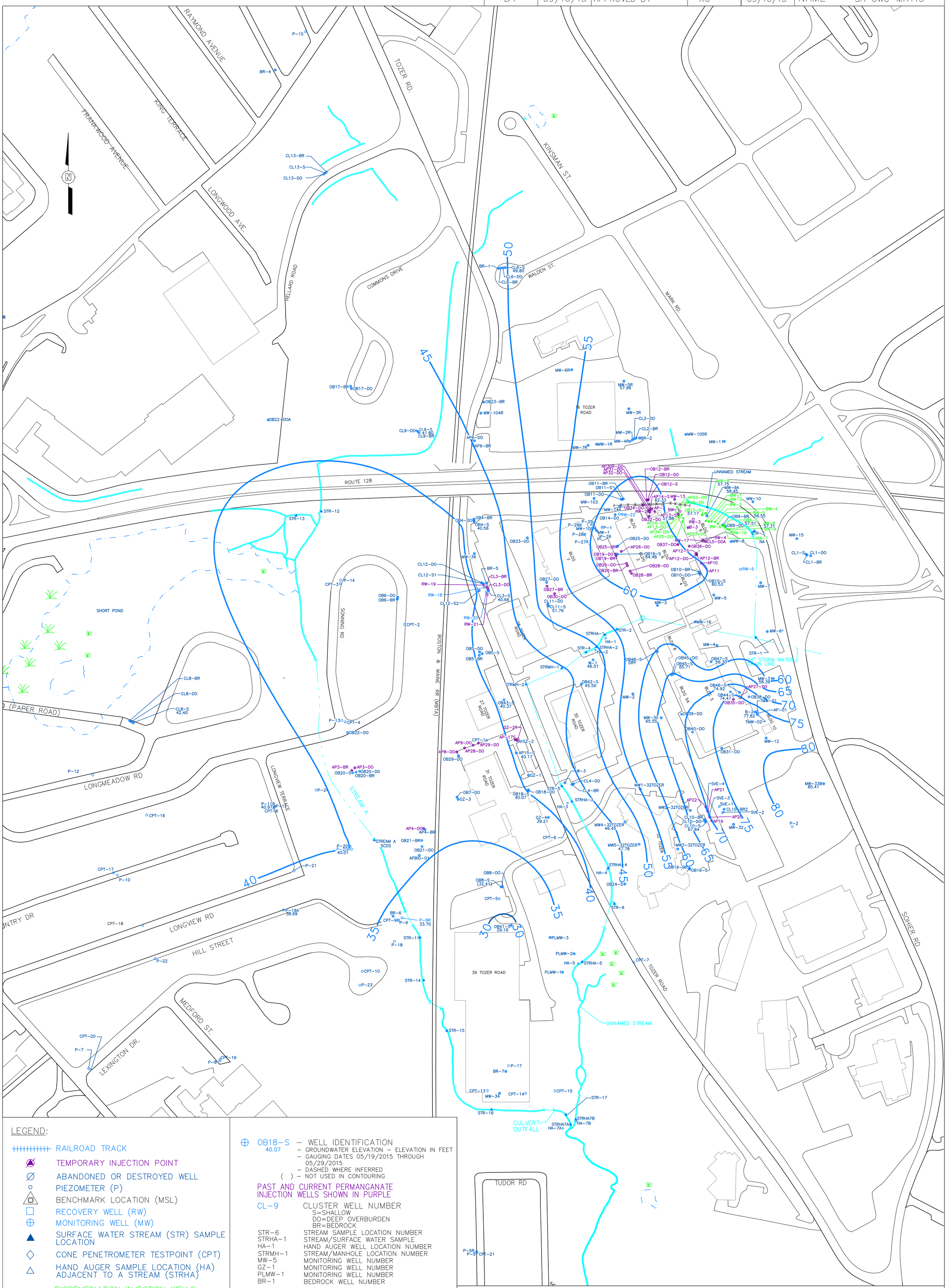

LEGEND:

- RAILROAD TRACK
- TEMPORARY INJECTION POINT
- ABANDONED OR DESTROYED WELL
- PIEZOMETER (P)
- BENCHMARK LOCATION (MSL)
- RECOVERY WELL (RW)
- MONITORING WELL (MW)
- SURFACE WATER STREAM (STR) SAMPLE LOCATION
- CONE PENETROMETER TESTPOINT (CPT)
- HAND AUGER SAMPLE LOCATION (HA) ADJACENT TO A STREAM (STRHA)
- BIOREMEDIATION INJECTION WELLS INJECTION LOCATIONS SHOWN IN GREEN
- SHALLOW BIOREMEDIATION BARRIER WELL (BW)
- STRMH — MANHOLE ACCESS TO THE STREAM LOCATED WITHIN A CULVERT
- APPROXIMATE BUILDING LOCATION
- APPROXIMATE DRAIN MANHOLE LOCATION
- APPROXIMATE LOCATION OF STREAM IN CULVERT
- APPROXIMATE STREAM LOCATION
- WATER AND MARSH AREA

OB18-S — WELL IDENTIFICATION
40.07 — GROUNDWATER ELEVATION - ELEVATION IN FEET
- GAUGING DATES 05/19/2015 THROUGH 05/29/2015
- DASHED WHERE INFERRED
( ) - NOT USED IN CONTOURING

PAST AND CURRENT PERMANGANATE INJECTION WELLS SHOWN IN PURPLE

CL-9	CLUSTER WELL NUMBER S=SHALLOW DO=DEEP OVERBURDEN BR=BEDROCK
STR-6	STREAM SAMPLE LOCATION NUMBER
STRHA-1	STREAM/SURFACE WATER SAMPLE
HA-1	HAND AUGER WELL LOCATION NUMBER
STRMH-1	STREAM/MANHOLE LOCATION NUMBER
MW-5	MONITORING WELL NUMBER
GZ-1	MONITORING WELL NUMBER
PLMW-1	MONITORING WELL NUMBER
BR-1	BEDROCK WELL NUMBER

BEDROCK WELLS BR-1 THROUGH BR-8 AND CL9-BR HAVE MULTILEVEL GROUNDWATER MONITORING SYSTEMS PRESENT WITHIN THE BEDROCK. ZONE 1 REFERS TO THE DEEPEST SAMPLING ZONE, ZONE 2 REFERS TO IS THE MIDDLE SAMPLING INTERVAL, AND ZONE 3 CLOSEST TO THE GROUND SURFACE. THIS MAP HAS BEEN COMPILED FROM SURVEY DATA COLLECTED IN JULY 1994, MARCH 1995, OCTOBER 1995, SEPTEMBER 1996, MARCH 1997, DECEMBER 1997, SEPTEMBER 1998, JANUARY 2000, FEBRUARY 2001, JUNE 2002, SEPTEMBER 2002, JULY 2003, FEBRUARY 2004, OCTOBER 2004, JULY 2012, MAY 2014, FROM VARIOUS EXISTING PLANS, AND OBSERVATIONS MADE IN THE FIELD BY CB&I ENVIRONMENTAL & INFRASTRUCTURE, INC.

SCALE IN FEET
0 300 600

FIGURE 4
GROUNDWATER ELEVATION CONTOURS IN SHALLOW OVERBURDEN AQUIFER

PREPARED FOR: VARIAN MEDICAL SYSTEMS, INC. PALO ALTO, CALIFORNIA

SCALE: 1" = 150'	DRAFTED BY: CD
DATE: 10 SEPTEMBER 2015	PROJECT NO.: 152728

PREPARED BY: CB&I ENVIRONMENTAL & INFRASTRUCTURE, INC.

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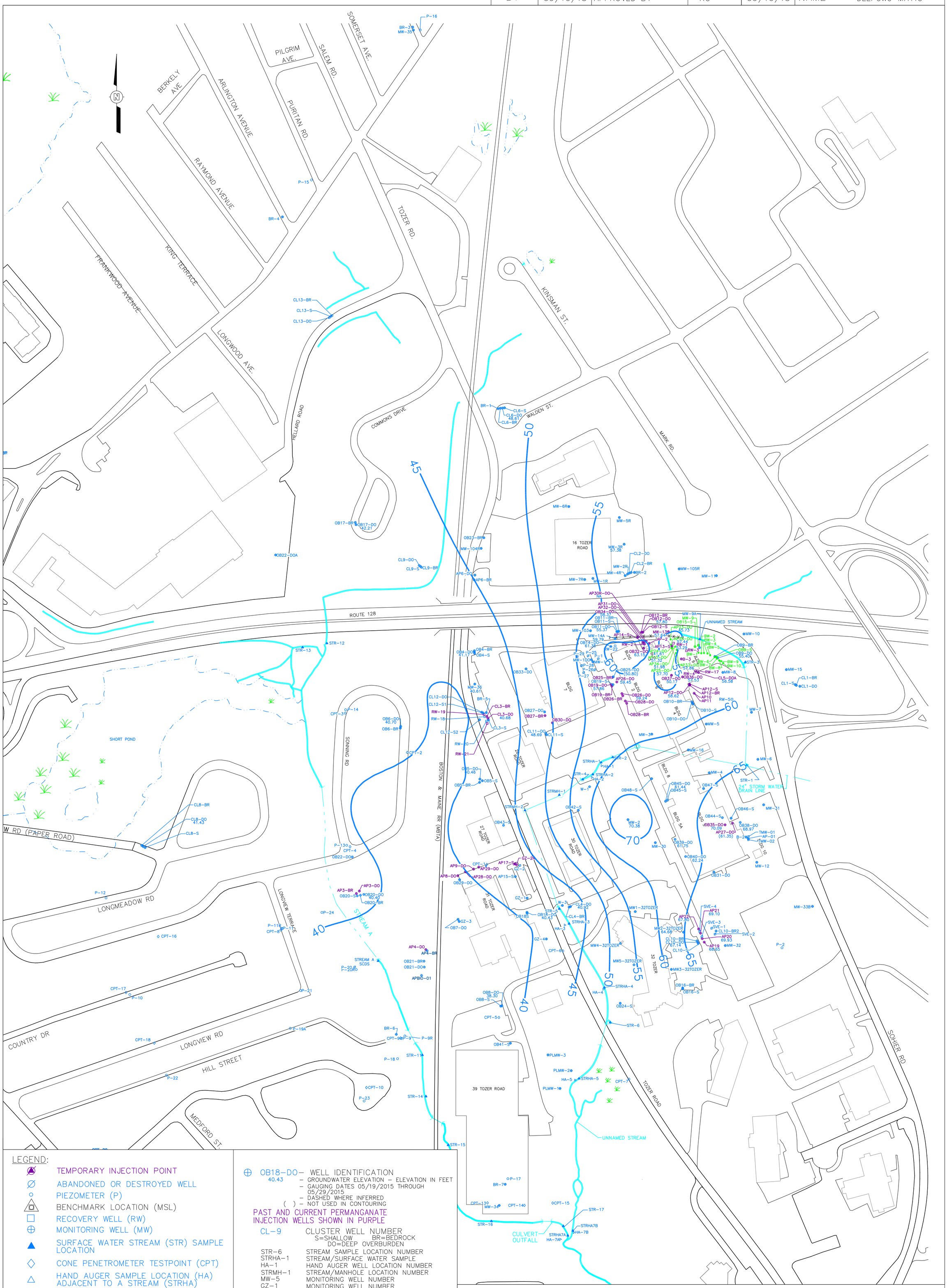

LEGEND:

- TEMPORARY INJECTION POINT
- ABANDONED OR DESTROYED WELL
- PIEZOMETER (P)
- BENCHMARK LOCATION (MSL)
- RECOVERY WELL (RW)
- MONITORING WELL (MW)
- SURFACE WATER STREAM (STR) SAMPLE LOCATION
- CONE PENETROMETER TESTPOINT (CPT)
- HAND AUGER SAMPLE LOCATION (HA) ADJACENT TO A STREAM (STRHA)
- BIOREMEDIATION INJECTION WELLS INJECTION LOCATIONS SHOWN IN GREEN
- SHALLOW BIOREMEDIATION BARRIER WELL (BW)
- STRMH — MANHOLE ACCESS TO THE STREAM LOCATED WITHIN A CULVERT
- APPROXIMATE BUILDING LOCATION
- APPROXIMATE DRAIN MANHOLE LOCATION
- APPROXIMATE LOCATION OF STREAM IN CULVERT
- APPROXIMATE STREAM LOCATION
- WATER AND MARSH AREA

⊕ OB18-DO — WELL IDENTIFICATION
40.43 — GROUNDWATER ELEVATION — ELEVATION IN FEET
— GAUGING DATES 05/19/2015 THROUGH 05/29/2015
— DASHED WHERE INFERRED
( ) — NOT USED IN CONTOURING

PAST AND CURRENT PERMANGANATE INJECTION WELLS SHOWN IN PURPLE

CL-9 CLUSTER WELL NUMBER
S=SHALLOW BR=BEDROCK
DO=DEEP OVERBURDEN

STR-6	STREAM SAMPLE LOCATION NUMBER
STRHA-1	STREAM/SURFACE WATER SAMPLE
HA-1	HAND AUGER WELL LOCATION NUMBER
STRMH-1	STREAM/MANHOLE LOCATION NUMBER
MW-5	MONITORING WELL NUMBER
GZ-1	MONITORING WELL NUMBER
PLMW-1	MONITORING WELL NUMBER
BR-1	BEDROCK WELL NUMBER

BEDROCK WELLS BR-1 THROUGH BR-8 AND CL9-BR HAVE MULTILEVEL GROUNDWATER MONITORING SYSTEMS PRESENT WITHIN THE BEDROCK. ZONE 1 REFERS TO THE DEEPEST SAMPLING ZONE, ZONE 2 REFERS IS THE MIDDLE SAMPLING INTERVAL, AND ZONE 3 CLOSEST TO THE GROUND SURFACE. THIS MAP HAS BEEN COMPILED FROM SURVEY DATA COLLECTED IN JULY 1994, MARCH 1995, OCTOBER 1995, SEPTEMBER 1996, MARCH 1997, DECEMBER 1997, SEPTEMBER 1998, JANUARY 2000, FEBRUARY 2001, JUNE 2002, SEPTEMBER 2002, JULY 2003, FEBRUARY 2004, OCTOBER 2004, JULY 2012, MAY 2014, FROM VARIOUS EXISTING PLANS, AND OBSERVATIONS MADE IN THE FIELD BY CB&I ENVIRONMENTAL & INFRASTRUCTURE, INC.

SCALE IN FEET

0 300 600

FIGURE 5
GROUNDWATER ELEVATION CONTOURS IN DEEP OVERBURDEN AQUIFER

PREPARED FOR: VARIAN MEDICAL SYSTEMS, INC.
PALO ALTO, CALIFORNIA

SCALE: 1" = 150'	DRAFTED BY: CD
DATE: 10 SEPTEMBER 2015	PROJECT NO.: 152728

PREPARED BY: CB&I ENVIRONMENTAL & INFRASTRUCTURE, INC.

XREF Files: SITE_XREF28 IMAGE Files:
File: T:\MISC\Varian\Beverly, Ma\Phase 4\Rev2\BEDROCK\BEDROCK-GWC-MAY15.dwg Layout: BEDROCK-GWC-MAY15 User: chris.desiata Sep 14, 2015 - 3:37pm

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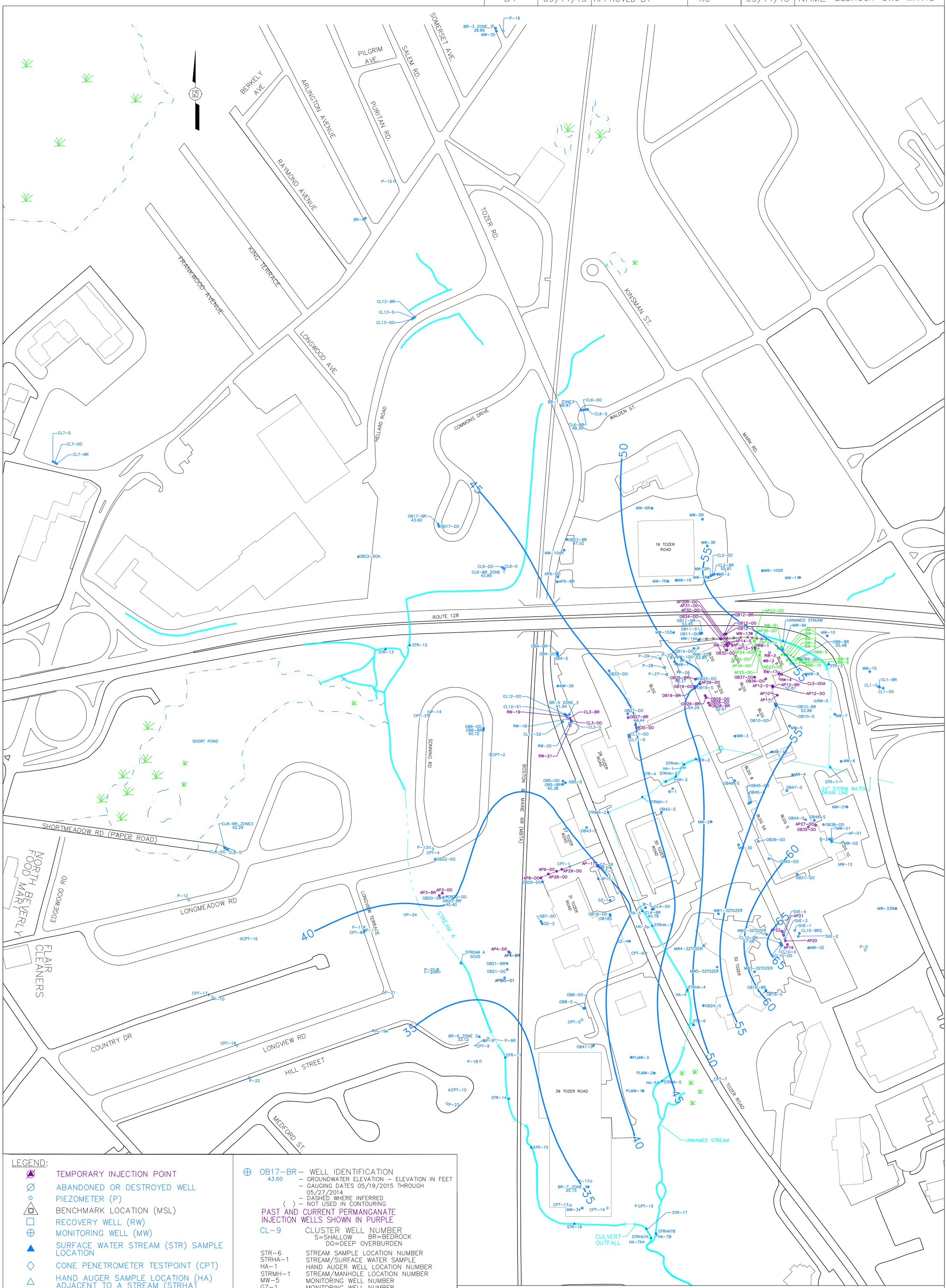
	09/14/15	APPROVED BY	RC	09/14/15	



LEGEND:

- TEMPORARY INJECTION POINT
- ABANDONED OR DESTROYED WELL
- PIEZOMETER (P)
- BENCHMARK LOCATION (MSL)
- RECOVERY WELL (RW)
- MONITORING WELL (MW)
- SURFACE WATER STREAM (STR) SAMPLE LOCATION
- CONE PENETROMETER TESTPOINT (CPT)
- HAND AUGER SAMPLE LOCATION (HA) ADJACENT TO A STREAM (STRHA)
- BIOREMEDIATION INJECTION WELLS INJECTION LOCATIONS SHOWN IN GREEN
- SHALLOW BIOREMEDIATION BARRIER WELL (BW)
- STRMH — MANHOLE ACCESS TO THE STREAM LOCATED WITHIN A CULVERT
- APPROXIMATE BUILDING LOCATION
- APPROXIMATE DRAIN MANHOLE LOCATION
- APPROXIMATE LOCATION OF STREAM IN CULVERT
- APPROXIMATE STREAM LOCATION
- WATER AND MARSH AREA

OB17-BR — WELL IDENTIFICATION
43.60 — GROUNDWATER ELEVATION — ELEVATION IN FEET
— GAUGING DATES 05/19/2015 THROUGH 05/27/2014
— DASHED WHERE INFERRED
( ) — NOT USED IN CONTOURING

PAST AND CURRENT PERMANGANATE INJECTION WELLS SHOWN IN PURPLE

CL-9 CLUSTER WELL NUMBER
S=SHALLOW BR=BEDROCK
DO=DEEP OVERBURDEN

STR-6	STREAM SAMPLE LOCATION NUMBER
STRHA-1	STREAM/SURFACE WATER SAMPLE
HA-1	HAND AUGER WELL LOCATION NUMBER
STRMH-1	STREAM/MANHOLE LOCATION NUMBER
MW-5	MONITORING WELL NUMBER
GZ-1	MONITORING WELL NUMBER
PLMW-1	MONITORING WELL NUMBER
BR-1	BEDROCK WELL NUMBER

BEDROCK WELLS BR-1 THROUGH BR-8 AND CL9-BR HAVE MULTILEVEL GROUNDWATER MONITORING SYSTEMS PRESENT WITHIN THE BEDROCK. ZONE 1 REFERS TO THE DEEPEST SAMPLING ZONE, ZONE 2 REFERS IS TO THE MIDDLE SAMPLING INTERVAL, AND ZONE 3 CLOSEST TO THE GROUND SURFACE. THIS MAP HAS BEEN COMPILED FROM SURVEY DATA COLLECTED IN JULY 1994, MARCH 1995, OCTOBER 1995, SEPTEMBER 1996, MARCH 1997, DECEMBER 1997, SEPTEMBER 1998, JANUARY 2000, FEBRUARY 2001, JUNE 2002, SEPTEMBER 2002, JULY 2003, FEBRUARY 2004, OCTOBER 2004, JULY 2012, MAY 2014, FROM VARIOUS EXISTING PLANS, AND OBSERVATIONS MADE IN THE FIELD BY CB&I ENVIRONMENTAL & INFRASTRUCTURE, INC.

SCALE IN FEET
0 340 680

FIGURE 6
GROUNDWATER ELEVATION CONTOURS IN BEDROCK AQUIFER

PREPARED FOR: VARIAN MEDICAL SYSTEMS, INC. PALO ALTO, CALIFORNIA	
SCALE: 1" = 170'	DRAFTED BY: CD
DATE: 14 SEPTEMBER 2015	PROJECT NO.: 152728
PREPARED BY: CB&I ENVIRONMENTAL & INFRASTRUCTURE, INC.	

XREF Files: SITE_XREF28 IMAGE Files:
File: T:\MISC\Varian\Beverly, Ma\Phase 4\Rev2\SHALLOW\SH_VOC-MAY15.dwg Layout: Layout1 User: chris.desiata Oct 07, 2015 - 2:25pm

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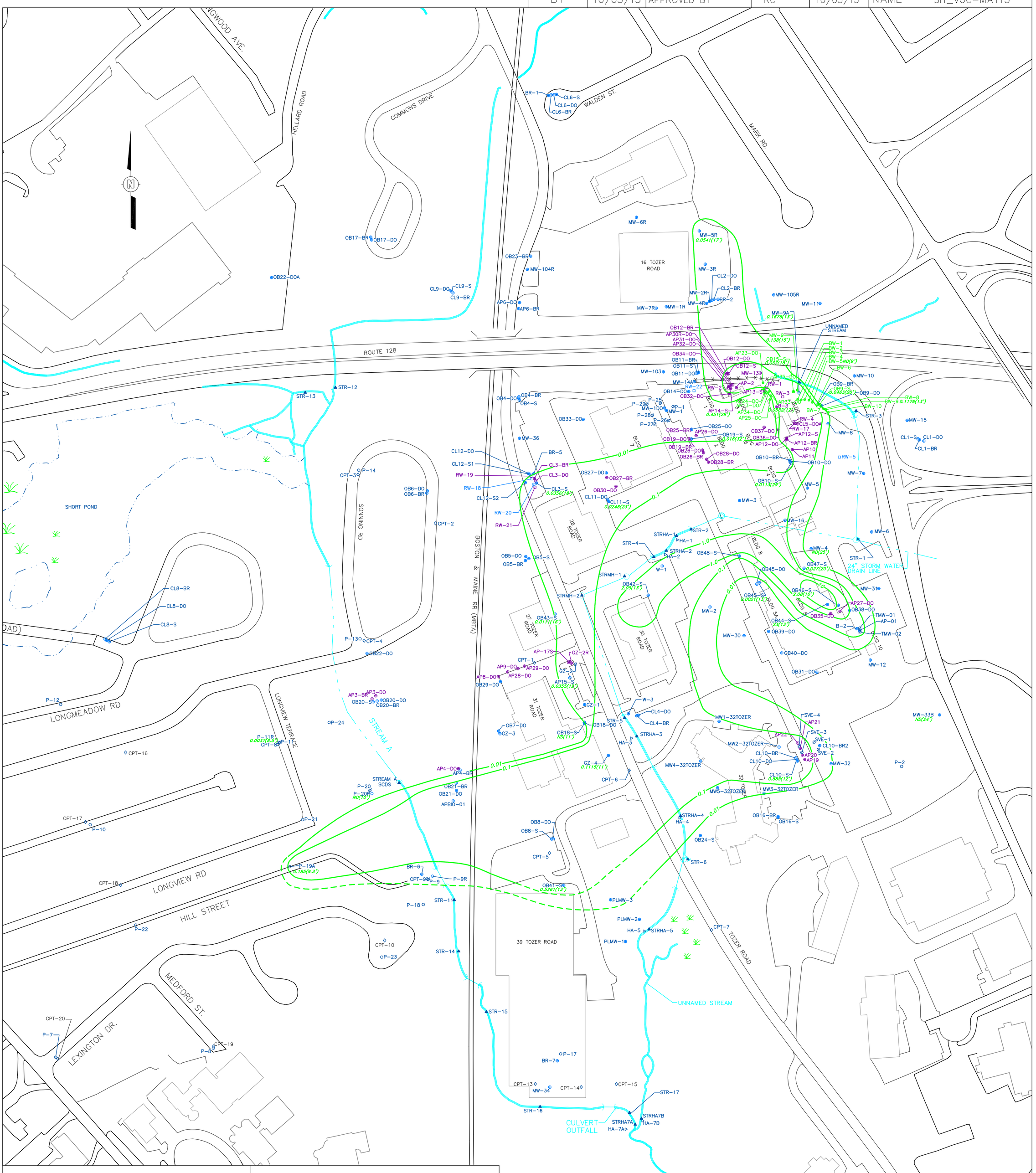
	10/03/15	APPROVED BY	RC	10/03/15	



LEGEND:

- TEMPORARY INJECTION POINT
- ABANDONED OR DESTROYED WELL
- PIEZOMETER (P)
- BENCHMARK LOCATION (MSL)
- RECOVERY WELL (RW)
- MONITORING WELL (MW)
- SURFACE WATER STREAM (STR) SAMPLE LOCATION
- CONE PENETROMETER TESTPOINT (CPT)
- HAND AUGER SAMPLE LOCATION (HA) ADJACENT TO A STREAM (STRHA)
- BIOREMEDIATION INJECTION WELLS INJECTION LOCATIONS SHOWN IN GREEN
- SHALLOW BIOREMEDIATION BARRIER WELL (BW)
- STRMH — MANHOLE ACCESS TO THE STREAM LOCATED WITHIN A CULVERT
- APPROXIMATE BUILDING LOCATION
- APPROXIMATE DRAIN MANHOLE LOCATION
- APPROXIMATE LOCATION OF STREAM IN CULVERT
- APPROXIMATE STREAM LOCATION
- WATER AND MARSH AREA
- CL-9 — CLUSTER WELL NUMBER
  S=SHALLOW
  DO=DEEP OVERBURDEN
  BR=BEDROCK

STR-6	STREAM SAMPLE LOCATION NUMBER
STRHA-1	STREAM/SURFACE WATER SAMPLE
HA-1	HAND AUGER WELL LOCATION NUMBER
STRMH-1	STREAM/MANHOLE LOCATION NUMBER
MW-5	MONITORING WELL NUMBER
GZ-1	MONITORING WELL NUMBER
PLMW-1	MONITORING WELL NUMBER
BR-1	BEDROCK WELL NUMBER

- ND — NON DETECT
- 1.0 — TOTAL VOLATILE ORGANIC COMPOUND (VOC) ISOCONCENTRATION CONTOUR IN MILLIGRAMS PER LITER (mg/L) THIS IS GRAPHICAL REPRESENTATION OF TOTAL VOC CONCENTRATIONS
- DASHING INDICATES AN INFERRED CONTOUR
- CL10-S — WELL IDENTIFICATION
  0.885(12') — TOTAL VOC CONCENTRATIONS (mg/L) (SAMPLE DEPTH BELOW GRADE IN FT.)

SAMPLE DATES 05/19/15 THROUGH 05/29/15

PAST AND CURRENT PERMANGANATE INJECTION WELLS SHOWN IN PURPLE

NOTE:
1) CONTOURS WERE DEVELOPED USING TOTAL VOC CONCENTRATION DETECTED AT EACH WELL. VOCs TOTALED INCLUDED THE FOLLOWING SITE-RELATED CHEMICALS: TRICHLOROETHENE, TETRACHLOROETHENE, 1,1,1,-TRICHLOROETHANE, CIS-1,2-DICHLOROETHENE, TRANS-1,2-DICHLOROETHENE, 1,1-DICHLOROETHANE, 1,1-DICHLOROETHENE, 1,2-DICHLOROETHANE AND VINYL CHLORIDE.
2) DATA USED TO ESTIMATE VOC CONCENTRATIONS IN GROUNDWATER ARE FROM SAMPLE DATES NOTED ABOVE, WITH THE FOLLOWING EXCEPTIONS: - DATA FOR "CPT" POINTS WAS COLLECTED DURING SURVEYS CONDUCTED IN AUGUST-SEPTEMBER 1996 AND APRIL-MAY 1998. AT WELLS NOT SAMPLED IN APRIL 2011, DATA FROM THE MOST RECENT MONITORING WAS USED. RESULTS OF SURFACE WATER SAMPLES WERE NOT CONSIDERED IN ESTIMATING VOC DISTRIBUTION.

BEDROCK WELLS BR-1 THROUGH BR-8 AND CL9-BR HAVE MULTILEVEL GROUNDWATER MONITORING SYSTEMS PRESENT WITHIN THE BEDROCK. ZONE 1 REFERS TO THE DEEPEST SAMPLING ZONE, ZONE 2 REFERS IS THE MIDDLE SAMPLING INTERVAL, AND ZONE 3 CLOSEST TO THE GROUND SURFACE.
THIS MAP HAS BEEN COMPILED FROM SURVEY DATA COLLECTED IN JULY 1994, MARCH 1995, OCTOBER 1995, SEPTEMBER 1996, MARCH 1997, DECEMBER 1997, SEPTEMBER 1998, JANUARY 2000, FEBRUARY 2001, JUNE 2002, SEPTEMBER 2002, JULY 2003, FEBRUARY 2004, OCTOBER 2004, JULY 2012, MAY 2014, FROM VARIOUS EXISTING PLANS, AND OBSERVATIONS MADE IN THE FIELD BY CB&I ENVIRONMENTAL & INFRASTRUCTURE, INC.

SCALE IN FEET

0 300 600

FIGURE 7
ESTIMATED DISTRIBUTION OF TOTAL VOC CONCENTRATIONS IN SHALLOW OVERBURDEN AQUIFER

PREPARED FOR: VARIAN MEDICAL SYSTEMS, INC. PALO ALTO, CALIFORNIA	
SCALE: 1" = 150'	DRAFTED BY: CD
DATE: 03 OCTOBER 2015	PROJECT NO.: 152780
PREPARED BY: CB&I ENVIRONMENTAL & INFRASTRUCTURE, INC.	

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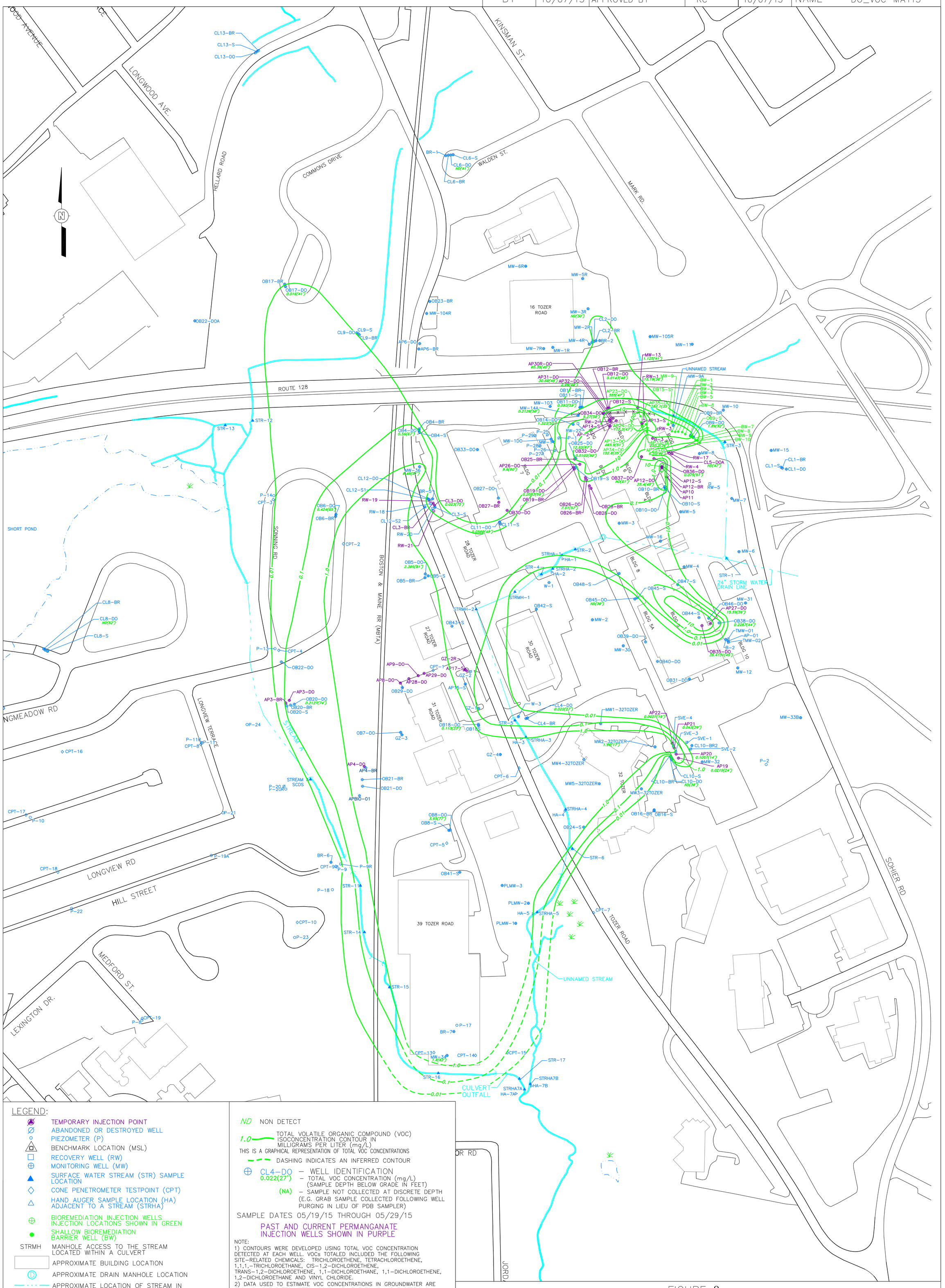
	10/07/15	APPROVED BY	RC	10/07/15	


LONGWOOD AVE.
HELLARD ROAD
COMMONS DRIVE
KINSMAN ST.
WALDEN ST.
MARK RD.
ROUTE 128
SHORT POND
SONNING RD
BOSTON & MAINE RR (MBTA)
LONGMEADOW RD
LONGVIEW TERRACE
LONGVIEW RD
HILL STREET
MEDFORD ST.
LEXINGTON DR.
SOHIER RD
TOZER ROAD
16 TOZER ROAD
28 TOZER ROAD
27 TOZER ROAD
30 TOZER ROAD
31 TOZER ROAD
32 TOZER
39 TOZER ROAD
BLDG 8
BLDG 5A
BLDG 10
24" STORM WATER DRAIN LINE
UNNAMED STREAM
STREAM A
CULVERT OUTFALL
CL9-S
CL9-BR
CL9-DO
CL13-BR
CL13-S
CL13-DO
BR-1
CL6-S
CL6-DO ND(41')
CL6-BR
OB17-BR
OB17-DO 0.016(41')
OB22-DOA
OB23-BR
MW-104R
AP6-DO
AP6-BR
MW-6R
MW-5R
MW-3R ND(30')
MW-2R
MW-4R
MW-7R
MW-1R
CL2-DO
CL2-BR
BR-2
MW-105R
MW-11
MW-13 1.125(41')
AP30R-DO 80.35(40')
AP31-DO 30.68(48')
AP32-DO 2.28(48')
OB12-BR
OB12-DO 0.0143(48')
OB11-BR
OB11-S
OB11-DO 0.093(59')
OB12-S
OB15-S
AP23-DO 555(47')
AP35-DO 182.1(35')
AP13-S
AP24-DO 172.2(47')
AP25-DO 350.2(36')
AP34-DO 152.6(52')
MW-103
MW-14A 0.2128(58')
OB14-DO 1.323(52')
OB34-DO 9.27(58')
RW-2
AP14-S
RW-22
AP-22
RW-3
BLDG 14
BLDG 7
BLDG 6
BLDG 2
P-29
P-28
P-27
P-26
P-25
MW-10D
MW-18
OB25-DO 12.52(67')
AP13-DO 463.9(51')
OB32-DO 0.0102(60')
OB33-DO
OB25-BR
AP26-DO 9.6(60')
OB4-BR
OB4-DO 0.56(67')
OB4-S
MW-15
CL1-S
CL1-BR
CL1-DO
UNNAMED STREAM
MW-9A
RW-1
RW-2
RW-3
RW-4
RW-5
BW-1
BW-2
BW-3
BW-4
BW-5
BW-6
BW-7
BW-8
BW-9
BW-10
MW-9
RW-1 13.19(38')
OB9-BR
OB9-S
OB9-DO 1.89(92')
MW-10
STR-3
MW-8
RW-17
CL5-DOA ND(47')
OB36-DO 0.029(67')
AP12-S
AP12-BR
AP10
AP11
OB10-S
MW-5
OB10-BR
OB10-DO
AP12-DO 25.4(48')
OB37-DO ND(61')
OB19-S
OB19-DO 0.2093(56')
OB19-BR
OB26-DO 7.51(57')
OB26-BR
OB28-BR
OB28-DO
MW-7
MW-3
MW-16
MW-6
MW-4
STR-1
OB47-S
OB46-DO
AP27-DO 15.59(56')
OB38-DO 0.2287(44')
TMW-01
AP-01
TMW-02
B-2
OB35-DO 39.415(46')
MW-12
OB45-S
OB45-DO ND(39')
OB44-S
OB39-DO
MW-30
OB40-DO
OB31-DO
MW-31
MW-2
OB48-S
STR-2
STRHA-1
HA-1
STR-4
STRHA-2
HA-2
W-1
STRMH-1
STRMH-2
OB42-S
OB43-S
GZ-2R
GZ-2
AP17-S
AP9-DO
AP29-DO
AP8-DO
AP28-DO
OB29-DO
AP16-S
GZ-1R
W-3
CL4-DO 0.022(27')
CL4-BR
STR-5
OB18-DO 0.113(23')
OB18-S
MW1-32TOZER
AP22 0.0027(19')
SVE-4
AP21 0.043(29')
SVE-3
SVE-1
CL10-BR2
SVE-2
AP20 0.1007(14')
MW-32
AP19 0.0219(24')
CL10-S
CL10-BR
CL10-DO ND(36')
MW2-32TOZER 1.96(17')
MW3-32TOZER
MW4-32TOZER
MW5-32TOZER
MW-33B
P-2
HA-3
STRHA-3
GZ-4
CPT-6
OB7-DO
GZ-3
OB16-BR
OB16-S
HA-4
STRHA-4
OB24-S
STR-6
OB8-DO 3.95(77')
OB8-S
CPT-5
OB41-S
PLMW-3
PLMW-2
HA-5
STRHA-5
PLMW-1
CPT-7
STR-17
STRHA7B
HA-7B
STRHA7A
HA-7A
CPT-15
CPT-13
MW-38 1.8(62')
CPT-14
STR-16
STR-15
BR-7
P-17
STR-14
P-18
STR-11
BR-6
CPT-9
P-9
P-9R
CPT-10
P-23
CPT-18
P-19A
P-22
CPT-17
P-10
OP-21
CPT-16
P-11R
CPT-8
P-11
OP-24
P-20
P-20RO
STREAM SCDS
AP4-DO
AP4-BR
OB21-BR
OB21-DO
APBIO-01
AP3-BR
AP3-DO
OB20-DO 0.2127(74')
OB20-BR
OB20-S
OB22-DO
P-13
CPT-4
CPT-2
P-14
CPT-3
OB6-DO 0.424(65')
OB6-BR
CL12-DO
CL12-S1
CL12-S2
CL3-BR
RW-18
RW-19
RW-20
RW-21
BR-5
CL3-DO 0.023(73')
CL3-S
CL11-DO 0.0568(49')
CL11-S
OB27-DO
OB27-BR
OB30-DO
OB5-DO 2.395(81')
OB5-BR
OB5-S
STR-12
STR-13
CL8-BR
CL8-DO ND(52')
CL8-S
MW-33
MW-35
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MW-143
MW-144
MW-145

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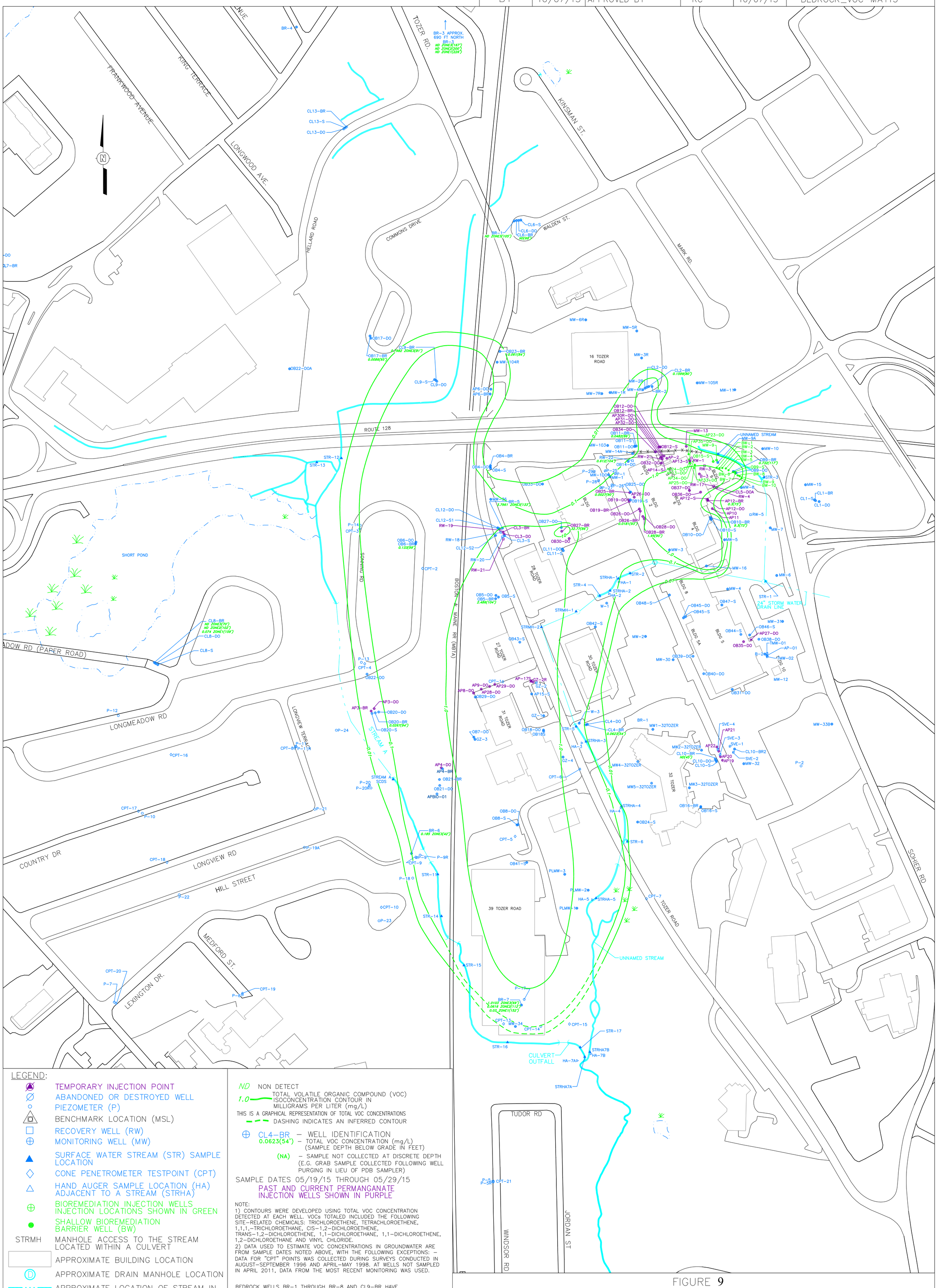

LEGEND:

- TEMPORARY INJECTION POINT
- ABANDONED OR DESTROYED WELL
- PIEZOMETER (P)
- BENCHMARK LOCATION (MSL)
- RECOVERY WELL (RW)
- MONITORING WELL (MW)
- SURFACE WATER STREAM (STR) SAMPLE LOCATION
- CONE PENETROMETER TESTPOINT (CPT)
- HAND AUGER SAMPLE LOCATION (HA) ADJACENT TO A STREAM (STRHA)
- BIOREMEDIATION INJECTION WELLS INJECTION LOCATIONS SHOWN IN GREEN
- SHALLOW BIOREMEDIATION BARRIER WELL (BW)
- STRMH — MANHOLE ACCESS TO THE STREAM LOCATED WITHIN A CULVERT
- APPROXIMATE BUILDING LOCATION
- APPROXIMATE DRAIN MANHOLE LOCATION
- APPROXIMATE LOCATION OF STREAM IN CULVERT
- APPROXIMATE STREAM LOCATION
- WATER AND MARSH AREA
- CL-9 — CLUSTER WELL NUMBER (S=SHALLOW, DO=DEEP OVERBURDEN, BR=BEDROCK)

STR-6	STREAM SAMPLE LOCATION NUMBER
STRHA-1	STREAM/SURFACE WATER SAMPLE
HA-1	HAND AUGER WELL LOCATION NUMBER
STRMH-1	STREAM/MANHOLE LOCATION NUMBER
MW-5	MONITORING WELL NUMBER
GZ-1	MONITORING WELL NUMBER
PLMW-1	MONITORING WELL NUMBER
BR-1	BEDROCK WELL NUMBER

ND NON DETECT

1.0 TOTAL VOLATILE ORGANIC COMPOUND (VOC) ISOCONCENTRATION CONTOUR IN MILLIGRAMS PER LITER (mg/L)

THIS IS A GRAPHICAL REPRESENTATION OF TOTAL VOC CONCENTRATIONS

DASHING INDICATES AN INFERRED CONTOUR

CL4-BR — WELL IDENTIFICATION
0.0623(54') — TOTAL VOC CONCENTRATION (mg/L) (SAMPLE DEPTH BELOW GRADE IN FEET)
(NA) — SAMPLE NOT COLLECTED AT DISCRETE DEPTH (E.G. GRAB SAMPLE COLLECTED FOLLOWING WELL PURGING IN LIEU OF PDB SAMPLER)

SAMPLE DATES 05/19/15 THROUGH 05/29/15

PAST AND CURRENT PERMANGANATE INJECTION WELLS SHOWN IN PURPLE

NOTE:
1) CONTOURS WERE DEVELOPED USING TOTAL VOC CONCENTRATION DETECTED AT EACH WELL. VOCs TOTALED INCLUDED THE FOLLOWING SITE-RELATED CHEMICALS: TRICHLOROETHENE, TETRACHLOROETHENE, 1,1,1,-TRICHLOROETHANE, CIS-1,2-DICHLOROETHENE, TRANS-1,2-DICHLOROETHENE, 1,1-DICHLOROETHANE, 1,1-DICHLOROETHENE, 1,2-DICHLOROETHANE AND VINYL CHLORIDE.
2) DATA USED TO ESTIMATE VOC CONCENTRATIONS IN GROUNDWATER ARE FROM SAMPLE DATES NOTED ABOVE, WITH THE FOLLOWING EXCEPTIONS: - DATA FOR "CPT" POINTS WAS COLLECTED DURING SURVEYS CONDUCTED IN AUGUST-SEPTEMBER 1996 AND APRIL-MAY 1998. AT WELLS NOT SAMPLED IN APRIL 2011, DATA FROM THE MOST RECENT MONITORING WAS USED.

BEDROCK WELLS BR-1 THROUGH BR-8 AND CL9-BR HAVE MULTILEVEL GROUNDWATER MONITORING SYSTEMS PRESENT WITHIN THE BEDROCK. ZONE 1 REFERS TO THE DEEPEST SAMPLING ZONE, ZONE 2 REFERS IS THE MIDDLE SAMPLING INTERVAL, AND ZONE 3 CLOSEST TO THE GROUND SURFACE.

THIS MAP HAS BEEN COMPILED FROM SURVEY DATA COLLECTED IN JULY 1994, MARCH 1995, OCTOBER 1995, SEPTEMBER 1996, MARCH 1997, DECEMBER 1997, SEPTEMBER 1998, JANUARY 2000, FEBRUARY 2001, JULY 2002, SEPTEMBER 2002, JULY 2003, FEBRUARY 2004, OCTOBER 2004, JULY 2012, FROM VARIOUS EXISTING PLANS, AND OBSERVATIONS MADE IN THE FIELD BY CB&I ENVIRONMENTAL & INFRASTRUCTURE, INC.

SCALE IN FEET

0 300 600

FIGURE 9

ESTIMATED DISTRIBUTION OF TOTAL VOC CONCENTRATIONS IN BEDROCK AQUIFER APRIL

PREPARED FOR: VARIAN MEDICAL SYSTEMS. INC. PALO ALTO, CALIFORNIA	
SCALE: 1" = 150'	DRAFTED BY: CD
DATE: 7 OCTOBER 2015	PROJECT NO.: 155349
PREPARED BY: CB&I ENVIRONMENTAL & INFRASTRUCTURE, INC.	

OFFICE	DRAWN	CHECKED BY	APPROVED BY	DRAWING NUMBER
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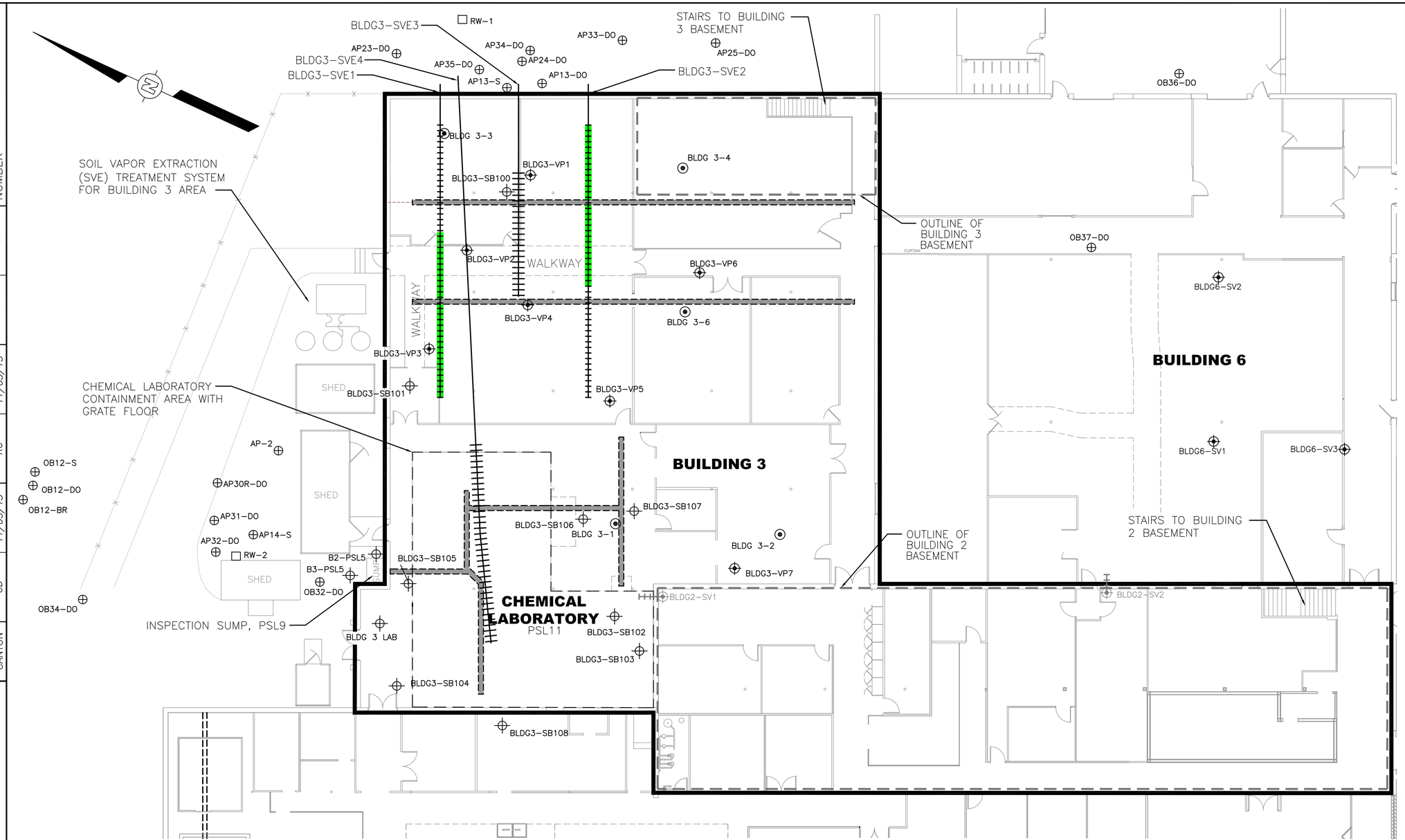
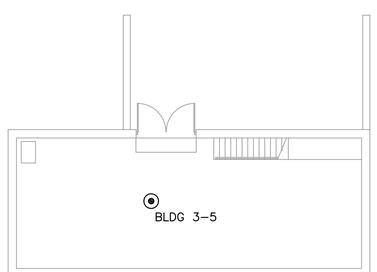
	11/03/15	11/03/15	-	



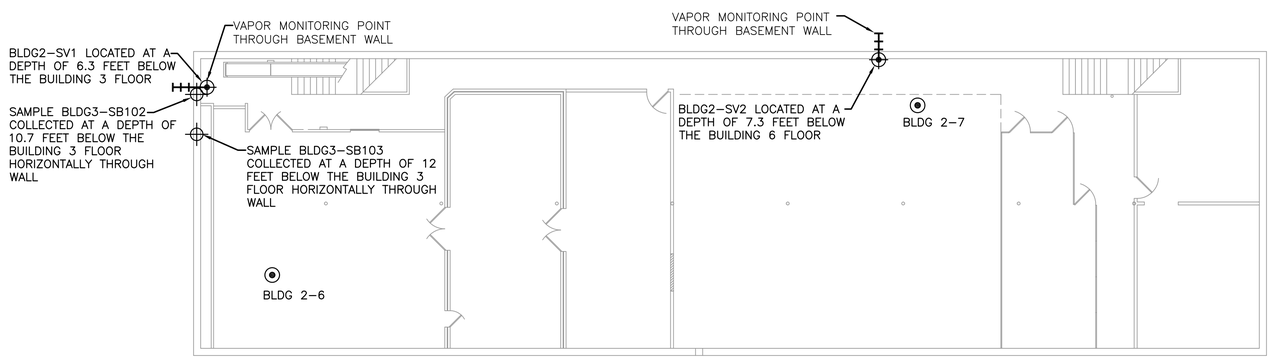
LEGEND

- BUILDING 3 TREATMENT AREA
- HORIZONTAL SOIL VAPOR EXTRACTION (SVE) WELL LOCATION
- PORTION (SHADED) OF HORIZONTAL SOIL VAPOR EXTRACTION (SVE) WELL SEAL WITH PACKER INSTALLED
- SUB-SLAB SOIL VAPOR MONITORING POINT
- SOIL BORING LOCATION
- INDOOR AIR SAMPLE LOCATION
- MONITORING WELL
- RECOVERY WELL
- BUILDING COLUMNS
- UTILITY TRENCH
- FORMER UTILITY TRENCH-FILLED WITH CONCRETE
- BUILDING WALLS
- FENCE LINE
- PSL — POTENTIAL SOURCE LOCATION AS DESCRIBED IN PHASE II CSA FOR RTN 3-0485

INDOOR AIR SAMPLE ID	ROOM
BLDG 2-6	ENVIRONMENTAL TESTING ROOM BUILDING 2 BASEMENT
BLDG 2-7	STORAGE ROOM BUILDING 2 BASEMENT
BLDG 3-1	MAIN CHEMICAL LABORATORY
BLDG 3-2	CHEMISTRY LABORATORY BENCH TESTING ROOM
BLDG 3-3	MID STOCK ROOM
BLDG 3-4	BUILDING 3 MACHINE SHOP
BLDG 3-5	BOILER ROOM BUILDING 3 BASEMENT
BLDG 3-6	BUILDING 3 STORAGE ROOM



BUILDING 3 BASEMENT



BUILDING 2 BASEMENT

SCALE
0 10 20 30 FEET

REFERENCE:
PLAN DERIVED FROM CPI COMMUNICATIONS & POWER INDUSTRIES, BEVERLY MICROWAVE DIVISION, AND CB&I ENVIRONMENTAL FIELD RECONNAISSANCE.

CB&I ENVIRONMENTAL & INFRASTRUCTURE, INC.
150 ROYALL STREET
CANTON, MASSACHUSETTS
(617) 589-5111

FIGURE 10
BUILDING 3 REMEDIAL TREATMENT AREA SAMPLE LOCATIONS

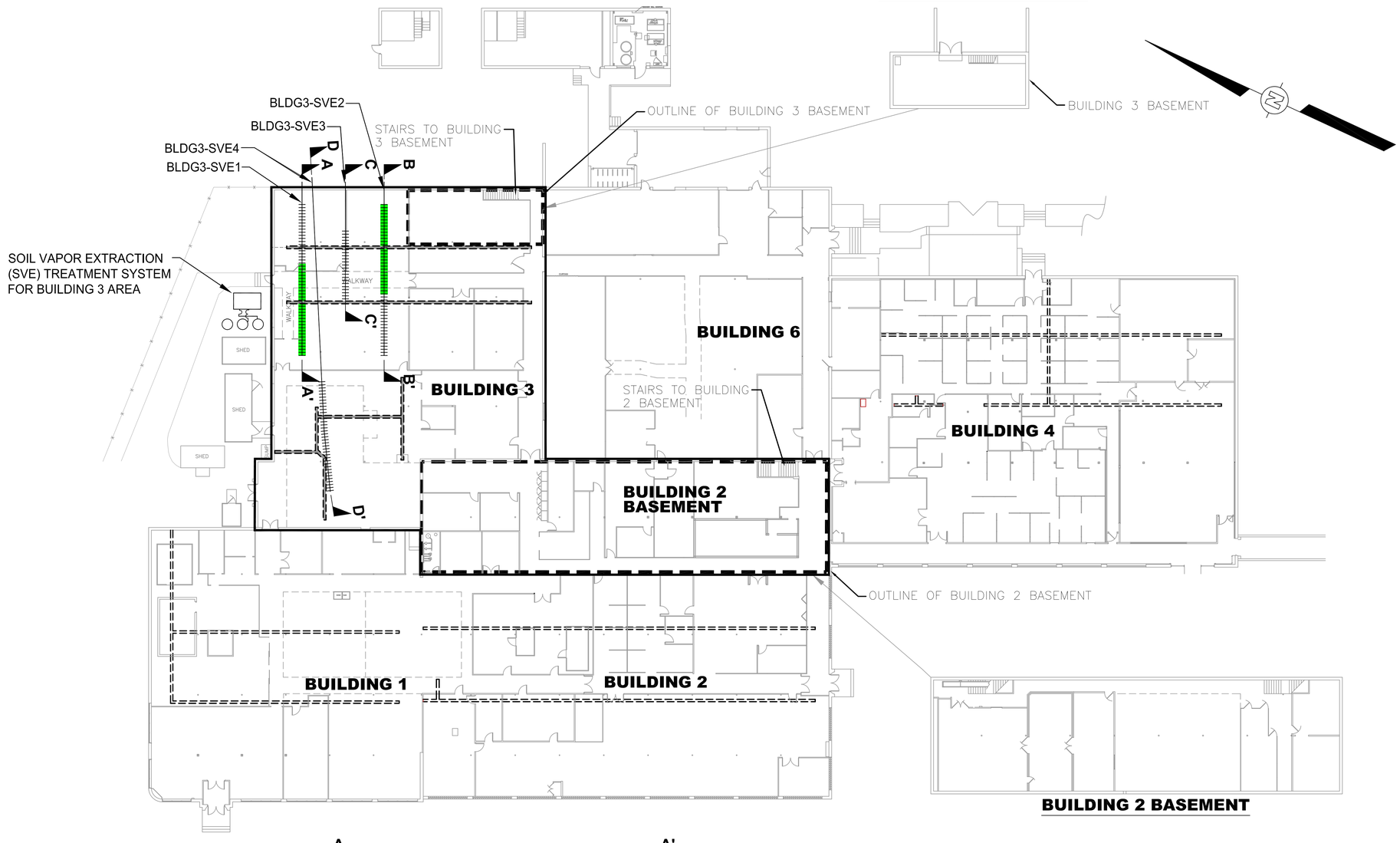
FORMER VARIAN FACILTIY SITE
150 SOHIER ROAD
BEVERLY, MASSACHUSETTS

File: T:\MISC\Varian\Beverly Mo\Phase 4\BUILDING 5 SYSTEM\150148-02.dwg
Plot Date/Time: Nov 03 2015 - 10:32am
Plotted By: chris.desisto

DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
CD 04/01/15	PH 04/01/15	- -	150148-D1

OFFICE CANTON

BUILDING 3 BASEMENT

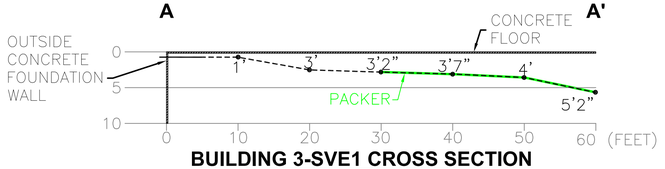


LEGEND

- BUILDING 3 TREATMENT AREA (INCLUDES BUILDING 2 BASEMENT)
- HORIZONTAL SOIL VAPOR EXTRACTION (SVE) WELL OPEN TO EXTRACTION
- PORTION OF HORIZONTAL SOIL VAPOR EXTRACTION (SVE) WELL SEALED WITH PACKERS
- BUILDING COLUMNS
- UTILITY TRENCH
- FORMER UTILITY TRENCH– FILLED WITH CONCRETE
- BUILDING WALLS
- FENCE LINE

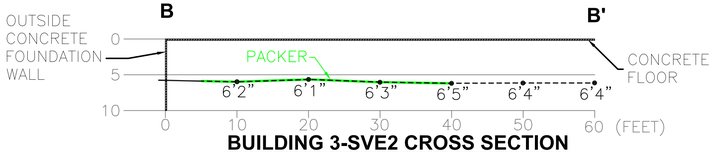
SCALE
0 20 40 60 FEET

BUILDING 2 BASEMENT



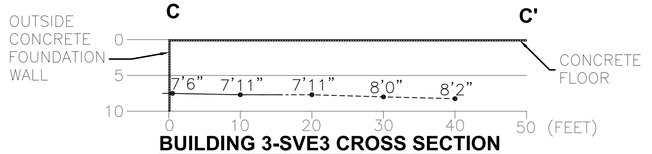
BUILDING 3-SVE1 CROSS SECTION WELL CONSTRUCTION

55' OF 2" 0.010 SLOT SCHEDULE 80 PVC 5' OF 2" SCHEDULE 80 PVC, (3'7") DEPTH OF WELL BENEATH FLOOR
PACKER INSTALLED 30'–60' FROM WELL HEAD



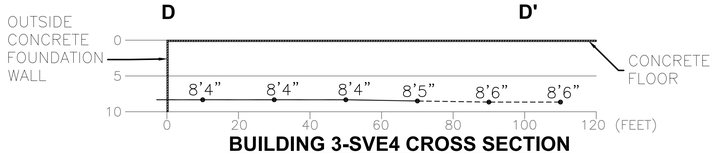
BUILDING 3-SVE2 CROSS SECTION WELL CONSTRUCTION

55' OF 2" 0.010 SLOT SCHEDULE 80 PVC 5' of 2" SCHEDULE 80 PVC (6'3") DEPTH OF WELL BENEATH FLOOR
PACKER INSTALLED 21'–41' FROM WELL HEAD



BUILDING 3-SVE3 CROSS SECTION WELL CONSTRUCTION

25' OF 3" 0.010 SLOT SCHEDULE 80 PVC 25' of 3" SCHEDULE 80 PVC (8') DEPTH OF WELL BENEATH FLOOR



BUILDING 3-SVE4 CROSS SECTION WELL CONSTRUCTION

40' OF 3" 0.010 SLOT SCHEDULE 80 PVC 70' of 3" SCHEDULE 80 PVC (8.5') DEPTH OF WELL BENEATH FLOOR

REFERENCE:
PLAN DERIVED FROM CPI COMMUNICATIONS & POWER INDUSTRIES, BEVERLY MICROWAVE DIVISION, AND CB&I ENVIRONMENTAL & INFRASTRUCTURE, INC. FIELD RECONNAISSANCE.

CB&I ENVIRONMENTAL & INFRASTRUCTURE, INC.
150 ROYALL STREET
CANTON, MASSACHUSETTS
(617) 589-5111

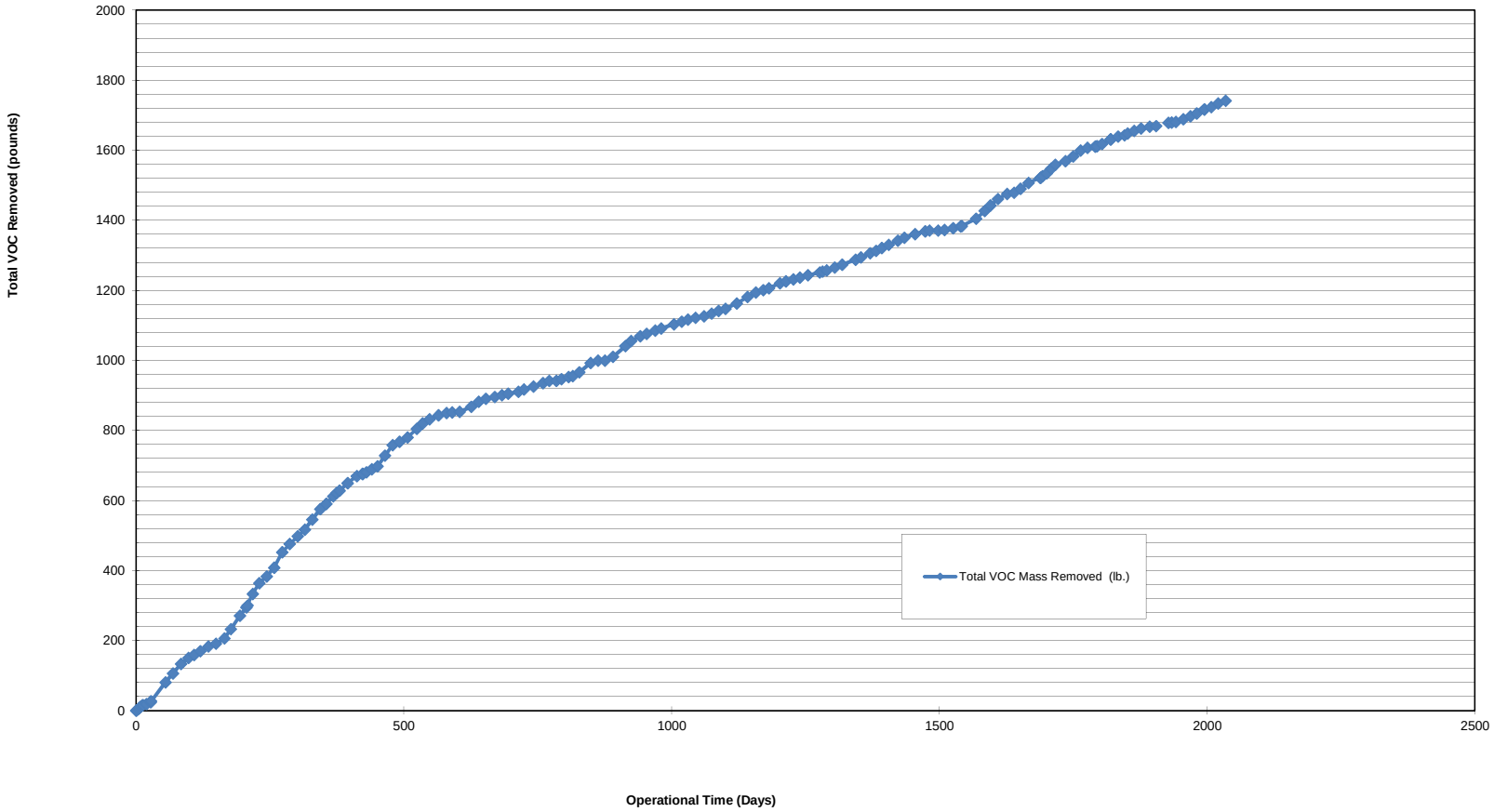
FIGURE 11

BUILDING 3 REMEDIAL TREATMENT AREA - SVE CROSS SECTIONS

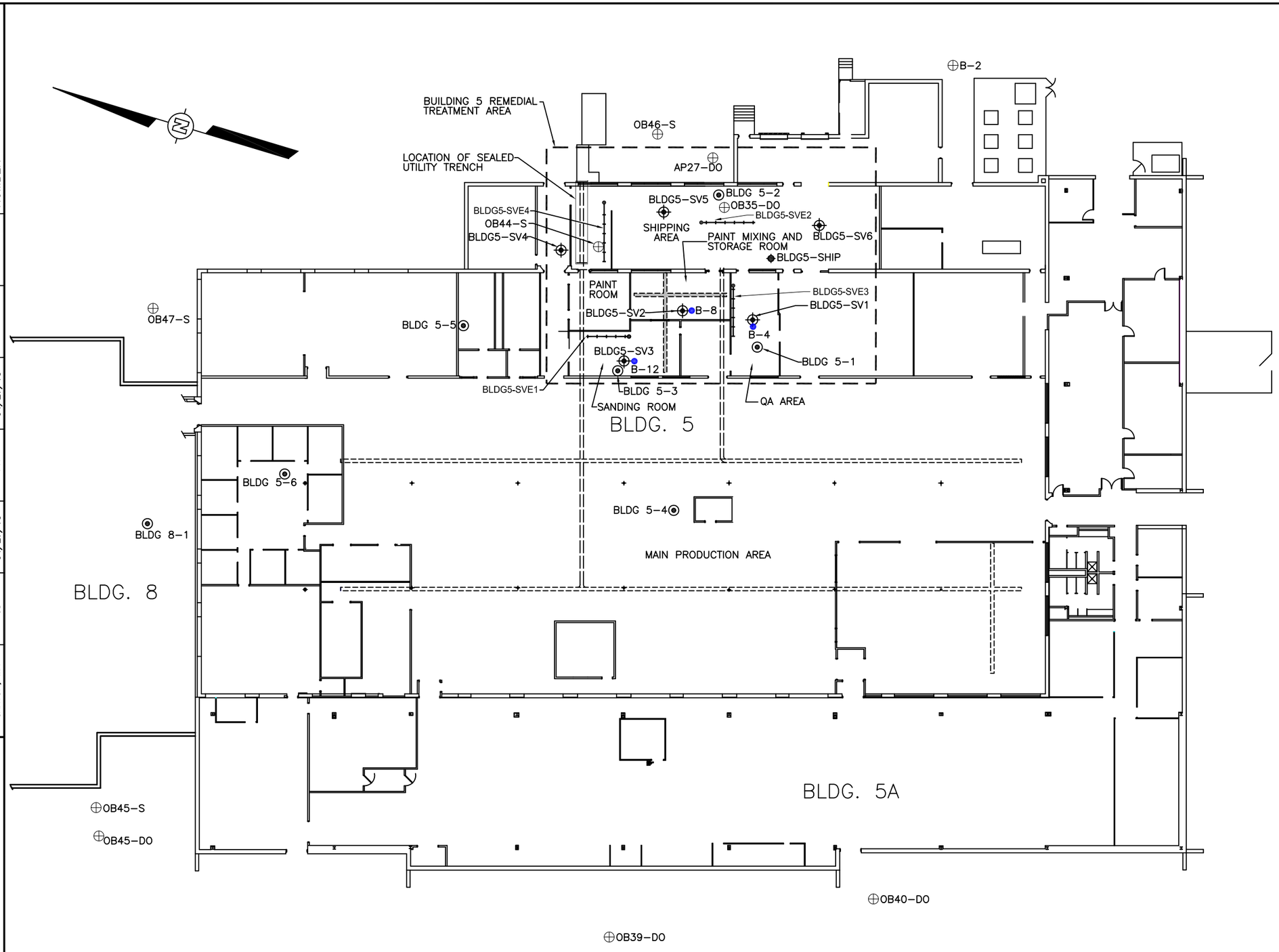
FORMER VARIAN FACILTIY SITE
150 SOHIER ROAD
BEVERLY, MASSACHUSETTS

File: T:\MISC\Varian\Beverly, Ma\Phase 4\BUILDING 5 SYSTEM\150148-D1.dwg
Plot Date/Time: Apr 02, 2015 - 12:29pm
Plotted By: chris.desisto

Figure 12
VOC Mass Removal Estimate
Building 3 Sub-Slab SVE System
Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts



P:\Varian\Final15\Reports\Status\October 2015 ROS\Figures\Figure 12 BLDG 3 SVE Mass Removal.xlsx



LEGEND

- SUB-SLAB SOIL VAPOR SAMPLE LOCATION (2011-2014)
- INDOOR AIR SAMPLE LOCATION (2011-2014)
- SUB-SLAB SOIL VAPOR SAMPLE LOCATION (1995)
- MONITORING WELL
- SOIL BORING
- FORMER UTILITY TRENCH FILLED WITH CONCRETE
- UTILITY TRENCH
- SVE TRENCH WELL

INDOOR AIR SAMPLE ID RTN 3-0485	ROOM
BLDG 5-1	QA AREA
BLDG 5-2	SHIPPING AREA
BLDG 5-3	SANDING ROOM
BLDG 5-4	PRODUCTION AREA
BLDG 5-5	CATHODE SPRAY ROOM
BLDG 5-6	COMMON OFFICE AREA
BLDG 8-1	HIGH POWER TESTING BUILDING 8 BASEMENT

REFERENCE:

PLAN DERIVED FROM COMMUNICATIONS & POWER INDUSTRIES MAP, DATED 07/11/03, CLEAN HARBORS ENVIRONMENTAL SERVICES, INC. MAP TITLED "1962-BUILDING 5", AND CB&I ENVIRONMENTAL FIELD RECONNAISSANCE, JULY 2012 AND APRIL 2014.

SCALE
0 30 60 FEET

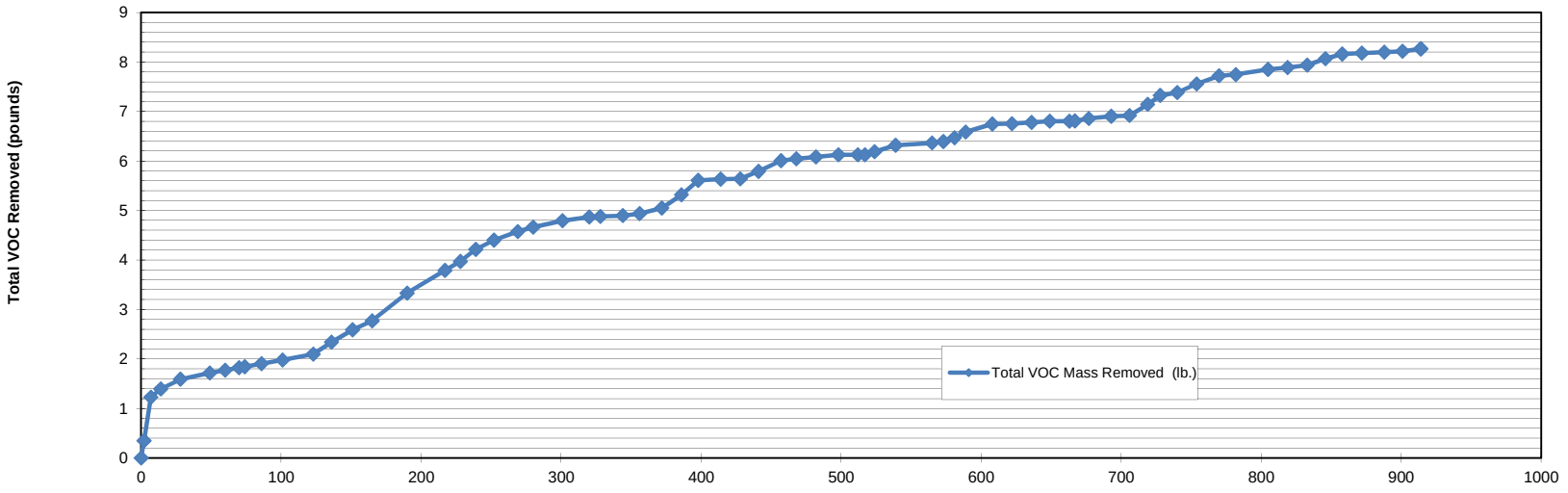
CB&I ENVIRONMENTAL & INFRASTRUCTURE, INC.
150 ROYALL STREET
CANTON, MASSACHUSETTS
(617) 589-5111

FIGURE 13
BUILDING 5 REMEDIAL TREATMENT AREA
FORMER VARIAN FACILITY
150 SOHIER ROAD
BEVERLY, MASSACHUSETTS

DRAWING NUMBER	146898-SITE PLAN	
APPROVED BY	--	--
CHECKED BY	PH	04/27/15
DRAWN BY	CD	04/27/15
OFFICE	CANTON, MA	

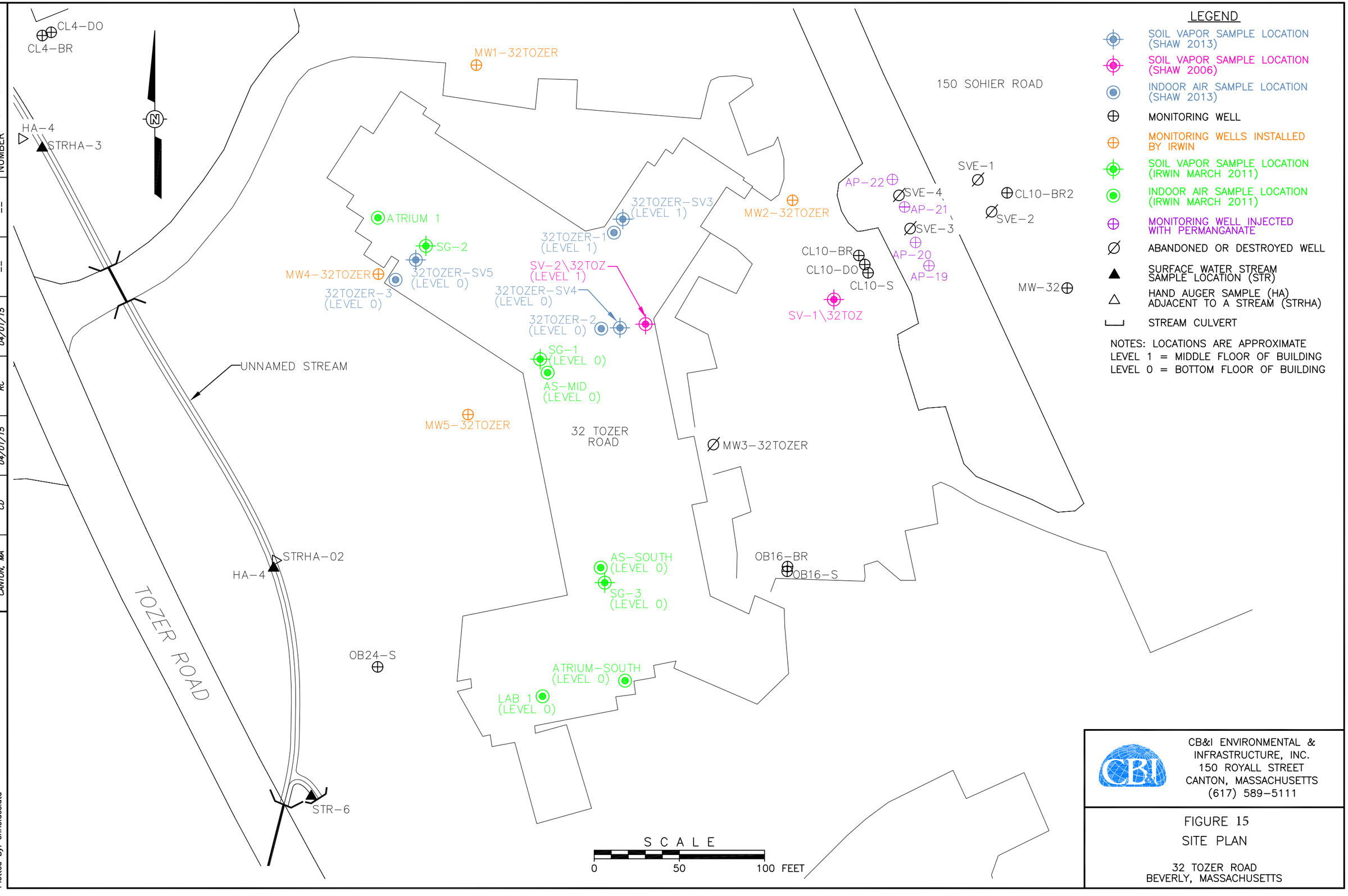
XREF Files: IMAGE Files:
File: T:\MISC\Varian\Beverly, Ma\Phase 4\BUILDING 5 SYSTEM\146898-SITE PLAN.dwg
Plot Date/Time: Apr 27, 2015 - 4:17pm
Plotted By: chris.desiata

Figure 14
VOC Mass Removal Estimate
Building 5 Sub-Slab SVE System
Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts



P:\Varian\Draft\Reports\Status\October 2015 ROS\Figures\Figure 14 - Bldg 5 SVE Mass Removal.xlsx

DRAWING NUMBER	32TOZERROAD
APPROVED BY	--
	--
CHECKED BY	04/01/15
	RC
DRAWN BY	04/01/15
	CD
OFFICE	CANTON, MA



LEGEND

- SOIL VAPOR SAMPLE LOCATION (SHAW 2013)
- SOIL VAPOR SAMPLE LOCATION (SHAW 2006)
- INDOOR AIR SAMPLE LOCATION (SHAW 2013)
- MONITORING WELL
- MONITORING WELLS INSTALLED BY IRWIN
- SOIL VAPOR SAMPLE LOCATION (IRWIN MARCH 2011)
- INDOOR AIR SAMPLE LOCATION (IRWIN MARCH 2011)
- MONITORING WELL INJECTED WITH PERMANGANATE
- ABANDONED OR DESTROYED WELL
- SURFACE WATER STREAM SAMPLE LOCATION (STR)
- HAND AUGER SAMPLE (HA) ADJACENT TO A STREAM (STRHA)
- STREAM CULVERT

NOTES: LOCATIONS ARE APPROXIMATE
LEVEL 1 = MIDDLE FLOOR OF BUILDING
LEVEL 0 = BOTTOM FLOOR OF BUILDING

CB&I ENVIRONMENTAL & INFRASTRUCTURE, INC.
150 ROYALL STREET
CANTON, MASSACHUSETTS
(617) 589-5111

FIGURE 15
SITE PLAN

32 TOZER ROAD
BEVERLY, MASSACHUSETTS

XREF Files: IMAGE Files:
File: T:\MISC\Varian\Beverly, Ma\Phase 4\Rev2\32TOZERROAD.dwg
Plot Date/Time: Apr 01, 2015 - 5:52pm
Plotted By: chris.desiata

APPENDIX A

MADEP COMPREHENSIVE RESPONSE ACTION TRANSMITTAL FORM (BWSC108) AND REMEDIAL MONITORING REPORT (RMR)

Massachusetts Department of Environmental Protection

eDEP Transaction Copy

Here is the file you requested for your records.

To retain a copy of this file you must save and/or print.

Username:	**BRIANCOTE**
Transaction ID:	**783305**
Document:	**BWSC108 Comp. Res. Action Transmittal Form & Phase I**
Size of File:	**551.90K**
Status of Transaction:	**Submitted**
Date and Time Created:	**11/5/2015:3:12:01 PM**

Note: This file only includes forms that were part of your transaction as of the date and time indicated above. If you need a more current copy of your transaction, return to eDEP and select to “Download a Copy” from the Current Submittals page.

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC 108

Release Tracking Number
3 - 485

COMPREHENSIVE RESPONSE ACTION TRANSMITTAL FORM & PHASE I COMPLETION STATEMENT

Pursuant to 310 CMR 40.0484 (Subpart D) and 40.0800 (Subpart H)

A. SITE LOCATION:

1. Site Name: VARIAN-MICROWAVE DIV

2. Street Address: 150 SOHIER RD

3. City/Town: BEVERLY 4. ZIP Code: 019150000

☑ 5. Check here if the disposal site that is the source of the release is Tier Classified. Check the current Tier Classification Category:

☑ a. Tier I ☐ b. Tier ID ☐ c. Tier II

B. THIS FORM IS BEING USED TO: (check all that apply)

☐ 1. Submit a **Phase I Completion Statement,** pursuant to 310 CMR 40.0484.

☐ 2. Submit a **Revised Phase I Completion Statement,** pursuant to 310 CMR 40.0484.

☐ 3. Submit a **Phase II Scope of Work,** pursuant to 310 CMR 40.0834.

☐ 4. Submit an **interim Phase II Report.** This report does not satisfy the response action deadline requirements in 310 CMR 40.0500.

☐ 5. Submit a **final Phase II Report and Completion Statement,** pursuant to 310 CMR 40.0836.

☐ 6. Submit a **Revised Phase II Report and Completion Statement,** pursuant to 310 CMR 40.0836.

☐ 7. Submit a **Phase III Remedial Action Plan and Completion Statement,** pursuant to 310 CMR 40.0862.

☐ 8. Submit a **Revised Phase III Remedial Action Plan and Completion Statement,** pursuant to 310 CMR 40.0862.

☐ 9. Submit a **Phase IV Remedy Implementation Plan,** pursuant to 310 CMR 40.0874.

☐ 10. Submit a **Modified Phase IV Remedy Implementation Plan,** pursuant to 310 CMR 40.0874.

☐ 11. Submit an **As-Built Construction Report,** pursuant to 310 CMR 40.0875.

☐ 12. Submit a **Phase IV Status Report,** pursuant to 310 CMR 40.0877.

☐ 13. Submit a **Phase IV Completion Statement,** pursuant to 310 CMR 40.0878 and 40.0879.

Specify the outcome of Phase IV activities: (check one)

☐ a. Phase V Operation, Maintenance or Monitoring of the Comprehensive Remedial Action is necessary to achieve a Permanent or Temporary Solution.

☐ b. The requirements of a Permanent Solution have been met. A completed Permanent Solution Statement and Report (BWSC104) will be submitted to DEP.

☐ c. The requirements of a Temporary Solution have been met. A completed Temporary Solution Statement and Report (BWSC104) will be submitted to DEP.

B. THIS FORM IS BEING USED TO (cont.): (check all that apply)

☐ 14. Submit a **Revised Phase IV Completion Statement,** pursuant to 310 CMR 40.0878 and 40.0879.

☐ 15. Submit a **Phase V Status Report,** pursuant to 310 CMR 40.0892.

☑ 16. Submit a **Remedial Monitoring Report.** (This report can only be submitted through eDEP.)

a. Type of Report: (check one) ☐ i. Initial Report ☑ ii. Interim Report ☐ iii. Final Report

b. Frequency of Submittal: (check all that apply)

☐ i. A Remedial Monitoring Report(s) submitted monthly to address an Imminent Hazard.

☐ ii. A Remedial Monitoring Report(s) submitted monthly to address a Condition of Substantial Release Migration.

☑ iii. A Remedial Monitoring Report(s) submitted every six months, concurrent with a Status Report.

☐ iv. A Remedial Monitoring Report(s) submitted annually, concurrent with a Status Report.

c. Status of Site: (check one) ☐ i. Phase IV ☐ ii. Phase V ☑ iii. Remedy Operation Status ☐ iv. Temporary Solution

d. Number of Remedial Systems and/or Monitoring Programs: 3

A separate BWSC108A, CRA Remedial Monitoring Report, must be filled out for each Remedial System and/or Monitoring Program addressed by this transmittal form.

☐ 17. Submit a **Remedy Operation Status,** pursuant to 310 CMR 40.0893.

☑ 18. Submit a **Status Report to maintain a Remedy Operation Status,** pursuant to 310 CMR 40.0893(2).

☐ 19. Submit a **Transfer and/or a Modification of Persons Maintaining a Remedy Operation Status (ROS),** pursuant to 310 CMR 40.0893(5) (check one, or both, if applicable).

☐ a. Submit a Transfer of Persons Maintaining an ROS (the transferee should be the person listed in Section D, "Person Undertaking Response Actions").

☐ b. Submit a Modification of Persons Maintaining an ROS (the primary representative should be the person listed in Section D, "Person Undertaking Response Actions").

c. Number of Persons Maintaining an ROS not including the primary representative: _____

☐ 20. Submit a **Termination of a Remedy Operation Status,** pursuant to 310 CMR 40.0893(6).(check one)

☐ a. Submit a notice indicating ROS performance standards have not been met. A plan and timetable pursuant to 310 CMR 40.0893(6)(b) for resuming the ROS are attached.

☐ b. Submit a notice of Termination of ROS.

☐ 21. Submit a **Phase V Completion Statement,** pursuant to 310 CMR 40.0894.

Specify the outcome of Phase V activities: (check one)

☐ a. The requirements of a Permanent Solution have been met. A completed Permanent Solution Statement and Report (BWSC104) will be submitted to DEP.

☐ b. The requirements for a Temporary Solution have been met. A completed Temporary Solution Statement and Report (BWSC104) will be submitted to DEP.

☐ 22. Submit a **Revised Phase V Completion Statement,** pursuant to 310 CMR 40.0894.

☐ 23. Submit a **Temporary Solution Status Report,** pursuant to 310 CMR 40.0898.

☐ 24. Submit a **Plan for the Application of Remedial Additives** near a sensitive receptor, pursuant to 310 CMR 40.0046(3).

a. Status of Site: (check one)

☐ i. Phase IV ☐ ii. Phase V ☐ iii. Remedy Operation Status ☐ iv. Temporary Solution

COMPREHENSIVE RESPONSE ACTION TRANSMITTAL FORM & PHASE I COMPLETION STATEMENT
Pursuant to 310 CMR 40.0484 (Subpart D) and 40.0800 (Subpart H)

C. LSP SIGNATURE AND STAMP:

I attest under the pains and penalties of perjury that I have personally examined and am familiar with this transmittal form, including any and all documents accompanying this submittal. In my professional opinion and judgment based upon application of (i) the standard of care in 309 CMR 4.02(1), (ii) the applicable provisions of 309 CMR 4.02(2) and (3), and 309 CMR 4.03(2), and (iii) the provisions of 309 CMR 4.03(3), to the best of my knowledge, information and belief,

> *if Section B indicates that a* ***Phase I, Phase II, Phase III, Phase IV or Phase V Completion Statement*** *and/or a* ***Termination of a Remedy Operation Status*** *is being submitted*, the response action(s) that is (are) the subject of this submittal (i) has (have) been developed and implemented in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, and (iii) comply(ies) with the identified provisions of all orders, permits, and approvals identified in this submittal;

> *if Section B indicates that a* ***Phase II Scope of Work*** *or a* ***Phase IV Remedy Implementation Plan*** *is being submitted,* the response action (s) that is (are) the subject of this submittal (i) has (have) been developed in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, and (iii) comply(ies) with the identified provisions of all orders, permits, and approvals identified in this submittal;

> *if Section B indicates that an* ***As-Built Construction Report,*** *a* ***Remedy Operation Status,*** *a* ***Phase IV, Phase V or Temporary Solution Status Report,*** *a* ***Status Report to Maintain a Remedy Operation Status,*** *a* ***Transfer or Modification of Persons Maintaining a Remedy Operation Status*** *and/or a* ***Remedial Monitoring Report*** *is being submitted,* the response action(s) that is (are) the subject of this submittal (i) is (are) being implemented in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, and (iii) comply(ies) with the identified provisions of all orders, permits, and approvals identified in this submittal.

I am aware that significant penalties may result, including, but not limited to, possible fines and imprisonment, if I submit information which I know to be false, inaccurate or materially incomplete.

1. LSP#: 4689

2. First Name: BRIAN J 3. Last Name: COTE

4. Telephone: 617-589-6175 5. Ext.: 6. Email:

7. Signature: BRIAN J COTE

8. Date: 11/5/2015 (mm/dd/yyyy)

9. LSP Stamp:

COMPREHENSIVE RESPONSE ACTION TRANSMITTAL FORM & PHASE I COMPLETION STATEMENT

Pursuant to 310 CMR 40.0484 (Subpart D) and 40.0800 (Subpart H)

D. PERSON UNDERTAKING RESPONSE ACTIONS:

1. Check all that apply: ☐ a. change in contact name ☐ b. change of address ☐ c. change in the person undertaking response actions

2. Name of Organization: VARIAN MEDICAL SYSTEMS INC

3. Contact First Name: JOHN R 4. Last Name: BUCHANAN

5. Street: 3120 HANSEN WAY M/S G-100 6. Title: ENVIRONMENTAL AFFAIRS MANAGER

7. City/Town: PALO ALTO 8. State: CA 9. ZIP Code: 943041030

10. Telephone: 650-424-6103 11. Ext: 12. Email: john.buchanan@varian.com

E. RELATIONSHIP TO SITE OF PERSON UNDERTAKING RESPONSE ACTIONS: ☐ Check here to change relationship

☑ 1. RP or PRP ☐ a. Owner ☐ b. Operator ☐ c. Generator ☐ d. Transporter

☑ e. Other RP or PRP Specify: OTHER PRPS

☐ 2. Fiduciary, Secured Lender or Municipality with Exempt Status (as defined by M.G.L. c. 21E, s. 2)

☐ 3. Agency or Public Utility on a Right of Way (as defined by M.G.L. c. 21E, s. 5(j))

☐ 4. Any Other Person Undertaking Response Actions Specify Relationship:

F. REQUIRED ATTACHMENT AND SUBMITTALS:

☑ 1. Check here if the Response Action(s) on which this opinion is based, if any, are (were) subject to any order(s), permit(s) and/or approval(s) issued by DEP or EPA. If the box is checked, you MUST attach a statement identifying the applicable provisions thereof.

☐ 2. Check here to certify that the Chief Municipal Officer and the Local Board of Health have been notified of the submittal of any Phase Reports to DEP.

☐ 3. Check here to certify that the Chief Municipal Officer and the Local Board of Health have been notified of the availability of a Phase III Remedial Action Plan.

☐ 4. Check here to certify that the Chief Municipal Officer and the Local Board of Health have been notified of the availability of a Phase IV Remedy Implementation Plan.

☐ 5. Check here to certify that the Chief Municipal Officer and the Local Board of Health have been notified of any field work involving the implementation of a Phase IV Remedial Action.

☐ 6. If submitting a Transfer of a Remedy Operation Status (as per 310 CMR 40.0893(5)), check here to certify that a statement detailing the compliance history for the person making this submittal (transferee) is attached.

☐ 7. If submitting a Modification of a Remedy Operation Status (as per 310 CMR 40.0893(5)), check here to certify that a statement detailing the compliance history for each new person making this submittal is attached.

☐ 8. Check here if any non-updatable information provided on this form is incorrect, e.g. Release Address/Location Aid. Send corrections to: BWSC.eDEP@state.ma.us.

☑ 9. Check here to certify that the LSP Opinion containing the material facts, data, and other information is attached.

G. CERTIFICATION OF PERSON UNDERTAKING RESPONSE ACTIONS:

1. I, JOHN R BUCHANAN, attest under the pains and penalties of perjury (i) that I have personally examined and am familiar with the information contained in this submittal, including any and all documents accompanying this transmittal form, (ii) that, based on my inquiry of those individuals immediately responsible for obtaining the information, the material information contained in this submittal is, to the best of my knowledge and belief, true, accurate and complete, and (iii) that I am fully authorized to make this attestation on behalf of the entity legally responsible for this submittal. I/the person or entity on whose behalf this submittal is made am/is aware that there are significant penalties, including, but not limited to, possible fines and imprisonment, for willfully submitting false, inaccurate, or incomplete information.

>*if Section B indicates that this is a* **Modification of a Remedy Operation Status (ROS),** I attest under the pains and penalties of perjury that I am fully authorized to act on behalf of all persons performing response actions under the ROS as stated in 310 CMR 40.0893(5)(d) to receive oral and written correspondence from MassDEP with respect to performance of response actions under the ROS, and to receive a statement of fee amount as per 4.03(3).

I understand that any material received by the Primary Representative from MassDEP shall be deemed received by all the persons performing response actions under the ROS, and I am aware that there are significant penalties, including, but not limited to, possible fines and imprisonment, for willfully submitting false, inaccurate or incomplete information.

2. By: JOHN R BUCHANAN (Signature)

3. Title: ENVIRONMENTAL AFFAIRS MANAGER

4. For: VARIAN MEDICAL SYSTEMS INC (Name of person or entity recorded in Section D)

5. Date: 11/4/2015 (mm/dd/yyyy)

☐ 6. Check here if the address of the person providing certification is different from address recorded in Section D.

7. Street:

8. City/Town: 9. State: 10. ZIP Code:

11. Telephone: 12. Ext.: 13. Email:

YOU ARE SUBJECT TO AN ANNUAL COMPLIANCE ASSURANCE FEE OF UP TO $10,000 PER BILLABLE YEAR FOR THIS DISPOSAL SITE. YOU MUST LEGIBLY COMPLETE ALL RELEVANT SECTIONS OF THIS FORM OR DEP MAY RETURN THE DOCUMENT AS INCOMPLETE. IF YOU SUBMIT AN INCOMPLETE FORM, YOU MAY BE PENALIZED FOR MISSING A REQUIRED DEADLINE.

Date Stamp (DEP USE ONLY:)

Received by DEP on 11/5/2015 1:18:36 PM

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup
CRA REMEDIAL MONITORING REPORT
Pursuant to 310 CMR 40.0800 (SUBPART H)
Remedial System or Monitoring Program: 1 of: 3

BWSC108 -A

Release Tracking Number
3 - 485

A. DESCRIPTION OF ACTIVE OPERATION AND MAINTENANCE ACTIVITY:

1. Type of Active Operation and Maintenance Activity: (check all that apply)

☐ a. Active Remedial System: (check all that apply)

☐ i. NAPL Recovery ☐ ii. Soil Vapor Extraction/Bioventing ☐ iii. Vapor-phase Carbon Adsorption
☐ iv. Groundwater Recovery ☐ v. Dual/Multi-phase Extraction ☐ vi. Aqueous-phase Carbon Adsorption
☐ vii. Air Stripping ☐ viii. Sparging/Biosparging ☐ ix. Cat/Thermal Oxidation
☐ x. Other Describe:

☐ b. Active Exposure Pathway Elimination Measure
Active Exposure Pathway Mitigation System to address (check one): ☐ i. Indoor Air ☐ ii. Drinking Water

☑ c. Application of Remedial Additives: (check all that apply)

☐ i. To the Subsurface ☑ ii. To Groundwater (Injection) ☐ iii. To the Surface

☐ d. Active Remedial Monitoring Program Without the Application of Remedial Additives: (check all that apply; Sections C, D and E are not required; attach supporting information, data, maps and/or sketches needed by checking Section G5)

☐ i. Reactive Wall ☐ ii. Natural Attenuation ☐ iii. Other Describe:

2. Mode of Operation: (check one)

☐ a. Continuous ☑ b. Intermittent ☐ c. Pulsed ☐ d. One-time Event Only ☐ e. Other:

3. System Effluent/Discharge: (check all that apply)

☐ a. Sanitary Sewer/POTW
☐ b. Groundwater Re-infiltration/Re-injection: (check one) ☐ i. Downgradient ☐ ii. Upgradient
☐ c. Vapor-phase Discharge to Ambient Air: (check one) ☐ i. Off-gas Controls ☐ ii. No Off-gas Controls
☐ d. Drinking Water Supply
☐ e. Surface Water (including Storm Drains)
☑ f. Other Describe: NA

B. MONITORING FREQUENCY:

1. Reporting period that is the subject of this submittal: From: 4/1/2015 (mm/dd/yyyy) To: 9/30/2015 (mm/dd/yyyy)

2. Number of monitoring events during the reporting period: (check one)

☐ a. System Startup: (if applicable)

☐ i. Days 1, 3, 6, and then weekly thereafter, for the first month.
☐ ii. Other Describe:

☑ b. Post-system Startup (after first month) or Monitoring Program:

☑ i. Monthly
☐ ii. Quarterly
☐ iii. Annually
☐ iv. Other Describe:

☑ 3. Check here to certify that the number of required monitoring events were conducted during the reporting period.

C. EFFLUENT/DISCHARGE REGULATION: (check one to indicate how the effluent/discharge limits were established)

☐ 1. NPDES: (check one) ☐ a. Remediation General Permit ☐ b. Individual Permit
☐ c. Emergency Exclusion
Effective Date of Permit: (mm/dd/yyyy)

☐ 2. MCP Performance Standard MCP Citations(s):

☐ 3. DEP Approval Letter Date of Letter: (mm/dd/yyyy)

☐ 4. Other Describe:

D. WASTEWATER TREATMENT PLANT OPERATOR: (check one)

☐ 1. Required due to Remedial Wastewater Treatment Plant in place for more than 30 days.
a. Name: _____ b. Grade: _____
c. License No: _____ d. License Exp. Date: _____ (mm/dd/yyyy)

☑ 2. Not Required

☐ 3. Not Applicable

E. STATUS OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM DURING REPORTING PERIOD: (check all that apply)

☐ 1. The Active Remedial System was functional one or more days during the Reporting Period.
a. Days System was Fully Functional: _____ b. GW Recovered (gals): _____
c. NAPL Recovered (gals): _____ d. GW Discharged (gals): _____
e. Avg. Soil Gas Recovery Rate (scfm): _____ f. Avg. Sparging Rate (scfm): _____

☑ 2. Remedial Additives: (check all that apply)

☐ a. No Remedial Additives applied during the Reporting Period.

☑ b. Enhanced Bioremediation Additives applied: (total quantity applied at the site for the current reporting period)

☐ i. Nitrogen/Phosphorus:

Name of Additive	Date	Quantity	Units

☐ ii. Peroxides:

Name of Additive	Date	Quantity	Units

☑ iii. Microorganisms:

Name of Additive	Date	Quantity	Units
DEHALOCOIDES CUL	4/20/2015	500	ML

☑ iv. Other:

Name of Additive	Date	Quantity	Units
SODIUM LACTATE	4/20/2015	6316	GAL

☑ c. Chemical oxidation/reduction additives applied: (total quantity applied at the site for the current reporting period)

☑ i. Permanganates:

Name of Additive	Date	Quantity	Units
SODIUM PERMANGA	4/6/2015	306	GAL

☐ ii. Peroxides:

Name of Additive	Date	Quantity	Units

☐ iii. Persulfates:

Name of Additive	Date	Quantity	Units

☐ iv. Other:

Name of Additive	Date	Quantity	Units

E. STATUS OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM DURING REPORTING PERIOD: (cont.)

☐ d. Other additives applied: (total quantity applied at the site for the current reporting period)

Name of Additive	Date	Quantity	Units

Name of Additive	Date	Quantity	Units

☐ e. Check here if any additional Remedial Additives were applied. Attach list of additional additives and include Name of Additive, Date Applied, Quantity Applied and Units (in gals. or lbs.)

F. SHUTDOWNS OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM: (check all that apply)

☐ 1. The Active Remedial System had unscheduled shutdowns on one or more occasions during the Reporting Period.

a. Number of Unscheduled Shutdowns: _____ b. Total Number of Days of Unscheduled Shutdowns: _____

c. Reason(s) for Unscheduled Shutdowns: _____

☐ 2. The Active Remedial System had scheduled shutdowns on one or more occasions during the Reporting Period.

a. Number of Scheduled Shutdowns: _____ b. Total Number of Days of Scheduled Shutdowns: _____

c. Reason(s) for Scheduled Shutdowns: _____

☐ 3. The Active Remedial System or Active Remedial Monitoring Program was permanently shutdown/discontinued during the Reporting Period.

a. Date of Final System or Monitoring Program Shutdown: _____
(mm/dd/yyyy)

☐ b. No Further Effluent Discharges.

☐ c. No Further Application of Remedial Additives planned; sufficient monitoring completed to demonstrate compliance with 310 CMR 40.0046.

☐ d. No Further Submittals Planned.

☐ e. Other: Describe: _____

G. SUMMARY STATEMENTS: (check all that apply for the current reporting period)

☐ 1. All Active Remedial System checks and effluent analyses required by the approved plan and/or permit were performed when applicable.

☐ 2. There were no significant problems or prolonged (>25% of reporting period) unscheduled shutdowns of the Active Remedial System.

☑ 3. The Active Remedial System or Active Remedial Monitoring Program operated in conformance with the MCP, and all applicable approval conditions and/or permits.

4. Indicate any Operational Problems or Notes:

☐ 5. Check here if additional/supporting Information, data, maps, and/or sketches are attached to the form.

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup
CRA REMEDIAL MONITORING REPORT
Pursuant to 310 CMR 40.0800 (SUBPART H)
Remedial System or Monitoring Program: 2 of: 3

BWSC108 -A

Release Tracking Number
3 - 485

A. DESCRIPTION OF ACTIVE OPERATION AND MAINTENANCE ACTIVITY:

1. Type of Active Operation and Maintenance Activity: (check all that apply)

☑ a. Active Remedial System: (check all that apply)

☐ i. NAPL Recovery ☑ ii. Soil Vapor Extraction/Bioventing ☑ iii. Vapor-phase Carbon Adsorption
☐ iv. Groundwater Recovery ☐ v. Dual/Multi-phase Extraction ☐ vi. Aqueous-phase Carbon Adsorption
☐ vii. Air Stripping ☐ viii. Sparging/Biosparging ☐ ix. Cat/Thermal Oxidation
☑ x. Other Describe: BLDG3 SUB-SLAB SVE SYSTEM

☑ b. Active Exposure Pathway Elimination Measure
Active Exposure Pathway Mitigation System to address (check one): ☑ i. Indoor Air ☐ ii. Drinking Water

☐ c. Application of Remedial Additives: (check all that apply)
☐ i. To the Subsurface ☐ ii. To Groundwater (Injection) ☐ iii. To the Surface

☐ d. Active Remedial Monitoring Program Without the Application of Remedial Additives: (check all that apply; Sections C, D and E are not required; attach supporting information, data, maps and/or sketches needed by checking Section G5)
☐ i. Reactive Wall ☐ ii. Natural Attenuation ☐ iii. Other Describe:

2. Mode of Operation: (check one)
☑ a. Continuous ☐ b. Intermittent ☐ c. Pulsed ☐ d. One-time Event Only ☐ e. Other:

3. System Effluent/Discharge: (check all that apply)
☐ a. Sanitary Sewer/POTW
☐ b. Groundwater Re-infiltration/Re-injection: (check one) ☐ i. Downgradient ☐ ii. Upgradient
☑ c. Vapor-phase Discharge to Ambient Air: (check one) ☑ i. Off-gas Controls ☐ ii. No Off-gas Controls
☐ d. Drinking Water Supply
☐ e. Surface Water (including Storm Drains)
☐ f. Other Describe:

B. MONITORING FREQUENCY:

1. Reporting period that is the subject of this submittal: From: 4/1/2015 (mm/dd/yyyy) To: 9/30/2015 (mm/dd/yyyy)

2. Number of monitoring events during the reporting period: (check one)
☐ a. System Startup: (if applicable)
☐ i. Days 1, 3, 6, and then weekly thereafter, for the first month.
☐ ii. Other Describe:
☑ b. Post-system Startup (after first month) or Monitoring Program:
☐ i. Monthly
☐ ii. Quarterly
☐ iii. Annually
☑ iv. Other Describe: BI-WEEKLY

☐ 3. Check here to certify that the number of required monitoring events were conducted during the reporting period.

C. EFFLUENT/DISCHARGE REGULATION: (check one to indicate how the effluent/discharge limits were established)

☐ 1. NPDES: (check one) ☐ a. Remediation General Permit ☐ b. Individual Permit
☐ c. Emergency Exclusion Effective Date of Permit: (mm/dd/yyyy)

☑ 2. MCP Performance Standard MCP Citations(s): MADEP POLICY #WSC94-150

☐ 3. DEP Approval Letter Date of Letter: (mm/dd/yyyy)

☐ 4. Other Describe:

D. WASTEWATER TREATMENT PLANT OPERATOR: (check one)

☐ 1. Required due to Remedial Wastewater Treatment Plant in place for more than 30 days.
a. Name: _____ b. Grade: _____
c. License No: _____ d. License Exp. Date: _____ (mm/dd/yyyy)

☐ 2. Not Required

☑ 3. Not Applicable

E. STATUS OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM DURING REPORTING PERIOD: (check all that apply)

☑ 1. The Active Remedial System was functional one or more days during the Reporting Period.
a. Days System was Fully Functional: 167 b. GW Recovered (gals): _____
c. NAPL Recovered (gals): _____ d. GW Discharged (gals): _____
e. Avg. Soil Gas Recovery Rate (scfm): 138 f. Avg. Sparging Rate (scfm): _____

☐ 2. Remedial Additives: (check all that apply)

☐ a. No Remedial Additives applied during the Reporting Period.

☐ b. Enhanced Bioremediation Additives applied: (total quantity applied at the site for the current reporting period)

☐ i. Nitrogen/Phosphorus:

Name of Additive	Date	Quantity	Units

☐ ii. Peroxides:

Name of Additive	Date	Quantity	Units

☐ iii. Microorganisms:

Name of Additive	Date	Quantity	Units

☐ iv. Other:

Name of Additive	Date	Quantity	Units

☐ c. Chemical oxidation/reduction additives applied: (total quantity applied at the site for the current reporting period)

☐ i. Permanganates:

Name of Additive	Date	Quantity	Units

☐ ii. Peroxides:

Name of Additive	Date	Quantity	Units

☐ iii. Persulfates:

Name of Additive	Date	Quantity	Units

☐ iv. Other:

Name of Additive	Date	Quantity	Units

E. STATUS OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM DURING REPORTING PERIOD: (cont.)

☐ d. Other additives applied: (total quantity applied at the site for the current reporting period)

Name of Additive	Date	Quantity	Units

Name of Additive	Date	Quantity	Units

☐ e. Check here if any additional Remedial Additives were applied. Attach list of additional additives and include Name of Additive, Date Applied, Quantity Applied and Units (in gals. or lbs.)

F. SHUTDOWNS OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM: (check all that apply)

☐ 1. The Active Remedial System had unscheduled shutdowns on one or more occasions during the Reporting Period.

a. Number of Unscheduled Shutdowns: _____ b. Total Number of Days of Unscheduled Shutdowns: _____

c. Reason(s) for Unscheduled Shutdowns: _____

☑ 2. The Active Remedial System had scheduled shutdowns on one or more occasions during the Reporting Period.

a. Number of Scheduled Shutdowns: 1 b. Total Number of Days of Scheduled Shutdowns: 16

c. Reason(s) for Scheduled Shutdowns: TO SAMPLE STATIC VOC CONCENTRATIONS IN SOIL GAS AND INDOOR AIR

☐ 3. The Active Remedial System or Active Remedial Monitoring Program was permanently shutdown/discontinued during the Reporting Period.

a. Date of Final System or Monitoring Program Shutdown: _____ (mm/dd/yyyy)

☐ b. No Further Effluent Discharges.

☐ c. No Further Application of Remedial Additives planned; sufficient monitoring completed to demonstrate compliance with 310 CMR 40.0046.

☐ d. No Further Submittals Planned.

☐ e. Other: Describe: _____

G. SUMMARY STATEMENTS: (check all that apply for the current reporting period)

☑ 1. All Active Remedial System checks and effluent analyses required by the approved plan and/or permit were performed when applicable.

☑ 2. There were no significant problems or prolonged (>25% of reporting period) unscheduled shutdowns of the Active Remedial System.

☑ 3. The Active Remedial System or Active Remedial Monitoring Program operated in conformance with the MCP, and all applicable approval conditions and/or permits.

4. Indicate any Operational Problems or Notes:

☐ 5. Check here if additional/supporting Information, data, maps, and/or sketches are attached to the form.

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup
CRA REMEDIAL MONITORING REPORT
Pursuant to 310 CMR 40.0800 (SUBPART H)
Remedial System or Monitoring Program: 3 of: 3

BWSC108 -A

Release Tracking Number
3 - 485

A. DESCRIPTION OF ACTIVE OPERATION AND MAINTENANCE ACTIVITY:

1. Type of Active Operation and Maintenance Activity: (check all that apply)

☑ a. Active Remedial System: (check all that apply)

☐ i. NAPL Recovery ☑ ii. Soil Vapor Extraction/Bioventing ☑ iii. Vapor-phase Carbon Adsorption
☐ iv. Groundwater Recovery ☐ v. Dual/Multi-phase Extraction ☐ vi. Aqueous-phase Carbon Adsorption
☐ vii. Air Stripping ☐ viii. Sparging/Biosparging ☐ ix. Cat/Thermal Oxidation
☑ x. Other Describe: BUILDING 5 SUB-SLAB SVE SYSTEM

☑ b. Active Exposure Pathway Elimination Measure
Active Exposure Pathway Mitigation System to address (check one): ☑ i. Indoor Air ☐ ii. Drinking Water

☐ c. Application of Remedial Additives: (check all that apply)
☐ i. To the Subsurface ☐ ii. To Groundwater (Injection) ☐ iii. To the Surface

☐ d. Active Remedial Monitoring Program Without the Application of Remedial Additives: (check all that apply; Sections C, D and E are not required; attach supporting information, data, maps and/or sketches needed by checking Section G5)
☐ i. Reactive Wall ☐ ii. Natural Attenuation ☐ iii. Other Describe:

2. Mode of Operation: (check one)
☑ a. Continuous ☐ b. Intermittent ☐ c. Pulsed ☐ d. One-time Event Only ☐ e. Other:

3. System Effluent/Discharge: (check all that apply)
☐ a. Sanitary Sewer/POTW
☐ b. Groundwater Re-infiltration/Re-injection: (check one) ☐ i. Downgradient ☐ ii. Upgradient
☑ c. Vapor-phase Discharge to Ambient Air: (check one) ☑ i. Off-gas Controls ☐ ii. No Off-gas Controls
☐ d. Drinking Water Supply
☐ e. Surface Water (including Storm Drains)
☐ f. Other Describe:

B. MONITORING FREQUENCY:

1. Reporting period that is the subject of this submittal: From: 4/1/2015 (mm/dd/yyyy) To: 9/30/2015 (mm/dd/yyyy)

2. Number of monitoring events during the reporting period: (check one)
☐ a. System Startup: (if applicable)
☐ i. Days 1, 3, 6, and then weekly thereafter, for the first month.
☐ ii. Other Describe:
☑ b. Post-system Startup (after first month) or Monitoring Program:
☐ i. Monthly
☐ ii. Quarterly
☐ iii. Annually
☑ iv. Other Describe: BI-WEEKLY

☐ 3. Check here to certify that the number of required monitoring events were conducted during the reporting period.

C. EFFLUENT/DISCHARGE REGULATION: (check one to indicate how the effluent/discharge limits were established)

☐ 1. NPDES: (check one) ☐ a. Remediation General Permit ☐ b. Individual Permit
☐ c. Emergency Exclusion Effective Date of Permit: (mm/dd/yyyy)

☑ 2. MCP Performance Standard MCP Citations(s): MADEP POLICY #WSC94-150

☐ 3. DEP Approval Letter Date of Letter: (mm/dd/yyyy)

☐ 4. Other Describe:

D. WASTEWATER TREATMENT PLANT OPERATOR: (check one)

☐ 1. Required due to Remedial Wastewater Treatment Plant in place for more than 30 days.
a. Name: _____ b. Grade: _____
c. License No: _____ d. License Exp. Date: _____ (mm/dd/yyyy)

☐ 2. Not Required
☑ 3. Not Applicable

E. STATUS OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM DURING REPORTING PERIOD: (check all that apply)

☑ 1. The Active Remedial System was functional one or more days during the Reporting Period.
a. Days System was Fully Functional: 169 b. GW Recovered (gals): _____
c. NAPL Recovered (gals): _____ d. GW Discharged (gals): _____
e. Avg. Soil Gas Recovery Rate (scfm): 133 f. Avg. Sparging Rate (scfm): _____

☐ 2. Remedial Additives: (check all that apply)

☐ a. No Remedial Additives applied during the Reporting Period.
☐ b. Enhanced Bioremediation Additives applied: (total quantity applied at the site for the current reporting period)

☐ i. Nitrogen/Phosphorus:

Name of Additive	Date	Quantity	Units

☐ ii. Peroxides:

Name of Additive	Date	Quantity	Units

☐ iii. Microorganisms:

Name of Additive	Date	Quantity	Units

☐ iv. Other:

Name of Additive	Date	Quantity	Units

☐ c. Chemical oxidation/reduction additives applied: (total quantity applied at the site for the current reporting period)

☐ i. Permanganates:

Name of Additive	Date	Quantity	Units

☐ ii. Peroxides:

Name of Additive	Date	Quantity	Units

☐ iii. Persulfates:

Name of Additive	Date	Quantity	Units

☐ iv. Other:

Name of Additive	Date	Quantity	Units

E. STATUS OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM DURING REPORTING PERIOD: (cont.)

☐ d. Other additives applied: (total quantity applied at the site for the current reporting period)

Name of Additive	Date	Quantity	Units

Name of Additive	Date	Quantity	Units

☐ e. Check here if any additional Remedial Additives were applied. Attach list of additional additives and include Name of Additive, Date Applied, Quantity Applied and Units (in gals. or lbs.)

F. SHUTDOWNS OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM: (check all that apply)

☐ 1. The Active Remedial System had unscheduled shutdowns on one or more occasions during the Reporting Period.

a. Number of Unscheduled Shutdowns: _____ b. Total Number of Days of Unscheduled Shutdowns: _____

c. Reason(s) for Unscheduled Shutdowns: _____

☑ 2. The Active Remedial System had scheduled shutdowns on one or more occasions during the Reporting Period.

a. Number of Scheduled Shutdowns: 1 b. Total Number of Days of Scheduled Shutdowns: 14

c. Reason(s) for Scheduled Shutdowns: TO SAMPLE STATIC VOC CONCENTRATIONS IN SOIL GAS AND INDOOR AIR

☐ 3. The Active Remedial System or Active Remedial Monitoring Program was permanently shutdown/discontinued during the Reporting Period.

a. Date of Final System or Monitoring Program Shutdown: _____
(mm/dd/yyyy)

☐ b. No Further Effluent Discharges.

☐ c. No Further Application of Remedial Additives planned; sufficient monitoring completed to demonstrate compliance with 310 CMR 40.0046.

☐ d. No Further Submittals Planned.

☐ e. Other: Describe: _____

G. SUMMARY STATEMENTS: (check all that apply for the current reporting period)

☑ 1. All Active Remedial System checks and effluent analyses required by the approved plan and/or permit were performed when applicable.

☑ 2. There were no significant problems or prolonged (>25% of reporting period) unscheduled shutdowns of the Active Remedial System.

☑ 3. The Active Remedial System or Active Remedial Monitoring Program operated in conformance with the MCP, and all applicable approval conditions and/or permits.

4. Indicate any Operational Problems or Notes:

☐ 5. Check here if additional/supporting Information, data, maps, and/or sketches are attached to the form.

APPENDIX B

COPIES OF WASTE MANIFESTS

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
MAR000006734	1	800-424-9300	006197555 FLE

GENERATOR

5. Generator's Name and Mailing Address
WATSON MEDICAL SYSTEMS c/o CDWG
150 RAILROAD AVENUE
EAST HANOVER, NJ 07936
Generator's Phone: 650-424-6113

Generator's Site Address (if different than mailing address)
VARIAN MEDICAL SYSTEMS
FARMER VARIAN FACILITY
150 SAWGRASS ROAD
BEVERLY, MA 01915

6. Transporter 1 Company Name
NORTHERN TRANSPORTATION INC.

U.S. EPA ID Number
MAD 986 714 874

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address
ENERGY WASTE TECHNOLOGIES LLC
4333 MISSOURI STREET
PARKER, AZ. 85344

U.S. EPA ID Number
AZD 982441243

Facility's Phone: 928-669-3758

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	1. NA3077, HAZARDOUS WASTE, SOLID, N.O.S. (D008), 9, PG III	01	DM	030	P	F002		
	2.							
	3.							
	4.							

14. Special Handling Instructions and Additional Information
161. SMART VAPOR CANISTERS CONTAINING SILICA
SUB: 5011747 PROFILE: WI0382EH-2 EXP: 12/31/15

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Emmanuel T. Colombe Agent for CDWG
Signature:
Month: 5 Day: 23 Year: 15

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Carl Hall
Signature:
Month: 5 Day: 22 Year: 15

Transporter 2 Printed/Typed Name
Signature
Month Day Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator)

U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name
Signature
Month Day Year

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

GENERATOR'S INITIAL COPY

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: MAR000006734
2. Page 1 of: 1
3. Emergency Response Phone: 800-424-9300
4. Manifest Tracking Number: 006197377 FLE

GENERATOR

5. Generator's Name and Mailing Address
VARIAN MEDICAL SYSTEMS c/o CBI
150 ROYAL STREET
CANTON, MA 02021
Generator's Phone: 650-424-6103

Generator's Site Address (if different than mailing address)
VARIAN MEDICAL SYSTEMS
FORMER VARIAN FACILITY
150 SOHIER ROAD
BEVERLY, MA 01915

6. Transporter 1 Company Name: HORWITH TRUCKS INC
U.S. EPA ID Number: PAD146714878

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address: EVOQUA WATER TECHNOLOGIES LLC
2523 MUSTANG STREET
PARKER, AZ 85344
Facility's Phone: 928-669-5758
U.S. EPA ID Number: AZD982441263

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	1. NA3077, HAZARDOUS WASTE SOLID, N.O.S. (SOLVENTS) 9, PG III	40	DM	6,400	P	F002		
	2.							
	3.							
	4.							

14. Special Handling Instructions and Additional Information
(162) SPENT VAPOR CARBON CONTAINING SOLVENTS
PROFILE# W90382KH-2 EXP: 12/11/15

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Raymond J. Cadorette Agent for VMS
Signature:
Month: 07 Day: 21 Year: 15

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name:
Signature:
Month: 07 Day: 21 Year: 15

Transporter 2 Printed/Typed Name:
Signature:
Month: Day: Year:

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number:
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name:
Signature:
Month: Day: Year:

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

GENERATOR'S INITIAL COPY

APPENDIX C

GROUNDWATER GAUGING RESULTS AND PHYSICAL PARAMETER DATA

WATER LEVEL MONITORING DATA

Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

Location	Date	Reference Elevation (Feet)	Depth to Water (Feet)	Groundwater Elevation (Feet)	Notes
AP-12-BR	05/05/15	71.32	17.50	53.82	DTB = 74.60'
AP-12-BR	05/29/15	71.32	18.51	52.81	DTB = 74.03'
AP-12-DO	05/05/15	71.30	11.65	59.65	DTB = 49.30'
AP-12-DO	05/29/15	71.30	12.68	58.62	DTB = 49.00'
AP-13-DO	05/04/15	68.86	14.40	54.46	
AP-13-DO	05/28/15	68.86	17.54	51.32	DTB = 61.00'
AP-13-DO	06/02/15	68.86	27.92	40.94	
AP-13-DO	07/27/15	68.86	27.80	41.06	
AP-13-DO	07/28/15	68.86	28.05	40.81	
AP-13-DO	08/11/15	68.86	30.95	37.91	
AP-14-S	05/07/15	74.97	11.68	63.29	DTB = 30.03'
AP-14-S	05/26/15	74.97	12.64	62.33	DTB = 30.22'
AP-15-S	05/05/15	45.88	5.19	40.69	DTB = 13.20'
AP-15-S	05/23/15	45.88	5.71	40.17	DTB = 13.25'
AP-19	04/09/15	81.30	11.77	69.53	
AP-19	05/05/15	81.30	11.60	69.70	DTB = 25.11'
AP-19	05/20/15	81.30	12.65	68.65	DTB = 25.20'
AP-20	04/09/15	81.43	8.46	72.97	
AP-20	05/05/15	81.43	10.38	71.05	DTB = 15.94'
AP-20	05/20/15	81.43	11.50	69.93	DTB = 16.00'
AP-21	04/09/15	81.50	11.53	69.97	
AP-21	05/05/15	81.50	10.99	70.51	
AP-21	05/20/15	81.50	12.40	69.10	
AP-22	04/09/15	81.96	11.30	70.66	
AP-22	05/05/15	81.96	13.00	68.96	
AP-22	05/20/15	81.96	14.16	67.80	
AP-23-DO	05/04/15	69.46	11.70	57.76	
AP-23-DO	05/28/15	69.46	23.73	45.73	DTB = 52.03'
AP-23-DO	06/02/15	69.46	16.49	52.97	
AP-23-DO	07/28/15	69.46	20.65	48.81	
AP-23-DO	08/11/15	69.46	21.65	47.81	
AP-24-DO	05/04/15	69.56	10.70	58.86	
AP-24-DO	05/28/15	69.56	27.95	41.61	DTB = 52.50'
AP-24-DO	06/02/15	69.56	27.02	42.54	
AP-24-DO	07/27/15	69.56	29.94	39.62	
AP-24-DO	07/28/15	69.56	30.05	39.51	
AP-24-DO	08/11/15	69.56	31.10	38.46	
AP-25-DO	05/04/15	65.58	6.10	59.48	
AP-25-DO	05/29/15	65.58	7.88	57.70	DTB = 47.81'
AP-25-DO	06/02/15	65.58	0.65	64.93	
AP-25-DO	07/27/15	65.58	7.10	58.48	
AP-25-DO	07/28/15	65.58	7.10	58.48	

Feet = Measured below surface grade NM = Not Measured NA = Not Applicable

WATER LEVEL MONITORING DATA
(Continued)

Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

Location	Date	Reference Elevation (Feet)	Depth to Water (Feet)	Groundwater Elevation (Feet)	Notes
AP-25-DO	08/11/15	65.58	7.81	57.77	
AP-26-DO	04/09/15	73.99	12.91	61.08	
AP-26-DO	05/04/15	73.99	13.30	60.69	DTB = 61.10'
AP-26-DO	05/26/15	73.99	14.54	59.45	DTB = 61.50'
AP-27-DO	04/09/15	77.34	14.43	62.91	
AP-27-DO	04/20/15	77.34	13.41	63.93	
AP-27-DO	05/02/15	77.34	14.12	63.22	
AP-27-DO	05/04/15	77.34	14.10	63.24	
AP-27-DO	05/05/15	77.34	14.40	62.94	DTB = 57.80'
AP-27-DO	05/27/15	77.34	15.99	61.35	DTB = 57.81'
AP-27-DO	06/02/15	77.34	16.06	61.28	
AP-27-DO	06/04/15	77.34	16.15	61.19	
AP-27-DO	07/27/15	77.34	17.20	60.14	
AP-27-DO	07/28/15	77.34	17.15	60.19	
AP-27-DO	08/11/15	77.34	17.60	59.74	
AP-30R-DO	05/29/15	NA	NM	NA	
AP-30R-DO	06/02/15	NA	NM	NA	
AP-30R-DO	07/29/15	NA	23.05	NA	
AP-32-DO	04/09/15	NA	13.69	NA	
AP-33-DO	05/04/15	66.49	7.80	58.69	
AP-33-DO	05/28/15	66.49	8.63	57.86	DTB = 37.19'
AP-33-DO	06/02/15	66.49	8.86	57.63	
AP-33-DO	07/27/15	66.49	8.72	57.77	
AP-33-DO	07/28/15	66.49	8.81	57.68	
AP-33-DO	08/11/15	66.49	9.40	57.09	
AP-34-DO	05/04/15	68.33	9.60	58.73	
AP-34-DO	05/28/15	68.33	16.35	51.98	DTB = 37.00'
AP-34-DO	06/02/15	68.33	12.19	56.14	
AP-34-DO	07/27/15	68.33	15.85	52.48	
AP-34-DO	07/28/15	68.33	16.10	52.23	
AP-34-DO	08/11/15	68.33	16.05	52.28	
AP-35-DO	05/04/15	68.92	10.20	58.72	
AP-35-DO	05/28/15	68.92	11.48	57.44	DTB = 36.27'
AP-35-DO	06/02/15	68.92	10.39	58.53	
AP-35-DO	07/28/15	68.92	11.26	57.66	
AP-35-DO	08/11/15	68.92	10.95	57.97	
B-2	04/20/15	80.40	2.27	78.13	
B-2	05/02/15	80.40	2.27	78.13	
B-2	05/04/15	80.40	2.21	78.19	
B-2	05/09/15	80.40	2.37	78.03	
B-2	05/17/15	80.40	2.45	77.95	
B-2	05/22/15	80.40	2.58	77.82	
B-2	06/02/15	80.40	NM	NA	Well covered with water.
B-2	06/04/15	80.40	2.16	78.24	

Feet = Measured below surface grade NM = Not Measured NA = Not Applicable

WATER LEVEL MONITORING DATA
(Continued)

Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

Location	Date	Reference Elevation (Feet)	Depth to Water (Feet)	Groundwater Elevation (Feet)	Notes
B-2	07/27/15	80.40	2.31	78.09	
BR-1_ZONE3	05/19/15	58.60	9.73	48.87	DTB = 102.40'
BR-3_ZONE1	05/19/15	62.36	18.89	43.47	DTB = 72.00'
BR-3_ZONE2	05/19/15	62.36	22.25	40.11	DTB = 197.79'
BR-3_ZONE3	05/19/15	62.36	23.50	38.86	DTB = 164.17'
BR-5_ZONE3	05/20/15	51.04	9.10	41.94	DTB = 16.80'
BR-6_ZONE3	05/22/15	38.33	5.21	33.12	DTB = 38.50'
BR-7_ZONE1	05/19/15	35.15	0.00	35.15	
BR-7_ZONE2	05/19/15	35.15	0.00	35.15	
BR-7_ZONE3	05/19/15	35.15	0.00	35.15	
BW-05	05/04/15	65.17	6.90	58.27	DTB = 10.30'
BW-05	05/27/15	65.17	8.62	56.55	DTB = 10.41'
BW-08	05/04/15	65.44	7.30	58.14	DTB = 14.70'
BW-08	05/27/15	65.44	8.13	57.31	DTB = 14.74'
CL02-BR	05/04/15	62.79	6.09	56.70	DTB = 81.10'
CL02-BR	05/19/15	62.79	6.98	55.81	DTB = 78.94'
CL02-DO	04/09/15	62.76	1.76	61.00	
CL03-DO	04/09/15	50.40	7.07	43.33	
CL03-DO	05/04/15	50.40	9.21	41.19	DTB = 76.65'
CL03-DO	05/20/15	50.40	9.72	40.68	DTB = 76.36'
CL03-S	05/04/15	50.21	9.07	41.14	DTB = 19.06'
CL03-S	05/20/15	50.21	9.55	40.66	DTB = 18.10'
CL04-BR	05/04/15	47.78	6.29	41.49	DTB = 55.50'
CL04-BR	05/20/15	47.78	7.00	40.78	DTB = 55.45'
CL04-DO	05/04/15	47.42	5.85	41.57	DTB = 28.33'
CL04-DO	05/20/15	47.42	6.50	40.92	DTB = 28.35'
CL05-DOA	05/05/15	70.26	11.70	58.56	DTB = 48.95'
CL05-DOA	05/29/15	70.26	13.68	56.58	DTB = 56.33'
CL06-BR	05/04/15	58.41	9.28	49.13	DTB = 69.60'
CL06-BR	05/19/15	58.41	10.11	48.30	DTB = 69.60'
CL06-DO	05/04/15	58.75	9.38	49.37	DTB = 42.12'
CL06-DO	05/19/15	58.75	10.14	48.61	DTB = 42.05'
CL06-S	05/04/15	58.62	8.51	50.11	
CL06-S	05/19/15	58.62	8.82	49.80	

Feet = Measured below surface grade NM = Not Measured NA = Not Applicable

WATER LEVEL MONITORING DATA
(Continued)

Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

Location	Date	Reference Elevation (Feet)	Depth to Water (Feet)	Groundwater Elevation (Feet)	Notes
CL08-BR_ZONE1	05/20/15	48.28	7.82	40.46	DTB = 158.15'
CL08-BR_ZONE2	05/20/15	48.28	6.20	42.08	DTB = 99.50'
CL08-BR_ZONE3	05/20/15	48.28	5.99	42.29	DTB = 69.00'
CL08-DO	05/04/15	47.85	5.81	42.04	DTB = 53.60'
CL08-DO	05/20/15	47.85	6.42	41.43	DTB = 52.63'
CL08-S	05/04/15	47.62	5.46	42.16	
CL08-S	05/22/15	47.62	5.22	42.40	
CL09-BR_ZONE3	05/19/15	47.65	3.80	43.85	DTB = 78.87'
CL09-S	05/04/15	47.08	4.68	42.40	
CL09-S	05/19/15	47.08	5.28	41.80	
CL10-BR	05/05/15	72.28	4.18	68.10	
CL10-BR	05/20/15	72.28	5.20	67.08	DTB = 45.60'
CL10-DO	04/09/15	72.54	3.93	68.61	
CL10-DO	05/05/15	72.54	4.20	68.34	
CL10-DO	05/20/15	72.54	5.40	67.14	
CL10-S	05/05/15	72.54	4.28	68.26	DTB = 13.45'
CL10-S	05/20/15	72.54	4.70	67.84	DTB = 13.20'
CL11-DO	05/05/15	68.72	19.00	49.72	DTB = 50.50'
CL11-DO	05/23/15	68.72	20.03	48.69	DTB = 50.52'
CL11-S	05/05/15	68.46	15.50	52.96	DTB = 24.35'
CL11-S	05/23/15	68.46	16.70	51.76	DTB = 24.39'
GZ-4	05/05/15	45.13	5.40	39.73	DTB = 12.02'
GZ-4	05/19/15	45.13	5.92	39.21	DTB = 12.02'
MW-002	05/22/15	80.08	9.70	70.38	
MW-003R	05/04/15	61.28	2.58	58.70	DTB = 31.19'
MW-003R	05/19/15	61.28	3.90	57.38	DTB = 30.86'
MW-005R	05/04/15	62.96	4.06	58.90	DTB = 18.31'
MW-005R	05/19/15	62.96	5.00	57.96	DTB = 18.00'
MW-009	05/04/15	63.48	4.90	58.58	
MW-009	05/29/15	63.48	5.73	57.75	DTB = 21.72'
MW-009A	05/05/15	63.86	5.40	58.46	DTB = 14.30'
MW-009A	05/27/15	63.86	5.41	58.45	DTB = 14.55'
MW-013	05/05/15	69.11	10.30	58.81	DTB = 42.80'
MW-013	05/22/15	69.11	11.47	57.64	DTB = 42.68'
MW-014A	05/05/15	75.59	14.40	61.19	DTB = 59.80'
MW-014A	05/22/15	75.59	15.80	59.79	DTB = 59.79'

Feet = Measured below surface grade NM = Not Measured NA = Not Applicable

WATER LEVEL MONITORING DATA
(Continued)

Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

Location	Date	Reference Elevation (Feet)	Depth to Water (Feet)	Groundwater Elevation (Feet)	Notes
MW-030	05/22/15	79.87	14.32	65.55	
MW-031	05/22/15	78.01	19.62	58.39	
MW-032	04/09/15	82.44	5.76	76.68	
MW-033B	05/05/15	91.16	3.50	87.66	DTB = 25.80'
MW-033B	05/20/15	91.16	5.75	85.41	DTB = 25.80'
MW-036	05/04/15	52.64	11.53	41.11	DTB = 52.82'
MW-036	05/20/15	52.64	12.03	40.61	DTB = 52.75'
MW-2_32-TOZER	04/09/15	70.83	4.89	65.94	
MW-2_32-TOZER	05/04/15	70.83	7.91	62.92	DTB = 18.24'
MW-2_32-TOZER	05/20/15	70.83	6.15	64.68	DTB = 18.30'
MW-4_32-TOZER	05/04/15	54.54	6.80	47.74	
MW-4_32-TOZER	05/22/15	54.54	8.09	46.45	
MW-5_32-TOZER	05/04/15	54.61	6.20	48.41	
MW-5_32-TOZER	05/22/15	54.61	6.83	47.78	
OB-04-DO	05/04/15	54.35	12.67	41.68	DTB = 68.00'
OB-04-DO	05/20/15	54.35	13.18	41.17	DTB = 67.87'
OB-04-S	05/04/15	53.98	12.81	41.17	
OB-04-S	05/22/15	53.98	13.42	40.56	
OB-05-BR	05/04/15	49.01	7.88	41.13	DTB = 105.24'
OB-05-BR	05/20/15	49.01	8.63	40.38	DTB = 105.23'
OB-05-DO	05/04/15	49.06	8.11	40.95	DTB = 82.20'
OB-05-DO	05/20/15	49.06	8.60	40.46	DTB = 82.20'
OB-06-BR	05/04/15	48.70	7.40	41.30	DTB = 100.90'
OB-06-BR	05/22/15	48.70	7.98	40.72	DTB = 100.83'
OB-06-DO	05/04/15	49.21	7.98	41.23	DTB = 66.45'
OB-06-DO	05/22/15	49.21	8.51	40.70	DTB = 66.47'
OB-08-DO	05/05/15	38.29	-0.01	38.30	DTB = 78.80'
OB-08-DO	05/19/15	38.29	-0.01	38.30	DTB = 78.82'
OB-09-BR	05/04/15	65.25	8.70	56.55	DTB = 118.33'
OB-09-BR	05/27/15	65.25	9.77	55.48	DTB = 119.74'
OB-09-DO	05/04/15	65.11	8.65	56.46	DTB = 93.10'
OB-09-DO	05/27/15	65.11	9.71	55.40	DTB = 93.05'
OB-09-S	05/04/15	65.22	7.10	58.12	
OB-09-S	05/29/15	65.22	7.71	57.51	DTB = 21.05'
OB-09-S	07/27/15	65.22	7.45	57.77	
OB-10-BR	05/06/15	71.04	17.38	53.66	DTB = 74.13'
OB-10-BR	05/23/15	71.04	18.18	52.86	DTB = 73.90'

Feet = Measured below surface grade NM = Not Measured NA = Not Applicable

WATER LEVEL MONITORING DATA
(Continued)

Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

Location	Date	Reference Elevation (Feet)	Depth to Water (Feet)	Groundwater Elevation (Feet)	Notes
OB-10-S	05/06/15	70.91	9.50	61.41	DTB = 30.03'
OB-10-S	05/23/15	70.91	10.38	60.53	DTB = 30.10'
OB-11-BR	05/06/15	75.37	21.01	54.36	DTB = 87.01'
OB-11-BR	05/22/15	75.37	21.92	53.45	DTB = 87.15'
OB-11-DO	05/06/15	75.50	18.84	56.66	DTB = 60.76'
OB-11-DO	05/22/15	75.50	20.13	55.37	DTB = 60.85'
OB-12-BR	04/09/15	73.67	18.28	55.39	
OB-12-DO	04/09/15	73.54	13.50	60.04	
OB-12-DO	05/06/15	73.54	14.90	58.64	DTB = 49.25'
OB-12-DO	05/26/15	73.54	15.74	57.80	DTB = 48.80'
OB-14-DO	05/05/15	75.05	12.75	62.30	DTB = 56.40'
OB-14-DO	05/22/15	75.05	13.69	61.36	DTB = 56.44'
OB-15-S	05/04/15	63.26	4.70	58.56	
OB-15-S	05/29/15	63.26	6.09	57.17	DTB = 14.32'
OB-15-S	07/27/15	63.26	5.40	57.86	
OB-17-BR	05/04/15	49.19	4.36	44.83	DTB = 96.70'
OB-17-BR	05/19/15	49.19	5.59	43.60	DTB = 96.70'
OB-17-DO	05/04/15	48.86	5.64	43.22	DTB = 42.25'
OB-17-DO	05/19/15	48.86	6.65	42.21	DTB = 42.25'
OB-18-DO	05/05/15	45.10	4.12	40.98	DTB = 24.75'
OB-18-DO	05/23/15	45.10	4.67	40.43	DTB = 24.87'
OB-18-S	05/05/15	44.98	4.33	40.65	DTB = 12.21'
OB-18-S	05/23/15	44.98	4.91	40.07	DTB = 12.26'
OB-19-DO	04/09/15	74.28	14.02	60.26	
OB-19-DO	05/04/15	74.28	15.25	59.03	DTB = 57.80'
OB-19-DO	05/26/15	74.28	16.42	57.86	DTB = 56.96'
OB-19-S	05/04/15	73.96	7.80	66.16	DTB = 33.75'
OB-19-S	05/23/15	73.96	9.48	64.48	DTB = 33.71'
OB-20-BR	05/05/15	43.85	2.95	40.90	DTB = 95.65'
OB-20-BR	05/19/15	43.85	3.45	40.40	DTB = 95.88'
OB-20-DO	05/05/15	43.98	3.17	40.81	DTB = 75.50'
OB-20-DO	05/19/15	43.98	3.58	40.40	DTB = 76.11'
OB-23-BR	05/04/15	56.48	8.64	47.84	DTB = 85.01'
OB-23-BR	05/19/15	56.48	9.46	47.02	DTB = 84.14'
OB-25-BR	04/09/15	74.26	25.17	49.09	
OB-25-BR	05/04/15	74.26	25.20	49.06	
OB-25-BR	05/26/15	74.26	25.89	48.37	DTB = 91.02'

Feet = Measured below surface grade NM = Not Measured NA = Not Applicable

WATER LEVEL MONITORING DATA
(Continued)

Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

Location	Date	Reference Elevation (Feet)	Depth to Water (Feet)	Groundwater Elevation (Feet)	Notes
OB-25-DO	04/09/15	74.52	20.41	54.11	
OB-25-DO	05/04/15	74.52	21.70	52.82	
OB-25-DO	05/29/15	74.52	23.72	50.80	DTB = 68.81'
OB-25-DO	07/27/15	74.52	23.01	51.51	
OB-25-DO	07/29/15	74.52	23.00	51.52	
OB-25-DO	08/11/15	74.52	23.30	51.22	
OB-26-BR	05/04/15	74.44	20.13	54.31	DTB = 94.00'
OB-26-BR	05/23/15	74.44	20.15	54.29	DTB = 93.97'
OB-26-DO	05/04/15	74.48	13.70	60.78	DTB = 58.80'
OB-26-DO	05/23/15	74.48	15.24	59.24	DTB = 59.73'
OB-27-BR	04/09/15	71.68	24.82	46.86	
OB-27-BR	05/06/15	71.68	26.22	45.46	
OB-27-BR	05/23/15	71.68	27.24	44.44	
OB-28-BR	05/04/15	74.35	20.60	53.75	DTB = 91.10'
OB-28-BR	05/23/15	74.35	21.74	52.61	DTB = 90.73'
OB-32-DO	05/06/15	75.70	11.74	63.96	
OB-32-DO	05/26/15	75.70	12.55	63.15	DTB = 16.32'
OB-34-DO	04/09/15	75.10	13.55	61.55	
OB-34-DO	05/06/15	75.10	15.73	59.37	DTB = 59.05'
OB-34-DO	05/22/15	75.10	16.73	58.37	DTB = 59.13'
OB-35-DO	04/09/15	81.41	11.14	70.27	
OB-35-DO	04/20/15	81.41	9.99	71.42	
OB-35-DO	05/02/15	81.41	10.44	70.97	
OB-35-DO	05/04/15	81.41	10.39	71.02	
OB-35-DO	05/05/15	81.41	10.12	71.29	DTB = 48.72'
OB-35-DO	05/27/15	81.41	11.32	70.09	
OB-35-DO	06/02/15	81.41	11.19	70.22	
OB-35-DO	06/04/15	81.41	11.04	70.37	
OB-35-DO	07/27/15	81.41	12.30	69.11	
OB-35-DO	07/29/15	81.41	12.30	69.11	
OB-36-DO	05/05/15	75.92	17.42	58.50	
OB-36-DO	05/26/15	75.92	18.39	57.53	
OB-37-DO	05/05/15	75.86	16.01	59.85	
OB-37-DO	05/26/15	75.86	25.69	50.17	DTB = 62.00'
OB-38-DO	05/05/15	77.45	7.40	70.05	DTB = 45.40'
OB-38-DO	05/22/15	77.45	8.48	68.97	DTB = 45.36'
OB-39-DO	04/09/15	79.01	16.92	62.09	
OB-39-DO	05/22/15	79.01	17.26	61.75	
OB-40-DO	05/22/15	80.26	18.02	62.24	

Feet = Measured below surface grade NM = Not Measured NA = Not Applicable

WATER LEVEL MONITORING DATA
(Continued)

Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

Location	Date	Reference Elevation (Feet)	Depth to Water (Feet)	Groundwater Elevation (Feet)	Notes
OB-41-S	05/05/15	33.26	3.95	29.31	DTB = 14.30'
OB-41-S	05/22/15	33.26	4.10	29.16	DTB = 14.37'
OB-42-S	05/04/15	51.40	5.40	46.00	DTB = 14.63'
OB-42-S	05/20/15	51.40	5.90	45.50	DTB = 14.56'
OB-43-S	05/04/15	52.58	11.75	40.83	DTB = 17.03'
OB-43-S	05/20/15	52.58	12.21	40.37	DTB = 16.95'
OB-44-S	04/09/15	81.49	5.25	76.24	
OB-44-S	04/20/15	81.49	6.91	74.58	
OB-44-S	05/02/15	81.49	6.35	75.14	
OB-44-S	05/04/15	81.49	6.30	75.19	
OB-44-S	05/09/15	81.49	6.40	75.09	
OB-44-S	05/28/15	81.49	7.02	74.47	DTB = 18.77'
OB-44-S	06/02/15	81.49	8.99	72.50	
OB-44-S	06/04/15	81.49	7.99	73.50	
OB-44-S	07/27/15	81.49	7.25	74.24	
OB-44-S	07/29/15	81.49	7.25	74.24	
OB-45-DO	04/09/15	76.48	12.88	63.60	
OB-45-DO	05/05/15	76.48	13.10	63.38	DTB = 40.95'
OB-45-DO	05/22/15	76.48	15.04	61.44	DTB = 49.40'
OB-45-S	04/20/15	76.57	8.24	68.33	
OB-45-S	05/02/15	76.57	8.68	67.89	
OB-45-S	05/04/15	76.57	8.60	67.97	
OB-45-S	05/05/15	76.57	8.93	67.64	DTB = 14.80'
OB-45-S	05/22/15	76.57	10.86	65.71	DTB = 14.82'
OB-45-S	06/02/15	76.57	11.23	65.34	
OB-45-S	06/04/15	76.57	9.44	67.13	
OB-45-S	07/27/15	76.57	11.96	64.61	
OB-45-S	07/28/15	76.57	11.80	64.77	
OB-45-S	08/11/15	76.57	12.50	64.07	
OB-46-S	04/20/15	NA	1.40	NA	
OB-46-S	05/02/15	77.24	1.59	75.65	
OB-46-S	05/04/15	77.24	1.65	75.59	
OB-46-S	05/09/15	77.24	1.74	75.50	
OB-46-S	05/28/15	77.24	2.32	74.92	DTB = 14.99'
OB-46-S	06/02/15	77.24	2.02	75.22	
OB-46-S	06/04/15	77.24	1.53	75.71	
OB-46-S	07/27/15	77.24	1.97	75.27	
OB-46-S	07/28/15	77.24	6.00	71.24	
OB-46-S	08/11/15	77.24	2.60	74.64	
OB-47-S	04/20/15	NA	12.49	NA	
OB-47-S	05/02/15	78.54	12.95	65.59	
OB-47-S	05/04/15	78.54	12.93	65.61	
OB-47-S	05/09/15	78.54	14.80	63.74	
OB-47-S	05/29/15	78.54	22.24	56.30	DTB = 24.60'

Feet = Measured below surface grade NM = Not Measured NA = Not Applicable

WATER LEVEL MONITORING DATA
(Continued)

Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

Location	Date	Reference Elevation (Feet)	Depth to Water (Feet)	Groundwater Elevation (Feet)	Notes
OB-47-S	06/02/15	78.54	22.37	56.17	
OB-47-S	06/04/15	78.54	22.11	56.43	
OB-47-S	07/27/15	78.54	22.73	55.81	
OB-47-S	07/28/15	78.54	22.80	55.74	
OB-47-S	08/11/15	78.54	23.10	55.44	
OB-48-S	04/20/15	NA	13.19	NA	
OB-48-S	05/02/15	75.70	15.26	60.44	
OB-48-S	05/04/15	75.70	15.24	60.46	
OB-48-S	05/06/15	75.70	16.80	58.90	
OB-48-S	05/29/15	75.70	Dry	NA	DTB = 19.54'
OB-48-S	06/02/15	75.70	Dry	NA	
OB-48-S	06/04/15	75.70	Dry	NA	DTB = 19.56'
OB-48-S	07/27/15	75.70	Dry	NA	
OB-48-S	07/28/15	75.70	Dry	NA	
P-09R	05/05/15	37.86	3.93	33.93	DTB = 4.51'
P-09R	05/19/15	37.86	4.16	33.70	DTB = 4.48'
P-11R	05/05/15	47.92	6.48	41.44	DTB = 9.54'
P-11R	05/19/15	47.92	6.95	40.97	
P-19A	05/05/15	47.51	7.78	39.73	DTB = 10.38'
P-19A	05/19/15	47.51	8.52	38.99	DTB = 10.41'
P-20R	05/05/15	42.56	2.04	40.52	DTB = 11.10'
P-20R	05/19/15	42.56	2.55	40.01	DTB = 11.11'
RW-01_MW-18	05/05/15	63.32	9.00	54.32	
RW-01_MW-18	05/29/15	63.32	10.03	53.29	DTB = 38.48'
RW-01_MW-18	06/02/15	63.32	4.71	58.61	
RW-01_MW-18	07/28/15	63.32	10.00	53.32	
RW-01_MW-18	08/11/15	63.32	10.51	52.81	
RW-03	07/28/15	60.80	8.40	52.40	
RW-03	08/11/15	60.80	8.25	52.55	
RW-22	05/05/15	75.15	21.50	53.65	DTB = 105.75'
RW-22	05/22/15	75.15	22.30	52.85	DTB = 104.95'
W-1	05/05/15	51.37	4.80	46.57	DTB = 11.88'
W-1	05/22/15	51.37	4.86	46.51	

Feet = Measured below surface grade NM = Not Measured NA = Not Applicable

GROUNDWATER PHYSICAL PARAMETER DATA

Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

Site ID	Date	Color	ORP (mV)	pH	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)
AP-13-DO	06/02/15	White	149.9	4.80	0.803	2.29
AP-13-DO	07/27/15	White	--	--	--	--
AP-19	04/09/15	Clear	23.9	7.40	0.163	5.19
AP-20	04/09/15	Clear	289.6	7.65	0.202	6.45
AP-21	04/09/15	Dark Purple	--	--	--	--
AP-21	05/20/15	Purple	--	--	--	--
AP-22	04/09/15	Dark Purple	--	--	--	--
AP-22	05/20/15	Purple	--	--	--	--
AP-23-DO	06/02/15	White	-4.4	5.63	1.679	0.27
AP-23-DO	07/28/15	White	--	--	--	--
AP-24-DO	06/02/15	White	24.1	5.12	0.588	0.26
AP-24-DO	07/27/15	White	--	--	--	--
AP-25-DO	06/02/15	Clear	207.4	9.18	0.043	11.05
AP-25-DO	07/27/15	Clear	13.5	7.08	0.109	3.40
AP-26-DO	04/09/15	Clear	62.1	7.15	0.321	6.19
AP-27-DO	04/09/15	Clear	224.1	8.23	0.925	0.50
AP-27-DO	04/20/15	Clear	18.6	8.20	1.503	0.24
AP-27-DO	05/02/15	Clear	110.6	8.45	1.107	0.99
AP-27-DO	05/04/15	Clear	100.1	7.99	0.953	0.63
AP-27-DO	06/02/15	Clear	116.7	8.63	0.857	0.55
AP-27-DO	06/04/15	Clear	-67.9	8.04	0.815	0.66
AP-27-DO	07/27/15	Clear	39.1	7.78	0.975	0.56
AP-30R-DO	06/02/15	Clear	101.6	7.14	5.214	11.50
AP-30R-DO	07/29/15	Clear	92.5	6.69	6.024	17.27
AP-32-DO	04/09/15	Light Pink	--	--	--	--
AP-32-DO	05/26/15	Purple	--	--	--	--
AP-33-DO	06/02/15	Clear	219.7	7.41	0.085	10.24
AP-33-DO	07/27/15	Clear	-36.7	5.78	1.336	0.74
AP-34-DO	06/02/15	White	-11.8	5.35	1.600	0.57
AP-34-DO	07/27/15	White	--	--	--	--
AP-35-DO	06/02/15	Clear	74.0	5.81	0.026	9.26
AP-35-DO	07/28/15	Clear	-64.1	5.78	1.592	0.62
B-2	04/20/15	Clear	-195.7	8.72	6.013	0.60
B-2	05/02/15	Clear	-100.4	7.72	4.245	0.48
B-2	05/04/15	Clear	-77.3	7.54	4.635	1.1
B-2	05/09/15	Clear	-12.6	8.27	3.622	0.30
B-2	05/17/15	Clear	-113.5	7.61	4.017	0.58
B-2	06/02/15	Clear	--	--	--	--
B-2	06/04/15	Clear	-82.8	7.12	1.741	0.41
B-2	07/27/15	Clear	-21.3	6.50	0.394	0.55
CL02-DO	04/09/15	Clear	72.6	7.02	0.492	5.05
CL03-DO	04/09/15	Clear	100.8	7.63	0.280	0.85

NOTES: -- = Not Analyzed
mV=millivolts

ORP= Oxidation reduction potential
S/m= Siemans per meter

Deg.C= Degrees Celcius

GROUNDWATER PHYSICAL PARAMETER DATA

Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

Site ID	Date	Color	ORP (mV)	pH	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)
CL03-DO	05/20/15	Purple at bottom 20'.	--	--	--	--
CL10-DO	04/09/15	Pink	--	--	--	--
CL10-DO	05/20/15	Light Purple	--	--	--	--
MW-013	05/22/15	Purple at bottom 15'.	--	--	--	--
MW-032	04/09/15	Clear	-20.6	8.40	0.162	6.10
MW-2_32-TOZER	04/09/15	Clear	5.2	7.19	3.052	0.34
OB-09-S	07/27/15	Clear	-79.9	6.37	2.290	0.48
OB-12-BR	04/09/15	Clear	-8.7	9.89	0.274	0.80
OB-12-DO	04/09/15	Dark Purple	--	--	--	--
OB-12-DO	05/06/15	Light Pink	--	--	--	--
OB-15-S	07/27/15	Clear	-33.7	6.19	1.311	0.61
OB-19-DO	04/09/15	Clear	10.3	7.57	0.644	1.46
OB-25-BR	04/09/15	Dark Purple	--	--	--	--
OB-25-BR	05/04/15	Purple	--	--	--	--
OB-25-DO	04/09/15	Clear	61.4	8.04	0.609	6.26
OB-25-DO	07/27/15	Clear	102.6	7.41	0.443	2.95
OB-27-BR	04/09/15	Dark Purple	--	--	--	--
OB-27-BR	05/06/15	Light Purple	--	--	--	--
OB-32-DO	05/06/15	Light Purple	--	--	--	--
OB-32-DO	05/26/15	Purple	--	--	--	--
OB-34-DO	04/09/15	Light Purple	--	--	--	--
OB-35-DO	04/09/15	Dark Purple	--	--	--	--
OB-35-DO	04/20/15	Pink	--	--	--	--
OB-35-DO	05/02/15	Clear	408.7	8.12	0.371	2.79
OB-35-DO	05/04/15	Light Purple/Pink	--	--	--	--
OB-35-DO	05/05/15	Light Pink	--	--	--	--
OB-35-DO	05/27/15	Very Pale Purple	--	--	--	--
OB-35-DO	06/02/15	Clear	255.8	8.04	0.370	5.30
OB-35-DO	06/04/15	Clear	1.4	7.97	0.394	3.49
OB-35-DO	07/29/15	Clear	22.6	8.72	0.478	2.29
OB-36-DO	05/05/15	Light Pink	--	--	--	--
OB-36-DO	05/26/15	Light Purple	--	--	--	--
OB-37-DO	05/05/15	Purple	--	--	--	--
OB-39-DO	04/09/15	Clear	250.4	8.62	0.233	0.80
OB-44-S	04/09/15	Clear	48.3	7.61	0.501	2.41
OB-44-S	04/20/15	Clear	24.3	7.90	0.494	2.68
OB-44-S	05/02/15	Clear	65.6	8.55	0.509	1.83
OB-44-S	05/04/15	Clear	379.9	8.01	0.604	3.97
OB-44-S	05/09/15	Clear	-20.4	7.67	0.466	1.69
OB-44-S	06/02/15	Clear	25.3	7.20	0.548	3.39
OB-44-S	06/04/15	Clear	11.8	7.39	0.531	2.07
OB-44-S	07/29/15	Clear	-35.4	6.98	0.618	1.55
OB-45-DO	04/09/15	Clear	122.7	8.44	0.570	0.72

NOTES: -- = Not Analyzed
mV=millivolts
ORP= Oxidation reduction potential
S/m= Siemans per meter
Deg.C= Degrees Celcius

GROUNDWATER PHYSICAL PARAMETER DATA

Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

Site ID	Date	Color	ORP (mV)	pH	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)
OB-45-S	04/20/15	Clear	13.8	7.97	0.419	11.47
OB-45-S	05/02/15	Clear	304.6	7.28	0.404	7.76
OB-45-S	05/04/15	Clear	18.61	7.33	0.501	6.29
OB-45-S	06/02/15	Clear	159.0	7.60	0.361	7.34
OB-45-S	06/04/15	Clear	141.4	7.36	0.362	6.35
OB-45-S	07/27/15	Clear	104.5	6.53	0.436	5.60
OB-46-S	04/20/15	Clear	52.8	10.20	4.212	0.43
OB-46-S	05/02/15	Clear	94.6	9.61	4.525	0.32
OB-46-S	05/04/15	Clear	-19.8	10.37	5.616	1.03
OB-46-S	05/09/15	Clear	35.1	8.67	4.988	0.61
OB-46-S	06/02/15	Clear	62.9	9.00	0.098	9.45
OB-46-S	06/04/15	Clear	-98.5	8.99	5.638	0.21
OB-46-S	07/27/15	Clear	-76.8	7.15	6.412	1.22
OB-47-S	04/20/15	Clear	-34.1	7.54	0.452	6.36
OB-47-S	05/02/15	Clear	323.5	7.04	0.397	4.86
OB-47-S	05/04/15	Clear	163.4	7.13	0.411	4.01
OB-47-S	05/09/15	Clear	51.8	6.96	0.364	6.66
OB-47-S	06/02/15	Clear	178.3	6.83	0.435	4.11
OB-47-S	06/04/15	Clear	43.9	7.47	0.421	2.70
OB-47-S	07/27/15	Clear	103.8	6.51	0.505	7.24
OB-48-S	04/20/15	Clear	9.4	9.36	0.328	4.96
OB-48-S	05/02/15	Clear	296.3	8.17	0.414	5.01
OB-48-S	05/04/15	Clear	92.6	7.90	0.392	5.53
RW-01_MW-18	06/02/15	Clear	36.0	6.14	0.221	2.50
UNNAMED_STREAM	04/09/15	Clear	--	--	--	--

NOTES: -- = Not Analyzed
mV=millivolts

ORP= Oxidation reduction potential
S/m= Siemans per meter

Deg.C= Degrees Celcius

APPENDIX D

LABORATORY ANALYTICAL REPORTS

Data Usability Worksheet

Project Name : Varian Medical Systems, Inc

Job Number :

Prepared By: Jennifer Gailey

Date : 10/16/2015

Matrix: Indoor air and Soil Vapor

Analyte Group : Volatile Organics

Analytical Method : TO-15

Completed MADEP CAM Certification Form included: Yes

Laboratory ID No. : 2066607

Chain of Custody included in Data Package ? Yes

Is it Complete ? Yes

Sample Collection Date	Analysis	Allowable Holding Time for extraction	Allowable Holding Time for analysis	Analysis Date
4/16/15	TO-15	14 days	10 days	4/21/2015

Sample temperature within QC limits: NA

Surrogate Recovery

Are all % recoveries within the allowable range ? Yes

If No, List sample ID where range was exceeded: NA

MS/MSD

Are all MS/MSD sample recoveries within the QC limits ? NA

If No, list sample ID, date and compound where limit was exceeded: NA

Laboratory Control Samples

Are all laboratory control sample recoveries within the QC limits ? Yes

If no, list sample ID where range was exceeded: NA

Equipment Field Blank ID : NA

Trip Blank ID : NA

Method Blank: TO-15 4/29/2015

Were any compounds identified in the method blank, field blank or trip blank above detection limits ? No

If so, list Sample ID/Compound/Concentration/Units: N/A

Notes:

Reviewed by: Catherine Joe Mainville 10/16/2015

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

April 28, 2015

Mr. Ray Cadorette
CB& I - Canton - MA
150 Royall Street
Canton, MA 02021

Certificate of Analysis

Project Name:	**Varian Air Samples**	Workorder:	**2066607**
Purchase Order:	**853583-000 OP**	Workorder ID:	**TO-15 testing**

Dear Mr. Cadorette:

Enclosed are the analytical results for samples received by the laboratory on Tuesday, April 21, 2015.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Mrs. Vicki A. Forney (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

This laboratory report may not be reproduced, except in full, without the written approval of ALS Environmental.

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

CC: Ms. Cathy Mainville

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Vicki Forney

Mrs. Vicki A. Forney
Project Coordinator

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

SAMPLE SUMMARY

Workorder: 2066607 TO-15 testing

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2066607001	32 Tozer - SV3	Air	4/16/2015 12:15	4/21/2015 08:50	Collected by Client
2066607002	32 Tozer - 1	Air	4/16/2015 16:15	4/21/2015 08:50	Collected by Client
2066607003	32 Tozer - SV5	Air	4/16/2015 12:22	4/21/2015 08:50	Collected by Client
2066607004	32 Tozer - 3	Air	4/16/2015 16:10	4/21/2015 08:50	Collected by Client
2066607005	32 Tozer - SV4	Air	4/16/2015 12:35	4/21/2015 08:50	Collected by Client
2066607006	32 Tozer - 2	Air	4/16/2015 16:00	4/21/2015 08:50	Collected by Client

Notes

-- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
-- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
-- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
-- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
-- The Chain of Custody document is included as part of this report.
-- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
-- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
-- Method references listed on this report beginning with the prefix “S” followed by a method number (such as S2310B-97) refer to methods from “Standard Methods for the Examination of Water and Wastewater”.

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

PROJECT SUMMARY

Workorder: 2066607 TO-15 testing

Sample Comments

Lab ID: 2066607001 **Sample ID:** 32 Tozer - SV3 **Sample Type:** SAMPLE

The reporting limits for the TO15 analytes were raised due to the dilution of the sample caused by the level of target compounds.

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ANALYTICAL RESULTS

Workorder: 2066607 TO-15 testing

Lab ID: **2066607001** Date Collected: 4/16/2015 12:15 Matrix: Air

Sample ID: **32 Tozer - SV3** Date Received: 4/21/2015 08:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS @ STP										
1,1-Dichloroethane	16		ug/m3	2	TO-15			4/28/15 03:25	ECB	A
1,1-Dichloroethene	9		ug/m3	2	TO-15			4/28/15 03:25	ECB	A
cis-1,2-Dichloroethene	1900		ug/m3	20	TO-15			4/24/15 00:10	ECB	A
trans-1,2-Dichloroethene	13		ug/m3	2	TO-15			4/28/15 03:25	ECB	A
Tetrachloroethene	54		ug/m3	3	TO-15			4/28/15 03:25	ECB	A
1,1,1-Trichloroethane	ND		ug/m3	3	TO-15			4/28/15 03:25	ECB	A
Trichloroethene	150		ug/m3	3	TO-15			4/28/15 03:25	ECB	A
Vinyl Chloride	4		ug/m3	1	TO-15			4/28/15 03:25	ECB	A
1,1-Dichloroethane	3.9		ppbv	0.50	TO-15			4/28/15 03:25	ECB	A
1,1-Dichloroethene	2.2		ppbv	0.50	TO-15			4/28/15 03:25	ECB	A
cis-1,2-Dichloroethene	470		ppbv	5.0	TO-15			4/24/15 00:10	ECB	A
trans-1,2-Dichloroethene	3.4		ppbv	0.50	TO-15			4/28/15 03:25	ECB	A
Tetrachloroethene	8.0		ppbv	0.50	TO-15			4/28/15 03:25	ECB	A
1,1,1-Trichloroethane	ND		ppbv	0.50	TO-15			4/28/15 03:25	ECB	A
Trichloroethene	27		ppbv	0.50	TO-15			4/28/15 03:25	ECB	A
Vinyl Chloride	1.6		ppbv	0.50	TO-15			4/28/15 03:25	ECB	A

Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
4-Bromofluorobenzene (S)	95		%	70 - 130	TO-15			4/28/15 03:25	ECB	A
4-Bromofluorobenzene (S)	89		%	70 - 130	TO-15			4/24/15 00:10	ECB	A

Vicki Forney

Mrs. Vicki A. Forney
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2066607 TO-15 testing

Lab ID: **2066607002** Date Collected: 4/16/2015 16:15 Matrix: Air

Sample ID: **32 Tozer - 1** Date Received: 4/21/2015 08:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS @ STP										
1,1-Dichloroethane	ND		ug/m3	0.8	TO-15			4/28/15 04:21	ECB	A
1,1-Dichloroethene	ND		ug/m3	0.8	TO-15			4/28/15 04:21	ECB	A
cis-1,2-Dichloroethene	2		ug/m3	0.8	TO-15			4/28/15 04:21	ECB	A
trans-1,2-Dichloroethene	ND		ug/m3	0.8	TO-15			4/28/15 04:21	ECB	A
Tetrachloroethene	7		ug/m3	1	TO-15			4/28/15 04:21	ECB	A
1,1,1-Trichloroethane	ND		ug/m3	1	TO-15			4/28/15 04:21	ECB	A
Trichloroethene	ND		ug/m3	1	TO-15			4/28/15 04:21	ECB	A
Vinyl Chloride	ND		ug/m3	0.5	TO-15			4/28/15 04:21	ECB	A
1,1-Dichloroethane	ND		ppbv	0.20	TO-15			4/28/15 04:21	ECB	A
1,1-Dichloroethene	ND		ppbv	0.20	TO-15			4/28/15 04:21	ECB	A
cis-1,2-Dichloroethene	0.58		ppbv	0.20	TO-15			4/28/15 04:21	ECB	A
trans-1,2-Dichloroethene	ND		ppbv	0.20	TO-15			4/28/15 04:21	ECB	A
Tetrachloroethene	1.0		ppbv	0.20	TO-15			4/28/15 04:21	ECB	A
1,1,1-Trichloroethane	ND		ppbv	0.20	TO-15			4/28/15 04:21	ECB	A
Trichloroethene	ND		ppbv	0.20	TO-15			4/28/15 04:21	ECB	A
Vinyl Chloride	ND		ppbv	0.20	TO-15			4/28/15 04:21	ECB	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
4-Bromofluorobenzene (S)	97		%	70 - 130	TO-15			4/28/15 04:21	ECB	A

Vicki Forney

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ANALYTICAL RESULTS

Workorder: 2066607 TO-15 testing

Lab ID: **2066607003** Date Collected: 4/16/2015 12:22 Matrix: Air

Sample ID: **32 Tozer - SV5** Date Received: 4/21/2015 08:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS @ STP										
1,1-Dichloroethane	2		ug/m3	0.8	TO-15			4/28/15 05:23	ECB	A
1,1-Dichloroethene	ND		ug/m3	0.8	TO-15			4/28/15 05:23	ECB	A
cis-1,2-Dichloroethene	260		ug/m3	32	TO-15			4/24/15 01:48	ECB	A
trans-1,2-Dichloroethene	2		ug/m3	0.8	TO-15			4/28/15 05:23	ECB	A
Tetrachloroethene	9		ug/m3	1	TO-15			4/28/15 05:23	ECB	A
1,1,1-Trichloroethane	ND		ug/m3	1	TO-15			4/28/15 05:23	ECB	A
Trichloroethene	28		ug/m3	1	TO-15			4/28/15 05:23	ECB	A
Vinyl Chloride	ND		ug/m3	0.5	TO-15			4/28/15 05:23	ECB	A
1,1-Dichloroethane	0.52		ppbv	0.20	TO-15			4/28/15 05:23	ECB	A
1,1-Dichloroethene	ND		ppbv	0.20	TO-15			4/28/15 05:23	ECB	A
cis-1,2-Dichloroethene	66		ppbv	8.0	TO-15			4/24/15 01:48	ECB	A
trans-1,2-Dichloroethene	0.52		ppbv	0.20	TO-15			4/28/15 05:23	ECB	A
Tetrachloroethene	1.3		ppbv	0.20	TO-15			4/28/15 05:23	ECB	A
1,1,1-Trichloroethane	ND		ppbv	0.20	TO-15			4/28/15 05:23	ECB	A
Trichloroethene	5.2		ppbv	0.20	TO-15			4/28/15 05:23	ECB	A
Vinyl Chloride	ND		ppbv	0.20	TO-15			4/28/15 05:23	ECB	A

Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
4-Bromofluorobenzene (S)	93		%	70 - 130	TO-15			4/28/15 05:23	ECB	A
4-Bromofluorobenzene (S)	89		%	70 - 130	TO-15			4/24/15 01:48	ECB	A

Vicki Forney

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ANALYTICAL RESULTS

Workorder: 2066607 TO-15 testing

Lab ID: **2066607004** Date Collected: 4/16/2015 16:10 Matrix: Air

Sample ID: **32 Tozer - 3** Date Received: 4/21/2015 08:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS @ STP										
1,1-Dichloroethane	ND		ug/m3	0.8	TO-15			4/28/15 06:14	ECB	A
1,1-Dichloroethene	ND		ug/m3	0.8	TO-15			4/28/15 06:14	ECB	A
cis-1,2-Dichloroethene	ND		ug/m3	0.8	TO-15			4/28/15 06:14	ECB	A
trans-1,2-Dichloroethene	ND		ug/m3	0.8	TO-15			4/28/15 06:14	ECB	A
Tetrachloroethene	ND		ug/m3	1	TO-15			4/28/15 06:14	ECB	A
1,1,1-Trichloroethane	ND		ug/m3	1	TO-15			4/28/15 06:14	ECB	A
Trichloroethene	ND		ug/m3	1	TO-15			4/28/15 06:14	ECB	A
Vinyl Chloride	ND		ug/m3	0.5	TO-15			4/28/15 06:14	ECB	A
1,1-Dichloroethane	ND		ppbv	0.20	TO-15			4/28/15 06:14	ECB	A
1,1-Dichloroethene	ND		ppbv	0.20	TO-15			4/28/15 06:14	ECB	A
cis-1,2-Dichloroethene	ND		ppbv	0.20	TO-15			4/28/15 06:14	ECB	A
trans-1,2-Dichloroethene	ND		ppbv	0.20	TO-15			4/28/15 06:14	ECB	A
Tetrachloroethene	ND		ppbv	0.20	TO-15			4/28/15 06:14	ECB	A
1,1,1-Trichloroethane	ND		ppbv	0.20	TO-15			4/28/15 06:14	ECB	A
Trichloroethene	ND		ppbv	0.20	TO-15			4/28/15 06:14	ECB	A
Vinyl Chloride	ND		ppbv	0.20	TO-15			4/28/15 06:14	ECB	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
4-Bromofluorobenzene (S)	95		%	70 - 130	TO-15			4/28/15 06:14	ECB	A

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ANALYTICAL RESULTS

Workorder: 2066607 TO-15 testing

Lab ID: **2066607005** Date Collected: 4/16/2015 12:35 Matrix: Air

Sample ID: **32 Tozer - SV4** Date Received: 4/21/2015 08:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS @ STP										
1,1-Dichloroethane	ND		ug/m3	0.8	TO-15			4/28/15 07:05	ECB	A
1,1-Dichloroethene	ND		ug/m3	0.8	TO-15			4/28/15 07:05	ECB	A
cis-1,2-Dichloroethene	12		ug/m3	0.8	TO-15			4/28/15 07:05	ECB	A
trans-1,2-Dichloroethene	ND		ug/m3	0.8	TO-15			4/28/15 07:05	ECB	A
Tetrachloroethene	8		ug/m3	1	TO-15			4/28/15 07:05	ECB	A
1,1,1-Trichloroethane	ND		ug/m3	1	TO-15			4/28/15 07:05	ECB	A
Trichloroethene	4		ug/m3	1	TO-15			4/28/15 07:05	ECB	A
Vinyl Chloride	0.6		ug/m3	0.5	TO-15			4/28/15 07:05	ECB	A
1,1-Dichloroethane	ND		ppbv	0.20	TO-15			4/28/15 07:05	ECB	A
1,1-Dichloroethene	ND		ppbv	0.20	TO-15			4/28/15 07:05	ECB	A
cis-1,2-Dichloroethene	3.1		ppbv	0.20	TO-15			4/28/15 07:05	ECB	A
trans-1,2-Dichloroethene	ND		ppbv	0.20	TO-15			4/28/15 07:05	ECB	A
Tetrachloroethene	1.2		ppbv	0.20	TO-15			4/28/15 07:05	ECB	A
1,1,1-Trichloroethane	ND		ppbv	0.20	TO-15			4/28/15 07:05	ECB	A
Trichloroethene	0.82		ppbv	0.20	TO-15			4/28/15 07:05	ECB	A
Vinyl Chloride	0.23		ppbv	0.20	TO-15			4/28/15 07:05	ECB	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
4-Bromofluorobenzene (S)	87		%	70 - 130	TO-15			4/24/15 03:26	ECB	A
4-Bromofluorobenzene (S)	94		%	70 - 130	TO-15			4/28/15 07:05	ECB	A

Vicki Forney

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ANALYTICAL RESULTS

Workorder: 2066607 TO-15 testing

Lab ID: **2066607006** Date Collected: 4/16/2015 16:00 Matrix: Air

Sample ID: **32 Tozer - 2** Date Received: 4/21/2015 08:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS @ STP										
1,1-Dichloroethane	ND		ug/m3	0.8	TO-15			4/28/15 07:56	ECB	A
1,1-Dichloroethene	ND		ug/m3	0.8	TO-15			4/28/15 07:56	ECB	A
cis-1,2-Dichloroethene	2		ug/m3	0.8	TO-15			4/28/15 07:56	ECB	A
trans-1,2-Dichloroethene	ND		ug/m3	0.8	TO-15			4/28/15 07:56	ECB	A
Tetrachloroethene	3		ug/m3	1	TO-15			4/28/15 07:56	ECB	A
1,1,1-Trichloroethane	ND		ug/m3	1	TO-15			4/28/15 07:56	ECB	A
Trichloroethene	ND		ug/m3	1	TO-15			4/28/15 07:56	ECB	A
Vinyl Chloride	ND		ug/m3	0.5	TO-15			4/28/15 07:56	ECB	A
1,1-Dichloroethane	ND		ppbv	0.20	TO-15			4/28/15 07:56	ECB	A
1,1-Dichloroethene	ND		ppbv	0.20	TO-15			4/28/15 07:56	ECB	A
cis-1,2-Dichloroethene	0.42		ppbv	0.20	TO-15			4/28/15 07:56	ECB	A
trans-1,2-Dichloroethene	ND		ppbv	0.20	TO-15			4/28/15 07:56	ECB	A
Tetrachloroethene	0.46		ppbv	0.20	TO-15			4/28/15 07:56	ECB	A
1,1,1-Trichloroethane	ND		ppbv	0.20	TO-15			4/28/15 07:56	ECB	A
Trichloroethene	ND		ppbv	0.20	TO-15			4/28/15 07:56	ECB	A
Vinyl Chloride	ND		ppbv	0.20	TO-15			4/28/15 07:56	ECB	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
4-Bromofluorobenzene (S)	89		%	70 - 130	TO-15			4/24/15 04:15	ECB	A
4-Bromofluorobenzene (S)	97		%	70 - 130	TO-15			4/28/15 07:56	ECB	A

Vicki Forney

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AIR ANALYSIS
CHAIN- OF- CUSTODY/FIELD TEST DATA SHEET

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT/SAMPLER.
INSTRUCTIONS ON THE BACK.

COC #: *2066607*
ALS Qu
of 1

1. CLIENT INFORMATION

Client Name/Address: CB+I
150 Sohier Rd, Canton MA 02021
Contact: Ray Caderette
Phone#: 617 589 6103
Project Name/#: PO 853583
Bill To:
TAT: [ ] Normal- Standard TAT is 10- 12 business days. [ ] Rush- TAT subject to ALS approval and surcharges.
Date Required: Approved By:
Email? [X] -Y raymond.caderette@cbi.com
Fax? [ ] -Y No.:

2. ANALYSES/METHOD REQUESTED

√ APPROPRIATE TEST CODE/ANALYTE LIST.

No.	TO-15 Analysis:	STD LIST	UST LIST	OTHER
1	√			see list below
2				
3				
4				
5				
6				
7				
8				
9				
10				

3. LABORATORY

LABORATORY CANISTER CERTIFIED BY:
GC/MS Analyst Signature:
CANISTERS PREPARED BY:
Name: Donald deMeillewais
Title: GCMS Analyst
Custody Sealed Date/Time: 4/21/15 1100
Date Shipped to Client: 4/21/15
Custody Seal #(s): 1691 & 1692 & 1693

RECEIVING INFORMATION:

	Y	N	Initial
COC Complete/Accurate?	√		
Labels Complete/Accurate?	√		
Cont. in Good Cond.?	√		
Custody Seals Present?	√		
(If present) Seals Intact?	√		
Returned in ≤ 15 days?		√	
Custody Seal #(s):			N
Courier/Tracking #:			

4. FIELD DATA SHEET

	Sample Description/Location (as it will appear on the lab report)	Sample Type- Choose one: *IA-Indoor air *AS-ambient soil *V-vapor *SS-sub-slab	Sample Date	Start Time	Stop Time	Temp Deg C	1L	6L	Canister No.	Flow Controller No.	Canister Pressure ("Hg) Start	Canister Pressure ("Hg) Stop	Canister Certification File	Canister Pressure ("Hg) Out	Canister Pressure ("Hg) In	Flow Controller Setpoint (mL/min)
1	32 Tozer-SV3	SS	4/16/15	815	1215			X	10074	A0179654-8	30+	18	21033015	-29.8	-18 10	7.0
2	32 Tozer -1	IA		816	915				11184	A0195528-1	30	21	21033015	-29.8	-20 5	10.35
3	32 Tozer-SV5	SS		822	1222				11183	7302021	30+	26	21032425	-29.8	-22 0	6.14
4	32 Tozer-3	IA		823	410				L5627	7266999	30+	7	21033015	-29.8	-5 5	10.30
5	32 Tozer-SV4	SS		835	1235				10036	A0195528-9	30	8	21032425	-29.8	-2.8	6.1
6	32 Tozer-2	IA	√	836	400			√	H4040	7303487	28	5	21032425	-29.5	-4 8	10.32
7																
8																
9																
10																

5. SAMPLED BY (Please Print): Pernilla Haley

LOGGED BY(signature): DATE: 4/23/15 TIME: 1818

REVIEWED BY(signature): DATE: TIME:

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 Pernilla Haley	4/16/15	500	2 ALS	4/21/15	0855
3			4		
5			6		
7			8		
9			10		

6. PROJECT INFORMATION

Data Deliverables: [ ] Standard [ ] CLP-like [ ] DOD [ ] TO-15 [ ] Other MA DEP CAM
EDDs- Type:
ALS Field Services: [ ] Pickup [ ] Labor
Other:

State Samples Collected In: [ ] NY [ ] NJ [ ] PA [ ] NC [X] MA other

Phone: 1- 717- 944- 5541
ALS ENVIRONMENTAL SHIPPING ADDRESS: 34 DOGWOOD LANE, MIDDLETOWN, PA 17057
Rev 03Mar2011

only report: 1,1,1-TCA; 1,1,1-DCA; 1,1-DCE; PCE; TCE; vinyl chloride; cis-1,2-DCE; trans-1,2-DCE
2nd run Must check flow on SV regulators

ALS

ALS-Middletown

TO-15 Sample Receipt Checklist

Client ID: CB+I

Horizon WO#: 206607

Sample Delivery Group ID: NA

Log In By/Date: 4/23/15

(signature)

Number of Shipping containers received:

Project Name/#: NOT LISTED

Date/Time received: 4/20/15

Received By: S. Miller

Project Manager Review (date) 4/24/15

(signature)

Courier: Fedex

Circle the response below as appropriate.

1. Did kit(s) come with a shipping slip (airbill, etc.)? (YES) NO NA
   If YES, enter airbill numbers: Tracking 7901 5821 0171
   7901 5821 0182

Shipping Container Information:

2. Were shipping containers received without signs of tampering? (YES) NO NA
   Comments

3. Were custody seals present and intact? (YES) NO NA
4. Were custody seals numbers present? (YES) NO (NA)
   List Custody Seal Numbers: 1695 | 1696

Sample Condition:

5. Were sample containers received intact without signs of tampering? (YES) NO NA
   Comments

Chain of Custody:

6. Did COC arrive with the samples? (YES) NO NA
7. Do sample ID/Sample Description(s) match samples submitted? (YES) NO NA
8. Is date and time of collection listed on the COC for all samples? (YES) NO NA
9. Is identification of sampler on COC? (YES) NO NA
10. Are requested test method(s) on COC? (YES) NO NA
11. Are necessary signatures on COC? (YES) NO NA
12. Was Internal COC initiated? (should always be YES) (YES) NO NA

Sample Integrity Usability:

13. Do sample containers match the COC? (YES) NO NA
14. Were sample canisters received within 15 days of shipment to client (YES) (NO) NA

Anomalies or Non-Conformances: Samples shipped 4/2/15

Rev. 2/2011

MassDEP Analytical Protocol Certification Form

Laboratory Name: ALS Environmental Project #: 2066607

Project Location: Varian RTN:

This Form provides certifications for the following data set: list Laboratory Sample ID Number(s):
2066607-001 to -006

Matrices: Groundwater/Surface Water Soil/Sediment Drinking Water Air X Other:

CAM Protocol (check all that apply below):

8260 VOC CAM II A	7470/7471 Hg CAM III B	MassDEP VPH CAM IV A	8081 Pesticides CAM V B	7196 Hex Cr CAM VI B	MassDEP APH CAM IX A
8270 SVOC CAM II B	7010 Metals CAM III C	MassDEP EPH CAM IV B	8151 Herbicides CAM V C	8330 Explosives CAM VIII A	TO-15 VOC CAM IX B X
6010 Metals CAM III A	6020 Metals CAM III D	8082 PCB CAM V A	9014 Total Cyanide/PAC CAM VI A	6860 Perchlorate CAM VIII B	

Affirmative Responses to Questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	(Yes) No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	(Yes) No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	(Yes) No
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	(Yes) No
E	VPH, EPH, APH, and TO-15 only: a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	Yes No Yes (No)
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	(Yes) No

Responses to Questions G, H and I below are required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	(Yes) No[1]

***Data User Note:** Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.*

H	Were **all** QC performance standards specified in the CAM protocol(s) achieved?	(Yes) No[1]
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	Yes (No[1])

[1] *All negative responses must be addressed in an attached laboratory narrative.*

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Signature: **Position:** Reporting Manager

Printed Name: Jennifer M. Stanhope Lamoreux **Date:** 4/29/2015

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010, NY 11759, PA 22-293 DoD ELAP: AZLA 0818.01

State Certification: CT PH-0224, DE ID 11, GA 914, MA PA0102, MD 128, LA 04162, VA 421, WY EPA Region 8, WV 343

QUALITY CONTROL DATA

Workorder **2066607** **Project Name** **TO-15 testing**

QC Batch TO15 / 2767

QC Batch Method TO-15 **Analysis Method** TO-15

Associated Lab Samples 2066607001 2066607003 2066607005 2066607006

METHOD BLANK 2168366

Parameter	Blank Result	Qualifiers	Units	Reporting Limit	% Rec	% Rec Limits
cis-1,2-Dichloroethene	ND	U	ug/m3	0.8		
cis-1,2-Dichloroethene	ND	U	ppbv	0.20		
Surrogate Recoveries						
4-Bromofluorobenzene			%		89	70-130

LABORATORY CONTROL SAMPLE 2168367

Parameter	LCS Result	Qualifiers	Units	Spike Conc.	LCS % Rec	% Rec Limits
cis-1,2-Dichloroethene	2		ug/m3	2	95	60-140
cis-1,2-Dichloroethene	0.47		ppbv	0.5	95	60-140
Surrogate Recoveries						
4-Bromofluorobenzene			%		95	70-130

SAMPLE DUPLICATE 2168375(DIL1000) Original 2065708001

*****NOTE - The Original Result and Duplicate Result shown below are raw results and are only used for the purpose of calculating Sample Duplicate percent recoveries. This result is not a final value and cannot be used as such.*

Parameter	Original Result	Qualifiers	Units	DUP Result	RPD	Max RPD	% Rec	% Rec Limits
cis-1,2-Dichloroethene	9704.95814		ug/m3	9784.65062	0.8	25		

This is an addendum to the Certificate of Analysis.

cis-1,2-Dichloroethene	2447.78		ppbv	2467.88	0.8	25

SAMPLE DUPLICATE 2168375(DIL10000) Original 2065708001

*****NOTE - The Original Result and Duplicate Result shown below are raw results and are only used for the purpose of calculating Sample Duplicate percent recoveries. This result is not a final value and cannot be used as such.*

Parameter	Original Result	Qualifiers	Units	DUP Result	RPD	Max RPD	% Rec	% Rec Limits
cis-1,2-Dichloroethene	9704.95814	U	ug/m3	ND	NC	25		
cis-1,2-Dichloroethene	2447.78	U	ppbv	ND	NC	25		

QC Batch TO15 / 2769

QC Batch Method TO-15 **Analysis Method** TO-15

Associated Lab Samples 2066607001 2066607002 2066607003 2066607004 2066607005 2066607006

METHOD BLANK 2169608

Parameter	Blank Result	Qualifiers	Units	Reporting Limit	% Rec	% Rec Limits
1,1,1-Trichloroethane	ND	U	ug/m3	1		
1,1,1-Trichloroethane	ND	U	ppbv	0.20		
1,1-Dichloroethane	ND	U	ug/m3	0.8		
1,1-Dichloroethane	ND	U	ppbv	0.20		
1,1-Dichloroethene	ND	U	ug/m3	0.8		
1,1-Dichloroethene	ND	U	ppbv	0.20		
cis-1,2-Dichloroethene	ND	U	ug/m3	0.8		
cis-1,2-Dichloroethene	ND	U	ppbv	0.20		
Tetrachloroethene	ND	U	ug/m3	1		
Tetrachloroethene	ND	U	ppbv	0.20		
trans-1,2-Dichloroethene	ND	U	ug/m3	0.8		
trans-1,2-Dichloroethene	ND	U	ppbv	0.20		
Trichloroethene	ND	U	ug/m3	1		
Trichloroethene	ND	U	ppbv	0.20		
Vinyl Chloride	ND	U	ug/m3	0.5		
Vinyl Chloride	ND	U	ppbv	0.20		
Surrogate Recoveries						
4-Bromofluorobenzene			%		95	70-130

This is an addendum to the Certificate of Analysis.

LABORATORY CONTROL SAMPLE 2169609

Parameter	LCS Result	Qualifiers	Units	Spike Conc.	LCS % Rec	% Rec Limits
1,1,1-Trichloroethane	0.5		ppbv	0.5	100	60-140
1,1,1-Trichloroethane	3		ug/m3	3	100	60-140
1,1-Dichloroethane	0.52		ppbv	0.5	104	60-140
1,1-Dichloroethane	2		ug/m3	2	104	60-140
1,1-Dichloroethene	2		ug/m3	2	100	60-140
1,1-Dichloroethene	0.5		ppbv	0.5	100	60-140
cis-1,2-Dichloroethene	2		ug/m3	2	86	60-140
cis-1,2-Dichloroethene	0.43		ppbv	0.5	86	60-140
Tetrachloroethene	3		ug/m3	3	91	60-140
Tetrachloroethene	0.46		ppbv	0.5	91	60-140
trans-1,2-Dichloroethene	2		ug/m3	2	90	60-140
trans-1,2-Dichloroethene	0.45		ppbv	0.5	90	60-140
Trichloroethene	2		ug/m3	3	87	60-140
Trichloroethene	0.43		ppbv	0.5	87	60-140
Vinyl Chloride	1		ug/m3	1	112	60-140
Vinyl Chloride	0.56		ppbv	0.5	112	60-140
Surrogate Recoveries						
4-Bromofluorobenzene			%		101	70-130

This is an addendum to the Certificate of Analysis.

Standard Acronyms/Flags	
J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
NC	Not Calculated
*	Result outside of QC limits
DIL	Dilution Factor

ALS Environmental Laboratory Locations Across North America

Canada: Burlington · Calgary · Centre of Excellence · Edmonton · Fort McMurray · Fort St. John · Grande Prairie · London · Mississauga · Richmond Hill · Saskatoon · Thunder Bay Vancouver Waterloo · Winnipeg · Yellowknife **United States:** Cincinnati · Everett · Fort Collins · Holland · Houston · Middletown · Salt Lake City · Spring City · York **Mexico:** Monterrey

This is an addendum to the Certificate of Analysis.

This is an addendum to the Certificate of Analysis.

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
2065708001	ZZZZZZZZZZ	TO-15	TO15 / 2767	TO-15	TO15 / 2767
2066607001	32 Tozer - SV3	TO-15	TO15 / 2767	TO-15	TO15 / 2767
2066607001	32 Tozer - SV3	TO-15	TO15 / 2769	TO-15	TO15 / 2769
2066607002	32 Tozer - 1	TO-15	TO15 / 2769	TO-15	TO15 / 2769
2066607003	32 Tozer - SV5	TO-15	TO15 / 2767	TO-15	TO15 / 2767
2066607003	32 Tozer - SV5	TO-15	TO15 / 2769	TO-15	TO15 / 2769
2066607004	32 Tozer - 3	TO-15	TO15 / 2769	TO-15	TO15 / 2769
2066607005	32 Tozer - SV4	TO-15	TO15 / 2767	TO-15	TO15 / 2767
2066607005	32 Tozer - SV4	TO-15	TO15 / 2769	TO-15	TO15 / 2769
2066607006	32 Tozer - 2	TO-15	TO15 / 2767	TO-15	TO15 / 2767
2066607006	32 Tozer - 2	TO-15	TO15 / 2769	TO-15	TO15 / 2769

This is an addendum to the Certificate of Analysis.

Data Usability Worksheet

Project Name : Varian Medical Systems, Inc
Job Number : 152780.05

Prepared By: Jennifer Gailey
Date : 6/29/2015

Matrix: Groundwater

Analyte Group : Volatile Organics
Analytical Method : SW-846 8260C

Completed MADEP CAM Certification Form included: Yes
Laboratory ID No. : R1504068

Chain of Custody included in Data Package ? Yes
Is it Complete ? Yes

Sample Collection Date	Analysis	Allowable Holding Time for extraction	Allowable Holding Time for analysis	Analysis Date
5/22/15	SW-846 8260C	14 days	10 days	5/30,5/31,6/3,6/4/2015

Sample temperature within QC limits: No (7 ºC)

Surrogate Recovery
Are all % recoveries within the allowable range ? Yes

If No, List sample ID where range was exceeded: NA

MS/MSD
Are all MS/MSD sample recoveries within the QC limits ? NA

If No, list sample ID, date and compound where limit was exceeded: NA

Laboratory Control Samples
Are all laboratory control sample recoveries within the QC limits ? No

If no, list sample ID where range was exceeded: See Notes

Equipment Field Blank ID : EB-3 EB-4
Trip Blank ID : TB-3 TB-4

Method Blank: SW-846 8260C 5/30,5/31, 6/4, 6/5/2015

Were any compounds identified in the method blank, field blank or trip blank above detection limits ? No

If so, list Sample ID/Compound/Concentration/Units: N/A

Notes:
Several Volatile Organics samples were analyzed at dilutions to bring target analytes within the calibration range o the method.

All method analyses were compliant. No validation required.

All the continuing calibration criteria (CCV) were met for all analytes except Carbon tetrachloride and Bromoform. All positive detections for these analytes for samples associated with these CCV's should be considered as estimated. However, since actual calibration data was not reported and all results are estimated due to elevated cooler temperature when received by lab, no qualifiers were applied based on CCV.

Various compounds for OB34-DO (58), OB41-S (13), OB27-BR (86), OB26-DO (57) and MW-l3 (41) have been flagged with an "E" by the lab as being outside the calibration range of the instrument. The samples were rerun at a higher dilution and the results that were previously flagged "E" were flagged "D" to designate they were from a diluted sample.

The relative percent difference (RPD) for the LCS/LCSD was outside limits for acetone in the lab control sample associated with batch 447152 No qualification was necessary for actone for samples in batch 447152 as the results were non-detect.

Due to the elevated temperature the samples were received at the lab, data qualifiers have been added, "UJ" to non detects and "J" to detected compounds

Reviewed by: Catherine Joe Mainville 10/16/2015

ALS Environmental
ALS Group USA, Corp
1565 Jefferson Rd, Building 300, Suite 360
Rochester, NY 14623
T: 585-288-5380
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June 10, 2015

Analytical Report for Service Request No: R1504068

Mr. Ray Cadorette
CB&I Environmental & Infrastructure
150 Royall Street
Canton, MA 02021

Laboratory Results for: Varian Beverly/152780-05000000

Dear Mr. Cadorette:

Enclosed are the results of the sample(s) submitted to our laboratory on May 27, 2015. For your reference, these analyses have been assigned our service request number **R1504068**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s) for analysis of these samples, and represented by Laboratory Control Sample control limits. Any events, such as QC failures, which may add to the uncertainty are explained in the report narrative.

Please contact me if you have any questions., My extension is 7472. You may also contact me via email at Janice.Jaeger@alsglobal.com.

Respectfully submitted,

ALS Group USA Corp. dba ALS Environmental

Janice Jaeger
Project Manager

CC: Pernilla Haley

ALS Environmental

Client:	CB&I
Service Request No.:	R1504068
Project:	Varian
Date Received:	5/27/15
Sample Matrix:	Water
Project/Case No.:	

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II data deliverables. When appropriate to the method, method blank results have been reported with each analytical test. Surrogate recoveries have been reported for all applicable organic analyses. Additional quality control analyses reported herein include: Laboratory Control Sample (LCS).

Sample Receipt

Water samples were received for analysis at ALS Environmental on 5/27/15. The samples were received in good condition but at 7 C and consistent with the accompanying chain of custody form. The client was notified of the temperature outlier and the samples analyzed. All sampling activities performed by ALS personnel have been in accordance with "ALS Field Procedures and Measurements Manual" or by client specifications. The samples were stored in a refrigerator between 1°C and 6°C upon receipt at the laboratory. All Soluble samples were filtered in the field.

Volatile Organics

Water samples were analyzed for a site list of Volatile Organics by SW-846 Method 8260C.

Several samples were initially analyzed at dilutions to bring target analytes within the calibration range of the method.

All initial calibrations were compliant.

All the continuing calibration criteria were met for all analytes except Carbon tetrachloride on the 05/30/15 CCV and Bromoform on the 05/31/15 CCV. No data was affected.

Various compounds for OB34-DO (58), OB41-S (13), OB27-BR (86), OB26-DO (57) and MW-13 (41) have been flagged with an "E" as being outside the calibration range of the instrument. The samples were repeated at dilutions and both sets of data have been reported out.

All Surrogate Standard recoveries were within QC limits.

All Blank Spike (LCS)/Blank Spike Duplicate (LCSD) recoveries were within QC limits. All RPD's were acceptable except Acetone on the 05/30/15 LCS/LCSD and has been flagged with an "*".

All samples were analyzed within the required holding time of 14 days.

MassDEP Analytical Protocol Certification Form

Laboratory Name: ALS Environmental | Project #: 152780

Project Location: Varian Beverly | RTN:

This Form provides certifications for the following data set: list Laboratory Sample ID Number(s):
R1504068-001-030

Matrices: Groundwater/Surface Water X Soil/Sediment Drinking Water Air Other:

CAM Protocol (check all that apply below):

8260 VOC CAM II A **X**	7470/7471 Hg CAM III B	MassDEP VPH CAM IV A	8081 Pesticides CAM V B	7196 Hex Cr CAM VI B	MassDEP APH CAM IX A
8270 SVOC CAM II B	7010 Metals CAM III C	MassDEP EPH CAM IV B	8151 Herbicides CAM V C	8330 Explosives CAM VIII A	TO-15 VOC CAM IX B
6010 Metals CAM III A	6020 Metals CAM III D	8082 PCB CAM V A	9014 Total Cyanide/PAC CAM VI A	6860 Perchlorate CAM VIII B	

Affirmative Responses to Questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	Yes X No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	X Yes No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	X Yes No
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	X Yes No
E	VPH, EPH, APH, and TO-15 only: a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	Yes No Yes No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	X Yes No

Responses to Questions G, H and I below are required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	X Yes No[1]

***Data User Note**: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.*

H	Were **all** QC performance standards specified in the CAM protocol(s) achieved?	X Yes No[1]
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	Yes X No[1]

[1] *All negative responses must be addressed in an attached laboratory narrative.*

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Signature: _____ **Position: Project Manager**

Printed Name: Janice Jaeger **Date:** 06/15/15 00003

ALS Environmental

REPORT QUALIFIERS AND DEFINITIONS

U Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.

J Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Arclors).

B Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.

E Inorganics- Concentration is estimated due to the serial dilution was outside control limits.

E Organics- Concentration has exceeded the calibration range for that specific analysis.

D Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.

* Indicates that a quality control parameter has exceeded laboratory limits. Under the "Notes" column of the Form I, this qualifier denotes analysis was performed out of Holding Time.

H Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.

Spike was diluted out.

+ Correlation coefficient for MSA is <0.995.

N Inorganics- Matrix spike recovery was outside laboratory limits.

N Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.

S Concentration has been determined using Method of Standard Additions (MSA).

W Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.

P Concentration >40% (25% for CLP) difference between the two GC columns.

C Confirmed by GC/MS

Q DoD reports: indicates a pesticide/Aroclor is not confirmed (≥100% Difference between two GC columns).

X See Case Narrative for discussion.

MRL Method Reporting Limit. Also known as:
LOQ Limit of Quantitation (LOQ)
The lowest concentration at which the method analyte may be reliably quantified under the method conditions.

MDL Method Detection Limit. A statistical value derived from a study designed to provide the lowest concentration that will be detected 99% of the time. Values between the MDL and MRL are estimated (see J qualifier).

LOD Limit of Detection. A value at or above the MDL which has been verified to be detectable.

ND Non-Detect. Analyte was not detected at the concentration listed. Same as U qualifier.

Lab ID # for Massachusetts Certification

M-NY032

Analyses were conducted in accordance with Massachusetts Department of Environmental Protection certification standards, except as noted in the laboratory case narrative provided. A copy of the current Department issued parameter list is included in this report.

The Commonwealth of Massachusetts

Department of Environmental Protection

Division of Environmental Analysis
Senator William X. Wall Experiment Station

certifies

M-NY032

ALS ENVIRONMENTAL ROCHESTER
1565 JEFFERSON RD
BUILDING 300, SUITE 360
ROCHESTER, NY 14623-0000

Laboratory Director: **PETER FRICK**

for the analysis of **NON POTABLE WATER (CHEMISTRY)**

pursuant to 310 CMR 42.00

This certificate supersedes all previous Massachusetts certificates issued to this laboratory. The laboratory is regulated by and shall be responsible for being in compliance with Massachusetts regulations at 310 CMR 42.00.

This certificate is valid only when accompanied by the latest dated Certified Parameter List as issued by the Massachusetts D.E.P. Contact the Division of Environmental Analysis to verify the current certification status of the laboratory.

Certification is no guarantee of the validity of the data. This certification is subject to unannounced laboratory inspections.

Issued: **26 FEB 2015**

Expires: **30 JUN 2015**

Oscar C. Parcado

Director, Division of Environmental Analysis

00005

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 01 JUL 2014

M-NY032 **ALS ENVIRONMENTAL ROCHESTER**
ROCHESTER NY

NON POTABLE WATER (CHEMISTRY) **Effective Date** **01 JUL 2014** **Expiration Date** **30 JUN 2015**

Analytes	Methods
ALUMINUM	EPA 200.7
ANTIMONY	EPA 200.7
ANTIMONY	EPA 200.8
ARSENIC	EPA 200.7
ARSENIC	EPA 200.8
BERYLLIUM	EPA 200.7
BERYLLIUM	EPA 200.8
CADMIUM	EPA 200.7
CADMIUM	EPA 200.8
CHROMIUM	EPA 200.7
CHROMIUM	EPA 200.8
COBALT	EPA 200.7
COBALT	EPA 200.8
COPPER	EPA 200.7
COPPER	EPA 200.8
IRON	EPA 200.7
LEAD	EPA 200.7
LEAD	EPA 200.8
MANGANESE	EPA 200.7
MANGANESE	EPA 200.8
MERCURY	EPA 245.1
MOLYBDENUM	EPA 200.7
MOLYBDENUM	EPA 200.8
NICKEL	EPA 200.7
NICKEL	EPA 200.8
SELENIUM	EPA 200.7
SELENIUM	EPA 200.8
SILVER	EPA 200.7
SILVER	EPA 200.8
THALLIUM	EPA 200.7
THALLIUM	EPA 200.8
VANADIUM	EPA 200.7
VANADIUM	EPA 200.8
ZINC	EPA 200.7
ZINC	EPA 200.8
SPECIFIC CONDUCTIVITY	EPA 120.1
TOTAL DISSOLVED SOLIDS	SM 2540C
HARDNESS (CACO3), TOTAL	SM 2340C
CALCIUM	EPA 200.7
MAGNESIUM	EPA 200.7
SODIUM	EPA 200.7
POTASSIUM	EPA 200.7
ALKALINITY, TOTAL	SM 2320B

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 01 JUL 2014

M-NY032 ALS ENVIRONMENTAL ROCHESTER
ROCHESTER NY

NON POTABLE WATER (CHEMISTRY) **Effective Date** **01 JUL 2014** **Expiration Date** **30 JUN 2015**

Analytes	Methods
CHLORIDE	SM 4500-CL-E
CHLORIDE	EPA 300.0
FLUORIDE	EPA 300.0
SULFATE	EPA 300.0
AMMONIA-N	EPA 350.1
NITRATE-N	EPA 300.0
NITRATE-N	EPA 353.2
KJELDAHL-N	EPA 351.2
ORTHOPHOSPHATE	EPA 365.1
PHOSPHORUS, TOTAL	EPA 365.1
CHEMICAL OXYGEN DEMAND	EPA 410.4
BIOCHEMICAL OXYGEN DEMAND	SM 5210B
TOTAL ORGANIC CARBON	SM 5310C
CYANIDE, TOTAL	EPA 335.4
NON-FILTERABLE RESIDUE	SM 2540D
OIL AND GREASE	EPA 1664
PHENOLICS, TOTAL	EPA 420.4
VOLATILE HALOCARBONS	EPA 601
VOLATILE HALOCARBONS	EPA 624
VOLATILE AROMATICS	EPA 602
VOLATILE AROMATICS	EPA 624
SVOC-ACID EXTRACTABLES	EPA 625
SVOC-BASE/NEUTRAL EXTRACTABLES	EPA 625
POLYCHLORINATED BIPHENYLS (WATEI	EPA 608

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504068
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/22/15 1300
Sample Matrix:	Water	**Date Received:**	5/27/15
		Date Analyzed:	5/30/15 19:03
Sample Name:	OB14-DO (55)	**Units:**	µg/L
Lab Code:	R1504068-001	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	447152
Data File Name:	I:\ACQUDATA\MSVOA14\Data\053015\B0972.D\	**Instrument Name:**	R-MS-14
		Dilution Factor:	10

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	20	U	20	
79-34-5	1,1,2,2-Tetrachloroethane	20	U	20	
79-00-5	1,1,2-Trichloroethane	20	U	20	
75-34-3	1,1-Dichloroethane (1,1-DCA)	20	U	20	
75-35-4	1,1-Dichloroethene (1,1-DCE)	20	U	20	
107-06-2	1,2-Dichloroethane	20	U	20	
78-87-5	1,2-Dichloropropane	20	U	20	
67-64-1	Acetone	100	U	100	
75-27-4	Bromodichloromethane	20	U	20	
75-25-2	Bromoform	20	U	20	
74-83-9	Bromomethane	20	U	20	
56-23-5	Carbon Tetrachloride	20	U	20	
108-90-7	Chlorobenzene	20	U	20	
75-00-3	Chloroethane	20	U	20	
67-66-3	Chloroform	20	U	20	
74-87-3	Chloromethane	20	U	20	
124-48-1	Dibromochloromethane	20	U	20	
75-09-2	Methylene Chloride	20	U	20	
127-18-4	Tetrachloroethene (PCE)	**93**		20	
79-01-6	Trichloroethene (TCE)	**1100**		20	
75-69-4	Trichlorofluoromethane (CFC 11)	20	U	20	
75-01-4	Vinyl Chloride	20	U	20	
156-59-2	cis-1,2-Dichloroethene	**130**		20	
10061-01-5	cis-1,3-Dichloropropene	20	U	20	
156-60-5	trans-1,2-Dichloroethene	20	U	20	
10061-02-6	trans-1,3-Dichloropropene	20	U	20	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	92	70-130	5/30/15 19:03	
Dibromofluoromethane	95	70-130	5/30/15 19:03	
Toluene-d8	96	70-130	5/30/15 19:03	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504068
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/22/15 1330
Sample Matrix:	Water	**Date Received:**	5/27/15
		Date Analyzed:	5/30/15 19:27
Sample Name:	OB34-DO (58)	**Units:**	µg/L
Lab Code:	R1504068-002	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	447152
Data File Name:	I:\ACQUDATA\MSVOA14\Data\053015\B0973.D\	**Instrument Name:**	R-MS-14
		Dilution Factor:	5

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	10	U	10	
79-34-5	1,1,2,2-Tetrachloroethane	10	U	10	
79-00-5	1,1,2-Trichloroethane	10	U	10	
75-34-3	1,1-Dichloroethane (1,1-DCA)	10	U	10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	10	U	10	
107-06-2	1,2-Dichloroethane	10	U	10	
78-87-5	1,2-Dichloropropane	10	U	10	
67-64-1	Acetone	50	U	50	
75-27-4	Bromodichloromethane	10	U	10	
75-25-2	Bromoform	10	U	10	
74-83-9	Bromomethane	10	U	10	
56-23-5	Carbon Tetrachloride	10	U	10	
108-90-7	Chlorobenzene	10	U	10	
75-00-3	Chloroethane	10	U	10	
67-66-3	Chloroform	10	U	10	
74-87-3	Chloromethane	10	U	10	
124-48-1	Dibromochloromethane	10	U	10	
75-09-2	Methylene Chloride	10	U	10	
127-18-4	Tetrachloroethene (PCE)	**1100**	E	10	
79-01-6	Trichloroethene (TCE)	**8100**	E	10	
75-69-4	Trichlorofluoromethane (CFC 11)	10	U	10	
75-01-4	Vinyl Chloride	10	U	10	
156-59-2	cis-1,2-Dichloroethene	**670**		10	
10061-01-5	cis-1,3-Dichloropropene	10	U	10	
156-60-5	trans-1,2-Dichloroethene	10	U	10	
10061-02-6	trans-1,3-Dichloropropene	10	U	10	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	92	70-130	5/30/15 19:27	
Dibromofluoromethane	96	70-130	5/30/15 19:27	
Toluene-d8	98	70-130	5/30/15 19:27	

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Analytical Report

Client:	CB&I	**Service Request:**	R1504068
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/22/15 1330
Sample Matrix:	Water	**Date Received:**	5/27/15
		Date Analyzed:	6/3/15 16:58
Sample Name:	OB34-DO (58)	**Units:**	µg/L
Lab Code:	R1504068-002	**Basis:**	NA
Run Type:	Dilution		

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	447556
Data File Name:	I:\ACQUDATA\MSVOA14\Data\060315\B1037.D\	**Instrument Name:**	R-MS-14
		Dilution Factor:	100

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	200	U	200	
79-34-5	1,1,2,2-Tetrachloroethane	200	U	200	
79-00-5	1,1,2-Trichloroethane	200	U	200	
75-34-3	1,1-Dichloroethane (1,1-DCA)	200	U	200	
75-35-4	1,1-Dichloroethene (1,1-DCE)	200	U	200	
107-06-2	1,2-Dichloroethane	200	U	200	
78-87-5	1,2-Dichloropropane	200	U	200	
67-64-1	Acetone	1000	U	1000	
75-27-4	Bromodichloromethane	200	U	200	
75-25-2	Bromoform	200	U	200	
74-83-9	Bromomethane	200	U	200	
56-23-5	Carbon Tetrachloride	200	U	200	
108-90-7	Chlorobenzene	200	U	200	
75-00-3	Chloroethane	200	U	200	
67-66-3	Chloroform	200	U	200	
74-87-3	Chloromethane	200	U	200	
124-48-1	Dibromochloromethane	200	U	200	
75-09-2	Methylene Chloride	200	U	200	
127-18-4	Tetrachloroethene (PCE)	**1100**	D	200	
79-01-6	Trichloroethene (TCE)	**7500**	D	200	
75-69-4	Trichlorofluoromethane (CFC 11)	200	U	200	
75-01-4	Vinyl Chloride	200	U	200	
156-59-2	cis-1,2-Dichloroethene	**620**	D	200	
10061-01-5	cis-1,3-Dichloropropene	200	U	200	
156-60-5	trans-1,2-Dichloroethene	200	U	200	
10061-02-6	trans-1,3-Dichloropropene	200	U	200	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	88	70-130	6/3/15 16:58	
Dibromofluoromethane	95	70-130	6/3/15 16:58	
Toluene-d8	95	70-130	6/3/15 16:58	

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Analytical Report

Client:	CB&I	**Service Request:**	R1504068
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/22/15 1400
Sample Matrix:	Water	**Date Received:**	5/27/15
		Date Analyzed:	6/3/15 17:23
Sample Name:	RW-22 (104)	**Units:**	µg/L
Lab Code:	R1504068-003	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	447556
Data File Name:	I:\ACQUDATA\MSVOA14\Data\060315\B1038.D\	**Instrument Name:**	R-MS-14
		Dilution Factor:	5

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	10	U	10	
79-34-5	1,1,2,2-Tetrachloroethane	10	U	10	
79-00-5	1,1,2-Trichloroethane	10	U	10	
75-34-3	1,1-Dichloroethane (1,1-DCA)	10	U	10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	10	U	10	
107-06-2	1,2-Dichloroethane	10	U	10	
78-87-5	1,2-Dichloropropane	10	U	10	
67-64-1	Acetone	50	U	50	
75-27-4	Bromodichloromethane	10	U	10	
75-25-2	Bromoform	10	U	10	
74-83-9	Bromomethane	10	U	10	
56-23-5	Carbon Tetrachloride	10	U	10	
108-90-7	Chlorobenzene	10	U	10	
75-00-3	Chloroethane	10	U	10	
67-66-3	Chloroform	10	U	10	
74-87-3	Chloromethane	10	U	10	
124-48-1	Dibromochloromethane	10	U	10	
75-09-2	Methylene Chloride	10	U	10	
127-18-4	Tetrachloroethene (PCE)	10	U	10	
79-01-6	Trichloroethene (TCE)	**27**		10	
75-69-4	Trichlorofluoromethane (CFC 11)	10	U	10	
75-01-4	Vinyl Chloride	**15**		10	
156-59-2	cis-1,2-Dichloroethene	**570**		10	
10061-01-5	cis-1,3-Dichloropropene	10	U	10	
156-60-5	trans-1,2-Dichloroethene	10	U	10	
10061-02-6	trans-1,3-Dichloropropene	10	U	10	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	90	70-130	6/3/15 17:23	
Dibromofluoromethane	94	70-130	6/3/15 17:23	
Toluene-d8	94	70-130	6/3/15 17:23	

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Analytical Report

Client:	CB&I	**Service Request:**	R1504068
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/22/15 1430
Sample Matrix:	Water	**Date Received:**	5/27/15
		Date Analyzed:	6/3/15 12:56
Sample Name:	MW-14A (58)	**Units:**	µg/L
Lab Code:	R1504068-004	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	447556
Data File Name:	I:\ACQUDATA\MSVOA14\Data\060315\B1027.D\	**Instrument Name:**	R-MS-14
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	**81**		2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	**2.5**		2.0	
156-59-2	cis-1,2-Dichloroethene	**120**		2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	**9.3**		2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	90	70-130	6/3/15 12:56	
Dibromofluoromethane	95	70-130	6/3/15 12:56	
Toluene-d8	94	70-130	6/3/15 12:56	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504068
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/22/15 1500
Sample Matrix:	Water	**Date Received:**	5/27/15
		Date Analyzed:	5/30/15 15:49
Sample Name:	BR-6 ZONE 3	**Units:**	µg/L
Lab Code:	R1504068-005	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	447152
Data File Name:	I:\ACQUDATA\MSVOA14\Data\053015\B0964.D\	**Instrument Name:**	R-MS-14
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	**55**		2.0	
156-59-2	cis-1,2-Dichloroethene	**130**		2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	94	70-130	5/30/15 15:49	
Dibromofluoromethane	96	70-130	5/30/15 15:49	
Toluene-d8	99	70-130	5/30/15 15:49	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504068
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/22/15 1530
Sample Matrix:	Water	**Date Received:**	5/27/15
		Date Analyzed:	5/30/15 16:13
Sample Name:	OB41-S (13)	**Units:**	µg/L
Lab Code:	R1504068-006	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	447152
Data File Name:	I:\ACQUDATA\MSVOA14\Data\053015\B0965.D\	**Instrument Name:**	R-MS-14
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	**2.6**		2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	**3.5**		2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	**70**		2.0	
79-01-6	Trichloroethene (TCE)	**370**	E	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	**140**		2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	90	70-130	5/30/15 16:13	
Dibromofluoromethane	97	70-130	5/30/15 16:13	
Toluene-d8	96	70-130	5/30/15 16:13	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504068
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/22/15 1530
Sample Matrix:	Water	**Date Received:**	5/27/15
		Date Analyzed:	6/3/15 17:47
Sample Name:	OB41-S (13)	**Units:**	µg/L
Lab Code:	R1504068-006	**Basis:**	NA
Run Type:	Dilution		

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	447556
Data File Name:	I:\ACQUDATA\MSVOA14\Data\060315\B1039.D\	**Instrument Name:**	R-MS-14
		Dilution Factor:	5

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	10	U	10	
79-34-5	1,1,2,2-Tetrachloroethane	10	U	10	
79-00-5	1,1,2-Trichloroethane	10	U	10	
75-34-3	1,1-Dichloroethane (1,1-DCA)	10	U	10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	10	U	10	
107-06-2	1,2-Dichloroethane	10	U	10	
78-87-5	1,2-Dichloropropane	10	U	10	
67-64-1	Acetone	50	U	50	
75-27-4	Bromodichloromethane	10	U	10	
75-25-2	Bromoform	10	U	10	
74-83-9	Bromomethane	10	U	10	
56-23-5	Carbon Tetrachloride	10	U	10	
108-90-7	Chlorobenzene	10	U	10	
75-00-3	Chloroethane	10	U	10	
67-66-3	Chloroform	10	U	10	
74-87-3	Chloromethane	10	U	10	
124-48-1	Dibromochloromethane	10	U	10	
75-09-2	Methylene Chloride	10	U	10	
127-18-4	Tetrachloroethene (PCE)	**61**	D	10	
79-01-6	Trichloroethene (TCE)	**310**	D	10	
75-69-4	Trichlorofluoromethane (CFC 11)	10	U	10	
75-01-4	Vinyl Chloride	10	U	10	
156-59-2	cis-1,2-Dichloroethene	**120**	D	10	
10061-01-5	cis-1,3-Dichloropropene	10	U	10	
156-60-5	trans-1,2-Dichloroethene	10	U	10	
10061-02-6	trans-1,3-Dichloropropene	10	U	10	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	91	70-130	6/3/15 17:47	
Dibromofluoromethane	93	70-130	6/3/15 17:47	
Toluene-d8	95	70-130	6/3/15 17:47	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504068
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/23/15 0715
Sample Matrix:	Water	**Date Received:**	5/27/15
		Date Analyzed:	5/31/15 17:09
Sample Name:	EB-4	**Units:**	µg/L
Lab Code:	R1504068-007	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	447056
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\053115\M2213.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	103	70-130	5/31/15 17:09	
Dibromofluoromethane	98	70-130	5/31/15 17:09	
Toluene-d8	108	70-130	5/31/15 17:09	

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Analytical Report

Client:	CB&I	**Service Request:**	R1504068
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/23/15 0730
Sample Matrix:	Water	**Date Received:**	5/27/15
		Date Analyzed:	5/30/15 14:36
Sample Name:	TB-4	**Units:**	µg/L
Lab Code:	R1504068-008	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	447152
Data File Name:	I:\ACQUDATA\MSVOA14\Data\053015\B0961.D\	**Instrument Name:**	R-MS-14
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	91	70-130	5/30/15 14:36	
Dibromofluoromethane	95	70-130	5/30/15 14:36	
Toluene-d8	96	70-130	5/30/15 14:36	

Client:	CB&I	**Service Request:**	R1504068
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/23/15 0750
Sample Matrix:	Water	**Date Received:**	5/27/15
		Date Analyzed:	5/31/15 17:40
Sample Name:	AP15-S (12)	**Units:**	µg/L
Lab Code:	R1504068-009	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	447056
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\053115\M2214.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	**12**		10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	**16**		2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	**5.5**		2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	102	70-130	5/31/15 17:40	
Dibromofluoromethane	100	70-130	5/31/15 17:40	
Toluene-d8	108	70-130	5/31/15 17:40	

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Analytical Report

Client:	CB&I	**Service Request:**	R1504068
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/23/15 0830
Sample Matrix:	Water	**Date Received:**	5/27/15
		Date Analyzed:	5/31/15 18:12
Sample Name:	OB18-S (11)	**Units:**	µg/L
Lab Code:	R1504068-010	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	447056
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\053115\M2215.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	100	70-130	5/31/15 18:12	
Dibromofluoromethane	105	70-130	5/31/15 18:12	
Toluene-d8	110	70-130	5/31/15 18:12	

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Analytical Report

Client:	CB&I	**Service Request:**	R1504068
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/23/15 0900
Sample Matrix:	Water	**Date Received:**	5/27/15
		Date Analyzed:	6/4/15 14:43
Sample Name:	OB18-DO (23)	**Units:**	µg/L
Lab Code:	R1504068-011	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	447749
Data File Name:	I:\ACQUDATA\MSVOA14\Data\060415\B1085.D\	**Instrument Name:**	R-MS-14
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	**15**		2.0	
156-59-2	cis-1,2-Dichloroethene	**98**		2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	95	70-130	6/4/15 14:43	
Dibromofluoromethane	99	70-130	6/4/15 14:43	
Toluene-d8	99	70-130	6/4/15 14:43	

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Analytical Report

Client: CB&I
Project: Varian Beverly/152780-05000000
Sample Matrix: Water

Service Request: R1504068
Date Collected: 5/23/15 0930
Date Received: 5/27/15
Date Analyzed: 5/31/15 18:44

Sample Name: CL-11S (23)
Lab Code: R1504068-012

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Data File Name: I:\ACQUDATA\MSVOA6\DATA\053115\M2216.D\

Analysis Lot: 447056
Instrument Name: R-MS-06
Dilution Factor: 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	**5.8**		2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	**13**		2.0	
79-01-6	Trichloroethene (TCE)	**6.0**		2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	103	70-130	5/31/15 18:44	
Dibromofluoromethane	102	70-130	5/31/15 18:44	
Toluene-d8	109	70-130	5/31/15 18:44	

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Analytical Report

Client:	CB&I	**Service Request:**	R1504068
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/23/15 1000
Sample Matrix:	Water	**Date Received:**	5/27/15
		Date Analyzed:	5/31/15 19:16
Sample Name:	CL-11 DO (49)	**Units:**	µg/L
Lab Code:	R1504068-013	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	447056
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\053115\M2217.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	**3.9**		2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	**6.1**		2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	**6.3**		2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	**5.5**		2.0	
79-01-6	Trichloroethene (TCE)	**35**		2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	99	70-130	5/31/15 19:16	
Dibromofluoromethane	101	70-130	5/31/15 19:16	
Toluene-d8	109	70-130	5/31/15 19:16	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly/152780-05000000
Sample Matrix: Water

Service Request: R1504068
Date Collected: 5/23/15 1100
Date Received: 5/27/15
Date Analyzed: 5/31/15 19:48

Sample Name: OB27-BR (86)
Lab Code: R1504068-014

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Data File Name: I:\ACQUDATA\MSVOA6\DATA\053115\M2218.D\

Analysis Lot: 447056
Instrument Name: R-MS-06
Dilution Factor: 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	**37**		2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	**53**		2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	**2300**	E	2.0	
79-01-6	Trichloroethene (TCE)	**4000**	E	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	**460**	E	2.0	
156-59-2	cis-1,2-Dichloroethene	**2400**	E	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	**140**		2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	101	70-130	5/31/15 19:48	
Dibromofluoromethane	98	70-130	5/31/15 19:48	
Toluene-d8	109	70-130	5/31/15 19:48	

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Analytical Report

Client:	CB&I	**Service Request:**	R1504068
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/23/15 1100
Sample Matrix:	Water	**Date Received:**	5/27/15
		Date Analyzed:	6/4/15 15:31
Sample Name:	OB27-BR (86)	**Units:**	µg/L
Lab Code:	R1504068-014	**Basis:**	NA
Run Type:	Dilution		

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	447749
Data File Name:	I:\ACQUDATA\MSVOA14\Data\060415\B1087.D\	**Instrument Name:**	R-MS-14
		Dilution Factor:	200

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	400	U	400	
79-34-5	1,1,2,2-Tetrachloroethane	400	U	400	
79-00-5	1,1,2-Trichloroethane	400	U	400	
75-34-3	1,1-Dichloroethane (1,1-DCA)	400	U	400	
75-35-4	1,1-Dichloroethene (1,1-DCE)	400	U	400	
107-06-2	1,2-Dichloroethane	400	U	400	
78-87-5	1,2-Dichloropropane	400	U	400	
67-64-1	Acetone	2000	U	2000	
75-27-4	Bromodichloromethane	400	U	400	
75-25-2	Bromoform	400	U	400	
74-83-9	Bromomethane	400	U	400	
56-23-5	Carbon Tetrachloride	400	U	400	
108-90-7	Chlorobenzene	400	U	400	
75-00-3	Chloroethane	400	U	400	
67-66-3	Chloroform	400	U	400	
74-87-3	Chloromethane	400	U	400	
124-48-1	Dibromochloromethane	400	U	400	
75-09-2	Methylene Chloride	400	U	400	
127-18-4	Tetrachloroethene (PCE)	**6300**	D	400	
79-01-6	Trichloroethene (TCE)	**18000**	D	400	
75-69-4	Trichlorofluoromethane (CFC 11)	400	U	400	
75-01-4	Vinyl Chloride	**840**	D	400	
156-59-2	cis-1,2-Dichloroethene	**7400**	D	400	
10061-01-5	cis-1,3-Dichloropropene	400	U	400	
156-60-5	trans-1,2-Dichloroethene	400	U	400	
10061-02-6	trans-1,3-Dichloropropene	400	U	400	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	97	70-130	6/4/15 15:31	
Dibromofluoromethane	99	70-130	6/4/15 15:31	
Toluene-d8	100	70-130	6/4/15 15:31	

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Analytical Report

Client:	CB&I	**Service Request:**	R1504068
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/23/15 1130
Sample Matrix:	Water	**Date Received:**	5/27/15
		Date Analyzed:	6/3/15 14:33
Sample Name:	OB28-BR (90)	**Units:**	µg/L
Lab Code:	R1504068-015	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	447556
Data File Name:	I:\ACQUDATA\MSVOA14\Data\060315\B1031.D\	**Instrument Name:**	R-MS-14
		Dilution Factor:	10

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	20	U	20	
79-34-5	1,1,2,2-Tetrachloroethane	20	U	20	
79-00-5	1,1,2-Trichloroethane	20	U	20	
75-34-3	1,1-Dichloroethane (1,1-DCA)	20	U	20	
75-35-4	1,1-Dichloroethene (1,1-DCE)	20	U	20	
107-06-2	1,2-Dichloroethane	20	U	20	
78-87-5	1,2-Dichloropropane	20	U	20	
67-64-1	Acetone	100	U	100	
75-27-4	Bromodichloromethane	20	U	20	
75-25-2	Bromoform	20	U	20	
74-83-9	Bromomethane	20	U	20	
56-23-5	Carbon Tetrachloride	20	U	20	
108-90-7	Chlorobenzene	20	U	20	
75-00-3	Chloroethane	20	U	20	
67-66-3	Chloroform	20	U	20	
74-87-3	Chloromethane	20	U	20	
124-48-1	Dibromochloromethane	20	U	20	
75-09-2	Methylene Chloride	20	U	20	
127-18-4	Tetrachloroethene (PCE)	20	U	20	
79-01-6	Trichloroethene (TCE)	**1400**		20	
75-69-4	Trichlorofluoromethane (CFC 11)	20	U	20	
75-01-4	Vinyl Chloride	20	U	20	
156-59-2	cis-1,2-Dichloroethene	**550**		20	
10061-01-5	cis-1,3-Dichloropropene	20	U	20	
156-60-5	trans-1,2-Dichloroethene	20	U	20	
10061-02-6	trans-1,3-Dichloropropene	20	U	20	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	90	70-130	6/3/15 14:33	
Dibromofluoromethane	94	70-130	6/3/15 14:33	
Toluene-d8	95	70-130	6/3/15 14:33	

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Analytical Report

Client:	CB&I	**Service Request:**	R1504068
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/23/15 1230
Sample Matrix:	Water	**Date Received:**	5/27/15
		Date Analyzed:	6/4/15 15:07
Sample Name:	OB26-BR (93)	**Units:**	µg/L
Lab Code:	R1504068-016	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	447749
Data File Name:	I:\ACQUDATA\MSVOA14\Data\060415\B1086.D\	**Instrument Name:**	R-MS-14
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	**3.1**		2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	**15**		2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	93	70-130	6/4/15 15:07	
Dibromofluoromethane	100	70-130	6/4/15 15:07	
Toluene-d8	99	70-130	6/4/15 15:07	

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Analytical Report

Client: CB&I
Project: Varian Beverly/152780-05000000
Sample Matrix: Water

Service Request: R1504068
Date Collected: 5/23/15 1200
Date Received: 5/27/15
Date Analyzed: 6/3/15 15:21

Sample Name: OB26-DO (57)
Lab Code: R1504068-017

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Data File Name: I:\ACQUDATA\MSVOA14\Data\060315\B1033.D\

Analysis Lot: 447556
Instrument Name: R-MS-14
Dilution Factor: 10

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	20	U	20	
79-34-5	1,1,2,2-Tetrachloroethane	20	U	20	
79-00-5	1,1,2-Trichloroethane	20	U	20	
75-34-3	1,1-Dichloroethane (1,1-DCA)	20	U	20	
75-35-4	1,1-Dichloroethene (1,1-DCE)	20	U	20	
107-06-2	1,2-Dichloroethane	20	U	20	
78-87-5	1,2-Dichloropropane	20	U	20	
67-64-1	Acetone	100	U	100	
75-27-4	Bromodichloromethane	20	U	20	
75-25-2	Bromoform	20	U	20	
74-83-9	Bromomethane	20	U	20	
56-23-5	Carbon Tetrachloride	20	U	20	
108-90-7	Chlorobenzene	20	U	20	
75-00-3	Chloroethane	20	U	20	
67-66-3	Chloroform	20	U	20	
74-87-3	Chloromethane	20	U	20	
124-48-1	Dibromochloromethane	20	U	20	
75-09-2	Methylene Chloride	20	U	20	
127-18-4	Tetrachloroethene (PCE)	**1100**		20	
79-01-6	Trichloroethene (TCE)	**5500**	E	20	
75-69-4	Trichlorofluoromethane (CFC 11)	20	U	20	
75-01-4	Vinyl Chloride	20	U	20	
156-59-2	cis-1,2-Dichloroethene	**210**		20	
10061-01-5	cis-1,3-Dichloropropene	20	U	20	
156-60-5	trans-1,2-Dichloroethene	20	U	20	
10061-02-6	trans-1,3-Dichloropropene	20	U	20	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	91	70-130	6/3/15 15:21	
Dibromofluoromethane	98	70-130	6/3/15 15:21	
Toluene-d8	98	70-130	6/3/15 15:21	

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Analytical Report

Client:	CB&I	**Service Request:**	R1504068
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/23/15 1200
Sample Matrix:	Water	**Date Received:**	5/27/15
		Date Analyzed:	6/4/15 15:56
Sample Name:	OB26-DO (57)	**Units:**	µg/L
Lab Code:	R1504068-017	**Basis:**	NA
Run Type:	Dilution		

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	447749
Data File Name:	I:\ACQUDATA\MSVOA14\Data\060415\B1088.D\	**Instrument Name:**	R-MS-14
		Dilution Factor:	50

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	100	U	100	
79-34-5	1,1,2,2-Tetrachloroethane	100	U	100	
79-00-5	1,1,2-Trichloroethane	100	U	100	
75-34-3	1,1-Dichloroethane (1,1-DCA)	100	U	100	
75-35-4	1,1-Dichloroethene (1,1-DCE)	100	U	100	
107-06-2	1,2-Dichloroethane	100	U	100	
78-87-5	1,2-Dichloropropane	100	U	100	
67-64-1	Acetone	500	U	500	
75-27-4	Bromodichloromethane	100	U	100	
75-25-2	Bromoform	100	U	100	
74-83-9	Bromomethane	100	U	100	
56-23-5	Carbon Tetrachloride	100	U	100	
108-90-7	Chlorobenzene	100	U	100	
75-00-3	Chloroethane	100	U	100	
67-66-3	Chloroform	100	U	100	
74-87-3	Chloromethane	100	U	100	
124-48-1	Dibromochloromethane	100	U	100	
75-09-2	Methylene Chloride	100	U	100	
127-18-4	Tetrachloroethene (PCE)	**1400**	D	100	
79-01-6	Trichloroethene (TCE)	**6200**	D	100	
75-69-4	Trichlorofluoromethane (CFC 11)	100	U	100	
75-01-4	Vinyl Chloride	100	U	100	
156-59-2	cis-1,2-Dichloroethene	**240**	D	100	
10061-01-5	cis-1,3-Dichloropropene	100	U	100	
156-60-5	trans-1,2-Dichloroethene	100	U	100	
10061-02-6	trans-1,3-Dichloropropene	100	U	100	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	100	70-130	6/4/15 15:56	
Dibromofluoromethane	101	70-130	6/4/15 15:56	
Toluene-d8	104	70-130	6/4/15 15:56	

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Analytical Report

Client:	CB&I	**Service Request:**	R1504068
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/23/15 1300
Sample Matrix:	Water	**Date Received:**	5/27/15
		Date Analyzed:	6/3/15 13:20
Sample Name:	OB19-S (32)	**Units:**	µg/L
Lab Code:	R1504068-018	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	447556
Data File Name:	I:\ACQUDATA\MSVOA14\Data\060315\B1028.D\	**Instrument Name:**	R-MS-14
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	**16**		2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	91	70-130	6/3/15 13:20	
Dibromofluoromethane	93	70-130	6/3/15 13:20	
Toluene-d8	96	70-130	6/3/15 13:20	

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Analytical Report

Client:	CB&I	**Service Request:**	R1504068
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/23/15 1330
Sample Matrix:	Water	**Date Received:**	5/27/15
		Date Analyzed:	6/3/15 13:44
Sample Name:	OB10-S (29)	**Units:**	µg/L
Lab Code:	R1504068-019	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	447556
Data File Name:	I:\ACQUDATA\MSVOA14\Data\060315\B1029.D\	**Instrument Name:**	R-MS-14
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	**2.8**		2.0	
79-01-6	Trichloroethene (TCE)	**8.5**		2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	94	70-130	6/3/15 13:44	
Dibromofluoromethane	95	70-130	6/3/15 13:44	
Toluene-d8	98	70-130	6/3/15 13:44	

Client:	CB&I	**Service Request:**	R1504068
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/23/15 1400
Sample Matrix:	Water	**Date Received:**	5/27/15
		Date Analyzed:	6/3/15 15:46
Sample Name:	OB10-BR (73)	**Units:**	µg/L
Lab Code:	R1504068-020	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	447556
Data File Name:	I:\ACQUDATA\MSVOA14\Data\060315\B1034.D\	**Instrument Name:**	R-MS-14
		Dilution Factor:	50

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	100	U	100	
79-34-5	1,1,2,2-Tetrachloroethane	100	U	100	
79-00-5	1,1,2-Trichloroethane	100	U	100	
75-34-3	1,1-Dichloroethane (1,1-DCA)	100	U	100	
75-35-4	1,1-Dichloroethene (1,1-DCE)	100	U	100	
107-06-2	1,2-Dichloroethane	100	U	100	
78-87-5	1,2-Dichloropropane	100	U	100	
67-64-1	Acetone	500	U	500	
75-27-4	Bromodichloromethane	100	U	100	
75-25-2	Bromoform	100	U	100	
74-83-9	Bromomethane	100	U	100	
56-23-5	Carbon Tetrachloride	100	U	100	
108-90-7	Chlorobenzene	100	U	100	
75-00-3	Chloroethane	100	U	100	
67-66-3	Chloroform	100	U	100	
74-87-3	Chloromethane	100	U	100	
124-48-1	Dibromochloromethane	100	U	100	
75-09-2	Methylene Chloride	100	U	100	
127-18-4	Tetrachloroethene (PCE)	**2200**		100	
79-01-6	Trichloroethene (TCE)	**6000**		100	
75-69-4	Trichlorofluoromethane (CFC 11)	100	U	100	
75-01-4	Vinyl Chloride	100	U	100	
156-59-2	cis-1,2-Dichloroethene	**1100**		100	
10061-01-5	cis-1,3-Dichloropropene	100	U	100	
156-60-5	trans-1,2-Dichloroethene	100	U	100	
10061-02-6	trans-1,3-Dichloropropene	100	U	100	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	91	70-130	6/3/15 15:46	
Dibromofluoromethane	97	70-130	6/3/15 15:46	
Toluene-d8	95	70-130	6/3/15 15:46	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504068
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/22/15 0815
Sample Matrix:	Water	**Date Received:**	5/27/15
		Date Analyzed:	5/30/15 15:00
Sample Name:	TB-3	**Units:**	µg/L
Lab Code:	R1504068-021	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	447152
Data File Name:	I:\ACQUDATA\MSVOA14\Data\053015\B0962.D\	**Instrument Name:**	R-MS-14
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	91	70-130	5/30/15 15:00	
Dibromofluoromethane	94	70-130	5/30/15 15:00	
Toluene-d8	96	70-130	5/30/15 15:00	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504068
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/22/15 0845
Sample Matrix:	Water	**Date Received:**	5/27/15
		Date Analyzed:	5/30/15 15:25
Sample Name:	EB-3	**Units:**	µg/L
Lab Code:	R1504068-022	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	447152
Data File Name:	I:\ACQUDATA\MSVOA14\Data\053015\B0963.D\	**Instrument Name:**	R-MS-14
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	93	70-130	5/30/15 15:25	
Dibromofluoromethane	96	70-130	5/30/15 15:25	
Toluene-d8	97	70-130	5/30/15 15:25	

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Analytical Report

Client:	CB&I	**Service Request:**	R1504068
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/22/15 0800
Sample Matrix:	Water	**Date Received:**	5/27/15
		Date Analyzed:	6/3/15 16:10
Sample Name:	OB6-DO (65)	**Units:**	µg/L
Lab Code:	R1504068-023	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	447556
Data File Name:	I:\ACQUDATA\MSVOA14\Data\060315\B1035.D\	**Instrument Name:**	R-MS-14
		Dilution Factor:	2.5

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	5.0	U	5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0	U	5.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	5.0	U	5.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	5.0	U	5.0	
107-06-2	1,2-Dichloroethane	5.0	U	5.0	
78-87-5	1,2-Dichloropropane	5.0	U	5.0	
67-64-1	Acetone	25	U	25	
75-27-4	Bromodichloromethane	5.0	U	5.0	
75-25-2	Bromoform	5.0	U	5.0	
74-83-9	Bromomethane	5.0	U	5.0	
56-23-5	Carbon Tetrachloride	5.0	U	5.0	
108-90-7	Chlorobenzene	5.0	U	5.0	
75-00-3	Chloroethane	5.0	U	5.0	
67-66-3	Chloroform	5.0	U	5.0	
74-87-3	Chloromethane	5.0	U	5.0	
124-48-1	Dibromochloromethane	5.0	U	5.0	
75-09-2	Methylene Chloride	5.0	U	5.0	
127-18-4	Tetrachloroethene (PCE)	**33**		5.0	
79-01-6	Trichloroethene (TCE)	**57**		5.0	
75-69-4	Trichlorofluoromethane (CFC 11)	5.0	U	5.0	
75-01-4	Vinyl Chloride	**14**		5.0	
156-59-2	cis-1,2-Dichloroethene	**320**		5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0	U	5.0	
156-60-5	trans-1,2-Dichloroethene	5.0	U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0	U	5.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	90	70-130	6/3/15 16:10	
Dibromofluoromethane	97	70-130	6/3/15 16:10	
Toluene-d8	98	70-130	6/3/15 16:10	

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Analytical Report

Client:	CB&I	**Service Request:**	R1504068
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/22/15 0830
Sample Matrix:	Water	**Date Received:**	5/27/15
		Date Analyzed:	5/30/15 16:38
Sample Name:	OB6-BR (99)	**Units:**	µg/L
Lab Code:	R1504068-024	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	447152
Data File Name:	I:\ACQUDATA\MSVOA14\Data\053015\B0966.D\	**Instrument Name:**	R-MS-14
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	**29**		2.0	
79-01-6	Trichloroethene (TCE)	**85**		2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	**19**		2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	91	70-130	5/30/15 16:38	
Dibromofluoromethane	98	70-130	5/30/15 16:38	
Toluene-d8	98	70-130	5/30/15 16:38	

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Analytical Report

Client:	CB&I	**Service Request:**	R1504068
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/22/15 0930
Sample Matrix:	Water	**Date Received:**	5/27/15
		Date Analyzed:	5/30/15 17:02
Sample Name:	OB38-DO (44)	**Units:**	µg/L
Lab Code:	R1504068-025	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	447152
Data File Name:	I:\ACQUDATA\MSVOA14\Data\053015\B0967.D\	**Instrument Name:**	R-MS-14
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	**70**		2.0	
79-01-6	Trichloroethene (TCE)	**110**		2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	**44**		2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	**4.7**		2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	95	70-130	5/30/15 17:02	
Dibromofluoromethane	99	70-130	5/30/15 17:02	
Toluene-d8	99	70-130	5/30/15 17:02	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504068
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/22/15 1000
Sample Matrix:	Water	**Date Received:**	5/27/15
		Date Analyzed:	5/30/15 17:26
Sample Name:	OB45-S (13)	**Units:**	µg/L
Lab Code:	R1504068-026	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	447152
Data File Name:	I:\ACQUDATA\MSVOA14\Data\053015\B0968.D\	**Instrument Name:**	R-MS-14
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	**2.1**		2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	94	70-130	5/30/15 17:26	
Dibromofluoromethane	97	70-130	5/30/15 17:26	
Toluene-d8	98	70-130	5/30/15 17:26	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504068
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/22/15 1030
Sample Matrix:	Water	**Date Received:**	5/27/15
		Date Analyzed:	5/30/15 17:50
Sample Name:	OB45-DO (39)	**Units:**	µg/L
Lab Code:	R1504068-027	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	447152
Data File Name:	I:\ACQUDATA\MSVOA14\Data\053015\B0969.D\	**Instrument Name:**	R-MS-14
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	90	70-130	5/30/15 17:50	
Dibromofluoromethane	95	70-130	5/30/15 17:50	
Toluene-d8	96	70-130	5/30/15 17:50	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504068
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/22/15 1130
Sample Matrix:	Water	**Date Received:**	5/27/15
		Date Analyzed:	6/3/15 16:34
Sample Name:	MW-13 (41)	**Units:**	µg/L
Lab Code:	R1504068-028	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	447556
Data File Name:	I:\ACQUDATA\MSVOA14\Data\060315\B1036.D\	**Instrument Name:**	R-MS-14
		Dilution Factor:	5

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	**41**		10	
79-34-5	1,1,2,2-Tetrachloroethane	10	U	10	
79-00-5	1,1,2-Trichloroethane	10	U	10	
75-34-3	1,1-Dichloroethane (1,1-DCA)	10	U	10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	10	U	10	
107-06-2	1,2-Dichloroethane	10	U	10	
78-87-5	1,2-Dichloropropane	10	U	10	
67-64-1	Acetone	50	U	50	
75-27-4	Bromodichloromethane	10	U	10	
75-25-2	Bromoform	10	U	10	
74-83-9	Bromomethane	10	U	10	
56-23-5	Carbon Tetrachloride	**34**		10	
108-90-7	Chlorobenzene	10	U	10	
75-00-3	Chloroethane	10	U	10	
67-66-3	Chloroform	**50**		10	
74-87-3	Chloromethane	10	U	10	
124-48-1	Dibromochloromethane	10	U	10	
75-09-2	Methylene Chloride	10	U	10	
127-18-4	Tetrachloroethene (PCE)	**1200**	E	10	
79-01-6	Trichloroethene (TCE)	10	U	10	
75-69-4	Trichlorofluoromethane (CFC 11)	10	U	10	
75-01-4	Vinyl Chloride	10	U	10	
156-59-2	cis-1,2-Dichloroethene	10	U	10	
10061-01-5	cis-1,3-Dichloropropene	10	U	10	
156-60-5	trans-1,2-Dichloroethene	10	U	10	
10061-02-6	trans-1,3-Dichloropropene	10	U	10	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	92	70-130	6/3/15 16:34	
Dibromofluoromethane	95	70-130	6/3/15 16:34	
Toluene-d8	96	70-130	6/3/15 16:34	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504068
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/22/15 1130
Sample Matrix:	Water	**Date Received:**	5/27/15
		Date Analyzed:	6/4/15 16:20
Sample Name:	MW-13 (41)	**Units:**	µg/L
Lab Code:	R1504068-028	**Basis:**	NA
Run Type:	Dilution		

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	447749
Data File Name:	I:\ACQUDATA\MSVOA14\Data\060415\B1089.D\	**Instrument Name:**	R-MS-14
		Dilution Factor:	10

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	**40**		20	
79-34-5	1,1,2,2-Tetrachloroethane	20	U	20	
79-00-5	1,1,2-Trichloroethane	20	U	20	
75-34-3	1,1-Dichloroethane (1,1-DCA)	20	U	20	
75-35-4	1,1-Dichloroethene (1,1-DCE)	20	U	20	
107-06-2	1,2-Dichloroethane	20	U	20	
78-87-5	1,2-Dichloropropane	20	U	20	
67-64-1	Acetone	100	U	100	
75-27-4	Bromodichloromethane	20	U	20	
75-25-2	Bromoform	20	U	20	
74-83-9	Bromomethane	20	U	20	
56-23-5	Carbon Tetrachloride	**33**	D	20	
108-90-7	Chlorobenzene	20	U	20	
75-00-3	Chloroethane	20	U	20	
67-66-3	Chloroform	**55**	D	20	
74-87-3	Chloromethane	20	U	20	
124-48-1	Dibromochloromethane	20	U	20	
75-09-2	Methylene Chloride	20	U	20	
127-18-4	Tetrachloroethene (PCE)	**1000**	D	20	
79-01-6	Trichloroethene (TCE)	20	U	20	
75-69-4	Trichlorofluoromethane (CFC 11)	20	U	20	
75-01-4	Vinyl Chloride	20	U	20	
156-59-2	cis-1,2-Dichloroethene	20	U	20	
10061-01-5	cis-1,3-Dichloropropene	20	U	20	
156-60-5	trans-1,2-Dichloroethene	20	U	20	
10061-02-6	trans-1,3-Dichloropropene	20	U	20	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	98	70-130	6/4/15 16:20	
Dibromofluoromethane	101	70-130	6/4/15 16:20	
Toluene-d8	102	70-130	6/4/15 16:20	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504068
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/22/15 1200
Sample Matrix:	Water	**Date Received:**	5/27/15
		Date Analyzed:	5/30/15 18:14
Sample Name:	OB11-DO (59)	**Units:**	µg/L
Lab Code:	R1504068-029	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	447152
Data File Name:	I:\ACQUDATA\MSVOA14\Data\053015\B0970.D\	**Instrument Name:**	R-MS-14
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	**78**		2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	**15**		2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	93	70-130	5/30/15 18:14	
Dibromofluoromethane	94	70-130	5/30/15 18:14	
Toluene-d8	97	70-130	5/30/15 18:14	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504068
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/22/15 1230
Sample Matrix:	Water	**Date Received:**	5/27/15
		Date Analyzed:	5/30/15 18:39
Sample Name:	OB11-BR (86)	**Units:**	µg/L
Lab Code:	R1504068-030	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	447152
Data File Name:	I:\ACQUDATA\MSVOA14\Data\053015\B0971.D\	**Instrument Name:**	R-MS-14
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	**3.3**		2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	**2.2**		2.0	
156-59-2	cis-1,2-Dichloroethene	**37**		2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	**5.7**		2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	94	70-130	5/30/15 18:39	
Dibromofluoromethane	98	70-130	5/30/15 18:39	
Toluene-d8	97	70-130	5/30/15 18:39	

Client:	CB&I	**Service Request:**	R1504068
Project:	Varian Beverly/152780-05000000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	5/30/15 14:12
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1505874-05	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	447152
Data File Name:	I:\ACQUDATA\MSVOA14\Data\053015\B0960.D\	**Instrument Name:**	R-MS-14
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	90	70-130	5/30/15 14:12	
Dibromofluoromethane	98	70-130	5/30/15 14:12	
Toluene-d8	96	70-130	5/30/15 14:12	

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Analytical Report

Client:	CB&I	**Service Request:**	R1504068
Project:	Varian Beverly/152780-05000000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	5/31/15 15:01
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1506038-05	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	447056
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\053115\M2209.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	103	70-130	5/31/15 15:01	
Dibromofluoromethane	101	70-130	5/31/15 15:01	
Toluene-d8	109	70-130	5/31/15 15:01	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504068
Project:	Varian Beverly/152780-05000000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	6/3/15 12:32
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1506137-05	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	447556
Data File Name:	I:\ACQUDATA\MSVOA14\Data\060315\B1026.D\	**Instrument Name:**	R-MS-14
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	89	70-130	6/3/15 12:32	
Dibromofluoromethane	95	70-130	6/3/15 12:32	
Toluene-d8	95	70-130	6/3/15 12:32	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly/152780-05000000
Sample Matrix: Water

Service Request: R1504068
Date Collected: NA
Date Received: NA
Date Analyzed: 6/4/15 14:14

Sample Name: Method Blank
Lab Code: RQ1506219-05

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Data File Name: I:\ACQUDATA\MSVOA14\Data\060415\B1084.D\

Analysis Lot: 447749
Instrument Name: R-MS-14
Dilution Factor: 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	93	70-130	6/4/15 14:14	
Dibromofluoromethane	96	70-130	6/4/15 14:14	
Toluene-d8	97	70-130	6/4/15 14:14	

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: CB&I
Project: Varian Beverly/152780-05000000
Sample Matrix: Water

Service Request: R1504068
Date Analyzed: 5/30/15

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260C

Units: µg/L
Basis: NA

Analysis Lot: 447152

Analyte Name	Lab Control Sample RQ1505874-03 Result	Spike Amount	% Rec	Duplicate Lab Control Sample RQ1505874-04 Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
1,1,1-Trichloroethane (TCA)	16.8	20.0	84	18.3	20.0	92	70 - 130	9	20
1,1,2,2-Tetrachloroethane	16.5	20.0	83	19.3	20.0	96	70 - 130	15	20
1,1,2-Trichloroethane	17.2	20.0	86	19.3	20.0	97	70 - 130	12	20
1,1-Dichloroethane (1,1-DCA)	17.3	20.0	87	19.4	20.0	97	70 - 130	11	20
1,1-Dichloroethene (1,1-DCE)	17.1	20.0	85	19.2	20.0	96	70 - 130	12	20
1,2-Dichloroethane	16.7	20.0	84	19.2	20.0	96	70 - 130	14	20
1,2-Dichloropropane	17.9	20.0	90	19.3	20.0	96	70 - 130	7	20
Acetone	18.9	20.0	94	24.2	20.0	121	40 - 160	25 *	20
Bromodichloromethane	17.6	20.0	88	19.5	20.0	98	70 - 130	10	20
Bromoform	16.0	20.0	80	18.1	20.0	91	70 - 130	13	20
Bromomethane	15.0	20.0	75	15.1	20.0	76	40 - 160	<1	20
Carbon Tetrachloride	15.9	20.0	80	17.2	20.0	86	70 - 130	8	20
Chlorobenzene	17.6	20.0	88	19.0	20.0	95	70 - 130	7	20
Chloroethane	16.7	20.0	83	20.1	20.0	100	70 - 130	18	20
Chloroform	17.6	20.0	88	19.4	20.0	97	70 - 130	10	20
Chloromethane	20.9	20.0	105	24.3	20.0	122	40 - 160	15	20
Dibromochloromethane	17.3	20.0	86	18.9	20.0	95	70 - 130	9	20
Methylene Chloride	17.8	20.0	89	19.4	20.0	97	70 - 130	9	20
Tetrachloroethene (PCE)	17.0	20.0	85	18.3	20.0	91	70 - 130	7	20
Trichloroethene (TCE)	17.2	20.0	86	19.1	20.0	96	70 - 130	11	20
Trichlorofluoromethane (CFC 11)	17.3	20.0	86	19.3	20.0	97	70 - 130	11	20
Vinyl Chloride	18.1	20.0	90	20.6	20.0	103	70 - 130	13	20
cis-1,2-Dichloroethene	17.9	20.0	89	19.5	20.0	98	70 - 130	9	20
cis-1,3-Dichloropropene	17.8	20.0	89	19.2	20.0	96	70 - 130	8	20
trans-1,2-Dichloroethene	18.2	20.0	91	20.3	20.0	101	70 - 130	11	20
trans-1,3-Dichloropropene	18.4	20.0	92	19.9	20.0	99	70 - 130	8	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: CB&I
Project: Varian Beverly/152780-05000000
Sample Matrix: Water

Service Request: R1504068
Date Analyzed: 5/31/15

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260C

Units: µg/L
Basis: NA

Analysis Lot: 447056

Analyte Name	Lab Control Sample RQ1506038-03 Result	Spike Amount	% Rec	Duplicate Lab Control Sample RQ1506038-04 Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
1,1,1-Trichloroethane (TCA)	19.4	20.0	97	20.8	20.0	104	70 - 130	7	20
1,1,2,2-Tetrachloroethane	20.5	20.0	102	21.0	20.0	105	70 - 130	2	20
1,1,2-Trichloroethane	20.3	20.0	102	20.8	20.0	104	70 - 130	2	20
1,1-Dichloroethane (1,1-DCA)	20.0	20.0	100	20.7	20.0	104	70 - 130	3	20
1,1-Dichloroethene (1,1-DCE)	18.9	20.0	95	19.5	20.0	97	70 - 130	3	20
1,2-Dichloroethane	20.2	20.0	101	21.0	20.0	105	70 - 130	4	20
1,2-Dichloropropane	20.7	20.0	104	21.2	20.0	106	70 - 130	2	20
Acetone	23.8	20.0	119	25.0	20.0	125	40 - 160	5	20
Bromodichloromethane	21.5	20.0	108	21.7	20.0	109	70 - 130	<1	20
Bromoform	22.5	20.0	112	25.3	20.0	127	70 - 130	12	20
Bromomethane	16.3	20.0	82	16.5	20.0	83	40 - 160	1	20
Carbon Tetrachloride	19.5	20.0	98	21.5	20.0	107	70 - 130	10	20
Chlorobenzene	19.7	20.0	98	20.3	20.0	101	70 - 130	3	20
Chloroethane	17.6	20.0	88	19.4	20.0	97	70 - 130	10	20
Chloroform	19.5	20.0	98	20.8	20.0	104	70 - 130	7	20
Chloromethane	17.7	20.0	89	18.6	20.0	93	40 - 160	5	20
Dibromochloromethane	22.1	20.0	111	23.0	20.0	115	70 - 130	4	20
Methylene Chloride	18.6	20.0	93	19.8	20.0	99	70 - 130	6	20
Tetrachloroethene (PCE)	19.0	20.0	95	21.4	20.0	107	70 - 130	12	20
Trichloroethene (TCE)	19.3	20.0	96	20.7	20.0	103	70 - 130	7	20
Trichlorofluoromethane (CFC 11)	17.4	20.0	87	19.4	20.0	97	70 - 130	11	20
Vinyl Chloride	18.1	20.0	91	19.4	20.0	97	70 - 130	7	20
cis-1,2-Dichloroethene	19.4	20.0	97	19.7	20.0	98	70 - 130	1	20
cis-1,3-Dichloropropene	20.8	20.0	104	21.5	20.0	108	70 - 130	3	20
trans-1,2-Dichloroethene	19.0	20.0	95	20.0	20.0	100	70 - 130	5	20
trans-1,3-Dichloropropene	21.7	20.0	109	22.7	20.0	114	70 - 130	5	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: CB&I
Project: Varian Beverly/152780-05000000
Sample Matrix: Water

Service Request: R1504068
Date Analyzed: 6/ 3/15

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260C

Units: µg/L
Basis: NA

Analysis Lot: 447556

Analyte Name	Lab Control Sample RQ1506137-03 Result	Spike Amount	% Rec	Duplicate Lab Control Sample RQ1506137-04 Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
1,1,1-Trichloroethane (TCA)	16.9	20.0	85	16.5	20.0	82	70 - 130	3	20
1,1,2,2-Tetrachloroethane	17.3	20.0	87	17.6	20.0	88	70 - 130	1	20
1,1,2-Trichloroethane	17.8	20.0	89	16.8	20.0	84	70 - 130	6	20
1,1-Dichloroethane (1,1-DCA)	17.0	20.0	85	16.7	20.0	84	70 - 130	2	20
1,1-Dichloroethene (1,1-DCE)	17.4	20.0	87	17.0	20.0	85	70 - 130	2	20
1,2-Dichloroethane	16.6	20.0	83	16.1	20.0	80	70 - 130	3	20
1,2-Dichloropropane	17.4	20.0	87	17.1	20.0	85	70 - 130	2	20
Acetone	17.5	20.0	88	17.8	20.0	89	40 - 160	2	20
Bromodichloromethane	17.9	20.0	89	17.1	20.0	85	70 - 130	4	20
Bromoform	17.0	20.0	85	17.5	20.0	88	70 - 130	3	20
Bromomethane	20.1	20.0	100	21.7	20.0	108	40 - 160	8	20
Carbon Tetrachloride	15.3	20.0	77	15.7	20.0	78	70 - 130	2	20
Chlorobenzene	17.1	20.0	85	17.5	20.0	88	70 - 130	2	20
Chloroethane	18.0	20.0	90	16.8	20.0	84	70 - 130	7	20
Chloroform	17.6	20.0	88	17.4	20.0	87	70 - 130	1	20
Chloromethane	19.6	20.0	98	18.7	20.0	94	40 - 160	5	20
Dibromochloromethane	18.0	20.0	90	17.9	20.0	90	70 - 130	<1	20
Methylene Chloride	17.9	20.0	89	16.7	20.0	83	70 - 130	7	20
Tetrachloroethene (PCE)	15.1	20.0	75	15.4	20.0	77	70 - 130	2	20
Trichloroethene (TCE)	16.8	20.0	84	16.6	20.0	83	70 - 130	1	20
Trichlorofluoromethane (CFC 11)	17.1	20.0	85	16.7	20.0	84	70 - 130	2	20
Vinyl Chloride	19.0	20.0	95	18.3	20.0	91	70 - 130	4	20
cis-1,2-Dichloroethene	18.2	20.0	91	17.5	20.0	87	70 - 130	4	20
cis-1,3-Dichloropropene	17.4	20.0	87	16.8	20.0	84	70 - 130	4	20
trans-1,2-Dichloroethene	18.6	20.0	93	18.0	20.0	90	70 - 130	3	20
trans-1,3-Dichloropropene	19.2	20.0	96	18.9	20.0	94	70 - 130	1	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: CB&I
Project: Varian Beverly/152780-05000000
Sample Matrix: Water

Service Request: R1504068
Date Analyzed: 6/ 4/15

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260C

Units: µg/L
Basis: NA

Analysis Lot: 447749

Analyte Name	Lab Control Sample RQ1506219-03 Result	Spike Amount	% Rec	Duplicate Lab Control Sample RQ1506219-04 Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
1,1,1-Trichloroethane (TCA)	16.1	20.0	81	16.2	20.0	81	70 - 130	<1	20
1,1,2,2-Tetrachloroethane	17.1	20.0	86	17.3	20.0	86	70 - 130	<1	20
1,1,2-Trichloroethane	17.2	20.0	86	17.3	20.0	86	70 - 130	<1	20
1,1-Dichloroethane (1,1-DCA)	16.3	20.0	82	16.8	20.0	84	70 - 130	3	20
1,1-Dichloroethene (1,1-DCE)	17.0	20.0	85	16.9	20.0	84	70 - 130	<1	20
1,2-Dichloroethane	16.3	20.0	82	16.3	20.0	81	70 - 130	<1	20
1,2-Dichloropropane	17.4	20.0	87	17.0	20.0	85	70 - 130	2	20
Acetone	15.8	20.0	79	18.4	20.0	92	40 - 160	15	20
Bromodichloromethane	17.1	20.0	86	16.7	20.0	83	70 - 130	3	20
Bromoform	15.7	20.0	79	16.3	20.0	81	70 - 130	3	20
Bromomethane	18.3	20.0	91	19.9	20.0	99	40 - 160	8	20
Carbon Tetrachloride	15.4	20.0	77	14.8	20.0	74	70 - 130	4	20
Chlorobenzene	17.2	20.0	86	17.6	20.0	88	70 - 130	2	20
Chloroethane	17.6	20.0	88	17.1	20.0	85	70 - 130	3	20
Chloroform	16.7	20.0	83	17.2	20.0	86	70 - 130	3	20
Chloromethane	19.8	20.0	99	20.2	20.0	101	40 - 160	2	20
Dibromochloromethane	17.0	20.0	85	17.2	20.0	86	70 - 130	1	20
Methylene Chloride	17.5	20.0	87	16.7	20.0	84	70 - 130	5	20
Tetrachloroethene (PCE)	17.2	20.0	86	16.7	20.0	84	70 - 130	3	20
Trichloroethene (TCE)	17.3	20.0	86	17.5	20.0	88	70 - 130	1	20
Trichlorofluoromethane (CFC 11)	17.2	20.0	86	16.8	20.0	84	70 - 130	2	20
Vinyl Chloride	18.5	20.0	93	18.1	20.0	90	70 - 130	3	20
cis-1,2-Dichloroethene	17.7	20.0	89	17.8	20.0	89	70 - 130	<1	20
cis-1,3-Dichloropropene	16.4	20.0	82	16.0	20.0	80	70 - 130	3	20
trans-1,2-Dichloroethene	18.3	20.0	92	17.8	20.0	89	70 - 130	3	20
trans-1,3-Dichloropropene	17.2	20.0	86	17.1	20.0	86	70 - 130	<1	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Columbia Analytical Services - CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

1 Mustard Street, Suite 250, Rochester, NY 14609 | 585.288.5380 | 800.695.7222 | 585.288.8475 (fax) PAGE 1 OF 3

Project Name: Varian Beverly	Project Number: 152780-05000000
Project Manager: Raymond Cadorette	Report CC:
Company/Address: CB&I Environmental 150 Royall Street Canton, MA 02021	
Phone #: 617-589-6102	E-mail: Raymond.Cadorette@CBI.com
Sampler's Signature:	Sampler's Printed Name: Paul Hedeen

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

PRESERVATIVE: 1 | 20

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS		GC/MS VOA's 8260 ☐ 624 ☐ CLP List + Site Specific	GC/MS SVOA's ☐ 8270 ☐ 625	GC VOA's ☐ 8021 ☐ 601/602	PESTICIDES ☐ 8081 ☐ 608	PCB's ☐ 8082 ☐ 608	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below) Ferric Chloride	REMARKS/ ALTERNATE DESCRIPTION
OB14-DO (55)		5.22.15	1300	GW	3	3								
OB34-DO (58)			1330		3	3								
RW-22 (104)			1400		3	3								
MW-14A (58)			1430		3	3								
BR-bZone 3			1500		3	3								
OB41-S (13)		↓	1530		3	3								
EB-4		5.23.15	0715		3	3								
TB-4			0730		3	3								
AP15-S (12)			0750		3	3								
OB18-S (11)		↓	0830	↓	3	3								

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

SPECIAL INSTRUCTIONS/COMMENTS
Metals = Field filtered

Site specific VOC list.
Massachusetts CAM analyses reporting and QA/QC.
Please email GISKey formatted EDD & PDF of report to:
Catherine.Mainville@CBI.com.

See QAPP ☐

STATE WHERE SAMPLES WERE COLLECTED:

TURNAROUND REQUIREMENTS
____ RUSH (SURCHARGES APPLY)
____ 1 day ____ 2 day ____ 3 day
____ 4 day ____ 5 day
✓ Standard

REQUESTED REPORT DATE: _____

REPORT REQUIREMENTS
____ I. Results Only
____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
____ III. Results + QC and Calibration Summaries
____ IV. Data Validation Report with Raw Data

Edata ✓ Yes ____ No

INVOICE INFORMATION
PO #: 915904
BILL TO: CB&I

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature:	Signature:	Signature:	Signature:	Signature:	Signature:
Printed Name: Paul Hedeen	Printed Name:	Printed Name:	Printed Name:	Printed Name:	Printed Name:
Firm: CB&I	Firm:	Firm:	Firm:	Firm:	Firm:
Date/Time: 5.23.15 1600	Date/Time: 5/27/15 0900	Date/Time:	Date/Time:	Date/Time:	Date/Time:

R1504068 7 Y
CB&I Environmental & Infrastructure
Varian Beverly - Non-Bio Wells

Distribution: White - Lab Copy; Yellow - Return To Originator

SCOC Rev. 10/2010

Columbia Analytical Services- CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

1 Mustard Street, Suite 250, Rochester, NY 14609 | 585.288.5380 | 800.695.7222 | 585.288.8475 (fax)

Project Name: Varian Beverly	Project Number: 152780-05000000
Project Manager: Raymond, Cadorette	Report CC:
Company/Address: CB&I Environmental 150 Royall Street Canton, MA 02021	
Phone #: 617-589-6102	E-mail: Raymond.Cadorette@CBI.com
Sampler's Signature:	Sampler's Printed Name: Paul Hedeen

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

PRESERVATIVE: 1 | 2 0

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS		GC/MS VOA's ☐ 8260 ☐ 624 ☐ CLP List Site Specific	GC/MS SVOA's ☐ 8270 ☐ 625	GC VOA's ☐ 8021 ☐ 601/602	PESTICIDES ☐ 8081 ☐ 608	PCB's ☐ 8082 ☐ 608	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below) Ret + ma	Chloride	REMARKS/ ALTERNATE DESCRIPTION
OB 18-DO (23)		5.23.15	0900	GW	3	3									
CL-11S (23)			0930		3	3									
CL-11DO (49)			1000		3	3									
OB 27-BR (86)			1100		3	3									
OB 28-BR (90)			1130		3	3									
OB 26-BR (93) (2)			1230 (2)		3	3									
OB 26-DO (57) (2)			1300		3	3									
OB 19-S (32)			1300		3	3									
OB 10-S (29)			1330	✓	3	3									
OB 10-BR (73)			1400		3	3									

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

SPECIAL INSTRUCTIONS/COMMENTS
Metals = Field filtered

Site specific VOC list.
Massachusetts CAM analyses reporting and QA/QC.
Please email GISKey formatted EDD & PDF of report to:
Catherine.Mainville@CBI.com.

See QAPP ☐

TURNAROUND REQUIREMENTS
____ RUSH (SURCHARGES APPLY)
____ 1 day ____ 2 day ____ 3 day
____ 4 day ____ 5 day
✓ Standard

REQUESTED REPORT DATE: _____

REPORT REQUIREMENTS
____ I. Results Only
____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
____ III. Results + QC and Calibration Summaries
____ IV. Data Validation Report with Raw Data

Edata ✓ Yes ____ No

INVOICE INFORMATION
PO #: 915904
BILL TO: CB&I

RQ504068

STATE WHERE SAMPLES WERE COLLECTED:

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature:	Signature:	Signature:	Signature:	Signature:	Signature:
Printed Name: Paul Hedeen	Printed Name: Greg Peters	Printed Name:	Printed Name:	Printed Name:	Printed Name:
Firm: CB&I	Firm: AS	Firm:	Firm:	Firm:	Firm:
Date/Time: 5.23.15 1600	Date/Time: 5/27/15 0900	Date/Time:	Date/Time:	Date/Time:	Date/Time:

Columbia Analytical Services — CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

1 Mustard Street, Suite 250, Rochester, NY 14609 | 585.288.5380 | 800.695.7222 | 585.288.8475 (fax) PAGE 3 OF 3

Project Name	Project Number
Varian Beverly	152780-05000000
Project Manager	**Report CC**
Raymond Cadorette	
Company/Address	
CB&I Environmental 150 Royall Street Canton, MA 02021	
Phone #	**E-mail**
617-589-6102	Raymond.Cadorette@CBI.com
Sampler's Signature	**Sampler's Printed Name**
	Paul Redcay

ANALYSIS REQUESTED *(Include Method Number and Container Preservative)*

PRESERVATIVE: 1 — 2 0

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS		GC/MS VOA's 5/Specific @ 8260 ☐ 624 ☐ CLP List	GC/MS SVOA's ☐ 8270 ☐ 625	GC VOA's ☐ 8021 ☐ 601/602	PESTICIDES ☐ 8081 ☐ 608	PCB's ☐ 8082 ☐ 608	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below) Fe+ Mn	Chloride	REMARKS/ ALTERNATE DESCRIPTION
TB-3		5.22.15	0845	GW	3	3									
EB-3			0845		3	3									
OB6-DO (65)			0800		3	3									
OB6-BR (99)			0830		3	3									
OB38-DO (44)			0930		3	3									
OB45-S (13)			1000		3	3									
OB45-DO (39)			1030		3	3									
MW-13 (41)			1130		3	3									
OB11-DO (59)			1200		3	3									
OB11-BR (86)		✓	1230		3	3									

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

SPECIAL INSTRUCTIONS/COMMENTS
Metals = Field filtered

Site specific VOC list.
Massachusetts CAM analyses reporting and QA/QC.
Please email GISKey formatted EDD & PDF of report to:
Catherine.Mainville@CBI.com.

☑ See QAPP ☐

STATE WHERE SAMPLES WERE COLLECTED:

TURNAROUND REQUIREMENTS
____ RUSH (SURCHARGES APPLY)
____ 1 day ____ 2 day ____ 3 day
____ 4 day ____ 5 day
✓ Standard

REQUESTED REPORT DATE: _____

REPORT REQUIREMENTS
____ I. Results Only
____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
____ III. Results + QC and Calibration Summaries
____ IV. Data Validation Report with Raw Data

Edata ✓ Yes ____ No

INVOICE INFORMATION
PO #: 915904
BILL TO: CB&I

RISO4068

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature	Signature	Signature	Signature	Signature	Signature
Printed Name: Paul Redcay	Printed Name	Printed Name	Printed Name	Printed Name	Printed Name
Firm: CB&I	Firm: AVI	Firm	Firm	Firm	Firm
Date/Time: 5.23.15 1600	Date/Time: 5/27/15 0900	Date/Time	Date/Time	Date/Time	Date/Time

Distribution: White - Lab Copy; Yellow - Return To Originator

R1504068 7 Y
CB&I Environmental & Infrastructure
Varian Beverly - Non-Bio Wells

Cooler Receipt and Preservation Check Form

Project/Client CB+I Folder Number R15-4068

Cooler received on 5/27/15 by: @

COURIER: ALS (UPS) FEDEX VELOCITY CLIENT

1	Were **Custody seals** on outside of cooler?	(Y) N	5a	**Perchlorate** samples have required headspace?	Y N (NA)
2	**Custody papers** properly completed (ink, signed)?	(Y) N	5b	Did VOA vials, Alk,or Sulfide have sig* **bubbles**?	Y (N) NA
3	Did all bottles arrive in good **condition** (unbroken)?	(Y) N	6	Where did the bottles originate?	(ALS/ROC) CLIENT
4	Circle: (Wet Ice) **Dry Ice Gel packs** present?	(Y) N	7	Soil VOA received as: Bulk Encore 5035set	(NA)

8. Temperature Readings Date: 5/27/15 Time: 0907 ID: (IR#3) IR#5 From: Temp Blank (Sample Bottle)

Observed Temp (°C)	7.6						
Correction Factor (°C)	-0.6						
Corrected Temp (°C)	7.0°						
Within 0-6°C?	Y (N)	Y N	Y N	Y N	Y N	Y N	Y N

If out of Temperature, note packing/ice condition: _____ Ice melted (Poorly Packed) Same Day Rule

&Client Approval to Run Samples: _____ Standing Approval Client aware at drop-off Client notified by: _____

All samples held in storage location: R-012 by @ on 5/27/15 at 0910
5035 samples placed in storage location: _____ by _____ on _____ at _____

PC Secondary Review: JMS 5/28/15

Cooler Breakdown: Date: 5/27/15 Time: 1352 by: @

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

Explain any discrepancies:

pH	Reagent	Yes	No	Lot Received	Exp	Sample ID	Vol. Added	Lot Added	Final pH
≥12	NaOH								
≤2	HNO_3								
≤2	H_2SO_4								
<4	$NaHSO_4$								
Residual Chlorine (-)	For CN Phenol and 522			If +, contact PM to add $Na_2S_2O_3$ (CN), ascorbic (phenol).					
	$Na_2S_2O_3$	-	-						
	ZnAcetate	-	-						
	HCl	**	**	4114050	4/16				

**Not to be tested before analysis – pH tested and recorded by VOAs on a separate worksheet

Yes=All samples OK

No=Samples were preserved at The lab as listed

PM OK to Adjust: _____

Bottle lot numbers: 5-022-001
Other Comments:

PC Secondary Review: JMS 5/28/15

*significant air bubbles: VOA > 5-6 mm : WC >1 in. diameter

Data Usability Worksheet

Project Name : Varian Medical Systems, Inc

Job Number : 152780.05

Prepared By: Ana Fioretti

Date : 6/29/2015

Matrix: Groundwater

Analyte Group : Volatile Organics
Chloride
Metals (iron, manganese)

Analytical Method : SW-846 8260C
300
6010C

Completed MADEP CAM Certification Form included: Yes

Laboratory ID No. : RI503935

Chain of Custody included in Data Package ? Yes

Is it Complete ? Yes

Sample Collection Date	Analysis	Allowable Holding Time for extraction	Allowable Holding Time for analysis	Analysis Date
5/20/15	SW-846 8260C	14 days	10 days	5/27/15 5/28/15 5/29/15 5/30/15
5/20/15	6010 C	180 Days	180 Days	6/10/2015
5/20/15	300.0 (Chloride)	N/A	28 Days	5/28/2015

Sample temperature within QC limits: Yes

Surrogate Recovery

Are all % recoveries within the allowable range ? Yes

If No, List sample ID where range was exceeded: NA

MS/MSD

Are all MS/MSD sample recoveries within the QC limits ? NA

If No, list sample ID, date and compound where limit was exceeded: NA

Laboratory Control Samples

Are all laboratory control sample recoveries within the QC limits ? No

If no, list sample ID where range was exceeded: See Notes

Equipment Field Blank ID :		EB-1	EB-2
Trip Blank ID :		TB-1	TB-2
Method Blank:	SW-846 8260C	5/28/15 and 5/29/15 and 5/30/15	
	6010 C	6/10/2015	
	300.0	5/28/2015	

Were any compounds identified in the method blank, field blank or trip blank above detection limits ? No

If so, list Sample ID/Compound/Concentration/Units: N/A

Notes:

Several Volatile Organics samples were analyzed at dilutions to bring target analytes within the calibration range o the method.

All method analyses were compliant. No validation required.

Various compounds for OB 5 BR (104), BR-5 Zone 3, BR-7 Zone 3 and CL9-BR Zone 3 have been flagged with an E as being outside the calibration range of the instrument. The samples were repeated at dilutions and both sets of data have been reported out.

All Blank Spike (LCS)/Blank Spike Duplicate (LCSD) recoveries were within QC limits. All RPD's were acceptable except Chloroethane on the 05/30/15 LCS/LCSD and has been flagged with an "*".

The RPD was outside limits in the LCS or LCSD for Chloroethane in batch 447048 (sample BR-5 Zone 3)
The data was not impacted since the analytical results were non-detect for these analytes in the associated batch.

Reviewed by: Jennifer Gailey 6/29/2015

ALS Environmental
ALS Group USA, Corp
1565 Jefferson Rd, Building 300, Suite 360
Rochester, NY 14623
T: 585-288-5380
F: 585-288-8475
www.alsglobal.com

June 12, 2015

Analytical Report for Service Request No: R1503935

Mr. Ray Cadorette
CB&I Environmental & Infrastructure
150 Royall Street
Canton, MA 02021

Laboratory Results for: Varian Beverly/152780-05000000

Dear Mr. Cadorette:

Enclosed are the results of the sample(s) submitted to our laboratory on May 21, 2015. For your reference, these analyses have been assigned our service request number **R1503935**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s) for analysis of these samples, and represented by Laboratory Control Sample control limits. Any events, such as QC failures, which may add to the uncertainty are explained in the report narrative.

Please contact me if you have any questions. My extension is 7472. You may also contact me via email at Janice.Jaeger@alsglobal.com.

Respectfully submitted,

ALS Group USA Corp. dba ALS Environmental

Janice Jaeger
Project Manager

CC: Pernilla Haley

ALS Environmental

Client:	CB&I
Service Request No.:	R1503935
Project:	Varian
Date Received:	5/21/15
Sample Matrix:	Water
Project/Case No.:	

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II data deliverables. When appropriate to the method, method blank results have been reported with each analytical test. Surrogate recoveries have been reported for all applicable organic analyses. Additional quality control analyses reported herein include: Laboratory Control Sample (LCS).

Sample Receipt

Water samples were received for analysis at ALS Environmental on 5/21/15. The samples were received in good condition and consistent with the accompanying chain of custody form. All sampling activities performed by ALS personnel have been in accordance with "ALS Field Procedures and Measurements Manual" or by client specifications. The samples were stored in a refrigerator between 1°C and 6°C upon receipt at the laboratory. All Soluble samples were filtered in the field.

Volatile Organics

Water samples were analyzed for a site list of Volatile Organics by SW-846 Method 8260C.

Several samples were initially analyzed at dilutions to bring target analytes within the calibration range of the method.

All initial calibrations were compliant.

All the continuing calibration criteria were met for all analytes.

Various compounds for OB 5 BR (104), BR-5 Zone 3, BR-7 Zone 3 and CL9-BR Zone 3 have been flagged with an "E" as being outside the calibration range of the instrument. The samples were repeated at dilutions and both sets of data have been reported out.

All Surrogate Standard recoveries were within QC limits.

All Blank Spike (LCS)/Blank Spike Duplicate (LCSD) recoveries were within QC limits. All RPD's were acceptable except Chloroethane on the 05/30/15 LCS/LCSD and has been flagged with an "*".

All samples were analyzed within the required holding time of 14 days.

Inorganic Analyses

Water samples were analyzed for a site specific list of inorganics. Please attached data pages for method numbers.

The initial and continuing calibration criteria were met for all analytes.

All Blank Spike (LCS) recoveries were within QC limits.

MassDEP Analytical Protocol Certification Form

Laboratory Name: ALS Environmental | Project #: 152780

Project Location: Varian Beverly | RTN:

This Form provides certifications for the following data set: list Laboratory Sample ID Number(s):
R1503935-001-055

Matrices: Groundwater/Surface Water X Soil/Sediment Drinking Water Air Other:

CAM Protocol (check all that apply below):

8260 VOC CAM II A X	7470/7471 Hg CAM III B	MassDEP VPH CAM IV A	8081 Pesticides CAM V B	7196 Hex Cr CAM VI B	MassDEP APH CAM IX A
8270 SVOC CAM II B	7010 Metals CAM III C	MassDEP EPH CAM IV B	8151 Herbicides CAM V C	8330 Explosives CAM VIII A	TO-15 VOC CAM IX B
6010 Metals CAM III A X	6020 Metals CAM III D	8082 PCB CAM V A	9014 Total Cyanide/PAC CAM VI A	6860 Perchlorate CAM VIII B	

Affirmative Responses to Questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	X Yes No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	X Yes No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	X Yes No
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	X Yes No
E	VPH, EPH, APH, and TO-15 only: a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	Yes No Yes No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	X Yes No

Responses to Questions G, H and I below are required for "Presumptive Certainty" status

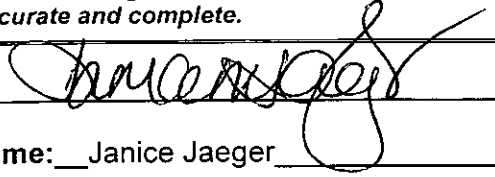
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	X Yes No[1]

Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.

H	Were **all** QC performance standards specified in the CAM protocol(s) achieved?	X Yes No[1]
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	Yes X No[1]

[1] *All negative responses must be addressed in an attached laboratory narrative.*

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Signature: 

Position: Project Manager

Printed Name: Janice Jaeger

Date: 06/15/15

00003

CASE NARRATIVE

This report contains analytical results for the following samples:
Service Request Number: R1503935

Lab ID	Client ID
R1503935-001	OB20-DO (74')
R1503935-002	OB20-BR (94')
R1503935-003	TB-1
R1503935-004	P-20R (10')
R1503935-005	STRM-A-SCDS
R1503935-006	P-19A (9.3')
R1503935-007	P-11R (8.5')
R1503935-008	EB-1
R1503935-009	OB8-DO(77')
R1503935-010	GZ-4 (11')
R1503935-011	OB 42S (13)
R1503935-012	OB 5 DO (81)
R1503935-013	OB 5 BR (104)
R1503935-014	CL 8- DO(52)
R1503935-015	CL 8-BR ZONE 1
R1503935-016	CL 8-BR ZONE 2
R1503935-017	CL 8-BR ZONE 3
R1503935-018	BR-5 ZONE 3
R1503935-019	BR-7 ZONE 2
R1503935-020	BR-7 ZONE 3
R1503935-021	OB 23-BR (84')
R1503935-022	MW 5R (17')
R1503935-023	MW 3R (30')
R1503935-024	CL2-BR (80')
R1503935-025	OB4-DO (67')
R1503935-026	MW-36 (51')
R1503935-027	EB-2
R1503935-028	TB-2
R1503935-029	BR-1 ZONE 3
R1503935-030	CL6-BR (68')
R1503935-031	CL6-DO (41')
R1503935-032	BR-3 ZONE 1
R1503935-033	BR-3 ZONE 2
R1503935-034	BR-3 ZONE 3
R1503935-035	CL9-BR ZONE 3
R1503935-036	OB17-DO (41')
R1503935-037	OB17-BR (95')
R1503935-038	BR-7 ZONE 1
R1503935-039	MW-33B (24')
R1503935-040	AP-19 (24')
R1503935-041	AP-20 (14')
R1503935-042	AP-21 (29')
R1503935-043	AP-22 (19')

Lab ID	Client ID
R1503935-044	CL4-DO (27')
R1503935-045	CL4-BR(54')
R1503935-046	CL10-S (12')
R1503935-047	CL10-BR(45')
R1503935-048	MW2-32TOZER(17')
R1503935-049	CL3-S (18)
R1503935-050	CL3-DO (75)
R1503935-051	CL10-D0(36')
R1503935-052	OB43-S (16)
R1503935-053	CULVERT OUTFALL
R1503935-054	STRHA-7A
R1503935-055	STRHA-7B

ALS Environmental

REPORT QUALIFIERS AND DEFINITIONS

U Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.

J Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Arclors).

B Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.

E Inorganics- Concentration is estimated due to the serial dilution was outside control limits.

E Organics- Concentration has exceeded the calibration range for that specific analysis.

D Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.

* Indicates that a quality control parameter has exceeded laboratory limits. Under the "Notes" column of the Form I, this qualifier denotes analysis was performed out of Holding Time.

H Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.

Spike was diluted out.

+ Correlation coefficient for MSA is <0.995.

N Inorganics- Matrix spike recovery was outside laboratory limits.

N Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.

S Concentration has been determined using Method of Standard Additions (MSA).

W Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.

P Concentration >40% (25% for CLP) difference between the two GC columns.

C Confirmed by GC/MS

Q DoD reports: indicates a pesticide/Aroclor is not confirmed (≥100% Difference between two GC columns).

X See Case Narrative for discussion.

MRL Method Reporting Limit. Also known as:
LOQ Limit of Quantitation (LOQ)
The lowest concentration at which the method analyte may be reliably quantified under the method conditions.

MDL Method Detection Limit. A statistical value derived from a study designed to provide the lowest concentration that will be detected 99% of the time. Values between the MDL and MRL are estimated (see J qualifier).

LOD Limit of Detection. A value at or above the MDL which has been verified to be detectable.

ND Non-Detect. Analyte was not detected at the concentration listed. Same as U qualifier.

Lab ID # for Massachusetts Certification

M-NY032

Analyses were conducted in accordance with Massachusetts Department of Environmental Protection certification standards, except as noted in the laboratory case narrative provided. A copy of the current Department issued parameter list is included in this report.

The Commonwealth of Massachusetts

Department of Environmental Protection

Division of Environmental Analysis
Senator William X. Wall Experiment Station

certifies

M-NY032

ALS ENVIRONMENTAL ROCHESTER
1565 JEFFERSON RD
BUILDING 300, SUITE 360
ROCHESTER, NY 14623-0000

Laboratory Director: **PETER FRICK**

for the analysis of **NON POTABLE WATER (CHEMISTRY)**

pursuant to 310 CMR 42.00

This certificate supersedes all previous Massachusetts certificates issued to this laboratory. The laboratory is regulated by and shall be responsible for being in compliance with Massachusetts regulations at 310 CMR 42.00.

This certificate is valid only when accompanied by the latest dated Certified Parameter List as issued by the Massachusetts D.E.P. Contact the Division of Environmental Analysis to verify the current certification status of the laboratory.

Certification is no guarantee of the validity of the data. This certification is subject to unannounced laboratory inspections.

Issued: **26 FEB 2015**

Expires: **30 JUN 2015**

Oscar C. Parcells

Director, Division of Environmental Analysis

00007

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 01 JUL 2014

M-NY032 **ALS ENVIRONMENTAL ROCHESTER**
ROCHESTER NY

NON POTABLE WATER (CHEMISTRY) **Effective Date** **01 JUL 2014** **Expiration Date** **30 JUN 2015**

Analytes	Methods
ALUMINUM	EPA 200.7
ANTIMONY	EPA 200.7
ANTIMONY	EPA 200.8
ARSENIC	EPA 200.7
ARSENIC	EPA 200.8
BERYLLIUM	EPA 200.7
BERYLLIUM	EPA 200.8
CADMIUM	EPA 200.7
CADMIUM	EPA 200.8
CHROMIUM	EPA 200.7
CHROMIUM	EPA 200.8
COBALT	EPA 200.7
COBALT	EPA 200.8
COPPER	EPA 200.7
COPPER	EPA 200.8
IRON	EPA 200.7
LEAD	EPA 200.7
LEAD	EPA 200.8
MANGANESE	EPA 200.7
MANGANESE	EPA 200.8
MERCURY	EPA 245.1
MOLYBDENUM	EPA 200.7
MOLYBDENUM	EPA 200.8
NICKEL	EPA 200.7
NICKEL	EPA 200.8
SELENIUM	EPA 200.7
SELENIUM	EPA 200.8
SILVER	EPA 200.7
SILVER	EPA 200.8
THALLIUM	EPA 200.7
THALLIUM	EPA 200.8
VANADIUM	EPA 200.7
VANADIUM	EPA 200.8
ZINC	EPA 200.7
ZINC	EPA 200.8
SPECIFIC CONDUCTIVITY	EPA 120.1
TOTAL DISSOLVED SOLIDS	SM 2540C
HARDNESS (CACO3), TOTAL	SM 2340C
CALCIUM	EPA 200.7
MAGNESIUM	EPA 200.7
SODIUM	EPA 200.7
POTASSIUM	EPA 200.7
ALKALINITY, TOTAL	SM 2320B

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 01 JUL 2014

M-NY032 **ALS ENVIRONMENTAL ROCHESTER**
ROCHESTER NY

NON POTABLE WATER (CHEMISTRY) **Effective Date** **01 JUL 2014** **Expiration Date** **30 JUN 2015**

Analytes	Methods
CHLORIDE	SM 4500-CL-E
CHLORIDE	EPA 300.0
FLUORIDE	EPA 300.0
SULFATE	EPA 300.0
AMMONIA-N	EPA 350.1
NITRATE-N	EPA 300.0
NITRATE-N	EPA 353.2
KJELDAHL-N	EPA 351.2
ORTHOPHOSPHATE	EPA 365.1
PHOSPHORUS, TOTAL	EPA 365.1
CHEMICAL OXYGEN DEMAND	EPA 410.4
BIOCHEMICAL OXYGEN DEMAND	SM 5210B
TOTAL ORGANIC CARBON	SM 5310C
CYANIDE, TOTAL	EPA 335.4
NON-FILTERABLE RESIDUE	SM 2540D
OIL AND GREASE	EPA 1664
PHENOLICS, TOTAL	EPA 420.4
VOLATILE HALOCARBONS	EPA 601
VOLATILE HALOCARBONS	EPA 624
VOLATILE AROMATICS	EPA 602
VOLATILE AROMATICS	EPA 624
SVOC-ACID EXTRACTABLES	EPA 625
SVOC-BASE/NEUTRAL EXTRACTABLES	EPA 625
POLYCHLORINATED BIPHENYLS (WATEI	EPA 608

INORGANIC PREPARATION METHODS

The preparation methods associated with this report are found in these tables unless discussed in the case narrative.

Water/Liquid Matrix

Analytical Method	Preparation Method
200.7	200.2
200.8	200.2
6010C	3005A/3010A
6020A	ILM05.3
9014 Cyanide Reactivity	SW846 Ch7, 7.3.4.2
9034 Sulfide Reactivity	SW846 Ch7, 7.3.4.2
9034 Sulfide Acid Soluble	9030B
9056A Bomb (Halogens)	5050A
9066 Manual Distillation	9065
SM 4500-CN-E Residual Cyanide	SM 4500-CN-G
SM 4500-CN-E WAD Cyanide	SM 4500-CN-I

Solid/Soil/Non-Aqueous Matrix

Analytical Method	Preparation Method
6010C	3050B
6020A	3050B
6010C TCLP (1311) extract	3005A/3010A
6010 SPLP (1312) extract	3005A/3010A
7196A	3060A
7199	3060A
9056A Halogens/Halides	5050
300.0 Anions/ 350.1/ 353.2/ SM 2320B/ SM 5210B/ 9056A Anions	DI extraction

For analytical methods not listed, the preparation method is the same as the analytical method reference.

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1503935
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/19/15 0900
Sample Matrix:	Water	**Date Received:**	5/21/15
		Date Analyzed:	5/28/15 06:52
Sample Name:	OB20-DO (74')	**Units:**	µg/L
Lab Code:	R1503935-001	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	446544
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\052715\M2122.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	2

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	4.0	U	4.0	
79-34-5	1,1,2,2-Tetrachloroethane	4.0	U	4.0	
79-00-5	1,1,2-Trichloroethane	4.0	U	4.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	4.0	U	4.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	4.0	U	4.0	
107-06-2	1,2-Dichloroethane	4.0	U	4.0	
78-87-5	1,2-Dichloropropane	4.0	U	4.0	
67-64-1	Acetone	20	U	20	
75-27-4	Bromodichloromethane	4.0	U	4.0	
75-25-2	Bromoform	4.0	U	4.0	
74-83-9	Bromomethane	4.0	U	4.0	
56-23-5	Carbon Tetrachloride	4.0	U	4.0	
108-90-7	Chlorobenzene	4.0	U	4.0	
75-00-3	Chloroethane	4.0	U	4.0	
67-66-3	Chloroform	4.0	U	4.0	
74-87-3	Chloromethane	4.0	U	4.0	
124-48-1	Dibromochloromethane	4.0	U	4.0	
75-09-2	Methylene Chloride	4.0	U	4.0	
127-18-4	Tetrachloroethene (PCE)	4.0	U	4.0	
79-01-6	Trichloroethene (TCE)	**6.8**		4.0	
75-69-4	Trichlorofluoromethane (CFC 11)	4.0	U	4.0	
75-01-4	Vinyl Chloride	**5.9**		4.0	
156-59-2	cis-1,2-Dichloroethene	**200**		4.0	
10061-01-5	cis-1,3-Dichloropropene	4.0	U	4.0	
156-60-5	trans-1,2-Dichloroethene	4.0	U	4.0	
10061-02-6	trans-1,3-Dichloropropene	4.0	U	4.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	104	70-130	5/28/15 06:52	
Dibromofluoromethane	104	70-130	5/28/15 06:52	
Toluene-d8	111	70-130	5/28/15 06:52	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly/152780-05000000
Sample Matrix: Water

Service Request: R1503935
Date Collected: 5/19/15 0930
Date Received: 5/21/15
Date Analyzed: 5/28/15 02:37

Sample Name: OB20-BR (94')
Lab Code: R1503935-002

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Data File Name: I:\ACQUDATA\MSVOA6\DATA\052715\M2114.D\

Analysis Lot: 446544
Instrument Name: R-MS-06
Dilution Factor: 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	**2.7**		2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	**24**		2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	102	70-130	5/28/15 02:37	
Dibromofluoromethane	103	70-130	5/28/15 02:37	
Toluene-d8	110	70-130	5/28/15 02:37	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1503935
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/19/15 0935
Sample Matrix:	Water	**Date Received:**	5/21/15
		Date Analyzed:	5/28/15 01:01
Sample Name:	TB-1	**Units:**	µg/L
Lab Code:	R1503935-003	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	446544
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\052715\M2111.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	102	70-130	5/28/15 01:01	
Dibromofluoromethane	104	70-130	5/28/15 01:01	
Toluene-d8	109	70-130	5/28/15 01:01	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1503935
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/19/15 1000
Sample Matrix:	Water	**Date Received:**	5/21/15
		Date Analyzed:	5/28/15 03:09
Sample Name:	P-20R (10')	**Units:**	µg/L
Lab Code:	R1503935-004	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	446544
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\052715\M2115.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	105	70-130	5/28/15 03:09	
Dibromofluoromethane	101	70-130	5/28/15 03:09	
Toluene-d8	107	70-130	5/28/15 03:09	

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Analytical Report

Client:	CB&I	**Service Request:**	R1503935
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/19/15 1015
Sample Matrix:	Water	**Date Received:**	5/21/15
		Date Analyzed:	5/28/15 03:41
Sample Name:	STRM-A-SCDS	**Units:**	µg/L
Lab Code:	R1503935-005	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	446544
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\052715\M2116.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	**5.9**		2.0	
79-01-6	Trichloroethene (TCE)	**18**		2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	**12**		2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	103	70-130	5/28/15 03:41	
Dibromofluoromethane	104	70-130	5/28/15 03:41	
Toluene-d8	106	70-130	5/28/15 03:41	

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Analytical Report

Client:	CB&I	**Service Request:**	R1503935
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/19/15 1030
Sample Matrix:	Water	**Date Received:**	5/21/15
		Date Analyzed:	5/28/15 09:49
Sample Name:	P-19A (9.3')	**Units:**	µg/L
Lab Code:	R1503935-006	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	446544
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\052715\M2127.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	**4.0**		2.0	
79-01-6	Trichloroethene (TCE)	**21**		2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	**160**		2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	103	70-130	5/28/15 09:49	
Dibromofluoromethane	101	70-130	5/28/15 09:49	
Toluene-d8	109	70-130	5/28/15 09:49	

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Analytical Report

Client:	CB&I	**Service Request:**	R1503935
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/19/15 1100
Sample Matrix:	Water	**Date Received:**	5/21/15
		Date Analyzed:	5/28/15 04:12
Sample Name:	P-11R (8.5')	**Units:**	µg/L
Lab Code:	R1503935-007	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	446544
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\052715\M2117.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	3.7		2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	104	70-130	5/28/15 04:12	
Dibromofluoromethane	101	70-130	5/28/15 04:12	
Toluene-d8	107	70-130	5/28/15 04:12	

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Analytical Report

Client:	CB&I	**Service Request:**	R1503935
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/19/15 1110
Sample Matrix:	Water	**Date Received:**	5/21/15
		Date Analyzed:	5/28/15 01:33
Sample Name:	EB-1	**Units:**	µg/L
Lab Code:	R1503935-008	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	446544
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\052715\M2112.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	102	70-130	5/28/15 01:33	
Dibromofluoromethane	102	70-130	5/28/15 01:33	
Toluene-d8	108	70-130	5/28/15 01:33	

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Analytical Report

Client:	CB&I	**Service Request:**	R1503935
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/19/15 1230
Sample Matrix:	Water	**Date Received:**	5/21/15
		Date Analyzed:	5/28/15 07:23
Sample Name:	OB8-DO(77')	**Units:**	µg/L
Lab Code:	R1503935-009	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	446544
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\052715\M2123.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	20

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	40	U	40	
79-34-5	1,1,2,2-Tetrachloroethane	40	U	40	
79-00-5	1,1,2-Trichloroethane	40	U	40	
75-34-3	1,1-Dichloroethane (1,1-DCA)	40	U	40	
75-35-4	1,1-Dichloroethene (1,1-DCE)	40	U	40	
107-06-2	1,2-Dichloroethane	40	U	40	
78-87-5	1,2-Dichloropropane	40	U	40	
67-64-1	Acetone	200	U	200	
75-27-4	Bromodichloromethane	40	U	40	
75-25-2	Bromoform	40	U	40	
74-83-9	Bromomethane	40	U	40	
56-23-5	Carbon Tetrachloride	40	U	40	
108-90-7	Chlorobenzene	40	U	40	
75-00-3	Chloroethane	40	U	40	
67-66-3	Chloroform	40	U	40	
74-87-3	Chloromethane	40	U	40	
124-48-1	Dibromochloromethane	40	U	40	
75-09-2	Methylene Chloride	40	U	40	
127-18-4	Tetrachloroethene (PCE)	**350**		40	
79-01-6	Trichloroethene (TCE)	**2300**		40	
75-69-4	Trichlorofluoromethane (CFC 11)	40	U	40	
75-01-4	Vinyl Chloride	40	U	40	
156-59-2	cis-1,2-Dichloroethene	**1300**		40	
10061-01-5	cis-1,3-Dichloropropene	40	U	40	
156-60-5	trans-1,2-Dichloroethene	40	U	40	
10061-02-6	trans-1,3-Dichloropropene	40	U	40	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	101	70-130	5/28/15 07:23	
Dibromofluoromethane	101	70-130	5/28/15 07:23	
Toluene-d8	107	70-130	5/28/15 07:23	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1503935
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/19/15 1300
Sample Matrix:	Water	**Date Received:**	5/21/15
		Date Analyzed:	5/28/15 04:44
Sample Name:	GZ-4 (11')	**Units:**	µg/L
Lab Code:	R1503935-010	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	446544
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\052715\M2118.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	**2.5**		2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	**10**		10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	**4.0**		2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	**13**		2.0	
156-59-2	cis-1,2-Dichloroethene	**82**		2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	106	70-130	5/28/15 04:44	
Dibromofluoromethane	101	70-130	5/28/15 04:44	
Toluene-d8	110	70-130	5/28/15 04:44	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1503935
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/20/15 1215
Sample Matrix:	Water	**Date Received:**	5/21/15
		Date Analyzed:	5/28/15 19:36
Sample Name:	OB 42S (13)	**Units:**	µg/L
Lab Code:	R1503935-011	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	446701
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\052815\M2145.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	10

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	20	U	20	
79-34-5	1,1,2,2-Tetrachloroethane	20	U	20	
79-00-5	1,1,2-Trichloroethane	20	U	20	
75-34-3	1,1-Dichloroethane (1,1-DCA)	20	U	20	
75-35-4	1,1-Dichloroethene (1,1-DCE)	20	U	20	
107-06-2	1,2-Dichloroethane	20	U	20	
78-87-5	1,2-Dichloropropane	20	U	20	
67-64-1	Acetone	100	U	100	
75-27-4	Bromodichloromethane	20	U	20	
75-25-2	Bromoform	20	U	20	
74-83-9	Bromomethane	20	U	20	
56-23-5	Carbon Tetrachloride	20	U	20	
108-90-7	Chlorobenzene	20	U	20	
75-00-3	Chloroethane	20	U	20	
67-66-3	Chloroform	20	U	20	
74-87-3	Chloromethane	20	U	20	
124-48-1	Dibromochloromethane	20	U	20	
75-09-2	Methylene Chloride	20	U	20	
127-18-4	Tetrachloroethene (PCE)	**50**		20	
79-01-6	Trichloroethene (TCE)	**1300**		20	
75-69-4	Trichlorofluoromethane (CFC 11)	20	U	20	
75-01-4	Vinyl Chloride	20	U	20	
156-59-2	cis-1,2-Dichloroethene	**740**		20	
10061-01-5	cis-1,3-Dichloropropene	20	U	20	
156-60-5	trans-1,2-Dichloroethene	20	U	20	
10061-02-6	trans-1,3-Dichloropropene	20	U	20	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	103	70-130	5/28/15 19:36	
Dibromofluoromethane	101	70-130	5/28/15 19:36	
Toluene-d8	109	70-130	5/28/15 19:36	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1503935
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/20/15 1045
Sample Matrix:	Water	**Date Received:**	5/21/15
		Date Analyzed:	5/28/15 06:20
Sample Name:	OB 5 DO (81)	**Units:**	µg/L
Lab Code:	R1503935-012	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	446544
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\052715\M2121.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	10

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	20	U	20	
79-34-5	1,1,2,2-Tetrachloroethane	20	U	20	
79-00-5	1,1,2-Trichloroethane	20	U	20	
75-34-3	1,1-Dichloroethane (1,1-DCA)	20	U	20	
75-35-4	1,1-Dichloroethene (1,1-DCE)	20	U	20	
107-06-2	1,2-Dichloroethane	20	U	20	
78-87-5	1,2-Dichloropropane	20	U	20	
67-64-1	Acetone	100	U	100	
75-27-4	Bromodichloromethane	20	U	20	
75-25-2	Bromoform	20	U	20	
74-83-9	Bromomethane	20	U	20	
56-23-5	Carbon Tetrachloride	20	U	20	
108-90-7	Chlorobenzene	20	U	20	
75-00-3	Chloroethane	20	U	20	
67-66-3	Chloroform	20	U	20	
74-87-3	Chloromethane	20	U	20	
124-48-1	Dibromochloromethane	20	U	20	
75-09-2	Methylene Chloride	20	U	20	
127-18-4	Tetrachloroethene (PCE)	**440**		20	
79-01-6	Trichloroethene (TCE)	**1200**		20	
75-69-4	Trichlorofluoromethane (CFC 11)	20	U	20	
75-01-4	Vinyl Chloride	**25**		20	
156-59-2	cis-1,2-Dichloroethene	**730**		20	
10061-01-5	cis-1,3-Dichloropropene	20	U	20	
156-60-5	trans-1,2-Dichloroethene	20	U	20	
10061-02-6	trans-1,3-Dichloropropene	20	U	20	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	101	70-130	5/28/15 06:20	
Dibromofluoromethane	99	70-130	5/28/15 06:20	
Toluene-d8	109	70-130	5/28/15 06:20	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly/152780-05000000
Sample Matrix: Water

Service Request: R1503935
Date Collected: 5/20/15 1115
Date Received: 5/21/15
Date Analyzed: 5/28/15 05:16

Sample Name: OB 5 BR (104)
Lab Code: R1503935-013

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Data File Name: I:\ACQUDATA\MSVOA6\DATA\052715\M2119.D\

Analysis Lot: 446544
Instrument Name: R-MS-06
Dilution Factor: 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	**2.5**		2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	**9.5**		2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	**330**	E	2.0	
156-59-2	cis-1,2-Dichloroethene	**1100**	E	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	**14**		2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	103	70-130	5/28/15 05:16	
Dibromofluoromethane	105	70-130	5/28/15 05:16	
Toluene-d8	108	70-130	5/28/15 05:16	

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Analytical Report

Client: CB&I
Project: Varian Beverly/152780-05000000
Sample Matrix: Water

Service Request: R1503935
Date Collected: 5/20/15 1115
Date Received: 5/21/15
Date Analyzed: 5/29/15 10:29

Sample Name: OB 5 BR (104)
Lab Code: R1503935-013
Run Type: Dilution

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Data File Name: I:\ACQUDATA\MSVOA6\DATA\052815\M2173.D\

Analysis Lot: 446766
Instrument Name: R-MS-06
Dilution Factor: 20

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	40	U	40	
79-34-5	1,1,2,2-Tetrachloroethane	40	U	40	
79-00-5	1,1,2-Trichloroethane	40	U	40	
75-34-3	1,1-Dichloroethane (1,1-DCA)	40	U	40	
75-35-4	1,1-Dichloroethene (1,1-DCE)	40	U	40	
107-06-2	1,2-Dichloroethane	40	U	40	
78-87-5	1,2-Dichloropropane	40	U	40	
67-64-1	Acetone	200	U	200	
75-27-4	Bromodichloromethane	40	U	40	
75-25-2	Bromoform	40	U	40	
74-83-9	Bromomethane	40	U	40	
56-23-5	Carbon Tetrachloride	40	U	40	
108-90-7	Chlorobenzene	40	U	40	
75-00-3	Chloroethane	40	U	40	
67-66-3	Chloroform	40	U	40	
74-87-3	Chloromethane	40	U	40	
124-48-1	Dibromochloromethane	40	U	40	
75-09-2	Methylene Chloride	40	U	40	
127-18-4	Tetrachloroethene (PCE)	40	U	40	
79-01-6	Trichloroethene (TCE)	40	U	40	
75-69-4	Trichlorofluoromethane (CFC 11)	40	U	40	
75-01-4	Vinyl Chloride	**460**	D	40	
156-59-2	cis-1,2-Dichloroethene	**2000**	D	40	
10061-01-5	cis-1,3-Dichloropropene	40	U	40	
156-60-5	trans-1,2-Dichloroethene	40	U	40	
10061-02-6	trans-1,3-Dichloropropene	40	U	40	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	105	70-130	5/29/15 10:29	
Dibromofluoromethane	101	70-130	5/29/15 10:29	
Toluene-d8	110	70-130	5/29/15 10:29	

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Analytical Report

Client:	CB&I	**Service Request:**	R1503935
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/20/15 1245
Sample Matrix:	Water	**Date Received:**	5/21/15
		Date Analyzed:	5/28/15 02:05
Sample Name:	CL 8- DO(52)	**Units:**	µg/L
Lab Code:	R1503935-014	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	446544
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\052715\M2113.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	101	70-130	5/28/15 02:05	
Dibromofluoromethane	103	70-130	5/28/15 02:05	
Toluene-d8	111	70-130	5/28/15 02:05	

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Analytical Report

Client:	CB&I	**Service Request:**	R1503935
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/20/15 1330
Sample Matrix:	Water	**Date Received:**	5/21/15
		Date Analyzed:	5/28/15 08:45
Sample Name:	CL 8-BR ZONE 1	**Units:**	µg/L
Lab Code:	R1503935-015	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	446544
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\052715\M2125.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	**74**		10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	102	70-130	5/28/15 08:45	
Dibromofluoromethane	99	70-130	5/28/15 08:45	
Toluene-d8	107	70-130	5/28/15 08:45	

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Analytical Report

Client:	CB&I	**Service Request:**	R1503935
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/20/15 1345
Sample Matrix:	Water	**Date Received:**	5/21/15
		Date Analyzed:	5/28/15 15:53
Sample Name:	CL 8-BR ZONE 2	**Units:**	µg/L
Lab Code:	R1503935-016	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	446701
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\052815\M2138.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	102	70-130	5/28/15 15:53	
Dibromofluoromethane	100	70-130	5/28/15 15:53	
Toluene-d8	108	70-130	5/28/15 15:53	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1503935
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/20/15 1400
Sample Matrix:	Water	**Date Received:**	5/21/15
		Date Analyzed:	5/28/15 16:25
Sample Name:	CL 8-BR ZONE 3	**Units:**	µg/L
Lab Code:	R1503935-017	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	446701
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\052815\M2139.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	103	70-130	5/28/15 16:25	
Dibromofluoromethane	102	70-130	5/28/15 16:25	
Toluene-d8	107	70-130	5/28/15 16:25	

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Analytical Report

Client:	CB&I	**Service Request:**	R1503935
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/20/15 0950
Sample Matrix:	Water	**Date Received:**	5/21/15
		Date Analyzed:	5/28/15 19:04
Sample Name:	BR-5 ZONE 3	**Units:**	µg/L
Lab Code:	R1503935-018	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	446701
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\052815\M2144.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	**8.8**		2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	**9.4**		2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	**4.9**		2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	**12**		2.0	
79-01-6	Trichloroethene (TCE)	**120**		2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	**280**	E	2.0	
156-59-2	cis-1,2-Dichloroethene	**1900**	E	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	**61**		2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	101	70-130	5/28/15 19:04	
Dibromofluoromethane	99	70-130	5/28/15 19:04	
Toluene-d8	107	70-130	5/28/15 19:04	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1503935
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/20/15 0950
Sample Matrix:	Water	**Date Received:**	5/21/15
		Date Analyzed:	5/30/15 19:44
Sample Name:	BR-5 ZONE 3	**Units:**	µg/L
Lab Code:	R1503935-018	**Basis:**	NA
Run Type:	Dilution		

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	447048
Data File Name:	I:\ACQUDATA\msvoa10\data\053015\A9058.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	50

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	100	U	100	
79-34-5	1,1,2,2-Tetrachloroethane	100	U	100	
79-00-5	1,1,2-Trichloroethane	100	U	100	
75-34-3	1,1-Dichloroethane (1,1-DCA)	100	U	100	
75-35-4	1,1-Dichloroethene (1,1-DCE)	100	U	100	
107-06-2	1,2-Dichloroethane	100	U	100	
78-87-5	1,2-Dichloropropane	100	U	100	
67-64-1	Acetone	500	U	500	
75-27-4	Bromodichloromethane	100	U	100	
75-25-2	Bromoform	100	U	100	
74-83-9	Bromomethane	100	U	100	
56-23-5	Carbon Tetrachloride	100	U	100	
108-90-7	Chlorobenzene	100	U	100	
75-00-3	Chloroethane	100	U	100	
67-66-3	Chloroform	100	U	100	
74-87-3	Chloromethane	100	U	100	
124-48-1	Dibromochloromethane	100	U	100	
75-09-2	Methylene Chloride	100	U	100	
127-18-4	Tetrachloroethene (PCE)	100	U	100	
79-01-6	Trichloroethene (TCE)	100	U	100	
75-69-4	Trichlorofluoromethane (CFC 11)	100	U	100	
75-01-4	Vinyl Chloride	**280**	D	100	
156-59-2	cis-1,2-Dichloroethene	**3300**	D	100	
10061-01-5	cis-1,3-Dichloropropene	100	U	100	
156-60-5	trans-1,2-Dichloroethene	100	U	100	
10061-02-6	trans-1,3-Dichloropropene	100	U	100	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	94	70-130	5/30/15 19:44	
Dibromofluoromethane	94	70-130	5/30/15 19:44	
Toluene-d8	98	70-130	5/30/15 19:44	

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Analytical Report

Client:	CB&I	**Service Request:**	R1503935
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/19/15 1230
Sample Matrix:	Water	**Date Received:**	5/21/15
		Date Analyzed:	5/28/15 18:32
Sample Name:	BR-7 ZONE 2	**Units:**	µg/L
Lab Code:	R1503935-019	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	446701
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\052815\M2143.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	**7.5**		2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	**21**		10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	**30**		2.0	
156-59-2	cis-1,2-Dichloroethene	**3.1**		2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	102	70-130	5/28/15 18:32	
Dibromofluoromethane	103	70-130	5/28/15 18:32	
Toluene-d8	111	70-130	5/28/15 18:32	

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Analytical Report

Client:	CB&I	**Service Request:**	R1503935
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/19/15 1245
Sample Matrix:	Water	**Date Received:**	5/21/15
		Date Analyzed:	5/28/15 20:40
Sample Name:	BR-7 ZONE 3	**Units:**	µg/L
Lab Code:	R1503935-020	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	446701
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\052815\M2147.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	2

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	4.0	U	4.0	
79-34-5	1,1,2,2-Tetrachloroethane	4.0	U	4.0	
79-00-5	1,1,2-Trichloroethane	4.0	U	4.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	**8.3**		4.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	**10**		4.0	
107-06-2	1,2-Dichloroethane	4.0	U	4.0	
78-87-5	1,2-Dichloropropane	4.0	U	4.0	
67-64-1	Acetone	20	U	20	
75-27-4	Bromodichloromethane	4.0	U	4.0	
75-25-2	Bromoform	4.0	U	4.0	
74-83-9	Bromomethane	4.0	U	4.0	
56-23-5	Carbon Tetrachloride	4.0	U	4.0	
108-90-7	Chlorobenzene	4.0	U	4.0	
75-00-3	Chloroethane	4.0	U	4.0	
67-66-3	Chloroform	4.0	U	4.0	
74-87-3	Chloromethane	4.0	U	4.0	
124-48-1	Dibromochloromethane	4.0	U	4.0	
75-09-2	Methylene Chloride	4.0	U	4.0	
127-18-4	Tetrachloroethene (PCE)	4.0	U	4.0	
79-01-6	Trichloroethene (TCE)	4.0	U	4.0	
75-69-4	Trichlorofluoromethane (CFC 11)	4.0	U	4.0	
75-01-4	Vinyl Chloride	**21**		4.0	
156-59-2	cis-1,2-Dichloroethene	**840**	E	4.0	
10061-01-5	cis-1,3-Dichloropropene	4.0	U	4.0	
156-60-5	trans-1,2-Dichloroethene	**11**		4.0	
10061-02-6	trans-1,3-Dichloropropene	4.0	U	4.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	104	70-130	5/28/15 20:40	
Dibromofluoromethane	104	70-130	5/28/15 20:40	
Toluene-d8	104	70-130	5/28/15 20:40	

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Analytical Report

Client:	CB&I	**Service Request:**	R1503935
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/19/15 1245
Sample Matrix:	Water	**Date Received:**	5/21/15
		Date Analyzed:	5/29/15 11:02
Sample Name:	BR-7 ZONE 3	**Units:**	µg/L
Lab Code:	R1503935-020	**Basis:**	NA
Run Type:	Dilution		

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	446766
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\052815\M2174.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	10

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	20	U	20	
79-34-5	1,1,2,2-Tetrachloroethane	20	U	20	
79-00-5	1,1,2-Trichloroethane	20	U	20	
75-34-3	1,1-Dichloroethane (1,1-DCA)	20	U	20	
75-35-4	1,1-Dichloroethene (1,1-DCE)	20	U	20	
107-06-2	1,2-Dichloroethane	20	U	20	
78-87-5	1,2-Dichloropropane	20	U	20	
67-64-1	Acetone	100	U	100	
75-27-4	Bromodichloromethane	20	U	20	
75-25-2	Bromoform	20	U	20	
74-83-9	Bromomethane	20	U	20	
56-23-5	Carbon Tetrachloride	20	U	20	
108-90-7	Chlorobenzene	20	U	20	
75-00-3	Chloroethane	20	U	20	
67-66-3	Chloroform	20	U	20	
74-87-3	Chloromethane	20	U	20	
124-48-1	Dibromochloromethane	20	U	20	
75-09-2	Methylene Chloride	20	U	20	
127-18-4	Tetrachloroethene (PCE)	20	U	20	
79-01-6	Trichloroethene (TCE)	20	U	20	
75-69-4	Trichlorofluoromethane (CFC 11)	20	U	20	
75-01-4	Vinyl Chloride	**22**	D	20	
156-59-2	cis-1,2-Dichloroethene	**960**	D	20	
10061-01-5	cis-1,3-Dichloropropene	20	U	20	
156-60-5	trans-1,2-Dichloroethene	20	U	20	
10061-02-6	trans-1,3-Dichloropropene	20	U	20	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	103	70-130	5/29/15 11:02	
Dibromofluoromethane	100	70-130	5/29/15 11:02	
Toluene-d8	108	70-130	5/29/15 11:02	

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Analytical Report

Client:	CB&I	**Service Request:**	R1503935
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/19/15 1415
Sample Matrix:	Water	**Date Received:**	5/21/15
		Date Analyzed:	5/28/15 16:57
Sample Name:	OB 23-BR (84')	**Units:**	µg/L
Lab Code:	R1503935-021	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	446701
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\052815\M2140.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	**28**		2.0	
156-59-2	cis-1,2-Dichloroethene	**33**		2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	100	70-130	5/28/15 16:57	
Dibromofluoromethane	100	70-130	5/28/15 16:57	
Toluene-d8	107	70-130	5/28/15 16:57	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1503935
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/19/15 1445
Sample Matrix:	Water	**Date Received:**	5/21/15
		Date Analyzed:	5/28/15 17:29
Sample Name:	MW 5R (17')	**Units:**	µg/L
Lab Code:	R1503935-022	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	446701
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\052815\M2141.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	**13**		2.0	
79-01-6	Trichloroethene (TCE)	**32**		2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	**9.1**		2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	104	70-130	5/28/15 17:29	
Dibromofluoromethane	101	70-130	5/28/15 17:29	
Toluene-d8	108	70-130	5/28/15 17:29	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1503935
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/19/15 1500
Sample Matrix:	Water	**Date Received:**	5/21/15
		Date Analyzed:	5/28/15 18:01
Sample Name:	MW 3R (30')	**Units:**	µg/L
Lab Code:	R1503935-023	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	446701
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\052815\M2142.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	103	70-130	5/28/15 18:01	
Dibromofluoromethane	104	70-130	5/28/15 18:01	
Toluene-d8	108	70-130	5/28/15 18:01	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1503935
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/19/15 1530
Sample Matrix:	Water	**Date Received:**	5/21/15
		Date Analyzed:	5/29/15 09:25
Sample Name:	CL2-BR (80')	**Units:**	µg/L
Lab Code:	R1503935-024	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	446766
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\052815\M2171.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	**2.8**		2.0	
79-01-6	Trichloroethene (TCE)	**23**		2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	**41**		2.0	
156-59-2	cis-1,2-Dichloroethene	**91**		2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	**2.1**		2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	101	70-130	5/29/15 09:25	
Dibromofluoromethane	100	70-130	5/29/15 09:25	
Toluene-d8	108	70-130	5/29/15 09:25	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1503935
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/20/15 0730
Sample Matrix:	Water	**Date Received:**	5/21/15
		Date Analyzed:	5/29/15 22:40
Sample Name:	OB4-DO (67')	**Units:**	µg/L
Lab Code:	R1503935-025	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	446935
Data File Name:	I:\ACQUDATA\msvoa10\data\052915\A9037.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	2

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	4.0	U	4.0	
79-34-5	1,1,2,2-Tetrachloroethane	4.0	U	4.0	
79-00-5	1,1,2-Trichloroethane	4.0	U	4.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	4.0	U	4.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	4.0	U	4.0	
107-06-2	1,2-Dichloroethane	4.0	U	4.0	
78-87-5	1,2-Dichloropropane	4.0	U	4.0	
67-64-1	Acetone	20	U	20	
75-27-4	Bromodichloromethane	4.0	U	4.0	
75-25-2	Bromoform	4.0	U	4.0	
74-83-9	Bromomethane	4.0	U	4.0	
56-23-5	Carbon Tetrachloride	4.0	U	4.0	
108-90-7	Chlorobenzene	4.0	U	4.0	
75-00-3	Chloroethane	4.0	U	4.0	
67-66-3	Chloroform	4.0	U	4.0	
74-87-3	Chloromethane	4.0	U	4.0	
124-48-1	Dibromochloromethane	4.0	U	4.0	
75-09-2	Methylene Chloride	4.0	U	4.0	
127-18-4	Tetrachloroethene (PCE)	**83**		4.0	
79-01-6	Trichloroethene (TCE)	**220**		4.0	
75-69-4	Trichlorofluoromethane (CFC 11)	4.0	U	4.0	
75-01-4	Vinyl Chloride	**37**		4.0	
156-59-2	cis-1,2-Dichloroethene	**220**		4.0	
10061-01-5	cis-1,3-Dichloropropene	4.0	U	4.0	
156-60-5	trans-1,2-Dichloroethene	4.0	U	4.0	
10061-02-6	trans-1,3-Dichloropropene	4.0	U	4.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	94	70-130	5/29/15 22:40	
Dibromofluoromethane	100	70-130	5/29/15 22:40	
Toluene-d8	96	70-130	5/29/15 22:40	

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Analytical Report

Client:	CB&I	**Service Request:**	R1503935
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/20/15 0800
Sample Matrix:	Water	**Date Received:**	5/21/15
		Date Analyzed:	5/28/15 22:16
Sample Name:	MW-36 (51')	**Units:**	µg/L
Lab Code:	R1503935-026	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	446701
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\052815\M2150.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	20

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	40	U	40	
79-34-5	1,1,2,2-Tetrachloroethane	40	U	40	
79-00-5	1,1,2-Trichloroethane	40	U	40	
75-34-3	1,1-Dichloroethane (1,1-DCA)	40	U	40	
75-35-4	1,1-Dichloroethene (1,1-DCE)	40	U	40	
107-06-2	1,2-Dichloroethane	40	U	40	
78-87-5	1,2-Dichloropropane	40	U	40	
67-64-1	Acetone	200	U	200	
75-27-4	Bromodichloromethane	40	U	40	
75-25-2	Bromoform	40	U	40	
74-83-9	Bromomethane	40	U	40	
56-23-5	Carbon Tetrachloride	40	U	40	
108-90-7	Chlorobenzene	40	U	40	
75-00-3	Chloroethane	40	U	40	
67-66-3	Chloroform	40	U	40	
74-87-3	Chloromethane	40	U	40	
124-48-1	Dibromochloromethane	40	U	40	
75-09-2	Methylene Chloride	40	U	40	
127-18-4	Tetrachloroethene (PCE)	**1200**		40	
79-01-6	Trichloroethene (TCE)	**2900**		40	
75-69-4	Trichlorofluoromethane (CFC 11)	40	U	40	
75-01-4	Vinyl Chloride	**260**		40	
156-59-2	cis-1,2-Dichloroethene	**2100**		40	
10061-01-5	cis-1,3-Dichloropropene	40	U	40	
156-60-5	trans-1,2-Dichloroethene	40	U	40	
10061-02-6	trans-1,3-Dichloropropene	40	U	40	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	102	70-130	5/28/15 22:16	
Dibromofluoromethane	103	70-130	5/28/15 22:16	
Toluene-d8	112	70-130	5/28/15 22:16	

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Analytical Report

Client:	CB&I	**Service Request:**	R1503935
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/20/15 0815
Sample Matrix:	Water	**Date Received:**	5/21/15
		Date Analyzed:	5/28/15 14:59
Sample Name:	EB-2	**Units:**	µg/L
Lab Code:	R1503935-027	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	446701
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\052815\M2136.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	100	70-130	5/28/15 14:59	
Dibromofluoromethane	103	70-130	5/28/15 14:59	
Toluene-d8	109	70-130	5/28/15 14:59	

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Analytical Report

Client:	CB&I	**Service Request:**	R1503935
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/20/15 0830
Sample Matrix:	Water	**Date Received:**	5/21/15
		Date Analyzed:	5/28/15 15:25
Sample Name:	TB-2	**Units:**	µg/L
Lab Code:	R1503935-028	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	446701
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\052815\M2137.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	103	70-130	5/28/15 15:25	
Dibromofluoromethane	101	70-130	5/28/15 15:25	
Toluene-d8	108	70-130	5/28/15 15:25	

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Analytical Report

Client:	CB&I	**Service Request:**	R1503935
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/19/15 0845
Sample Matrix:	Water	**Date Received:**	5/21/15
		Date Analyzed:	5/29/15 04:35
Sample Name:	BR-1 ZONE 3	**Units:**	µg/L
Lab Code:	R1503935-029	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	446723
Data File Name:	I:\ACQUDATA\msvoa10\data\052815\A9001.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	90	70-130	5/29/15 04:35	
Dibromofluoromethane	98	70-130	5/29/15 04:35	
Toluene-d8	94	70-130	5/29/15 04:35	

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Analytical Report

Client:	CB&I	**Service Request:**	R1503935
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/19/15 0855
Sample Matrix:	Water	**Date Received:**	5/21/15
		Date Analyzed:	5/29/15 05:04
Sample Name:	CL6-BR (68')	**Units:**	µg/L
Lab Code:	R1503935-030	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	446723
Data File Name:	I:\ACQUDATA\msvoa10\data\052815\A9002.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	90	70-130	5/29/15 05:04	
Dibromofluoromethane	98	70-130	5/29/15 05:04	
Toluene-d8	96	70-130	5/29/15 05:04	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1503935
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/19/15 0910
Sample Matrix:	Water	**Date Received:**	5/21/15
		Date Analyzed:	5/29/15 05:34
Sample Name:	CL6-DO (41')	**Units:**	µg/L
Lab Code:	R1503935-031	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	446723
Data File Name:	I:\ACQUDATA\msvoa10\data\052815\A9003.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	94	70-130	5/29/15 05:34	
Dibromofluoromethane	100	70-130	5/29/15 05:34	
Toluene-d8	95	70-130	5/29/15 05:34	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1503935
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/19/15 0945
Sample Matrix:	Water	**Date Received:**	5/21/15
		Date Analyzed:	5/29/15 06:04
Sample Name:	BR-3 ZONE 1	**Units:**	µg/L
Lab Code:	R1503935-032	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	446723
Data File Name:	I:\ACQUDATA\msvoa10\data\052815\A9004.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	94	70-130	5/29/15 06:04	
Dibromofluoromethane	97	70-130	5/29/15 06:04	
Toluene-d8	95	70-130	5/29/15 06:04	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1503935
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/19/15 1000
Sample Matrix:	Water	**Date Received:**	5/21/15
		Date Analyzed:	5/29/15 06:33
Sample Name:	BR-3 ZONE 2	**Units:**	µg/L
Lab Code:	R1503935-033	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	446723
Data File Name:	I:\ACQUDATA\msvoa10\data\052815\A9005.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	90	70-130	5/29/15 06:33	
Dibromofluoromethane	99	70-130	5/29/15 06:33	
Toluene-d8	95	70-130	5/29/15 06:33	

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Analytical Report

Client:	CB&I	**Service Request:**	R1503935
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/19/15 1015
Sample Matrix:	Water	**Date Received:**	5/21/15
		Date Analyzed:	5/29/15 07:03
Sample Name:	BR-3 ZONE 3	**Units:**	µg/L
Lab Code:	R1503935-034	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	446723
Data File Name:	I:\ACQUDATA\msvoa10\data\052815\A9006.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	92	70-130	5/29/15 07:03	
Dibromofluoromethane	99	70-130	5/29/15 07:03	
Toluene-d8	96	70-130	5/29/15 07:03	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1503935
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/19/15 1045
Sample Matrix:	Water	**Date Received:**	5/21/15
		Date Analyzed:	5/29/15 07:32
Sample Name:	CL9-BR ZONE 3	**Units:**	µg/L
Lab Code:	R1503935-035	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	446723
Data File Name:	I:\ACQUDATA\msvoa10\data\052815\A9007.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	**16**		2.0	
79-01-6	Trichloroethene (TCE)	**41**		2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	**19**		2.0	
156-59-2	cis-1,2-Dichloroethene	**660**	E	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	**2.2**		2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	88	70-130	5/29/15 07:32	
Dibromofluoromethane	100	70-130	5/29/15 07:32	
Toluene-d8	96	70-130	5/29/15 07:32	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1503935
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/19/15 1045
Sample Matrix:	Water	**Date Received:**	5/21/15
		Date Analyzed:	5/29/15 23:10
Sample Name:	CL9-BR ZONE 3	**Units:**	µg/L
Lab Code:	R1503935-035	**Basis:**	NA
Run Type:	Dilution		

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	446935
Data File Name:	I:\ACQUDATA\msvoa10\data\052915\A9038.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	5

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	10	U	10	
79-34-5	1,1,2,2-Tetrachloroethane	10	U	10	
79-00-5	1,1,2-Trichloroethane	10	U	10	
75-34-3	1,1-Dichloroethane (1,1-DCA)	10	U	10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	10	U	10	
107-06-2	1,2-Dichloroethane	10	U	10	
78-87-5	1,2-Dichloropropane	10	U	10	
67-64-1	Acetone	50	U	50	
75-27-4	Bromodichloromethane	10	U	10	
75-25-2	Bromoform	10	U	10	
74-83-9	Bromomethane	10	U	10	
56-23-5	Carbon Tetrachloride	10	U	10	
108-90-7	Chlorobenzene	10	U	10	
75-00-3	Chloroethane	10	U	10	
67-66-3	Chloroform	10	U	10	
74-87-3	Chloromethane	10	U	10	
124-48-1	Dibromochloromethane	10	U	10	
75-09-2	Methylene Chloride	10	U	10	
127-18-4	Tetrachloroethene (PCE)	**14**	D	10	
79-01-6	Trichloroethene (TCE)	**39**	D	10	
75-69-4	Trichlorofluoromethane (CFC 11)	10	U	10	
75-01-4	Vinyl Chloride	**20**	D	10	
156-59-2	cis-1,2-Dichloroethene	**720**	D	10	
10061-01-5	cis-1,3-Dichloropropene	10	U	10	
156-60-5	trans-1,2-Dichloroethene	10	U	10	
10061-02-6	trans-1,3-Dichloropropene	10	U	10	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	92	70-130	5/29/15 23:10	
Dibromofluoromethane	100	70-130	5/29/15 23:10	
Toluene-d8	96	70-130	5/29/15 23:10	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1503935
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/19/15 1115
Sample Matrix:	Water	**Date Received:**	5/21/15
		Date Analyzed:	5/29/15 08:02
Sample Name:	OB17-DO (41')	**Units:**	µg/L
Lab Code:	R1503935-036	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	446723
Data File Name:	I:\ACQUDATA\msvoa10\data\052815\A9008.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	**7.3**		2.0	
79-01-6	Trichloroethene (TCE)	**8.7**		2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	90	70-130	5/29/15 08:02	
Dibromofluoromethane	99	70-130	5/29/15 08:02	
Toluene-d8	94	70-130	5/29/15 08:02	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1503935
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/19/15 1130
Sample Matrix:	Water	**Date Received:**	5/21/15
		Date Analyzed:	5/29/15 08:31
Sample Name:	OB17-BR (95')	**Units:**	µg/L
Lab Code:	R1503935-037	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	446723
Data File Name:	I:\ACQUDATA\msvoa10\data\052815\A9009.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	**2.0**		2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	**3.5**		2.0	
156-59-2	cis-1,2-Dichloroethene	**3.1**		2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	96	70-130	5/29/15 08:31	
Dibromofluoromethane	101	70-130	5/29/15 08:31	
Toluene-d8	97	70-130	5/29/15 08:31	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1503935
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/19/15 1215
Sample Matrix:	Water	**Date Received:**	5/21/15
		Date Analyzed:	5/29/15 09:01
Sample Name:	BR-7 ZONE 1	**Units:**	µg/L
Lab Code:	R1503935-038	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	446723
Data File Name:	I:\ACQUDATA\msvoa10\data\052815\A9010.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	**6.0**		2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	**24**		10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	92	70-130	5/29/15 09:01	
Dibromofluoromethane	100	70-130	5/29/15 09:01	
Toluene-d8	96	70-130	5/29/15 09:01	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1503935
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/20/15 0830
Sample Matrix:	Water	**Date Received:**	5/21/15
		Date Analyzed:	5/29/15 09:30
Sample Name:	MW-33B (24')	**Units:**	µg/L
Lab Code:	R1503935-039	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	446723
Data File Name:	I:\ACQUDATA\msvoa10\data\052815\A9011.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	92	70-130	5/29/15 09:30	
Dibromofluoromethane	101	70-130	5/29/15 09:30	
Toluene-d8	97	70-130	5/29/15 09:30	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1503935
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/20/15 0900
Sample Matrix:	Water	**Date Received:**	5/21/15
Sample Name:	AP-19 (24')		
Lab Code:	R1503935-040	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chloride	300.0	**5.2**		mg/L	2.0	10	NA	5/28/15 07:49	

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Analytical Report

Client:	CB&I	**Service Request:**	R1503935
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/20/15 0900
Sample Matrix:	Water	**Date Received:**	5/21/15
Sample Name:	AP-19 (24')		
Lab Code:	R1503935-040	**Basis:**	NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Iron, Dissolved	6010C	100	U	µg/L	100	1	5/26/15	6/10/15 06:41	
Manganese, Dissolved	6010C	27		µg/L	10	1	5/26/15	6/10/15 18:17	

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Analytical Report

Client:	CB&I	**Service Request:**	R1503935
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/20/15 0900
Sample Matrix:	Water	**Date Received:**	5/21/15
		Date Analyzed:	5/29/15 10:00
Sample Name:	AP-19 (24')	**Units:**	µg/L
Lab Code:	R1503935-040	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	446723
Data File Name:	I:\ACQUDATA\msvoa10\data\052815\A9012.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	**19**		2.0	
79-01-6	Trichloroethene (TCE)	**2.9**		2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	90	70-130	5/29/15 10:00	
Dibromofluoromethane	98	70-130	5/29/15 10:00	
Toluene-d8	95	70-130	5/29/15 10:00	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1503935
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/20/15 0930
Sample Matrix:	Water	**Date Received:**	5/21/15
Sample Name:	AP-20 (14')		
Lab Code:	R1503935-041	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chloride	300.0	**28.4**		mg/L	2.0	10	NA	5/28/15 15:09	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1503935
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/20/15 0930
Sample Matrix:	Water	**Date Received:**	5/21/15
Sample Name:	AP-20 (14')		
Lab Code:	R1503935-041	**Basis:**	NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Iron, Dissolved	6010C	100	U	µg/L	100	1	5/26/15	6/10/15 06:47	
Manganese, Dissolved	6010C	77		µg/L	10	1	5/26/15	6/10/15 18:23	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1503935
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/20/15 0930
Sample Matrix:	Water	**Date Received:**	5/21/15
		Date Analyzed:	5/29/15 10:29
Sample Name:	AP-20 (14')	**Units:**	µg/L
Lab Code:	R1503935-041	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	446723
Data File Name:	I:\ACQUDATA\msvoa10\data\052815\A9013.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	**8.7**		2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	**19**		2.0	
79-01-6	Trichloroethene (TCE)	**58**		2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	**15**		2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	95	70-130	5/29/15 10:29	
Dibromofluoromethane	98	70-130	5/29/15 10:29	
Toluene-d8	95	70-130	5/29/15 10:29	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1503935
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/20/15 1000
Sample Matrix:	Water	**Date Received:**	5/21/15
Sample Name:	AP-21 (29')		
Lab Code:	R1503935-042	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chloride	300.0	67		mg/L	20	100	NA	5/28/15 11:26	

Client: CB&I
Project: Varian Beverly/152780-05000000
Sample Matrix: Water

Service Request: R1503935
Date Collected: 5/20/15 1000
Date Received: 5/21/15

Sample Name: AP-21 (29')
Lab Code: R1503935-042

Basis: NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Iron, Dissolved	6010C	1000	U	µg/L	1000	10	5/26/15	6/10/15 06:53	
Manganese, Dissolved	6010C	**1440000**		µg/L	2000	200	5/26/15	6/10/15 05:33	

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Analytical Report

Client:	CB&I	**Service Request:**	R1503935
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/20/15 1000
Sample Matrix:	Water	**Date Received:**	5/21/15
		Date Analyzed:	5/28/15 22:48
Sample Name:	AP-21 (29')	**Units:**	µg/L
Lab Code:	R1503935-042	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	446701
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\052815\M2151.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	**43**		2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	104	70-130	5/28/15 22:48	
Dibromofluoromethane	102	70-130	5/28/15 22:48	
Toluene-d8	107	70-130	5/28/15 22:48	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1503935
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/20/15 1030
Sample Matrix:	Water	**Date Received:**	5/21/15
Sample Name:	AP-22 (19')		
Lab Code:	R1503935-043	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chloride	300.0	**1200**		mg/L	40	200	NA	5/28/15 11:37	

Client: CB&I
Project: Varian Beverly/152780-05000000
Sample Matrix: Water

Service Request: R1503935
Date Collected: 5/20/15 1030
Date Received: 5/21/15

Sample Name: AP-22 (19')
Lab Code: R1503935-043

Basis: NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Iron, Dissolved	6010C	1000	U	µg/L	1000	10	5/26/15	6/10/15 07:00	
Manganese, Dissolved	6010C	**1550000**		µg/L	2000	200	5/26/15	6/10/15 05:39	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1503935
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/20/15 1030
Sample Matrix:	Water	**Date Received:**	5/21/15
		Date Analyzed:	5/29/15 02:31
Sample Name:	AP-22 (19')	**Units:**	µg/L
Lab Code:	R1503935-043	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	446766
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\052815\M2158.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.7		2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	103	70-130	5/29/15 02:31	
Dibromofluoromethane	104	70-130	5/29/15 02:31	
Toluene-d8	112	70-130	5/29/15 02:31	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1503935
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/20/15 1100
Sample Matrix:	Water	**Date Received:**	5/21/15
		Date Analyzed:	5/29/15 03:03
Sample Name:	CL4-DO (27')	**Units:**	µg/L
Lab Code:	R1503935-044	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	446766
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\052815\M2159.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	22		2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	104	70-130	5/29/15 03:03	
Dibromofluoromethane	101	70-130	5/29/15 03:03	
Toluene-d8	108	70-130	5/29/15 03:03	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1503935
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/20/15 1115
Sample Matrix:	Water	**Date Received:**	5/21/15
		Date Analyzed:	5/29/15 03:35
Sample Name:	CL4-BR(54')	**Units:**	µg/L
Lab Code:	R1503935-045	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	446766
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\052815\M2160.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	**4.2**		2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	**56**		2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	**2.1**		2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	102	70-130	5/29/15 03:35	
Dibromofluoromethane	101	70-130	5/29/15 03:35	
Toluene-d8	108	70-130	5/29/15 03:35	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1503935
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/20/15 1150
Sample Matrix:	Water	**Date Received:**	5/21/15
		Date Analyzed:	5/29/15 10:59
Sample Name:	CL10-S (12')	**Units:**	µg/L
Lab Code:	R1503935-046	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	446723
Data File Name:	I:\ACQUDATA\msvoa10\data\052815\A9014.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	5

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	10	U	10	
79-34-5	1,1,2,2-Tetrachloroethane	10	U	10	
79-00-5	1,1,2-Trichloroethane	10	U	10	
75-34-3	1,1-Dichloroethane (1,1-DCA)	10	U	10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	10	U	10	
107-06-2	1,2-Dichloroethane	10	U	10	
78-87-5	1,2-Dichloropropane	10	U	10	
67-64-1	Acetone	50	U	50	
75-27-4	Bromodichloromethane	10	U	10	
75-25-2	Bromoform	10	U	10	
74-83-9	Bromomethane	10	U	10	
56-23-5	Carbon Tetrachloride	10	U	10	
108-90-7	Chlorobenzene	10	U	10	
75-00-3	Chloroethane	10	U	10	
67-66-3	Chloroform	10	U	10	
74-87-3	Chloromethane	10	U	10	
124-48-1	Dibromochloromethane	10	U	10	
75-09-2	Methylene Chloride	10	U	10	
127-18-4	Tetrachloroethene (PCE)	**770**		10	
79-01-6	Trichloroethene (TCE)	**55**		10	
75-69-4	Trichlorofluoromethane (CFC 11)	10	U	10	
75-01-4	Vinyl Chloride	10	U	10	
156-59-2	cis-1,2-Dichloroethene	**60**		10	
10061-01-5	cis-1,3-Dichloropropene	10	U	10	
156-60-5	trans-1,2-Dichloroethene	10	U	10	
10061-02-6	trans-1,3-Dichloropropene	10	U	10	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	95	70-130	5/29/15 10:59	
Dibromofluoromethane	100	70-130	5/29/15 10:59	
Toluene-d8	97	70-130	5/29/15 10:59	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1503935
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/20/15 1200
Sample Matrix:	Water	**Date Received:**	5/21/15
		Date Analyzed:	5/29/15 04:07
Sample Name:	CL10-BR(45')	**Units:**	µg/L
Lab Code:	R1503935-047	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	446766
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\052815\M2161.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	102	70-130	5/29/15 04:07	
Dibromofluoromethane	102	70-130	5/29/15 04:07	
Toluene-d8	109	70-130	5/29/15 04:07	

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Analytical Report

Client:	CB&I	**Service Request:**	R1503935
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/20/15 1230
Sample Matrix:	Water	**Date Received:**	5/21/15
		Date Analyzed:	5/29/15 11:28
Sample Name:	MW2-32TOZER(17')	**Units:**	µg/L
Lab Code:	R1503935-048	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	446723
Data File Name:	I:\ACQUDATA\msvoa10\data\052815\A9015.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	10

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	20	U	20	
79-34-5	1,1,2,2-Tetrachloroethane	20	U	20	
79-00-5	1,1,2-Trichloroethane	20	U	20	
75-34-3	1,1-Dichloroethane (1,1-DCA)	20	U	20	
75-35-4	1,1-Dichloroethene (1,1-DCE)	20	U	20	
107-06-2	1,2-Dichloroethane	20	U	20	
78-87-5	1,2-Dichloropropane	20	U	20	
67-64-1	Acetone	100	U	100	
75-27-4	Bromodichloromethane	20	U	20	
75-25-2	Bromoform	20	U	20	
74-83-9	Bromomethane	20	U	20	
56-23-5	Carbon Tetrachloride	20	U	20	
108-90-7	Chlorobenzene	20	U	20	
75-00-3	Chloroethane	20	U	20	
67-66-3	Chloroform	20	U	20	
74-87-3	Chloromethane	20	U	20	
124-48-1	Dibromochloromethane	20	U	20	
75-09-2	Methylene Chloride	20	U	20	
127-18-4	Tetrachloroethene (PCE)	**1000**		20	
79-01-6	Trichloroethene (TCE)	**380**		20	
75-69-4	Trichlorofluoromethane (CFC 11)	20	U	20	
75-01-4	Vinyl Chloride	20	U	20	
156-59-2	cis-1,2-Dichloroethene	**580**		20	
10061-01-5	cis-1,3-Dichloropropene	20	U	20	
156-60-5	trans-1,2-Dichloroethene	20	U	20	
10061-02-6	trans-1,3-Dichloropropene	20	U	20	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	93	70-130	5/29/15 11:28	
Dibromofluoromethane	100	70-130	5/29/15 11:28	
Toluene-d8	96	70-130	5/29/15 11:28	

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Analytical Report

Client:	CB&I	**Service Request:**	R1503935
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/20/15 0930
Sample Matrix:	Water	**Date Received:**	5/21/15
		Date Analyzed:	5/29/15 04:38
Sample Name:	CL3-S (18)	**Units:**	µg/L
Lab Code:	R1503935-049	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	446766
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\052815\M2162.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	**13**		2.0	
79-01-6	Trichloroethene (TCE)	**20**		2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	**2.6**		2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	104	70-130	5/29/15 04:38	
Dibromofluoromethane	101	70-130	5/29/15 04:38	
Toluene-d8	106	70-130	5/29/15 04:38	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1503935
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/20/15 1015
Sample Matrix:	Water	**Date Received:**	5/21/15
		Date Analyzed:	5/29/15 05:10
Sample Name:	CL3-DO (75)	**Units:**	µg/L
Lab Code:	R1503935-050	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	446766
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\052815\M2163.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	23		2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	99	70-130	5/29/15 05:10	
Dibromofluoromethane	101	70-130	5/29/15 05:10	
Toluene-d8	107	70-130	5/29/15 05:10	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1503935
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/20/15 1215
Sample Matrix:	Water	**Date Received:**	5/21/15
Sample Name:	CL10-D0(36')		
Lab Code:	R1503935-051	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chloride	300.0	**258**		mg/L	20	100	NA	5/28/15 11:59	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1503935
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/20/15 1215
Sample Matrix:	Water	**Date Received:**	5/21/15
Sample Name:	CL10-D0(36')		
Lab Code:	R1503935-051	**Basis:**	NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Iron, Dissolved	6010C	100	U	µg/L	100	1	5/26/15	6/10/15 17:15	
Manganese, Dissolved	6010C	**40800**		µg/L	2000	200	5/26/15	6/10/15 05:45	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1503935
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/20/15 1215
Sample Matrix:	Water	**Date Received:**	5/21/15
		Date Analyzed:	5/29/15 05:42
Sample Name:	CL10-D0(36')	**Units:**	µg/L
Lab Code:	R1503935-051	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	446766
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\052815\M2164.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	103	70-130	5/29/15 05:42	
Dibromofluoromethane	104	70-130	5/29/15 05:42	
Toluene-d8	112	70-130	5/29/15 05:42	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1503935
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/20/15 1145
Sample Matrix:	Water	**Date Received:**	5/21/15
		Date Analyzed:	5/29/15 06:14
Sample Name:	OB43-S (16)	**Units:**	µg/L
Lab Code:	R1503935-052	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	446766
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\052815\M2165.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	**4.7**		2.0	
79-01-6	Trichloroethene (TCE)	**6.4**		2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	104	70-130	5/29/15 06:14	
Dibromofluoromethane	103	70-130	5/29/15 06:14	
Toluene-d8	110	70-130	5/29/15 06:14	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1503935
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/20/15 1330
Sample Matrix:	Water	**Date Received:**	5/21/15
		Date Analyzed:	5/29/15 06:46
Sample Name:	CULVERT OUTFALL	**Units:**	µg/L
Lab Code:	R1503935-053	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	446766
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\052815\M2166.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	**3.0**		2.0	
79-01-6	Trichloroethene (TCE)	**14**		2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	**17**		2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	103	70-130	5/29/15 06:46	
Dibromofluoromethane	101	70-130	5/29/15 06:46	
Toluene-d8	106	70-130	5/29/15 06:46	

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Analytical Report

Client:	CB&I	**Service Request:**	R1503935
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/20/15 1345
Sample Matrix:	Water	**Date Received:**	5/21/15
		Date Analyzed:	5/29/15 07:18
Sample Name:	STRHA-7A	**Units:**	µg/L
Lab Code:	R1503935-054	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	446766
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\052815\M2167.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	**5.5**		2.0	
79-01-6	Trichloroethene (TCE)	**25**		2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	**21**		2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	106	70-130	5/29/15 07:18	
Dibromofluoromethane	101	70-130	5/29/15 07:18	
Toluene-d8	108	70-130	5/29/15 07:18	

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Analytical Report

Client:	CB&I	**Service Request:**	R1503935
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/20/15 1405
Sample Matrix:	Water	**Date Received:**	5/21/15
		Date Analyzed:	5/29/15 07:50
Sample Name:	STRHA-7B	**Units:**	µg/L
Lab Code:	R1503935-055	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	446766
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\052815\M2168.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	**8.2**		2.0	
79-01-6	Trichloroethene (TCE)	**32**		2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	**11**		2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	100	70-130	5/29/15 07:50	
Dibromofluoromethane	102	70-130	5/29/15 07:50	
Toluene-d8	111	70-130	5/29/15 07:50	

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Analytical Report

Client:	CB&I	**Service Request:**	R1503935
Project:	Varian Beverly/152780-05000000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank		
Lab Code:	R1503935-MB1	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chloride	300.0	0.20	U	mg/L	0.20	1	NA	5/28/15 03:12	

Client:	CB&I	**Service Request:**	R1503935
Project:	Varian Beverly/152780-05000000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank		
Lab Code:	R1503935-MB2	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chloride	300.0	0.20	U	mg/L	0.20	1	NA	5/28/15 11:04	

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Analytical Report

Client:	CB&I	**Service Request:**	R1503935
Project:	Varian Beverly/152780-05000000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank		
Lab Code:	R1503935-MB	**Basis:**	NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Iron, Dissolved	6010C	100	U	µg/L	100	1	5/26/15	6/10/15 02:46	
Manganese, Dissolved	6010C	10	U	µg/L	10	1	5/26/15	6/10/15 02:46	

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Analytical Report

Client:	CB&I	**Service Request:**	R1503935
Project:	Varian Beverly/152780-05000000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	5/28/15 00:29
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1505746-05	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	446544
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\052715\M2110.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	99	70-130	5/28/15 00:29	
Dibromofluoromethane	104	70-130	5/28/15 00:29	
Toluene-d8	107	70-130	5/28/15 00:29	

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Analytical Report

Client:	CB&I	**Service Request:**	R1503935
Project:	Varian Beverly/152780-05000000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	5/28/15 14:12
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1505784-05	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	446701
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\052815\M2135.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	102	70-130	5/28/15 14:12	
Dibromofluoromethane	104	70-130	5/28/15 14:12	
Toluene-d8	112	70-130	5/28/15 14:12	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1503935
Project:	Varian Beverly/152780-05000000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	5/29/15 01:59
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1505842-05	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	446766
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\052815\M2157.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	103	70-130	5/29/15 01:59	
Dibromofluoromethane	100	70-130	5/29/15 01:59	
Toluene-d8	108	70-130	5/29/15 01:59	

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Analytical Report

Client:	CB&I	**Service Request:**	R1503935
Project:	Varian Beverly/152780-05000000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	5/29/15 02:37
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1505787-05	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	446723
Data File Name:	I:\ACQUDATA\msvoa10\data\052815\A8997.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	90	70-130	5/29/15 02:37	
Dibromofluoromethane	98	70-130	5/29/15 02:37	
Toluene-d8	96	70-130	5/29/15 02:37	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1503935
Project:	Varian Beverly/152780-05000000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	5/29/15 16:47
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1505853-05	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	446935
Data File Name:	I:\ACQUDATA\msvoa10\data\052915\A9025.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	92	70-130	5/29/15 16:47	
Dibromofluoromethane	98	70-130	5/29/15 16:47	
Toluene-d8	97	70-130	5/29/15 16:47	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1503935
Project:	Varian Beverly/152780-05000000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	5/30/15 18:16
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1505844-05	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	447048
Data File Name:	I:\ACQUDATA\msvoa10\data\053015\A9055.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	93	70-130	5/30/15 18:16	
Dibromofluoromethane	99	70-130	5/30/15 18:16	
Toluene-d8	98	70-130	5/30/15 18:16	

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: CB&I
Project: Varian Beverly/152780-05000000
Sample Matrix: Water

Service Request: R1503935
Date Analyzed: 5/28/15

Lab Control Sample Summary
General Chemistry Parameters

Units: mg/L
Basis: NA

Analyte Name	Method	Lab Control Sample R1503935-LCS1 Result	Spike Amount	% Rec	% Rec Limits
Chloride	300.0	1.94	2.00	97	90 - 110

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: CB&I
Project: Varian Beverly/152780-05000000
Sample Matrix: Water

Service Request: R1503935
Date Analyzed: 5/28/15

Lab Control Sample Summary
General Chemistry Parameters

Units: mg/L
Basis: NA

Analyte Name	Method	Lab Control Sample R1503935-LCS2 Result	Spike Amount	% Rec	% Rec Limits
Chloride	300.0	1.95	2.00	98	90 - 110

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: CB&I
Project: Varian Beverly/152780-05000000
Sample Matrix: Water

Service Request: R1503935
Date Analyzed: 6/10/15

Lab Control Sample Summary
Inorganic Parameters

Units: µg/L
Basis: NA

Analyte Name	Method	Lab Control Sample R1503935-LCS Result	Spike Amount	% Rec	% Rec Limits
Iron, Dissolved	6010C	1030	1000	103	80 - 120
Manganese, Dissolved	6010C	512	500	102	80 - 120

Results flagged with an asterisk (*) indicate values outside control criteria.

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ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: CB&I
Project: Varian Beverly/152780-05000000
Sample Matrix: Water

Service Request: R1503935
Date Analyzed: 5/27/15

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260C

Units: µg/L
Basis: NA

Analysis Lot: 446544

	Lab Control Sample RQ1505746-03			Duplicate Lab Control Sample RQ1505746-04					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
1,1,1-Trichloroethane (TCA)	20.7	20.0	104	20.2	20.0	101	70 - 130	2	20
1,1,2,2-Tetrachloroethane	22.3	20.0	112	21.3	20.0	106	70 - 130	5	20
1,1,2-Trichloroethane	21.5	20.0	107	20.7	20.0	104	70 - 130	4	20
1,1-Dichloroethane (1,1-DCA)	20.7	20.0	104	20.6	20.0	103	70 - 130	<1	20
1,1-Dichloroethene (1,1-DCE)	19.0	20.0	95	19.0	20.0	95	70 - 130	<1	20
1,2-Dichloroethane	21.5	20.0	108	20.8	20.0	104	70 - 130	3	20
1,2-Dichloropropane	20.7	20.0	103	19.8	20.0	99	70 - 130	4	20
Acetone	29.1	20.0	145	24.8	20.0	124	40 - 160	16	20
Bromodichloromethane	21.6	20.0	108	21.1	20.0	106	70 - 130	2	20
Bromoform	23.5	20.0	117	24.1	20.0	121	70 - 130	3	20
Bromomethane	16.0	20.0	80	15.7	20.0	78	40 - 160	2	20
Carbon Tetrachloride	20.8	20.0	104	20.0	20.0	100	70 - 130	4	20
Chlorobenzene	19.9	20.0	100	19.9	20.0	99	70 - 130	<1	20
Chloroethane	18.6	20.0	93	17.7	20.0	88	70 - 130	5	20
Chloroform	20.2	20.0	101	20.4	20.0	102	70 - 130	<1	20
Chloromethane	15.8	20.0	79	16.3	20.0	82	40 - 160	3	20
Dibromochloromethane	21.9	20.0	110	23.0	20.0	115	70 - 130	5	20
Methylene Chloride	19.2	20.0	96	19.4	20.0	97	70 - 130	<1	20
Tetrachloroethene (PCE)	20.1	20.0	101	21.1	20.0	105	70 - 130	5	20
Trichloroethene (TCE)	20.6	20.0	103	20.2	20.0	101	70 - 130	2	20
Trichlorofluoromethane (CFC 11)	18.1	20.0	90	17.6	20.0	88	70 - 130	3	20
Vinyl Chloride	17.4	20.0	87	17.3	20.0	86	70 - 130	<1	20
cis-1,2-Dichloroethene	19.6	20.0	98	19.8	20.0	99	70 - 130	1	20
cis-1,3-Dichloropropene	20.0	20.0	100	19.7	20.0	98	70 - 130	2	20
trans-1,2-Dichloroethene	20.1	20.0	100	20.1	20.0	100	70 - 130	<1	20
trans-1,3-Dichloropropene	21.3	20.0	106	21.8	20.0	109	70 - 130	2	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: CB&I
Project: Varian Beverly/152780-05000000
Sample Matrix: Water

Service Request: R1503935
Date Analyzed: 5/28/15

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260C

Units: µg/L
Basis: NA

Analysis Lot: 446701

Analyte Name	Lab Control Sample RQ1505784-03 Result	Spike Amount	% Rec	Duplicate Lab Control Sample RQ1505784-04 Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
1,1,1-Trichloroethane (TCA)	18.1	20.0	90	18.7	20.0	93	70 - 130	3	20
1,1,2,2-Tetrachloroethane	19.1	20.0	96	18.1	20.0	90	70 - 130	6	20
1,1,2-Trichloroethane	18.9	20.0	95	18.0	20.0	90	70 - 130	5	20
1,1-Dichloroethane (1,1-DCA)	18.3	20.0	92	18.7	20.0	93	70 - 130	2	20
1,1-Dichloroethene (1,1-DCE)	16.9	20.0	84	17.0	20.0	85	70 - 130	<1	20
1,2-Dichloroethane	19.0	20.0	95	19.1	20.0	96	70 - 130	<1	20
1,2-Dichloropropane	18.9	20.0	95	18.2	20.0	91	70 - 130	4	20
Acetone	24.6	20.0	123	21.2	20.0	106	40 - 160	15	20
Bromodichloromethane	19.1	20.0	95	19.1	20.0	95	70 - 130	<1	20
Bromoform	21.5	20.0	108	19.3	20.0	96	70 - 130	11	20
Bromomethane	17.1	20.0	85	16.5	20.0	82	40 - 160	4	20
Carbon Tetrachloride	17.6	20.0	88	18.3	20.0	92	70 - 130	4	20
Chlorobenzene	18.4	20.0	92	17.8	20.0	89	70 - 130	3	20
Chloroethane	16.0	20.0	80	15.8	20.0	79	70 - 130	1	20
Chloroform	18.4	20.0	92	18.4	20.0	92	70 - 130	<1	20
Chloromethane	15.0	20.0	75	14.7	20.0	73	40 - 160	3	20
Dibromochloromethane	19.9	20.0	100	19.0	20.0	95	70 - 130	5	20
Methylene Chloride	18.0	20.0	90	17.7	20.0	88	70 - 130	1	20
Tetrachloroethene (PCE)	17.8	20.0	89	17.3	20.0	87	70 - 130	3	20
Trichloroethene (TCE)	17.9	20.0	90	18.2	20.0	91	70 - 130	2	20
Trichlorofluoromethane (CFC 11)	15.9	20.0	80	16.2	20.0	81	70 - 130	2	20
Vinyl Chloride	15.4	20.0	77	15.8	20.0	79	70 - 130	2	20
cis-1,2-Dichloroethene	17.7	20.0	88	18.0	20.0	90	70 - 130	2	20
cis-1,3-Dichloropropene	18.7	20.0	93	17.7	20.0	88	70 - 130	6	20
trans-1,2-Dichloroethene	17.4	20.0	87	17.6	20.0	88	70 - 130	1	20
trans-1,3-Dichloropropene	20.4	20.0	102	18.5	20.0	92	70 - 130	10	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: CB&I
Project: Varian Beverly/152780-05000000
Sample Matrix: Water

Service Request: R1503935
Date Analyzed: 5/29/15

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260C

Units: µg/L
Basis: NA

Analysis Lot: 446723

Analyte Name	Lab Control Sample RQ1505787-03 Result	Spike Amount	% Rec	Duplicate Lab Control Sample RQ1505787-04 Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
1,1,1-Trichloroethane (TCA)	51.5	50.0	103	47.7	50.0	95	70 - 130	8	20
1,1,2,2-Tetrachloroethane	47.6	50.0	95	47.8	50.0	96	70 - 130	<1	20
1,1,2-Trichloroethane	48.2	50.0	96	48.8	50.0	98	70 - 130	1	20
1,1-Dichloroethane (1,1-DCA)	51.1	50.0	102	48.9	50.0	98	70 - 130	4	20
1,1-Dichloroethene (1,1-DCE)	48.8	50.0	98	45.2	50.0	90	70 - 130	8	20
1,2-Dichloroethane	50.1	50.0	100	50.0	50.0	100	70 - 130	<1	20
1,2-Dichloropropane	50.7	50.0	101	48.6	50.0	97	70 - 130	4	20
Acetone	53.1	50.0	106	51.0	50.0	102	40 - 160	4	20
Bromodichloromethane	51.8	50.0	104	50.5	50.0	101	70 - 130	3	20
Bromoform	56.0	50.0	112	58.4	50.0	117	70 - 130	4	20
Bromomethane	33.8	50.0	68	32.4	50.0	65	40 - 160	4	20
Carbon Tetrachloride	54.2	50.0	108	47.9	50.0	96	70 - 130	12	20
Chlorobenzene	51.9	50.0	104	49.5	50.0	99	70 - 130	5	20
Chloroethane	45.6	50.0	91	39.1	50.0	78	70 - 130	15	20
Chloroform	50.1	50.0	100	48.5	50.0	97	70 - 130	3	20
Chloromethane	43.4	50.0	87	42.2	50.0	84	40 - 160	3	20
Dibromochloromethane	55.3	50.0	111	54.6	50.0	109	70 - 130	1	20
Methylene Chloride	48.3	50.0	97	43.5	50.0	87	70 - 130	10	20
Tetrachloroethene (PCE)	51.0	50.0	102	45.5	50.0	91	70 - 130	11	20
Trichloroethene (TCE)	56.1	50.0	112	53.4	50.0	107	70 - 130	5	20
Trichlorofluoromethane (CFC 11)	44.1	50.0	88	45.9	50.0	92	70 - 130	4	20
Vinyl Chloride	46.1	50.0	92	43.3	50.0	86	70 - 130	6	20
cis-1,2-Dichloroethene	50.3	50.0	100	48.4	50.0	97	70 - 130	4	20
cis-1,3-Dichloropropene	49.5	50.0	99	48.6	50.0	97	70 - 130	2	20
trans-1,2-Dichloroethene	49.4	50.0	99	46.5	50.0	93	70 - 130	6	20
trans-1,3-Dichloropropene	48.9	50.0	98	49.5	50.0	99	70 - 130	1	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: CB&I
Project: Varian Beverly/152780-05000000
Sample Matrix: Water

Service Request: R1503935
Date Analyzed: 5/29/15

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260C

Units: µg/L
Basis: NA

Analysis Lot: 446766

Analyte Name	Lab Control Sample RQ1505842-03 Result	Spike Amount	% Rec	Duplicate Lab Control Sample RQ1505842-04 Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
1,1,1-Trichloroethane (TCA)	20.7	20.0	103	21.0	20.0	105	70 - 130	2	20
1,1,2,2-Tetrachloroethane	20.3	20.0	101	19.5	20.0	97	70 - 130	4	20
1,1,2-Trichloroethane	22.0	20.0	110	21.2	20.0	106	70 - 130	4	20
1,1-Dichloroethane (1,1-DCA)	20.7	20.0	103	21.8	20.0	109	70 - 130	6	20
1,1-Dichloroethene (1,1-DCE)	20.2	20.0	101	19.8	20.0	99	70 - 130	2	20
1,2-Dichloroethane	21.5	20.0	108	21.2	20.0	106	70 - 130	2	20
1,2-Dichloropropane	21.1	20.0	106	20.5	20.0	103	70 - 130	3	20
Acetone	31.5	20.0	158	30.2	20.0	151	40 - 160	4	20
Bromodichloromethane	21.5	20.0	108	21.7	20.0	108	70 - 130	<1	20
Bromoform	23.3	20.0	116	23.5	20.0	117	70 - 130	<1	20
Bromomethane	13.9	20.0	70	13.5	20.0	67	40 - 160	3	20
Carbon Tetrachloride	20.8	20.0	104	20.0	20.0	100	70 - 130	4	20
Chlorobenzene	20.9	20.0	104	20.8	20.0	104	70 - 130	<1	20
Chloroethane	20.2	20.0	101	19.4	20.0	97	70 - 130	4	20
Chloroform	20.4	20.0	102	20.5	20.0	103	70 - 130	<1	20
Chloromethane	18.1	20.0	91	18.3	20.0	91	40 - 160	<1	20
Dibromochloromethane	22.3	20.0	112	22.0	20.0	110	70 - 130	2	20
Methylene Chloride	20.5	20.0	102	20.4	20.0	102	70 - 130	<1	20
Tetrachloroethene (PCE)	20.9	20.0	105	21.3	20.0	106	70 - 130	2	20
Trichloroethene (TCE)	22.5	20.0	112	22.4	20.0	112	70 - 130	<1	20
Trichlorofluoromethane (CFC 11)	19.4	20.0	97	19.4	20.0	97	70 - 130	<1	20
Vinyl Chloride	18.9	20.0	94	20.5	20.0	102	70 - 130	8	20
cis-1,2-Dichloroethene	20.9	20.0	105	19.8	20.0	99	70 - 130	6	20
cis-1,3-Dichloropropene	20.4	20.0	102	20.4	20.0	102	70 - 130	<1	20
trans-1,2-Dichloroethene	20.1	20.0	101	20.6	20.0	103	70 - 130	2	20
trans-1,3-Dichloropropene	21.6	20.0	108	21.7	20.0	109	70 - 130	<1	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: CB&I
Project: Varian Beverly/152780-05000000
Sample Matrix: Water

Service Request: R1503935
Date Analyzed: 5/29/15

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260C

Units: µg/L
Basis: NA

Analysis Lot: 446935

Analyte Name	Lab Control Sample RQ1505853-03 Result	Spike Amount	% Rec	Duplicate Lab Control Sample RQ1505853-04 Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
1,1,1-Trichloroethane (TCA)	19.1	20.0	96	20.0	20.0	100	70 - 130	4	20
1,1,2,2-Tetrachloroethane	21.2	20.0	106	21.8	20.0	109	70 - 130	3	20
1,1,2-Trichloroethane	18.9	20.0	94	19.2	20.0	96	70 - 130	2	20
1,1-Dichloroethane (1,1-DCA)	19.4	20.0	97	20.1	20.0	101	70 - 130	4	20
1,1-Dichloroethene (1,1-DCE)	18.8	20.0	94	20.6	20.0	103	70 - 130	9	20
1,2-Dichloroethane	19.1	20.0	96	20.2	20.0	101	70 - 130	6	20
1,2-Dichloropropane	18.7	20.0	93	19.5	20.0	97	70 - 130	4	20
Acetone	16.4	20.0	82	17.8	20.0	89	40 - 160	8	20
Bromodichloromethane	19.4	20.0	97	20.4	20.0	102	70 - 130	5	20
Bromoform	19.7	20.0	99	20.5	20.0	102	70 - 130	4	20
Bromomethane	11.2	20.0	56	12.7	20.0	64	40 - 160	13	20
Carbon Tetrachloride	18.7	20.0	94	19.3	20.0	97	70 - 130	3	20
Chlorobenzene	19.1	20.0	96	20.4	20.0	102	70 - 130	6	20
Chloroethane	15.5	20.0	77	17.5	20.0	87	70 - 130	12	20
Chloroform	19.0	20.0	95	20.2	20.0	101	70 - 130	6	20
Chloromethane	16.8	20.0	84	18.0	20.0	90	40 - 160	7	20
Dibromochloromethane	19.5	20.0	98	21.0	20.0	105	70 - 130	7	20
Methylene Chloride	17.4	20.0	87	18.5	20.0	92	70 - 130	6	20
Tetrachloroethene (PCE)	17.8	20.0	89	19.3	20.0	96	70 - 130	8	20
Trichloroethene (TCE)	18.4	20.0	92	19.2	20.0	96	70 - 130	4	20
Trichlorofluoromethane (CFC 11)	19.8	20.0	99	21.0	20.0	105	70 - 130	6	20
Vinyl Chloride	18.8	20.0	94	20.1	20.0	101	70 - 130	7	20
cis-1,2-Dichloroethene	18.7	20.0	94	20.3	20.0	102	70 - 130	8	20
cis-1,3-Dichloropropene	18.7	20.0	93	19.7	20.0	98	70 - 130	5	20
trans-1,2-Dichloroethene	19.1	20.0	96	20.4	20.0	102	70 - 130	6	20
trans-1,3-Dichloropropene	18.8	20.0	94	19.6	20.0	98	70 - 130	4	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: CB&I
Project: Varian Beverly/152780-05000000
Sample Matrix: Water

Service Request: R1503935
Date Analyzed: 5/30/15

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260C

Units: µg/L
Basis: NA

Analysis Lot: 447048

Analyte Name	Lab Control Sample RQ1505844-03 Result	Spike Amount	% Rec	Duplicate Lab Control Sample RQ1505844-04 Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
1,1,1-Trichloroethane (TCA)	21.4	20.0	107	24.4	20.0	122	70 - 130	13	20
1,1,2,2-Tetrachloroethane	21.8	20.0	109	22.6	20.0	113	70 - 130	3	20
1,1,2-Trichloroethane	20.9	20.0	104	21.4	20.0	107	70 - 130	2	20
1,1-Dichloroethane (1,1-DCA)	21.8	20.0	109	24.1	20.0	121	70 - 130	10	20
1,1-Dichloroethene (1,1-DCE)	21.2	20.0	106	24.0	20.0	120	70 - 130	12	20
1,2-Dichloroethane	21.1	20.0	106	23.0	20.0	115	70 - 130	8	20
1,2-Dichloropropane	21.5	20.0	107	23.0	20.0	115	70 - 130	7	20
Acetone	18.0	20.0	90	17.1	20.0	86	40 - 160	5	20
Bromodichloromethane	21.7	20.0	108	23.5	20.0	117	70 - 130	8	20
Bromoform	22.8	20.0	114	23.8	20.0	119	70 - 130	4	20
Bromomethane	13.7	20.0	69	14.9	20.0	75	40 - 160	9	20
Carbon Tetrachloride	21.8	20.0	109	24.5	20.0	122	70 - 130	11	20
Chlorobenzene	21.7	20.0	108	23.6	20.0	118	70 - 130	8	20
Chloroethane	17.1	20.0	85	21.2	20.0	106	70 - 130	21 *	20
Chloroform	21.7	20.0	109	23.5	20.0	117	70 - 130	8	20
Chloromethane	20.9	20.0	104	22.5	20.0	112	40 - 160	7	20
Dibromochloromethane	22.4	20.0	112	24.4	20.0	122	70 - 130	9	20
Methylene Chloride	17.7	20.0	88	21.1	20.0	105	70 - 130	17	20
Tetrachloroethene (PCE)	20.0	20.0	100	23.5	20.0	117	70 - 130	16	20
Trichloroethene (TCE)	20.8	20.0	104	23.6	20.0	118	70 - 130	13	20
Trichlorofluoromethane (CFC 11)	22.2	20.0	111	25.5	20.0	127	70 - 130	14	20
Vinyl Chloride	22.2	20.0	111	24.4	20.0	122	70 - 130	9	20
cis-1,2-Dichloroethene	21.1	20.0	106	23.2	20.0	116	70 - 130	9	20
cis-1,3-Dichloropropene	21.5	20.0	108	23.3	20.0	117	70 - 130	8	20
trans-1,2-Dichloroethene	21.8	20.0	109	24.4	20.0	122	70 - 130	11	20
trans-1,3-Dichloropropene	21.3	20.0	107	22.8	20.0	114	70 - 130	7	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Columbia Analytical Services - CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

1 Mustard Street, Suite 250, Rochester, NY 14609 | 585.288.5380 | 800.695.7222 | 585.288.8475 (fax) PAGE 1 OF 6

Project Name: Varian Beverly	Project Number: 152780-05000000
Project Manager: Raymond Cadorette	Report CC:
Company/Address: CB&I Environmental 150 Royall Street Canton, MA 02021	
Phone #: 617-589-6102	E-mail: Raymond.Cadorette@CBI.com
Sampler's Signature: [signature]	Sampler's Printed Name: DANIEL C. LEARY

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

PRESERVATIVE: 1 2 0

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	GC/MS VOA's Site Specific ☐ 8260 ☐ 624 ☐ CLP List	GC/MS SVOA's ☐ 8270 ☐ 625	GC VOA's ☐ 8021 ☐ 601/602	PESTICIDES ☐ 8081 ☐ 608	PCB's ☐ 8082 ☐ 608	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below) Ferric Chloride							REMARKS/ ALTERNATE DESCRIPTION
OB20-DO(74')		5/19/15	0900	GW	3	3													
OB20-BR(94')		5/19/15	0930	✓	3	3													
TB-1 BY UB		5/14/15	0935	LW	3	3													
P-20R(10')		5/19/15	1000	GW	3	3													
STRM-A-SCDS		5/19/15	1015		3	3													
P-19A(9.3')		5/19/15	1030		3	3													
P-11R(8.5')		5/19/15	1100		3	3													
EB-1		5/19/15	1110		3	3													
OBB-DO(77')		5/19/15	1230		3	3													
GZ-4(11')		5/19/15	1300	✓	3	3													

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

SPECIAL INSTRUCTIONS/COMMENTS
Metals = Field filtered

Site specific VOC list.
Massachusetts CAM analyses reporting and QA/QC.
Please email GISKey formatted EDD & PDF of report to:
Catherine.Mainville@CBI.com.

See QAPP ☐

TURNAROUND REQUIREMENTS
____ RUSH (SURCHARGES APPLY)
____ 1 day ____ 2 day ____ 3 day
____ 4 day ____ 5 day
✓ Standard

REQUESTED REPORT DATE: _____

REPORT REQUIREMENTS
____ I. Results Only
____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
____ III. Results + QC and Calibration Summaries
____ IV. Data Validation Report with Raw Data

Edata ✓ Yes ____ No

INVOICE INFORMATION
PO #: 915904
BILL TO: CB&I

STATE WHERE SAMPLES WERE COLLECTED: MASS

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature: [signature]	Signature: [signature]	Signature	Signature	Signature	Signature
Printed Name: Paul Ludwig	Printed Name: Gerry Tipton	Printed Name	Printed Name	Printed Name	Printed Name
Firm: CBI	Firm: Varian	Firm	Firm	Firm	Firm
Date/Time: 5.20.15 1600	Date/Time: 5/21/15 0905	Date/Time	Date/Time	Date/Time	Date/Time

R1503935 7 Y
CB&I Environmental & Infrastructure
Varian Beverly - Non-Bio Wells

Distribution: White - Lab Copy; Yellow - Return To Originator

SCOC Rev. 10/2010

Columbia Analytical Services

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

1 Mustard Street, Suite 250, Rochester, NY 14609 | 585.288.5380 | 800.695.7222 | 585.288.8475 (fax)

Project Name: Varian Beverly	Project Number: 152780-05000000
Project Manager: Raymond Cadorette	Report CC:
Company/Address: CB&I Environmental 150 Royall Street Canton, MA. 02021	
Phone #: 617-589-6102	E-mail: Raymond.Cadorette@CBI.com
Sampler's Signature:	Sampler's Printed Name: Paul Hedarick

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

PRESERVATIVE: 1 2 0

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS		GC/MS VOA's 8260 ☐ Site specific ☐ CLP List	GC/MS SVOA's ☐ 8270 ☐ 625	GC VOA's ☐ 8021 ☐ 601/602	PESTICIDES ☐ 8081 ☐ 608	PCB's ☐ 8082 ☐ 608	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below)									REMARKS/ ALTERNATE DESCRIPTION
~~OB4-DO (67)~~		5.20.15	0730	GW	3	3	(1A)																
~~MW-36 (31)~~			0800		3	3	(1A)																
OB42S (13)			1215		3	3																	
OB5DO (81)			1045		3	3																	
OB5BR (104)			1115		3	3																	
CL8-DO (52)			1245		3	3																	
CL8-BR Zone 1			1330		3	3																	
CL8-BR Zone 2			1345 1400		3	3																	
CL8-BR Zone 3			~~0945~~		3	3																	
BR-5 Zone 3			0950		3	3																	

SPECIAL INSTRUCTIONS/COMMENTS
Metals = Field filtered

Site specific VOC list.
Massachusetts CAM analyses reporting and QA/QC.
Please email GISKey formatted EDD & PDF of report to:
Catherine.Mainville@CBI.com.

See QAPP ☐

STATE WHERE SAMPLES WERE COLLECTED:

TURNAROUND REQUIREMENTS
____ RUSH (SURCHARGES APPLY)
____ 1 day ____ 2 day ____ 3 day
____ 4 day ____ 5 day
✓ Standard

REQUESTED REPORT DATE

REPORT REQUIREMENTS
____ I. Results Only
____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
____ III. Results + QC and Calibration Summaries
____ IV. Data Validation Report with Raw Data

Edata ✓ Yes ____ No

INVOICE INFORMATION
PO #: 915904
BILL TO: CB&I

R1503935 7 Y
CB&I Environmental & Infrastructure
Varian Beverly - Non-Bio Wells

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	
Signature: Paul Hedarick	Signature: Gregg Lafon	Signature	Signature	Signature	Signature
Printed Name: CBI	Printed Name: Gregg Lafon	Printed Name	Printed Name	Printed Name	Printed Name
Firm: 5.20.15 1600	Firm: ARI	Firm	Firm	Firm	Firm
Date/Time	Date/Time: 5/21/15 0905	Date/Time	Date/Time	Date/Time	Date/Time

Columbia Analytical Services — CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

1 Mustard Street, Suite 250, Rochester, NY 14609 | 585.288.5380 | 800.695.7222 | 585.288.8475 (fax)

Project Name: Varian Beverly	Project Number: 152780-05000000
Project Manager: Raymond Cadorette	Report CC:
Company/Address: CB&I Environmental 150 Royall Street Canton, MA 02021	
Phone #: 617-589-6102	E-mail: Raymond.Cadorette@CBI.com
Sampler's Signature:	Sampler's Printed Name:

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

PRESERVATIVE: 1 2 0

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	GC/MS VOA's ☐ 8260 ☐ 624 ☐ CLP Site Specific List	GC/MS SVOA's ☐ 8270 ☐ 625	GC VOA's ☐ 8021 ☐ 601/602	PESTICIDES ☐ 8081 ☐ 608	PCB's ☐ 8082 ☐ 608	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below)	Chloride	REMARKS/ ALTERNATE DESCRIPTION
BR-7 Zone 2		5.19.15	1230	GW	3	3								
BR-7 Zone 3			1245		3	3								
OB 23-BR			1415		3	3								
MW 5R			1445		3	3								
MW 3R			1500		3	3								
CL2-BR			1530		3	3								
OB 4-DO		5.20.15	0730		3	3								
MW-36			0800		3	3								
EB-2			0815		3	3								
TB-2 By Lab			0830		3	3								

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

SPECIAL INSTRUCTIONS/COMMENTS
Metals = Field Filtered

Site specific VOC list.
Massachusetts CAM analyses reporting and QA/QC.
Please email GISKey formatted EDD & PDF of report to:
Catherine.Mainville@CBI.com.

See QAPP ☐

STATE WHERE SAMPLES WERE COLLECTED:

TURNAROUND REQUIREMENTS
____ RUSH (SURCHARGES APPLY)
____ 1 day ____ 2 day ____ 3 day
____ 4 day ____ 5 day
✓ Standard

REQUESTED REPORT DATE: _____

REPORT REQUIREMENTS
____ I. Results Only
____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
____ III. Results + QC and Calibration Summaries
____ IV. Data Validation Report with Raw Data

Edata ✓ Yes ____ No

INVOICE INFORMATION
PO #: 915904
BILL TO: CB&I

R1503935

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature	Signature	Signature	Signature	Signature	Signature
Printed Name: CBE	Printed Name	Printed Name	Printed Name	Printed Name	Printed Name
Firm: 5.20.15 1600	Firm	Firm	Firm	Firm	Firm
Date/Time	Date/Time: 5/21/15 0925	Date/Time	Date/Time	Date/Time	Date/Time

Distribution: White - Lab Copy; Yellow - Return To Originator

SCOC Rev. 10/2010

Columbia Analytical Services — CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

1 Mustard Street, Suite 250, Rochester, NY 14609 | 585.288.5380 | 800.695.7222 | 585.288.8475 (fax)

Project Name: Varian Beverly	Project Number: 152780-05000000
Project Manager: Raymond Cadorette	Report CC:
Company/Address: CB&I Environmental 150 Royall Street Canton, MA 02021	
Phone: 617-589-6102	E-mail: Raymond.Cadorette@CBI.com
Sampler's Signature:	Sampler's Printed Name:

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

PRESERVATIVE: 1 2 0

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS		GC/MS VOA's 8260 ☐ 624 ☐ Site specific ☐ CLP List	GC/MS SVOA's ☐ 8270 ☐ 625	GC VOA's ☐ 8021 ☐ 601/602	PESTICIDES ☐ 8081 ☐ 608	PCB's ☐ 8082 ☐ 608	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below) Fe+ Mn	Chloride	REMARKS/ ALTERNATE DESCRIPTION
BR-1 Zone 3		5.19.15	0845	GW	3	3									
CL6-BR			0855		3	3									
CL6-DO			0910		3	3									
BR-3 Zone 1			0945		3	3									
BR-3 Zone 2			1000		3	3									
BR-3 Zone 3			1015		3	3									
~~BR~~ CL9-BR Zone 3			1045		3	3									
OB17-DO			1115		3	3									
OB17-BR			1130		3	3									
BR-7 Zone 1		↓	1215	↓	3	3									

Preservative Key: 0. NONE; 1. HCL; 2. HNO_3; 3. H_2SO_4; 4. NaOH; 5. Zn. Acetate; 6. MeOH; 7. $NaHSO_4$; 8. Other _____

SPECIAL INSTRUCTIONS/COMMENTS

Metals = Field filtered

Site specific VOC list.
Massachusetts CAM analyses reporting and QA/QC
Please email GISKey formatted EDD & PDF of report to:
Catherine.Mainville@CBI.com.

See QAPP ☐

STATE WHERE SAMPLES WERE COLLECTED:

TURNAROUND REQUIREMENTS
___ RUSH (SURCHARGES APPLY)
___ 1 day ___ 2 day ___ 3 day
___ 4 day ___ 5 day
✓ Standard

REQUESTED REPORT DATE: _____

REPORT REQUIREMENTS
___ I. Results Only
___ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
___ III. Results + QC and Calibration Summaries
___ IV. Data Validation Report with Raw Data

Edata ✓ Yes ___ No

INVOICE INFORMATION
PO #: 915904
BILL TO: CB&I

R1503935

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature	Signature	Signature	Signature	Signature	Signature
Printed Name: CB&I	Printed Name	Printed Name	Printed Name	Printed Name	Printed Name
Firm	Firm	Firm	Firm	Firm	Firm
Date/Time: 5.20.15 1600	Date/Time: 5/21/15 0905	Date/Time	Date/Time	Date/Time	Date/Time

Distribution: White - Lab Copy; Yellow - Return To Originator

SCOC Rev. 10/2010

Columbia Analytical Services — CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

1 Mustard Street, Suite 250, Rochester, NY 14609 | 585.288.5380 | 800.695.7222 | 585.288.8475 (fax) PAGE 5 OF 6

Project Name: Varian Beverly	Project Number: 152780-05000000
Project Manager: Raymond Cadorette	Report CC:
Company/Address: CB&I Environmental 150 Royall Street Canton, MA 02021	
Phone #: 617-589-6102	E-mail: Raymond.Cadorette@CBI.com
Sampler's Signature:	Sampler's Printed Name:

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

PRESERVATIVE: 1 | 2 | 0

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	GC/MS VOA's 8260 ☐ 624 ☐ CLP List + Site Specific	GC/MS SVOA's ☐ 8270 ☐ 625	GC VOA's ☐ 8021 ☐ 601/602	PESTICIDES ☐ 8081 ☐ 608	PCB's ☐ 8082 ☐ 608	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below) Chloride							REMARKS/ ALTERNATE DESCRIPTION
MW-33B (24')		5-20-15	0830	GW	3	3						1							
AP-19 (24')		5-20-15	0900		5	3						1	1						
AP-20 (14')		5-20-15	0930		5	3						1	1						
AP-21 (29')		5-20-15	1000		5	3						1	1						
AP-22 (19')		5-20-15	1030		5	3						1	1						
CL4-DO (27')		5-20-15	1100		3	3													
CL4-BR (54')		5-20-15	1115		3	3													
CL10-S (12')		5-20-15	1150		3	3													
CL10-BR (45')		5-20-15	1200		3	3													
MW2-32 Trip (17')		5-20-15	1230	✓	3	3													

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

SPECIAL INSTRUCTIONS/COMMENTS
Metals = Field filtered

Site specific VOC list.
Massachusetts CAM analyses reporting and QA/QC.
Catherine.Mainville@CBI.com.

See QAPP ☐

TURNAROUND REQUIREMENTS
____ RUSH (SURCHARGES APPLY)
____ 1 day ____ 2 day ____ 3 day
____ 4 day ____ 5 day
✓ Standard

REQUESTED REPORT DATE

REPORT REQUIREMENTS
____ I. Results Only
____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
____ III. Results + QC and Calibration Summaries
____ IV. Data Validation Report with Raw Data

Edata ✓ Yes ____ No

INVOICE INFORMATION
PO #: 915904
BILL TO: CB&I

R1503935

STATE WHERE SAMPLES WERE COLLECTED:

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature: Paul Ledoux	Signature: Gregg Lutz	Signature	Signature	Signature	Signature
Printed Name: Paul Ledoux	Printed Name: Gregg Lutz	Printed Name	Printed Name	Printed Name	Printed Name
Firm: CB&I	Firm: A&S	Firm	Firm	Firm	Firm
Date/Time: 5.20.15 1600	Date/Time: 5/21/15 0945	Date/Time	Date/Time	Date/Time	Date/Time

Columbia Analytical Services — CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

1 Mustard Street, Suite 250, Rochester, NY 14609 | 585.288.5380 | 800.695.7222 | 585.288.8475 (fax) PAGE 6 OF 6

Project Name: Varian Beverly	Project Number: 152780-05000000
Project Manager: Raymond Cadorette	Report CC:
Company/Address: CB&I Environmental 150 Royall Street Canton, MA 02021	
Phone #: 617-589-6102	E-mail: Raymond.Cadorette@CBI.com
Sampler's Signature:	Sampler's Printed Name:

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	GC/MS VOA's ☐8260 ☐624 ☐CLP	GC/MS SVOA's ☐8270 ☐625	GC VOA's ☐8021 ☐601/602	PESTICIDES ☐8081 ☐608	PCB's ☐8082 ☐608	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below)	Fe Mn Chloride							REMARKS/ ALTERNATE DESCRIPTION
PRESERVATIVE														1				2	0	
CL 3-S (18)		5.20.15	0930	GW	3	3														
CL 3-DO (75)		5.20.15	1015		3	3														
CL 16-DO (36)		5.20.15	1215		5	3						1	1							
OB 43-S (16)		5.20.15	1145		3	3														
Culvert at fall		5.20.15	1330		3	3														
STRHA-7A		5-20-15	1345		3	3														
STRHA-7B		5-20-15	1405		3	3														
				✓																

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

SPECIAL INSTRUCTIONS/COMMENTS
Metals = Field filtered

Site specific VOC list.
Massachusetts CAM analyses reporting and QA/QC.
Please email GISKey formatted EDD & PDF of report to:
. Catherine.Mainville@CBI.com.

See QAPP ☐

TURNAROUND REQUIREMENTS
____ RUSH (SURCHARGES APPLY)
____ 1 day ____ 2 day ____ 3 day
____ 4 day ____ 5 day
__✓__ Standard

REQUESTED REPORT DATE: _____

REPORT REQUIREMENTS
____ I. Results Only
____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
____ III. Results + QC and Calibration Summaries
____ IV. Data Validation Report with Raw Data

Edata __✓__ Yes ____ No

INVOICE INFORMATION
PO #: 915904
BILL TO: CB&I

R1503935

STATE WHERE SAMPLES WERE COLLECTED:

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature:	Signature:	Signature:	Signature:	Signature:	Signature:
Printed Name: CBI	Printed Name: Gary Latin	Printed Name:	Printed Name:	Printed Name:	Printed Name:
Firm: 5.20.15 1600	Firm:	Firm:	Firm:	Firm:	Firm:
Date/Time:	Date/Time: 5/21/15 0905	Date/Time:	Date/Time:	Date/Time:	Date/Time:

Distribution: White - Lab Copy; Yellow - Return To Originator

R1503935 7 Y
CB&I Environmental & Infrastructure
Verian Beverly - Non-Bio Wells

Cooler Receipt and Preservation Check Form

Project/Client CB+I Folder Number R15-3935

Cooler received on 5/21/15 by: @

COURIER: ALS (UPS) ~~FEDEX~~ VELOCITY CLIENT

1	Were **Custody seals** on outside of cooler?	(Y)	N
2	**Custody papers** properly completed (ink, signed)?	(Y)	N
3	Did all bottles arrive in good **condition** (unbroken)?	(Y)	N
4	Circle: (**Wet Ice**) **Dry Ice** **Gel packs** present?	(Y)	N

5a	**Perchlorate** samples have required headspace?	Y N	(NA)
5b	Did VOA vials, Alk,or Sulfide have sig* **bubbles**?	Y (N)	NA
6	Where did the bottles originate?	(ALS/ROC)	CLIENT
7	Soil VOA received as: Bulk Encore 5035set		(NA)

8. Temperature Readings Date: 5/21/15 Time: 0930 ID: (IR#3) IR#5 From: (Temp Blank) Sample Bottle

Observed Temp (°C)	4.0°	4.8°					
Correction Factor (°C)	+0.6	+0.6					
Corrected Temp (°C)	4.6°	5.4°					
Within 0-6°C?	(Y) N	(Y) N	Y N	Y N	Y N	Y N	Y N

If out of Temperature, note packing/ice condition: _____ Ice melted Poorly Packed Same Day Rule

&Client Approval to Run Samples: _____ Standing Approval Client aware at drop-off Client notified by: _____

All samples held in storage location: R-002 by @ on 5/21/15 at 0935
5035 samples placed in storage location: _____ by _____ on _____ at _____

PC Secondary Review: JMS 5/26/15

Cooler Breakdown: Date: 5/22/15 Time: 1200 by: @

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

Explain any discrepancies:

pH	Reagent	Yes	No	Lot Received	Exp	Sample ID	Vol. Added	Lot Added	Final pH
≥12	NaOH								
≤2	HNO_3	✓		33B261431	5/16				
≤2	H_2SO_4								
<4	$NaHSO_4$								
Residual Chlorine (-)	For CN Phenol and 522			If +, contact PM to add $Na_2S_2O_3$ (CN), ascorbic (phenol).					
	$Na_2S_2O_3$	-	-						
	ZnAcetate	-	-						
	HCl	**	**	411405D	4/16				

Yes=All samples OK

No=Samples were preserved at The lab as listed

PM OK to Adjust: _____

**Not to be tested before analysis – pH tested and recorded by VOAs on a separate worksheet

Bottle lot numbers: 04021S-2AM0 , 4-251-003
Other Comments:

PC Secondary Review: JMS 5/26/15 *significant air bubbles: VOA > 5-6 mm : WC >1 in. diameter

Data Usability Worksheet

Project Name : Varian Medical Systems, Inc

Job Number : 152728.05

Prepared By: Ana Fioretti

Date : 6/29/2015

Matrix: Groundwater

Analyte Group : Nitrate
Sulfate

Analytical Method : 300
300

Completed MADEP CAM Certification Form included: Yes

Laboratory ID No. : R1504217

Chain of Custody included in Data Package ? Yes

Is it Complete ? Yes

Sample Collection Date	Analysis	Allowable Holding Time for extraction	Allowable Holding Time for analysis	Analysis Date
5/20/15	300.0 (Nitrate)	N/A	48 hours	6/1/2015
5/20/15	300.0 (Sulfate)	N/A	28 Days	6/2/15 and 6/9/15

Sample temperature within QC limits: Yes

Surrogate Recovery

Are all % recoveries within the allowable range ? Yes

If No, List sample ID where range was exceeded: NA

MS/MSD

Are all MS/MSD sample recoveries within the QC limits ? NA

If No, list sample ID, date and compound where limit was exceeded: NA

Laboratory Control Samples

Are all laboratory control sample recoveries within the QC limits ? Yes

If no, list sample ID where range was exceeded: N/A

Equipment Field Blank ID : N/A
Trip Blank ID : N/A

Method Blank: 300.0 (Nitrate) 6/1/2015
300.0 (Sulfate) 6/2/15 and 6/9/15

Were any compounds identified in the method blank, field blank or trip blank above detection limits ? No

If so, list Sample ID/Compound/Concentration/Units: N/A

Notes:

Nitrate has been flagged with an "*", as it was received outside the recommended holding time of 48 hour
(samples AP34-DO(35), AP35-DO(35), AP24-DO(47), AP13-DO(51), AP33-DO(36), AP23-DO(47), OB46S(10), OB44-S(13))
The client was notified and the sample was analyzed as soon as possible after receipt.
J/UJ qualified
All Blank Spike (LCS) recoveries were within QC limits.

Reviewed by: Jennifer Gailey 6/29/2015

ALS Environmental
ALS Group USA, Corp
1565 Jefferson Rd, Building 300, Suite 360
Rochester, NY 14623
T: 585-288-5380
F: 585-288-8475
www.alsglobal.com

June 12, 2015

Analytical Report for Service Request No: R1504217

Mr. Ray Cadorette
CB&I Environmental & Infrastructure
150 Royall Street
Canton, MA 02021

Laboratory Results for: Varian Beverly/152728-05000000

Dear Mr. Cadorette:

Enclosed are the results of the sample(s) submitted to our laboratory on June 1, 2015. For your reference, these analyses have been assigned our service request number **R1504217**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s) for analysis of these samples, and represented by Laboratory Control Sample control limits. Any events, such as QC failures, which may add to the uncertainty are explained in the report narrative.

Please contact me if you have any questions. My extension is 7472. You may also contact me via email at Janice.Jaeger@alsglobal.com.

Respectfully submitted,

ALS Group USA Corp. dba ALS Environmental

Janice Jaeger
Project Manager

CC: Pernilla Haley

ALS Environmental

Client:	CB&I
Service Request No.:	R1504217
Project:	Varian
Date Received:	6/01/15
Sample Matrix:	Water
Project/Case No.:	

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II data deliverables. When appropriate to the method, method blank results have been reported with each analytical test. Surrogate recoveries have been reported for all applicable organic analyses. Additional quality control analyses reported herein include: Laboratory Control Sample (LCS).

Sample Receipt

Water samples were received for analysis at ALS Environmental on 6/01/15. The samples were received in good condition and consistent with the accompanying chain of custody form. All sampling activities performed by ALS personnel have been in accordance with "ALS Field Procedures and Measurements Manual" or by client specifications. The samples were stored in a refrigerator between 1°C and 6°C upon receipt at the laboratory. All Soluble samples were filtered in the field.

Inorganic Analyses

Water samples were analyzed for a site specific list of inorganics. Please attached data pages for method numbers.

The initial and continuing calibration criteria were met for all analytes.

Nitrate has been flagged with an "*" as it was received outside the recommended holding time of 48 hours. The client was notified and the sample was analyzed as soon as possible after receipt.

All Blank Spike (LCS) recoveries were within QC limits.

CASE NARRATIVE

This report contains analytical results for the following samples:
Service Request Number: R1504217

Lab ID	Client ID
R1504217-001	AP34-DO (35)
R1504217-002	AP13-DO (51)
R1504217-003	AP33-DO (36)
R1504217-004	AP35-DO (35)
R1504217-005	AP23-DO (47)
R1504217-006	OB46S (10)
R1504217-007	OB44-S (13)
R1504217-008	AP24-DO (47)

ALS Environmental

REPORT QUALIFIERS AND DEFINITIONS

U Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.

J Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Arclors).

B Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.

E Inorganics- Concentration is estimated due to the serial dilution was outside control limits.

E Organics- Concentration has exceeded the calibration range for that specific analysis.

D Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.

* Indicates that a quality control parameter has exceeded laboratory limits. Under the "Notes" column of the Form I, this qualifier denotes analysis was performed out of Holding Time.

H Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.

Spike was diluted out.

+ Correlation coefficient for MSA is <0.995.

N Inorganics- Matrix spike recovery was outside laboratory limits.

N Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.

S Concentration has been determined using Method of Standard Additions (MSA).

W Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.

P Concentration >40% (25% for CLP) difference between the two GC columns.

C Confirmed by GC/MS

Q DoD reports: indicates a pesticide/Aroclor is not confirmed (≥100% Difference between two GC columns).

X See Case Narrative for discussion.

MRL Method Reporting Limit. Also known as:
LOQ Limit of Quantitation (LOQ)
The lowest concentration at which the method analyte may be reliably quantified under the method conditions.

MDL Method Detection Limit. A statistical value derived from a study designed to provide the lowest concentration that will be detected 99% of the time. Values between the MDL and MRL are estimated (see J qualifier).

LOD Limit of Detection. A value at or above the MDL which has been verified to be detectable.

ND Non-Detect. Analyte was not detected at the concentration listed. Same as U qualifier.

Lab ID # for Massachusetts Certification

M-NY032

Analyses were conducted in accordance with Massachusetts Department of Environmental Protection certification standards, except as noted in the laboratory case narrative provided. A copy of the current Department issued parameter list is included in this report.

The Commonwealth of Massachusetts

Department of Environmental Protection

Division of Environmental Analysis
Senator William X. Wall Experiment Station

certifies

M-NY032

ALS ENVIRONMENTAL ROCHESTER
1565 JEFFERSON RD
BUILDING 300, SUITE 360
ROCHESTER, NY 14623-0000

Laboratory Director: **PETER FRICK**

for the analysis of **NON POTABLE WATER (CHEMISTRY)**

pursuant to 310 CMR 42.00

This certificate supersedes all previous Massachusetts certificates issued to this laboratory. The laboratory is regulated by and shall be responsible for being in compliance with Massachusetts regulations at 310 CMR 42.00.

This certificate is valid only when accompanied by the latest dated Certified Parameter List as issued by the Massachusetts D.E.P. Contact the Division of Environmental Analysis to verify the current certification status of the laboratory.

Certification is no guarantee of the validity of the data. This certification is subject to unannounced laboratory inspections.

Issued: **26 FEB 2015**

Expires: **30 JUN 2015**

Oscar C. Jacobs

Director, Division of Environmental Analysis

00005

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 01 JUL 2014

M-NY032 ALS ENVIRONMENTAL ROCHESTER
ROCHESTER NY

NON POTABLE WATER (CHEMISTRY) **Effective Date** **01 JUL 2014** **Expiration Date** **30 JUN 2015**

Analytes	Methods
ALUMINUM	EPA 200.7
ANTIMONY	EPA 200.7
ANTIMONY	EPA 200.8
ARSENIC	EPA 200.7
ARSENIC	EPA 200.8
BERYLLIUM	EPA 200.7
BERYLLIUM	EPA 200.8
CADMIUM	EPA 200.7
CADMIUM	EPA 200.8
CHROMIUM	EPA 200.7
CHROMIUM	EPA 200.8
COBALT	EPA 200.7
COBALT	EPA 200.8
COPPER	EPA 200.7
COPPER	EPA 200.8
IRON	EPA 200.7
LEAD	EPA 200.7
LEAD	EPA 200.8
MANGANESE	EPA 200.7
MANGANESE	EPA 200.8
MERCURY	EPA 245.1
MOLYBDENUM	EPA 200.7
MOLYBDENUM	EPA 200.8
NICKEL	EPA 200.7
NICKEL	EPA 200.8
SELENIUM	EPA 200.7
SELENIUM	EPA 200.8
SILVER	EPA 200.7
SILVER	EPA 200.8
THALLIUM	EPA 200.7
THALLIUM	EPA 200.8
VANADIUM	EPA 200.7
VANADIUM	EPA 200.8
ZINC	EPA 200.7
ZINC	EPA 200.8
SPECIFIC CONDUCTIVITY	EPA 120.1
TOTAL DISSOLVED SOLIDS	SM 2540C
HARDNESS (CACO3), TOTAL	SM 2340C
CALCIUM	EPA 200.7
MAGNESIUM	EPA 200.7
SODIUM	EPA 200.7
POTASSIUM	EPA 200.7
ALKALINITY, TOTAL	SM 2320B

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 01 JUL 2014

M-NY032 ALS ENVIRONMENTAL ROCHESTER
ROCHESTER NY

NON POTABLE WATER (CHEMISTRY) Effective Date 01 JUL 2014 Expiration Date 30 JUN 2015

Analytes	Methods
CHLORIDE	SM 4500-CL-E
CHLORIDE	EPA 300.0
FLUORIDE	EPA 300.0
SULFATE	EPA 300.0
AMMONIA-N	EPA 350.1
NITRATE-N	EPA 300.0
NITRATE-N	EPA 353.2
KJELDAHL-N	EPA 351.2
ORTHOPHOSPHATE	EPA 365.1
PHOSPHORUS, TOTAL	EPA 365.1
CHEMICAL OXYGEN DEMAND	EPA 410.4
BIOCHEMICAL OXYGEN DEMAND	SM 5210B
TOTAL ORGANIC CARBON	SM 5310C
CYANIDE, TOTAL	EPA 335.4
NON-FILTERABLE RESIDUE	SM 2540D
OIL AND GREASE	EPA 1664
PHENOLICS, TOTAL	EPA 420.4
VOLATILE HALOCARBONS	EPA 601
VOLATILE HALOCARBONS	EPA 624
VOLATILE AROMATICS	EPA 602
VOLATILE AROMATICS	EPA 624
SVOC-ACID EXTRACTABLES	EPA 625
SVOC-BASE/NEUTRAL EXTRACTABLES	EPA 625
POLYCHLORINATED BIPHENYLS (WATEF	EPA 608

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504217
Project:	Varian Beverly/152728-05000000	**Date Collected:**	5/28/15 1030
Sample Matrix:	Water	**Date Received:**	6/ 1/15
Sample Name:	AP34-DO (35)		
Lab Code:	R1504217-001	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Nitrate as Nitrogen	300.0	1.0	U	mg/L	1.0	10	NA	6/1/15 18:07	*
Sulfate	300.0	**65.4**		mg/L	2.0	10	NA	6/2/15 14:16	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504217
Project:	Varian Beverly/152728-05000000	**Date Collected:**	5/28/15 1110
Sample Matrix:	Water	**Date Received:**	6/ 1/15
Sample Name:	AP13-DO (51)		
Lab Code:	R1504217-002	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Nitrate as Nitrogen	300.0	1.0	U	mg/L	1.0	10	NA	6/1/15 18:21	*
Sulfate	300.0	**156**		mg/L	4.0	20	NA	6/9/15 19:44	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504217
Project:	Varian Beverly/152728-05000000	**Date Collected:**	5/28/15 1230
Sample Matrix:	Water	**Date Received:**	6/ 1/15
Sample Name:	AP33-DO (36)		
Lab Code:	R1504217-003	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Nitrate as Nitrogen	300.0	1.0	U	mg/L	1.0	10	NA	6/1/15 16:57	*
Sulfate	300.0	2.0	U	mg/L	2.0	10	NA	6/2/15 14:44	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504217
Project:	Varian Beverly/152728-05000000	**Date Collected:**	5/28/15 1005
Sample Matrix:	Water	**Date Received:**	6/ 1/15
Sample Name:	AP35-DO (35)		
Lab Code:	R1504217-004	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Nitrate as Nitrogen	300.0	1.0	U	mg/L	1.0	10	NA	6/1/15 20:00	*
Sulfate	300.0	2.0	U	mg/L	2.0	10	NA	6/2/15 14:57	

Client: CB&I
Project: Varian Beverly/152728-05000000
Sample Matrix: Water

Service Request: R1504217
Date Collected: 5/28/15 0920
Date Received: 6/ 1/15

Sample Name: AP23-DO (47)
Lab Code: R1504217-005

Basis: NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Nitrate as Nitrogen	300.0	1.0	U	mg/L	1.0	10	NA	6/1/15 18:35	*
Sulfate	300.0	**25.7**		mg/L	2.0	10	NA	6/2/15 15:11	

Client: CB&I
Project: Varian Beverly/152728-05000000
Sample Matrix: Water

Service Request: R1504217
Date Collected: 5/28/15 1315
Date Received: 6/ 1/15

Sample Name: OB46S (10)
Lab Code: R1504217-006

Basis: NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Nitrate as Nitrogen	300.0	1.0	U	mg/L	1.0	10	NA	6/1/15 19:03	*
Sulfate	300.0	35.7		mg/L	2.0	10	NA	6/2/15 15:25	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504217
Project:	Varian Beverly/152728-05000000	**Date Collected:**	5/28/15 1345
Sample Matrix:	Water	**Date Received:**	6/ 1/15
Sample Name:	OB44-S (13)		
Lab Code:	R1504217-007	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Nitrate as Nitrogen	300.0	1.0	U	mg/L	1.0	10	NA	6/1/15 19:46	*
Sulfate	300.0	**80.5**		mg/L	2.0	10	NA	6/2/15 15:39	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504217
Project:	Varian Beverly/152728-05000000	**Date Collected:**	5/28/15 1140
Sample Matrix:	Water	**Date Received:**	6/ 1/15
Sample Name:	AP24-DO (47)		
Lab Code:	R1504217-008	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Nitrate as Nitrogen	300.0	1.0	U	mg/L	1.0	10	NA	6/1/15 18:49	*
Sulfate	300.0	**6.2**		mg/L	2.0	10	NA	6/2/15 15:53	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504217
Project:	Varian Beverly/152728-05000000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank		
Lab Code:	R1504217-MB1	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Nitrate as Nitrogen	300.0	0.10	U	mg/L	0.10	1	NA	6/1/15 14:50	
Sulfate	300.0	0.20	U	mg/L	0.20	1	NA	6/2/15 08:16	

Client:	CB&I	**Service Request:**	R1504217
Project:	Varian Beverly/152728-05000000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank		
Lab Code:	R1504217-MB2	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Sulfate	300.0	0.20	U	mg/L	0.20	1	NA	6/9/15 14:54	

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: CB&I
Project: Varian Beverly/152728-05000000
Sample Matrix: Water

Service Request: R1504217
Date Analyzed: 6/ 1/15 - 6/ 2/15

Lab Control Sample Summary
General Chemistry Parameters

Units: mg/L
Basis: NA

Analyte Name	Method	Lab Control Sample R1504217-LCS1 Result	Spike Amount	% Rec	% Rec Limits
Nitrate as Nitrogen	300.0	1.03	1.00	103	90 - 110
Sulfate	300.0	1.98	2.00	99	90 - 110

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: CB&I
Project: Varian Beverly/152728-05000000
Sample Matrix: Water

Service Request: R1504217
Date Analyzed: 6/ 9/15

Lab Control Sample Summary
General Chemistry Parameters

Units: mg/L
Basis: NA

Analyte Name	Method	Lab Control Sample R1504217-LCS2 Result	Spike Amount	% Rec	% Rec Limits
Sulfate	300.0	1.97	2.00	98	90 - 110

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

B10

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

24716

ALS Environmental

1565 Jefferson Road, Building 300, Suite 360 • Rochester, NY 14623 | +1 585 288 5380 +1 585 288 8475 (fax) PAGE 1 OF 1

Project Name: Varian Beverly	Project Number: 152728-05000000
Project Manager: Raymond Cadorette	Report CC:
Company/Address: CB&I Environmental 150 Royall Street Canton, MA 02021	
Phone #: 617-589-6102	Email: Raymond.Cadorette@CBI.com
Sampler's Signature:	Sampler's Printed Name: Ana Foretti

ANALYSIS REQUESTED *(Include Method Number and Container Preservative)*

PRESERVATIVE: 1 | | | | 4 | | | 1 | 3 | 0

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	GCMS VOAs • 8260b • 624 • CLP Site Specific List	GCMS SVOAs • 8270 • 625	GC VOAs • 8021 • 601/602	PESTICIDES • 8081 • 608	PCBs • 8082 • 608	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below)	Methane, Ethane, Ethene	TOC	Nitrate, Sulfate					REMARKS/ ALTERNATE DESCRIPTION
AP34-DO(35)		5/28/15	1030	GW	1									1						
AP13-DO(51)			1110		1									1						
AP33-DO(36)			1230		1									1						
AP35-DO(35)			1005		1									1						
AP23-DO(47)			0970		1									1						
OB46S(10)			1315		1									1						
OB44-S(13)			1345		1									1						
AP29-DO(47)			1140		1									1						
				✓																

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

SPECIAL INSTRUCTIONS/COMMENTS
Metals N/A

Site specific VOC list.
Massachusetts CAM analyses reporting and QA/QC.
Please email GISKey formatted EDD & PDF of report to:
Catherine.Mainville@CBI.com.

See QAPP ☐

STATE WHERE SAMPLES WERE COLLECTED

TURNAROUND REQUIREMENTS
___ RUSH (SURCHARGES APPLY)
✓ STANDARD
___ 1 day ___ 2 day ___ 3 day
___ 4 day ___ 5 day

REQUESTED REPORT DATE: _____

REPORT REQUIREMENTS
___ I. Results Only
___ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
___ III. Results + QC and Calibration Summaries
___ IV. Data Validation Report with Raw Data

Edata ✓ Yes ___ No

INVOICE INFORMATION
915964
PO # CB&I
BILL TO:

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature:	Signature:	Signature:	Signature:	Signature:	
Printed Name: Ana Foretti	Printed Name: J. Sexton	Printed Name:	Printed Name:	Printed Name:	
Firm: CB&I	Firm: ALS	Firm:	Firm:	Firm:	
Date/Time: 5/29/15 1500	Date/Time: 6/1/15 0905	Date/Time:	Date/Time:	Date/Time:	

R1504217 7 Y
CB&I Environmental & Infrastructure
Varian Beverly

Distribution: White - Lab Copy; Yellow - Return to Originator

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R1504217 7 Y
CB&I Environmental & Infrastructure
Varian Beverly

Cooler Receipt and Preservation Check Form

Project/Client CB+I Folder Number R15-4217

Cooler received on 6/1/15 by: JFS

COURIER: ALS ~~UPS~~ FEDEX VELOCITY CLIENT

1	Were **Custody seals** on outside of cooler?	(Y)	N
2	**Custody papers** properly completed (ink, signed)?	(Y)	N
3	Did all bottles arrive in good **condition** (unbroken)?	(Y)	N
4	Circle: **Wet Ice Dry Ice Gel packs** present?	(Y)	N

5a	**Perchlorate** samples have required headspace?	Y	N	NA
5b	Did VOA vials, Alk,or Sulfide have sig* **bubbles**?	Y	N	NA
6	Where did the bottles originate?	ALS/ROC	CLIENT	
7	Soil VOA received as:	Bulk	Encore	5035set NA

8. Temperature Readings Date: 6/1/15 Time: 0905 ID: IR#3 (IR#5) From: (Temp Blank) Sample Bottle

Observed Temp (°C)	2.8						
Correction Factor (°C)	–						
Corrected Temp (°C)	2.8						
Within 0-6°C?	(Y) N	Y N	Y N	Y N	Y N	Y N	Y N

If out of Temperature, note packing/ice condition: _____ Ice melted Poorly Packed Same Day Rule

&Client Approval to Run Samples: _____ Standing Approval Client aware at drop-off Client notified by: _____

All samples held in storage location: room by JFS on 6/1/15 at 0907
5035 samples placed in storage location: _____ by _____ on _____ at _____

PC Secondary Review: JMS 6/1/15

Cooler Breakdown: Date: 6/1/15 Time: 1255 by: (AP)

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

Explain any discrepancies:

pH	Reagent	Yes	No	Lot Received	Exp	Sample ID	Vol. Added	Lot Added	Final pH
≥12	NaOH								
≤2	HNO_3								
≤2	H_2SO_4								
<4	$NaHSO_4$								
Residual Chlorine (-)	For CN Phenol and 522			If +, contact PM to add $Na_2S_2O_3$ (CN), ascorbic (phenol).					
	$Na_2S_2O_3$	-	-						
	ZnAcetate	-	-						
	HCl	**	**						

**Not to be tested before analysis – pH tested and recorded by VOAs on a separate worksheet

Yes=All samples OK

No=Samples were preserved at The lab as listed

PM OK to Adjust: _____

Bottle lot numbers: 04201S-01AA0

Other Comments:

NO3-8
5/28/15
0920 -1345

PC Secondary Review: JMS 6/1/15

*significant air bubbles: VOA > 5-6 mm : WC >1 in. diameter

Data Usability Worksheet

Project Name : Varian Medical Systems, Inc
Job Number : 152780.05

Prepared By: Ana Fioretti
Date : 6/29/2015

Matrix: Groundwater

Analyte Group : Volatile Organics
Analytical Method : SW-846 8260C

Completed MADEP CAM Certification Form included: Yes
Laboratory ID No. : R1504236

Chain of Custody included in Data Package ? Yes
Is it Complete ? Yes

Sample Collection Date	Analysis	Allowable Holding Time for extraction	Allowable Holding Time for analysis	Analysis Date
5/29/15	SW846 8260C	14 days	10 Days	6/9/15 and 6/10/15

Sample temperature within QC limits: Yes

Surrogate Recovery
Are all % recoveries within the allowable range ? Yes

If No, List sample ID where range was exceeded: NA

MS/MSD
Are all MS/MSD sample recoveries within the QC limits ? NA

If No, list sample ID, date and compound where limit was exceeded: NA

Laboratory Control Samples
Are all laboratory control sample recoveries within the QC limits ? No

If no, list sample ID where range was exceeded: See Notes

Equipment Field Blank ID : N/A
Trip Blank ID : N/A
Method Blank: SW846 8260C 6/9/15 and 6/10/15

Were any compounds identified in the method blank, field blank or trip blank above detection limits ? No

If so, list Sample ID/Compound/Concentration/Units: N/A

Notes:
Several samples were initially analyzed at dilutions to bring target analytes within the calibration range of the method.

Various compounds for AP 12-DO (48) have been flagged with an "E" as being outside the calibration range of the instrument. The sample was repeated at a dilution and both sets of data have been reported out.

All Blank Spike (LCS)/Blank Spike Duplicate (LCSD) recoveries were within QC limits. All RPD's were acceptable except Acetone on the 06/10/15 (batch 448271) LCS/LCSD and has been flagged with an "*". (samples API2-DO (48), AP12-BR (73)) No qualification was necessary for acetone as the results were non-detect.

Reviewed by: Jennifer Gailey 6/29/2015

ALS Environmental
ALS Group USA, Corp
1565 Jefferson Rd, Building 300, Suite 360
Rochester, NY 14623
T: 585-288-5380
F: 585-288-8475
www.alsglobal.com

June 12, 2015

Analytical Report for Service Request No: R1504236

Mr. Ray Cadorette
CB&I Environmental & Infrastructure
150 Royall Street
Canton, MA 02021

Laboratory Results for: Varian Beverly/152780-05000000

Dear Mr. Cadorette:

Enclosed are the results of the sample(s) submitted to our laboratory on June 2, 2015. For your reference, these analyses have been assigned our service request number **R1504236**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s) for analysis of these samples, and represented by Laboratory Control Sample control limits. Any events, such as QC failures, which may add to the uncertainty are explained in the report narrative.

Please contact me if you have any questions. My extension is 7472. You may also contact me via email at Janice.Jaeger@alsglobal.com.

Respectfully submitted,

ALS Group USA Corp. dba ALS Environmental

Janice Jaeger
Project Manager

CC: Pernilla Haley

ALS Environmental

Client:	CB&I
Service Request No.:	R1504236
Project:	Varian
Date Received:	6/02/15
Sample Matrix:	Water
Project/Case No.:	

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II data deliverables. When appropriate to the method, method blank results have been reported with each analytical test. Surrogate recoveries have been reported for all applicable organic analyses. Additional quality control analyses reported herein include: Laboratory Control Sample (LCS).

Sample Receipt

Water samples were received for analysis at ALS Environmental on 6/02/15. The samples were received in good condition and consistent with the accompanying chain of custody form. All sampling activities performed by ALS personnel have been in accordance with "ALS Field Procedures and Measurements Manual" or by client specifications. The samples were stored in a refrigerator between 1°C and 6°C upon receipt at the laboratory. All Soluble samples were filtered in the field.

Volatile Organics

Water samples were analyzed for a site list of Volatile Organics by SW-846 Method 8260C.

Several samples were initially analyzed at dilutions to bring target analytes within the calibration range of the method.

All initial calibrations were compliant.

All the continuing calibration criteria were met for all analytes.

Various compounds for AP12-DO (48) have been flagged with an "E" as being outside the calibration range of the instrument. The sample was repeated at a dilution and both sets of data have been reported out.

All Surrogate Standard recoveries were within QC limits.

All Blank Spike (LCS)/Blank Spike Duplicate (LCSD) recoveries were within QC limits. All RPD's were acceptable except Acetone on the 06/10/15 LCS/LCSD and has been flagged with an "*".

All samples were analyzed within the required holding time of 14 days.

MassDEP Analytical Protocol Certification Form

Laboratory Name: ALS Environmental Project #: 152780

Project Location: Varian Beverly RTN:

This Form provides certifications for the following data set: list Laboratory Sample ID Number(s):
R1504236-001-003

Matrices: Groundwater/Surface Water X Soil/Sediment Drinking Water Air Other:

CAM Protocol (check all that apply below):

8260 VOC CAM II A **X**	7470/7471 Hg CAM III B	MassDEP VPH CAM IV A	8081 Pesticides CAM V B	7196 Hex Cr CAM VI B	MassDEP APH CAM IX A
8270 SVOC CAM II B	7010 Metals CAM III C	MassDEP EPH CAM IV B	8151 Herbicides CAM V C	8330 Explosives CAM VIII A	TO-15 VOC CAM IX B
6010 Metals CAM III A	6020 Metals CAM III D	8082 PCB CAM V A	9014 Total Cyanide/PAC CAM VI A	6860 Perchlorate CAM VIII B	

Affirmative Responses to Questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	X Yes No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	X Yes No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	X Yes No
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	X Yes No
E	VPH, EPH, APH, and TO-15 only: a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	Yes No Yes No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	X Yes No

Responses to Questions G, H and I below are required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	X Yes No[1]

***Data User Note:** Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.*

H	Were **all** QC performance standards specified in the CAM protocol(s) achieved?	X Yes No[1]
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	Yes X No[1]

[1] *All negative responses must be addressed in an attached laboratory narrative.*

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Signature: _____ **Position: Project Manager**

Printed Name: Janice Jaeger **Date:** 06/15/15

CASE NARRATIVE

This report contains analytical results for the following samples:
Service Request Number: R1504236

Lab ID	Client ID
R1504236-001	AP12-DO (48)
R1504236-002	AP12-BR (73)
R1504236-003	CL5-DOA (47)

ALS Environmental

REPORT QUALIFIERS AND DEFINITIONS

U Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.

J Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Arclors).

B Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.

E Inorganics- Concentration is estimated due to the serial dilution was outside control limits.

E Organics- Concentration has exceeded the calibration range for that specific analysis.

D Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.

* Indicates that a quality control parameter has exceeded laboratory limits. Under the "Notes" column of the Form I, this qualifier denotes analysis was performed out of Holding Time.

H Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.

Spike was diluted out.

+ Correlation coefficient for MSA is <0.995.

N Inorganics- Matrix spike recovery was outside laboratory limits.

N Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.

S Concentration has been determined using Method of Standard Additions (MSA).

W Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.

P Concentration >40% (25% for CLP) difference between the two GC columns.

C Confirmed by GC/MS

Q DoD reports: indicates a pesticide/Aroclor is not confirmed (≥100% Difference between two GC columns).

X See Case Narrative for discussion.

MRL Method Reporting Limit. Also known as:
LOQ Limit of Quantitation (LOQ)
The lowest concentration at which the method analyte may be reliably quantified under the method conditions.

MDL Method Detection Limit. A statistical value derived from a study designed to provide the lowest concentration that will be detected 99% of the time. Values between the MDL and MRL are estimated (see J qualifier).

LOD Limit of Detection. A value at or above the MDL which has been verified to be detectable.

ND Non-Detect. Analyte was not detected at the concentration listed. Same as U qualifier.

Lab ID # for Massachusetts Certification

M-NY032

Analyses were conducted in accordance with Massachusetts Department of Environmental Protection certification standards, except as noted in the laboratory case narrative provided. A copy of the current Department issued parameter list is included in this report.

The Commonwealth of Massachusetts

Department of Environmental Protection

Division of Environmental Analysis
Senator William X. Wall Experiment Station

certifies

M-NY032

ALS ENVIRONMENTAL ROCHESTER
1565 JEFFERSON RD
BUILDING 300, SUITE 360
ROCHESTER, NY 14623-0000

Laboratory Director: **PETER FRICK**

for the analysis of **NON-POTABLE WATER (CHEMISTRY)**

pursuant to 310 CMR 42.00

This certificate supersedes all previous Massachusetts certificates issued to this laboratory. The laboratory is regulated by and shall be responsible for being in compliance with Massachusetts regulations at 310 CMR 42.00.

This certificate is valid only when accompanied by the latest dated Certified Parameter List as issued by the Massachusetts D.E.P. Contact the Division of Environmental Analysis to verify the current certification status of the laboratory.

Certification is no guarantee of the validity of the data. This certification is subject to unannounced laboratory inspections.

Issued: **26 FEB 2015**

Expires: **30 JUN 2015**

Oscar C. Parcells

Director, Division of Environmental Analysis

00006

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 01 JUL 2014

M-NY032 **ALS ENVIRONMENTAL ROCHESTER**
ROCHESTER NY

NON POTABLE WATER (CHEMISTRY) **Effective Date** **01 JUL 2014** **Expiration Date** **30 JUN 2015**

Analytes	Methods
ALUMINUM	EPA 200.7
ANTIMONY	EPA 200.7
ANTIMONY	EPA 200.8
ARSENIC	EPA 200.7
ARSENIC	EPA 200.8
BERYLLIUM	EPA 200.7
BERYLLIUM	EPA 200.8
CADMIUM	EPA 200.7
CADMIUM	EPA 200.8
CHROMIUM	EPA 200.7
CHROMIUM	EPA 200.8
COBALT	EPA 200.7
COBALT	EPA 200.8
COPPER	EPA 200.7
COPPER	EPA 200.8
IRON	EPA 200.7
LEAD	EPA 200.7
LEAD	EPA 200.8
MANGANESE	EPA 200.7
MANGANESE	EPA 200.8
MERCURY	EPA 245.1
MOLYBDENUM	EPA 200.7
MOLYBDENUM	EPA 200.8
NICKEL	EPA 200.7
NICKEL	EPA 200.8
SELENIUM	EPA 200.7
SELENIUM	EPA 200.8
SILVER	EPA 200.7
SILVER	EPA 200.8
THALLIUM	EPA 200.7
THALLIUM	EPA 200.8
VANADIUM	EPA 200.7
VANADIUM	EPA 200.8
ZINC	EPA 200.7
ZINC	EPA 200.8
SPECIFIC CONDUCTIVITY	EPA 120.1
TOTAL DISSOLVED SOLIDS	SM 2540C
HARDNESS (CACO3), TOTAL	SM 2340C
CALCIUM	EPA 200.7
MAGNESIUM	EPA 200.7
SODIUM	EPA 200.7
POTASSIUM	EPA 200.7
ALKALINITY, TOTAL	SM 2320B

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 01 JUL 2014

M-NY032 ALS ENVIRONMENTAL ROCHESTER
ROCHESTER NY

NON POTABLE WATER (CHEMISTRY) Effective Date 01 JUL 2014 Expiration Date 30 JUN 2015

Analytes	Methods
CHLORIDE	SM 4500-CL-E
CHLORIDE	EPA 300.0
FLUORIDE	EPA 300.0
SULFATE	EPA 300.0
AMMONIA-N	EPA 350.1
NITRATE-N	EPA 300.0
NITRATE-N	EPA 353.2
KJELDAHL-N	EPA 351.2
ORTHOPHOSPHATE	EPA 365.1
PHOSPHORUS, TOTAL	EPA 365.1
CHEMICAL OXYGEN DEMAND	EPA 410.4
BIOCHEMICAL OXYGEN DEMAND	SM 5210B
TOTAL ORGANIC CARBON	SM 5310C
CYANIDE, TOTAL	EPA 335.4
NON-FILTERABLE RESIDUE	SM 2540D
OIL AND GREASE	EPA 1664
PHENOLICS, TOTAL	EPA 420.4
VOLATILE HALOCARBONS	EPA 601
VOLATILE HALOCARBONS	EPA 624
VOLATILE AROMATICS	EPA 602
VOLATILE AROMATICS	EPA 624
SVOC-ACID EXTRACTABLES	EPA 625
SVOC-BASE/NEUTRAL EXTRACTABLES	EPA 625
POLYCHLORINATED BIPHENYLS (WATEI	EPA 608

00008

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504236
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/29/15 1025
Sample Matrix:	Water	**Date Received:**	6/ 2/15
		Date Analyzed:	6/9/15 03:41
Sample Name:	AP12-DO (48)	**Units:**	µg/L
Lab Code:	R1504236-001	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	448128
Data File Name:	I:\ACQUDATA\msvoa10\data\060815\A9353.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	50

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	100	U	100	
79-34-5	1,1,2,2-Tetrachloroethane	100	U	100	
79-00-5	1,1,2-Trichloroethane	100	U	100	
75-34-3	1,1-Dichloroethane (1,1-DCA)	100	U	100	
75-35-4	1,1-Dichloroethene (1,1-DCE)	100	U	100	
107-06-2	1,2-Dichloroethane	100	U	100	
78-87-5	1,2-Dichloropropane	100	U	100	
67-64-1	Acetone	500	U	500	
75-27-4	Bromodichloromethane	100	U	100	
75-25-2	Bromoform	100	U	100	
74-83-9	Bromomethane	100	U	100	
56-23-5	Carbon Tetrachloride	100	U	100	
108-90-7	Chlorobenzene	100	U	100	
75-00-3	Chloroethane	100	U	100	
67-66-3	Chloroform	**100**		100	
74-87-3	Chloromethane	100	U	100	
124-48-1	Dibromochloromethane	100	U	100	
75-09-2	Methylene Chloride	100	U	100	
127-18-4	Tetrachloroethene (PCE)	**12000**	E	100	
79-01-6	Trichloroethene (TCE)	**11000**	E	100	
75-69-4	Trichlorofluoromethane (CFC 11)	100	U	100	
75-01-4	Vinyl Chloride	100	U	100	
156-59-2	cis-1,2-Dichloroethene	**3300**		100	
10061-01-5	cis-1,3-Dichloropropene	100	U	100	
156-60-5	trans-1,2-Dichloroethene	100	U	100	
10061-02-6	trans-1,3-Dichloropropene	100	U	100	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	95	70-130	6/9/15 03:41	
Dibromofluoromethane	99	70-130	6/9/15 03:41	
Toluene-d8	97	70-130	6/9/15 03:41	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504236
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/29/15 1025
Sample Matrix:	Water	**Date Received:**	6/ 2/15
		Date Analyzed:	6/10/15 06:53
Sample Name:	AP12-DO (48)	**Units:**	µg/L
Lab Code:	R1504236-001	**Basis:**	NA
Run Type:	Dilution		

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	448271
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\060915\A9400.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	100

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	200	U	200	
79-34-5	1,1,2,2-Tetrachloroethane	200	U	200	
79-00-5	1,1,2-Trichloroethane	200	U	200	
75-34-3	1,1-Dichloroethane (1,1-DCA)	200	U	200	
75-35-4	1,1-Dichloroethene (1,1-DCE)	200	U	200	
107-06-2	1,2-Dichloroethane	200	U	200	
78-87-5	1,2-Dichloropropane	200	U	200	
67-64-1	Acetone	1000	U	1000	
75-27-4	Bromodichloromethane	200	U	200	
75-25-2	Bromoform	200	U	200	
74-83-9	Bromomethane	200	U	200	
56-23-5	Carbon Tetrachloride	200	U	200	
108-90-7	Chlorobenzene	200	U	200	
75-00-3	Chloroethane	200	U	200	
67-66-3	Chloroform	200	U	200	
74-87-3	Chloromethane	200	U	200	
124-48-1	Dibromochloromethane	200	U	200	
75-09-2	Methylene Chloride	200	U	200	
127-18-4	Tetrachloroethene (PCE)	**11000**	D	200	
79-01-6	Trichloroethene (TCE)	**11000**	D	200	
75-69-4	Trichlorofluoromethane (CFC 11)	200	U	200	
75-01-4	Vinyl Chloride	200	U	200	
156-59-2	cis-1,2-Dichloroethene	**3400**	D	200	
10061-01-5	cis-1,3-Dichloropropene	200	U	200	
156-60-5	trans-1,2-Dichloroethene	200	U	200	
10061-02-6	trans-1,3-Dichloropropene	200	U	200	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	94	70-130	6/10/15 06:53	
Dibromofluoromethane	99	70-130	6/10/15 06:53	
Toluene-d8	97	70-130	6/10/15 06:53	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504236
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/29/15 1015
Sample Matrix:	Water	**Date Received:**	6/ 2/15
		Date Analyzed:	6/10/15 07:21
Sample Name:	AP12-BR (73)	**Units:**	µg/L
Lab Code:	R1504236-002	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	448271
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\060915\A9401.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	2

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	4.0	U	4.0	
79-34-5	1,1,2,2-Tetrachloroethane	4.0	U	4.0	
79-00-5	1,1,2-Trichloroethane	4.0	U	4.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	4.0	U	4.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	4.0	U	4.0	
107-06-2	1,2-Dichloroethane	4.0	U	4.0	
78-87-5	1,2-Dichloropropane	4.0	U	4.0	
67-64-1	Acetone	20	U	20	
75-27-4	Bromodichloromethane	4.0	U	4.0	
75-25-2	Bromoform	4.0	U	4.0	
74-83-9	Bromomethane	4.0	U	4.0	
56-23-5	Carbon Tetrachloride	4.0	U	4.0	
108-90-7	Chlorobenzene	4.0	U	4.0	
75-00-3	Chloroethane	4.0	U	4.0	
67-66-3	Chloroform	4.0	U	4.0	
74-87-3	Chloromethane	4.0	U	4.0	
124-48-1	Dibromochloromethane	4.0	U	4.0	
75-09-2	Methylene Chloride	4.0	U	4.0	
127-18-4	Tetrachloroethene (PCE)	**17**		4.0	
79-01-6	Trichloroethene (TCE)	**93**		4.0	
75-69-4	Trichlorofluoromethane (CFC 11)	4.0	U	4.0	
75-01-4	Vinyl Chloride	4.0	U	4.0	
156-59-2	cis-1,2-Dichloroethene	**190**		4.0	
10061-01-5	cis-1,3-Dichloropropene	4.0	U	4.0	
156-60-5	trans-1,2-Dichloroethene	4.0	U	4.0	
10061-02-6	trans-1,3-Dichloropropene	4.0	U	4.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	95	70-130	6/10/15 07:21	
Dibromofluoromethane	97	70-130	6/10/15 07:21	
Toluene-d8	96	70-130	6/10/15 07:21	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504236
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/29/15 1040
Sample Matrix:	Water	**Date Received:**	6/ 2/15
		Date Analyzed:	6/9/15 04:37
Sample Name:	CL5-DOA (47)	**Units:**	µg/L
Lab Code:	R1504236-003	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	448128
Data File Name:	I:\ACQUDATA\msvoa10\data\060815\A9355.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	90	70-130	6/9/15 04:37	
Dibromofluoromethane	100	70-130	6/9/15 04:37	
Toluene-d8	95	70-130	6/9/15 04:37	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504236
Project:	Varian Beverly/152780-05000000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	6/8/15 22:04
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1506252-01	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	448128
Data File Name:	I:\ACQUDATA\msvoa10\data\060815\A9341.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	94	70-130	6/8/15 22:04	
Dibromofluoromethane	98	70-130	6/8/15 22:04	
Toluene-d8	96	70-130	6/8/15 22:04	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly/152780-05000000
Sample Matrix: Water

Service Request: R1504236
Date Collected: NA
Date Received: NA
Date Analyzed: 6/10/15 01:17

Sample Name: Method Blank
Lab Code: RQ1506341-01

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Prep Method: EPA 5030C
Data File Name: I:\ACQUDATA\msvoa10\data\060915\A9388.D\

Analysis Lot: 448271
Instrument Name: R-MS-10
Dilution Factor: 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	93	70-130	6/10/15 01:17	
Dibromofluoromethane	98	70-130	6/10/15 01:17	
Toluene-d8	97	70-130	6/10/15 01:17	

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: CB&I
Project: Varian Beverly/152780-05000000
Sample Matrix: Water

Service Request: R1504236
Date Analyzed: 6/ 8/15

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260C

Units: µg/L
Basis: NA

Analysis Lot: 448128

Analyte Name	Lab Control Sample RQ1506252-02 Result	Spike Amount	% Rec	Duplicate Lab Control Sample RQ1506252-03 Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
1,1,1-Trichloroethane (TCA)	18.8	20.0	94	21.1	20.0	105	70 - 130	11	20
1,1,2,2-Tetrachloroethane	19.1	20.0	95	20.0	20.0	100	70 - 130	5	20
1,1,2-Trichloroethane	18.2	20.0	91	20.4	20.0	102	70 - 130	11	20
1,1-Dichloroethane (1,1-DCA)	18.7	20.0	94	20.6	20.0	103	70 - 130	10	20
1,1-Dichloroethene (1,1-DCE)	20.1	20.0	101	22.0	20.0	110	70 - 130	9	20
1,2-Dichloroethane	19.2	20.0	96	19.9	20.0	99	70 - 130	3	20
1,2-Dichloropropane	18.7	20.0	93	19.6	20.0	98	70 - 130	5	20
Acetone	17.1	20.0	85	17.5	20.0	87	40 - 160	2	20
Bromodichloromethane	19.3	20.0	96	20.6	20.0	103	70 - 130	7	20
Bromoform	21.5	20.0	107	23.1	20.0	115	70 - 130	7	20
Bromomethane	16.3	20.0	81	17.7	20.0	88	40 - 160	8	20
Carbon Tetrachloride	19.6	20.0	98	20.7	20.0	103	70 - 130	6	20
Chlorobenzene	19.7	20.0	98	21.1	20.0	105	70 - 130	7	20
Chloroethane	16.2	20.0	81	17.6	20.0	88	70 - 130	8	20
Chloroform	18.6	20.0	93	20.7	20.0	103	70 - 130	10	20
Chloromethane	17.8	20.0	89	19.8	20.0	99	40 - 160	11	20
Dibromochloromethane	21.1	20.0	106	22.3	20.0	111	70 - 130	5	20
Methylene Chloride	19.3	20.0	97	21.3	20.0	106	70 - 130	10	20
Tetrachloroethene (PCE)	18.5	20.0	92	20.3	20.0	102	70 - 130	9	20
Trichloroethene (TCE)	20.1	20.0	100	22.2	20.0	111	70 - 130	10	20
Trichlorofluoromethane (CFC 11)	19.5	20.0	98	21.7	20.0	108	70 - 130	11	20
Vinyl Chloride	17.9	20.0	89	20.7	20.0	104	70 - 130	15	20
cis-1,2-Dichloroethene	18.4	20.0	92	20.4	20.0	102	70 - 130	10	20
cis-1,3-Dichloropropene	19.0	20.0	95	19.9	20.0	100	70 - 130	4	20
trans-1,2-Dichloroethene	20.2	20.0	101	22.4	20.0	112	70 - 130	10	20
trans-1,3-Dichloropropene	19.0	20.0	95	20.4	20.0	102	70 - 130	7	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: CB&I
Project: Varian Beverly/152780-05000000
Sample Matrix: Water

Service Request: R1504236
Date Analyzed: 6/10/15

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260C

Units: µg/L
Basis: NA

Analysis Lot: 448271

Analyte Name	Lab Control Sample RQ1506341-02 Result	Spike Amount	% Rec	Duplicate Lab Control Sample RQ1506341-03 Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
1,1,1-Trichloroethane (TCA)	19.6	20.0	98	21.3	20.0	107	70 - 130	8	20
1,1,2,2-Tetrachloroethane	19.9	20.0	100	18.6	20.0	93	70 - 130	7	20
1,1,2-Trichloroethane	19.5	20.0	97	18.0	20.0	90	70 - 130	8	20
1,1-Dichloroethane (1,1-DCA)	20.2	20.0	101	21.4	20.0	107	70 - 130	6	20
1,1-Dichloroethene (1,1-DCE)	20.9	20.0	104	22.8	20.0	114	70 - 130	9	20
1,2-Dichloroethane	20.3	20.0	101	19.3	20.0	96	70 - 130	5	20
1,2-Dichloropropane	20.0	20.0	100	19.8	20.0	99	70 - 130	1	20
Acetone	19.6	20.0	98	14.0	20.0	70	40 - 160	33 *	20
Bromodichloromethane	20.4	20.0	102	20.4	20.0	102	70 - 130	<1	20
Bromoform	22.5	20.0	112	20.0	20.0	100	70 - 130	12	20
Bromomethane	16.4	20.0	82	17.9	20.0	89	40 - 160	9	20
Carbon Tetrachloride	20.8	20.0	104	21.5	20.0	107	70 - 130	3	20
Chlorobenzene	19.9	20.0	100	20.6	20.0	103	70 - 130	3	20
Chloroethane	16.5	20.0	82	18.8	20.0	94	70 - 130	13	20
Chloroform	20.3	20.0	101	21.0	20.0	105	70 - 130	3	20
Chloromethane	19.1	20.0	96	20.4	20.0	102	40 - 160	6	20
Dibromochloromethane	21.6	20.0	108	20.5	20.0	103	70 - 130	5	20
Methylene Chloride	20.8	20.0	104	22.1	20.0	111	70 - 130	6	20
Tetrachloroethene (PCE)	19.1	20.0	96	20.3	20.0	101	70 - 130	6	20
Trichloroethene (TCE)	20.7	20.0	104	20.6	20.0	103	70 - 130	<1	20
Trichlorofluoromethane (CFC 11)	20.2	20.0	101	21.9	20.0	110	70 - 130	8	20
Vinyl Chloride	19.3	20.0	96	21.1	20.0	106	70 - 130	9	20
cis-1,2-Dichloroethene	20.0	20.0	100	21.0	20.0	105	70 - 130	5	20
cis-1,3-Dichloropropene	19.6	20.0	98	19.5	20.0	97	70 - 130	<1	20
trans-1,2-Dichloroethene	22.2	20.0	111	23.8	20.0	119	70 - 130	7	20
trans-1,3-Dichloropropene	20.0	20.0	100	18.6	20.0	93	70 - 130	7	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Environmental

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

25961

1565 Jefferson Road, Building 300, Suite 360 • Rochester, NY 14623 | +1 585 288 5380 +1 585 288 8475 (fax) PAGE 1 OF 1

Project Name: Varian Beverly	Project Number: 152780-05000000
Project Manager: Raymond Cadarette	Report CC:
Company Address: CB+I Environmental 150 Rayall St Canton, MA 02021	
Phone #: 617-589-6102	Email: Raymond.Cadarette@CBI.com
Sampler's Signature:	Sampler's Printed Name: Ana Foretti

ANALYSIS REQUESTED *(Include Method Number and Container Preservative)*

PRESERVATIVE: 1

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	GCMS VOAs 8260 ○ 624 ○ CLP	GCMS SVOAs ○ 8270 ○ 625	GC VOAs ○ 8021 ○ 601/602	PESTICIDES ○ 8081 ○ 608	PCBs ○ 8082 ○ 608	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below)	Site specific List	REMARKS/ ALTERNATE DESCRIPTION
AP12-DO(48)		5/29/15	1025	GW	3	3								
AP12-BR(73)		↓	1015	↓	3	3								
CL5-DOA(47)		↓	1040	↓	3	3								

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

SPECIAL INSTRUCTIONS/COMMENTS
Metals

See QAPP ☐

STATE WHERE SAMPLES WERE COLLECTED

TURNAROUND REQUIREMENTS
___ RUSH (SURCHARGES APPLY)
✓ Standard
___ 1 day ___ 2 day ___ 3 day
___ 4 day ___ 5 day

REQUESTED REPORT DATE: _____

REPORT REQUIREMENTS
___ I. Results Only
___ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
___ III. Results + QC and Calibration Summaries
___ IV. Data Validation Report with Raw Data

Edata ✓ Yes ___ No

INVOICE INFORMATION
PO # 915904
BILL TO: CB+I

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature: Ana Foretti	Signature: V. Sasso	Signature: V. Sasso fedex	Signature:	Signature:	
Printed Name: CB+I	Printed Name: CB+I	Printed Name: CB+I	Printed Name: J. Savard	Printed Name:	
Firm: 5/29/15 1700	Firm:	Firm:	Firm: 425	Firm:	
Date/Time:	Date/Time: 5/29/15	Date/Time: 6/1/15	Date/Time: 6/2/15 0910	Date/Time:	

R1504236 7 Y
CB&I Environmental & Infrastructure
Varian Beverly - Non-Bio Wells

Distribution: White - Lab Copy; Yellow - Return to Originator

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R1504236
CB&I Environmental & Infrastructure
Varian Beverly - Non-Bio Wells
7 Y

Cooler Receipt and Preservation Check Form

Project/Client CB+I Folder Number R15-4736

Cooler received on 6/2/15 by: JTJ COURIER: ALS (UPS) FEDEX VELOCITY CLIENT

1	Were **Custody seals** on outside of cooler?	(Y) N	5a	**Perchlorate** samples have required headspace?	Y N (NA)
2	**Custody papers** properly completed (ink, signed)?	(Y) N	5b	Did VOA vials, Alk,or Sulfide have sig* **bubbles**?	(Y) N NA
3	Did all bottles arrive in good **condition** (unbroken)?	Y (N)	6	Where did the bottles originate?	ALS/ROC CLIENT
4	Circle: **Wet Ice Dry Ice Gel packs** present?	(Y) N	7	Soil VOA received as:	Bulk Encore 5035set (NA)

8. Temperature Readings Date: 6/2/15 Time: 0945 ID: IR#3 (IR#5) From: (Temp Blank) Sample Bottle

Observed Temp (°C)	6.3						
Correction Factor (°C)	-0.4						
Corrected Temp (°C)	5.9						
Within 0-6°C?	(Y) N	Y N	Y N	Y N	Y N	Y N	Y N

If out of Temperature, note packing/ice condition: _____ Ice melted Poorly Packed Same Day Rule

&Client Approval to Run Samples: _____ Standing Approval Client aware at drop-off Client notified by: _____

All samples held in storage location: none by JTJ on 6/2/15 at 0933
5035 samples placed in storage location: _____ by _____ on _____ at _____

PC Secondary Review: [signature] 6/2/15

Cooler Breakdown: Date: 6/2/15 Time: 1419 by: DNW

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

Explain any discrepancies:

pH	Reagent	Yes	No	Lot Received	Exp	Sample ID	Vol. Added	Lot Added	Final pH
≥12	NaOH								
≤2	HNO_3								
≤2	H_2SO_4								
<4	$NaHSO_4$								
Residual Chlorine (-)	For CN Phenol and 522			If +, contact PM to add $Na_2S_2O_3$ (CN), ascorbic (phenol).					
	$Na_2S_2O_3$	-	-						
	ZnAcetate	-	-						
	HCl	**	**	4114050	4/16				

**Not to be tested before analysis – pH tested and recorded by VOAs on a separate worksheet

Yes=All samples OK

No=Samples were preserved at The lab as listed

PM OK to Adjust: _____

Bottle lot numbers: client label

Other Comments:

AP23-DO (47') - 1 vial w/ bubbles)
OB49-S (20') - 2 vials w/ (bubbles)
AP33-DO (36') - All vials w/ (bubbles)
AP35-DO (35') - 1 vial received broken
MW-9 (15') - All vials w/ (bubbles)
AP33-DO (36') - 1 vial w/ bubbles.
MW-9 (15') - 1 vial w/ bubbles.
AP35-DO (35') - All vials.
AP34-DO (35') - All vials.
OB46-S (10') - All vials.

OB15-S (18') - All vials.
OB44-S (13') - 1 vial.
AP12-DO (45') - (vial).

AP24-DO (47') - All vials.
AP34-DO (35') TOC Jar arrived w/ broken cap.

PC Secondary Review: [signature] 6/2/15

*significant air bubbles: VOA > 5-6 mm : WC >1 in. diameter

Data Usability Worksheet

Project Name : Varian Medical Systems, Inc
Job Number : 152780

Prepared By: Ana Fioretti
Date : 9/3/2015

Matrix: Air

Analyte Group : Volatile Organics
Analytical Method : TO-15

Completed MADEP CAM Certification Form included: Yes
Laboratory ID No. : 2077588

Chain of Custody included in Data Package ? Yes
Is it Complete ? Yes

Sample Collection Date	Analysis	Allowable Holding Time for extraction	Allowable Holding Time for analysis	Analysis Date
6/11/15, 6/12/15	TO-15		30 days	6/23/15, 6/24/15, 6/25/15

Sample temperature within QC limits: NA

Surrogate Recovery
Are all % recoveries within the allowable range ? Yes

If No, List sample ID where range was exceeded: NA

MS/MSD
Are all MS/MSD sample recoveries within the QC limits ? NA

If No, list sample ID, date and compound where limit was exceeded: NA

Laboratory Control Samples
Are all laboratory control sample recoveries within the QC limits ? Yes

If no, list sample ID where range was exceeded: N/A

Equipment Field Blank ID : N/A
Trip Blank ID : N/A

Method Blank: 2195805 and 2196318

Were any compounds identified in the method blank, field blank or trip blank above detection limits ? No

If so, list Sample ID/Compound/Concentration/Units: N/A

Notes:

Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).

Reviewed by: Jennifer Gailey 9/3/2015

ALS Environmental

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June 26, 2015

Mr. Ray Cadorette
CB& I - Canton - MA
150 Royall Street
Canton, MA 02021

Certificate of Analysis

Project Name:	**Varian Air Samples**	Workorder:	**2077588**
Purchase Order:	**915904**	Workorder ID:	**CVC005|Varian Beverly 152780**

Dear Mr. Cadorette:

Enclosed are the analytical results for samples received by the laboratory on Monday, June 15, 2015.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Mrs. Vicki A. Forney (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

This laboratory report may not be reproduced, except in full, without the written approval of ALS Environmental.

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

CC: Ms. Cathy Mainville

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Vicki Forney

Mrs. Vicki A. Forney
Project Coordinator

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SAMPLE SUMMARY

Workorder: 2077588 CVC005|Varian Beverly 152780

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2077588001	Bldg5-1	Air	6/11/2015 11:15	6/15/2015 10:26	Collected by Client
2077588002	Bldg5-2	Air	6/11/2015 11:13	6/15/2015 10:26	Collected by Client
2077588003	Bldg5-3	Air	6/11/2015 11:17	6/15/2015 10:26	Collected by Client
2077588004	Bldg5-SVE INF	Air	6/12/2015 11:10	6/15/2015 10:26	Collected by Client
2077588005	Bldg5-SVE 4	Air	6/12/2015 11:14	6/15/2015 10:26	Collected by Client
2077588006	Bldg5-SVE 1	Air	6/12/2015 11:17	6/15/2015 10:26	Collected by Client
2077588007	Bldg5-SV 1	Air	6/12/2015 10:27	6/15/2015 10:26	Collected by Client
2077588008	Bldg5-SV 3	Air	6/12/2015 10:31	6/15/2015 10:26	Collected by Client
2077588009	Bldg5-SV 5	Air	6/12/2015 10:29	6/15/2015 10:26	Collected by Client

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SAMPLE SUMMARY

Workorder: 2077588 CVC005|Varian Beverly 152780

Notes

-- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
-- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
-- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
-- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
-- The Chain of Custody document is included as part of this report.
-- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
-- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
-- Method references listed on this report beginning with the prefix “S” followed by a method number (such as S2310B-97) refer to methods from “Standard Methods for the Examination of Water and Wastewater”.

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)

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ANALYTICAL RESULTS

Workorder: 2077588 CVC005|Varian Beverly 152780

Lab ID: **2077588001** Date Collected: 6/11/2015 11:15 Matrix: Air

Sample ID: **Bldg5-1** Date Received: 6/15/2015 10:26

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	*Cntr*
VOLATILE ORGANICS @ STP									
Acetone	550		ug/m3	5	TO-15		6/23/15 18:35	ECB	A
Benzene	ND		ug/m3	0.6	TO-15		6/24/15 07:53	ECB	A
Bromodichloromethane	ND		ug/m3	1	TO-15		6/24/15 07:53	ECB	A
Bromoform	ND		ug/m3	2	TO-15		6/24/15 07:53	ECB	A
Bromomethane	ND		ug/m3	0.8	TO-15		6/24/15 07:53	ECB	A
2-Butanone	39		ug/m3	0.6	TO-15		6/24/15 07:53	ECB	A
Carbon Tetrachloride	ND		ug/m3	1	TO-15		6/24/15 07:53	ECB	A
Chlorobenzene	ND		ug/m3	0.9	TO-15		6/24/15 07:53	ECB	A
Chlorodibromomethane	ND		ug/m3	2	TO-15		6/24/15 07:53	ECB	A
Chloroform	ND		ug/m3	1	TO-15		6/24/15 07:53	ECB	A
1,2-Dibromoethane	ND		ug/m3	2	TO-15		6/24/15 07:53	ECB	A
1,2-Dichlorobenzene	ND		ug/m3	1	TO-15		6/24/15 07:53	ECB	A
1,3-Dichlorobenzene	ND		ug/m3	1	TO-15		6/24/15 07:53	ECB	A
1,4-Dichlorobenzene	ND		ug/m3	1	TO-15		6/24/15 07:53	ECB	A
1,1-Dichloroethane	ND		ug/m3	0.8	TO-15		6/24/15 07:53	ECB	A
1,2-Dichloroethane	ND		ug/m3	0.8	TO-15		6/24/15 07:53	ECB	A
1,1-Dichloroethene	ND		ug/m3	0.8	TO-15		6/24/15 07:53	ECB	A
cis-1,2-Dichloroethene	ND		ug/m3	0.8	TO-15		6/24/15 07:53	ECB	A
trans-1,2-Dichloroethene	ND		ug/m3	0.8	TO-15		6/24/15 07:53	ECB	A
1,2-Dichloropropane	ND		ug/m3	0.9	TO-15		6/24/15 07:53	ECB	A
cis-1,3-Dichloropropene	ND		ug/m3	0.9	TO-15		6/24/15 07:53	ECB	A
trans-1,3-Dichloropropene	ND		ug/m3	0.9	TO-15		6/24/15 07:53	ECB	A
1,4-Dioxane	ND		ug/m3	0.7	TO-15		6/24/15 07:53	ECB	A
Ethylbenzene	2		ug/m3	0.9	TO-15		6/24/15 07:53	ECB	A
Hexachlorobutadiene	ND		ug/m3	2	TO-15		6/24/15 07:53	ECB	A
2-Hexanone	ND		ug/m3	0.8	TO-15		6/24/15 07:53	ECB	A
Methyl t-Butyl Ether	ND		ug/m3	0.7	TO-15		6/24/15 07:53	ECB	A
4-Methyl-2-Pentanone(MIBK)	8		ug/m3	0.8	TO-15		6/24/15 07:53	ECB	A
Methylene Chloride	3		ug/m3	0.7	TO-15		6/24/15 07:53	ECB	A
Naphthalene	ND		ug/m3	1	TO-15		6/24/15 07:53	ECB	A
Styrene	ND		ug/m3	0.8	TO-15		6/24/15 07:53	ECB	A
1,1,2,2-Tetrachloroethane	ND		ug/m3	1	TO-15		6/24/15 07:53	ECB	A
Tetrachloroethene	2		ug/m3	1	TO-15		6/24/15 07:53	ECB	A
Toluene	3		ug/m3	0.8	TO-15		6/24/15 07:53	ECB	A
1,1,1-Trichloroethane	ND		ug/m3	1	TO-15		6/24/15 07:53	ECB	A
1,1,2-Trichloroethane	ND		ug/m3	1	TO-15		6/24/15 07:53	ECB	A

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ANALYTICAL RESULTS

Workorder: 2077588 CVC005|Varian Beverly 152780

Lab ID: **2077588001** Date Collected: 6/11/2015 11:15 Matrix: Air

Sample ID: **Bldg5-1** Date Received: 6/15/2015 10:26

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	*Cntr*
Trichloroethene	3		ug/m3	1	TO-15		6/24/15 07:53	ECB	A
Vinyl Chloride	ND		ug/m3	0.5	TO-15		6/24/15 07:53	ECB	A
o-Xylene	3		ug/m3	0.9	TO-15		6/24/15 07:53	ECB	A
mp-Xylene	10		ug/m3	2	TO-15		6/24/15 07:53	ECB	A
Acetone	230		ppbv	2.0	TO-15		6/23/15 18:35	ECB	A
Benzene	ND		ppbv	0.20	TO-15		6/24/15 07:53	ECB	A
Bromodichloromethane	ND		ppbv	0.20	TO-15		6/24/15 07:53	ECB	A
Bromoform	ND		ppbv	0.20	TO-15		6/24/15 07:53	ECB	A
Bromomethane	ND		ppbv	0.20	TO-15		6/24/15 07:53	ECB	A
2-Butanone	13		ppbv	0.20	TO-15		6/24/15 07:53	ECB	A
Carbon Tetrachloride	ND		ppbv	0.20	TO-15		6/24/15 07:53	ECB	A
Chlorobenzene	ND		ppbv	0.20	TO-15		6/24/15 07:53	ECB	A
Chlorodibromomethane	ND		ppbv	0.20	TO-15		6/24/15 07:53	ECB	A
Chloroform	ND		ppbv	0.20	TO-15		6/24/15 07:53	ECB	A
1,2-Dibromoethane	ND		ppbv	0.20	TO-15		6/24/15 07:53	ECB	A
1,2-Dichlorobenzene	ND		ppbv	0.20	TO-15		6/24/15 07:53	ECB	A
1,3-Dichlorobenzene	ND		ppbv	0.20	TO-15		6/24/15 07:53	ECB	A
1,4-Dichlorobenzene	ND		ppbv	0.20	TO-15		6/24/15 07:53	ECB	A
1,1-Dichloroethane	ND		ppbv	0.20	TO-15		6/24/15 07:53	ECB	A
1,2-Dichloroethane	ND		ppbv	0.20	TO-15		6/24/15 07:53	ECB	A
1,1-Dichloroethene	ND		ppbv	0.20	TO-15		6/24/15 07:53	ECB	A
cis-1,2-Dichloroethene	ND		ppbv	0.20	TO-15		6/24/15 07:53	ECB	A
trans-1,2-Dichloroethene	ND		ppbv	0.20	TO-15		6/24/15 07:53	ECB	A
1,2-Dichloropropane	ND		ppbv	0.20	TO-15		6/24/15 07:53	ECB	A
cis-1,3-Dichloropropene	ND		ppbv	0.20	TO-15		6/24/15 07:53	ECB	A
trans-1,3-Dichloropropene	ND		ppbv	0.20	TO-15		6/24/15 07:53	ECB	A
1,4-Dioxane	ND		ppbv	0.20	TO-15		6/24/15 07:53	ECB	A
Ethylbenzene	0.54		ppbv	0.20	TO-15		6/24/15 07:53	ECB	A
Hexachlorobutadiene	ND		ppbv	0.20	TO-15		6/24/15 07:53	ECB	A
2-Hexanone	ND		ppbv	0.20	TO-15		6/24/15 07:53	ECB	A
Methyl t-Butyl Ether	ND		ppbv	0.20	TO-15		6/24/15 07:53	ECB	A
4-Methyl-2-Pentanone(MIBK)	2.0		ppbv	0.20	TO-15		6/24/15 07:53	ECB	A
Methylene Chloride	0.92		ppbv	0.20	TO-15		6/24/15 07:53	ECB	A
Naphthalene	ND		ppbv	0.20	TO-15		6/24/15 07:53	ECB	A
Styrene	ND		ppbv	0.20	TO-15		6/24/15 07:53	ECB	A
1,1,2,2-Tetrachloroethane	ND		ppbv	0.20	TO-15		6/24/15 07:53	ECB	A
Tetrachloroethene	0.29		ppbv	0.20	TO-15		6/24/15 07:53	ECB	A
Toluene	0.68		ppbv	0.20	TO-15		6/24/15 07:53	ECB	A

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ANALYTICAL RESULTS

Workorder: 2077588 CVC005|Varian Beverly 152780

Lab ID: **2077588001** Date Collected: 6/11/2015 11:15 Matrix: Air

Sample ID: **Bldg5-1** Date Received: 6/15/2015 10:26

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
1,1,1-Trichloroethane	ND		ppbv	0.20	TO-15			6/24/15 07:53	ECB	A
1,1,2-Trichloroethane	ND		ppbv	0.20	TO-15			6/24/15 07:53	ECB	A
Trichloroethene	0.47		ppbv	0.20	TO-15			6/24/15 07:53	ECB	A
Vinyl Chloride	ND		ppbv	0.20	TO-15			6/24/15 07:53	ECB	A
o-Xylene	0.62		ppbv	0.20	TO-15			6/24/15 07:53	ECB	A
mp-Xylene	2.2		ppbv	0.40	TO-15			6/24/15 07:53	ECB	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
4-Bromofluorobenzene (S)	100		%	70 - 130	TO-15			6/23/15 18:35	ECB	A
4-Bromofluorobenzene (S)	96		%	70 - 130	TO-15			6/24/15 07:53	ECB	A

Vicki Forney

Mrs. Vicki A. Forney
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2077588 CVC005|Varian Beverly 152780

Lab ID: **2077588002** Date Collected: 6/11/2015 11:13 Matrix: Air

Sample ID: **Bldg5-2** Date Received: 6/15/2015 10:26

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	*Cntr*
VOLATILE ORGANICS @ STP									
Acetone	370		ug/m3	5	TO-15		6/23/15 19:24	ECB	A
Benzene	ND		ug/m3	0.6	TO-15		6/24/15 08:44	ECB	A
Bromodichloromethane	ND		ug/m3	1	TO-15		6/24/15 08:44	ECB	A
Bromoform	ND		ug/m3	2	TO-15		6/24/15 08:44	ECB	A
Bromomethane	ND		ug/m3	0.8	TO-15		6/24/15 08:44	ECB	A
2-Butanone	89		ug/m3	0.6	TO-15		6/24/15 08:44	ECB	A
Carbon Tetrachloride	ND		ug/m3	1	TO-15		6/24/15 08:44	ECB	A
Chlorobenzene	ND		ug/m3	0.9	TO-15		6/24/15 08:44	ECB	A
Chlorodibromomethane	ND		ug/m3	2	TO-15		6/24/15 08:44	ECB	A
Chloroform	ND		ug/m3	1	TO-15		6/24/15 08:44	ECB	A
1,2-Dibromoethane	ND		ug/m3	2	TO-15		6/24/15 08:44	ECB	A
1,2-Dichlorobenzene	ND		ug/m3	1	TO-15		6/24/15 08:44	ECB	A
1,3-Dichlorobenzene	ND		ug/m3	1	TO-15		6/24/15 08:44	ECB	A
1,4-Dichlorobenzene	ND		ug/m3	1	TO-15		6/24/15 08:44	ECB	A
1,1-Dichloroethane	ND		ug/m3	0.8	TO-15		6/24/15 08:44	ECB	A
1,2-Dichloroethane	ND		ug/m3	0.8	TO-15		6/24/15 08:44	ECB	A
1,1-Dichloroethene	ND		ug/m3	0.8	TO-15		6/24/15 08:44	ECB	A
cis-1,2-Dichloroethene	ND		ug/m3	0.8	TO-15		6/24/15 08:44	ECB	A
trans-1,2-Dichloroethene	ND		ug/m3	0.8	TO-15		6/24/15 08:44	ECB	A
1,2-Dichloropropane	ND		ug/m3	0.9	TO-15		6/24/15 08:44	ECB	A
cis-1,3-Dichloropropene	ND		ug/m3	0.9	TO-15		6/24/15 08:44	ECB	A
trans-1,3-Dichloropropene	ND		ug/m3	0.9	TO-15		6/24/15 08:44	ECB	A
1,4-Dioxane	ND		ug/m3	0.7	TO-15		6/24/15 08:44	ECB	A
Ethylbenzene	5		ug/m3	0.9	TO-15		6/24/15 08:44	ECB	A
Hexachlorobutadiene	ND		ug/m3	2	TO-15		6/24/15 08:44	ECB	A
2-Hexanone	ND		ug/m3	0.8	TO-15		6/24/15 08:44	ECB	A
Methyl t-Butyl Ether	ND		ug/m3	0.7	TO-15		6/24/15 08:44	ECB	A
4-Methyl-2-Pentanone(MIBK)	14		ug/m3	0.8	TO-15		6/24/15 08:44	ECB	A
Methylene Chloride	3		ug/m3	0.7	TO-15		6/24/15 08:44	ECB	A
Naphthalene	1		ug/m3	1	TO-15		6/24/15 08:44	ECB	A
Styrene	ND		ug/m3	0.8	TO-15		6/24/15 08:44	ECB	A
1,1,2,2-Tetrachloroethane	ND		ug/m3	1	TO-15		6/24/15 08:44	ECB	A
Tetrachloroethene	6		ug/m3	1	TO-15		6/24/15 08:44	ECB	A
Toluene	4		ug/m3	0.8	TO-15		6/24/15 08:44	ECB	A
1,1,1-Trichloroethane	ND		ug/m3	1	TO-15		6/24/15 08:44	ECB	A
1,1,2-Trichloroethane	ND		ug/m3	1	TO-15		6/24/15 08:44	ECB	A

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ANALYTICAL RESULTS

Workorder: 2077588 CVC005|Varian Beverly 152780

Lab ID: **2077588002** Date Collected: 6/11/2015 11:13 Matrix: Air

Sample ID: **Bldg5-2** Date Received: 6/15/2015 10:26

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
Trichloroethene	7		ug/m3	1	TO-15		6/24/15 08:44	ECB	A
Vinyl Chloride	ND		ug/m3	0.5	TO-15		6/24/15 08:44	ECB	A
o-Xylene	7		ug/m3	0.9	TO-15		6/24/15 08:44	ECB	A
mp-Xylene	23		ug/m3	2	TO-15		6/24/15 08:44	ECB	A
Acetone	160		ppbv	2.0	TO-15		6/23/15 19:24	ECB	A
Benzene	ND		ppbv	0.20	TO-15		6/24/15 08:44	ECB	A
Bromodichloromethane	ND		ppbv	0.20	TO-15		6/24/15 08:44	ECB	A
Bromoform	ND		ppbv	0.20	TO-15		6/24/15 08:44	ECB	A
Bromomethane	ND		ppbv	0.20	TO-15		6/24/15 08:44	ECB	A
2-Butanone	30		ppbv	0.20	TO-15		6/24/15 08:44	ECB	A
Carbon Tetrachloride	ND		ppbv	0.20	TO-15		6/24/15 08:44	ECB	A
Chlorobenzene	ND		ppbv	0.20	TO-15		6/24/15 08:44	ECB	A
Chlorodibromomethane	ND		ppbv	0.20	TO-15		6/24/15 08:44	ECB	A
Chloroform	ND		ppbv	0.20	TO-15		6/24/15 08:44	ECB	A
1,2-Dibromoethane	ND		ppbv	0.20	TO-15		6/24/15 08:44	ECB	A
1,2-Dichlorobenzene	ND		ppbv	0.20	TO-15		6/24/15 08:44	ECB	A
1,3-Dichlorobenzene	ND		ppbv	0.20	TO-15		6/24/15 08:44	ECB	A
1,4-Dichlorobenzene	ND		ppbv	0.20	TO-15		6/24/15 08:44	ECB	A
1,1-Dichloroethane	ND		ppbv	0.20	TO-15		6/24/15 08:44	ECB	A
1,2-Dichloroethane	ND		ppbv	0.20	TO-15		6/24/15 08:44	ECB	A
1,1-Dichloroethene	ND		ppbv	0.20	TO-15		6/24/15 08:44	ECB	A
cis-1,2-Dichloroethene	ND		ppbv	0.20	TO-15		6/24/15 08:44	ECB	A
trans-1,2-Dichloroethene	ND		ppbv	0.20	TO-15		6/24/15 08:44	ECB	A
1,2-Dichloropropane	ND		ppbv	0.20	TO-15		6/24/15 08:44	ECB	A
cis-1,3-Dichloropropene	ND		ppbv	0.20	TO-15		6/24/15 08:44	ECB	A
trans-1,3-Dichloropropene	ND		ppbv	0.20	TO-15		6/24/15 08:44	ECB	A
1,4-Dioxane	ND		ppbv	0.20	TO-15		6/24/15 08:44	ECB	A
Ethylbenzene	1.2		ppbv	0.20	TO-15		6/24/15 08:44	ECB	A
Hexachlorobutadiene	ND		ppbv	0.20	TO-15		6/24/15 08:44	ECB	A
2-Hexanone	ND		ppbv	0.20	TO-15		6/24/15 08:44	ECB	A
Methyl t-Butyl Ether	ND		ppbv	0.20	TO-15		6/24/15 08:44	ECB	A
4-Methyl-2-Pentanone(MIBK)	3.4		ppbv	0.20	TO-15		6/24/15 08:44	ECB	A
Methylene Chloride	0.85		ppbv	0.20	TO-15		6/24/15 08:44	ECB	A
Naphthalene	0.21		ppbv	0.20	TO-15		6/24/15 08:44	ECB	A
Styrene	ND		ppbv	0.20	TO-15		6/24/15 08:44	ECB	A
1,1,2,2-Tetrachloroethane	ND		ppbv	0.20	TO-15		6/24/15 08:44	ECB	A
Tetrachloroethene	0.94		ppbv	0.20	TO-15		6/24/15 08:44	ECB	A
Toluene	0.96		ppbv	0.20	TO-15		6/24/15 08:44	ECB	A

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ANALYTICAL RESULTS

Workorder: 2077588 CVC005|Varian Beverly 152780

Lab ID: **2077588002** Date Collected: 6/11/2015 11:13 Matrix: Air

Sample ID: **Bldg5-2** Date Received: 6/15/2015 10:26

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
1,1,1-Trichloroethane	ND		ppbv	0.20	TO-15			6/24/15 08:44	ECB	A
1,1,2-Trichloroethane	ND		ppbv	0.20	TO-15			6/24/15 08:44	ECB	A
Trichloroethene	1.3		ppbv	0.20	TO-15			6/24/15 08:44	ECB	A
Vinyl Chloride	ND		ppbv	0.20	TO-15			6/24/15 08:44	ECB	A
o-Xylene	1.5		ppbv	0.20	TO-15			6/24/15 08:44	ECB	A
mp-Xylene	5.4		ppbv	0.40	TO-15			6/24/15 08:44	ECB	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
4-Bromofluorobenzene (S)	95		%	70 - 130	TO-15			6/24/15 08:44	ECB	A
4-Bromofluorobenzene (S)	100		%	70 - 130	TO-15			6/23/15 19:24	ECB	A

Vicki Forney

Mrs. Vicki A. Forney
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ANALYTICAL RESULTS

Workorder: 2077588 CVC005|Varian Beverly 152780

Lab ID: **2077588003** Date Collected: 6/11/2015 11:17 Matrix: Air

Sample ID: **Bldg5-3** Date Received: 6/15/2015 10:26

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	*Cntr*
VOLATILE ORGANICS @ STP									
Acetone	870		ug/m3	5	TO-15		6/23/15 20:13	ECB	A
Benzene	ND		ug/m3	0.6	TO-15		6/24/15 09:35	ECB	A
Bromodichloromethane	ND		ug/m3	1	TO-15		6/24/15 09:35	ECB	A
Bromoform	ND		ug/m3	2	TO-15		6/24/15 09:35	ECB	A
Bromomethane	ND		ug/m3	0.8	TO-15		6/24/15 09:35	ECB	A
2-Butanone	62		ug/m3	0.6	TO-15		6/24/15 09:35	ECB	A
Carbon Tetrachloride	ND		ug/m3	1	TO-15		6/24/15 09:35	ECB	A
Chlorobenzene	ND		ug/m3	0.9	TO-15		6/24/15 09:35	ECB	A
Chlorodibromomethane	ND		ug/m3	2	TO-15		6/24/15 09:35	ECB	A
Chloroform	ND		ug/m3	1	TO-15		6/24/15 09:35	ECB	A
1,2-Dibromoethane	ND		ug/m3	2	TO-15		6/24/15 09:35	ECB	A
1,2-Dichlorobenzene	ND		ug/m3	1	TO-15		6/24/15 09:35	ECB	A
1,3-Dichlorobenzene	ND		ug/m3	1	TO-15		6/24/15 09:35	ECB	A
1,4-Dichlorobenzene	ND		ug/m3	1	TO-15		6/24/15 09:35	ECB	A
1,1-Dichloroethane	ND		ug/m3	0.8	TO-15		6/24/15 09:35	ECB	A
1,2-Dichloroethane	ND		ug/m3	0.8	TO-15		6/24/15 09:35	ECB	A
1,1-Dichloroethene	ND		ug/m3	0.8	TO-15		6/24/15 09:35	ECB	A
cis-1,2-Dichloroethene	ND		ug/m3	0.8	TO-15		6/24/15 09:35	ECB	A
trans-1,2-Dichloroethene	ND		ug/m3	0.8	TO-15		6/24/15 09:35	ECB	A
1,2-Dichloropropane	ND		ug/m3	0.9	TO-15		6/24/15 09:35	ECB	A
cis-1,3-Dichloropropene	ND		ug/m3	0.9	TO-15		6/24/15 09:35	ECB	A
trans-1,3-Dichloropropene	ND		ug/m3	0.9	TO-15		6/24/15 09:35	ECB	A
1,4-Dioxane	ND		ug/m3	0.7	TO-15		6/24/15 09:35	ECB	A
Ethylbenzene	3		ug/m3	0.9	TO-15		6/24/15 09:35	ECB	A
Hexachlorobutadiene	ND		ug/m3	2	TO-15		6/24/15 09:35	ECB	A
2-Hexanone	ND		ug/m3	0.8	TO-15		6/24/15 09:35	ECB	A
Methyl t-Butyl Ether	ND		ug/m3	0.7	TO-15		6/24/15 09:35	ECB	A
4-Methyl-2-Pentanone(MIBK)	14		ug/m3	0.8	TO-15		6/24/15 09:35	ECB	A
Methylene Chloride	1		ug/m3	0.7	TO-15		6/24/15 09:35	ECB	A
Naphthalene	ND		ug/m3	1	TO-15		6/24/15 09:35	ECB	A
Styrene	ND		ug/m3	0.8	TO-15		6/24/15 09:35	ECB	A
1,1,2,2-Tetrachloroethane	ND		ug/m3	1	TO-15		6/24/15 09:35	ECB	A
Tetrachloroethene	2		ug/m3	1	TO-15		6/24/15 09:35	ECB	A
Toluene	4		ug/m3	0.8	TO-15		6/24/15 09:35	ECB	A
1,1,1-Trichloroethane	ND		ug/m3	1	TO-15		6/24/15 09:35	ECB	A
1,1,2-Trichloroethane	ND		ug/m3	1	TO-15		6/24/15 09:35	ECB	A

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ANALYTICAL RESULTS

Workorder: 2077588 CVC005|Varian Beverly 152780

Lab ID: **2077588003** Date Collected: 6/11/2015 11:17 Matrix: Air

Sample ID: **Bldg5-3** Date Received: 6/15/2015 10:26

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
Trichloroethene	2		ug/m3	1	TO-15		6/24/15 09:35	ECB	A
Vinyl Chloride	ND		ug/m3	0.5	TO-15		6/24/15 09:35	ECB	A
o-Xylene	3		ug/m3	0.9	TO-15		6/24/15 09:35	ECB	A
mp-Xylene	12		ug/m3	2	TO-15		6/24/15 09:35	ECB	A
Acetone	370		ppbv	2.0	TO-15		6/23/15 20:13	ECB	A
Benzene	ND		ppbv	0.20	TO-15		6/24/15 09:35	ECB	A
Bromodichloromethane	ND		ppbv	0.20	TO-15		6/24/15 09:35	ECB	A
Bromoform	ND		ppbv	0.20	TO-15		6/24/15 09:35	ECB	A
Bromomethane	ND		ppbv	0.20	TO-15		6/24/15 09:35	ECB	A
2-Butanone	21		ppbv	0.20	TO-15		6/24/15 09:35	ECB	A
Carbon Tetrachloride	ND		ppbv	0.20	TO-15		6/24/15 09:35	ECB	A
Chlorobenzene	ND		ppbv	0.20	TO-15		6/24/15 09:35	ECB	A
Chlorodibromomethane	ND		ppbv	0.20	TO-15		6/24/15 09:35	ECB	A
Chloroform	ND		ppbv	0.20	TO-15		6/24/15 09:35	ECB	A
1,2-Dibromoethane	ND		ppbv	0.20	TO-15		6/24/15 09:35	ECB	A
1,2-Dichlorobenzene	ND		ppbv	0.20	TO-15		6/24/15 09:35	ECB	A
1,3-Dichlorobenzene	ND		ppbv	0.20	TO-15		6/24/15 09:35	ECB	A
1,4-Dichlorobenzene	ND		ppbv	0.20	TO-15		6/24/15 09:35	ECB	A
1,1-Dichloroethane	ND		ppbv	0.20	TO-15		6/24/15 09:35	ECB	A
1,2-Dichloroethane	ND		ppbv	0.20	TO-15		6/24/15 09:35	ECB	A
1,1-Dichloroethene	ND		ppbv	0.20	TO-15		6/24/15 09:35	ECB	A
cis-1,2-Dichloroethene	ND		ppbv	0.20	TO-15		6/24/15 09:35	ECB	A
trans-1,2-Dichloroethene	ND		ppbv	0.20	TO-15		6/24/15 09:35	ECB	A
1,2-Dichloropropane	ND		ppbv	0.20	TO-15		6/24/15 09:35	ECB	A
cis-1,3-Dichloropropene	ND		ppbv	0.20	TO-15		6/24/15 09:35	ECB	A
trans-1,3-Dichloropropene	ND		ppbv	0.20	TO-15		6/24/15 09:35	ECB	A
1,4-Dioxane	ND		ppbv	0.20	TO-15		6/24/15 09:35	ECB	A
Ethylbenzene	0.69		ppbv	0.20	TO-15		6/24/15 09:35	ECB	A
Hexachlorobutadiene	ND		ppbv	0.20	TO-15		6/24/15 09:35	ECB	A
2-Hexanone	ND		ppbv	0.20	TO-15		6/24/15 09:35	ECB	A
Methyl t-Butyl Ether	ND		ppbv	0.20	TO-15		6/24/15 09:35	ECB	A
4-Methyl-2-Pentanone(MIBK)	3.5		ppbv	0.20	TO-15		6/24/15 09:35	ECB	A
Methylene Chloride	0.42		ppbv	0.20	TO-15		6/24/15 09:35	ECB	A
Naphthalene	ND		ppbv	0.20	TO-15		6/24/15 09:35	ECB	A
Styrene	ND		ppbv	0.20	TO-15		6/24/15 09:35	ECB	A
1,1,2,2-Tetrachloroethane	ND		ppbv	0.20	TO-15		6/24/15 09:35	ECB	A
Tetrachloroethene	0.25		ppbv	0.20	TO-15		6/24/15 09:35	ECB	A
Toluene	1.1		ppbv	0.20	TO-15		6/24/15 09:35	ECB	A

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ANALYTICAL RESULTS

Workorder: 2077588 CVC005|Varian Beverly 152780

Lab ID: **2077588003** Date Collected: 6/11/2015 11:17 Matrix: Air

Sample ID: **Bldg5-3** Date Received: 6/15/2015 10:26

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
1,1,1-Trichloroethane	ND		ppbv	0.20	TO-15			6/24/15 09:35	ECB	A
1,1,2-Trichloroethane	ND		ppbv	0.20	TO-15			6/24/15 09:35	ECB	A
Trichloroethene	0.40		ppbv	0.20	TO-15			6/24/15 09:35	ECB	A
Vinyl Chloride	ND		ppbv	0.20	TO-15			6/24/15 09:35	ECB	A
o-Xylene	0.71		ppbv	0.20	TO-15			6/24/15 09:35	ECB	A
mp-Xylene	2.7		ppbv	0.40	TO-15			6/24/15 09:35	ECB	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
4-Bromofluorobenzene (S)	95		%	70 - 130	TO-15			6/24/15 09:35	ECB	A
4-Bromofluorobenzene (S)	100		%	70 - 130	TO-15			6/23/15 20:13	ECB	A

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ANALYTICAL RESULTS

Workorder: 2077588 CVC005|Varian Beverly 152780

Lab ID: **2077588004** Date Collected: 6/12/2015 11:10 Matrix: Air

Sample ID: **Bldg5-SVE INF** Date Received: 6/15/2015 10:26

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	*Cntr*
VOLATILE ORGANICS @ STP									
Acetone	130		ug/m3	5	TO-15		6/23/15 21:02	ECB	A
Benzene	ND		ug/m3	0.6	TO-15		6/24/15 10:26	ECB	A
Bromodichloromethane	ND		ug/m3	1	TO-15		6/24/15 10:26	ECB	A
Bromoform	ND		ug/m3	2	TO-15		6/24/15 10:26	ECB	A
Bromomethane	ND		ug/m3	0.8	TO-15		6/24/15 10:26	ECB	A
2-Butanone	29		ug/m3	0.6	TO-15		6/24/15 10:26	ECB	A
Carbon Tetrachloride	ND		ug/m3	1	TO-15		6/24/15 10:26	ECB	A
Chlorobenzene	ND		ug/m3	0.9	TO-15		6/24/15 10:26	ECB	A
Chlorodibromomethane	ND		ug/m3	2	TO-15		6/24/15 10:26	ECB	A
Chloroform	ND		ug/m3	1	TO-15		6/24/15 10:26	ECB	A
1,2-Dibromoethane	ND		ug/m3	2	TO-15		6/24/15 10:26	ECB	A
1,2-Dichlorobenzene	ND		ug/m3	1	TO-15		6/24/15 10:26	ECB	A
1,3-Dichlorobenzene	4		ug/m3	1	TO-15		6/24/15 10:26	ECB	A
1,4-Dichlorobenzene	ND		ug/m3	1	TO-15		6/24/15 10:26	ECB	A
1,1-Dichloroethane	ND		ug/m3	0.8	TO-15		6/24/15 10:26	ECB	A
1,2-Dichloroethane	ND		ug/m3	0.8	TO-15		6/24/15 10:26	ECB	A
1,1-Dichloroethene	ND		ug/m3	0.8	TO-15		6/24/15 10:26	ECB	A
cis-1,2-Dichloroethene	2		ug/m3	0.8	TO-15		6/24/15 10:26	ECB	A
trans-1,2-Dichloroethene	ND		ug/m3	0.8	TO-15		6/24/15 10:26	ECB	A
1,2-Dichloropropane	ND		ug/m3	0.9	TO-15		6/24/15 10:26	ECB	A
cis-1,3-Dichloropropene	ND		ug/m3	0.9	TO-15		6/24/15 10:26	ECB	A
trans-1,3-Dichloropropene	ND		ug/m3	0.9	TO-15		6/24/15 10:26	ECB	A
1,4-Dioxane	ND		ug/m3	0.7	TO-15		6/24/15 10:26	ECB	A
Ethylbenzene	2		ug/m3	0.9	TO-15		6/24/15 10:26	ECB	A
Hexachlorobutadiene	ND		ug/m3	2	TO-15		6/24/15 10:26	ECB	A
2-Hexanone	ND		ug/m3	0.8	TO-15		6/24/15 10:26	ECB	A
Methyl t-Butyl Ether	ND		ug/m3	0.7	TO-15		6/24/15 10:26	ECB	A
4-Methyl-2-Pentanone(MIBK)	8		ug/m3	0.8	TO-15		6/24/15 10:26	ECB	A
Methylene Chloride	3		ug/m3	0.7	TO-15		6/24/15 10:26	ECB	A
Naphthalene	ND		ug/m3	1	TO-15		6/24/15 10:26	ECB	A
Styrene	ND		ug/m3	0.8	TO-15		6/24/15 10:26	ECB	A
1,1,2,2-Tetrachloroethane	ND		ug/m3	1	TO-15		6/24/15 10:26	ECB	A
Tetrachloroethene	15		ug/m3	1	TO-15		6/24/15 10:26	ECB	A
Toluene	2		ug/m3	0.8	TO-15		6/24/15 10:26	ECB	A
1,1,1-Trichloroethane	ND		ug/m3	1	TO-15		6/24/15 10:26	ECB	A
1,1,2-Trichloroethane	ND		ug/m3	1	TO-15		6/24/15 10:26	ECB	A

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ANALYTICAL RESULTS

Workorder: 2077588 CVC005|Varian Beverly 152780

Lab ID: **2077588004** Date Collected: 6/12/2015 11:10 Matrix: Air

Sample ID: **Bldg5-SVE INF** Date Received: 6/15/2015 10:26

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
Trichloroethene	44		ug/m3	1	TO-15		6/24/15 10:26	ECB	A
Vinyl Chloride	ND		ug/m3	0.5	TO-15		6/24/15 10:26	ECB	A
o-Xylene	2		ug/m3	0.9	TO-15		6/24/15 10:26	ECB	A
mp-Xylene	6		ug/m3	2	TO-15		6/24/15 10:26	ECB	A
Acetone	55		ppbv	2.0	TO-15		6/23/15 21:02	ECB	A
Benzene	ND		ppbv	0.20	TO-15		6/24/15 10:26	ECB	A
Bromodichloromethane	ND		ppbv	0.20	TO-15		6/24/15 10:26	ECB	A
Bromoform	ND		ppbv	0.20	TO-15		6/24/15 10:26	ECB	A
Bromomethane	ND		ppbv	0.20	TO-15		6/24/15 10:26	ECB	A
2-Butanone	9.7		ppbv	0.20	TO-15		6/24/15 10:26	ECB	A
Carbon Tetrachloride	ND		ppbv	0.20	TO-15		6/24/15 10:26	ECB	A
Chlorobenzene	ND		ppbv	0.20	TO-15		6/24/15 10:26	ECB	A
Chlorodibromomethane	ND		ppbv	0.20	TO-15		6/24/15 10:26	ECB	A
Chloroform	ND		ppbv	0.20	TO-15		6/24/15 10:26	ECB	A
1,2-Dibromoethane	ND		ppbv	0.20	TO-15		6/24/15 10:26	ECB	A
1,2-Dichlorobenzene	ND		ppbv	0.20	TO-15		6/24/15 10:26	ECB	A
1,3-Dichlorobenzene	0.74		ppbv	0.20	TO-15		6/24/15 10:26	ECB	A
1,4-Dichlorobenzene	ND		ppbv	0.20	TO-15		6/24/15 10:26	ECB	A
1,1-Dichloroethane	ND		ppbv	0.20	TO-15		6/24/15 10:26	ECB	A
1,2-Dichloroethane	ND		ppbv	0.20	TO-15		6/24/15 10:26	ECB	A
1,1-Dichloroethene	ND		ppbv	0.20	TO-15		6/24/15 10:26	ECB	A
cis-1,2-Dichloroethene	0.49		ppbv	0.20	TO-15		6/24/15 10:26	ECB	A
trans-1,2-Dichloroethene	ND		ppbv	0.20	TO-15		6/24/15 10:26	ECB	A
1,2-Dichloropropane	ND		ppbv	0.20	TO-15		6/24/15 10:26	ECB	A
cis-1,3-Dichloropropene	ND		ppbv	0.20	TO-15		6/24/15 10:26	ECB	A
trans-1,3-Dichloropropene	ND		ppbv	0.20	TO-15		6/24/15 10:26	ECB	A
1,4-Dioxane	ND		ppbv	0.20	TO-15		6/24/15 10:26	ECB	A
Ethylbenzene	0.39		ppbv	0.20	TO-15		6/24/15 10:26	ECB	A
Hexachlorobutadiene	ND		ppbv	0.20	TO-15		6/24/15 10:26	ECB	A
2-Hexanone	ND		ppbv	0.20	TO-15		6/24/15 10:26	ECB	A
Methyl t-Butyl Ether	ND		ppbv	0.20	TO-15		6/24/15 10:26	ECB	A
4-Methyl-2-Pentanone(MIBK)	2.1		ppbv	0.20	TO-15		6/24/15 10:26	ECB	A
Methylene Chloride	0.84		ppbv	0.20	TO-15		6/24/15 10:26	ECB	A
Naphthalene	ND		ppbv	0.20	TO-15		6/24/15 10:26	ECB	A
Styrene	ND		ppbv	0.20	TO-15		6/24/15 10:26	ECB	A
1,1,2,2-Tetrachloroethane	ND		ppbv	0.20	TO-15		6/24/15 10:26	ECB	A
Tetrachloroethene	2.2		ppbv	0.20	TO-15		6/24/15 10:26	ECB	A
Toluene	0.46		ppbv	0.20	TO-15		6/24/15 10:26	ECB	A

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ANALYTICAL RESULTS

Workorder: 2077588 CVC005|Varian Beverly 152780

Lab ID: **2077588004** Date Collected: 6/12/2015 11:10 Matrix: Air

Sample ID: **Bldg5-SVE INF** Date Received: 6/15/2015 10:26

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
1,1,1-Trichloroethane	ND		ppbv	0.20	TO-15		6/24/15 10:26	ECB	A
1,1,2-Trichloroethane	ND		ppbv	0.20	TO-15		6/24/15 10:26	ECB	A
Trichloroethene	8.2		ppbv	0.20	TO-15		6/24/15 10:26	ECB	A
Vinyl Chloride	ND		ppbv	0.20	TO-15		6/24/15 10:26	ECB	A
o-Xylene	0.45		ppbv	0.20	TO-15		6/24/15 10:26	ECB	A
mp-Xylene	1.4		ppbv	0.40	TO-15		6/24/15 10:26	ECB	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared By*	*Analyzed*	*By*	*Cntr*
4-Bromofluorobenzene (S)	96		%	70 - 130	TO-15		6/24/15 10:26	ECB	A
4-Bromofluorobenzene (S)	100		%	70 - 130	TO-15		6/23/15 21:02	ECB	A

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ANALYTICAL RESULTS

Workorder: 2077588 CVC005|Varian Beverly 152780

Lab ID: **2077588005** Date Collected: 6/12/2015 11:14 Matrix: Air

Sample ID: **Bldg5-SVE 4** Date Received: 6/15/2015 10:26

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	*Cntr*
VOLATILE ORGANICS @ STP									
Acetone	110		ug/m3	5	TO-15		6/24/15 03:43	ECB	A
Benzene	1		ug/m3	0.6	TO-15		6/25/15 03:00	ECB	A
Bromodichloromethane	ND		ug/m3	1	TO-15		6/25/15 03:00	ECB	A
Bromoform	ND		ug/m3	2	TO-15		6/25/15 03:00	ECB	A
Bromomethane	ND		ug/m3	0.8	TO-15		6/25/15 03:00	ECB	A
2-Butanone	31		ug/m3	0.6	TO-15		6/25/15 03:00	ECB	A
Carbon Tetrachloride	ND		ug/m3	1	TO-15		6/25/15 03:00	ECB	A
Chlorobenzene	ND		ug/m3	0.9	TO-15		6/25/15 03:00	ECB	A
Chlorodibromomethane	ND		ug/m3	2	TO-15		6/25/15 03:00	ECB	A
Chloroform	ND		ug/m3	1	TO-15		6/25/15 03:00	ECB	A
1,2-Dibromoethane	ND		ug/m3	2	TO-15		6/25/15 03:00	ECB	A
1,2-Dichlorobenzene	ND		ug/m3	1	TO-15		6/25/15 03:00	ECB	A
1,3-Dichlorobenzene	6		ug/m3	1	TO-15		6/25/15 03:00	ECB	A
1,4-Dichlorobenzene	ND		ug/m3	1	TO-15		6/25/15 03:00	ECB	A
1,1-Dichloroethane	ND		ug/m3	0.8	TO-15		6/25/15 03:00	ECB	A
1,2-Dichloroethane	ND		ug/m3	0.8	TO-15		6/25/15 03:00	ECB	A
1,1-Dichloroethene	ND		ug/m3	0.8	TO-15		6/25/15 03:00	ECB	A
cis-1,2-Dichloroethene	0.9		ug/m3	0.8	TO-15		6/25/15 03:00	ECB	A
trans-1,2-Dichloroethene	ND		ug/m3	0.8	TO-15		6/25/15 03:00	ECB	A
1,2-Dichloropropane	ND		ug/m3	0.9	TO-15		6/25/15 03:00	ECB	A
cis-1,3-Dichloropropene	ND		ug/m3	0.9	TO-15		6/25/15 03:00	ECB	A
trans-1,3-Dichloropropene	ND		ug/m3	0.9	TO-15		6/25/15 03:00	ECB	A
1,4-Dioxane	ND		ug/m3	0.7	TO-15		6/25/15 03:00	ECB	A
Ethylbenzene	4		ug/m3	0.9	TO-15		6/25/15 03:00	ECB	A
Hexachlorobutadiene	ND		ug/m3	2	TO-15		6/25/15 03:00	ECB	A
2-Hexanone	ND		ug/m3	0.8	TO-15		6/25/15 03:00	ECB	A
Methyl t-Butyl Ether	ND		ug/m3	0.7	TO-15		6/25/15 03:00	ECB	A
4-Methyl-2-Pentanone(MIBK)	10		ug/m3	0.8	TO-15		6/25/15 03:00	ECB	A
Methylene Chloride	2		ug/m3	0.7	TO-15		6/25/15 03:00	ECB	A
Naphthalene	1		ug/m3	1	TO-15		6/25/15 03:00	ECB	A
Styrene	ND		ug/m3	0.8	TO-15		6/25/15 03:00	ECB	A
1,1,2,2-Tetrachloroethane	ND		ug/m3	1	TO-15		6/25/15 03:00	ECB	A
Tetrachloroethene	11		ug/m3	1	TO-15		6/25/15 03:00	ECB	A
Toluene	4		ug/m3	0.8	TO-15		6/25/15 03:00	ECB	A
1,1,1-Trichloroethane	ND		ug/m3	1	TO-15		6/25/15 03:00	ECB	A
1,1,2-Trichloroethane	ND		ug/m3	1	TO-15		6/25/15 03:00	ECB	A

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ANALYTICAL RESULTS

Workorder: 2077588 CVC005|Varian Beverly 152780

Lab ID: **2077588005** Date Collected: 6/12/2015 11:14 Matrix: Air

Sample ID: **Bldg5-SVE 4** Date Received: 6/15/2015 10:26

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
Trichloroethene	5		ug/m3	1	TO-15		6/25/15 03:00	ECB	A
Vinyl Chloride	ND		ug/m3	0.5	TO-15		6/25/15 03:00	ECB	A
o-Xylene	5		ug/m3	0.9	TO-15		6/25/15 03:00	ECB	A
mp-Xylene	19		ug/m3	2	TO-15		6/25/15 03:00	ECB	A
Acetone	46		ppbv	2.0	TO-15		6/24/15 03:43	ECB	A
Benzene	0.32		ppbv	0.20	TO-15		6/25/15 03:00	ECB	A
Bromodichloromethane	ND		ppbv	0.20	TO-15		6/25/15 03:00	ECB	A
Bromoform	ND		ppbv	0.20	TO-15		6/25/15 03:00	ECB	A
Bromomethane	ND		ppbv	0.20	TO-15		6/25/15 03:00	ECB	A
2-Butanone	11		ppbv	0.20	TO-15		6/25/15 03:00	ECB	A
Carbon Tetrachloride	ND		ppbv	0.20	TO-15		6/25/15 03:00	ECB	A
Chlorobenzene	ND		ppbv	0.20	TO-15		6/25/15 03:00	ECB	A
Chlorodibromomethane	ND		ppbv	0.20	TO-15		6/25/15 03:00	ECB	A
Chloroform	ND		ppbv	0.20	TO-15		6/25/15 03:00	ECB	A
1,2-Dibromoethane	ND		ppbv	0.20	TO-15		6/25/15 03:00	ECB	A
1,2-Dichlorobenzene	ND		ppbv	0.20	TO-15		6/25/15 03:00	ECB	A
1,3-Dichlorobenzene	1.1		ppbv	0.20	TO-15		6/25/15 03:00	ECB	A
1,4-Dichlorobenzene	ND		ppbv	0.20	TO-15		6/25/15 03:00	ECB	A
1,1-Dichloroethane	ND		ppbv	0.20	TO-15		6/25/15 03:00	ECB	A
1,2-Dichloroethane	ND		ppbv	0.20	TO-15		6/25/15 03:00	ECB	A
1,1-Dichloroethene	ND		ppbv	0.20	TO-15		6/25/15 03:00	ECB	A
cis-1,2-Dichloroethene	0.23		ppbv	0.20	TO-15		6/25/15 03:00	ECB	A
trans-1,2-Dichloroethene	ND		ppbv	0.20	TO-15		6/25/15 03:00	ECB	A
1,2-Dichloropropane	ND		ppbv	0.20	TO-15		6/25/15 03:00	ECB	A
cis-1,3-Dichloropropene	ND		ppbv	0.20	TO-15		6/25/15 03:00	ECB	A
trans-1,3-Dichloropropene	ND		ppbv	0.20	TO-15		6/25/15 03:00	ECB	A
1,4-Dioxane	ND		ppbv	0.20	TO-15		6/25/15 03:00	ECB	A
Ethylbenzene	0.97		ppbv	0.20	TO-15		6/25/15 03:00	ECB	A
Hexachlorobutadiene	ND		ppbv	0.20	TO-15		6/25/15 03:00	ECB	A
2-Hexanone	ND		ppbv	0.20	TO-15		6/25/15 03:00	ECB	A
Methyl t-Butyl Ether	ND		ppbv	0.20	TO-15		6/25/15 03:00	ECB	A
4-Methyl-2-Pentanone(MIBK)	2.4		ppbv	0.20	TO-15		6/25/15 03:00	ECB	A
Methylene Chloride	0.54		ppbv	0.20	TO-15		6/25/15 03:00	ECB	A
Naphthalene	0.23		ppbv	0.20	TO-15		6/25/15 03:00	ECB	A
Styrene	ND		ppbv	0.20	TO-15		6/25/15 03:00	ECB	A
1,1,2,2-Tetrachloroethane	ND		ppbv	0.20	TO-15		6/25/15 03:00	ECB	A
Tetrachloroethene	1.5		ppbv	0.20	TO-15		6/25/15 03:00	ECB	A
Toluene	0.94		ppbv	0.20	TO-15		6/25/15 03:00	ECB	A

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ANALYTICAL RESULTS

Workorder: 2077588 CVC005|Varian Beverly 152780

Lab ID: **2077588005** Date Collected: 6/12/2015 11:14 Matrix: Air

Sample ID: **Bldg5-SVE 4** Date Received: 6/15/2015 10:26

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
1,1,1-Trichloroethane	ND		ppbv	0.20	TO-15			6/25/15 03:00	ECB	A
1,1,2-Trichloroethane	ND		ppbv	0.20	TO-15			6/25/15 03:00	ECB	A
Trichloroethene	0.85		ppbv	0.20	TO-15			6/25/15 03:00	ECB	A
Vinyl Chloride	ND		ppbv	0.20	TO-15			6/25/15 03:00	ECB	A
o-Xylene	1.2		ppbv	0.20	TO-15			6/25/15 03:00	ECB	A
mp-Xylene	4.3		ppbv	0.40	TO-15			6/25/15 03:00	ECB	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
4-Bromofluorobenzene (S)	97		%	70 - 130	TO-15			6/25/15 03:00	ECB	A
4-Bromofluorobenzene (S)	95		%	70 - 130	TO-15			6/24/15 03:43	ECB	A

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ANALYTICAL RESULTS

Workorder: 2077588 CVC005|Varian Beverly 152780

Lab ID: **2077588006** Date Collected: 6/12/2015 11:17 Matrix: Air

Sample ID: **Bldg5-SVE 1** Date Received: 6/15/2015 10:26

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	*Cntr*
VOLATILE ORGANICS @ STP									
Acetone	73		ug/m3	0.5	TO-15		6/25/15 03:51	ECB	A
Benzene	0.8		ug/m3	0.6	TO-15		6/25/15 03:51	ECB	A
Bromodichloromethane	ND		ug/m3	1	TO-15		6/25/15 03:51	ECB	A
Bromoform	ND		ug/m3	2	TO-15		6/25/15 03:51	ECB	A
Bromomethane	ND		ug/m3	0.8	TO-15		6/25/15 03:51	ECB	A
2-Butanone	17		ug/m3	0.6	TO-15		6/25/15 03:51	ECB	A
Carbon Tetrachloride	ND		ug/m3	1	TO-15		6/25/15 03:51	ECB	A
Chlorobenzene	ND		ug/m3	0.9	TO-15		6/25/15 03:51	ECB	A
Chlorodibromomethane	ND		ug/m3	2	TO-15		6/25/15 03:51	ECB	A
Chloroform	1		ug/m3	1	TO-15		6/25/15 03:51	ECB	A
1,2-Dibromoethane	ND		ug/m3	2	TO-15		6/25/15 03:51	ECB	A
1,2-Dichlorobenzene	ND		ug/m3	1	TO-15		6/25/15 03:51	ECB	A
1,3-Dichlorobenzene	9		ug/m3	1	TO-15		6/25/15 03:51	ECB	A
1,4-Dichlorobenzene	ND		ug/m3	1	TO-15		6/25/15 03:51	ECB	A
1,1-Dichloroethane	ND		ug/m3	0.8	TO-15		6/25/15 03:51	ECB	A
1,2-Dichloroethane	ND		ug/m3	0.8	TO-15		6/25/15 03:51	ECB	A
1,1-Dichloroethene	ND		ug/m3	0.8	TO-15		6/25/15 03:51	ECB	A
cis-1,2-Dichloroethene	47		ug/m3	0.8	TO-15		6/25/15 03:51	ECB	A
trans-1,2-Dichloroethene	ND		ug/m3	0.8	TO-15		6/25/15 03:51	ECB	A
1,2-Dichloropropane	ND		ug/m3	0.9	TO-15		6/25/15 03:51	ECB	A
cis-1,3-Dichloropropene	ND		ug/m3	0.9	TO-15		6/25/15 03:51	ECB	A
trans-1,3-Dichloropropene	ND		ug/m3	0.9	TO-15		6/25/15 03:51	ECB	A
1,4-Dioxane	ND		ug/m3	0.7	TO-15		6/25/15 03:51	ECB	A
Ethylbenzene	3		ug/m3	0.9	TO-15		6/25/15 03:51	ECB	A
Hexachlorobutadiene	ND		ug/m3	2	TO-15		6/25/15 03:51	ECB	A
2-Hexanone	ND		ug/m3	0.8	TO-15		6/25/15 03:51	ECB	A
Methyl t-Butyl Ether	ND		ug/m3	0.7	TO-15		6/25/15 03:51	ECB	A
4-Methyl-2-Pentanone(MIBK)	4		ug/m3	0.8	TO-15		6/25/15 03:51	ECB	A
Methylene Chloride	2		ug/m3	0.7	TO-15		6/25/15 03:51	ECB	A
Naphthalene	ND		ug/m3	1	TO-15		6/25/15 03:51	ECB	A
Styrene	ND		ug/m3	0.8	TO-15		6/25/15 03:51	ECB	A
1,1,2,2-Tetrachloroethane	ND		ug/m3	1	TO-15		6/25/15 03:51	ECB	A
Tetrachloroethene	170		ug/m3	1	TO-15		6/25/15 03:51	ECB	A
Toluene	3		ug/m3	0.8	TO-15		6/25/15 03:51	ECB	A
1,1,1-Trichloroethane	ND		ug/m3	1	TO-15		6/25/15 03:51	ECB	A
1,1,2-Trichloroethane	ND		ug/m3	1	TO-15		6/25/15 03:51	ECB	A

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ANALYTICAL RESULTS

Workorder: 2077588 CVC005|Varian Beverly 152780

Lab ID: **2077588006** Date Collected: 6/12/2015 11:17 Matrix: Air

Sample ID: **Bldg5-SVE 1** Date Received: 6/15/2015 10:26

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	*Cntr*
Trichloroethene	1600		ug/m3	11	TO-15		6/24/15 04:32	ECB	A
Vinyl Chloride	ND		ug/m3	0.5	TO-15		6/25/15 03:51	ECB	A
o-Xylene	4		ug/m3	0.9	TO-15		6/25/15 03:51	ECB	A
mp-Xylene	13		ug/m3	2	TO-15		6/25/15 03:51	ECB	A
Acetone	31		ppbv	0.20	TO-15		6/25/15 03:51	ECB	A
Benzene	0.26		ppbv	0.20	TO-15		6/25/15 03:51	ECB	A
Bromodichloromethane	ND		ppbv	0.20	TO-15		6/25/15 03:51	ECB	A
Bromoform	ND		ppbv	0.20	TO-15		6/25/15 03:51	ECB	A
Bromomethane	ND		ppbv	0.20	TO-15		6/25/15 03:51	ECB	A
2-Butanone	5.8		ppbv	0.20	TO-15		6/25/15 03:51	ECB	A
Carbon Tetrachloride	ND		ppbv	0.20	TO-15		6/25/15 03:51	ECB	A
Chlorobenzene	ND		ppbv	0.20	TO-15		6/25/15 03:51	ECB	A
Chlorodibromomethane	ND		ppbv	0.20	TO-15		6/25/15 03:51	ECB	A
Chloroform	0.27		ppbv	0.20	TO-15		6/25/15 03:51	ECB	A
1,2-Dibromoethane	ND		ppbv	0.20	TO-15		6/25/15 03:51	ECB	A
1,2-Dichlorobenzene	ND		ppbv	0.20	TO-15		6/25/15 03:51	ECB	A
1,3-Dichlorobenzene	1.5		ppbv	0.20	TO-15		6/25/15 03:51	ECB	A
1,4-Dichlorobenzene	ND		ppbv	0.20	TO-15		6/25/15 03:51	ECB	A
1,1-Dichloroethane	ND		ppbv	0.20	TO-15		6/25/15 03:51	ECB	A
1,2-Dichloroethane	ND		ppbv	0.20	TO-15		6/25/15 03:51	ECB	A
1,1-Dichloroethene	ND		ppbv	0.20	TO-15		6/25/15 03:51	ECB	A
cis-1,2-Dichloroethene	12		ppbv	0.20	TO-15		6/25/15 03:51	ECB	A
trans-1,2-Dichloroethene	ND		ppbv	0.20	TO-15		6/25/15 03:51	ECB	A
1,2-Dichloropropane	ND		ppbv	0.20	TO-15		6/25/15 03:51	ECB	A
cis-1,3-Dichloropropene	ND		ppbv	0.20	TO-15		6/25/15 03:51	ECB	A
trans-1,3-Dichloropropene	ND		ppbv	0.20	TO-15		6/25/15 03:51	ECB	A
1,4-Dioxane	ND		ppbv	0.20	TO-15		6/25/15 03:51	ECB	A
Ethylbenzene	0.69		ppbv	0.20	TO-15		6/25/15 03:51	ECB	A
Hexachlorobutadiene	ND		ppbv	0.20	TO-15		6/25/15 03:51	ECB	A
2-Hexanone	ND		ppbv	0.20	TO-15		6/25/15 03:51	ECB	A
Methyl t-Butyl Ether	ND		ppbv	0.20	TO-15		6/25/15 03:51	ECB	A
4-Methyl-2-Pentanone(MIBK)	1.1		ppbv	0.20	TO-15		6/25/15 03:51	ECB	A
Methylene Chloride	0.71		ppbv	0.20	TO-15		6/25/15 03:51	ECB	A
Naphthalene	ND		ppbv	0.20	TO-15		6/25/15 03:51	ECB	A
Styrene	ND		ppbv	0.20	TO-15		6/25/15 03:51	ECB	A
1,1,2,2-Tetrachloroethane	ND		ppbv	0.20	TO-15		6/25/15 03:51	ECB	A
Tetrachloroethene	24		ppbv	0.20	TO-15		6/25/15 03:51	ECB	A
Toluene	0.86		ppbv	0.20	TO-15		6/25/15 03:51	ECB	A

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ANALYTICAL RESULTS

Workorder: 2077588 CVC005|Varian Beverly 152780

Lab ID: **2077588006** Date Collected: 6/12/2015 11:17 Matrix: Air

Sample ID: **Bldg5-SVE 1** Date Received: 6/15/2015 10:26

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
1,1,1-Trichloroethane	ND		ppbv	0.20	TO-15		6/25/15 03:51	ECB	A
1,1,2-Trichloroethane	ND		ppbv	0.20	TO-15		6/25/15 03:51	ECB	A
Trichloroethene	300		ppbv	2.0	TO-15		6/24/15 04:32	ECB	A
Vinyl Chloride	ND		ppbv	0.20	TO-15		6/25/15 03:51	ECB	A
o-Xylene	0.84		ppbv	0.20	TO-15		6/25/15 03:51	ECB	A
mp-Xylene	2.9		ppbv	0.40	TO-15		6/25/15 03:51	ECB	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared By*	*Analyzed*	*By*	*Cntr*
4-Bromofluorobenzene (S)	95		%	70 - 130	TO-15		6/24/15 04:32	ECB	A
4-Bromofluorobenzene (S)	97		%	70 - 130	TO-15		6/25/15 03:51	ECB	A

Vicki Forney

Mrs. Vicki A. Forney
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ANALYTICAL RESULTS

Workorder: 2077588 CVC005|Varian Beverly 152780

Lab ID: **2077588007** Date Collected: 6/12/2015 10:27 Matrix: Air

Sample ID: **Bldg5-SV 1** Date Received: 6/15/2015 10:26

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	*Cntr*
VOLATILE ORGANICS @ STP									
Acetone	130		ug/m3	5	TO-15		6/24/15 05:21	ECB	A
Benzene	2		ug/m3	0.6	TO-15		6/25/15 04:42	ECB	A
Bromodichloromethane	ND		ug/m3	1	TO-15		6/25/15 04:42	ECB	A
Bromoform	ND		ug/m3	2	TO-15		6/25/15 04:42	ECB	A
Bromomethane	ND		ug/m3	0.8	TO-15		6/25/15 04:42	ECB	A
2-Butanone	170		ug/m3	6	TO-15		6/24/15 05:21	ECB	A
Carbon Tetrachloride	ND		ug/m3	1	TO-15		6/25/15 04:42	ECB	A
Chlorobenzene	ND		ug/m3	0.9	TO-15		6/25/15 04:42	ECB	A
Chlorodibromomethane	ND		ug/m3	2	TO-15		6/25/15 04:42	ECB	A
Chloroform	12		ug/m3	1	TO-15		6/25/15 04:42	ECB	A
1,2-Dibromoethane	ND		ug/m3	2	TO-15		6/25/15 04:42	ECB	A
1,2-Dichlorobenzene	ND		ug/m3	1	TO-15		6/25/15 04:42	ECB	A
1,3-Dichlorobenzene	23		ug/m3	1	TO-15		6/25/15 04:42	ECB	A
1,4-Dichlorobenzene	ND		ug/m3	1	TO-15		6/25/15 04:42	ECB	A
1,1-Dichloroethane	ND		ug/m3	0.8	TO-15		6/25/15 04:42	ECB	A
1,2-Dichloroethane	ND		ug/m3	0.8	TO-15		6/25/15 04:42	ECB	A
1,1-Dichloroethene	ND		ug/m3	0.8	TO-15		6/25/15 04:42	ECB	A
cis-1,2-Dichloroethene	ND		ug/m3	0.8	TO-15		6/25/15 04:42	ECB	A
trans-1,2-Dichloroethene	ND		ug/m3	0.8	TO-15		6/25/15 04:42	ECB	A
1,2-Dichloropropane	ND		ug/m3	0.9	TO-15		6/25/15 04:42	ECB	A
cis-1,3-Dichloropropene	ND		ug/m3	0.9	TO-15		6/25/15 04:42	ECB	A
trans-1,3-Dichloropropene	ND		ug/m3	0.9	TO-15		6/25/15 04:42	ECB	A
1,4-Dioxane	ND		ug/m3	0.7	TO-15		6/25/15 04:42	ECB	A
Ethylbenzene	5		ug/m3	0.9	TO-15		6/25/15 04:42	ECB	A
Hexachlorobutadiene	ND		ug/m3	2	TO-15		6/25/15 04:42	ECB	A
2-Hexanone	ND		ug/m3	0.8	TO-15		6/25/15 04:42	ECB	A
Methyl t-Butyl Ether	ND		ug/m3	0.7	TO-15		6/25/15 04:42	ECB	A
4-Methyl-2-Pentanone(MIBK)	0.9		ug/m3	0.8	TO-15		6/25/15 04:42	ECB	A
Methylene Chloride	3		ug/m3	0.7	TO-15		6/25/15 04:42	ECB	A
Naphthalene	1		ug/m3	1	TO-15		6/25/15 04:42	ECB	A
Styrene	ND		ug/m3	0.8	TO-15		6/25/15 04:42	ECB	A
1,1,2,2-Tetrachloroethane	ND		ug/m3	1	TO-15		6/25/15 04:42	ECB	A
Tetrachloroethene	14		ug/m3	1	TO-15		6/25/15 04:42	ECB	A
Toluene	29		ug/m3	0.8	TO-15		6/25/15 04:42	ECB	A
1,1,1-Trichloroethane	ND		ug/m3	1	TO-15		6/25/15 04:42	ECB	A
1,1,2-Trichloroethane	ND		ug/m3	1	TO-15		6/25/15 04:42	ECB	A

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ANALYTICAL RESULTS

Workorder: 2077588 CVC005|Varian Beverly 152780

Lab ID: **2077588007** Date Collected: 6/12/2015 10:27 Matrix: Air

Sample ID: **Bldg5-SV 1** Date Received: 6/15/2015 10:26

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	*Cntr*
Trichloroethene	28		ug/m3	1	TO-15		6/25/15 04:42	ECB	A
Vinyl Chloride	ND		ug/m3	0.5	TO-15		6/25/15 04:42	ECB	A
o-Xylene	6		ug/m3	0.9	TO-15		6/25/15 04:42	ECB	A
mp-Xylene	16		ug/m3	2	TO-15		6/25/15 04:42	ECB	A
Acetone	57		ppbv	2.0	TO-15		6/24/15 05:21	ECB	A
Benzene	0.56		ppbv	0.20	TO-15		6/25/15 04:42	ECB	A
Bromodichloromethane	ND		ppbv	0.20	TO-15		6/25/15 04:42	ECB	A
Bromoform	ND		ppbv	0.20	TO-15		6/25/15 04:42	ECB	A
Bromomethane	ND		ppbv	0.20	TO-15		6/25/15 04:42	ECB	A
2-Butanone	59		ppbv	2.0	TO-15		6/24/15 05:21	ECB	A
Carbon Tetrachloride	ND		ppbv	0.20	TO-15		6/25/15 04:42	ECB	A
Chlorobenzene	ND		ppbv	0.20	TO-15		6/25/15 04:42	ECB	A
Chlorodibromomethane	ND		ppbv	0.20	TO-15		6/25/15 04:42	ECB	A
Chloroform	2.5		ppbv	0.20	TO-15		6/25/15 04:42	ECB	A
1,2-Dibromoethane	ND		ppbv	0.20	TO-15		6/25/15 04:42	ECB	A
1,2-Dichlorobenzene	ND		ppbv	0.20	TO-15		6/25/15 04:42	ECB	A
1,3-Dichlorobenzene	3.8		ppbv	0.20	TO-15		6/25/15 04:42	ECB	A
1,4-Dichlorobenzene	ND		ppbv	0.20	TO-15		6/25/15 04:42	ECB	A
1,1-Dichloroethane	ND		ppbv	0.20	TO-15		6/25/15 04:42	ECB	A
1,2-Dichloroethane	ND		ppbv	0.20	TO-15		6/25/15 04:42	ECB	A
1,1-Dichloroethene	ND		ppbv	0.20	TO-15		6/25/15 04:42	ECB	A
cis-1,2-Dichloroethene	ND		ppbv	0.20	TO-15		6/25/15 04:42	ECB	A
trans-1,2-Dichloroethene	ND		ppbv	0.20	TO-15		6/25/15 04:42	ECB	A
1,2-Dichloropropane	ND		ppbv	0.20	TO-15		6/25/15 04:42	ECB	A
cis-1,3-Dichloropropene	ND		ppbv	0.20	TO-15		6/25/15 04:42	ECB	A
trans-1,3-Dichloropropene	ND		ppbv	0.20	TO-15		6/25/15 04:42	ECB	A
1,4-Dioxane	ND		ppbv	0.20	TO-15		6/25/15 04:42	ECB	A
Ethylbenzene	1.1		ppbv	0.20	TO-15		6/25/15 04:42	ECB	A
Hexachlorobutadiene	ND		ppbv	0.20	TO-15		6/25/15 04:42	ECB	A
2-Hexanone	ND		ppbv	0.20	TO-15		6/25/15 04:42	ECB	A
Methyl t-Butyl Ether	ND		ppbv	0.20	TO-15		6/25/15 04:42	ECB	A
4-Methyl-2-Pentanone(MIBK)	0.23		ppbv	0.20	TO-15		6/25/15 04:42	ECB	A
Methylene Chloride	0.74		ppbv	0.20	TO-15		6/25/15 04:42	ECB	A
Naphthalene	0.21		ppbv	0.20	TO-15		6/25/15 04:42	ECB	A
Styrene	ND		ppbv	0.20	TO-15		6/25/15 04:42	ECB	A
1,1,2,2-Tetrachloroethane	ND		ppbv	0.20	TO-15		6/25/15 04:42	ECB	A
Tetrachloroethene	2.0		ppbv	0.20	TO-15		6/25/15 04:42	ECB	A
Toluene	7.8		ppbv	0.20	TO-15		6/25/15 04:42	ECB	A

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ANALYTICAL RESULTS

Workorder: 2077588 CVC005|Varian Beverly 152780

Lab ID: **2077588007** Date Collected: 6/12/2015 10:27 Matrix: Air

Sample ID: **Bldg5-SV 1** Date Received: 6/15/2015 10:26

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
1,1,1-Trichloroethane	ND		ppbv	0.20	TO-15			6/25/15 04:42	ECB	A
1,1,2-Trichloroethane	ND		ppbv	0.20	TO-15			6/25/15 04:42	ECB	A
Trichloroethene	5.1		ppbv	0.20	TO-15			6/25/15 04:42	ECB	A
Vinyl Chloride	ND		ppbv	0.20	TO-15			6/25/15 04:42	ECB	A
o-Xylene	1.3		ppbv	0.20	TO-15			6/25/15 04:42	ECB	A
mp-Xylene	3.7		ppbv	0.40	TO-15			6/25/15 04:42	ECB	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
4-Bromofluorobenzene (S)	96		%	70 - 130	TO-15			6/25/15 04:42	ECB	A
4-Bromofluorobenzene (S)	95		%	70 - 130	TO-15			6/24/15 05:21	ECB	A

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ANALYTICAL RESULTS

Workorder: 2077588 CVC005|Varian Beverly 152780

Lab ID: **2077588008** Date Collected: 6/12/2015 10:31 Matrix: Air

Sample ID: **Bldg5-SV 3** Date Received: 6/15/2015 10:26

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	*Cntr*
VOLATILE ORGANICS @ STP									
Acetone	230		ug/m3	5	TO-15		6/24/15 18:34	ECB	A
Benzene	2		ug/m3	0.6	TO-15		6/25/15 07:13	ECB	A
Bromodichloromethane	ND		ug/m3	1	TO-15		6/25/15 07:13	ECB	A
Bromoform	ND		ug/m3	2	TO-15		6/25/15 07:13	ECB	A
Bromomethane	ND		ug/m3	0.8	TO-15		6/25/15 07:13	ECB	A
2-Butanone	270		ug/m3	6	TO-15		6/24/15 18:34	ECB	A
Carbon Tetrachloride	ND		ug/m3	1	TO-15		6/25/15 07:13	ECB	A
Chlorobenzene	ND		ug/m3	0.9	TO-15		6/25/15 07:13	ECB	A
Chlorodibromomethane	ND		ug/m3	2	TO-15		6/25/15 07:13	ECB	A
Chloroform	ND		ug/m3	1	TO-15		6/25/15 07:13	ECB	A
1,2-Dibromoethane	ND		ug/m3	2	TO-15		6/25/15 07:13	ECB	A
1,2-Dichlorobenzene	ND		ug/m3	1	TO-15		6/25/15 07:13	ECB	A
1,3-Dichlorobenzene	17		ug/m3	1	TO-15		6/25/15 07:13	ECB	A
1,4-Dichlorobenzene	ND		ug/m3	1	TO-15		6/25/15 07:13	ECB	A
1,1-Dichloroethane	ND		ug/m3	0.8	TO-15		6/25/15 07:13	ECB	A
1,2-Dichloroethane	ND		ug/m3	0.8	TO-15		6/25/15 07:13	ECB	A
1,1-Dichloroethene	ND		ug/m3	0.8	TO-15		6/25/15 07:13	ECB	A
cis-1,2-Dichloroethene	1		ug/m3	0.8	TO-15		6/25/15 07:13	ECB	A
trans-1,2-Dichloroethene	ND		ug/m3	0.8	TO-15		6/25/15 07:13	ECB	A
1,2-Dichloropropane	ND		ug/m3	0.9	TO-15		6/25/15 07:13	ECB	A
cis-1,3-Dichloropropene	ND		ug/m3	0.9	TO-15		6/25/15 07:13	ECB	A
trans-1,3-Dichloropropene	ND		ug/m3	0.9	TO-15		6/25/15 07:13	ECB	A
1,4-Dioxane	ND		ug/m3	0.7	TO-15		6/25/15 07:13	ECB	A
Ethylbenzene	5		ug/m3	0.9	TO-15		6/25/15 07:13	ECB	A
Hexachlorobutadiene	ND		ug/m3	2	TO-15		6/25/15 07:13	ECB	A
2-Hexanone	ND		ug/m3	0.8	TO-15		6/25/15 07:13	ECB	A
Methyl t-Butyl Ether	ND		ug/m3	0.7	TO-15		6/25/15 07:13	ECB	A
4-Methyl-2-Pentanone(MIBK)	2		ug/m3	0.8	TO-15		6/25/15 07:13	ECB	A
Methylene Chloride	2		ug/m3	0.7	TO-15		6/25/15 07:13	ECB	A
Naphthalene	ND		ug/m3	1	TO-15		6/25/15 07:13	ECB	A
Styrene	ND		ug/m3	0.8	TO-15		6/25/15 07:13	ECB	A
1,1,2,2-Tetrachloroethane	ND		ug/m3	1	TO-15		6/25/15 07:13	ECB	A
Tetrachloroethene	50		ug/m3	1	TO-15		6/25/15 07:13	ECB	A
Toluene	31		ug/m3	0.8	TO-15		6/25/15 07:13	ECB	A
1,1,1-Trichloroethane	1		ug/m3	1	TO-15		6/25/15 07:13	ECB	A
1,1,2-Trichloroethane	ND		ug/m3	1	TO-15		6/25/15 07:13	ECB	A

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ANALYTICAL RESULTS

Workorder: 2077588 CVC005|Varian Beverly 152780

Lab ID: **2077588008** Date Collected: 6/12/2015 10:31 Matrix: Air

Sample ID: **Bldg5-SV 3** Date Received: 6/15/2015 10:26

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
Trichloroethene	230		ug/m3	11	TO-15		6/24/15 18:34	ECB	A
Vinyl Chloride	ND		ug/m3	0.5	TO-15		6/25/15 07:13	ECB	A
o-Xylene	6		ug/m3	0.9	TO-15		6/25/15 07:13	ECB	A
mp-Xylene	16		ug/m3	2	TO-15		6/25/15 07:13	ECB	A
Acetone	99		ppbv	2.0	TO-15		6/24/15 18:34	ECB	A
Benzene	0.58		ppbv	0.20	TO-15		6/25/15 07:13	ECB	A
Bromodichloromethane	ND		ppbv	0.20	TO-15		6/25/15 07:13	ECB	A
Bromoform	ND		ppbv	0.20	TO-15		6/25/15 07:13	ECB	A
Bromomethane	ND		ppbv	0.20	TO-15		6/25/15 07:13	ECB	A
2-Butanone	90		ppbv	2.0	TO-15		6/24/15 18:34	ECB	A
Carbon Tetrachloride	ND		ppbv	0.20	TO-15		6/25/15 07:13	ECB	A
Chlorobenzene	ND		ppbv	0.20	TO-15		6/25/15 07:13	ECB	A
Chlorodibromomethane	ND		ppbv	0.20	TO-15		6/25/15 07:13	ECB	A
Chloroform	ND		ppbv	0.20	TO-15		6/25/15 07:13	ECB	A
1,2-Dibromoethane	ND		ppbv	0.20	TO-15		6/25/15 07:13	ECB	A
1,2-Dichlorobenzene	ND		ppbv	0.20	TO-15		6/25/15 07:13	ECB	A
1,3-Dichlorobenzene	2.8		ppbv	0.20	TO-15		6/25/15 07:13	ECB	A
1,4-Dichlorobenzene	ND		ppbv	0.20	TO-15		6/25/15 07:13	ECB	A
1,1-Dichloroethane	ND		ppbv	0.20	TO-15		6/25/15 07:13	ECB	A
1,2-Dichloroethane	ND		ppbv	0.20	TO-15		6/25/15 07:13	ECB	A
1,1-Dichloroethene	ND		ppbv	0.20	TO-15		6/25/15 07:13	ECB	A
cis-1,2-Dichloroethene	0.24		ppbv	0.20	TO-15		6/25/15 07:13	ECB	A
trans-1,2-Dichloroethene	ND		ppbv	0.20	TO-15		6/25/15 07:13	ECB	A
1,2-Dichloropropane	ND		ppbv	0.20	TO-15		6/25/15 07:13	ECB	A
cis-1,3-Dichloropropene	ND		ppbv	0.20	TO-15		6/25/15 07:13	ECB	A
trans-1,3-Dichloropropene	ND		ppbv	0.20	TO-15		6/25/15 07:13	ECB	A
1,4-Dioxane	ND		ppbv	0.20	TO-15		6/25/15 07:13	ECB	A
Ethylbenzene	1.1		ppbv	0.20	TO-15		6/25/15 07:13	ECB	A
Hexachlorobutadiene	ND		ppbv	0.20	TO-15		6/25/15 07:13	ECB	A
2-Hexanone	ND		ppbv	0.20	TO-15		6/25/15 07:13	ECB	A
Methyl t-Butyl Ether	ND		ppbv	0.20	TO-15		6/25/15 07:13	ECB	A
4-Methyl-2-Pentanone(MIBK)	0.37		ppbv	0.20	TO-15		6/25/15 07:13	ECB	A
Methylene Chloride	0.63		ppbv	0.20	TO-15		6/25/15 07:13	ECB	A
Naphthalene	ND		ppbv	0.20	TO-15		6/25/15 07:13	ECB	A
Styrene	ND		ppbv	0.20	TO-15		6/25/15 07:13	ECB	A
1,1,2,2-Tetrachloroethane	ND		ppbv	0.20	TO-15		6/25/15 07:13	ECB	A
Tetrachloroethene	7.4		ppbv	0.20	TO-15		6/25/15 07:13	ECB	A
Toluene	8.1		ppbv	0.20	TO-15		6/25/15 07:13	ECB	A

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ANALYTICAL RESULTS

Workorder: 2077588 CVC005|Varian Beverly 152780

Lab ID: **2077588008** Date Collected: 6/12/2015 10:31 Matrix: Air

Sample ID: **Bldg5-SV 3** Date Received: 6/15/2015 10:26

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
1,1,1-Trichloroethane	0.25		ppbv	0.20	TO-15			6/25/15 07:13	ECB	A
1,1,2-Trichloroethane	ND		ppbv	0.20	TO-15			6/25/15 07:13	ECB	A
Trichloroethene	43		ppbv	2.0	TO-15			6/24/15 18:34	ECB	A
Vinyl Chloride	ND		ppbv	0.20	TO-15			6/25/15 07:13	ECB	A
o-Xylene	1.3		ppbv	0.20	TO-15			6/25/15 07:13	ECB	A
mp-Xylene	3.6		ppbv	0.40	TO-15			6/25/15 07:13	ECB	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
4-Bromofluorobenzene (S)	97		%	70 - 130	TO-15			6/24/15 18:34	ECB	A
4-Bromofluorobenzene (S)	97		%	70 - 130	TO-15			6/25/15 07:13	ECB	A

Vicki Forney

Mrs. Vicki A. Forney
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2077588 CVC005|Varian Beverly 152780

Lab ID: **2077588009** Date Collected: 6/12/2015 10:29 Matrix: Air

Sample ID: **Bldg5-SV 5** Date Received: 6/15/2015 10:26

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	*Cntr*
VOLATILE ORGANICS @ STP									
Acetone	210		ug/m3	5	TO-15		6/24/15 19:23	ECB	A
Benzene	2		ug/m3	0.6	TO-15		6/25/15 08:04	ECB	A
Bromodichloromethane	ND		ug/m3	1	TO-15		6/25/15 08:04	ECB	A
Bromoform	ND		ug/m3	2	TO-15		6/25/15 08:04	ECB	A
Bromomethane	ND		ug/m3	0.8	TO-15		6/25/15 08:04	ECB	A
2-Butanone	270		ug/m3	6	TO-15		6/24/15 19:23	ECB	A
Carbon Tetrachloride	ND		ug/m3	1	TO-15		6/25/15 08:04	ECB	A
Chlorobenzene	ND		ug/m3	0.9	TO-15		6/25/15 08:04	ECB	A
Chlorodibromomethane	ND		ug/m3	2	TO-15		6/25/15 08:04	ECB	A
Chloroform	ND		ug/m3	1	TO-15		6/25/15 08:04	ECB	A
1,2-Dibromoethane	ND		ug/m3	2	TO-15		6/25/15 08:04	ECB	A
1,2-Dichlorobenzene	ND		ug/m3	1	TO-15		6/25/15 08:04	ECB	A
1,3-Dichlorobenzene	10		ug/m3	1	TO-15		6/25/15 08:04	ECB	A
1,4-Dichlorobenzene	ND		ug/m3	1	TO-15		6/25/15 08:04	ECB	A
1,1-Dichloroethane	ND		ug/m3	0.8	TO-15		6/25/15 08:04	ECB	A
1,2-Dichloroethane	ND		ug/m3	0.8	TO-15		6/25/15 08:04	ECB	A
1,1-Dichloroethene	ND		ug/m3	0.8	TO-15		6/25/15 08:04	ECB	A
cis-1,2-Dichloroethene	ND		ug/m3	0.8	TO-15		6/25/15 08:04	ECB	A
trans-1,2-Dichloroethene	ND		ug/m3	0.8	TO-15		6/25/15 08:04	ECB	A
1,2-Dichloropropane	ND		ug/m3	0.9	TO-15		6/25/15 08:04	ECB	A
cis-1,3-Dichloropropene	ND		ug/m3	0.9	TO-15		6/25/15 08:04	ECB	A
trans-1,3-Dichloropropene	ND		ug/m3	0.9	TO-15		6/25/15 08:04	ECB	A
1,4-Dioxane	ND		ug/m3	0.7	TO-15		6/25/15 08:04	ECB	A
Ethylbenzene	4		ug/m3	0.9	TO-15		6/25/15 08:04	ECB	A
Hexachlorobutadiene	ND		ug/m3	2	TO-15		6/25/15 08:04	ECB	A
2-Hexanone	ND		ug/m3	0.8	TO-15		6/25/15 08:04	ECB	A
Methyl t-Butyl Ether	0.8		ug/m3	0.7	TO-15		6/25/15 08:04	ECB	A
4-Methyl-2-Pentanone(MIBK)	3		ug/m3	0.8	TO-15		6/25/15 08:04	ECB	A
Methylene Chloride	46		ug/m3	0.7	TO-15		6/25/15 08:04	ECB	A
Naphthalene	ND		ug/m3	1	TO-15		6/25/15 08:04	ECB	A
Styrene	ND		ug/m3	0.8	TO-15		6/25/15 08:04	ECB	A
1,1,2,2-Tetrachloroethane	ND		ug/m3	1	TO-15		6/25/15 08:04	ECB	A
Tetrachloroethene	5		ug/m3	1	TO-15		6/25/15 08:04	ECB	A
Toluene	34		ug/m3	0.8	TO-15		6/25/15 08:04	ECB	A
1,1,1-Trichloroethane	ND		ug/m3	1	TO-15		6/25/15 08:04	ECB	A
1,1,2-Trichloroethane	ND		ug/m3	1	TO-15		6/25/15 08:04	ECB	A

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ANALYTICAL RESULTS

Workorder: 2077588 CVC005|Varian Beverly 152780

Lab ID: **2077588009** Date Collected: 6/12/2015 10:29 Matrix: Air

Sample ID: **Bldg5-SV 5** Date Received: 6/15/2015 10:26

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	*Cntr*
Trichloroethene	2		ug/m3	1	TO-15		6/25/15 08:04	ECB	A
Vinyl Chloride	ND		ug/m3	0.5	TO-15		6/25/15 08:04	ECB	A
o-Xylene	5		ug/m3	0.9	TO-15		6/25/15 08:04	ECB	A
mp-Xylene	13		ug/m3	2	TO-15		6/25/15 08:04	ECB	A
Acetone	90		ppbv	2.0	TO-15		6/24/15 19:23	ECB	A
Benzene	0.63		ppbv	0.20	TO-15		6/25/15 08:04	ECB	A
Bromodichloromethane	ND		ppbv	0.20	TO-15		6/25/15 08:04	ECB	A
Bromoform	ND		ppbv	0.20	TO-15		6/25/15 08:04	ECB	A
Bromomethane	ND		ppbv	0.20	TO-15		6/25/15 08:04	ECB	A
2-Butanone	93		ppbv	2.0	TO-15		6/24/15 19:23	ECB	A
Carbon Tetrachloride	ND		ppbv	0.20	TO-15		6/25/15 08:04	ECB	A
Chlorobenzene	ND		ppbv	0.20	TO-15		6/25/15 08:04	ECB	A
Chlorodibromomethane	ND		ppbv	0.20	TO-15		6/25/15 08:04	ECB	A
Chloroform	ND		ppbv	0.20	TO-15		6/25/15 08:04	ECB	A
1,2-Dibromoethane	ND		ppbv	0.20	TO-15		6/25/15 08:04	ECB	A
1,2-Dichlorobenzene	ND		ppbv	0.20	TO-15		6/25/15 08:04	ECB	A
1,3-Dichlorobenzene	1.7		ppbv	0.20	TO-15		6/25/15 08:04	ECB	A
1,4-Dichlorobenzene	ND		ppbv	0.20	TO-15		6/25/15 08:04	ECB	A
1,1-Dichloroethane	ND		ppbv	0.20	TO-15		6/25/15 08:04	ECB	A
1,2-Dichloroethane	ND		ppbv	0.20	TO-15		6/25/15 08:04	ECB	A
1,1-Dichloroethene	ND		ppbv	0.20	TO-15		6/25/15 08:04	ECB	A
cis-1,2-Dichloroethene	ND		ppbv	0.20	TO-15		6/25/15 08:04	ECB	A
trans-1,2-Dichloroethene	ND		ppbv	0.20	TO-15		6/25/15 08:04	ECB	A
1,2-Dichloropropane	ND		ppbv	0.20	TO-15		6/25/15 08:04	ECB	A
cis-1,3-Dichloropropene	ND		ppbv	0.20	TO-15		6/25/15 08:04	ECB	A
trans-1,3-Dichloropropene	ND		ppbv	0.20	TO-15		6/25/15 08:04	ECB	A
1,4-Dioxane	ND		ppbv	0.20	TO-15		6/25/15 08:04	ECB	A
Ethylbenzene	0.92		ppbv	0.20	TO-15		6/25/15 08:04	ECB	A
Hexachlorobutadiene	ND		ppbv	0.20	TO-15		6/25/15 08:04	ECB	A
2-Hexanone	ND		ppbv	0.20	TO-15		6/25/15 08:04	ECB	A
Methyl t-Butyl Ether	0.22		ppbv	0.20	TO-15		6/25/15 08:04	ECB	A
4-Methyl-2-Pentanone(MIBK)	0.67		ppbv	0.20	TO-15		6/25/15 08:04	ECB	A
Methylene Chloride	13		ppbv	0.20	TO-15		6/25/15 08:04	ECB	A
Naphthalene	ND		ppbv	0.20	TO-15		6/25/15 08:04	ECB	A
Styrene	ND		ppbv	0.20	TO-15		6/25/15 08:04	ECB	A
1,1,2,2-Tetrachloroethane	ND		ppbv	0.20	TO-15		6/25/15 08:04	ECB	A
Tetrachloroethene	0.76		ppbv	0.20	TO-15		6/25/15 08:04	ECB	A
Toluene	8.9		ppbv	0.20	TO-15		6/25/15 08:04	ECB	A

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ANALYTICAL RESULTS

Workorder: 2077588 CVC005|Varian Beverly 152780

Lab ID: **2077588009** Date Collected: 6/12/2015 10:29 Matrix: Air

Sample ID: **Bldg5-SV 5** Date Received: 6/15/2015 10:26

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
1,1,1-Trichloroethane	ND		ppbv	0.20	TO-15			6/25/15 08:04	ECB	A
1,1,2-Trichloroethane	ND		ppbv	0.20	TO-15			6/25/15 08:04	ECB	A
Trichloroethene	0.45		ppbv	0.20	TO-15			6/25/15 08:04	ECB	A
Vinyl Chloride	ND		ppbv	0.20	TO-15			6/25/15 08:04	ECB	A
o-Xylene	1.1		ppbv	0.20	TO-15			6/25/15 08:04	ECB	A
mp-Xylene	3.0		ppbv	0.40	TO-15			6/25/15 08:04	ECB	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
4-Bromofluorobenzene (S)	98		%	70 - 130	TO-15			6/24/15 19:23	ECB	A
4-Bromofluorobenzene (S)	97		%	70 - 130	TO-15			6/25/15 08:04	ECB	A

Vicki Forney

Mrs. Vicki A. Forney
Project Coordinator

QUALITY CONTROL DATA

Workorder: 2077588 CVC005|Varian Beverly 152780

QC Batch: TO15/2806 **Analysis Method:** TO-15

QC Batch Method: TO-15

Associated Lab Samples: 2077588001, 2077588002, 2077588003, 2077588004, 2077588005, 2077588006, 2077588007

METHOD BLANK: 2195803

Parameter	Blank Result	Units	Reporting Limit	Qualifiers
Vinyl Chloride	ND	ppbv	0.20	
Bromomethane	ND	ppbv	0.20	
Acetone	ND	ppbv	0.20	
1,1-Dichloroethene	ND	ppbv	0.20	
Methylene Chloride	ND	ppbv	0.20	
trans-1,2-Dichloroethene	ND	ppbv	0.20	
1,1-Dichloroethane	ND	ppbv	0.20	
Methyl t-Butyl Ether	ND	ppbv	0.20	
2-Butanone	ND	ppbv	0.20	
cis-1,2-Dichloroethene	ND	ppbv	0.20	
Chloroform	ND	ppbv	0.20	
1,2-Dichloroethane	ND	ppbv	0.20	
1,1,1-Trichloroethane	ND	ppbv	0.20	
Benzene	ND	ppbv	0.20	
Carbon Tetrachloride	ND	ppbv	0.20	
1,2-Dichloropropane	ND	ppbv	0.20	
Bromodichloromethane	ND	ppbv	0.20	
Trichloroethene	ND	ppbv	0.20	
1,4-Dioxane	ND	ppbv	0.20	
cis-1,3-Dichloropropene	ND	ppbv	0.20	
4-Methyl-2-Pentanone(MIBK)	ND	ppbv	0.20	
trans-1,3-Dichloropropene	ND	ppbv	0.20	
1,1,2-Trichloroethane	ND	ppbv	0.20	
Toluene	ND	ppbv	0.20	
2-Hexanone	ND	ppbv	0.20	
Chlorodibromomethane	ND	ppbv	0.20	
1,2-Dibromoethane	ND	ppbv	0.20	
Tetrachloroethene	ND	ppbv	0.20	
Chlorobenzene	ND	ppbv	0.20	
Ethylbenzene	ND	ppbv	0.20	
mp-Xylene	ND	ppbv	0.40	
Bromoform	ND	ppbv	0.20	
Styrene	ND	ppbv	0.20	
1,1,2,2-Tetrachloroethane	ND	ppbv	0.20	
o-Xylene	ND	ppbv	0.20	
1,3-Dichlorobenzene	ND	ppbv	0.20	
1,4-Dichlorobenzene	ND	ppbv	0.20	

QUALITY CONTROL DATA

Workorder: 2077588 CVC005|Varian Beverly 152780

1,2-Dichlorobenzene	ND	ppbv	0.20
Naphthalene	ND	ppbv	0.20
Hexachlorobutadiene	ND	ppbv	0.20
Vinyl Chloride	ND	ug/m3	0.5
Bromomethane	ND	ug/m3	0.8
Acetone	ND	ug/m3	0.5
1,1-Dichloroethene	ND	ug/m3	0.8
Methylene Chloride	ND	ug/m3	0.7
trans-1,2-Dichloroethene	ND	ug/m3	0.8
1,1-Dichloroethane	ND	ug/m3	0.8
Methyl t-Butyl Ether	ND	ug/m3	0.7
2-Butanone	ND	ug/m3	0.6
cis-1,2-Dichloroethene	ND	ug/m3	0.8
Chloroform	ND	ug/m3	1
1,2-Dichloroethane	ND	ug/m3	0.8
1,1,1-Trichloroethane	ND	ug/m3	1
Benzene	ND	ug/m3	0.6
Carbon Tetrachloride	ND	ug/m3	1
1,2-Dichloropropane	ND	ug/m3	0.9
Bromodichloromethane	ND	ug/m3	1
Trichloroethene	ND	ug/m3	1
1,4-Dioxane	ND	ug/m3	0.7
cis-1,3-Dichloropropene	ND	ug/m3	0.9
4-Methyl-2-Pentanone(MIBK)	ND	ug/m3	0.8
trans-1,3-Dichloropropene	ND	ug/m3	0.9
1,1,2-Trichloroethane	ND	ug/m3	1
Toluene	ND	ug/m3	0.8
2-Hexanone	ND	ug/m3	0.8
Chlorodibromomethane	ND	ug/m3	2
1,2-Dibromoethane	ND	ug/m3	2
Tetrachloroethene	ND	ug/m3	1
Chlorobenzene	ND	ug/m3	0.9
Ethylbenzene	ND	ug/m3	0.9
mp-Xylene	ND	ug/m3	2
Bromoform	ND	ug/m3	2
Styrene	ND	ug/m3	0.8
1,1,2,2-Tetrachloroethane	ND	ug/m3	1
o-Xylene	ND	ug/m3	0.9
1,3-Dichlorobenzene	ND	ug/m3	1
1,4-Dichlorobenzene	ND	ug/m3	1
1,2-Dichlorobenzene	ND	ug/m3	1
Naphthalene	ND	ug/m3	1
Hexachlorobutadiene	ND	ug/m3	2
4-Bromofluorobenzene (S)			
4-Bromofluorobenzene (S)	98	%	70 - 130

QUALITY CONTROL DATA

Workorder: 2077588 CVC005|Varian Beverly 152780

LABORATORY CONTROL SAMPLE: 2195804

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit	Qualifiers
Vinyl Chloride	110	ppbv	.2	0.22	60 - 140	
Bromomethane	111	ppbv	.2	0.22	60 - 140	
Acetone	113	ppbv	.2	0.23	60 - 140	
1,1-Dichloroethene	107	ppbv	.2	0.21	60 - 140	
Methylene Chloride	118	ppbv	.2	0.24	60 - 140	
trans-1,2-Dichloroethene	107	ppbv	.2	0.21	60 - 140	
1,1-Dichloroethane	108	ppbv	.2	0.22	60 - 140	
Methyl t-Butyl Ether	97	ppbv	.2	0.19	60 - 140	
2-Butanone	103	ppbv	.2	0.21	60 - 140	
cis-1,2-Dichloroethene	107	ppbv	.2	0.21	60 - 140	
Chloroform	106	ppbv	.2	0.21	60 - 140	
1,2-Dichloroethane	108	ppbv	.2	0.22	60 - 140	
1,1,1-Trichloroethane	104	ppbv	.2	0.21	60 - 140	
Benzene	107	ppbv	.2	0.21	60 - 140	
Carbon Tetrachloride	103	ppbv	.2	0.21	60 - 140	
1,2-Dichloropropane	109	ppbv	.2	0.22	60 - 140	
Bromodichloromethane	100	ppbv	.2	0.20	60 - 140	
Trichloroethene	106	ppbv	.2	0.21	60 - 140	
1,4-Dioxane	113	ppbv	.2	0.23	60 - 140	
cis-1,3-Dichloropropene	95	ppbv	.2	0.19	60 - 140	
4-Methyl-2-Pentanone(MIBK)	97	ppbv	.2	0.19	60 - 140	
trans-1,3-Dichloropropene	92	ppbv	.2	0.18	60 - 140	
1,1,2-Trichloroethane	107	ppbv	.2	0.21	60 - 140	
Toluene	103	ppbv	.2	0.21	60 - 140	
2-Hexanone	90	ppbv	.2	0.18	60 - 140	
Chlorodibromomethane	95	ppbv	.2	0.19	60 - 140	
1,2-Dibromoethane	104	ppbv	.2	0.21	60 - 140	
Tetrachloroethene	104	ppbv	.2	0.21	60 - 140	
Chlorobenzene	109	ppbv	.2	0.22	60 - 140	
Ethylbenzene	105	ppbv	.2	0.21	60 - 140	
mp-Xylene	105	ppbv	.4	0.42	60 - 140	
Bromoform	89	ppbv	.2	0.18	60 - 140	
Styrene	98	ppbv	.2	0.20	60 - 140	
1,1,2,2-Tetrachloroethane	110	ppbv	.2	0.22	60 - 140	
o-Xylene	107	ppbv	.2	0.21	60 - 140	
1,3-Dichlorobenzene	112	ppbv	.2	0.22	60 - 140	
1,4-Dichlorobenzene	111	ppbv	.2	0.22	60 - 140	
1,2-Dichlorobenzene	109	ppbv	.2	0.22	60 - 140	
Naphthalene	99	ppbv	.2	0.20	60 - 140	
Hexachlorobutadiene	105	ppbv	.2	0.21	60 - 140	

QUALITY CONTROL DATA

Workorder: 2077588 CVC005|Varian Beverly 152780

Vinyl Chloride	110	ug/m3	.5	0.6	60 - 140
Bromomethane	111	ug/m3	.8	0.9	60 - 140
Acetone	113	ug/m3	.5	0.5	60 - 140
1,1-Dichloroethene	107	ug/m3	.8	0.8	60 - 140
Methylene Chloride	118	ug/m3	.7	0.8	60 - 140
trans-1,2-Dichloroethene	107	ug/m3	.8	0.8	60 - 140
1,1-Dichloroethane	108	ug/m3	.8	0.9	60 - 140
Methyl t-Butyl Ether	97	ug/m3	.7	0.7	60 - 140
2-Butanone	103	ug/m3	.6	0.6	60 - 140
cis-1,2-Dichloroethene	107	ug/m3	.8	0.8	60 - 140
Chloroform	106	ug/m3	1	1	60 - 140
1,2-Dichloroethane	108	ug/m3	.8	0.9	60 - 140
1,1,1-Trichloroethane	104	ug/m3	1	1	60 - 140
Benzene	107	ug/m3	.6	0.7	60 - 140
Carbon Tetrachloride	103	ug/m3	1	1	60 - 140
1,2-Dichloropropane	109	ug/m3	.9	1	60 - 140
Bromodichloromethane	100	ug/m3	1	1	60 - 140
Trichloroethene	106	ug/m3	1	1	60 - 140
1,4-Dioxane	113	ug/m3	.7	0.8	60 - 140
cis-1,3-Dichloropropene	95	ug/m3	.9	0.9	60 - 140
4-Methyl-2-Pentanone(MIBK)	97	ug/m3	.8	0.8	60 - 140
trans-1,3-Dichloropropene	92	ug/m3	.9	0.8	60 - 140
1,1,2-Trichloroethane	107	ug/m3	1	1	60 - 140
Toluene	103	ug/m3	.8	0.8	60 - 140
2-Hexanone	90	ug/m3	.8	0.7	60 - 140
Chlorodibromomethane	95	ug/m3	2	2	60 - 140
1,2-Dibromoethane	104	ug/m3	2	2	60 - 140
Tetrachloroethene	104	ug/m3	1	1	60 - 140
Chlorobenzene	109	ug/m3	.9	1	60 - 140
Ethylbenzene	105	ug/m3	.9	0.9	60 - 140
mp-Xylene	105	ug/m3	2	2	60 - 140
Bromoform	89	ug/m3	2	2	60 - 140
Styrene	98	ug/m3	.9	0.8	60 - 140
1,1,2,2-Tetrachloroethane	110	ug/m3	1	2	60 - 140
o-Xylene	107	ug/m3	.9	0.9	60 - 140
1,3-Dichlorobenzene	112	ug/m3	1	1	60 - 140
1,4-Dichlorobenzene	111	ug/m3	1	1	60 - 140
1,2-Dichlorobenzene	109	ug/m3	1	1	60 - 140
Naphthalene	99	ug/m3	1	1	60 - 140
Hexachlorobutadiene	105	ug/m3	2	2	60 - 140
4-Bromofluorobenzene (S)	99	%			70 - 130
4-Bromofluorobenzene (S)					

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

QUALITY CONTROL DATA

Workorder: 2077588 CVC005|Varian Beverly 152780

QC Batch: TO15/2807 **Analysis Method:** TO-15

QC Batch Method: TO-15

Associated Lab Samples: 2077588005, 2077588006, 2077588007, 2077588008, 2077588009

METHOD BLANK: 2196318

Parameter	Blank Result	Units	Reporting Limit	Qualifiers
Vinyl Chloride	ND	ppbv	0.20	
Bromomethane	ND	ppbv	0.20	
Acetone	ND	ppbv	0.20	
1,1-Dichloroethene	ND	ppbv	0.20	
Methylene Chloride	ND	ppbv	0.20	
trans-1,2-Dichloroethene	ND	ppbv	0.20	
1,1-Dichloroethane	ND	ppbv	0.20	
Methyl t-Butyl Ether	ND	ppbv	0.20	
2-Butanone	ND	ppbv	0.20	
cis-1,2-Dichloroethene	ND	ppbv	0.20	
Chloroform	ND	ppbv	0.20	
1,2-Dichloroethane	ND	ppbv	0.20	
1,1,1-Trichloroethane	ND	ppbv	0.20	
Benzene	ND	ppbv	0.20	
Carbon Tetrachloride	ND	ppbv	0.20	
1,2-Dichloropropane	ND	ppbv	0.20	
Bromodichloromethane	ND	ppbv	0.20	
Trichloroethene	ND	ppbv	0.20	
1,4-Dioxane	ND	ppbv	0.20	
cis-1,3-Dichloropropene	ND	ppbv	0.20	
4-Methyl-2-Pentanone(MIBK)	ND	ppbv	0.20	
trans-1,3-Dichloropropene	ND	ppbv	0.20	
1,1,2-Trichloroethane	ND	ppbv	0.20	
Toluene	ND	ppbv	0.20	
2-Hexanone	ND	ppbv	0.20	
Chlorodibromomethane	ND	ppbv	0.20	
1,2-Dibromoethane	ND	ppbv	0.20	
Tetrachloroethene	ND	ppbv	0.20	
Chlorobenzene	ND	ppbv	0.20	
Ethylbenzene	ND	ppbv	0.20	
mp-Xylene	ND	ppbv	0.40	
Bromoform	ND	ppbv	0.20	
Styrene	ND	ppbv	0.20	
1,1,2,2-Tetrachloroethane	ND	ppbv	0.20	
o-Xylene	ND	ppbv	0.20	
1,3-Dichlorobenzene	ND	ppbv	0.20	
1,4-Dichlorobenzene	ND	ppbv	0.20	

QUALITY CONTROL DATA

Workorder: 2077588 CVC005|Varian Beverly 152780

1,2-Dichlorobenzene	ND	ppbv	0.20
Naphthalene	ND	ppbv	0.20
Hexachlorobutadiene	ND	ppbv	0.20
Vinyl Chloride	ND	ug/m3	0.5
Bromomethane	ND	ug/m3	0.8
Acetone	ND	ug/m3	0.5
1,1-Dichloroethene	ND	ug/m3	0.8
Methylene Chloride	ND	ug/m3	0.7
trans-1,2-Dichloroethene	ND	ug/m3	0.8
1,1-Dichloroethane	ND	ug/m3	0.8
Methyl t-Butyl Ether	ND	ug/m3	0.7
2-Butanone	ND	ug/m3	0.6
cis-1,2-Dichloroethene	ND	ug/m3	0.8
Chloroform	ND	ug/m3	1
1,2-Dichloroethane	ND	ug/m3	0.8
1,1,1-Trichloroethane	ND	ug/m3	1
Benzene	ND	ug/m3	0.6
Carbon Tetrachloride	ND	ug/m3	1
1,2-Dichloropropane	ND	ug/m3	0.9
Bromodichloromethane	ND	ug/m3	1
Trichloroethene	ND	ug/m3	1
1,4-Dioxane	ND	ug/m3	0.7
cis-1,3-Dichloropropene	ND	ug/m3	0.9
4-Methyl-2-Pentanone(MIBK)	ND	ug/m3	0.8
trans-1,3-Dichloropropene	ND	ug/m3	0.9
1,1,2-Trichloroethane	ND	ug/m3	1
Toluene	ND	ug/m3	0.8
2-Hexanone	ND	ug/m3	0.8
Chlorodibromomethane	ND	ug/m3	2
1,2-Dibromoethane	ND	ug/m3	2
Tetrachloroethene	ND	ug/m3	1
Chlorobenzene	ND	ug/m3	0.9
Ethylbenzene	ND	ug/m3	0.9
mp-Xylene	ND	ug/m3	2
Bromoform	ND	ug/m3	2
Styrene	ND	ug/m3	0.8
1,1,2,2-Tetrachloroethane	ND	ug/m3	1
o-Xylene	ND	ug/m3	0.9
1,3-Dichlorobenzene	ND	ug/m3	1
1,4-Dichlorobenzene	ND	ug/m3	1
1,2-Dichlorobenzene	ND	ug/m3	1
Naphthalene	ND	ug/m3	1
Hexachlorobutadiene	ND	ug/m3	2
4-Bromofluorobenzene (S)	96	%	70 - 130
4-Bromofluorobenzene (S)			

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

QUALITY CONTROL DATA

Workorder: 2077588 CVC005|Varian Beverly 152780

LABORATORY CONTROL SAMPLE: 2196319

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit	Qualifiers
Vinyl Chloride	108	ppbv	.2	0.22	60 - 140	
Bromomethane	106	ppbv	.2	0.21	60 - 140	
Acetone	107	ppbv	.2	0.21	60 - 140	
1,1-Dichloroethene	108	ppbv	.2	0.22	60 - 140	
Methylene Chloride	115	ppbv	.2	0.23	60 - 140	
trans-1,2-Dichloroethene	104	ppbv	.2	0.21	60 - 140	
1,1-Dichloroethane	106	ppbv	.2	0.21	60 - 140	
Methyl t-Butyl Ether	105	ppbv	.2	0.21	60 - 140	
2-Butanone	102	ppbv	.2	0.20	60 - 140	
cis-1,2-Dichloroethene	105	ppbv	.2	0.21	60 - 140	
Chloroform	112	ppbv	.2	0.22	60 - 140	
1,2-Dichloroethane	111	ppbv	.2	0.22	60 - 140	
1,1,1-Trichloroethane	112	ppbv	.2	0.22	60 - 140	
Benzene	109	ppbv	.2	0.22	60 - 140	
Carbon Tetrachloride	112	ppbv	.2	0.22	60 - 140	
1,2-Dichloropropane	108	ppbv	.2	0.22	60 - 140	
Bromodichloromethane	102	ppbv	.2	0.20	60 - 140	
Trichloroethene	113	ppbv	.2	0.23	60 - 140	
1,4-Dioxane	120	ppbv	.2	0.24	60 - 140	
cis-1,3-Dichloropropene	99	ppbv	.2	0.20	60 - 140	
4-Methyl-2-Pentanone(MIBK)	96	ppbv	.2	0.19	60 - 140	
trans-1,3-Dichloropropene	98	ppbv	.2	0.20	60 - 140	
1,1,2-Trichloroethane	110	ppbv	.2	0.22	60 - 140	
Toluene	109	ppbv	.2	0.22	60 - 140	
2-Hexanone	94	ppbv	.2	0.19	60 - 140	
Chlorodibromomethane	103	ppbv	.2	0.21	60 - 140	
1,2-Dibromoethane	109	ppbv	.2	0.22	60 - 140	
Tetrachloroethene	118	ppbv	.2	0.24	60 - 140	
Chlorobenzene	118	ppbv	.2	0.24	60 - 140	
Ethylbenzene	109	ppbv	.2	0.22	60 - 140	
mp-Xylene	111	ppbv	.4	0.44	60 - 140	
Bromoform	98	ppbv	.2	0.20	60 - 140	
Styrene	102	ppbv	.2	0.20	60 - 140	
1,1,2,2-Tetrachloroethane	110	ppbv	.2	0.22	60 - 140	
o-Xylene	114	ppbv	.2	0.23	60 - 140	
1,3-Dichlorobenzene	122	ppbv	.2	0.24	60 - 140	
1,4-Dichlorobenzene	120	ppbv	.2	0.24	60 - 140	
1,2-Dichlorobenzene	120	ppbv	.2	0.24	60 - 140	
Naphthalene	109	ppbv	.2	0.22	60 - 140	
Hexachlorobutadiene	122	ppbv	.2	0.24	60 - 140	

QUALITY CONTROL DATA

Workorder: 2077588 CVC005|Varian Beverly 152780

Vinyl Chloride	108	ug/m3	.5	0.6	60 - 140
Bromomethane	106	ug/m3	.8	0.8	60 - 140
Acetone	107	ug/m3	.5	0.5	60 - 140
1,1-Dichloroethene	108	ug/m3	.8	0.9	60 - 140
Methylene Chloride	115	ug/m3	.7	0.8	60 - 140
trans-1,2-Dichloroethene	104	ug/m3	.8	0.8	60 - 140
1,1-Dichloroethane	106	ug/m3	.8	0.9	60 - 140
Methyl t-Butyl Ether	105	ug/m3	.7	0.8	60 - 140
2-Butanone	102	ug/m3	.6	0.6	60 - 140
cis-1,2-Dichloroethene	105	ug/m3	.8	0.8	60 - 140
Chloroform	112	ug/m3	1	1	60 - 140
1,2-Dichloroethane	111	ug/m3	.8	0.9	60 - 140
1,1,1-Trichloroethane	112	ug/m3	1	1	60 - 140
Benzene	109	ug/m3	.6	0.7	60 - 140
Carbon Tetrachloride	112	ug/m3	1	1	60 - 140
1,2-Dichloropropane	108	ug/m3	.9	1	60 - 140
Bromodichloromethane	102	ug/m3	1	1	60 - 140
Trichloroethene	113	ug/m3	1	1	60 - 140
1,4-Dioxane	120	ug/m3	.7	0.9	60 - 140
cis-1,3-Dichloropropene	99	ug/m3	.9	0.9	60 - 140
4-Methyl-2-Pentanone(MIBK)	96	ug/m3	.8	0.8	60 - 140
trans-1,3-Dichloropropene	98	ug/m3	.9	0.9	60 - 140
1,1,2-Trichloroethane	110	ug/m3	1	1	60 - 140
Toluene	109	ug/m3	.8	0.8	60 - 140
2-Hexanone	94	ug/m3	.8	0.8	60 - 140
Chlorodibromomethane	103	ug/m3	2	2	60 - 140
1,2-Dibromoethane	109	ug/m3	2	2	60 - 140
Tetrachloroethene	118	ug/m3	1	2	60 - 140
Chlorobenzene	118	ug/m3	.9	1	60 - 140
Ethylbenzene	109	ug/m3	.9	0.9	60 - 140
mp-Xylene	111	ug/m3	2	2	60 - 140
Bromoform	98	ug/m3	2	2	60 - 140
Styrene	102	ug/m3	.9	0.9	60 - 140
1,1,2,2-Tetrachloroethane	110	ug/m3	1	2	60 - 140
o-Xylene	114	ug/m3	.9	1	60 - 140
1,3-Dichlorobenzene	122	ug/m3	1	1	60 - 140
1,4-Dichlorobenzene	120	ug/m3	1	1	60 - 140
1,2-Dichlorobenzene	120	ug/m3	1	1	60 - 140
Naphthalene	109	ug/m3	1	1	60 - 140
Hexachlorobutadiene	122	ug/m3	2	3	60 - 140
4-Bromofluorobenzene (S)					
4-Bromofluorobenzene (S)	97	%			70 - 130

QUALITY CONTROL DATA

Workorder: 2077588 CVC005|Varian Beverly 152780

METHOD BLANK: 2195805

Parameter	Blank Result	Units	Reporting Limit	Qualifiers
Vinyl Chloride	ND	ppbv	0.20	
Bromomethane	ND	ppbv	0.20	
Acetone	ND	ppbv	0.20	
1,1-Dichloroethene	ND	ppbv	0.20	
Methylene Chloride	ND	ppbv	0.20	
trans-1,2-Dichloroethene	ND	ppbv	0.20	
1,1-Dichloroethane	ND	ppbv	0.20	
Methyl t-Butyl Ether	ND	ppbv	0.20	
2-Butanone	ND	ppbv	0.20	
cis-1,2-Dichloroethene	ND	ppbv	0.20	
Chloroform	ND	ppbv	0.20	
1,2-Dichloroethane	ND	ppbv	0.20	
1,1,1-Trichloroethane	ND	ppbv	0.20	
Benzene	ND	ppbv	0.20	
Carbon Tetrachloride	ND	ppbv	0.20	
1,2-Dichloropropane	ND	ppbv	0.20	
Bromodichloromethane	ND	ppbv	0.20	
Trichloroethene	ND	ppbv	0.20	
1,4-Dioxane	ND	ppbv	0.20	
cis-1,3-Dichloropropene	ND	ppbv	0.20	
4-Methyl-2-Pentanone(MIBK)	ND	ppbv	0.20	
trans-1,3-Dichloropropene	ND	ppbv	0.20	
1,1,2-Trichloroethane	ND	ppbv	0.20	
Toluene	ND	ppbv	0.20	
2-Hexanone	ND	ppbv	0.20	
Chlorodibromomethane	ND	ppbv	0.20	
1,2-Dibromoethane	ND	ppbv	0.20	
Tetrachloroethene	ND	ppbv	0.20	
Chlorobenzene	ND	ppbv	0.20	
Ethylbenzene	ND	ppbv	0.20	
mp-Xylene	ND	ppbv	0.40	
Bromoform	ND	ppbv	0.20	
Styrene	ND	ppbv	0.20	
1,1,2,2-Tetrachloroethane	ND	ppbv	0.20	
o-Xylene	ND	ppbv	0.20	
1,3-Dichlorobenzene	ND	ppbv	0.20	
1,4-Dichlorobenzene	ND	ppbv	0.20	
1,2-Dichlorobenzene	ND	ppbv	0.20	
Naphthalene	ND	ppbv	0.20	
Hexachlorobutadiene	ND	ppbv	0.20	
Vinyl Chloride	ND	ug/m3	0.5	
Bromomethane	ND	ug/m3	0.8	

QUALITY CONTROL DATA

Workorder: 2077588 CVC005|Varian Beverly 152780

Acetone	ND	ug/m3	0.5
1,1-Dichloroethene	ND	ug/m3	0.8
Methylene Chloride	ND	ug/m3	0.7
trans-1,2-Dichloroethene	ND	ug/m3	0.8
1,1-Dichloroethane	ND	ug/m3	0.8
Methyl t-Butyl Ether	ND	ug/m3	0.7
2-Butanone	ND	ug/m3	0.6
cis-1,2-Dichloroethene	ND	ug/m3	0.8
Chloroform	ND	ug/m3	1
1,2-Dichloroethane	ND	ug/m3	0.8
1,1,1-Trichloroethane	ND	ug/m3	1
Benzene	ND	ug/m3	0.6
Carbon Tetrachloride	ND	ug/m3	1
1,2-Dichloropropane	ND	ug/m3	0.9
Bromodichloromethane	ND	ug/m3	1
Trichloroethene	ND	ug/m3	1
1,4-Dioxane	ND	ug/m3	0.7
cis-1,3-Dichloropropene	ND	ug/m3	0.9
4-Methyl-2-Pentanone(MIBK)	ND	ug/m3	0.8
trans-1,3-Dichloropropene	ND	ug/m3	0.9
1,1,2-Trichloroethane	ND	ug/m3	1
Toluene	ND	ug/m3	0.8
2-Hexanone	ND	ug/m3	0.8
Chlorodibromomethane	ND	ug/m3	2
1,2-Dibromoethane	ND	ug/m3	2
Tetrachloroethene	ND	ug/m3	1
Chlorobenzene	ND	ug/m3	0.9
Ethylbenzene	ND	ug/m3	0.9
mp-Xylene	ND	ug/m3	2
Bromoform	ND	ug/m3	2
Styrene	ND	ug/m3	0.8
1,1,2,2-Tetrachloroethane	ND	ug/m3	1
o-Xylene	ND	ug/m3	0.9
1,3-Dichlorobenzene	ND	ug/m3	1
1,4-Dichlorobenzene	ND	ug/m3	1
1,2-Dichlorobenzene	ND	ug/m3	1
Naphthalene	ND	ug/m3	1
Hexachlorobutadiene	ND	ug/m3	2
4-Bromofluorobenzene (S)	95	%	70 - 130
4-Bromofluorobenzene (S)			

SAMPLE DUPLICATE: 2196320 ORIGINAL:

Parameter	Original Result	Units	DUP Result	RPD	Max RPD	Qualifiers

QUALITY CONTROL DATA

Workorder: 2077588 CVC005|Varian Beverly 152780

Methyl t-Butyl Ether	0	ppbv	0	NC	25
1,2-Dichloroethane		ppbv	0	NC	25
Benzene	.8198	ppbv	.83383	2	25
Toluene	2.01544	ppbv	2.07643	3	25
1,2-Dibromoethane		ppbv	0	NC	25
Ethylbenzene	.41214	ppbv	.42422	3	25
mp-Xylene		ppbv	1.72937	2	25
o-Xylene		ppbv	.86276	1	25
Naphthalene	0	ppbv	0	NC	25
Vinyl Chloride		ug/m3	0	NC	25
Bromomethane		ug/m3	0	NC	25
Acetone		ug/m3	0	NC	25
1,1-Dichloroethene		ug/m3	0	NC	25
Methylene Chloride		ug/m3	0	NC	25
trans-1,2-Dichloroethene		ug/m3	0	NC	25
1,1-Dichloroethane		ug/m3	0	NC	25
Methyl t-Butyl Ether	0	ug/m3	0	NC	25
2-Butanone		ug/m3	0	NC	25
cis-1,2-Dichloroethene		ug/m3	0	NC	25
Chloroform		ug/m3	0	NC	25
1,2-Dichloroethane		ug/m3	0	NC	25
1,1,1-Trichloroethane		ug/m3	0	NC	25
Benzene	2.619	ug/m3	2.66384	2	25
Carbon Tetrachloride		ug/m3	0	NC	25
1,2-Dichloropropane		ug/m3	0	NC	25
Bromodichloromethane		ug/m3	0	NC	25
Trichloroethene		ug/m3	0	NC	25
1,4-Dioxane		ug/m3	0	NC	25
cis-1,3-Dichloropropene		ug/m3	0	NC	25
4-Methyl-2-Pentanone(MIBK)		ug/m3	0	NC	25
trans-1,3-Dichloropropene		ug/m3	0	NC	25
1,1,2-Trichloroethane		ug/m3	0	NC	25
Toluene	7.59519	ug/m3	7.82503	3	25
2-Hexanone		ug/m3	0	NC	25
Chlorodibromomethane		ug/m3	0	NC	25
1,2-Dibromoethane		ug/m3	0	NC	25
Tetrachloroethene		ug/m3	0	NC	25
Chlorobenzene		ug/m3	0	NC	25
Ethylbenzene	1.79017	ug/m3	1.84262	3	25
mp-Xylene		ug/m3	7.51169	2	25
Bromoform		ug/m3	0	NC	25
Styrene		ug/m3	0	NC	25
1,1,2,2-Tetrachloroethane		ug/m3	0	NC	25
o-Xylene		ug/m3	3.74749	1	25
1,3-Dichlorobenzene		ug/m3	0	NC	25
1,4-Dichlorobenzene		ug/m3	0	NC	25

QUALITY CONTROL DATA

Workorder: 2077588 CVC005|Varian Beverly 152780

1,2-Dichlorobenzene		ug/m3	0	NC	25
Naphthalene	0	ug/m3	0	NC	25
Hexachlorobutadiene		ug/m3	0	NC	25
4-Bromofluorobenzene (S)	9.92329	%	9.80208	1	

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 2077588 CVC005|Varian Beverly 152780

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
2077588001	Bldg5-1			TO-15	TO15/2806
2077588002	Bldg5-2			TO-15	TO15/2806
2077588003	Bldg5-3			TO-15	TO15/2806
2077588004	Bldg5-SVE INF			TO-15	TO15/2806
2077588005	Bldg5-SVE 4			TO-15	TO15/2806
2077588006	Bldg5-SVE 1			TO-15	TO15/2806
2077588007	Bldg5-SV 1			TO-15	TO15/2806
2077588005	Bldg5-SVE 4			TO-15	TO15/2807
2077588006	Bldg5-SVE 1			TO-15	TO15/2807
2077588007	Bldg5-SV 1			TO-15	TO15/2807
2077588008	Bldg5-SV 3			TO-15	TO15/2807
2077588009	Bldg5-SV 5			TO-15	TO15/2807

Air - Chain of Custody Record & Analytical Service Request

2655 Park Center Drive, Suite A
Simi Valley, California 93065
Phone (805) 526-7161
Fax (805) 526-7270

2077588

Requested Turnaround Time in Business Days (Surcharges) please circle
1 Day (100%) 2 Day (75%) 3 Day (50%) 4 Day (35%) 5 Day (25%) 10-Day-Standard

Company Name & Address (Reporting Information)
150 Royall St
Canton MA 02021
CB+I Environmental + Infrastructure

Project Name: Varian Beverly
Project Number: 152780-02000000
Project Manager: Raymond Cadorette
P.O. # / Billing Information: 915904
Phone: 617-589-6102
Fax: 617-589-5495
Email Address for Result Reporting: Raymond.Cadorette@cbi.com
Sampler (Print & Sign): Ana Fioretti

ALS Contact:

Analysis Method: TO-15 (5 site list)

Client Sample ID	Laboratory ID Number	Date Collected	Time Collected	Canister ID (Bar code # - AC, SC, etc.)	Flow Controller ID (Bar code # - FC #)	Canister Start Pressure "Hg	Canister End Pressure "Hg/psig	Sample Volume			Comments e.g. Actual Preservative or specific instructions
BLDG5-1		6/11/15	1115	AC01898	FCA00380	29.2	6.5	6L	1		
BLDG5-2		6/11/15	1113	AS00864	F-211090	29	10	6L	1		Gauge stuck
BLDG5-3		6/11/15	1117	AS00310	FCA00952	>30	0	6L	1		Faulty gauge left for 8hr

6/18/15 14:46

1Z 602 802 22 1000 4418

Report Tier Levels - please select
Tier I - Results (Default in not specified) ____ Tier III (Results + QC & Calibration Summaries) ____
Tier II (Results + QC Summaries ____ Tier IV (Date Validation Package) 10% Surcharge ____

EDD required YES / No
Type: GIS Key Units: ug/m3 + ppmV

Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT

Project Requirements (MRLs, QAPP): QA/QC: MADEP CAM

Relinquished by: (Signature)	Date: 6-12-15	Time: 1500	Received by: (Signature)	Date: 6/15	Time: 1026
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:

Cooler / Blank Temperature ____ °C

ALS

Columbia Analytical Services

CHAIN OF CUSTODY - AIR

1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623 | 585.288.5380 | 585.288.8475 (fax) | www.caslab.com

Requested Turnaround Time in Business Days from Receipt, please circle: 1 Day 2 Day 3 Day 4 Day 5 Day 10 Day-Standard

CAS Project #:

Company Name: CB&I Environmental & Infrastructure

Project Name: Varian Beverly

CAS Contact:

Address: 150 Royall Street

Project Number: 152780-02000000

City, State, Zip: Canton, MA 02021

P.O. #/Billing Information: 915904

Project Manager: Raymond Cadorette

Phone: 617-589-6102 Fax: 617-589-5495

Email (for result reporting): Raymond.Cadorette@cbi.com

Sampler (Print & Sign): Paul Ledoux

Client Sample ID	Laboratory ID Number	Date Collected	Time Collected	Canister ID	Flow Controller ID		Analysis Method and/or Analytes: TO15 (Site List)				Comments Specific Instructions
Bldg #5 - SVE INF		6.12.15	1110	AS00873			1				
Bldg #5 - SVE 4			1114	AC01157			1				
Bldg #5 - SVE 1			1117	AS00180			1				
Bldg #5 - SV 1			1037	AS00808	FCA00856		1				
Bldg #5 - SV 3			1031	~~AS00856~~	FCA00639	AC01804	1				
Bldg #5 - SV 5			1029	AC01837	FCA00992		1				

What State were samples collected in: MA

Report Tier Levels - please select:
Tier I (Results/Default, if not specified) ___ Tier III (CLP Forms Only) ___
Tier II (Results + QC) ___ Tier IV (Data Validation) ___

EDD required: YES / NO
Type: GISKey EDD Units: ug/m3 & ppmV

Project Requirements (MRLs, QAPP, etc.)
QA/QC: MADEP CAM

Relinquished by: (Signature)	Date:	Time	Received by: (Signature)	Date:	Time:
Paul Ledoux	6.12.15	1500		6/15/15	1026
Relinquished by: (Signature)	Date:	Time	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Date:	Time	Received by: (Signature)	Date:	Time:

6/18/15 14:46

COC AIR REV 7-11

ALS

ALS-Middletown

TO-15 Sample Receipt Checklist

Client ID: CB&I
Horizon WO#: 2077588
Sample Delivery Group ID:
Log In By/Date: Amy K Borden / 06/18/15 14:46
(signature)
Number of Shipping containers received: 3

Project Name/#: Varian Beverly
Date/Time received: 6/15/15 1026
Received By: Jessica Smith
Project Manager Review (date)
(signature)
Courier: UPS

Circle the response below as appropriate.

1. Did kit(s) come with a shipping slip (airbill, etc.)? (YES) NO NA
   If YES, enter airbill numbers: 1Z6028W22210004418

Shipping Container Information:

2. Were shipping containers received without signs of tampering? (YES) NO NA
   Comments
3. Were custody seals present and intact? YES (NO) NA
4. Were custody seals numbers present? YES NO (NA)
   List Custody Seal Numbers:

Sample Condition:

5. Were sample containers received intact without signs of tampering? (YES) NO NA
   Comments

Chain of Custody:

6. Did COC arrive with the samples? (YES) NO NA
7. Do sample ID/Sample Description(s) match samples submitted? (YES) NO NA
8. Is date and time of collection listed on the COC for all samples? (YES) NO NA
9. Is identification of sampler on COC? (YES) NO NA
10. Are requested test method(s) on COC? (YES) NO NA
11. Are necessary signatures on COC? (YES) NO NA
12. Was Internal COC initiated? (should always be YES) (YES) NO NA

Sample Integrity Usability:

13. Do sample containers match the COC? (YES) NO NA
14. Were sample canisters received within 15 days of shipment to client (YES) NO NA

Anomalies or Non-Conformances:

Rev. 2/2011

MassDEP Analytical Protocol Certification Form

Laboratory Name: ALS Environmental Project #: 2077588

Project Location: Varian RTN:

This Form provides certifications for the following data set: list Laboratory Sample ID Number(s):
2077588-001 to -009

Matrices: Groundwater/Surface Water Soil/Sediment Drinking Water Air X Other:

CAM Protocol (check all that apply below):

8260 VOC CAM II A	7470/7471 Hg CAM III B	MassDEP VPH CAM IV A	8081 Pesticides CAM V B	7196 Hex Cr CAM VI B	MassDEP APH CAM IX A
8270 SVOC CAM II B	7010 Metals CAM III C	MassDEP EPH CAM IV B	8151 Herbicides CAM V C	8330 Explosives CAM VIII A	TO-15 VOC CAM IX B X
6010 Metals CAM III A	6020 Metals CAM III D	8082 PCB CAM V A	9014 Total Cyanide/PAC CAM VI A	6860 Perchlorate CAM VIII B	

Affirmative Responses to Questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	(Yes) No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	(Yes) No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	(Yes) No
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	(Yes) No
E	VPH, EPH, APH, and TO-15 only: a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	Yes No Yes (No)
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	(Yes) No

Responses to Questions G, H and I below are required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	(Yes) No[1]

***Data User Note:** Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.*

H	Were **all** QC performance standards specified in the CAM protocol(s) achieved?	(Yes) No[1]
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	Yes (No[1])

[1] *All negative responses must be addressed in an attached laboratory narrative.*

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Signature: **Position:** Reporting Manager

Printed Name: Jennifer M. Stanhope Lamoreux **Date:** 6/26/2015

Data Usability Worksheet

Project Name : Varian Medical Systems, Inc

Job Number : 152780.05

Prepared By: Ana Fioretti

Date : 7/6/2015

Matrix: Groundwater

Analyte Group : Volatile Organics
Chloride
Metals (Fe, Mn)

Analytical Method : SW-846 8260C
300
6010C

Completed MADEP CAM Certification Form included: Yes

Laboratory ID No. : R1504110

Chain of Custody included in Data Package ? Yes

Is it Complete ? Yes

Sample Collection Date	Analysis	Allowable Holding Time for extraction	Allowable Holding Time for analysis	Analysis Date
5/26 and 5/27/15	SW-846 8260C	14 Days	10 Days	6/3 6/4 and 6/5/15
5/26 and 5/27/15	300.0 (chloride)	NA	28 Days	5/29 and 5/30/15
5/26 and 5/27/15	6010C	180 Days	180 Days	6/16 6/15 and 6/16/15

Sample temperature within QC limits: Yes

Surrogate Recovery
Are all % recoveries within the allowable range ? Yes

If No, List sample ID where range was exceeded: NA

MS/MSD

Are all MS/MSD sample recoveries within the QC limits ? NA

If No, list sample ID, date and compound where limit was exceeded: NA

Laboratory Control Samples
Are all laboratory control sample recoveries within the QC limits ? Yes

If no, list sample ID where range was exceeded: N/A

Equipment Field Blank ID :
Trip Blank ID : TRIP BLANK

Method Blank:	SW-846 8260C	6/3 6/4 and 6/5/15
	300.0 (Chloride)	5/29 and 5/30/15
	6010C	6/12 and 6/15/15

Were any compounds identified in the method blank, field blank or trip blank above detection limits ? No

If so, list Sample ID/Compound/Concentration/Units: NA

Notes:
Several samples were initially analyzed at dilutions to bring target analytes within the calibration range of the method.

Various compounds for AP26-DO (60), AP31-DO (48) and 0B35-DO (46) have been flagged with an "E" as being outside the calibration range of the instrument. The samples were repeated at dilutions and both sets of data have been reported out.

The Method blanks were free of contamination except for a low level detection of Manganese. All affected data has been flagged with a "B".

Reviewed By: Jennifer Gailey 7/7/2015

ALS Environmental
ALS Group USA, Corp
1565 Jefferson Rd, Building 300, Suite 360
Rochester, NY 14623
T: 585-288-5380
F: 585-288-8475
www.alsglobal.com

June 18, 2015

Analytical Report for Service Request No: R1504110

Mr. Ray Cadorette
CB&I Environmental & Infrastructure
150 Royall Street
Canton, MA 02021

Laboratory Results for: Varian Beverly/152780-05000000

Dear Mr. Cadorette:

Enclosed are the results of the sample(s) submitted to our laboratory on May 28, 2015. For your reference, these analyses have been assigned our service request number **R1504110**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s) for analysis of these samples, and represented by Laboratory Control Sample control limits. Any events, such as QC failures, which may add to the uncertainty are explained in the report narrative.

Please contact me if you have any questions. My extension is 7472. You may also contact me via email at Janice.Jaeger@alsglobal.com.

Respectfully submitted,

ALS Group USA Corp. dba ALS Environmental

Janice Jaeger
Project Manager

CC: Pernilla Haley

ALS Environmental

Client:	CB&I
Service Request No.:	R1504110
Project:	Varian
Date Received:	5/28/15
Sample Matrix:	Water
Project/Case No.:	

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II data deliverables. When appropriate to the method, method blank results have been reported with each analytical test. Surrogate recoveries have been reported for all applicable organic analyses. Additional quality control analyses reported herein include: Laboratory Control Sample (LCS).

Sample Receipt

Water samples were received for analysis at ALS Environmental on 5/28/15. The samples were received in good condition and consistent with the accompanying chain of custody form. All sampling activities performed by ALS personnel have been in accordance with "ALS Field Procedures and Measurements Manual" or by client specifications. The samples were stored in a refrigerator between 1°C and 6°C upon receipt at the laboratory. All Soluble samples were filtered in the field.

Volatile Organics

Water samples were analyzed for a site list of Volatile Organics by SW-846 Method 8260C.

Several samples were initially analyzed at dilutions to bring target analytes within the calibration range of the method.

All initial calibrations were compliant.

All the continuing calibration criteria were met for all analytes.

Various compounds for AP26-DO (60), AP31-DO (48) and OB35-DO (46) have been flagged with an "E" as being outside the calibration range of the instrument. The samples were repeated at dilutions and both sets of data have been reported out.

All Surrogate Standard recoveries were within QC limits.

All Blank Spike (LCS)/Blank Spike Duplicate (LCSD) recoveries were within QC limits. All RPD's were acceptable except Chloroethane on the 05/30/15 LCS/LCSD and has been flagged with an "*".

All samples were analyzed within the required holding time of 14 days.

Inorganic Analyses

Water samples were analyzed for a site specific list of inorganics. Please attached data pages for method numbers.

The initial and continuing calibration criteria were met for all analytes.

All Blank Spike (LCS) recoveries were within QC limits.

The Method blanks were free of contamination except for a low level detection of Manganese. All affected data has been flagged with a "B".

MassDEP Analytical Protocol Certification Form

Laboratory Name: ALS Environmental | Project #: 152780

Project Location: Varian Beverly | RTN:

This Form provides certifications for the following data set: list Laboratory Sample ID Number(s):
R1504110-017

Matrices: Groundwater/Surface Water X Soil/Sediment Drinking Water Air Other:

CAM Protocol (check all that apply below):

8260 VOC CAM II A X	7470/7471 Hg CAM III B	MassDEP VPH CAM IV A	8081 Pesticides CAM V B	7196 Hex Cr CAM VI B	MassDEP APH CAM IX A
8270 SVOC CAM II B	7010 Metals CAM III C	MassDEP EPH CAM IV B	8151 Herbicides CAM V C	8330 Explosives CAM VIII A	TO-15 VOC CAM IX B
6010 Metals CAM III A X	6020 Metals CAM III D	8082 PCB CAM V A	9014 Total Cyanide/PAC CAM VI A	6860 Perchlorate CAM VIII B	

Affirmative Responses to Questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	X Yes No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	X Yes No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	X Yes No
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	X Yes No
E	VPH, EPH, APH, and TO-15 only: a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	Yes No Yes No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	X Yes No

Responses to Questions G, H and I below are required for "Presumptive Certainty" status

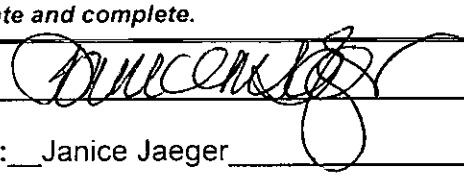
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	X Yes No[1]

***Data User Note:** Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.*

H	Were **all** QC performance standards specified in the CAM protocol(s) achieved?	X Yes No[1]
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	Yes X No[1]

[1] *All negative responses must be addressed in an attached laboratory narrative.*

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Signature:  **Position: Project Manager**

Printed Name: Janice Jaeger **Date:** 06/18/15

CASE NARRATIVE

This report contains analytical results for the following samples:
Service Request Number: R1504110

Lab ID	Client ID
R1504110-001	AP14-S (29)
R1504110-002	AP26-DO(60)
R1504110-003	AP31-DO (48)
R1504110-004	AP32-DO (48)
R1504110-005	BW-5 (9)
R1504110-006	BW-8 (13)
R1504110-007	MW-9A (13)
R1504110-008	OB9-DO (92)
R1504110-009	OB9-BR (117)
R1504110-010	OB12-DO (48)
R1504110-011	OB19-DO (56)
R1504110-012	OB25-BR (90)
R1504110-013	OB36-DO (61)
R1504110-014	OB35-DO (46)
R1504110-015	AP27-DO (56)
R1504110-016	OB32-DO (60)
R1504110-017	TRIP BLANK

ALS Environmental

REPORT QUALIFIERS AND DEFINITIONS

U Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.

J Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Arclors).

B Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.

E Inorganics- Concentration is estimated due to the serial dilution was outside control limits.

E Organics- Concentration has exceeded the calibration range for that specific analysis.

D Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.

* Indicates that a quality control parameter has exceeded laboratory limits. Under the "Notes" column of the Form I, this qualifier denotes analysis was performed out of Holding Time.

H Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.

Spike was diluted out.

+ Correlation coefficient for MSA is <0.995.

N Inorganics- Matrix spike recovery was outside laboratory limits.

N Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.

S Concentration has been determined using Method of Standard Additions (MSA).

W Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.

P Concentration >40% (25% for CLP) difference between the two GC columns.

C Confirmed by GC/MS

Q DoD reports: indicates a pesticide/Aroclor is not confirmed (≥100% Difference between two GC columns).

X See Case Narrative for discussion.

MRL Method Reporting Limit. Also known as:
LOQ Limit of Quantitation (LOQ)
The lowest concentration at which the method analyte may be reliably quantified under the method conditions.

MDL Method Detection Limit. A statistical value derived from a study designed to provide the lowest concentration that will be detected 99% of the time. Values between the MDL and MRL are estimated (see J qualifier).

LOD Limit of Detection. A value at or above the MDL which has been verified to be detectable.

ND Non-Detect. Analyte was not detected at the concentration listed. Same as U qualifier.

ACCREDITED IN ACCORDANCE WITH nelac

Rochester Lab ID # for State Certifications[1]

Connecticut ID # PH0556	Maine ID #NY0032	New Hampshire ID # 294100 A/B
Delaware Accredited	Nebraska Accredited	
DoD ELAP #65817	New Jersey ID # NY004	Pennsylvania ID# 68-786
Florida ID # E87674	New York ID # 10145	Rhode Island ID # 158
Illinois ID #200047	North Carolina #676	Virginia #460167

[1] Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state or agency requirements. The test results meet requirements of the current NELAP/TNI standards or state or agency requirements, where applicable, except as noted in the case narrative. Since not all analyte/method/matrix combinations are offered for state/NELAC accreditation, this report may contain results which are not accredited. For a specific list of accredited analytes, contact the laboratory or go to http://www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads/North-America-Downloads

INORGANIC PREPARATION METHODS

The preparation methods associated with this report are found in these tables unless discussed in the case narrative.

Water/Liquid Matrix

Analytical Method	Preparation Method
200.7	200.2
200.8	200.2
6010C	3005A/3010A
6020A	ILM05.3
9014 Cyanide Reactivity	SW846 Ch7, 7.3.4.2
9034 Sulfide Reactivity	SW846 Ch7, 7.3.4.2
9034 Sulfide Acid Soluble	9030B
9056A Bomb (Halogens)	5050A
9066 Manual Distillation	9065
SM 4500-CN-E Residual Cyanide	SM 4500-CN-G
SM 4500-CN-E WAD Cyanide	SM 4500-CN-I

Solid/Soil/Non-Aqueous Matrix

Analytical Method	Preparation Method
6010C	3050B
6020A	3050B
6010C TCLP (1311) extract	3005A/3010A
6010 SPLP (1312) extract	3005A/3010A
7196A	3060A
7199	3060A
9056A Halogens/Halides	5050
300.0 Anions/ 350.1/ 353.2/ SM 2320B/ SM 5210B/ 9056A Anions	DI extraction

For analytical methods not listed, the preparation method is the same as the analytical method reference.

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504110
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/26/15 1100
Sample Matrix:	Water	**Date Received:**	5/28/15
Sample Name:	AP14-S (29)		
Lab Code:	R1504110-001	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chloride	300.0	**52.8**		mg/L	2.0	10	NA	5/29/15 21:56	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly/152780-05000000
Sample Matrix: Water

Service Request: R1504110
Date Collected: 5/26/15 1100
Date Received: 5/28/15

Sample Name: AP14-S (29)
Lab Code: R1504110-001

Basis: NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Iron, Dissolved	6010C	100	U	µg/L	100	1	6/ 1/15	6/12/15 04:32	
Manganese, Dissolved	6010C	**282**		µg/L	10	1	6/ 1/15	6/12/15 04:32	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504110
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/26/15 1100
Sample Matrix:	Water	**Date Received:**	5/28/15
		Date Analyzed:	6/5/15 10:24
Sample Name:	AP14-S (29)	**Units:**	µg/L
Lab Code:	R1504110-001	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	447895
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\MSVOA14\Data\060515\B1126.D\	**Instrument Name:**	R-MS-14
		Dilution Factor:	4

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	8.0	U	8.0	
79-34-5	1,1,2,2-Tetrachloroethane	8.0	U	8.0	
79-00-5	1,1,2-Trichloroethane	8.0	U	8.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	8.0	U	8.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	8.0	U	8.0	
107-06-2	1,2-Dichloroethane	8.0	U	8.0	
78-87-5	1,2-Dichloropropane	8.0	U	8.0	
67-64-1	Acetone	40	U	40	
75-27-4	Bromodichloromethane	8.0	U	8.0	
75-25-2	Bromoform	8.0	U	8.0	
74-83-9	Bromomethane	8.0	U	8.0	
56-23-5	Carbon Tetrachloride	8.0	U	8.0	
108-90-7	Chlorobenzene	8.0	U	8.0	
75-00-3	Chloroethane	8.0	U	8.0	
67-66-3	Chloroform	8.0	U	8.0	
74-87-3	Chloromethane	8.0	U	8.0	
124-48-1	Dibromochloromethane	8.0	U	8.0	
75-09-2	Methylene Chloride	8.0	U	8.0	
127-18-4	Tetrachloroethene (PCE)	**440**		8.0	
79-01-6	Trichloroethene (TCE)	**11**		8.0	
75-69-4	Trichlorofluoromethane (CFC 11)	8.0	U	8.0	
75-01-4	Vinyl Chloride	8.0	U	8.0	
156-59-2	cis-1,2-Dichloroethene	8.0	U	8.0	
10061-01-5	cis-1,3-Dichloropropene	8.0	U	8.0	
156-60-5	trans-1,2-Dichloroethene	8.0	U	8.0	
10061-02-6	trans-1,3-Dichloropropene	8.0	U	8.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	90	70-130	6/5/15 10:24	
Dibromofluoromethane	95	70-130	6/5/15 10:24	
Toluene-d8	95	70-130	6/5/15 10:24	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504110
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/26/15 1445
Sample Matrix:	Water	**Date Received:**	5/28/15
Sample Name:	AP26-DO(60)		
Lab Code:	R1504110-002	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chloride	300.0	**52.2**		mg/L	2.0	10	NA	5/29/15 22:07	

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Analytical Report

Client:	CB&I	**Service Request:**	R1504110
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/26/15 1445
Sample Matrix:	Water	**Date Received:**	5/28/15
Sample Name:	AP26-DO(60)		
Lab Code:	R1504110-002	**Basis:**	NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Iron, Dissolved	6010C	100	U	µg/L	100	1	6/ 1/15	6/12/15 04:39	
Manganese, Dissolved	6010C	**137**		µg/L	10	1	6/ 1/15	6/12/15 04:39	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504110
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/26/15 1445
Sample Matrix:	Water	**Date Received:**	5/28/15
		Date Analyzed:	6/3/15 19:24
Sample Name:	AP26-DO(60)	**Units:**	µg/L
Lab Code:	R1504110-002	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	447556
Data File Name:	I:\ACQUDATA\MSVOA14\Data\060315\B1043.D\	**Instrument Name:**	R-MS-14
		Dilution Factor:	25

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	50	U	50	
79-34-5	1,1,2,2-Tetrachloroethane	50	U	50	
79-00-5	1,1,2-Trichloroethane	50	U	50	
75-34-3	1,1-Dichloroethane (1,1-DCA)	50	U	50	
75-35-4	1,1-Dichloroethene (1,1-DCE)	50	U	50	
107-06-2	1,2-Dichloroethane	50	U	50	
78-87-5	1,2-Dichloropropane	50	U	50	
67-64-1	Acetone	250	U	250	
75-27-4	Bromodichloromethane	50	U	50	
75-25-2	Bromoform	50	U	50	
74-83-9	Bromomethane	50	U	50	
56-23-5	Carbon Tetrachloride	50	U	50	
108-90-7	Chlorobenzene	50	U	50	
75-00-3	Chloroethane	50	U	50	
67-66-3	Chloroform	50	U	50	
74-87-3	Chloromethane	50	U	50	
124-48-1	Dibromochloromethane	50	U	50	
75-09-2	Methylene Chloride	50	U	50	
127-18-4	Tetrachloroethene (PCE)	**2200**		50	
79-01-6	Trichloroethene (TCE)	**6600**	E	50	
75-69-4	Trichlorofluoromethane (CFC 11)	50	U	50	
75-01-4	Vinyl Chloride	50	U	50	
156-59-2	cis-1,2-Dichloroethene	50	U	50	
10061-01-5	cis-1,3-Dichloropropene	50	U	50	
156-60-5	trans-1,2-Dichloroethene	50	U	50	
10061-02-6	trans-1,3-Dichloropropene	50	U	50	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	93	70-130	6/3/15 19:24	
Dibromofluoromethane	95	70-130	6/3/15 19:24	
Toluene-d8	96	70-130	6/3/15 19:24	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504110
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/26/15 1445
Sample Matrix:	Water	**Date Received:**	5/28/15
		Date Analyzed:	6/4/15 17:57
Sample Name:	AP26-DO(60)	**Units:**	µg/L
Lab Code:	R1504110-002	**Basis:**	NA
Run Type:	Dilution		

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	447749
Data File Name:	I:\ACQUDATA\MSVOA14\Data\060415\B1093.D\	**Instrument Name:**	R-MS-14
		Dilution Factor:	50

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	100	U	100	
79-34-5	1,1,2,2-Tetrachloroethane	100	U	100	
79-00-5	1,1,2-Trichloroethane	100	U	100	
75-34-3	1,1-Dichloroethane (1,1-DCA)	100	U	100	
75-35-4	1,1-Dichloroethene (1,1-DCE)	100	U	100	
107-06-2	1,2-Dichloroethane	100	U	100	
78-87-5	1,2-Dichloropropane	100	U	100	
67-64-1	Acetone	500	U	500	
75-27-4	Bromodichloromethane	100	U	100	
75-25-2	Bromoform	100	U	100	
74-83-9	Bromomethane	100	U	100	
56-23-5	Carbon Tetrachloride	100	U	100	
108-90-7	Chlorobenzene	100	U	100	
75-00-3	Chloroethane	100	U	100	
67-66-3	Chloroform	100	U	100	
74-87-3	Chloromethane	100	U	100	
124-48-1	Dibromochloromethane	100	U	100	
75-09-2	Methylene Chloride	100	U	100	
127-18-4	Tetrachloroethene (PCE)	**2700**	D	100	
79-01-6	Trichloroethene (TCE)	**7400**	D	100	
75-69-4	Trichlorofluoromethane (CFC 11)	100	U	100	
75-01-4	Vinyl Chloride	100	U	100	
156-59-2	cis-1,2-Dichloroethene	100	U	100	
10061-01-5	cis-1,3-Dichloropropene	100	U	100	
156-60-5	trans-1,2-Dichloroethene	100	U	100	
10061-02-6	trans-1,3-Dichloropropene	100	U	100	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	95	70-130	6/4/15 17:57	
Dibromofluoromethane	99	70-130	6/4/15 17:57	
Toluene-d8	100	70-130	6/4/15 17:57	

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Analytical Report

Client:	CB&I	**Service Request:**	R1504110
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/26/15 1130
Sample Matrix:	Water	**Date Received:**	5/28/15
Sample Name:	AP31-DO (48)		
Lab Code:	R1504110-003	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chloride	300.0	**481**		mg/L	20	100	NA	5/29/15 22:18	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504110
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/26/15 1130
Sample Matrix:	Water	**Date Received:**	5/28/15
Sample Name:	AP31-DO (48)		
Lab Code:	R1504110-003	**Basis:**	NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Iron, Dissolved	6010C	100	U	µg/L	100	1	6/ 1/15	6/12/15 04:45	
Manganese, Dissolved	6010C	44	B	µg/L	10	1	6/ 1/15	6/15/15 21:55	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly/152780-05000000
Sample Matrix: Water

Service Request: R1504110
Date Collected: 5/26/15 1130
Date Received: 5/28/15
Date Analyzed: 6/3/15 19:48

Sample Name: AP31-DO (48)
Lab Code: R1504110-003

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Data File Name: I:\ACQUDATA\MSVOA14\Data\060315\B1044.D\

Analysis Lot: 447556
Instrument Name: R-MS-14
Dilution Factor: 50

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	**350**		100	
79-34-5	1,1,2,2-Tetrachloroethane	100	U	100	
79-00-5	1,1,2-Trichloroethane	100	U	100	
75-34-3	1,1-Dichloroethane (1,1-DCA)	100	U	100	
75-35-4	1,1-Dichloroethene (1,1-DCE)	100	U	100	
107-06-2	1,2-Dichloroethane	100	U	100	
78-87-5	1,2-Dichloropropane	100	U	100	
67-64-1	Acetone	500	U	500	
75-27-4	Bromodichloromethane	100	U	100	
75-25-2	Bromoform	100	U	100	
74-83-9	Bromomethane	100	U	100	
56-23-5	Carbon Tetrachloride	100	U	100	
108-90-7	Chlorobenzene	100	U	100	
75-00-3	Chloroethane	100	U	100	
67-66-3	Chloroform	**730**		100	
74-87-3	Chloromethane	100	U	100	
124-48-1	Dibromochloromethane	100	U	100	
75-09-2	Methylene Chloride	100	U	100	
127-18-4	Tetrachloroethene (PCE)	**8600**		100	
79-01-6	Trichloroethene (TCE)	**23000**	E	100	
75-69-4	Trichlorofluoromethane (CFC 11)	100	U	100	
75-01-4	Vinyl Chloride	100	U	100	
156-59-2	cis-1,2-Dichloroethene	100	U	100	
10061-01-5	cis-1,3-Dichloropropene	100	U	100	
156-60-5	trans-1,2-Dichloroethene	100	U	100	
10061-02-6	trans-1,3-Dichloropropene	100	U	100	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	88	70-130	6/3/15 19:48	
Dibromofluoromethane	95	70-130	6/3/15 19:48	
Toluene-d8	96	70-130	6/3/15 19:48	

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Analytical Report

Client:	CB&I	**Service Request:**	R1504110
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/26/15 1130
Sample Matrix:	Water	**Date Received:**	5/28/15
		Date Analyzed:	6/4/15 18:21
Sample Name:	AP31-DO (48)	**Units:**	µg/L
Lab Code:	R1504110-003	**Basis:**	NA
Run Type:	Dilution		

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	447749
Data File Name:	I:\ACQUDATA\MSVOA14\Data\060415\B1094.D\	**Instrument Name:**	R-MS-14
		Dilution Factor:	200

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	400	U	400	
79-34-5	1,1,2,2-Tetrachloroethane	400	U	400	
79-00-5	1,1,2-Trichloroethane	400	U	400	
75-34-3	1,1-Dichloroethane (1,1-DCA)	400	U	400	
75-35-4	1,1-Dichloroethene (1,1-DCE)	400	U	400	
107-06-2	1,2-Dichloroethane	400	U	400	
78-87-5	1,2-Dichloropropane	400	U	400	
67-64-1	Acetone	2000	U	2000	
75-27-4	Bromodichloromethane	400	U	400	
75-25-2	Bromoform	400	U	400	
74-83-9	Bromomethane	400	U	400	
56-23-5	Carbon Tetrachloride	400	U	400	
108-90-7	Chlorobenzene	400	U	400	
75-00-3	Chloroethane	400	U	400	
67-66-3	Chloroform	**710**	D	400	
74-87-3	Chloromethane	400	U	400	
124-48-1	Dibromochloromethane	400	U	400	
75-09-2	Methylene Chloride	400	U	400	
127-18-4	Tetrachloroethene (PCE)	**8200**	D	400	
79-01-6	Trichloroethene (TCE)	**21000**	D	400	
75-69-4	Trichlorofluoromethane (CFC 11)	400	U	400	
75-01-4	Vinyl Chloride	400	U	400	
156-59-2	cis-1,2-Dichloroethene	400	U	400	
10061-01-5	cis-1,3-Dichloropropene	400	U	400	
156-60-5	trans-1,2-Dichloroethene	400	U	400	
10061-02-6	trans-1,3-Dichloropropene	400	U	400	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	96	70-130	6/4/15 18:21	
Dibromofluoromethane	98	70-130	6/4/15 18:21	
Toluene-d8	100	70-130	6/4/15 18:21	

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Analytical Report

Client:	CB&I	**Service Request:**	R1504110
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/26/15 1205
Sample Matrix:	Water	**Date Received:**	5/28/15
Sample Name:	AP32-DO (48)		
Lab Code:	R1504110-004	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chloride	300.0	**493**		mg/L	20	100	NA	5/29/15 22:30	

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Analytical Report

Client:	CB&I	**Service Request:**	R1504110
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/26/15 1205
Sample Matrix:	Water	**Date Received:**	5/28/15
Sample Name:	AP32-DO (48)		
Lab Code:	R1504110-004	**Basis:**	NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Iron, Dissolved	6010C	1000	U	µg/L	1000	1	6/ 2/15	6/16/15 02:08	
Manganese, Dissolved	6010C	**1970000**		µg/L	5000	50	6/ 2/15	6/12/15 08:32	

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Analytical Report

Client: CB&I
Project: Varian Beverly/152780-05000000
Sample Matrix: Water

Service Request: R1504110
Date Collected: 5/26/15 1205
Date Received: 5/28/15
Date Analyzed: 6/4/15 18:45

Sample Name: AP32-DO (48)
Lab Code: R1504110-004

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Data File Name: I:\ACQUDATA\MSVOA14\Data\060415\B1095.D\

Analysis Lot: 447749
Instrument Name: R-MS-14
Dilution Factor: 10

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	**1100**		20	
79-34-5	1,1,2,2-Tetrachloroethane	20	U	20	
79-00-5	1,1,2-Trichloroethane	20	U	20	
75-34-3	1,1-Dichloroethane (1,1-DCA)	20	U	20	
75-35-4	1,1-Dichloroethene (1,1-DCE)	20	U	20	
107-06-2	1,2-Dichloroethane	20	U	20	
78-87-5	1,2-Dichloropropane	20	U	20	
67-64-1	Acetone	100	U	100	
75-27-4	Bromodichloromethane	20	U	20	
75-25-2	Bromoform	20	U	20	
74-83-9	Bromomethane	20	U	20	
56-23-5	Carbon Tetrachloride	**380**		20	
108-90-7	Chlorobenzene	20	U	20	
75-00-3	Chloroethane	20	U	20	
67-66-3	Chloroform	**1400**		20	
74-87-3	Chloromethane	20	U	20	
124-48-1	Dibromochloromethane	20	U	20	
75-09-2	Methylene Chloride	20	U	20	
127-18-4	Tetrachloroethene (PCE)	**110**		20	
79-01-6	Trichloroethene (TCE)	20	U	20	
75-69-4	Trichlorofluoromethane (CFC 11)	20	U	20	
75-01-4	Vinyl Chloride	20	U	20	
156-59-2	cis-1,2-Dichloroethene	20	U	20	
10061-01-5	cis-1,3-Dichloropropene	20	U	20	
156-60-5	trans-1,2-Dichloroethene	20	U	20	
10061-02-6	trans-1,3-Dichloropropene	20	U	20	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	92	70-130	6/4/15 18:45	
Dibromofluoromethane	100	70-130	6/4/15 18:45	
Toluene-d8	98	70-130	6/4/15 18:45	

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Analytical Report

Client:	CB&I	**Service Request:**	R1504110
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/27/15 0930
Sample Matrix:	Water	**Date Received:**	5/28/15
		Date Analyzed:	6/4/15 01:03
Sample Name:	BW-5 (9)	**Units:**	µg/L
Lab Code:	R1504110-005	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	447559
Data File Name:	I:\ACQUDATA\MSVOA14\Data\060315\B1057.D\	**Instrument Name:**	R-MS-14
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	92	70-130	6/4/15 01:03	
Dibromofluoromethane	94	70-130	6/4/15 01:03	
Toluene-d8	96	70-130	6/4/15 01:03	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504110
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/27/15 1030
Sample Matrix:	Water	**Date Received:**	5/28/15
		Date Analyzed:	6/4/15 01:27
Sample Name:	BW-8 (13)	**Units:**	µg/L
Lab Code:	R1504110-006	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	447559
Data File Name:	I:\ACQUDATA\MSVOA14\Data\060315\B1058.D\	**Instrument Name:**	R-MS-14
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	**7.6**		2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	**6.0**		2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	**30**		2.0	
156-59-2	cis-1,2-Dichloroethene	**74**		2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	88	70-130	6/4/15 01:27	
Dibromofluoromethane	96	70-130	6/4/15 01:27	
Toluene-d8	95	70-130	6/4/15 01:27	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504110
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/27/15 1000
Sample Matrix:	Water	**Date Received:**	5/28/15
		Date Analyzed:	6/4/15 01:51
Sample Name:	MW-9A (13)	**Units:**	µg/L
Lab Code:	R1504110-007	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	447559
Data File Name:	I:\ACQUDATA\MSVOA14\Data\060315\B1059.D\	**Instrument Name:**	R-MS-14
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	**5.6**		2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	**62**		2.0	
156-59-2	cis-1,2-Dichloroethene	**100**		2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	90	70-130	6/4/15 01:51	
Dibromofluoromethane	95	70-130	6/4/15 01:51	
Toluene-d8	97	70-130	6/4/15 01:51	

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Analytical Report

Client:	CB&I	**Service Request:**	R1504110
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/27/15 0945
Sample Matrix:	Water	**Date Received:**	5/28/15
		Date Analyzed:	6/3/15 20:36
Sample Name:	OB9-DO (92)	**Units:**	µg/L
Lab Code:	R1504110-008	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	447556
Data File Name:	I:\ACQUDATA\MSVOA14\Data\060315\B1046.D\	**Instrument Name:**	R-MS-14
		Dilution Factor:	10

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	20	U	20	
79-34-5	1,1,2,2-Tetrachloroethane	20	U	20	
79-00-5	1,1,2-Trichloroethane	20	U	20	
75-34-3	1,1-Dichloroethane (1,1-DCA)	20	U	20	
75-35-4	1,1-Dichloroethene (1,1-DCE)	20	U	20	
107-06-2	1,2-Dichloroethane	20	U	20	
78-87-5	1,2-Dichloropropane	20	U	20	
67-64-1	Acetone	100	U	100	
75-27-4	Bromodichloromethane	20	U	20	
75-25-2	Bromoform	20	U	20	
74-83-9	Bromomethane	20	U	20	
56-23-5	Carbon Tetrachloride	20	U	20	
108-90-7	Chlorobenzene	20	U	20	
75-00-3	Chloroethane	20	U	20	
67-66-3	Chloroform	20	U	20	
74-87-3	Chloromethane	20	U	20	
124-48-1	Dibromochloromethane	20	U	20	
75-09-2	Methylene Chloride	20	U	20	
127-18-4	Tetrachloroethene (PCE)	20	U	20	
79-01-6	Trichloroethene (TCE)	20	U	20	
75-69-4	Trichlorofluoromethane (CFC 11)	20	U	20	
75-01-4	Vinyl Chloride	**690**		20	
156-59-2	cis-1,2-Dichloroethene	**1200**		20	
10061-01-5	cis-1,3-Dichloropropene	20	U	20	
156-60-5	trans-1,2-Dichloroethene	20	U	20	
10061-02-6	trans-1,3-Dichloropropene	20	U	20	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	95	70-130	6/3/15 20:36	
Dibromofluoromethane	99	70-130	6/3/15 20:36	
Toluene-d8	98	70-130	6/3/15 20:36	

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Analytical Report

Client:	CB&I	**Service Request:**	R1504110
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/27/15 1005
Sample Matrix:	Water	**Date Received:**	5/28/15
		Date Analyzed:	6/4/15 19:09
Sample Name:	OB9-BR (117)	**Units:**	µg/L
Lab Code:	R1504110-009	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	447749
Data File Name:	I:\ACQUDATA\MSVOA14\Data\060415\B1096.D\	**Instrument Name:**	R-MS-14
		Dilution Factor:	5

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	10	U	10	
79-34-5	1,1,2,2-Tetrachloroethane	10	U	10	
79-00-5	1,1,2-Trichloroethane	10	U	10	
75-34-3	1,1-Dichloroethane (1,1-DCA)	10	U	10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	10	U	10	
107-06-2	1,2-Dichloroethane	10	U	10	
78-87-5	1,2-Dichloropropane	10	U	10	
67-64-1	Acetone	50	U	50	
75-27-4	Bromodichloromethane	10	U	10	
75-25-2	Bromoform	10	U	10	
74-83-9	Bromomethane	10	U	10	
56-23-5	Carbon Tetrachloride	10	U	10	
108-90-7	Chlorobenzene	10	U	10	
75-00-3	Chloroethane	10	U	10	
67-66-3	Chloroform	10	U	10	
74-87-3	Chloromethane	10	U	10	
124-48-1	Dibromochloromethane	10	U	10	
75-09-2	Methylene Chloride	10	U	10	
127-18-4	Tetrachloroethene (PCE)	**12**		10	
79-01-6	Trichloroethene (TCE)	10	U	10	
75-69-4	Trichlorofluoromethane (CFC 11)	10	U	10	
75-01-4	Vinyl Chloride	**150**		10	
156-59-2	cis-1,2-Dichloroethene	**570**		10	
10061-01-5	cis-1,3-Dichloropropene	10	U	10	
156-60-5	trans-1,2-Dichloroethene	10	U	10	
10061-02-6	trans-1,3-Dichloropropene	10	U	10	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	94	70-130	6/4/15 19:09	
Dibromofluoromethane	99	70-130	6/4/15 19:09	
Toluene-d8	98	70-130	6/4/15 19:09	

Client:	CB&I	**Service Request:**	R1504110
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/26/15 1245
Sample Matrix:	Water	**Date Received:**	5/28/15
Sample Name:	OB12-DO (48)		
Lab Code:	R1504110-010	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chloride	300.0	**73.2**		mg/L	2.0	10	NA	5/29/15 22:41	

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Analytical Report

Client:	CB&I	**Service Request:**	R1504110
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/26/15 1245
Sample Matrix:	Water	**Date Received:**	5/28/15
Sample Name:	OB12-DO (48)		
Lab Code:	R1504110-010	**Basis:**	NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Iron, Dissolved	6010C	100	U	µg/L	100	1	6/2/15	6/16/15 02:14	
Manganese, Dissolved	6010C	**3300**		µg/L	100	10	6/2/15	6/12/15 08:50	

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Analytical Report

Client:	CB&I	**Service Request:**	R1504110
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/26/15 1245
Sample Matrix:	Water	**Date Received:**	5/28/15
		Date Analyzed:	6/4/15 02:16
Sample Name:	OB12-DO (48)	**Units:**	µg/L
Lab Code:	R1504110-010	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	447559
Data File Name:	I:\ACQUDATA\MSVOA14\Data\060315\B1060.D\	**Instrument Name:**	R-MS-14
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	**5.2**		2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	**9.1**		2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	90	70-130	6/4/15 02:16	
Dibromofluoromethane	95	70-130	6/4/15 02:16	
Toluene-d8	95	70-130	6/4/15 02:16	

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Analytical Report

Client:	CB&I	**Service Request:**	R1504110
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/26/15 1420
Sample Matrix:	Water	**Date Received:**	5/28/15
Sample Name:	OB19-DO (56)		
Lab Code:	R1504110-011	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chloride	300.0	**36.0**		mg/L	2.0	10	NA	5/29/15 22:52	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504110
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/26/15 1420
Sample Matrix:	Water	**Date Received:**	5/28/15
Sample Name:	OB19-DO (56)		
Lab Code:	R1504110-011	**Basis:**	NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Iron, Dissolved	6010C	**1510**		µg/L	100	1	6/ 1/15	6/12/15 04:51	
Manganese, Dissolved	6010C	**3400**		µg/L	10	1	6/ 1/15	6/12/15 04:51	

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Analytical Report

Client:	CB&I	**Service Request:**	R1504110
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/26/15 1420
Sample Matrix:	Water	**Date Received:**	5/28/15
		Date Analyzed:	6/4/15 16:44
Sample Name:	OB19-DO (56)	**Units:**	µg/L
Lab Code:	R1504110-011	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	447749
Data File Name:	I:\ACQUDATA\MSVOA14\Data\060415\B1090.D\	**Instrument Name:**	R-MS-14
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	**2.1**		2.0	
79-01-6	Trichloroethene (TCE)	**7.6**		2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	**8.6**		2.0	
156-59-2	cis-1,2-Dichloroethene	**170**		2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	**20**		2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	92	70-130	6/4/15 16:44	
Dibromofluoromethane	98	70-130	6/4/15 16:44	
Toluene-d8	100	70-130	6/4/15 16:44	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504110
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/26/15 1330
Sample Matrix:	Water	**Date Received:**	5/28/15
Sample Name:	OB25-BR (90)		
Lab Code:	R1504110-012	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chloride	300.0	**174**		mg/L	20	100	NA	5/30/15 17:55	

Client: CB&I
Project: Varian Beverly/152780-05000000
Sample Matrix: Water

Service Request: R1504110
Date Collected: 5/26/15 1330
Date Received: 5/28/15

Sample Name: OB25-BR (90)
Lab Code: R1504110-012

Basis: NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Iron, Dissolved	6010C	10000	U	µg/L	10000	10	6/ 2/15	6/16/15 02:21	
Manganese, Dissolved	6010C	**13800000**		µg/L	50000	500	6/ 2/15	6/12/15 08:57	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504110
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/26/15 1330
Sample Matrix:	Water	**Date Received:**	5/28/15
		Date Analyzed:	6/4/15 02:40
Sample Name:	OB25-BR (90)	**Units:**	µg/L
Lab Code:	R1504110-012	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	447559
Data File Name:	I:\ACQUDATA\MSVOA14\Data\060315\B1061.D\	**Instrument Name:**	R-MS-14
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	**2.7**		2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	90	70-130	6/4/15 02:40	
Dibromofluoromethane	94	70-130	6/4/15 02:40	
Toluene-d8	96	70-130	6/4/15 02:40	

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Analytical Report

Client:	CB&I	**Service Request:**	R1504110
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/27/15 1245
Sample Matrix:	Water	**Date Received:**	5/28/15
Sample Name:	OB36-DO (61)		
Lab Code:	R1504110-013	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chloride	300.0	**1020**		mg/L	200	1000	NA	5/30/15 00:20	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504110
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/27/15 1245
Sample Matrix:	Water	**Date Received:**	5/28/15
Sample Name:	OB36-DO (61)		
Lab Code:	R1504110-013	**Basis:**	NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Iron, Dissolved	6010C	50000	U	µg/L	50000	10	6/ 2/15	6/16/15 02:27	
Manganese, Dissolved	6010C	**86200000**		µg/L	250000	500	6/ 2/15	6/12/15 09:03	

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Analytical Report

Client:	CB&I	**Service Request:**	R1504110
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/27/15 1245
Sample Matrix:	Water	**Date Received:**	5/28/15
		Date Analyzed:	6/3/15 18:35
Sample Name:	OB36-DO (61)	**Units:**	µg/L
Lab Code:	R1504110-013	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	447556
Data File Name:	I:\ACQUDATA\MSVOA14\Data\060315\B1041.D\	**Instrument Name:**	R-MS-14
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	79		10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	89	70-130	6/3/15 18:35	
Dibromofluoromethane	94	70-130	6/3/15 18:35	
Toluene-d8	95	70-130	6/3/15 18:35	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504110
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/27/15 1430
Sample Matrix:	Water	**Date Received:**	5/28/15
Sample Name:	OB35-DO (46)		
Lab Code:	R1504110-014	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chloride	300.0	**90.1**		mg/L	2.0	10	NA	5/30/15 00:31	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504110
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/27/15 1430
Sample Matrix:	Water	**Date Received:**	5/28/15
Sample Name:	OB35-DO (46)		
Lab Code:	R1504110-014	**Basis:**	NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Iron, Dissolved	6010C	100	U	µg/L	100	1	6/ 1/15	6/12/15 04:57	
Manganese, Dissolved	6010C	**3220**		µg/L	10	1	6/ 1/15	6/12/15 04:57	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504110
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/27/15 1430
Sample Matrix:	Water	**Date Received:**	5/28/15
		Date Analyzed:	6/4/15 03:04
Sample Name:	OB35-DO (46)	**Units:**	µg/L
Lab Code:	R1504110-014	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	447559
Data File Name:	I:\ACQUDATA\MSVOA14\Data\060315\B1062.D\	**Instrument Name:**	R-MS-14
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	**8.4**		2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	**14**		2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	**27**		10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	**32000**	E	2.0	
79-01-6	Trichloroethene (TCE)	**8100**	E	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	**160**		2.0	
156-59-2	cis-1,2-Dichloroethene	**1200**	E	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	**5.7**		2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	91	70-130	6/4/15 03:04	
Dibromofluoromethane	93	70-130	6/4/15 03:04	
Toluene-d8	95	70-130	6/4/15 03:04	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly/152780-05000000
Sample Matrix: Water

Service Request: R1504110
Date Collected: 5/27/15 1430
Date Received: 5/28/15
Date Analyzed: 6/4/15 19:58

Sample Name: OB35-DO (46)
Lab Code: R1504110-014
Run Type: Dilution

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Data File Name: I:\ACQUDATA\MSVOA14\Data\060415\B1098.D\

Analysis Lot: 447749
Instrument Name: R-MS-14
Dilution Factor: 500

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	1000	U	1000	
79-34-5	1,1,2,2-Tetrachloroethane	1000	U	1000	
79-00-5	1,1,2-Trichloroethane	1000	U	1000	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1000	U	1000	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1000	U	1000	
107-06-2	1,2-Dichloroethane	1000	U	1000	
78-87-5	1,2-Dichloropropane	1000	U	1000	
67-64-1	Acetone	5000	U	5000	
75-27-4	Bromodichloromethane	1000	U	1000	
75-25-2	Bromoform	1000	U	1000	
74-83-9	Bromomethane	1000	U	1000	
56-23-5	Carbon Tetrachloride	1000	U	1000	
108-90-7	Chlorobenzene	1000	U	1000	
75-00-3	Chloroethane	1000	U	1000	
67-66-3	Chloroform	1000	U	1000	
74-87-3	Chloromethane	1000	U	1000	
124-48-1	Dibromochloromethane	1000	U	1000	
75-09-2	Methylene Chloride	1000	U	1000	
127-18-4	Tetrachloroethene (PCE)	**29000**	D	1000	
79-01-6	Trichloroethene (TCE)	**5200**	D	1000	
75-69-4	Trichlorofluoromethane (CFC 11)	1000	U	1000	
75-01-4	Vinyl Chloride	1000	U	1000	
156-59-2	cis-1,2-Dichloroethene	**1000**	D	1000	
10061-01-5	cis-1,3-Dichloropropene	1000	U	1000	
156-60-5	trans-1,2-Dichloroethene	1000	U	1000	
10061-02-6	trans-1,3-Dichloropropene	1000	U	1000	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	93	70-130	6/4/15 19:58	
Dibromofluoromethane	97	70-130	6/4/15 19:58	
Toluene-d8	97	70-130	6/4/15 19:58	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504110
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/27/15 0830
Sample Matrix:	Water	**Date Received:**	5/28/15
Sample Name:	AP27-DO (56)		
Lab Code:	R1504110-015	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chloride	300.0	**341**		mg/L	8.0	40	NA	5/30/15 00:43	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504110
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/27/15 0830
Sample Matrix:	Water	**Date Received:**	5/28/15
Sample Name:	AP27-DO (56)		
Lab Code:	R1504110-015	**Basis:**	NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Iron, Dissolved	6010C	100	U	µg/L	100	1	6/ 2/15	6/12/15 09:09	
Manganese, Dissolved	6010C	**1470**		µg/L	10	1	6/ 2/15	6/12/15 09:09	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504110
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/27/15 0830
Sample Matrix:	Water	**Date Received:**	5/28/15
		Date Analyzed:	6/4/15 19:34
Sample Name:	AP27-DO (56)	**Units:**	µg/L
Lab Code:	R1504110-015	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	447749
Data File Name:	I:\ACQUDATA\MSVOA14\Data\060415\B1097.D\	**Instrument Name:**	R-MS-14
		Dilution Factor:	100

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	200	U	200	
79-34-5	1,1,2,2-Tetrachloroethane	200	U	200	
79-00-5	1,1,2-Trichloroethane	200	U	200	
75-34-3	1,1-Dichloroethane (1,1-DCA)	200	U	200	
75-35-4	1,1-Dichloroethene (1,1-DCE)	200	U	200	
107-06-2	1,2-Dichloroethane	200	U	200	
78-87-5	1,2-Dichloropropane	200	U	200	
67-64-1	Acetone	1000	U	1000	
75-27-4	Bromodichloromethane	200	U	200	
75-25-2	Bromoform	200	U	200	
74-83-9	Bromomethane	200	U	200	
56-23-5	Carbon Tetrachloride	200	U	200	
108-90-7	Chlorobenzene	200	U	200	
75-00-3	Chloroethane	200	U	200	
67-66-3	Chloroform	200	U	200	
74-87-3	Chloromethane	200	U	200	
124-48-1	Dibromochloromethane	200	U	200	
75-09-2	Methylene Chloride	200	U	200	
127-18-4	Tetrachloroethene (PCE)	**590**		200	
79-01-6	Trichloroethene (TCE)	**15000**		200	
75-69-4	Trichlorofluoromethane (CFC 11)	200	U	200	
75-01-4	Vinyl Chloride	200	U	200	
156-59-2	cis-1,2-Dichloroethene	200	U	200	
10061-01-5	cis-1,3-Dichloropropene	200	U	200	
156-60-5	trans-1,2-Dichloroethene	200	U	200	
10061-02-6	trans-1,3-Dichloropropene	200	U	200	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	93	70-130	6/4/15 19:34	
Dibromofluoromethane	94	70-130	6/4/15 19:34	
Toluene-d8	96	70-130	6/4/15 19:34	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504110
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/27/15 1240
Sample Matrix:	Water	**Date Received:**	5/28/15
Sample Name:	OB32-DO (60)		
Lab Code:	R1504110-016	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chloride	300.0	**52.7**		mg/L	2.0	10	NA	5/30/15 18:06	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504110
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/27/15 1240
Sample Matrix:	Water	**Date Received:**	5/28/15
Sample Name:	OB32-DO (60)		
Lab Code:	R1504110-016	**Basis:**	NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Iron, Dissolved	6010C	100	U	µg/L	100	1	6/ 2/15	6/16/15 02:33	
Manganese, Dissolved	6010C	**54400**		µg/L	500	50	6/ 2/15	6/12/15 09:40	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504110
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/27/15 1240
Sample Matrix:	Water	**Date Received:**	5/28/15
		Date Analyzed:	6/4/15 17:08
Sample Name:	OB32-DO (60)	**Units:**	µg/L
Lab Code:	R1504110-016	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	447749
Data File Name:	I:\ACQUDATA\MSVOA14\Data\060415\B1091.D\	**Instrument Name:**	R-MS-14
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	**2.2**		2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	**2.8**		2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	**2.3**		2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	**2.9**		2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	96	70-130	6/4/15 17:08	
Dibromofluoromethane	98	70-130	6/4/15 17:08	
Toluene-d8	100	70-130	6/4/15 17:08	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504110
Project:	Varian Beverly/152780-05000000	**Date Collected:**	5/26/15 1100
Sample Matrix:	Water	**Date Received:**	5/28/15
		Date Analyzed:	6/4/15 00:39
Sample Name:	TRIP BLANK	**Units:**	µg/L
Lab Code:	R1504110-017	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	447559
Data File Name:	I:\ACQUDATA\MSVOA14\Data\060315\B1056.D\	**Instrument Name:**	R-MS-14
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	89	70-130	6/4/15 00:39	
Dibromofluoromethane	93	70-130	6/4/15 00:39	
Toluene-d8	96	70-130	6/4/15 00:39	

Client:	CB&I	**Service Request:**	R1504110
Project:	Varian Beverly/152780-05000000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank		
Lab Code:	R1504110-MB1	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chloride	300.0	0.20	U	mg/L	0.20	1	NA	5/29/15 19:21	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504110
Project:	Varian Beverly/152780-05000000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank		
Lab Code:	R1504110-MB2	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chloride	300.0	0.20	U	mg/L	0.20	1	NA	5/29/15 23:47	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504110
Project:	Varian Beverly/152780-05000000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank		
Lab Code:	R1504110-MB3	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chloride	300.0	0.20	U	mg/L	0.20	1	NA	5/30/15 17:33	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504110
Project:	Varian Beverly/152780-05000000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank		
Lab Code:	R1504110-MB1	**Basis:**	NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Iron, Dissolved	6010C	100	U	µg/L	100	1	6/ 1/15	6/12/15 04:14	
Manganese, Dissolved	6010C	**10**		µg/L	10	1	6/ 1/15	6/12/15 04:14	

Client:	CB&I	**Service Request:**	R1504110
Project:	Varian Beverly/152780-05000000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank		
Lab Code:	R1504110-MB2	**Basis:**	NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Iron, Dissolved	6010C	100	U	µg/L	100	1	6/2/15	6/12/15 08:20	
Manganese, Dissolved	6010C	10	U	µg/L	10	1	6/2/15	6/12/15 08:20	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504110
Project:	Varian Beverly/152780-05000000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank		
Lab Code:	R1504110-MB3	**Basis:**	NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Manganese, Dissolved	6010C	10	U	µg/L	10	1	NA	6/15/15 21:42	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504110
Project:	Varian Beverly/152780-05000000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	6/3/15 12:32
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1506137-05	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	447556
Data File Name:	I:\ACQUDATA\MSVOA14\Data\060315\B1026.D\	**Instrument Name:**	R-MS-14
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	89	70-130	6/3/15 12:32	
Dibromofluoromethane	95	70-130	6/3/15 12:32	
Toluene-d8	95	70-130	6/3/15 12:32	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504110
Project:	Varian Beverly/152780-05000000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	6/4/15 00:14
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1506141-05	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	447559
Data File Name:	I:\ACQUDATA\MSVOA14\Data\060315\B1055.D\	**Instrument Name:**	R-MS-14
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	92	70-130	6/4/15 00:14	
Dibromofluoromethane	95	70-130	6/4/15 00:14	
Toluene-d8	95	70-130	6/4/15 00:14	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504110
Project:	Varian Beverly/152780-05000000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	6/4/15 14:14
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1506219-05	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	447749
Data File Name:	I:\ACQUDATA\MSVOA14\Data\060415\B1084.D\	**Instrument Name:**	R-MS-14
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	93	70-130	6/4/15 14:14	
Dibromofluoromethane	96	70-130	6/4/15 14:14	
Toluene-d8	97	70-130	6/4/15 14:14	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504110
Project:	Varian Beverly/152780-05000000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	6/5/15 09:52
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1506287-05	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	447895
Data File Name:	I:\ACQUDATA\MSVOA14\Data\060515\B1125.D\	**Instrument Name:**	R-MS-14
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	89	70-130	6/5/15 09:52	
Dibromofluoromethane	95	70-130	6/5/15 09:52	
Toluene-d8	95	70-130	6/5/15 09:52	

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: CB&I
Project: Varian Beverly/152780-05000000
Sample Matrix: Water

Service Request: R1504110
Date Analyzed: 5/29/15

Lab Control Sample Summary
General Chemistry Parameters

Units: mg/L
Basis: NA

		Lab Control Sample R1504110-LCS1			
Analyte Name	**Method**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**
Chloride	300.0	1.93	2.00	97	90 - 110

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: CB&I
Project: Varian Beverly/152780-05000000
Sample Matrix: Water

Service Request: R1504110
Date Analyzed: 5/29/15

Lab Control Sample Summary
General Chemistry Parameters

Units: mg/L
Basis: NA

Analyte Name	Method	Lab Control Sample R1504110-LCS2 Result	Spike Amount	% Rec	% Rec Limits
Chloride	300.0	1.96	2.00	98	90 - 110

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: CB&I
Project: Varian Beverly/152780-05000000
Sample Matrix: Water

Service Request: R1504110
Date Analyzed: 5/30/15

Lab Control Sample Summary
General Chemistry Parameters

Units: mg/L
Basis: NA

Analyte Name	Method	Lab Control Sample R1504110-LCS3 Result	Spike Amount	% Rec	% Rec Limits
Chloride	300.0	1.96	2.00	98	90 - 110

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: CB&I
Project: Varian Beverly/152780-05000000
Sample Matrix: Water

Service Request: R1504110
Date Analyzed: 6/12/15

Lab Control Sample Summary
Inorganic Parameters

Units: µg/L
Basis: NA

Analyte Name	Method	Lab Control Sample R1504110-LCS1 Result	Spike Amount	% Rec	% Rec Limits
Iron, Dissolved	6010C	1030	1000	103	80 - 120
Manganese, Dissolved	6010C	510	500	102	80 - 120

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: CB&I
Project: Varian Beverly/152780-05000000
Sample Matrix: Water

Service Request: R1504110
Date Analyzed: 6/12/15

Lab Control Sample Summary
Inorganic Parameters

Units: µg/L
Basis: NA

Analyte Name	Method	Lab Control Sample R1504110-LCS2 Result	Spike Amount	% Rec	% Rec Limits
Iron, Dissolved	6010C	1030	1000	103	80 - 120
Manganese, Dissolved	6010C	509	500	102	80 - 120

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: CB&I
Project: Varian Beverly/152780-05000000
Sample Matrix: Water

Service Request: R1504110
Date Analyzed: 6/ 3/15

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260C

Units: µg/L
Basis: NA

Analysis Lot: 447556

Analyte Name	Lab Control Sample RQ1506137-03 Result	Spike Amount	% Rec	Duplicate Lab Control Sample RQ1506137-04 Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
1,1,1-Trichloroethane (TCA)	16.9	20.0	85	16.5	20.0	82	70 - 130	3	20
1,1,2,2-Tetrachloroethane	17.3	20.0	87	17.6	20.0	88	70 - 130	1	20
1,1,2-Trichloroethane	17.8	20.0	89	16.8	20.0	84	70 - 130	6	20
1,1-Dichloroethane (1,1-DCA)	17.0	20.0	85	16.7	20.0	84	70 - 130	2	20
1,1-Dichloroethene (1,1-DCE)	17.4	20.0	87	17.0	20.0	85	70 - 130	2	20
1,2-Dichloroethane	16.6	20.0	83	16.1	20.0	80	70 - 130	3	20
1,2-Dichloropropane	17.4	20.0	87	17.1	20.0	85	70 - 130	2	20
Acetone	17.5	20.0	88	17.8	20.0	89	40 - 160	2	20
Bromodichloromethane	17.9	20.0	89	17.1	20.0	85	70 - 130	4	20
Bromoform	17.0	20.0	85	17.5	20.0	88	70 - 130	3	20
Bromomethane	20.1	20.0	100	21.7	20.0	108	40 - 160	8	20
Carbon Tetrachloride	15.3	20.0	77	15.7	20.0	78	70 - 130	2	20
Chlorobenzene	17.1	20.0	85	17.5	20.0	88	70 - 130	2	20
Chloroethane	18.0	20.0	90	16.8	20.0	84	70 - 130	7	20
Chloroform	17.6	20.0	88	17.4	20.0	87	70 - 130	1	20
Chloromethane	19.6	20.0	98	18.7	20.0	94	40 - 160	5	20
Dibromochloromethane	18.0	20.0	90	17.9	20.0	90	70 - 130	<1	20
Methylene Chloride	17.9	20.0	89	16.7	20.0	83	70 - 130	7	20
Tetrachloroethene (PCE)	15.1	20.0	75	15.4	20.0	77	70 - 130	2	20
Trichloroethene (TCE)	16.8	20.0	84	16.6	20.0	83	70 - 130	1	20
Trichlorofluoromethane (CFC 11)	17.1	20.0	85	16.7	20.0	84	70 - 130	2	20
Vinyl Chloride	19.0	20.0	95	18.3	20.0	91	70 - 130	4	20
cis-1,2-Dichloroethene	18.2	20.0	91	17.5	20.0	87	70 - 130	4	20
cis-1,3-Dichloropropene	17.4	20.0	87	16.8	20.0	84	70 - 130	4	20
trans-1,2-Dichloroethene	18.6	20.0	93	18.0	20.0	90	70 - 130	3	20
trans-1,3-Dichloropropene	19.2	20.0	96	18.9	20.0	94	70 - 130	1	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: CB&I
Project: Varian Beverly/152780-05000000
Sample Matrix: Water

Service Request: R1504110
Date Analyzed: 6/ 3/15

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260C

Units: µg/L
Basis: NA

Analysis Lot: 447559

	Lab Control Sample RQ1506141-03			Duplicate Lab Control Sample RQ1506141-04					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
1,1,1-Trichloroethane (TCA)	17.1	20.0	85	17.1	20.0	86	70 - 130	<1	20
1,1,2,2-Tetrachloroethane	16.4	20.0	82	16.5	20.0	82	70 - 130	<1	20
1,1,2-Trichloroethane	18.2	20.0	91	18.5	20.0	92	70 - 130	2	20
1,1-Dichloroethane (1,1-DCA)	18.1	20.0	90	17.3	20.0	87	70 - 130	4	20
1,1-Dichloroethene (1,1-DCE)	18.0	20.0	90	17.5	20.0	87	70 - 130	3	20
1,2-Dichloroethane	17.8	20.0	89	17.6	20.0	88	70 - 130	1	20
1,2-Dichloropropane	18.2	20.0	91	18.1	20.0	90	70 - 130	<1	20
Acetone	19.7	20.0	98	21.9	20.0	110	40 - 160	11	20
Bromodichloromethane	17.8	20.0	89	18.1	20.0	91	70 - 130	2	20
Bromoform	16.5	20.0	83	17.4	20.0	87	70 - 130	5	20
Bromomethane	23.4	20.0	117	22.7	20.0	114	40 - 160	3	20
Carbon Tetrachloride	15.6	20.0	78	16.4	20.0	82	70 - 130	5	20
Chlorobenzene	18.1	20.0	91	18.1	20.0	91	70 - 130	<1	20
Chloroethane	19.0	20.0	95	17.9	20.0	89	70 - 130	6	20
Chloroform	18.6	20.0	93	18.1	20.0	90	70 - 130	3	20
Chloromethane	21.1	20.0	105	20.7	20.0	103	40 - 160	2	20
Dibromochloromethane	17.3	20.0	86	18.3	20.0	91	70 - 130	6	20
Methylene Chloride	19.2	20.0	96	18.2	20.0	91	70 - 130	6	20
Tetrachloroethene (PCE)	15.6	20.0	78	16.9	20.0	85	70 - 130	8	20
Trichloroethene (TCE)	19.7	20.0	98	19.7	20.0	99	70 - 130	<1	20
Trichlorofluoromethane (CFC 11)	18.2	20.0	91	18.1	20.0	90	70 - 130	<1	20
Vinyl Chloride	20.1	20.0	101	19.7	20.0	99	70 - 130	2	20
cis-1,2-Dichloroethene	19.7	20.0	98	18.9	20.0	95	70 - 130	4	20
cis-1,3-Dichloropropene	16.6	20.0	83	16.4	20.0	82	70 - 130	<1	20
trans-1,2-Dichloroethene	19.1	20.0	96	18.7	20.0	93	70 - 130	2	20
trans-1,3-Dichloropropene	18.0	20.0	90	17.4	20.0	87	70 - 130	3	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: CB&I
Project: Varian Beverly/152780-05000000
Sample Matrix: Water

Service Request: R1504110
Date Analyzed: 6/ 4/15

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260C

Units: µg/L
Basis: NA

Analysis Lot: 447749

	Lab Control Sample RQ1506219-03			Duplicate Lab Control Sample RQ1506219-04					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
1,1,1-Trichloroethane (TCA)	16.1	20.0	81	16.2	20.0	81	70 - 130	<1	20
1,1,2,2-Tetrachloroethane	17.1	20.0	86	17.3	20.0	86	70 - 130	<1	20
1,1,2-Trichloroethane	17.2	20.0	86	17.3	20.0	86	70 - 130	<1	20
1,1-Dichloroethane (1,1-DCA)	16.3	20.0	82	16.8	20.0	84	70 - 130	3	20
1,1-Dichloroethene (1,1-DCE)	17.0	20.0	85	16.9	20.0	84	70 - 130	<1	20
1,2-Dichloroethane	16.3	20.0	82	16.3	20.0	81	70 - 130	<1	20
1,2-Dichloropropane	17.4	20.0	87	17.0	20.0	85	70 - 130	2	20
Acetone	15.8	20.0	79	18.4	20.0	92	40 - 160	15	20
Bromodichloromethane	17.1	20.0	86	16.7	20.0	83	70 - 130	3	20
Bromoform	15.7	20.0	79	16.3	20.0	81	70 - 130	3	20
Bromomethane	18.3	20.0	91	19.9	20.0	99	40 - 160	8	20
Carbon Tetrachloride	15.4	20.0	77	14.8	20.0	74	70 - 130	4	20
Chlorobenzene	17.2	20.0	86	17.6	20.0	88	70 - 130	2	20
Chloroethane	17.6	20.0	88	17.1	20.0	85	70 - 130	3	20
Chloroform	16.7	20.0	83	17.2	20.0	86	70 - 130	3	20
Chloromethane	19.8	20.0	99	20.2	20.0	101	40 - 160	2	20
Dibromochloromethane	17.0	20.0	85	17.2	20.0	86	70 - 130	1	20
Methylene Chloride	17.5	20.0	87	16.7	20.0	84	70 - 130	5	20
Tetrachloroethene (PCE)	17.2	20.0	86	16.7	20.0	84	70 - 130	3	20
Trichloroethene (TCE)	17.3	20.0	86	17.5	20.0	88	70 - 130	1	20
Trichlorofluoromethane (CFC 11)	17.2	20.0	86	16.8	20.0	84	70 - 130	2	20
Vinyl Chloride	18.5	20.0	93	18.1	20.0	90	70 - 130	3	20
cis-1,2-Dichloroethene	17.7	20.0	89	17.8	20.0	89	70 - 130	<1	20
cis-1,3-Dichloropropene	16.4	20.0	82	16.0	20.0	80	70 - 130	3	20
trans-1,2-Dichloroethene	18.3	20.0	92	17.8	20.0	89	70 - 130	3	20
trans-1,3-Dichloropropene	17.2	20.0	86	17.1	20.0	86	70 - 130	<1	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: CB&I
Project: Varian Beverly/152780-05000000
Sample Matrix: Water

Service Request: R1504110
Date Analyzed: 6/ 5/15

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260C

Units: µg/L
Basis: NA

Analysis Lot: 447895

	Lab Control Sample RQ1506287-03			Duplicate Lab Control Sample RQ1506287-04					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
1,1,1-Trichloroethane (TCA)	16.9	20.0	84	17.0	20.0	85	70 - 130	<1	20
1,1,2,2-Tetrachloroethane	17.4	20.0	87	18.8	20.0	94	70 - 130	7	20
1,1,2-Trichloroethane	17.6	20.0	88	18.2	20.0	91	70 - 130	3	20
1,1-Dichloroethane (1,1-DCA)	16.5	20.0	82	17.2	20.0	86	70 - 130	4	20
1,1-Dichloroethene (1,1-DCE)	17.5	20.0	88	17.3	20.0	87	70 - 130	<1	20
1,2-Dichloroethane	16.5	20.0	82	17.0	20.0	85	70 - 130	3	20
1,2-Dichloropropane	17.1	20.0	85	17.6	20.0	88	70 - 130	3	20
Acetone	18.0	20.0	90	18.5	20.0	92	40 - 160	3	20
Bromodichloromethane	16.7	20.0	84	17.4	20.0	87	70 - 130	4	20
Bromoform	17.3	20.0	86	17.0	20.0	85	70 - 130	1	20
Bromomethane	21.9	20.0	110	18.4	20.0	92	40 - 160	17	20
Carbon Tetrachloride	16.8	20.0	84	16.6	20.0	83	70 - 130	1	20
Chlorobenzene	17.9	20.0	89	18.1	20.0	90	70 - 130	1	20
Chloroethane	17.7	20.0	88	17.0	20.0	85	70 - 130	4	20
Chloroform	17.2	20.0	86	17.2	20.0	86	70 - 130	<1	20
Chloromethane	19.7	20.0	98	19.9	20.0	99	40 - 160	1	20
Dibromochloromethane	17.3	20.0	86	17.7	20.0	88	70 - 130	2	20
Methylene Chloride	17.6	20.0	88	18.2	20.0	91	70 - 130	4	20
Tetrachloroethene (PCE)	18.3	20.0	91	17.8	20.0	89	70 - 130	2	20
Trichloroethene (TCE)	18.4	20.0	92	18.1	20.0	91	70 - 130	2	20
Trichlorofluoromethane (CFC 11)	18.0	20.0	90	17.8	20.0	89	70 - 130	1	20
Vinyl Chloride	19.0	20.0	95	18.3	20.0	92	70 - 130	4	20
cis-1,2-Dichloroethene	18.0	20.0	90	17.6	20.0	88	70 - 130	2	20
cis-1,3-Dichloropropene	16.1	20.0	80	16.8	20.0	84	70 - 130	4	20
trans-1,2-Dichloroethene	18.0	20.0	90	18.3	20.0	92	70 - 130	2	20
trans-1,3-Dichloropropene	17.4	20.0	87	17.9	20.0	90	70 - 130	3	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Columbia Analytical Services — CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

1 Mustard Street, Suite 250, Rochester, NY 14609 | 585.288.5380 | 800.695.7222 | 585.288.8475 (fax) PAGE 1 OF 2

Project Name: Varian Beverly	Project Number: 152780-05000000
Project Manager: Raymond Cadorette	Report CC:
Company/Address: CB&I Environmental 150 Royall Street Canton, MA 02021	
Phone #: 617-589-6102	E-mail: Raymond.Cadorette@CBI.com
Sampler's Signature:	Sampler's Printed Name:

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	PRESERVATIVE	GC/MS VOA's ☒ 8260 ☐ 624 ☐ CLP List	GC/MS SVOA's ☐ 8270 ☐ 625	GC VOA's ☐ 8021 ☐ 601/602	PESTICIDES ☐ 8081 ☐ 608	PCB's ☐ 8082 ☐ 608	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below) Fe + Mn	Chloride	REMARKS/ ALTERNATE DESCRIPTION
						1	Site specific							20	
AP14-S(29)		5/26/15	1100	GW	5	3						1	1		
AP26-DO(40)		5/26/15	1445		5	3						1	1		
AP31-DO(48)		5/26/15	1130		5	3						1	1		
AP32-DO(48)		5/26/15	1205		5	3						1	1		
BW-5(9)		5/27/15	0930		3	3									
BW-8(13)		5/27/15	1030		3	3									
MW-9A(13)		5/27/15	1000		3	3									
OB9-DO(92)		5/27/15	0945		3	3									
OB9-BR(117)		5/27/15	1005		3	3									
OB12-DO(48)		5/26/15	1245	✓	5	3						1	1		

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

SPECIAL INSTRUCTIONS/COMMENTS
Metals = Field filtered

Site specific VOC list.
Massachusetts CAM analyses reporting and QA/QC.
Please email GISKey formatted EDD & PDF of report to:
Catherine.Mainville@CBI.com.

See QAPP ☐

TURNAROUND REQUIREMENTS
____ RUSH (SURCHARGES APPLY)
____ 1 day ____ 2 day ____ 3 day
____ 4 day ____ 5 day
__✓__ Standard

REQUESTED REPORT DATE
_____

REPORT REQUIREMENTS
____ I. Results Only
____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
____ III. Results + QC and Calibration Summaries
____ IV. Data Validation Report with Raw Data

Edata __✓__ Yes ____ No

INVOICE INFORMATION
PO #: 915904
BILL TO: CB&I

STATE WHERE SAMPLES WERE COLLECTED:

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature	Signature	Signature	Signature	Signature	
Printed Name: Ana Foretti	Printed Name: Gary Lefebvre	Printed Name	Printed Name	Printed Name	
Firm: CB&I	Firm: #1	Firm	Firm	Firm	
Date/Time: 5/27/15 1500	Date/Time: 5/28/15 0900	Date/Time	Date/Time	Date/Time	

R1504110 7 Y
CB&I Environmental & Infrastructure
Varian Beverly - Non-Bio Wells

Distribution: White - Lab Copy; Yellow - Return To Originator

SCOC Rev. 10/2010

ALS Environmental

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

25976

1565 Jefferson Road, Building 300, Suite 360 • Rochester, NY 14623 | +1 585 288 5380 +1 585 288 8475 (fax) PAGE 2 OF 2

Project Name: Varian Beverly	Project Number: 152780-05000000
Project Manager: Raymond Cadorette	Report CC:
Company/Address: CB + I Environmental 150 Royall St Canton, MA 02021	
Phone #: 617-589-6102	Email: Raymond.Cadorette@CBI.com
Sampler's Signature:	Sampler's Printed Name:

ANALYSIS REQUESTED *(Include Method Number and Container Preservative)*

PRESERVATIVE: 1 | 2 | 0

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	GCMS VOAs *8260 ○ 624 ○ CLP	GCMS SVOAs ○ 8270 ○ 625	GC VOAs ○ 8021 ○ 601/602	PESTICIDES ○ 8081 ○ 608	PCBs ○ 8082 ○ 608	METALS: TOTAL (List in comments below)	METALS: DISSOLVED (List in comments below) Fe+Mn	Chloride	REMARKS/ ALTERNATE DESCRIPTION
OB19-DO(56)		5/26/15	1420	GW	5	3						1	1	
OB25-BR(90)		5/26/15	1330		5	3						1	1	
OB36-DO(41)		5/27/15	1245		4	2						1	1	
OB35-DO(46)		5/27/15	1430		5	3						1	1	
AP27-DO(56)		5/27/15	0830		5	3						1	1	
OB32-DO(60)		5/26/15	1240		5	3						1	1	
Trip Blank		5/19/15	1500		3	3								

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

SPECIAL INSTRUCTIONS/COMMENTS
Metals = Field filters

See QAPP ☐

TURNAROUND REQUIREMENTS
____ RUSH (SURCHARGES APPLY)
____ 1 day ____ 2 day ____ 3 day
____ 4 day ____ 5 day
REQUESTED REPORT DATE: _____

REPORT REQUIREMENTS
____ I. Results Only
____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
____ III. Results + QC and Calibration Summaries
____ IV. Data Validation Report with Raw Data
Edata ✓ Yes ____ No

INVOICE INFORMATION
PO # 915904
BILL TO: CB + I

STATE WHERE SAMPLES WERE COLLECTED

	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
1						
Signature						
Printed Name	Andy Fiorillo					
Firm	CB+I					
Date/Time	5/27/15 1500	5/28/15 0900				

Distribution: White - Lab Copy; Yellow - Return to Originator

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R1504110 7 Y
CB&I Environmental & Infrastructure
Varian Beverly - Non-Bio Wells

Cooler Receipt and Preservation Check Form

Project/Client CB.I Folder Number R1504110.

Cooler received on 5/21/15 by: Q COURIER: ALS (UPS) FEDEX VELOCITY CLIENT

1	Were **Custody seals** on outside of cooler?	(Y) N	5a	**Perchlorate** samples have required headspace?	Y N (NA)
2	**Custody papers** properly completed (ink, signed)?	(Y) N	5b	Did VOA vials, Alk,or Sulfide have sig* **bubbles**?	(Y) N NA
3	Did all bottles arrive in good **condition** (unbroken)?	(Y) N	6	Where did the bottles originate?	(ALS/ROC) CLIENT
4	Circle: (Wet Ice) **Dry Ice Gel packs** present?	(Y) N	7	Soil VOA received as: Bulk Encore 5035set	(NA)

8. Temperature Readings Date: 5/21/15 Time: 0908 ID: (IR#3) IR#5 From: Temp Blank (Sample Bottle)

Observed Temp (°C)	5.0						
Correction Factor (°C)	-0.6						
Corrected Temp (°C)	4.4°						
Within 0-6°C?	(Y) N	Y N	Y N	Y N	Y N	Y N	Y N

If out of Temperature, note packing/ice condition: _____ Ice melted Poorly Packed Same Day Rule

&Client Approval to Run Samples: _____ Standing Approval Client aware at drop-off Client notified by: _____

All samples held in storage location: R-002 by Q on 5/21/15 at 0912
5035 samples placed in storage location: _____ by _____ on _____ at _____

PC Secondary Review: JMS 5/28/15

Cooler Breakdown: Date: 5/28/15 Time: 1439 by: AD

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

Explain any discrepancies:

pH	Reagent	Yes	No	Lot Received	Exp	Sample ID	Vol. Added	Lot Added	Final pH
≥12	NaOH								
≤2	HNO_3	✓	✓	BB0261420	5/16				
≤2	H_2SO_4								
<4	$NaHSO_4$								
Residual Chlorine (-)	For CN Phenol and 522			If +, contact PM to add $Na_2S_2O_3$ (CN), ascorbic (phenol).					
	$Na_2S_2O_3$	-	-						
	ZnAcetate	-	-						
	HCl	**	**	4114050	4/16				

**Not to be tested before analysis – pH tested and recorded by VOAs on a separate worksheet

Yes=All samples OK

No=Samples were preserved at The lab as listed

PM OK to Adjust: _____

Bottle lot numbers: 4-258-004, 042015-2AAO

Other Comments:

All VOC have headspace

Bottles say OB37-DO (61')
COC says OB36-DO (61')

* OB25-BR (90') & OB37-DO (61') are too opaque to notice a change in pH paper for preservation check

PC Secondary Review: JMS 5/28/15 *significant air bubbles: VOA > 5-6 mm : WC >1 in. diameter

Data Usability Worksheet

Project Name : Varian Medical Systems, Inc
Job Number : 152728.05

Prepared By: Ana Fioretti
Date : 6/29/2015

Matrix: Groundwater

Analyte Group : Volatile Organics
Analytical Method : SW-846 5030C/8260C

Completed MADEP CAM Certification Form included: Yes
Laboratory ID No. : R1504566

Chain of Custody included in Data Package ? Yes
Is it Complete ? Yes

Sample Collection Date	Analysis	Allowable Holding Time for extraction	Allowable Holding Time for analysis	Analysis Date
6/9/15	SW-846 5030C/8260C	14 Days	10 days	6/16/2015

Sample temperature within QC limits: Yes

Surrogate Recovery
Are all % recoveries within the allowable range ? Yes

If No, List sample ID where range was exceeded: NA

MS/MSD

Are all MS/MSD sample recoveries within the QC limits ? NA

If No, list sample ID, date and compound where limit was exceeded: NA

Laboratory Control Samples
Are all laboratory control sample recoveries within the QC limits ? Yes

If no, list sample ID where range was exceeded: N/A

Equipment Field Blank ID :
Trip Blank ID :

Method Blank: Sw-846 5030C/8260C 6/16/2015

Were any compounds identified in the method blank, field blank or trip blank above detection limits ? No

If so, list Sample ID/Compound/Concentration/Units:

Notes:
Several samples were initially analyzed at dilutions to bring target analytes within the calibration range of the method.

All Blank Spike (LCS)/Blank Spike Duplicate (LCSD) recoveries and RPD's were within QC limits.

Reviewed By: Jennifer Gailey 6/30/2015

ALS Environmental
ALS Group USA, Corp
1565 Jefferson Rd, Building 300, Suite 360
Rochester, NY 14623
T: 585-288-5380
F: 585-288-8475
www.alsglobal.com

June 18, 2015

Analytical Report for Service Request No: R1504566

Mr. Ray Cadorette
CB&I Environmental & Infrastructure
150 Royall Street
Canton, MA 02021

Laboratory Results for: Varian Beverly/152728-05000000

Dear Mr. Cadorette:

Enclosed are the results of the sample(s) submitted to our laboratory on June 10, 2015. For your reference, these analyses have been assigned our service request number **R1504566**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s) for analysis of these samples, and represented by Laboratory Control Sample control limits. Any events, such as QC failures, which may add to the uncertainty are explained in the report narrative.

Please contact me if you have any questions. My extension is 7472. You may also contact me via email at Janice.Jaeger@alsglobal.com.

Respectfully submitted,

ALS Group USA Corp. dba ALS Environmental

Janice Jaeger
Project Manager

CC: Pernilla Haley

ALS Environmental

Client:	CB&I
Service Request No.:	R1504566
Project:	Varian
Date Received:	5/27/15
Sample Matrix:	Water
Project/Case No.:	

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II data deliverables. When appropriate to the method, method blank results have been reported with each analytical test. Surrogate recoveries have been reported for all applicable organic analyses. Additional quality control analyses reported herein include: Laboratory Control Sample (LCS).

Sample Receipt

Water samples were received for analysis at ALS Environmental on 5/27/15. The samples were received in good condition under the accompanying chain of custody form. All sampling activities performed by ALS personnel have been in accordance with "ALS Field Procedures and Measurements Manual" or by client specifications. The samples were stored in a refrigerator between 1°C and 6°C upon receipt at the laboratory. All Soluble samples were filtered in the field.

Volatile Organics

Water samples were analyzed for a site list of Volatile Organics by SW-846 Method 5030C/8260C.

Several samples were initially analyzed at dilutions to bring target analytes within the calibration range of the method.

All initial and continuing calibrations were compliant.

All Surrogate Standard recoveries were within QC limits.

All Blank Spike (LCS)/Blank Spike Duplicate (LCSD) recoveries and RPD's were within QC limits.

All samples were analyzed within the required holding time of 14 days.

MassDEP Analytical Protocol Certification Form

Laboratory Name: ALS Environmental | Project #: 152728

Project Location: Varian Beverly | RTN:

This Form provides certifications for the following data set: list Laboratory Sample ID Number(s):
R1504566-001

Matrices: Groundwater/Surface Water X Soil/Sediment Drinking Water Air Other:

CAM Protocol (check all that apply below):

8260 VOC CAM II A **X**	7470/7471 Hg CAM III B	MassDEP VPH CAM IV A	8081 Pesticides CAM V B	7196 Hex Cr CAM VI B	MassDEP APH CAM IX A
8270 SVOC CAM II B	7010 Metals CAM III C	MassDEP EPH CAM IV B	8151 Herbicides CAM V C	8330 Explosives CAM VIII A	TO-15 VOC CAM IX B
6010 Metals CAM III A	6020 Metals CAM III D	8082 PCB CAM V A	9014 Total Cyanide/PAC CAM VI A	6860 Perchlorate CAM VIII B	

Affirmative Responses to Questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	X Yes No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	X Yes No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	X Yes No
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	X Yes No
E	VPH, EPH, APH, and TO-15 only: a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	Yes No Yes No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	X Yes No

Responses to Questions G, H and I below are required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	X Yes No[1]

***Data User Note:** Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.*

H	Were **all** QC performance standards specified in the CAM protocol(s) achieved?	X Yes No[1]
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	Yes X No[1]

[1] *All negative responses must be addressed in an attached laboratory narrative.*

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Signature: _____ **Position: Project Manager**

Printed Name: Janice Jaeger **Date:** 06/18/15 00003

CASE NARRATIVE

This report contains analytical results for the following samples:
Service Request Number: R1504566

Lab ID	Client ID
R1504566-001	MW-34

ALS Environmental

REPORT QUALIFIERS AND DEFINITIONS

U Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.

J Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Arclors).

B Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.

E Inorganics- Concentration is estimated due to the serial dilution was outside control limits.

E Organics- Concentration has exceeded the calibration range for that specific analysis.

D Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.

* Indicates that a quality control parameter has exceeded laboratory limits. Under the "Notes" column of the Form I, this qualifier denotes analysis was performed out of Holding Time.

H Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.

Spike was diluted out.

+ Correlation coefficient for MSA is <0.995.

N Inorganics- Matrix spike recovery was outside laboratory limits.

N Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.

S Concentration has been determined using Method of Standard Additions (MSA).

W Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.

P Concentration >40% (25% for CLP) difference between the two GC columns.

C Confirmed by GC/MS

Q DoD reports: indicates a pesticide/Aroclor is not confirmed (≥100% Difference between two GC columns).

X See Case Narrative for discussion.

MRL Method Reporting Limit. Also known as:
LOQ Limit of Quantitation (LOQ)
The lowest concentration at which the method analyte may be reliably quantified under the method conditions.

MDL Method Detection Limit. A statistical value derived from a study designed to provide the lowest concentration that will be detected 99% of the time. Values between the MDL and MRL are estimated (see J qualifier).

LOD Limit of Detection. A value at or above the MDL which has been verified to be detectable.

ND Non-Detect. Analyte was not detected at the concentration listed. Same as U qualifier.

Lab ID # for Massachusetts Certification

M-NY032

Analyses were conducted in accordance with Massachusetts Department of Environmental Protection certification standards, except as noted in the laboratory case narrative provided. A copy of the current Department issued parameter list is included in this report.

The Commonwealth of Massachusetts

Department of Environmental Protection

Division of Environmental Analysis
Senator William X. Wall Experiment Station

certifies

M-NY032

ALS ENVIRONMENTAL ROCHESTER
1565 JEFFERSON RD
BUILDING 300, SUITE 360
ROCHESTER, NY 14623-0000

Laboratory Director: **PETER FRICK**

for the analysis of **NON POTABLE WATER (CHEMISTRY)**

pursuant to 310 CMR 42.00

This certificate supersedes all previous Massachusetts certificates issued to this laboratory. The laboratory is regulated by and shall be responsible for being in compliance with Massachusetts regulations at 310 CMR 42.00.

This certificate is valid only when accompanied by the latest dated Certified Parameter List as issued by the Massachusetts D.E.P. Contact the Division of Environmental Analysis to verify the current certification status of the laboratory.

Certification is no guarantee of the validity of the data. This certification is subject to unannounced laboratory inspections.

Issued: **26 FEB 2015**

Expires: **30 JUN 2015**

Oscar C. Jacobs

Director, Division of Environmental Analysis

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 01 JUL 2014

M-NY032 ALS ENVIRONMENTAL ROCHESTER
ROCHESTER NY

NON POTABLE WATER (CHEMISTRY) **Effective Date** **01 JUL 2014** **Expiration Date** **30 JUN 2015**

Analytes	Methods
ALUMINUM	EPA 200.7
ANTIMONY	EPA 200.7
ANTIMONY	EPA 200.8
ARSENIC	EPA 200.7
ARSENIC	EPA 200.8
BERYLLIUM	EPA 200.7
BERYLLIUM	EPA 200.8
CADMIUM	EPA 200.7
CADMIUM	EPA 200.8
CHROMIUM	EPA 200.7
CHROMIUM	EPA 200.8
COBALT	EPA 200.7
COBALT	EPA 200.8
COPPER	EPA 200.7
COPPER	EPA 200.8
IRON	EPA 200.7
LEAD	EPA 200.7
LEAD	EPA 200.8
MANGANESE	EPA 200.7
MANGANESE	EPA 200.8
MERCURY	EPA 245.1
MOLYBDENUM	EPA 200.7
MOLYBDENUM	EPA 200.8
NICKEL	EPA 200.7
NICKEL	EPA 200.8
SELENIUM	EPA 200.7
SELENIUM	EPA 200.8
SILVER	EPA 200.7
SILVER	EPA 200.8
THALLIUM	EPA 200.7
THALLIUM	EPA 200.8
VANADIUM	EPA 200.7
VANADIUM	EPA 200.8
ZINC	EPA 200.7
ZINC	EPA 200.8
SPECIFIC CONDUCTIVITY	EPA 120.1
TOTAL DISSOLVED SOLIDS	SM 2540C
HARDNESS (CACO3), TOTAL	SM 2340C
CALCIUM	EPA 200.7
MAGNESIUM	EPA 200.7
SODIUM	EPA 200.7
POTASSIUM	EPA 200.7
ALKALINITY, TOTAL	SM 2320B

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 01 JUL 2014

M-NY032 **ALS ENVIRONMENTAL ROCHESTER**
ROCHESTER NY

NON POTABLE WATER (CHEMISTRY) **Effective Date** **01 JUL 2014** **Expiration Date** **30 JUN 2015**

Analytes	Methods
CHLORIDE	SM 4500-CL-E
CHLORIDE	EPA 300.0
FLUORIDE	EPA 300.0
SULFATE	EPA 300.0
AMMONIA-N	EPA 350.1
NITRATE-N	EPA 300.0
NITRATE-N	EPA 353.2
KJELDAHL-N	EPA 351.2
ORTHOPHOSPHATE	EPA 365.1
PHOSPHORUS, TOTAL	EPA 365.1
CHEMICAL OXYGEN DEMAND	EPA 410.4
BIOCHEMICAL OXYGEN DEMAND	SM 5210B
TOTAL ORGANIC CARBON	SM 5310C
CYANIDE, TOTAL	EPA 335.4
NON-FILTERABLE RESIDUE	SM 2540D
OIL AND GREASE	EPA 1664
PHENOLICS, TOTAL	EPA 420.4
VOLATILE HALOCARBONS	EPA 601
VOLATILE HALOCARBONS	EPA 624
VOLATILE AROMATICS	EPA 602
VOLATILE AROMATICS	EPA 624
SVOC-ACID EXTRACTABLES	EPA 625
SVOC-BASE/NEUTRAL EXTRACTABLES	EPA 625
POLYCHLORINATED BIPHENYLS (WATEI	EPA 608

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504566
Project:	Varian Beverly/152728-05000000	**Date Collected:**	6/ 9/15 0930
Sample Matrix:	Water	**Date Received:**	6/10/15
		Date Analyzed:	6/16/15 17:55
Sample Name:	MW-34	**Units:**	µg/L
Lab Code:	R1504566-001	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	449232
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\061615\A9554.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	10

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	20	U	20	
79-34-5	1,1,2,2-Tetrachloroethane	20	U	20	
79-00-5	1,1,2-Trichloroethane	20	U	20	
75-34-3	1,1-Dichloroethane (1,1-DCA)	20	U	20	
75-35-4	1,1-Dichloroethene (1,1-DCE)	20	U	20	
107-06-2	1,2-Dichloroethane	20	U	20	
78-87-5	1,2-Dichloropropane	20	U	20	
67-64-1	Acetone	100	U	100	
75-27-4	Bromodichloromethane	20	U	20	
75-25-2	Bromoform	20	U	20	
74-83-9	Bromomethane	20	U	20	
56-23-5	Carbon Tetrachloride	20	U	20	
108-90-7	Chlorobenzene	20	U	20	
75-00-3	Chloroethane	20	U	20	
67-66-3	Chloroform	20	U	20	
74-87-3	Chloromethane	20	U	20	
124-48-1	Dibromochloromethane	20	U	20	
75-09-2	Methylene Chloride	20	U	20	
127-18-4	Tetrachloroethene (PCE)	20	U	20	
79-01-6	Trichloroethene (TCE)	**100**		20	
75-69-4	Trichlorofluoromethane (CFC 11)	20	U	20	
75-01-4	Vinyl Chloride	20	U	20	
156-59-2	cis-1,2-Dichloroethene	**1500**		20	
10061-01-5	cis-1,3-Dichloropropene	20	U	20	
156-60-5	trans-1,2-Dichloroethene	20	U	20	
10061-02-6	trans-1,3-Dichloropropene	20	U	20	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	90	70-130	6/16/15 17:55	
Dibromofluoromethane	98	70-130	6/16/15 17:55	
Toluene-d8	96	70-130	6/16/15 17:55	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504566
Project:	Varian Beverly/152728-05000000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	6/16/15 12:56
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1506601-01	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	449232
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\061615\A9544.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	92	70-130	6/16/15 12:56	
Dibromofluoromethane	96	70-130	6/16/15 12:56	
Toluene-d8	97	70-130	6/16/15 12:56	

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: CB&I
Project: Varian Beverly/152728-05000000
Sample Matrix: Water

Service Request: R1504566
Date Analyzed: 6/16/15

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260C

Units: µg/L
Basis: NA

Analysis Lot: 449232

Analyte Name	Lab Control Sample RQ1506601-02 Result	Spike Amount	% Rec	Duplicate Lab Control Sample RQ1506601-03 Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
1,1,1-Trichloroethane (TCA)	17.5	20.0	88	17.9	20.0	89	70 - 130	2	20
1,1,2,2-Tetrachloroethane	19.7	20.0	98	20.6	20.0	103	70 - 130	5	20
1,1,2-Trichloroethane	17.9	20.0	90	18.8	20.0	94	70 - 130	5	20
1,1-Dichloroethane (1,1-DCA)	17.6	20.0	88	18.4	20.0	92	70 - 130	4	20
1,1-Dichloroethene (1,1-DCE)	18.1	20.0	90	19.4	20.0	97	70 - 130	7	20
1,2-Dichloroethane	17.1	20.0	86	18.7	20.0	94	70 - 130	9	20
1,2-Dichloropropane	17.3	20.0	86	18.5	20.0	92	70 - 130	7	20
Acetone	17.3	20.0	86	15.2	20.0	76	40 - 160	13	20
Bromodichloromethane	18.4	20.0	92	19.4	20.0	97	70 - 130	5	20
Bromoform	21.7	20.0	109	22.4	20.0	112	70 - 130	3	20
Bromomethane	16.5	20.0	82	16.4	20.0	82	40 - 160	<1	20
Carbon Tetrachloride	18.1	20.0	91	18.3	20.0	92	70 - 130	1	20
Chlorobenzene	18.6	20.0	93	19.8	20.0	99	70 - 130	6	20
Chloroethane	14.8	20.0	74	17.6	20.0	88	70 - 130	17	20
Chloroform	17.5	20.0	87	18.4	20.0	92	70 - 130	5	20
Chloromethane	16.7	20.0	83	17.1	20.0	86	40 - 160	3	20
Dibromochloromethane	20.5	20.0	102	22.0	20.0	110	70 - 130	7	20
Methylene Chloride	17.7	20.0	88	19.6	20.0	98	70 - 130	11	20
Tetrachloroethene (PCE)	17.4	20.0	87	17.6	20.0	88	70 - 130	<1	20
Trichloroethene (TCE)	17.6	20.0	88	18.6	20.0	93	70 - 130	5	20
Trichlorofluoromethane (CFC 11)	17.5	20.0	87	18.6	20.0	93	70 - 130	6	20
Vinyl Chloride	16.9	20.0	84	17.1	20.0	86	70 - 130	2	20
cis-1,2-Dichloroethene	17.8	20.0	89	18.8	20.0	94	70 - 130	5	20
cis-1,3-Dichloropropene	18.2	20.0	91	19.6	20.0	98	70 - 130	7	20
trans-1,2-Dichloroethene	19.4	20.0	97	20.1	20.0	100	70 - 130	3	20
trans-1,3-Dichloropropene	18.5	20.0	92	19.3	20.0	96	70 - 130	4	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Environmental

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

-25963

1565 Jefferson Road, Building 300, Suite 360 • Rochester, NY 14623 | +1 585 288 5380 +1 585 288 8475 (fax) PAGE 1 OF 1

Project Name	Project Number
Varian Beverly	152728-05000000
Project Manager	**Report CC**
Raymond Cadorette	
Company/Address	
CB&I Environmental & Infrastructure, Inc. 150 Royall Street Canton, MA 02021	
Phone #	**Email**
617-589-6102	Raymond.Cadorette@cbi.com
Sampler's Signature	**Sampler's Printed Name**
	Dan Kelly

ANALYSIS REQUESTED *(Include Method Number and Container Preservative)*

PRESERVATIVE

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	GC/MS VOAs • 8260 • 624 • CLP	GC/MS SVOAs • 8270 • 625	GC VOAs • 8021 • 601/602	PESTICIDES • 8081 • 608	PCBs • 8082 • 608	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below)	REMARKS/ ALTERNATE DESCRIPTION
MW-34 (62)		6.9.15	0930	GW	3	3							

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

SPECIAL INSTRUCTIONS/COMMENTS

Metals

Site specific VOC list.
Massachusetts CAM analyses reporting and QA/QC.
Please email GISKey formatted EDD & PDF to:
Catherine.Mainville@cbi.com

See QAPP ☐

STATE WHERE SAMPLES WERE COLLECTED

TURNAROUND REQUIREMENTS

_____ RUSH (SURCHARGES APPLY)

_____ 1 day _____ 2 day _____ 3 day
_____ 4 day _____ 5 day

REQUESTED REPORT DATE

_____

REPORT REQUIREMENTS

____ I. Results Only

____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)

____ III. Results + QC and Calibration Summaries

____ IV. Data Validation Report with Raw Data

Edata ✓ Yes ____ No

INVOICE INFORMATION

PO #

BILL TO: CB&I

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature	Signature	Signature	Signature	Signature	
Printed Name CBI	Printed Name	Printed Name	Printed Name	Printed Name	
Firm 6.9.15 1000	Firm ALS	Firm	Firm	Firm	
Date/Time	Date/Time 6/10/15 850	Date/Time	Date/Time	Date/Time	

R1504566 7 Y
CB&I Environmental & Infrastructure
Varian Beverly - Non-Bio Wells

Distribution: White - Lab Copy; Yellow - Return to Originator

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R1504566 7 Y
CB&I Environmental & Infrastructure
Varian Beverly - Non-Bio Wells

Cooler Receipt and Preservation Check Form

Project/Client Varian Beverly Folder Number R15-4566

Cooler received on 6/10/15 by: MDS COURIER: ALS (UPS) ~~FEDEX~~ VELOCITY CLIENT

1	Were **Custody seals** on outside of cooler?	Y (N)	5a	**Perchlorate** samples have required headspace?	Y N (NA)
2	**Custody papers** properly completed (ink, signed)?	(Y) N	5b	Did VOA vials, Alk,or Sulfide have sig* **bubbles**?	Y N (NA)
3	Did all bottles arrive in good **condition** (unbroken)?	(Y) N	6	Where did the bottles originate?	(ALS/ROC) CLIENT
4	Circle: (**Wet Ice**) **Dry Ice Gel packs** present?	(Y) N	7	Soil VOA received as: Bulk Encore 5035set	(NA)

8. Temperature Readings Date: 6/10/15 Time: 0912 ID: IR#3 (IR#5) From: (Temp Blank) Sample Bottle

Observed Temp (°C)	~~6.1~~ 5.1						
Correction Factor (°C)	+0.6						
Corrected Temp (°C)	5.7						
Within 0-6°C?	(Y) N	Y N	Y N	Y N	Y N	Y N	Y N

If out of Temperature, note packing/ice condition: _____ Ice melted Poorly Packed Same Day Rule

&Client Approval to Run Samples: _____ Standing Approval Client aware at drop-off Client notified by: _____

All samples held in storage location: R-002 by MDS on 6/10/15 at 0915
5035 samples placed in storage location: _____ by _____ on _____ at _____

PC Secondary Review: MMS 6/11/15

Cooler Breakdown: Date: 6/10/15 Time: 1526 by: DW

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

Explain any discrepancies:

pH	Reagent	Yes	No	Lot Received	Exp	Sample ID	Vol. Added	Lot Added	Final pH
≥12	NaOH								
≤2	HNO_3								
≤2	H_2SO_4								
<4	$NaHSO_4$								
Residual Chlorine (-)	For CN Phenol and 522			If +, contact PM to add $Na_2S_2O_3$ (CN), ascorbic (phenol).					
	$Na_2S_2O_3$	-	-						
	ZnAcetate	-	-						
	HCl	**	**	4114050	4/16				

**Not to be tested before analysis – pH tested and recorded by VOAs on a separate worksheet

Yes=All samples OK

No=Samples were preserved at The lab as listed

PM OK to Adjust: _____

Bottle lot numbers: client label.

Other Comments:

PC Secondary Review: MMS 6/11/15 *significant air bubbles: VOA > 5-6 mm : WC >1 in. diameter

Data Usability Worksheet

Project Name : Varian Medical Systems, Inc

Job Number : 152728.05

Prepared By: Ana Fioretti

Date : 7/2/2015

Matrix: Groundwater

Analyte Group : Volatile Organics
Total Organic Carbon
Ethane, Mthane, Ethene
Metals (Fe, Mn)

Analytical Method : SW-846 8260C
SM5310 C-2000
RSK175
6010C

Completed MADEP CAM Certification Form included: Yes

Laboratory ID No. : R1504237.

Chain of Custody included in Data Package ? Yes

Is it Complete ? Yes

Sample Collection Date	Analysis	Allowable Holding Time for extraction	Allowable Holding Time for analysis	Analysis Date
5/28/15	SW-846 8260C	14 Days	10 Days	6/5 6/8 and 6/9/15
5/28/15	SM5310 C-2000		28 Days	6/10 and 6/11/15
5/28/15	RSK175		14 Days	6/5/2015
5/28/15	6010C	180 Days	180 Days	6/17/2015

Sample temperature within QC limits: Yes

Surrogate Recovery

Are all % recoveries within the allowable range ? Yes

If No, List sample ID where range was exceeded: NA

MS/MSD

Are all MS/MSD sample recoveries within the QC limits ? NA

If No, list sample ID, date and compound where limit was exceeded: NA

Laboratory Control Samples

Are all laboratory control sample recoveries within the QC limits ? Yes

If no, list sample ID where range was exceeded: NA

Equipment Field Blank ID : TB-6

Trip Blank ID : EB-6

Method Blank:	SW-846 8260C	6/5 and 6/8/2015
	SM5310 C-2000	6/10/2015
	RSK175	6/5/2015
	6010C	6/17/2015

Were any compounds identified in the method blank, field blank or trip blank above detection limits ? No

If so, list Sample ID/Compound/Concentration/Units: N/A

Notes:

Several samples were initially analyzed at dilutions to bring target analytes within the calibration range of the method.

Various compounds for AP34-DO (35), RS-I (38) and AP30R-DO (40) have been flagged with an "E" as being outside the calibration range of the instrument. The samples were repeated at dilutions and both sets of data have been reported out.

All Blank Spike (LCS)/Blank Spike Duplicate (LCSD) recoveries and RPD'swere within QC limits

Reviewed by: Jennifer Gailey 7/6/2015

ALS Environmental
ALS Group USA, Corp
1565 Jefferson Rd, Building 300, Suite 360
Rochester, NY 14623
T: 585-288-5380
F: 585-288-8475
www.alsglobal.com

June 19, 2015

Analytical Report for Service Request No: R1504237

Mr. Ray Cadorette
CB&I Environmental & Infrastructure
150 Royall Street
Canton, MA 02021

Laboratory Results for: Varian Beverly/152728-05000000

Dear Mr. Cadorette:

Enclosed are the results of the sample(s) submitted to our laboratory on June 2, 2015. For your reference, these analyses have been assigned our service request number **R1504237**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s) for analysis of these samples, and represented by Laboratory Control Sample control limits. Any events, such as QC failures, which may add to the uncertainty are explained in the report narrative.

Please contact me if you have any questions. My extension is 7472. You may also contact me via email at Janice.Jaeger@alsglobal.com.

Respectfully submitted,

ALS Group USA Corp. dba ALS Environmental

Janice Jaeger
Project Manager

CC: Pernilla Haley

ALS Environmental

Client:	CB&I
Service Request No.:	R1504237
Project:	Varian
Date Received:	6/05/15
Sample Matrix:	Water
Project/Case No.:	

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II data deliverables. When appropriate to the method, method blank results have been reported with each analytical test. Surrogate recoveries have been reported for all applicable organic analyses. Additional quality control analyses reported herein include: Laboratory Control Sample (LCS).

Sample Receipt

Water samples were received for analysis at ALS Environmental on 6/05/15. The samples were received in good condition and consistent with the accompanying chain of custody form. All sampling activities performed by ALS personnel have been in accordance with "ALS Field Procedures and Measurements Manual" or by client specifications. The samples were stored in a refrigerator between 1°C and 6°C upon receipt at the laboratory. All Soluble samples were filtered in the field.

Volatile Organics

Water samples were analyzed for a site list of Volatile Organics by SW-846 Method 8260C.

Several samples were initially analyzed at dilutions to bring target analytes within the calibration range of the method.

All initial calibrations were compliant.

All the continuing calibration criteria were met for all analytes.

Various compounds for AP34-DO (35), RS-1 (38) and AP30R-DO (40) have been flagged with an "E" as being outside the calibration range of the instrument. The samples were repeated at dilutions and both sets of data have been reported out.

All Surrogate Standard recoveries were within QC limits.

All Blank Spike (LCS)/Blank Spike Duplicate (LCSD) recoveries and RPD'swere within QC limits.

All samples were analyzed within the required holding time of 14 days.

Dissolved Gases

Water samples were analyzed for a site list of Dissolved Gases by Method RSK175M.

Several samples were initially analyzed at dilutions to bring target analytes within the calibration range of the method.

All initial calibrations were compliant.

All the continuing calibration criteria were met for all analytes.

All Blank Spike (LCS)/Blank Spike Duplicate (LCSD) recoveries and RPD's were within QC limits.

Various compounds for AP33-DO (36), AP34-DO (35), AP35-DO (35), AP25-DO (46), RW-1 (38), MW-9 (15) and OB46-S (10) have been flagged with an "E" as being outside the calibration range of the instrument. The samples were repeated at dilutions and both sets of data have been reported out.

All samples were analyzed within the required holding time of 14 days.

Inorganic Analyses

Water samples were analyzed for a site specific list of inorganics. Please attached data pages for method numbers.

The initial and continuing calibration criteria were met for all analytes.

All Blank Spike (LCS) recoveries were within QC limits.

The Method blanks were free of contamination.

MassDEP Analytical Protocol Certification Form

Laboratory Name: ALS Environmental | Project #: 152728

Project Location: Varian Beverly | RTN:

This Form provides certifications for the following data set: list Laboratory Sample ID Number(s):
R1504425-001-002

Matrices: Groundwater/Surface Water X Soil/Sediment Drinking Water Air Other:

CAM Protocol (check all that apply below):

8260 VOC CAM II A **X**	7470/7471 Hg CAM III B	MassDEP VPH CAM IV A	8081 Pesticides CAM V B	7196 Hex Cr CAM VI B	MassDEP APH CAM IX A
8270 SVOC CAM II B	7010 Metals CAM III C	MassDEP EPH CAM IV B	8151 Herbicides CAM V C	8330 Explosives CAM VIII A	TO-15 VOC CAM IX B
6010 Metals CAM III A **X**	6020 Metals CAM III D	8082 PCB CAM V A	9014 Total Cyanide/PAC CAM VI A	6860 Perchlorate CAM VIII B	

Affirmative Responses to Questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	X Yes No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	X Yes No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	X Yes No
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	X Yes No
E	VPH, EPH, APH, and TO-15 only: a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	Yes No Yes No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	X Yes No

Responses to Questions G, H and I below are required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	X Yes No[1]

***Data User Note:** Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.*

H	Were **all** QC performance standards specified in the CAM protocol(s) achieved?	X Yes No[1]
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	Yes X No[1]

[1] *All negative responses must be addressed in an attached laboratory narrative.*

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Signature: _____ **Position: Project Manager**

Printed Name: Janice Jaeger **Date:** 06/22/15 00004

CASE NARRATIVE

This report contains analytical results for the following samples:
Service Request Number: R1504237

Lab ID	Client ID
R1504237-001	AP13-DO (51)
R1504237-002	AP23-DO (47)
R1504237-003	AP24-DO (47)
R1504237-004	AP33-DO (36)
R1504237-005	AP34-DO (35)
R1504237-006	AP35-DO (35)
R1504237-007	AP25-DO (46)
R1504237-008	OB25-DO (67)
R1504237-009	RW-1 (38)
R1504237-010	AP30R-DO (40)
R1504237-011	MW-9 (15)
R1504237-012	OB9-S (20)
R1504237-013	OB15-S (18)
R1504237-014	OB44-S (13)
R1504237-015	OB46-S (10)
R1504237-016	OB47-S (20)
R1504237-018	TB-6
R1504237-019	EB-6

ALS Environmental

REPORT QUALIFIERS AND DEFINITIONS

U Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.

J Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Arclors).

B Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.

E Inorganics- Concentration is estimated due to the serial dilution was outside control limits.

E Organics- Concentration has exceeded the calibration range for that specific analysis.

D Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.

* Indicates that a quality control parameter has exceeded laboratory limits. Under the "Notes" column of the Form I, this qualifier denotes analysis was performed out of Holding Time.

H Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.

Spike was diluted out.

+ Correlation coefficient for MSA is <0.995.

N Inorganics- Matrix spike recovery was outside laboratory limits.

N Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.

S Concentration has been determined using Method of Standard Additions (MSA).

W Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.

P Concentration >40% (25% for CLP) difference between the two GC columns.

C Confirmed by GC/MS

Q DoD reports: indicates a pesticide/Aroclor is not confirmed (≥100% Difference between two GC columns).

X See Case Narrative for discussion.

MRL Method Reporting Limit. Also known as:
LOQ Limit of Quantitation (LOQ)
The lowest concentration at which the method analyte may be reliably quantified under the method conditions.

MDL Method Detection Limit. A statistical value derived from a study designed to provide the lowest concentration that will be detected 99% of the time. Values between the MDL and MRL are estimated (see J qualifier).

LOD Limit of Detection. A value at or above the MDL which has been verified to be detectable.

ND Non-Detect. Analyte was not detected at the concentration listed. Same as U qualifier.

Lab ID # for Massachusetts Certification

M-NY032

Analyses were conducted in accordance with Massachusetts Department of Environmental Protection certification standards, except as noted in the laboratory case narrative provided. A copy of the current Department issued parameter list is included in this report.

INORGANIC PREPARATION METHODS

The preparation methods associated with this report are found in these tables unless discussed in the case narrative.

Water/Liquid Matrix

Analytical Method	Preparation Method
200.7	200.2
200.8	200.2
6010C	3005A/3010A
6020A	ILM05.3
9014 Cyanide Reactivity	SW846 Ch7, 7.3.4.2
9034 Sulfide Reactivity	SW846 Ch7, 7.3.4.2
9034 Sulfide Acid Soluble	9030B
9056A Bomb (Halogens)	5050A
9066 Manual Distillation	9065
SM 4500-CN-E Residual Cyanide	SM 4500-CN-G
SM 4500-CN-E WAD Cyanide	SM 4500-CN-I

Solid/Soil/Non-Aqueous Matrix

Analytical Method	Preparation Method
6010C	3050B
6020A	3050B
6010C TCLP (1311) extract	3005A/3010A
6010 SPLP (1312) extract	3005A/3010A
7196A	3060A
7199	3060A
9056A Halogens/Halides	5050
300.0 Anions/ 350.1/ 353.2/ SM 2320B/ SM 5210B/ 9056A Anions	DI extraction

For analytical methods not listed, the preparation method is the same as the analytical method reference.

The Commonwealth of Massachusetts

Department of Environmental Protection

Division of Environmental Analysis
Senator William X. Wall Experiment Station

certifies

M-NY032

ALS ENVIRONMENTAL ROCHESTER
1565 JEFFERSON RD
BUILDING 300, SUITE 360
ROCHESTER, NY 14623-0000

Laboratory Director: **PETER FRICK**

for the analysis of **NON POTABLE WATER (CHEMISTRY)**

pursuant to 310 CMR 42.00

This certificate supersedes all previous Massachusetts certificates issued to this laboratory. The laboratory is regulated by and shall be responsible for being in compliance with Massachusetts regulations at 310 CMR 42.00.

This certificate is valid only when accompanied by the latest dated Certified Parameter List as issued by the Massachusetts D.E.P. Contact the Division of Environmental Analysis to verify the current certification status of the laboratory.

Certification is no guarantee of the validity of the data. This certification is subject to unannounced laboratory inspections.

Issued: **26 FEB 2015**

Expires: **30 JUN 2015**

Oscar C. Jacobs

Director, Division of Environmental Analysis

00008

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 01 JUL 2014

M-NY032 **ALS ENVIRONMENTAL ROCHESTER**
ROCHESTER NY

NON POTABLE WATER (CHEMISTRY) **Effective Date** **01 JUL 2014** **Expiration Date** **30 JUN 2015**

Analytes	Methods
ALUMINUM	EPA 200.7
ANTIMONY	EPA 200.7
ANTIMONY	EPA 200.8
ARSENIC	EPA 200.7
ARSENIC	EPA 200.8
BERYLLIUM	EPA 200.7
BERYLLIUM	EPA 200.8
CADMIUM	EPA 200.7
CADMIUM	EPA 200.8
CHROMIUM	EPA 200.7
CHROMIUM	EPA 200.8
COBALT	EPA 200.7
COBALT	EPA 200.8
COPPER	EPA 200.7
COPPER	EPA 200.8
IRON	EPA 200.7
LEAD	EPA 200.7
LEAD	EPA 200.8
MANGANESE	EPA 200.7
MANGANESE	EPA 200.8
MERCURY	EPA 245.1
MOLYBDENUM	EPA 200.7
MOLYBDENUM	EPA 200.8
NICKEL	EPA 200.7
NICKEL	EPA 200.8
SELENIUM	EPA 200.7
SELENIUM	EPA 200.8
SILVER	EPA 200.7
SILVER	EPA 200.8
THALLIUM	EPA 200.7
THALLIUM	EPA 200.8
VANADIUM	EPA 200.7
VANADIUM	EPA 200.8
ZINC	EPA 200.7
ZINC	EPA 200.8
SPECIFIC CONDUCTIVITY	EPA 120.1
TOTAL DISSOLVED SOLIDS	SM 2540C
HARDNESS (CACO3), TOTAL	SM 2340C
CALCIUM	EPA 200.7
MAGNESIUM	EPA 200.7
SODIUM	EPA 200.7
POTASSIUM	EPA 200.7
ALKALINITY, TOTAL	SM 2320B

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 01 JUL 2014

M-NY032 ALS ENVIRONMENTAL ROCHESTER
ROCHESTER NY

NON POTABLE WATER (CHEMISTRY) Effective Date 01 JUL 2014 Expiration Date 30 JUN 2015

Analytes	Methods
CHLORIDE	SM 4500-CL-E
CHLORIDE	EPA 300.0
FLUORIDE	EPA 300.0
SULFATE	EPA 300.0
AMMONIA-N	EPA 350.1
NITRATE-N	EPA 300.0
NITRATE-N	EPA 353.2
KJELDAHL-N	EPA 351.2
ORTHOPHOSPHATE	EPA 365.1
PHOSPHORUS, TOTAL	EPA 365.1
CHEMICAL OXYGEN DEMAND	EPA 410.4
BIOCHEMICAL OXYGEN DEMAND	SM 5210B
TOTAL ORGANIC CARBON	SM 5310C
CYANIDE, TOTAL	EPA 335.4
NON-FILTERABLE RESIDUE	SM 2540D
OIL AND GREASE	EPA 1664
PHENOLICS, TOTAL	EPA 420.4
VOLATILE HALOCARBONS	EPA 601
VOLATILE HALOCARBONS	EPA 624
VOLATILE AROMATICS	EPA 602
VOLATILE AROMATICS	EPA 624
SVOC-ACID EXTRACTABLES	EPA 625
SVOC-BASE/NEUTRAL EXTRACTABLES	EPA 625
POLYCHLORINATED BIPHENYLS (WATEI	EPA 608

Client:	CB&I	**Service Request:**	R1504237
Project:	Varian Beverly/152728-05000000	**Date Collected:**	5/28/15 1110
Sample Matrix:	Water	**Date Received:**	6/ 2/15
Sample Name:	AP13-DO (51)		
Lab Code:	R1504237-001	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Carbon, Total Organic (TOC)	SM 5310 C-2000(2011)	**47200**		mg/L	4000	4000	NA	6/10/15 20:03	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504237
Project:	Varian Beverly/152728-05000000	**Date Collected:**	5/28/15 1110
Sample Matrix:	Water	**Date Received:**	6/ 2/15
		Date Analyzed:	6/5/15 15:38
Sample Name:	AP13-DO (51)	**Units:**	µg/L
Lab Code:	R1504237-001	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	447895
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\MSVOA14\Data\060515\B1139.D\	**Instrument Name:**	R-MS-14
		Dilution Factor:	2000

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	**19000**		4000	
79-34-5	1,1,2,2-Tetrachloroethane	4000	U	4000	
79-00-5	1,1,2-Trichloroethane	4000	U	4000	
75-34-3	1,1-Dichloroethane (1,1-DCA)	4000	U	4000	
75-35-4	1,1-Dichloroethene (1,1-DCE)	4000	U	4000	
107-06-2	1,2-Dichloroethane	4000	U	4000	
78-87-5	1,2-Dichloropropane	4000	U	4000	
67-64-1	Acetone	**43000**		20000	
75-27-4	Bromodichloromethane	4000	U	4000	
75-25-2	Bromoform	4000	U	4000	
74-83-9	Bromomethane	4000	U	4000	
56-23-5	Carbon Tetrachloride	4000	U	4000	
108-90-7	Chlorobenzene	4000	U	4000	
75-00-3	Chloroethane	4000	U	4000	
67-66-3	Chloroform	4000	U	4000	
74-87-3	Chloromethane	4000	U	4000	
124-48-1	Dibromochloromethane	4000	U	4000	
75-09-2	Methylene Chloride	4000	U	4000	
127-18-4	Tetrachloroethene (PCE)	**85000**		4000	
79-01-6	Trichloroethene (TCE)	**310000**		4000	
75-69-4	Trichlorofluoromethane (CFC 11)	4000	U	4000	
75-01-4	Vinyl Chloride	4000	U	4000	
156-59-2	cis-1,2-Dichloroethene	**6900**		4000	
10061-01-5	cis-1,3-Dichloropropene	4000	U	4000	
156-60-5	trans-1,2-Dichloroethene	4000	U	4000	
10061-02-6	trans-1,3-Dichloropropene	4000	U	4000	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	95	70-130	6/5/15 15:38	
Dibromofluoromethane	96	70-130	6/5/15 15:38	
Toluene-d8	99	70-130	6/5/15 15:38	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504237
Project:	Varian Beverly/152728-05000000	**Date Collected:**	5/28/15 1110
Sample Matrix:	Water	**Date Received:**	6/ 2/15
		Date Analyzed:	6/5/15 09:52
Sample Name:	AP13-DO (51)	**Units:**	µg/L
Lab Code:	R1504237-001	**Basis:**	NA

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	447894
Data File Name:	1005.run	**Instrument Name:**	R-GC-02
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	**16**		1.0	
74-85-1	Ethene	**33**		1.0	
74-82-8	Methane	**5.0**		1.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504237
Project:	Varian Beverly/152728-05000000	**Date Collected:**	5/28/15 0920
Sample Matrix:	Water	**Date Received:**	6/ 2/15
Sample Name:	AP23-DO (47)		
Lab Code:	R1504237-002	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Carbon, Total Organic (TOC)	SM 5310 C-2000(2011)	**58000**		mg/L	4000	4000	NA	6/10/15 20:24	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504237
Project:	Varian Beverly/152728-05000000	**Date Collected:**	5/28/15 0920
Sample Matrix:	Water	**Date Received:**	6/ 2/15
Sample Name:	AP23-DO (47)		
Lab Code:	R1504237-002	**Basis:**	NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Iron, Dissolved	6010C	**4050**		µg/L	100	1	6/ 3/15	6/17/15 09:42	
Manganese, Dissolved	6010C	**452**		µg/L	10	1	6/ 3/15	6/17/15 09:42	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504237
Project:	Varian Beverly/152728-05000000	**Date Collected:**	5/28/15 0920
Sample Matrix:	Water	**Date Received:**	6/ 2/15
		Date Analyzed:	6/5/15 16:03
Sample Name:	AP23-DO (47)	**Units:**	µg/L
Lab Code:	R1504237-002	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	447895
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\MSVOA14\Data\060515\B1140.D\	**Instrument Name:**	R-MS-14
		Dilution Factor:	5000

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	10000	U	10000	
79-34-5	1,1,2,2-Tetrachloroethane	10000	U	10000	
79-00-5	1,1,2-Trichloroethane	10000	U	10000	
75-34-3	1,1-Dichloroethane (1,1-DCA)	10000	U	10000	
75-35-4	1,1-Dichloroethene (1,1-DCE)	10000	U	10000	
107-06-2	1,2-Dichloroethane	10000	U	10000	
78-87-5	1,2-Dichloropropane	10000	U	10000	
67-64-1	Acetone	**54000**		50000	
75-27-4	Bromodichloromethane	10000	U	10000	
75-25-2	Bromoform	10000	U	10000	
74-83-9	Bromomethane	10000	U	10000	
56-23-5	Carbon Tetrachloride	10000	U	10000	
108-90-7	Chlorobenzene	10000	U	10000	
75-00-3	Chloroethane	10000	U	10000	
67-66-3	Chloroform	10000	U	10000	
74-87-3	Chloromethane	10000	U	10000	
124-48-1	Dibromochloromethane	10000	U	10000	
75-09-2	Methylene Chloride	10000	U	10000	
127-18-4	Tetrachloroethene (PCE)	**41000**		10000	
79-01-6	Trichloroethene (TCE)	**460000**		10000	
75-69-4	Trichlorofluoromethane (CFC 11)	10000	U	10000	
75-01-4	Vinyl Chloride	10000	U	10000	
156-59-2	cis-1,2-Dichloroethene	10000	U	10000	
10061-01-5	cis-1,3-Dichloropropene	10000	U	10000	
156-60-5	trans-1,2-Dichloroethene	10000	U	10000	
10061-02-6	trans-1,3-Dichloropropene	10000	U	10000	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	93	70-130	6/5/15 16:03	
Dibromofluoromethane	97	70-130	6/5/15 16:03	
Toluene-d8	99	70-130	6/5/15 16:03	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504237
Project:	Varian Beverly/152728-05000000	**Date Collected:**	5/28/15 0920
Sample Matrix:	Water	**Date Received:**	6/ 2/15
		Date Analyzed:	6/5/15 10:13
Sample Name:	AP23-DO (47)	**Units:**	µg/L
Lab Code:	R1504237-002	**Basis:**	NA

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	447894
Data File Name:	1007.run	**Instrument Name:**	R-GC-02
		Dilution Factor:	5

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	**38**		5.0	
74-85-1	Ethene	**300**		5.0	
74-82-8	Methane	**77**		5.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504237
Project:	Varian Beverly/152728-05000000	**Date Collected:**	5/28/15 1140
Sample Matrix:	Water	**Date Received:**	6/ 2/15
Sample Name:	AP24-DO (47)		
Lab Code:	R1504237-003	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Carbon, Total Organic (TOC)	SM 5310 C-2000(2011)	**10700**		mg/L	1000	1000	NA	6/10/15 20:44	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504237
Project:	Varian Beverly/152728-05000000	**Date Collected:**	5/28/15 1140
Sample Matrix:	Water	**Date Received:**	6/ 2/15
Sample Name:	AP24-DO (47)		
Lab Code:	R1504237-003	**Basis:**	NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Iron, Dissolved	6010C	**1770**		µg/L	100	1	6/ 3/15	6/17/15 09:51	
Manganese, Dissolved	6010C	**633**		µg/L	10	1	6/ 3/15	6/17/15 09:51	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504237
Project:	Varian Beverly/152728-05000000	**Date Collected:**	5/28/15 1140
Sample Matrix:	Water	**Date Received:**	6/ 2/15
		Date Analyzed:	6/9/15 00:25
Sample Name:	AP24-DO (47)	**Units:**	µg/L
Lab Code:	R1504237-003	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	448128
Data File Name:	I:\ACQUDATA\msvoa10\data\060815\A9346.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1000

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	**20000**		2000	
79-34-5	1,1,2,2-Tetrachloroethane	2000	U	2000	
79-00-5	1,1,2-Trichloroethane	2000	U	2000	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2000	U	2000	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2000	U	2000	
107-06-2	1,2-Dichloroethane	2000	U	2000	
78-87-5	1,2-Dichloropropane	2000	U	2000	
67-64-1	Acetone	10000	U	10000	
75-27-4	Bromodichloromethane	2000	U	2000	
75-25-2	Bromoform	2000	U	2000	
74-83-9	Bromomethane	2000	U	2000	
56-23-5	Carbon Tetrachloride	2000	U	2000	
108-90-7	Chlorobenzene	2000	U	2000	
75-00-3	Chloroethane	2000	U	2000	
67-66-3	Chloroform	2000	U	2000	
74-87-3	Chloromethane	2000	U	2000	
124-48-1	Dibromochloromethane	2000	U	2000	
75-09-2	Methylene Chloride	2000	U	2000	
127-18-4	Tetrachloroethene (PCE)	2000	U	2000	
79-01-6	Trichloroethene (TCE)	**2200**		2000	
75-69-4	Trichlorofluoromethane (CFC 11)	2000	U	2000	
75-01-4	Vinyl Chloride	2000	U	2000	
156-59-2	cis-1,2-Dichloroethene	**150000**		2000	
10061-01-5	cis-1,3-Dichloropropene	2000	U	2000	
156-60-5	trans-1,2-Dichloroethene	2000	U	2000	
10061-02-6	trans-1,3-Dichloropropene	2000	U	2000	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	94	70-130	6/9/15 00:25	
Dibromofluoromethane	99	70-130	6/9/15 00:25	
Toluene-d8	96	70-130	6/9/15 00:25	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504237
Project:	Varian Beverly/152728-05000000	**Date Collected:**	5/28/15 1140
Sample Matrix:	Water	**Date Received:**	6/ 2/15
		Date Analyzed:	6/5/15 10:25
Sample Name:	AP24-DO (47)	**Units:**	µg/L
Lab Code:	R1504237-003	**Basis:**	NA

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	447894
Data File Name:	1008.run	**Instrument Name:**	R-GC-02
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	**62**		1.0	
74-85-1	Ethene	**20**		1.0	
74-82-8	Methane	**14**		1.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504237
Project:	Varian Beverly/152728-05000000	**Date Collected:**	5/28/15 1230
Sample Matrix:	Water	**Date Received:**	6/ 2/15
Sample Name:	AP33-DO (36)		
Lab Code:	R1504237-004	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Carbon, Total Organic (TOC)	SM 5310 C-2000(2011)	**111**		mg/L	10	10	NA	6/10/15 21:05	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504237
Project:	Varian Beverly/152728-05000000	**Date Collected:**	5/28/15 1230
Sample Matrix:	Water	**Date Received:**	6/ 2/15
Sample Name:	AP33-DO (36)		
Lab Code:	R1504237-004	**Basis:**	NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Iron, Dissolved	6010C	**24100**		µg/L	500	5	6/ 3/15	6/17/15 09:57	
Manganese, Dissolved	6010C	**4220**		µg/L	50	5	6/ 3/15	6/17/15 09:57	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504237
Project:	Varian Beverly/152728-05000000	**Date Collected:**	5/28/15 1230
Sample Matrix:	Water	**Date Received:**	6/ 2/15
		Date Analyzed:	6/5/15 16:51
Sample Name:	AP33-DO (36)	**Units:**	µg/L
Lab Code:	R1504237-004	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	447895
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\MSVOA14\Data\060515\B1142.D\	**Instrument Name:**	R-MS-14
		Dilution Factor:	2500

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	**29000**		5000	
79-34-5	1,1,2,2-Tetrachloroethane	5000	U	5000	
79-00-5	1,1,2-Trichloroethane	5000	U	5000	
75-34-3	1,1-Dichloroethane (1,1-DCA)	5000	U	5000	
75-35-4	1,1-Dichloroethene (1,1-DCE)	5000	U	5000	
107-06-2	1,2-Dichloroethane	5000	U	5000	
78-87-5	1,2-Dichloropropane	5000	U	5000	
67-64-1	Acetone	25000	U	25000	
75-27-4	Bromodichloromethane	5000	U	5000	
75-25-2	Bromoform	5000	U	5000	
74-83-9	Bromomethane	5000	U	5000	
56-23-5	Carbon Tetrachloride	5000	U	5000	
108-90-7	Chlorobenzene	5000	U	5000	
75-00-3	Chloroethane	5000	U	5000	
67-66-3	Chloroform	5000	U	5000	
74-87-3	Chloromethane	5000	U	5000	
124-48-1	Dibromochloromethane	5000	U	5000	
75-09-2	Methylene Chloride	5000	U	5000	
127-18-4	Tetrachloroethene (PCE)	**17000**		5000	
79-01-6	Trichloroethene (TCE)	**89000**		5000	
75-69-4	Trichlorofluoromethane (CFC 11)	5000	U	5000	
75-01-4	Vinyl Chloride	**5200**		5000	
156-59-2	cis-1,2-Dichloroethene	**210000**		5000	
10061-01-5	cis-1,3-Dichloropropene	5000	U	5000	
156-60-5	trans-1,2-Dichloroethene	5000	U	5000	
10061-02-6	trans-1,3-Dichloropropene	5000	U	5000	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	99	70-130	6/5/15 16:51	
Dibromofluoromethane	104	70-130	6/5/15 16:51	
Toluene-d8	105	70-130	6/5/15 16:51	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504237
Project:	Varian Beverly/152728-05000000	**Date Collected:**	5/28/15 1230
Sample Matrix:	Water	**Date Received:**	6/ 2/15
		Date Analyzed:	6/5/15 10:36
Sample Name:	AP33-DO (36)	**Units:**	µg/L
Lab Code:	R1504237-004	**Basis:**	NA

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	447894
Data File Name:	1009.run	**Instrument Name:**	R-GC-02
		Dilution Factor:	10

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	10	U	10	
74-85-1	Ethene	**2000**	E	10	
74-82-8	Methane	**91**		10	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504237
Project:	Varian Beverly/152728-05000000	**Date Collected:**	5/28/15 1230
Sample Matrix:	Water	**Date Received:**	6/ 2/15
		Date Analyzed:	6/5/15 13:37
Sample Name:	AP33-DO (36)	**Units:**	µg/L
Lab Code:	R1504237-004	**Basis:**	NA
Run Type:	Dilution		

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	447894
Data File Name:	1021.run	**Instrument Name:**	R-GC-02
		Dilution Factor:	50

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	50	U	50	
74-85-1	Ethene	**2200**	D	50	
74-82-8	Methane	**110**	D	50	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504237
Project:	Varian Beverly/152728-05000000	**Date Collected:**	5/28/15 1030
Sample Matrix:	Water	**Date Received:**	6/ 2/15
Sample Name:	AP34-DO (35)		
Lab Code:	R1504237-005	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Carbon, Total Organic (TOC)	SM 5310 C-2000(2011)	**5790**		mg/L	400	400	NA	6/11/15 09:27	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504237
Project:	Varian Beverly/152728-05000000	**Date Collected:**	5/28/15 1030
Sample Matrix:	Water	**Date Received:**	6/ 2/15
Sample Name:	AP34-DO (35)		
Lab Code:	R1504237-005	**Basis:**	NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Iron, Dissolved	6010C	**15100**		µg/L	100	1	6/ 3/15	6/17/15 10:03	
Manganese, Dissolved	6010C	**3000**		µg/L	10	1	6/ 3/15	6/17/15 10:03	

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Analytical Report

Client:	CB&I	**Service Request:**	R1504237
Project:	Varian Beverly/152728-05000000	**Date Collected:**	5/28/15 1030
Sample Matrix:	Water	**Date Received:**	6/ 2/15
		Date Analyzed:	6/5/15 17:16
Sample Name:	AP34-DO (35)	**Units:**	µg/L
Lab Code:	R1504237-005	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	447895
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\MSVOA14\Data\060515\B1143.D\	**Instrument Name:**	R-MS-14
		Dilution Factor:	500

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	1000	U	1000	
79-34-5	1,1,2,2-Tetrachloroethane	1000	U	1000	
79-00-5	1,1,2-Trichloroethane	1000	U	1000	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1000	U	1000	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1000	U	1000	
107-06-2	1,2-Dichloroethane	1000	U	1000	
78-87-5	1,2-Dichloropropane	1000	U	1000	
67-64-1	Acetone	5000	U	5000	
75-27-4	Bromodichloromethane	1000	U	1000	
75-25-2	Bromoform	1000	U	1000	
74-83-9	Bromomethane	1000	U	1000	
56-23-5	Carbon Tetrachloride	1000	U	1000	
108-90-7	Chlorobenzene	1000	U	1000	
75-00-3	Chloroethane	1000	U	1000	
67-66-3	Chloroform	1000	U	1000	
74-87-3	Chloromethane	1000	U	1000	
124-48-1	Dibromochloromethane	1000	U	1000	
75-09-2	Methylene Chloride	1000	U	1000	
127-18-4	Tetrachloroethene (PCE)	1000	U	1000	
79-01-6	Trichloroethene (TCE)	**2600**		1000	
75-69-4	Trichlorofluoromethane (CFC 11)	1000	U	1000	
75-01-4	Vinyl Chloride	1000	U	1000	
156-59-2	cis-1,2-Dichloroethene	**150000**	E	1000	
10061-01-5	cis-1,3-Dichloropropene	1000	U	1000	
156-60-5	trans-1,2-Dichloroethene	1000	U	1000	
10061-02-6	trans-1,3-Dichloropropene	1000	U	1000	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	95	70-130	6/5/15 17:16	
Dibromofluoromethane	106	70-130	6/5/15 17:16	
Toluene-d8	104	70-130	6/5/15 17:16	

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Analytical Report

Client:	CB&I	**Service Request:**	R1504237
Project:	Varian Beverly/152728-05000000	**Date Collected:**	5/28/15 1030
Sample Matrix:	Water	**Date Received:**	6/ 2/15
		Date Analyzed:	6/9/15 00:53
Sample Name:	AP34-DO (35)	**Units:**	µg/L
Lab Code:	R1504237-005	**Basis:**	NA
Run Type:	Dilution		

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	448128
Data File Name:	I:\ACQUDATA\msvoa10\data\060815\A9347.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1000

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2000	U	2000	
79-34-5	1,1,2,2-Tetrachloroethane	2000	U	2000	
79-00-5	1,1,2-Trichloroethane	2000	U	2000	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2000	U	2000	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2000	U	2000	
107-06-2	1,2-Dichloroethane	2000	U	2000	
78-87-5	1,2-Dichloropropane	2000	U	2000	
67-64-1	Acetone	10000	U	10000	
75-27-4	Bromodichloromethane	2000	U	2000	
75-25-2	Bromoform	2000	U	2000	
74-83-9	Bromomethane	2000	U	2000	
56-23-5	Carbon Tetrachloride	2000	U	2000	
108-90-7	Chlorobenzene	2000	U	2000	
75-00-3	Chloroethane	2000	U	2000	
67-66-3	Chloroform	2000	U	2000	
74-87-3	Chloromethane	2000	U	2000	
124-48-1	Dibromochloromethane	2000	U	2000	
75-09-2	Methylene Chloride	2000	U	2000	
127-18-4	Tetrachloroethene (PCE)	2000	U	2000	
79-01-6	Trichloroethene (TCE)	**2300**	D	2000	
75-69-4	Trichlorofluoromethane (CFC 11)	2000	U	2000	
75-01-4	Vinyl Chloride	2000	U	2000	
156-59-2	cis-1,2-Dichloroethene	**150000**	D	2000	
10061-01-5	cis-1,3-Dichloropropene	2000	U	2000	
156-60-5	trans-1,2-Dichloroethene	2000	U	2000	
10061-02-6	trans-1,3-Dichloropropene	2000	U	2000	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	95	70-130	6/9/15 00:53	
Dibromofluoromethane	99	70-130	6/9/15 00:53	
Toluene-d8	97	70-130	6/9/15 00:53	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504237
Project:	Varian Beverly/152728-05000000	**Date Collected:**	5/28/15 1030
Sample Matrix:	Water	**Date Received:**	6/ 2/15
		Date Analyzed:	6/5/15 10:53
Sample Name:	AP34-DO (35)	**Units:**	µg/L
Lab Code:	R1504237-005	**Basis:**	NA

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	447894
Data File Name:	1010.run	**Instrument Name:**	R-GC-02
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	**84**		1.0	
74-85-1	Ethene	**280**	E	1.0	
74-82-8	Methane	**100**	E	1.0	

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Analytical Report

Client:	CB&I	**Service Request:**	R1504237
Project:	Varian Beverly/152728-05000000	**Date Collected:**	5/28/15 1030
Sample Matrix:	Water	**Date Received:**	6/ 2/15
		Date Analyzed:	6/5/15 11:05
Sample Name:	AP34-DO (35)	**Units:**	µg/L
Lab Code:	R1504237-005	**Basis:**	NA
Run Type:	Dilution		

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	447894
Data File Name:	1011.run	**Instrument Name:**	R-GC-02
		Dilution Factor:	5

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	**82**	D	5.0	
74-85-1	Ethene	**280**	D	5.0	
74-82-8	Methane	**100**	D	5.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504237
Project:	Varian Beverly/152728-05000000	**Date Collected:**	5/28/15 1005
Sample Matrix:	Water	**Date Received:**	6/ 2/15
Sample Name:	AP35-DO (35)		
Lab Code:	R1504237-006	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Carbon, Total Organic (TOC)	SM 5310 C-2000(2011)	**320**		mg/L	40	40	NA	6/11/15 09:48	

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Analytical Report

Client:	CB&I	**Service Request:**	R1504237
Project:	Varian Beverly/152728-05000000	**Date Collected:**	5/28/15 1005
Sample Matrix:	Water	**Date Received:**	6/ 2/15
Sample Name:	AP35-DO (35)		
Lab Code:	R1504237-006	**Basis:**	NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Iron, Dissolved	6010C	**52600**		µg/L	1000	10	6/ 3/15	6/17/15 10:10	
Manganese, Dissolved	6010C	**10900**		µg/L	100	10	6/ 3/15	6/17/15 10:10	

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Analytical Report

Client:	CB&I	**Service Request:**	R1504237
Project:	Varian Beverly/152728-05000000	**Date Collected:**	5/28/15 1005
Sample Matrix:	Water	**Date Received:**	6/ 2/15
		Date Analyzed:	6/9/15 01:21
Sample Name:	AP35-DO (35)	**Units:**	µg/L
Lab Code:	R1504237-006	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	448128
Data File Name:	I:\ACQUDATA\msvoa10\data\060815\A9348.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1000

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2000	U	2000	
79-34-5	1,1,2,2-Tetrachloroethane	2000	U	2000	
79-00-5	1,1,2-Trichloroethane	2000	U	2000	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2000	U	2000	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2000	U	2000	
107-06-2	1,2-Dichloroethane	2000	U	2000	
78-87-5	1,2-Dichloropropane	2000	U	2000	
67-64-1	Acetone	10000	U	10000	
75-27-4	Bromodichloromethane	2000	U	2000	
75-25-2	Bromoform	2000	U	2000	
74-83-9	Bromomethane	2000	U	2000	
56-23-5	Carbon Tetrachloride	2000	U	2000	
108-90-7	Chlorobenzene	2000	U	2000	
75-00-3	Chloroethane	2000	U	2000	
67-66-3	Chloroform	2000	U	2000	
74-87-3	Chloromethane	2000	U	2000	
124-48-1	Dibromochloromethane	2000	U	2000	
75-09-2	Methylene Chloride	2000	U	2000	
127-18-4	Tetrachloroethene (PCE)	2000	U	2000	
79-01-6	Trichloroethene (TCE)	**2100**		2000	
75-69-4	Trichlorofluoromethane (CFC 11)	2000	U	2000	
75-01-4	Vinyl Chloride	2000	U	2000	
156-59-2	cis-1,2-Dichloroethene	**180000**		2000	
10061-01-5	cis-1,3-Dichloropropene	2000	U	2000	
156-60-5	trans-1,2-Dichloroethene	2000	U	2000	
10061-02-6	trans-1,3-Dichloropropene	2000	U	2000	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	94	70-130	6/9/15 01:21	
Dibromofluoromethane	101	70-130	6/9/15 01:21	
Toluene-d8	96	70-130	6/9/15 01:21	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504237
Project:	Varian Beverly/152728-05000000	**Date Collected:**	5/28/15 1005
Sample Matrix:	Water	**Date Received:**	6/ 2/15
		Date Analyzed:	6/5/15 11:31
Sample Name:	AP35-DO (35)	**Units:**	µg/L
Lab Code:	R1504237-006	**Basis:**	NA

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	447894
Data File Name:	1012.run	**Instrument Name:**	R-GC-02
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	**31**		1.0	
74-85-1	Ethene	**1200**	E	1.0	
74-82-8	Methane	**570**	E	1.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504237
Project:	Varian Beverly/152728-05000000	**Date Collected:**	5/28/15 1005
Sample Matrix:	Water	**Date Received:**	6/ 2/15
		Date Analyzed:	6/5/15 13:57
Sample Name:	AP35-DO (35)	**Units:**	µg/L
Lab Code:	R1504237-006	**Basis:**	NA
Run Type:	Dilution		

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	447894
Data File Name:	1023.run	**Instrument Name:**	R-GC-02
		Dilution Factor:	100

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	100	U	100	
74-85-1	Ethene	**1200**	D	100	
74-82-8	Methane	**6300**	D	100	

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Analytical Report

Client:	CB&I	**Service Request:**	R1504237
Project:	Varian Beverly/152728-05000000	**Date Collected:**	5/29/15 1345
Sample Matrix:	Water	**Date Received:**	6/ 2/15
Sample Name:	AP25-DO (46)		
Lab Code:	R1504237-007	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Carbon, Total Organic (TOC)	SM 5310 C-2000(2011)	**6.9**		mg/L	1.0	1	NA	6/11/15 10:09	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504237
Project:	Varian Beverly/152728-05000000	**Date Collected:**	5/29/15 1345
Sample Matrix:	Water	**Date Received:**	6/ 2/15
		Date Analyzed:	6/9/15 01:49
Sample Name:	AP25-DO (46)	**Units:**	µg/L
Lab Code:	R1504237-007	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	448128
Data File Name:	I:\ACQUDATA\msvoa10\data\060815\A9349.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	50

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	100	U	100	
79-34-5	1,1,2,2-Tetrachloroethane	100	U	100	
79-00-5	1,1,2-Trichloroethane	100	U	100	
75-34-3	1,1-Dichloroethane (1,1-DCA)	100	U	100	
75-35-4	1,1-Dichloroethene (1,1-DCE)	100	U	100	
107-06-2	1,2-Dichloroethane	100	U	100	
78-87-5	1,2-Dichloropropane	100	U	100	
67-64-1	Acetone	500	U	500	
75-27-4	Bromodichloromethane	100	U	100	
75-25-2	Bromoform	100	U	100	
74-83-9	Bromomethane	100	U	100	
56-23-5	Carbon Tetrachloride	100	U	100	
108-90-7	Chlorobenzene	100	U	100	
75-00-3	Chloroethane	100	U	100	
67-66-3	Chloroform	100	U	100	
74-87-3	Chloromethane	100	U	100	
124-48-1	Dibromochloromethane	100	U	100	
75-09-2	Methylene Chloride	100	U	100	
127-18-4	Tetrachloroethene (PCE)	100	U	100	
79-01-6	Trichloroethene (TCE)	100	U	100	
75-69-4	Trichlorofluoromethane (CFC 11)	100	U	100	
75-01-4	Vinyl Chloride	**550**		100	
156-59-2	cis-1,2-Dichloroethene	**5800**		100	
10061-01-5	cis-1,3-Dichloropropene	100	U	100	
156-60-5	trans-1,2-Dichloroethene	100	U	100	
10061-02-6	trans-1,3-Dichloropropene	100	U	100	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	94	70-130	6/9/15 01:49	
Dibromofluoromethane	97	70-130	6/9/15 01:49	
Toluene-d8	95	70-130	6/9/15 01:49	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504237
Project:	Varian Beverly/152728-05000000	**Date Collected:**	5/29/15 1345
Sample Matrix:	Water	**Date Received:**	6/ 2/15
		Date Analyzed:	6/5/15 11:43
Sample Name:	AP25-DO (46)	**Units:**	µg/L
Lab Code:	R1504237-007	**Basis:**	NA

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	447894
Data File Name:	1013.run	**Instrument Name:**	R-GC-02
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	**3.3**		1.0	
74-85-1	Ethene	**670**	E	1.0	
74-82-8	Methane	**20**		1.0	

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Analytical Report

Client:	CB&I	**Service Request:**	R1504237
Project:	Varian Beverly/152728-05000000	**Date Collected:**	5/29/15 1345
Sample Matrix:	Water	**Date Received:**	6/ 2/15
		Date Analyzed:	6/5/15 11:57
Sample Name:	AP25-DO (46)	**Units:**	µg/L
Lab Code:	R1504237-007	**Basis:**	NA
Run Type:	Dilution		

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	447894
Data File Name:	1014.run	**Instrument Name:**	R-GC-02
		Dilution Factor:	10

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	10	U	10	
74-85-1	Ethene	**670**	D	10	
74-82-8	Methane	**20**	D	10	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504237
Project:	Varian Beverly/152728-05000000	**Date Collected:**	5/29/15 1400
Sample Matrix:	Water	**Date Received:**	6/ 2/15
		Date Analyzed:	6/5/15 13:13
Sample Name:	OB25-DO (67)	**Units:**	µg/L
Lab Code:	R1504237-008	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	447895
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\MSVOA14\Data\060515\B1133.D\	**Instrument Name:**	R-MS-14
		Dilution Factor:	100

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	200	U	200	
79-34-5	1,1,2,2-Tetrachloroethane	200	U	200	
79-00-5	1,1,2-Trichloroethane	200	U	200	
75-34-3	1,1-Dichloroethane (1,1-DCA)	200	U	200	
75-35-4	1,1-Dichloroethene (1,1-DCE)	200	U	200	
107-06-2	1,2-Dichloroethane	200	U	200	
78-87-5	1,2-Dichloropropane	200	U	200	
67-64-1	Acetone	1000	U	1000	
75-27-4	Bromodichloromethane	200	U	200	
75-25-2	Bromoform	200	U	200	
74-83-9	Bromomethane	200	U	200	
56-23-5	Carbon Tetrachloride	200	U	200	
108-90-7	Chlorobenzene	200	U	200	
75-00-3	Chloroethane	200	U	200	
67-66-3	Chloroform	200	U	200	
74-87-3	Chloromethane	200	U	200	
124-48-1	Dibromochloromethane	200	U	200	
75-09-2	Methylene Chloride	200	U	200	
127-18-4	Tetrachloroethene (PCE)	**520**		200	
79-01-6	Trichloroethene (TCE)	**12000**		200	
75-69-4	Trichlorofluoromethane (CFC 11)	200	U	200	
75-01-4	Vinyl Chloride	200	U	200	
156-59-2	cis-1,2-Dichloroethene	200	U	200	
10061-01-5	cis-1,3-Dichloropropene	200	U	200	
156-60-5	trans-1,2-Dichloroethene	200	U	200	
10061-02-6	trans-1,3-Dichloropropene	200	U	200	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	92	70-130	6/5/15 13:13	
Dibromofluoromethane	95	70-130	6/5/15 13:13	
Toluene-d8	97	70-130	6/5/15 13:13	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504237
Project:	Varian Beverly/152728-05000000	**Date Collected:**	5/29/15 1330
Sample Matrix:	Water	**Date Received:**	6/ 2/15
Sample Name:	RW-1 (38)		
Lab Code:	R1504237-009	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Carbon, Total Organic (TOC)	SM 5310 C-2000(2011)	**9.7**		mg/L	1.0	1	NA	6/11/15 10:29	

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Analytical Report

Client:	CB&I	**Service Request:**	R1504237
Project:	Varian Beverly/152728-05000000	**Date Collected:**	5/29/15 1330
Sample Matrix:	Water	**Date Received:**	6/ 2/15
		Date Analyzed:	6/5/15 13:38
Sample Name:	RW-1 (38)	**Units:**	µg/L
Lab Code:	R1504237-009	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	447895
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\MSVOA14\Data\060515\B1134.D\	**Instrument Name:**	R-MS-14
		Dilution Factor:	50

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	100	U	100	
79-34-5	1,1,2,2-Tetrachloroethane	100	U	100	
79-00-5	1,1,2-Trichloroethane	100	U	100	
75-34-3	1,1-Dichloroethane (1,1-DCA)	100	U	100	
75-35-4	1,1-Dichloroethene (1,1-DCE)	100	U	100	
107-06-2	1,2-Dichloroethane	100	U	100	
78-87-5	1,2-Dichloropropane	100	U	100	
67-64-1	Acetone	500	U	500	
75-27-4	Bromodichloromethane	100	U	100	
75-25-2	Bromoform	100	U	100	
74-83-9	Bromomethane	100	U	100	
56-23-5	Carbon Tetrachloride	100	U	100	
108-90-7	Chlorobenzene	100	U	100	
75-00-3	Chloroethane	100	U	100	
67-66-3	Chloroform	100	U	100	
74-87-3	Chloromethane	100	U	100	
124-48-1	Dibromochloromethane	100	U	100	
75-09-2	Methylene Chloride	100	U	100	
127-18-4	Tetrachloroethene (PCE)	100	U	100	
79-01-6	Trichloroethene (TCE)	**490**		100	
75-69-4	Trichlorofluoromethane (CFC 11)	100	U	100	
75-01-4	Vinyl Chloride	**590**		100	
156-59-2	cis-1,2-Dichloroethene	**13000**	E	100	
10061-01-5	cis-1,3-Dichloropropene	100	U	100	
156-60-5	trans-1,2-Dichloroethene	**110**		100	
10061-02-6	trans-1,3-Dichloropropene	100	U	100	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	92	70-130	6/5/15 13:38	
Dibromofluoromethane	95	70-130	6/5/15 13:38	
Toluene-d8	96	70-130	6/5/15 13:38	

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Analytical Report

Client:	CB&I	**Service Request:**	R1504237
Project:	Varian Beverly/152728-05000000	**Date Collected:**	5/29/15 1330
Sample Matrix:	Water	**Date Received:**	6/ 2/15
		Date Analyzed:	6/9/15 02:17
Sample Name:	RW-1 (38)	**Units:**	µg/L
Lab Code:	R1504237-009	**Basis:**	NA
Run Type:	Dilution		

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	448128
Data File Name:	I:\ACQUDATA\msvoa10\data\060815\A9350.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	100

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	200	U	200	
79-34-5	1,1,2,2-Tetrachloroethane	200	U	200	
79-00-5	1,1,2-Trichloroethane	200	U	200	
75-34-3	1,1-Dichloroethane (1,1-DCA)	200	U	200	
75-35-4	1,1-Dichloroethene (1,1-DCE)	200	U	200	
107-06-2	1,2-Dichloroethane	200	U	200	
78-87-5	1,2-Dichloropropane	200	U	200	
67-64-1	Acetone	1000	U	1000	
75-27-4	Bromodichloromethane	200	U	200	
75-25-2	Bromoform	200	U	200	
74-83-9	Bromomethane	200	U	200	
56-23-5	Carbon Tetrachloride	200	U	200	
108-90-7	Chlorobenzene	200	U	200	
75-00-3	Chloroethane	200	U	200	
67-66-3	Chloroform	200	U	200	
74-87-3	Chloromethane	200	U	200	
124-48-1	Dibromochloromethane	200	U	200	
75-09-2	Methylene Chloride	200	U	200	
127-18-4	Tetrachloroethene (PCE)	200	U	200	
79-01-6	Trichloroethene (TCE)	**440**	D	200	
75-69-4	Trichlorofluoromethane (CFC 11)	200	U	200	
75-01-4	Vinyl Chloride	**440**	D	200	
156-59-2	cis-1,2-Dichloroethene	**12000**	D	200	
10061-01-5	cis-1,3-Dichloropropene	200	U	200	
156-60-5	trans-1,2-Dichloroethene	200	U	200	
10061-02-6	trans-1,3-Dichloropropene	200	U	200	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	96	70-130	6/9/15 02:17	
Dibromofluoromethane	97	70-130	6/9/15 02:17	
Toluene-d8	96	70-130	6/9/15 02:17	

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Analytical Report

Client:	CB&I	**Service Request:**	R1504237
Project:	Varian Beverly/152728-05000000	**Date Collected:**	5/29/15 1330
Sample Matrix:	Water	**Date Received:**	6/ 2/15
		Date Analyzed:	6/5/15 12:25
Sample Name:	RW-1 (38)	**Units:**	µg/L
Lab Code:	R1504237-009	**Basis:**	NA

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	447894
Data File Name:	1016.run	**Instrument Name:**	R-GC-02
		Dilution Factor:	10

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	10	U	10	
74-85-1	Ethene	**360**		10	
74-82-8	Methane	**2200**	E	10	

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Analytical Report

Client:	CB&I	**Service Request:**	R1504237
Project:	Varian Beverly/152728-05000000	**Date Collected:**	5/29/15 1330
Sample Matrix:	Water	**Date Received:**	6/ 2/15
		Date Analyzed:	6/5/15 14:14
Sample Name:	RW-1 (38)	**Units:**	µg/L
Lab Code:	R1504237-009	**Basis:**	NA
Run Type:	Dilution		

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	447894
Data File Name:	1024.run	**Instrument Name:**	R-GC-02
		Dilution Factor:	50

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	50	U	50	
74-85-1	Ethene	**300**	D	50	
74-82-8	Methane	**1900**	D	50	

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Analytical Report

Client:	CB&I	**Service Request:**	R1504237
Project:	Varian Beverly/152728-05000000	**Date Collected:**	5/29/15 1345
Sample Matrix:	Water	**Date Received:**	6/ 2/15
		Date Analyzed:	6/5/15 14:02
Sample Name:	AP30R-DO (40)	**Units:**	µg/L
Lab Code:	R1504237-010	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	447895
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\MSVOA14\Data\060515\B1135.D\	**Instrument Name:**	R-MS-14
		Dilution Factor:	50

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	**380**		100	
79-34-5	1,1,2,2-Tetrachloroethane	100	U	100	
79-00-5	1,1,2-Trichloroethane	100	U	100	
75-34-3	1,1-Dichloroethane (1,1-DCA)	100	U	100	
75-35-4	1,1-Dichloroethene (1,1-DCE)	100	U	100	
107-06-2	1,2-Dichloroethane	100	U	100	
78-87-5	1,2-Dichloropropane	100	U	100	
67-64-1	Acetone	500	U	500	
75-27-4	Bromodichloromethane	100	U	100	
75-25-2	Bromoform	100	U	100	
74-83-9	Bromomethane	100	U	100	
56-23-5	Carbon Tetrachloride	**510**		100	
108-90-7	Chlorobenzene	100	U	100	
75-00-3	Chloroethane	100	U	100	
67-66-3	Chloroform	**1600**		100	
74-87-3	Chloromethane	100	U	100	
124-48-1	Dibromochloromethane	100	U	100	
75-09-2	Methylene Chloride	100	U	100	
127-18-4	Tetrachloroethene (PCE)	**11000**	E	100	
79-01-6	Trichloroethene (TCE)	**71000**	E	100	
75-69-4	Trichlorofluoromethane (CFC 11)	100	U	100	
75-01-4	Vinyl Chloride	100	U	100	
156-59-2	cis-1,2-Dichloroethene	**2300**		100	
10061-01-5	cis-1,3-Dichloropropene	100	U	100	
156-60-5	trans-1,2-Dichloroethene	100	U	100	
10061-02-6	trans-1,3-Dichloropropene	100	U	100	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	92	70-130	6/5/15 14:02	
Dibromofluoromethane	96	70-130	6/5/15 14:02	
Toluene-d8	95	70-130	6/5/15 14:02	

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Analytical Report

Client:	CB&I	**Service Request:**	R1504237
Project:	Varian Beverly/152728-05000000	**Date Collected:**	5/29/15 1345
Sample Matrix:	Water	**Date Received:**	6/ 2/15
		Date Analyzed:	6/9/15 02:45
Sample Name:	AP30R-DO (40)	**Units:**	µg/L
Lab Code:	R1504237-010	**Basis:**	NA
Run Type:	Dilution		

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	448128
Data File Name:	I:\ACQUDATA\msvoa10\data\060815\A9351.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	500

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	1000	U	1000	
79-34-5	1,1,2,2-Tetrachloroethane	1000	U	1000	
79-00-5	1,1,2-Trichloroethane	1000	U	1000	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1000	U	1000	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1000	U	1000	
107-06-2	1,2-Dichloroethane	1000	U	1000	
78-87-5	1,2-Dichloropropane	1000	U	1000	
67-64-1	Acetone	5000	U	5000	
75-27-4	Bromodichloromethane	1000	U	1000	
75-25-2	Bromoform	1000	U	1000	
74-83-9	Bromomethane	1000	U	1000	
56-23-5	Carbon Tetrachloride	1000	U	1000	
108-90-7	Chlorobenzene	1000	U	1000	
75-00-3	Chloroethane	1000	U	1000	
67-66-3	Chloroform	**1200**	D	1000	
74-87-3	Chloromethane	1000	U	1000	
124-48-1	Dibromochloromethane	1000	U	1000	
75-09-2	Methylene Chloride	1000	U	1000	
127-18-4	Tetrachloroethene (PCE)	**7600**	D	1000	
79-01-6	Trichloroethene (TCE)	**48000**	D	1000	
75-69-4	Trichlorofluoromethane (CFC 11)	1000	U	1000	
75-01-4	Vinyl Chloride	1000	U	1000	
156-59-2	cis-1,2-Dichloroethene	**1700**	D	1000	
10061-01-5	cis-1,3-Dichloropropene	1000	U	1000	
156-60-5	trans-1,2-Dichloroethene	1000	U	1000	
10061-02-6	trans-1,3-Dichloropropene	1000	U	1000	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	92	70-130	6/9/15 02:45	
Dibromofluoromethane	97	70-130	6/9/15 02:45	
Toluene-d8	96	70-130	6/9/15 02:45	

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Analytical Report

Client:	CB&I	**Service Request:**	R1504237
Project:	Varian Beverly/152728-05000000	**Date Collected:**	5/29/15 1200
Sample Matrix:	Water	**Date Received:**	6/ 2/15
Sample Name:	MW-9 (15)		
Lab Code:	R1504237-011	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Carbon, Total Organic (TOC)	SM 5310 C-2000(2011)	**744**		mg/L	40	40	NA	6/11/15 10:50	

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Analytical Report

Client:	CB&I	**Service Request:**	R1504237
Project:	Varian Beverly/152728-05000000	**Date Collected:**	5/29/15 1200
Sample Matrix:	Water	**Date Received:**	6/ 2/15
		Date Analyzed:	6/8/15 23:56
Sample Name:	MW-9 (15)	**Units:**	µg/L
Lab Code:	R1504237-011	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	448128
Data File Name:	I:\ACQUDATA\msvoa10\data\060815\A9345.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	**12**		2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	**6.4**		2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	**84**		2.0	
156-59-2	cis-1,2-Dichloroethene	**33**		2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	**2.6**		2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	92	70-130	6/8/15 23:56	
Dibromofluoromethane	100	70-130	6/8/15 23:56	
Toluene-d8	95	70-130	6/8/15 23:56	

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Analytical Report

Client:	CB&I	**Service Request:**	R1504237
Project:	Varian Beverly/152728-05000000	**Date Collected:**	5/29/15 1200
Sample Matrix:	Water	**Date Received:**	6/ 2/15
		Date Analyzed:	6/5/15 12:52
Sample Name:	MW-9 (15)	**Units:**	µg/L
Lab Code:	R1504237-011	**Basis:**	NA

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	447894
Data File Name:	1017.run	**Instrument Name:**	R-GC-02
		Dilution Factor:	125

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	**1100**		130	
74-85-1	Ethene	**3700**		130	
74-82-8	Methane	**18000**	E	130	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504237
Project:	Varian Beverly/152728-05000000	**Date Collected:**	5/29/15 1200
Sample Matrix:	Water	**Date Received:**	6/ 2/15
		Date Analyzed:	6/5/15 13:02
Sample Name:	MW-9 (15)	**Units:**	µg/L
Lab Code:	R1504237-011	**Basis:**	NA
Run Type:	Dilution		

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	447894
Data File Name:	1018.run	**Instrument Name:**	R-GC-02
		Dilution Factor:	250

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	**1100**	D	250	
74-85-1	Ethene	**3700**	D	250	
74-82-8	Methane	**18000**	D	250	

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Analytical Report

Client:	CB&I	**Service Request:**	R1504237
Project:	Varian Beverly/152728-05000000	**Date Collected:**	5/29/15 1300
Sample Matrix:	Water	**Date Received:**	6/ 2/15
Sample Name:	OB9-S (20)		
Lab Code:	R1504237-012	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Carbon, Total Organic (TOC)	SM 5310 C-2000(2011)	**36.5**		mg/L	4.0	4	NA	6/11/15 11:11	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504237
Project:	Varian Beverly/152728-05000000	**Date Collected:**	5/29/15 1300
Sample Matrix:	Water	**Date Received:**	6/ 2/15
		Date Analyzed:	6/5/15 11:36
Sample Name:	OB9-S (20)	**Units:**	µg/L
Lab Code:	R1504237-012	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	447895
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\MSVOA14\Data\060515\B1129.D\	**Instrument Name:**	R-MS-14
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	**32**		2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	**6.2**		2.0	
156-59-2	cis-1,2-Dichloroethene	**8.1**		2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	91	70-130	6/5/15 11:36	
Dibromofluoromethane	95	70-130	6/5/15 11:36	
Toluene-d8	97	70-130	6/5/15 11:36	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504237
Project:	Varian Beverly/152728-05000000	**Date Collected:**	5/29/15 1300
Sample Matrix:	Water	**Date Received:**	6/ 2/15
		Date Analyzed:	6/5/15 13:13
Sample Name:	OB9-S (20)	**Units:**	µg/L
Lab Code:	R1504237-012	**Basis:**	NA

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	447894
Data File Name:	1019.run	**Instrument Name:**	R-GC-02
		Dilution Factor:	250

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	**370**		250	
74-85-1	Ethene	250	U	250	
74-82-8	Methane	**26000**		250	

Client:	CB&I	**Service Request:**	R1504237
Project:	Varian Beverly/152728-05000000	**Date Collected:**	5/29/15 1220
Sample Matrix:	Water	**Date Received:**	6/ 2/15
Sample Name:	OB15-S (18)		
Lab Code:	R1504237-013	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Carbon, Total Organic (TOC)	SM 5310 C-2000(2011)	**10.5**		mg/L	1.0	1	NA	6/11/15 11:32	

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Analytical Report

Client:	CB&I	**Service Request:**	R1504237
Project:	Varian Beverly/152728-05000000	**Date Collected:**	5/29/15 1220
Sample Matrix:	Water	**Date Received:**	6/ 2/15
		Date Analyzed:	6/5/15 12:01
Sample Name:	OB15-S (18)	**Units:**	µg/L
Lab Code:	R1504237-013	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	447895
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\MSVOA14\Data\060515\B1130.D\	**Instrument Name:**	R-MS-14
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	**19**		2.0	
156-59-2	cis-1,2-Dichloroethene	**18**		2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	91	70-130	6/5/15 12:01	
Dibromofluoromethane	98	70-130	6/5/15 12:01	
Toluene-d8	97	70-130	6/5/15 12:01	

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Analytical Report

Client:	CB&I	**Service Request:**	R1504237
Project:	Varian Beverly/152728-05000000	**Date Collected:**	5/29/15 1220
Sample Matrix:	Water	**Date Received:**	6/ 2/15
		Date Analyzed:	6/5/15 14:24
Sample Name:	OB15-S (18)	**Units:**	µg/L
Lab Code:	R1504237-013	**Basis:**	NA

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	447894
Data File Name:	1025.run	**Instrument Name:**	R-GC-02
		Dilution Factor:	5

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	**5.2**		5.0	
74-85-1	Ethene	**5.8**		5.0	
74-82-8	Methane	**340**		5.0	

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Analytical Report

Client:	CB&I	**Service Request:**	R1504237
Project:	Varian Beverly/152728-05000000	**Date Collected:**	5/28/15 1345
Sample Matrix:	Water	**Date Received:**	6/ 2/15
Sample Name:	OB44-S (13)		
Lab Code:	R1504237-014	**Basis:**	NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Iron, Dissolved	6010C	100	U	µg/L	100	1	6/ 3/15	6/17/15 10:17	
Manganese, Dissolved	6010C	**1060**		µg/L	10	1	6/ 3/15	6/17/15 10:17	

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Analytical Report

Client:	CB&I	**Service Request:**	R1504237
Project:	Varian Beverly/152728-05000000	**Date Collected:**	5/28/15 1345
Sample Matrix:	Water	**Date Received:**	6/ 2/15
		Date Analyzed:	6/5/15 14:50
Sample Name:	OB44-S (13)	**Units:**	µg/L
Lab Code:	R1504237-014	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	447895
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\MSVOA14\Data\060515\B1137.D\	**Instrument Name:**	R-MS-14
		Dilution Factor:	250

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	500	U	500	
79-34-5	1,1,2,2-Tetrachloroethane	500	U	500	
79-00-5	1,1,2-Trichloroethane	500	U	500	
75-34-3	1,1-Dichloroethane (1,1-DCA)	500	U	500	
75-35-4	1,1-Dichloroethene (1,1-DCE)	500	U	500	
107-06-2	1,2-Dichloroethane	500	U	500	
78-87-5	1,2-Dichloropropane	500	U	500	
67-64-1	Acetone	2500	U	2500	
75-27-4	Bromodichloromethane	500	U	500	
75-25-2	Bromoform	500	U	500	
74-83-9	Bromomethane	500	U	500	
56-23-5	Carbon Tetrachloride	500	U	500	
108-90-7	Chlorobenzene	500	U	500	
75-00-3	Chloroethane	500	U	500	
67-66-3	Chloroform	500	U	500	
74-87-3	Chloromethane	500	U	500	
124-48-1	Dibromochloromethane	500	U	500	
75-09-2	Methylene Chloride	500	U	500	
127-18-4	Tetrachloroethene (PCE)	500	U	500	
79-01-6	Trichloroethene (TCE)	500	U	500	
75-69-4	Trichlorofluoromethane (CFC 11)	500	U	500	
75-01-4	Vinyl Chloride	500	U	500	
156-59-2	cis-1,2-Dichloroethene	**23000**		500	
10061-01-5	cis-1,3-Dichloropropene	500	U	500	
156-60-5	trans-1,2-Dichloroethene	500	U	500	
10061-02-6	trans-1,3-Dichloropropene	500	U	500	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	91	70-130	6/5/15 14:50	
Dibromofluoromethane	98	70-130	6/5/15 14:50	
Toluene-d8	97	70-130	6/5/15 14:50	

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Analytical Report

Client:	CB&I	**Service Request:**	R1504237
Project:	Varian Beverly/152728-05000000	**Date Collected:**	5/28/15 1315
Sample Matrix:	Water	**Date Received:**	6/ 2/15
Sample Name:	OB46-S (10)		
Lab Code:	R1504237-015	**Basis:**	NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Iron, Dissolved	6010C	100	U	µg/L	100	1	6/16/15	6/17/15 22:37	
Manganese, Dissolved	6010C	**283**		µg/L	10	1	6/16/15	6/17/15 22:37	

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Analytical Report

Client:	CB&I	**Service Request:**	R1504237
Project:	Varian Beverly/152728-05000000	**Date Collected:**	5/28/15 1315
Sample Matrix:	Water	**Date Received:**	6/ 2/15
		Date Analyzed:	6/5/15 15:14
Sample Name:	OB46-S (10)	**Units:**	µg/L
Lab Code:	R1504237-015	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	447895
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\MSVOA14\Data\060515\B1138.D\	**Instrument Name:**	R-MS-14
		Dilution Factor:	5

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	10	U	10	
79-34-5	1,1,2,2-Tetrachloroethane	10	U	10	
79-00-5	1,1,2-Trichloroethane	10	U	10	
75-34-3	1,1-Dichloroethane (1,1-DCA)	10	U	10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	10	U	10	
107-06-2	1,2-Dichloroethane	10	U	10	
78-87-5	1,2-Dichloropropane	10	U	10	
67-64-1	Acetone	50	U	50	
75-27-4	Bromodichloromethane	10	U	10	
75-25-2	Bromoform	10	U	10	
74-83-9	Bromomethane	10	U	10	
56-23-5	Carbon Tetrachloride	10	U	10	
108-90-7	Chlorobenzene	10	U	10	
75-00-3	Chloroethane	10	U	10	
67-66-3	Chloroform	10	U	10	
74-87-3	Chloromethane	10	U	10	
124-48-1	Dibromochloromethane	10	U	10	
75-09-2	Methylene Chloride	10	U	10	
127-18-4	Tetrachloroethene (PCE)	**1800**	E	10	
79-01-6	Trichloroethene (TCE)	**150**		10	
75-69-4	Trichlorofluoromethane (CFC 11)	10	U	10	
75-01-4	Vinyl Chloride	10	U	10	
156-59-2	cis-1,2-Dichloroethene	**130**		10	
10061-01-5	cis-1,3-Dichloropropene	10	U	10	
156-60-5	trans-1,2-Dichloroethene	10	U	10	
10061-02-6	trans-1,3-Dichloropropene	10	U	10	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	92	70-130	6/5/15 15:14	
Dibromofluoromethane	97	70-130	6/5/15 15:14	
Toluene-d8	96	70-130	6/5/15 15:14	

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Analytical Report

Client:	CB&I	**Service Request:**	R1504237
Project:	Varian Beverly/152728-05000000	**Date Collected:**	5/28/15 1315
Sample Matrix:	Water	**Date Received:**	6/ 2/15
		Date Analyzed:	6/9/15 03:13
Sample Name:	OB46-S (10)	**Units:**	µg/L
Lab Code:	R1504237-015	**Basis:**	NA
Run Type:	Dilution		

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	448128
Data File Name:	I:\ACQUDATA\msvoa10\data\060815\A9352.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	20

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	40	U	40	
79-34-5	1,1,2,2-Tetrachloroethane	40	U	40	
79-00-5	1,1,2-Trichloroethane	40	U	40	
75-34-3	1,1-Dichloroethane (1,1-DCA)	40	U	40	
75-35-4	1,1-Dichloroethene (1,1-DCE)	40	U	40	
107-06-2	1,2-Dichloroethane	40	U	40	
78-87-5	1,2-Dichloropropane	40	U	40	
67-64-1	Acetone	200	U	200	
75-27-4	Bromodichloromethane	40	U	40	
75-25-2	Bromoform	40	U	40	
74-83-9	Bromomethane	40	U	40	
56-23-5	Carbon Tetrachloride	40	U	40	
108-90-7	Chlorobenzene	40	U	40	
75-00-3	Chloroethane	40	U	40	
67-66-3	Chloroform	40	U	40	
74-87-3	Chloromethane	40	U	40	
124-48-1	Dibromochloromethane	40	U	40	
75-09-2	Methylene Chloride	40	U	40	
127-18-4	Tetrachloroethene (PCE)	**1800**	D	40	
79-01-6	Trichloroethene (TCE)	**150**	D	40	
75-69-4	Trichlorofluoromethane (CFC 11)	40	U	40	
75-01-4	Vinyl Chloride	40	U	40	
156-59-2	cis-1,2-Dichloroethene	**130**	D	40	
10061-01-5	cis-1,3-Dichloropropene	40	U	40	
156-60-5	trans-1,2-Dichloroethene	40	U	40	
10061-02-6	trans-1,3-Dichloropropene	40	U	40	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	95	70-130	6/9/15 03:13	
Dibromofluoromethane	99	70-130	6/9/15 03:13	
Toluene-d8	97	70-130	6/9/15 03:13	

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Analytical Report

Client:	CB&I	**Service Request:**	R1504237
Project:	Varian Beverly/152728-05000000	**Date Collected:**	5/29/15 1135
Sample Matrix:	Water	**Date Received:**	6/ 2/15
		Date Analyzed:	6/5/15 12:25
Sample Name:	OB47-S (20)	**Units:**	µg/L
Lab Code:	R1504237-016	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	447895
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\MSVOA14\Data\060515\B1131.D\	**Instrument Name:**	R-MS-14
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	**15**		2.0	
79-01-6	Trichloroethene (TCE)	**12**		2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	93	70-130	6/5/15 12:25	
Dibromofluoromethane	95	70-130	6/5/15 12:25	
Toluene-d8	95	70-130	6/5/15 12:25	

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Analytical Report

Client:	CB&I	**Service Request:**	R1504237
Project:	Varian Beverly/152728-05000000	**Date Collected:**	5/29/15 1500
Sample Matrix:	Water	**Date Received:**	6/ 2/15
		Date Analyzed:	6/5/15 10:48
Sample Name:	TB-6	**Units:**	µg/L
Lab Code:	R1504237-018	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	447895
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\MSVOA14\Data\060515\B1127.D\	**Instrument Name:**	R-MS-14
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	91	70-130	6/5/15 10:48	
Dibromofluoromethane	94	70-130	6/5/15 10:48	
Toluene-d8	95	70-130	6/5/15 10:48	

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Analytical Report

Client:	CB&I	**Service Request:**	R1504237
Project:	Varian Beverly/152728-05000000	**Date Collected:**	5/29/15 1500
Sample Matrix:	Water	**Date Received:**	6/ 2/15
		Date Analyzed:	6/5/15 11:12
Sample Name:	EB-6	**Units:**	µg/L
Lab Code:	R1504237-019	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	447895
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\MSVOA14\Data\060515\B1128.D\	**Instrument Name:**	R-MS-14
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	91	70-130	6/5/15 11:12	
Dibromofluoromethane	95	70-130	6/5/15 11:12	
Toluene-d8	97	70-130	6/5/15 11:12	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504237
Project:	Varian Beverly/152728-05000000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank		
Lab Code:	R1504237-MB	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Carbon, Total Organic (TOC)	SM 5310 C-2000(2011)	1.0	U	mg/L	1.0	1	NA	6/10/15 17:36	

Client:	CB&I	**Service Request:**	R1504237
Project:	Varian Beverly/152728-05000000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank		
Lab Code:	R1504237-MB1	**Basis:**	NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Iron, Dissolved	6010C	100	U	µg/L	100	1	6/ 3/15	6/17/15 09:26	
Manganese, Dissolved	6010C	10	U	µg/L	10	1	6/ 3/15	6/17/15 09:26	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504237
Project:	Varian Beverly/152728-05000000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank		
Lab Code:	R1504237-MB2	**Basis:**	NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Iron, Dissolved	6010C	100	U	µg/L	100	1	6/16/15	6/17/15 20:58	
Manganese, Dissolved	6010C	10	U	µg/L	10	1	6/16/15	6/17/15 20:58	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504237
Project:	Varian Beverly/152728-05000000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	6/5/15 09:52
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1506287-05	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	447895
Data File Name:	I:\ACQUDATA\MSVOA14\Data\060515\B1125.D\	**Instrument Name:**	R-MS-14
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	89	70-130	6/5/15 09:52	
Dibromofluoromethane	95	70-130	6/5/15 09:52	
Toluene-d8	95	70-130	6/5/15 09:52	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504237
Project:	Varian Beverly/152728-05000000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	6/8/15 22:04
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1506252-01	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	448128
Data File Name:	I:\ACQUDATA\msvoa10\data\060815\A9341.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	94	70-130	6/8/15 22:04	
Dibromofluoromethane	98	70-130	6/8/15 22:04	
Toluene-d8	96	70-130	6/8/15 22:04	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504237
Project:	Varian Beverly/152728-05000000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	6/5/15 09:08
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1506229-01	**Basis:**	NA

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	447894
Data File Name:	1002.run	**Instrument Name:**	R-GC-02
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	1.0	U	1.0	
74-85-1	Ethene	1.0	U	1.0	
74-82-8	Methane	1.0	U	1.0	

Client: CB&I
Project: Varian Beverly/152728-05000000
Sample Matrix: Water

Service Request: R1504237
Date Analyzed: 6/10/15

Lab Control Sample Summary
General Chemistry Parameters

Units: mg/L
Basis: NA

Analyte Name	Method	Lab Control Sample R1504237-LCS Result	Spike Amount	% Rec	% Rec Limits
Carbon, Total Organic (TOC)	SM 5310 C-2000(2011)	9.26	10.0	93	76 - 123

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: CB&I
Project: Varian Beverly/152728-05000000
Sample Matrix: Water

Service Request: R1504237
Date Analyzed: 6/17/15

Lab Control Sample Summary
Inorganic Parameters

Units: µg/L
Basis: NA

Analyte Name	Method	Lab Control Sample R1504237-LCS1 Result	Spike Amount	% Rec	% Rec Limits
Iron, Dissolved	6010C	1080	1000	108	80 - 120
Manganese, Dissolved	6010C	531	500	106	80 - 120

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: CB&I
Project: Varian Beverly/152728-05000000
Sample Matrix: Water

Service Request: R1504237
Date Analyzed: 6/17/15

Lab Control Sample Summary
Inorganic Parameters

Units: µg/L
Basis: NA

Analyte Name	Method	Lab Control Sample R1504237-LCS2 Result	Spike Amount	% Rec	% Rec Limits
Iron, Dissolved	6010C	1050	1000	105	80 - 120
Manganese, Dissolved	6010C	522	500	104	80 - 120

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: CB&I
Project: Varian Beverly/152728-05000000
Sample Matrix: Water

Service Request: R1504237
Date Analyzed: 6/ 5/15

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260C

Units: µg/L
Basis: NA

Analysis Lot: 447895

Analyte Name	Lab Control Sample RQ1506287-03 Result	Spike Amount	% Rec	Duplicate Lab Control Sample RQ1506287-04 Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
1,1,1-Trichloroethane (TCA)	16.9	20.0	84	17.0	20.0	85	70 - 130	<1	20
1,1,2,2-Tetrachloroethane	17.4	20.0	87	18.8	20.0	94	70 - 130	7	20
1,1,2-Trichloroethane	17.6	20.0	88	18.2	20.0	91	70 - 130	3	20
1,1-Dichloroethane (1,1-DCA)	16.5	20.0	82	17.2	20.0	86	70 - 130	4	20
1,1-Dichloroethene (1,1-DCE)	17.5	20.0	88	17.3	20.0	87	70 - 130	<1	20
1,2-Dichloroethane	16.5	20.0	82	17.0	20.0	85	70 - 130	3	20
1,2-Dichloropropane	17.1	20.0	85	17.6	20.0	88	70 - 130	3	20
Acetone	18.0	20.0	90	18.5	20.0	92	40 - 160	3	20
Bromodichloromethane	16.7	20.0	84	17.4	20.0	87	70 - 130	4	20
Bromoform	17.3	20.0	86	17.0	20.0	85	70 - 130	1	20
Bromomethane	21.9	20.0	110	18.4	20.0	92	40 - 160	17	20
Carbon Tetrachloride	16.8	20.0	84	16.6	20.0	83	70 - 130	1	20
Chlorobenzene	17.9	20.0	89	18.1	20.0	90	70 - 130	1	20
Chloroethane	17.7	20.0	88	17.0	20.0	85	70 - 130	4	20
Chloroform	17.2	20.0	86	17.2	20.0	86	70 - 130	<1	20
Chloromethane	19.7	20.0	98	19.9	20.0	99	40 - 160	1	20
Dibromochloromethane	17.3	20.0	86	17.7	20.0	88	70 - 130	2	20
Methylene Chloride	17.6	20.0	88	18.2	20.0	91	70 - 130	4	20
Tetrachloroethene (PCE)	18.3	20.0	91	17.8	20.0	89	70 - 130	2	20
Trichloroethene (TCE)	18.4	20.0	92	18.1	20.0	91	70 - 130	2	20
Trichlorofluoromethane (CFC 11)	18.0	20.0	90	17.8	20.0	89	70 - 130	1	20
Vinyl Chloride	19.0	20.0	95	18.3	20.0	92	70 - 130	4	20
cis-1,2-Dichloroethene	18.0	20.0	90	17.6	20.0	88	70 - 130	2	20
cis-1,3-Dichloropropene	16.1	20.0	80	16.8	20.0	84	70 - 130	4	20
trans-1,2-Dichloroethene	18.0	20.0	90	18.3	20.0	92	70 - 130	2	20
trans-1,3-Dichloropropene	17.4	20.0	87	17.9	20.0	90	70 - 130	3	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: CB&I
Project: Varian Beverly/152728-05000000
Sample Matrix: Water

Service Request: R1504237
Date Analyzed: 6/ 8/15

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260C

Units: µg/L
Basis: NA

Analysis Lot: 448128

Analyte Name	Lab Control Sample RQ1506252-02 Result	Spike Amount	% Rec	Duplicate Lab Control Sample RQ1506252-03 Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
1,1,1-Trichloroethane (TCA)	18.8	20.0	94	21.1	20.0	105	70 - 130	11	20
1,1,2,2-Tetrachloroethane	19.1	20.0	95	20.0	20.0	100	70 - 130	5	20
1,1,2-Trichloroethane	18.2	20.0	91	20.4	20.0	102	70 - 130	11	20
1,1-Dichloroethane (1,1-DCA)	18.7	20.0	94	20.6	20.0	103	70 - 130	10	20
1,1-Dichloroethene (1,1-DCE)	20.1	20.0	101	22.0	20.0	110	70 - 130	9	20
1,2-Dichloroethane	19.2	20.0	96	19.9	20.0	99	70 - 130	3	20
1,2-Dichloropropane	18.7	20.0	93	19.6	20.0	98	70 - 130	5	20
Acetone	17.1	20.0	85	17.5	20.0	87	40 - 160	2	20
Bromodichloromethane	19.3	20.0	96	20.6	20.0	103	70 - 130	7	20
Bromoform	21.5	20.0	107	23.1	20.0	115	70 - 130	7	20
Bromomethane	16.3	20.0	81	17.7	20.0	88	40 - 160	8	20
Carbon Tetrachloride	19.6	20.0	98	20.7	20.0	103	70 - 130	6	20
Chlorobenzene	19.7	20.0	98	21.1	20.0	105	70 - 130	7	20
Chloroethane	16.2	20.0	81	17.6	20.0	88	70 - 130	8	20
Chloroform	18.6	20.0	93	20.7	20.0	103	70 - 130	10	20
Chloromethane	17.8	20.0	89	19.8	20.0	99	40 - 160	11	20
Dibromochloromethane	21.1	20.0	106	22.3	20.0	111	70 - 130	5	20
Methylene Chloride	19.3	20.0	97	21.3	20.0	106	70 - 130	10	20
Tetrachloroethene (PCE)	18.5	20.0	92	20.3	20.0	102	70 - 130	9	20
Trichloroethene (TCE)	20.1	20.0	100	22.2	20.0	111	70 - 130	10	20
Trichlorofluoromethane (CFC 11)	19.5	20.0	98	21.7	20.0	108	70 - 130	11	20
Vinyl Chloride	17.9	20.0	89	20.7	20.0	104	70 - 130	15	20
cis-1,2-Dichloroethene	18.4	20.0	92	20.4	20.0	102	70 - 130	10	20
cis-1,3-Dichloropropene	19.0	20.0	95	19.9	20.0	100	70 - 130	4	20
trans-1,2-Dichloroethene	20.2	20.0	101	22.4	20.0	112	70 - 130	10	20
trans-1,3-Dichloropropene	19.0	20.0	95	20.4	20.0	102	70 - 130	7	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: CB&I
Project: Varian Beverly/152728-05000000
Sample Matrix: Water

Service Request: R1504237
Date Analyzed: 6/ 5/15

Lab Control Sample Summary
Dissolved Gases by GC/FID

Analytical Method: RSK 175

Units: µg/L
Basis: NA

Analysis Lot: 447894

Analyte Name	Lab Control Sample RQ1506229-02 Result	Spike Amount	% Rec	Duplicate Lab Control Sample RQ1506229-03 Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Ethane	26.8	25.9	103	26.9	25.9	104	75 - 118	<1	30
Ethene	25.7	24.2	106	25.8	24.2	107	73 - 129	<1	30
Methane	27.2	26.1	104	27.1	26.1	104	65 - 126	<1	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

B10

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

24715

ALS Environmental

1565 Jefferson Road, Building 300, Suite 360 • Rochester, NY 14623 | +1 585 288 5380 +1 585 288 8475 (fax) PAGE 1 OF 2

Project Name: Varian Beverly	Project Number: 152728-05000000
Project Manager: Raymond Cadorette	Report CC:
Company/Address: CB&I Environmental 150 Royall Street Canton, MA 02021	
Phone #: 617-589-6102	Email: Raymond.Cadorette@CBI.com
Sampler's Signature:	Sampler's Printed Name: Ana Fioretti

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

PRESERVATIVE: 1 1 3 0

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	GC/MS VOAs (8260) Site Specific List	GC/MS SVOAs • 8270 • 625	GC VOAs • 8021 • 601/602	PESTICIDES • 8081 • 608	PCBs • 8082 • 608	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below)	Fe & Mn	Methane, Ethane, Ethene	TOC	Nitrate, Sulfate					
AP13-DO(51)		5/28/15	1110	GW	7	3							3	1							
AP23-DO(47)		5/28/15	0920		8	3						1	3	1							
AP24-DO(47)		5/28/15	1140		8	3						1	3	1							
AP33-DO(36)			1230		8	3						1	3	1							
AP34-DO(35)			1030		8	3						1	3	1							
AP35-DO(35)			1005		8	3						1	3	1							
AP25-DO(46)		5/29/15	1345		7	3							3	1							
OB25-DO(67)			1400		3	3															
RW-1(38)			1330		7	3							3	1							
AP30R-DO(40)			1345		3	3															
MW-9(15)			1200		7	3							3	1							

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

REMARKS/ ALTERNATE DESCRIPTION

SPECIAL INSTRUCTIONS/COMMENTS
Metals N/A
Site specific VOC list.
Massachusetts CAM analyses reporting and QA/QC.
Please email GISKey formatted EDD & PDF of report to:
Catherine.Mainville@CBI.com.

See QAPP ☐

STATE WHERE SAMPLES WERE COLLECTED

TURNAROUND REQUIREMENTS
___ RUSH (SURCHARGES APPLY)
✓ STANDARD
___ 1 day ___ 2 day ___ 3 day
___ 4 day ___ 5 day

REQUESTED REPORT DATE

REPORT REQUIREMENTS
___ I. Results Only
___ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
___ III. Results + QC and Calibration Summaries
___ IV. Data Validation Report with Raw Data
Edata ✓ Yes ___ No

INVOICE INFORMATION
915964
PO # CB&I
BILL TO:

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature	Signature V. Sasso	Signature TOUPS V. Sasso	Signature	Signature	
Printed Name Ana Fioretti	Printed Name V. Sasso	Printed Name V. Sasso	Printed Name J. Seward	Printed Name	Printed Name
Firm CB+I	Firm CB+I	Firm CB+I	Firm ALS	Firm	Firm
Date/Time 5/29/15 1700	Date/Time 5/29/15	Date/Time 6/1/15	Date/Time 6/2/15 0910	Date/Time	Date/Time

R1504237 7 Y
CB&I Environmental & Infrastructure
Varian Beverly - Non-Bio Wells

Distribution: White - Lab Copy; Yellow - Return to Originator

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ALS Environmental

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

25975

1565 Jefferson Road, Building 300, Suite 360 • Rochester, NY 14623 | +1 585 288 5380 +1 585 288 8475 (fax) PAGE 2 OF 2

Project Name: Varian Beverly	Project Number: 152728-05000000
Project Manager: Raymond Cadarette	Report CC:
Company/Address: CB+I Environmental 150 Rayall St Canton, MA 02021	
Phone #: 617-589-6102	Email: Raymond.Cadarette@CBI.com
Sampler's Signature:	Sampler's Printed Name: Ana Forcetti

ANALYSIS REQUESTED *(Include Method Number and Container Preservative)*

PRESERVATIVE: 1 | 3 | 0

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	GCMS VOAs (8260) • 624 • CLP Lists	GCMS SVOAs • 8270 • 625	GC VOAs • 8021 • 601/602	PESTICIDES • 8081 • 608	PCBs • 8082 • 608	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below)	Methane, Ethane, Ethene	TOC	REMARKS/ ALTERNATE DESCRIPTION
OB9-S (20)		5/29/15	1300	GW	7	3							3	1	
OB15-S (18)		5/29/15	1220	"	7	3							3	1	
OB44-S (13)		5/28/15	1345	"	4	3						1			
OB46-S (10)		5/28/15	1315	"	4	3						1			
OB47-S (20)		5/29/15	1135	"	3	3									
OB48-S (18.6)		5/29/15	1170	"	3	3									
TB-6		5/29/15	1500		3	3									
EB-6		5/29/15	1500		3	3									

SPECIAL INSTRUCTIONS/COMMENTS
Metals

See QAPP ☐

STATE WHERE SAMPLES WERE COLLECTED

TURNAROUND REQUIREMENTS
___ RUSH (SURCHARGES APPLY)
✓ Standard
___ 1 day ___ 2 day ___ 3 day
___ 4 day ___ 5 day

REQUESTED REPORT DATE: _____

REPORT REQUIREMENTS
___ I. Results Only
___ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
___ III. Results + QC and Calibration Summaries
___ IV. Data Validation Report with Raw Data
Edata ✓ Yes ___ No

INVOICE INFORMATION
915964
PO # CB+I
BILL TO:

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature:	Signature: V. Sasso	Signature: TO UPS V. Sasso	Signature:	Signature	Signature
Printed Name: Ana Forcetti	Printed Name: V. Sasso	Printed Name: V. Sasso	Printed Name: J. Seward	Printed Name	Printed Name
Firm: CB+I	Firm: CB+I	Firm: CB+I	Firm: ALS	Firm	Firm
Date/Time: 5/29/15 1700	Date/Time: 5/29/15	Date/Time: 6/1/15	Date/Time: 6/2/15 0910	Date/Time	Date/Time

Distribution: White - Lab Copy; Yellow - Return to Originator

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Cooler Receipt and Preservation Check Form

R1504237 7 Y
CB&I Environmental & Infrastructure
Varian Beverly - Non-Bio Wells

Project/Client CB+I Folder Number R15-4237

Cooler received on 6/2/15 by: JJ COURIER: ALS (UPS) FEDEX VELOCITY CLIENT

1	Were **Custody seals** on outside of cooler?	(Y) N	5a	**Perchlorate** samples have required headspace?	Y N (NA)
2	**Custody papers** properly completed (ink, signed)?	(Y) N	5b	Did VOA vials, Alk,or Sulfide have sig* **bubbles**?	(Y) N NA
3	Did all bottles arrive in good **condition** (unbroken)?	Y (N)	6	Where did the bottles originate?	ALS/ROC CLIENT
4	Circle: **Wet Ice Dry Ice Gel packs** present?	(Y) N	7	Soil VOA received as: Bulk Encore 5035set	(NA)

8. Temperature Readings Date: 6/2/15 Time: 0945 ID: IR#3 (IR#5) From: (Temp Blank) Sample Bottle

Observed Temp (°C)	6.3						
Correction Factor (°C)	-0.4						
Corrected Temp (°C)	5.9						
Within 0-6°C?	(Y) N	Y N	Y N	Y N	Y N	Y N	Y N

If out of Temperature, note packing/ice condition: _____ Ice melted Poorly Packed Same Day Rule

&Client Approval to Run Samples: _____ Standing Approval Client aware at drop-off Client notified by: _____

All samples held in storage location: none by JJ on 6/2/15 at 0933
5035 samples placed in storage location: _____ by _____ on _____ at _____

PC Secondary Review: MW 6/2/15

Cooler Breakdown: Date: 6/2/15 Time: 1815 by: MW

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

Explain any discrepancies:

pH	Reagent	Yes	No	Lot Received	Exp	Sample ID	Vol. Added	Lot Added	Final pH
≥12	NaOH								
≤2	HNO_3	✓		Client label					
≤2	H_2SO_4	✓		↓					
<4	$NaHSO_4$								
Residual Chlorine (-)	For CN Phenol and 522			If +, contact PM to add $Na_2S_2O_3$ (CN), ascorbic (phenol).					
	$Na_2S_2O_3$	-	-						
	ZnAcetate	-	-						
	HCl	**	**	4114650	4/16				

**Not to be tested before analysis – pH tested and recorded by VOAs on a separate worksheet

Yes=All samples OK

No=Samples were preserved at The lab as listed

PM OK to Adjust: _____

Bottle lot numbers: Client label.

Other Comments:

AP23-DO (47') - 1 vial w/ bubbles)
OB49-S (20') - 2 vials w/ (bubble)
AP33-DO (36') - All vials w/ (bubbles)
AP35-DO (35') - 1 vial received broken
MW-9 (15') - All vials w/ (bubbles)
AP33-DO (36') - 1 vial w/ bubbles.
MW-9 (15') - 1 vial w/ bubbles.
AP35-DO (35') - All vials.
AP34-DO (35') - All vials.
OB46-S (10') - All vials.
OB15-S (18') - All vials.
OB44-S (13') - 1 vial.
AP12-DO (45') - 1 vial.
AP24-DO (47') - All vials.
AP34-DO (35') TOC Jar arrived w/ broken cap.

PC Secondary Review: MW 6/2/15 *significant air bubbles: VOA > 5-6 mm : WC >1 in. diameter

Data Usability Worksheet

Project Name : Varian Medical Systems, Inc

Job Number : 152780.05

Prepared By: Ana Fioretti

Date : 7/2/2015

Matrix: Groundwater

Analyte Group : Volatile Organics
Chloride
Metals (Fe,Mn)

Analytical Method : SW-846 8260C
300
6010C

Completed MADEP CAM Certification Form included: Yes

Laboratory ID No. : RI504425

Chain of Custody included in Data Package ? Yes

Is it Complete ? Yes

Sample Collection Date	Analysis	Allowable Holding Time for extraction	Allowable Holding Time for analysis	Analysis Date
6/2/15	SW846 8260C	14 days	10 Days	6/10/2015
6/2/15	300.0(Chloride)		28 Days	6/9/2015
6/2/15	6010C	180 Days	180 Days	6/16/15 and 6/17/15

Sample temperature within QC limits: No 6.5C

Surrogate Recovery
Are all % recoveries within the allowable range ? Yes

If No, List sample ID where range was exceeded: NA

MS/MSD
Are all MS/MSD sample recoveries within the QC limits ? NA

If No, list sample ID, date and compound where limit was exceeded: NA

Laboratory Control Samples
Are all laboratory control sample recoveries within the QC limits ? No

If no, list sample ID where range was exceeded: See Notes

Equipment Field Blank ID : N/A
Trip Blank ID : TB5
Method Blank: SW846 8260C 6/10/2015
300.0 (Chloride) 6/9/2015
6010C 6/16/15 and 6/17/15

Were any compounds identified in the method blank, field blank or trip blank above detection limits ? No

If so, list Sample ID/Compound/Concentration/Units: N/A

Notes:
Several samples were initially analyzed at dilutions to bring target analytes within the calibration range of the method.

All Blank Spike (LCS)/Blank Spike Duplicate (LCSD) recoveries were within QC limits. All RPD's were acceptable except Acetone on the 06/10/15 LCS/LCSD and has been flagged with an "*".

The samples were received in good
condition and consistent with the accompanying chain of custody form with the exception that the samples were received at 6.5 C.

Samples need a "J" flag for being slightly elevated in temp.

Reviewed by: Jennifer Gailey 7/6/2015

ALS Environmental
ALS Group USA, Corp
1565 Jefferson Rd, Building 300, Suite 360
Rochester, NY 14623
T: 585-288-5380
F: 585-288-8475
www.alsglobal.com

June 19, 2015

Analytical Report for Service Request No: R1504425

Mr. Ray Cadorette
CB&I Environmental & Infrastructure
150 Royall Street
Canton, MA 02021

Laboratory Results for: Varian Beverly/1502780 95000000

Dear Mr. Cadorette:

Enclosed are the results of the sample(s) submitted to our laboratory on June 5, 2015. For your reference, these analyses have been assigned our service request number **R1504425**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s) for analysis of these samples, and represented by Laboratory Control Sample control limits. Any events, such as QC failures, which may add to the uncertainty are explained in the report narrative.

Please contact me if you have any questions. My extension is 7472. You may also contact me via email at Janice.Jaeger@alsglobal.com.

Respectfully submitted,

ALS Group USA Corp. dba ALS Environmental

Janice Jaeger
Project Manager

CC: Pernilla Haley

ALS Environmental

Client:	CB&I
Service Request No.:	R1504425
Project:	Varian
Date Received:	6/05/15
Sample Matrix:	Water
Project/Case No.:	

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II data deliverables. When appropriate to the method, method blank results have been reported with each analytical test. Surrogate recoveries have been reported for all applicable organic analyses. Additional quality control analyses reported herein include: Laboratory Control Sample (LCS).

Sample Receipt

Water samples were received for analysis at ALS Environmental on 6/05/15. The samples were received in good condition and consistent with the accompanying chain of custody form with the exception that the samples were received at 6.5 C. The client was notified and the samples analyzed. All sampling activities performed by ALS personnel have been in accordance with "ALS Field Procedures and Measurements Manual" or by client specifications. The samples were stored in a refrigerator between 1°C and 6°C upon receipt at the laboratory. All Soluble samples were filtered in the field.

Volatile Organics

Water samples were analyzed for a site list of Volatile Organics by SW-846 Method 8260C.

Several samples were initially analyzed at dilutions to bring target analytes within the calibration range of the method.

All initial calibrations were compliant.

All the continuing calibration criteria were met for all analytes.

All Surrogate Standard recoveries were within QC limits.

All Blank Spike (LCS)/Blank Spike Duplicate (LCSD) recoveries were within QC limits. All RPD's were acceptable except Acetone on the 06/10/15 LCS/LCSD and has been flagged with an "*".

All samples were analyzed within the required holding time of 14 days.

Inorganic Analyses

Water samples were analyzed for a site specific list of inorganics. Please attached data pages for method numbers.

The initial and continuing calibration criteria were met for all analytes.

All Blank Spike (LCS) recoveries were within QC limits.

The Method blanks were free of contamination.

MassDEP Analytical Protocol Certification Form

Laboratory Name: ALS Environmental Project #: 152780

Project Location: Varian Beverly RTN:

This Form provides certifications for the following data set: list Laboratory Sample ID Number(s):
R1504425-001-002

Matrices: Groundwater/Surface Water X Soil/Sediment Drinking Water Air Other:

CAM Protocol (check all that apply below):

8260 VOC CAM II A **X**	7470/7471 Hg CAM III B	MassDEP VPH CAM IV A	8081 Pesticides CAM V B	7196 Hex Cr CAM VI B	MassDEP APH CAM IX A
8270 SVOC CAM II B	7010 Metals CAM III C	MassDEP EPH CAM IV B	8151 Herbicides CAM V C	8330 Explosives CAM VIII A	TO-15 VOC CAM IX B
6010 Metals CAM III A **X**	6020 Metals CAM III D	8082 PCB CAM V A	9014 Total Cyanide/PAC CAM VI A	6860 Perchlorate CAM VIII B	

Affirmative Responses to Questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	Yes X No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	X Yes No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	X Yes No
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	X Yes No
E	VPH, EPH, APH, and TO-15 only: a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	Yes No Yes No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	X Yes No

Responses to Questions G, H and I below are required for "Presumptive Certainty" status

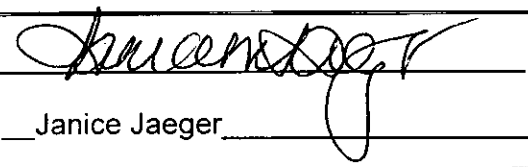
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	X Yes No[1]

Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.

H	Were **all** QC performance standards specified in the CAM protocol(s) achieved?	X Yes No[1]
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	Yes X No[1]

[1] *All negative responses must be addressed in an attached laboratory narrative.*

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Signature:  **Position: Project Manager**

Printed Name: Janice Jaeger **Date:** 06/22/15

00003

CASE NARRATIVE

This report contains analytical results for the following samples:
Service Request Number: R1504425

Lab ID	Client ID
R1504425-001	OB36-DO (61)
R1504425-002	TB-5

ALS Environmental

REPORT QUALIFIERS AND DEFINITIONS

U Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.

J Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Arclors).

B Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.

E Inorganics- Concentration is estimated due to the serial dilution was outside control limits.

E Organics- Concentration has exceeded the calibration range for that specific analysis.

D Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.

* Indicates that a quality control parameter has exceeded laboratory limits. Under the "Notes" column of the Form I, this qualifier denotes analysis was performed out of Holding Time.

H Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.

Spike was diluted out.

\+ Correlation coefficient for MSA is <0.995.

N Inorganics- Matrix spike recovery was outside laboratory limits.

N Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.

S Concentration has been determined using Method of Standard Additions (MSA).

W Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.

P Concentration >40% (25% for CLP) difference between the two GC columns.

C Confirmed by GC/MS.

Q DoD reports: indicates a pesticide/Aroclor is not confirmed (≥100% Difference between two GC columns).

X See Case Narrative for discussion.

MRL Method Reporting Limit. Also known as:
LOQ Limit of Quantitation (LOQ)
The lowest concentration at which the method analyte may be reliably quantified under the method conditions.

MDL Method Detection Limit. A statistical value derived from a study designed to provide the lowest concentration that will be detected 99% of the time. Values between the MDL and MRL are estimated (see J qualifier).

LOD Limit of Detection. A value at or above the MDL which has been verified to be detectable.

ND Non-Detect. Analyte was not detected at the concentration listed. Same as U qualifier.

Lab ID # for Massachusetts Certification

M-NY032

Analyses were conducted in accordance with Massachusetts Department of Environmental Protection certification standards, except as noted in the laboratory case narrative provided. A copy of the current Department issued parameter list is included in this report.

The Commonwealth of Massachusetts

Department of Environmental Protection

Division of Environmental Analysis
Senator William X. Wall Experiment Station

certifies

M-NY032

ALS ENVIRONMENTAL ROCHESTER
1565 JEFFERSON RD
BUILDING 300, SUITE 360
ROCHESTER, NY 14623-0000

Laboratory Director: **PETER FRICK**

for the analysis of **NON POTABLE WATER (CHEMISTRY)**

pursuant to 310 CMR 42.00

This certificate supersedes all previous Massachusetts certificates issued to this laboratory. The laboratory is regulated by and shall be responsible for being in compliance with Massachusetts regulations at 310 CMR 42.00.

This certificate is valid only when accompanied by the latest dated Certified Parameter List as issued by the Massachusetts D.E.P. Contact the Division of Environmental Analysis to verify the current certification status of the laboratory.

Certification is no guarantee of the validity of the data. This certification is subject to unannounced laboratory inspections.

Issued: **26 FEB 2015**

Expires: **30 JUN 2015**

Oscar C. Parcado

Director, Division of Environmental Analysis

00006

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 01 JUL 2014

M-NY032 **ALS ENVIRONMENTAL ROCHESTER**
ROCHESTER NY

NON POTABLE WATER (CHEMISTRY) **Effective Date** **01 JUL 2014** **Expiration Date** **30 JUN 2015**

Analytes	Methods
ALUMINUM	EPA 200.7
ANTIMONY	EPA 200.7
ANTIMONY	EPA 200.8
ARSENIC	EPA 200.7
ARSENIC	EPA 200.8
BERYLLIUM	EPA 200.7
BERYLLIUM	EPA 200.8
CADMIUM	EPA 200.7
CADMIUM	EPA 200.8
CHROMIUM	EPA 200.7
CHROMIUM	EPA 200.8
COBALT	EPA 200.7
COBALT	EPA 200.8
COPPER	EPA 200.7
COPPER	EPA 200.8
IRON	EPA 200.7
LEAD	EPA 200.7
LEAD	EPA 200.8
MANGANESE	EPA 200.7
MANGANESE	EPA 200.8
MERCURY	EPA 245.1
MOLYBDENUM	EPA 200.7
MOLYBDENUM	EPA 200.8
NICKEL	EPA 200.7
NICKEL	EPA 200.8
SELENIUM	EPA 200.7
SELENIUM	EPA 200.8
SILVER	EPA 200.7
SILVER	EPA 200.8
THALLIUM	EPA 200.7
THALLIUM	EPA 200.8
VANADIUM	EPA 200.7
VANADIUM	EPA 200.8
ZINC	EPA 200.7
ZINC	EPA 200.8
SPECIFIC CONDUCTIVITY	EPA 120.1
TOTAL DISSOLVED SOLIDS	SM 2540C
HARDNESS (CACO3), TOTAL	SM 2340C
CALCIUM	EPA 200.7
MAGNESIUM	EPA 200.7
SODIUM	EPA 200.7
POTASSIUM	EPA 200.7
ALKALINITY, TOTAL	SM 2320B

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 01 JUL 2014

M-NY032 **ALS ENVIRONMENTAL ROCHESTER**
ROCHESTER NY

NON POTABLE WATER (CHEMISTRY) **Effective Date** **01 JUL 2014** **Expiration Date** **30 JUN 2015**

Analytes	Methods
CHLORIDE	SM 4500-CL-E
CHLORIDE	EPA 300.0
FLUORIDE	EPA 300.0
SULFATE	EPA 300.0
AMMONIA-N	EPA 350.1
NITRATE-N	EPA 300.0
NITRATE-N	EPA 353.2
KJELDAHL-N	EPA 351.2
ORTHOPHOSPHATE	EPA 365.1
PHOSPHORUS, TOTAL	EPA 365.1
CHEMICAL OXYGEN DEMAND	EPA 410.4
BIOCHEMICAL OXYGEN DEMAND	SM 5210B
TOTAL ORGANIC CARBON	SM 5310C
CYANIDE, TOTAL	EPA 335.4
NON-FILTERABLE RESIDUE	SM 2540D
OIL AND GREASE	EPA 1664
PHENOLICS, TOTAL	EPA 420.4
VOLATILE HALOCARBONS	EPA 601
VOLATILE HALOCARBONS	EPA 624
VOLATILE AROMATICS	EPA 602
VOLATILE AROMATICS	EPA 624
SVOC-ACID EXTRACTABLES	EPA 625
SVOC-BASE/NEUTRAL EXTRACTABLES	EPA 625
POLYCHLORINATED BIPHENYLS (WATEI	EPA 608

INORGANIC PREPARATION METHODS

The preparation methods associated with this report are found in these tables unless discussed in the case narrative.

Water/Liquid Matrix

Analytical Method	Preparation Method
200.7	200.2
200.8	200.2
6010C	3005A/3010A
6020A	ILM05.3
9014 Cyanide Reactivity	SW846 Ch7, 7.3.4.2
9034 Sulfide Reactivity	SW846 Ch7, 7.3.4.2
9034 Sulfide Acid Soluble	9030B
9056A Bomb (Halogens)	5050A
9066 Manual Distillation	9065
SM 4500-CN-E Residual Cyanide	SM 4500-CN-G
SM 4500-CN-E WAD Cyanide	SM 4500-CN-I

Solid/Soil/Non-Aqueous Matrix

Analytical Method	Preparation Method
6010C	3050B
6020A	3050B
6010C TCLP (1311) extract	3005A/3010A
6010 SPLP (1312) extract	3005A/3010A
7196A	3060A
7199	3060A
9056A Halogens/Halides	5050
300.0 Anions/ 350.1/ 353.2/ SM 2320B/ SM 5210B/ 9056A Anions	DI extraction

For analytical methods not listed, the preparation method is the same as the analytical method reference.

Client:	CB&I	**Service Request:**	R1504425
Project:	Varian Beverly/1502780 95000000	**Date Collected:**	6/ 2/15 1600
Sample Matrix:	Water	**Date Received:**	6/ 5/15
Sample Name:	OB36-DO (61)		
Lab Code:	R1504425-001	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chloride	300.0	**1130**		mg/L	80	400	NA	6/9/15 23:56	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504425
Project:	Varian Beverly/1502780 95000000	**Date Collected:**	6/ 2/15 1600
Sample Matrix:	Water	**Date Received:**	6/ 5/15
Sample Name:	OB36-DO (61)		
Lab Code:	R1504425-001	**Basis:**	NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Iron, Dissolved	6010C	100	U	µg/L	100	1	6/ 8/15	6/17/15 21:36	
Manganese, Dissolved	6010C	**229000**		µg/L	500	50	6/ 8/15	6/16/15 18:17	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504425
Project:	Varian Beverly/1502780 95000000	**Date Collected:**	6/ 2/15 1600
Sample Matrix:	Water	**Date Received:**	6/ 5/15
		Date Analyzed:	6/10/15 03:09
Sample Name:	OB36-DO (61)	**Units:**	µg/L
Lab Code:	R1504425-001	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	448271
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\060915\A9392.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	**6.5**		2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	**3.0**		2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	**7.4**		2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	**12**		2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	**2.7**		2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	93	70-130	6/10/15 03:09	
Dibromofluoromethane	98	70-130	6/10/15 03:09	
Toluene-d8	96	70-130	6/10/15 03:09	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504425
Project:	Varian Beverly/1502780 95000000	**Date Collected:**	6/ 2/15 1600
Sample Matrix:	Water	**Date Received:**	6/ 5/15
		Date Analyzed:	6/10/15 03:37
Sample Name:	TB-5	**Units:**	µg/L
Lab Code:	R1504425-002	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	448271
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\060915\A9393.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	92	70-130	6/10/15 03:37	
Dibromofluoromethane	98	70-130	6/10/15 03:37	
Toluene-d8	94	70-130	6/10/15 03:37	

Client:	CB&I	**Service Request:**	R1504425
Project:	Varian Beverly/1502780 95000000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank		
Lab Code:	R1504425-MB	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chloride	300.0	0.20	U	mg/L	0.20	1	NA	6/9/15 21:35	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504425
Project:	Varian Beverly/1502780 95000000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank		
Lab Code:	R1504425-MB	**Basis:**	NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Iron, Dissolved	6010C	100	U	µg/L	100	1	6/ 8/15	6/17/15 20:46	
Manganese, Dissolved	6010C	10	U	µg/L	10	1	6/ 8/15	6/16/15 17:10	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504425
Project:	Varian Beverly/1502780 95000000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	6/10/15 01:17
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1506341-01	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	448271
Prep Method:	EPA 5030C		
Data File Name:	I:\ACQUDATA\msvoa10\data\060915\A9388.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	93	70-130	6/10/15 01:17	
Dibromofluoromethane	98	70-130	6/10/15 01:17	
Toluene-d8	97	70-130	6/10/15 01:17	

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: CB&I
Project: Varian Beverly/1502780 95000000
Sample Matrix: Water

Service Request: R1504425
Date Analyzed: 6/ 9/15

Lab Control Sample Summary
General Chemistry Parameters

Units: mg/L
Basis: NA

Analyte Name	Method	Lab Control Sample R1504425-LCS Result	Spike Amount	% Rec	% Rec Limits
Chloride	300.0	2.15	2.00	107	90 - 110

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: CB&I
Project: Varian Beverly/1502780 95000000
Sample Matrix: Water

Service Request: R1504425
Date Analyzed: 6/16/15 - 6/17/15

Lab Control Sample Summary
Inorganic Parameters

Units: µg/L
Basis: NA

Analyte Name	Method	Lab Control Sample R1504425-LCS Result	Spike Amount	% Rec	% Rec Limits
Iron, Dissolved	6010C	1040	1000	104	80 - 120
Manganese, Dissolved	6010C	507	500	101	80 - 120

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: CB&I
Project: Varian Beverly/1502780 95000000
Sample Matrix: Water

Service Request: R1504425
Date Analyzed: 6/10/15

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260C

Units: µg/L
Basis: NA

Analysis Lot: 448271

Analyte Name	Lab Control Sample RQ1506341-02 Result	Spike Amount	% Rec	Duplicate Lab Control Sample RQ1506341-03 Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
1,1,1-Trichloroethane (TCA)	19.6	20.0	98	21.3	20.0	107	70 - 130	8	20
1,1,2,2-Tetrachloroethane	19.9	20.0	100	18.6	20.0	93	70 - 130	7	20
1,1,2-Trichloroethane	19.5	20.0	97	18.0	20.0	90	70 - 130	8	20
1,1-Dichloroethane (1,1-DCA)	20.2	20.0	101	21.4	20.0	107	70 - 130	6	20
1,1-Dichloroethene (1,1-DCE)	20.9	20.0	104	22.8	20.0	114	70 - 130	9	20
1,2-Dichloroethane	20.3	20.0	101	19.3	20.0	96	70 - 130	5	20
1,2-Dichloropropane	20.0	20.0	100	19.8	20.0	99	70 - 130	1	20
Acetone	19.6	20.0	98	14.0	20.0	70	40 - 160	33 *	20
Bromodichloromethane	20.4	20.0	102	20.4	20.0	102	70 - 130	<1	20
Bromoform	22.5	20.0	112	20.0	20.0	100	70 - 130	12	20
Bromomethane	16.4	20.0	82	17.9	20.0	89	40 - 160	9	20
Carbon Tetrachloride	20.8	20.0	104	21.5	20.0	107	70 - 130	3	20
Chlorobenzene	19.9	20.0	100	20.6	20.0	103	70 - 130	3	20
Chloroethane	16.5	20.0	82	18.8	20.0	94	70 - 130	13	20
Chloroform	20.3	20.0	101	21.0	20.0	105	70 - 130	3	20
Chloromethane	19.1	20.0	96	20.4	20.0	102	40 - 160	6	20
Dibromochloromethane	21.6	20.0	108	20.5	20.0	103	70 - 130	5	20
Methylene Chloride	20.8	20.0	104	22.1	20.0	111	70 - 130	6	20
Tetrachloroethene (PCE)	19.1	20.0	96	20.3	20.0	101	70 - 130	6	20
Trichloroethene (TCE)	20.7	20.0	104	20.6	20.0	103	70 - 130	<1	20
Trichlorofluoromethane (CFC 11)	20.2	20.0	101	21.9	20.0	110	70 - 130	8	20
Vinyl Chloride	19.3	20.0	96	21.1	20.0	106	70 - 130	9	20
cis-1,2-Dichloroethene	20.0	20.0	100	21.0	20.0	105	70 - 130	5	20
cis-1,3-Dichloropropene	19.6	20.0	98	19.5	20.0	97	70 - 130	<1	20
trans-1,2-Dichloroethene	22.2	20.0	111	23.8	20.0	119	70 - 130	7	20
trans-1,3-Dichloropropene	20.0	20.0	100	18.6	20.0	93	70 - 130	7	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

25962

1565 Jefferson Road, Building 300, Suite 360 • Rochester, NY 14623 | +1 585 288 5380 +1 585 288 8475 (fax) PAGE 1 OF 1

Project Name: Varian Beverly	Project Number: 152780-05000000
Project Manager: Raymond Cadorette	Report CC:
Company/Address: CB&I Environmental, Inc. 150 Royall Street Canton, MA 02021	
Phone #: 617-589-6102	Email: Raymond.Cadorette@CBI.com
Sampler's Signature:	Sampler's Printed Name: Adrianna Fioretti

ANALYSIS REQUESTED *(Include Method Number and Container Preservative)*

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	PRESERVATIVE	GCMS VOAs ○ 8260/624 ○ CLP	GCMS SVOAs ○ 8270 ○ 625	GC VOAs ○ 8021 ○ 601/602	PESTICIDES ○ 8081 ○ 608	PCBs ○ 8082 ○ 608	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below) Fe + Mn	Chloride								REMARKS/ ALTERNATE DESCRIPTION
						PRESERVATIVE	1							2	0								
OB36DD		6.2.15	1600	GW	5	3							1	1									
TB-5		Lab	1630			3																	

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

SPECIAL INSTRUCTIONS/COMMENTS
Metals = Field filtered
Site specific VOC list.
Massachusetts CAM analyses reporting and QA/QC.
Email GISKey formatted EDD and PDF of report to:
Catherine.Mainville@CBI.com.

See QAPP ☐

STATE WHERE SAMPLES WERE COLLECTED

TURNAROUND REQUIREMENTS
_____ RUSH (SURCHARGES APPLY)
_____ 1 day _____ 2 day _____ 3 day
_____ 4 day _____ 5 day

REQUESTED REPORT DATE _____

REPORT REQUIREMENTS
_____ I. Results Only
_____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
_____ III. Results + QC and Calibration Summaries
_____ IV. Data Validation Report with Raw Data

Edata ✓ Yes _____ No

INVOICE INFORMATION
915904
PO # CB&I
BILL TO:

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature	Signature	Signature	Signature	Signature	
Printed Name: CBI	Printed Name: J Seward	Printed Name	Printed Name	Printed Name	
Firm: 6.2.15 2000	Firm: ALS	Firm	Firm	Firm	
Date/Time	Date/Time: 6/5/15 0910	Date/Time	Date/Time	Date/Time	

R1504425 7 Y
CB&I Environmental & Infrastructure
Varian Beverly - Non-Bio Wells

Distribution: White - Lab Copy; Yellow - Return to Originator

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Cooler Receipt and Preservation Check Form

Project/Client CB+I Folder Number 15-4425

Cooler received on 6/5/15 by: JTJ **COURIER:** ALS (UPS) FEDEX VELOCITY CLIENT

1	Were **Custody seals** on outside of cooler?	(Y) N	5a	**Perchlorate** samples have required headspace?	Y N (NA)
2	**Custody papers** properly completed (ink, signed)?	(Y) N	5b	Did VOA vials, Alk,or Sulfide have sig* **bubbles**?	Y (N) NA
3	Did all bottles arrive in good **condition** (unbroken)?	(Y) N	6	Where did the bottles originate?	ALS/ROC CLIENT
4	Circle: **Wet Ice** **Dry Ice** **Gel packs** present?	(Y) N	7	Soil VOA received as: Bulk Encore 5035set	(NA)

8. Temperature Readings Date: 6/5/15 Time: 0910 ID: IR#3 (IR#5) From: (Temp Blank) Sample Bottle

Observed Temp (°C)	6.9						
Correction Factor (°C)	-0.4						
Corrected Temp (°C)	6.5						
Within 0-6°C?	Y (N)	Y N	Y N	Y N	Y N	Y N	Y N

If out of Temperature, note packing/ice condition: _____ Ice melted (Poorly Packed) Same Day Rule

&Client Approval to Run Samples: _____ Standing Approval Client aware at drop-off Client notified by: MRS

All samples held in storage location: 2002 by JTJ on 6/5/15 at 0911
5035 samples placed in storage location: _____ by _____ on _____ at _____

PC Secondary Review: MRS 6/5/15

Cooler Breakdown: Date: 6/5/15 Time: 1253 by: JTJ

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

Explain any discrepancies:

pH	Reagent	Yes	No	Lot Received	Exp	Sample ID	Vol. Added	Lot Added	Final pH
≥12	NaOH								
≤2	HNO_3	✓		BD32614330	4/16				
≤2	H_2SO_4								
<4	$NaHSO_4$								
Residual Chlorine (-)	For CN Phenol and 522			If +, contact PM to add $Na_2S_2O_3$ (CN), ascorbic (phenol).					
	$Na_2S_2O_3$	-	-						
	ZnAcetate	-	-						
	HCl	**	**	4114050	4/16				

**Not to be tested before analysis – pH tested and recorded by VOAs on a separate worksheet

Yes=All samples OK

No=Samples were preserved at The lab as listed

PM OK to Adjust: _____

Bottle lot numbers: dust covered

Other Comments:

PC Secondary Review: MRS 6/5/15

*significant air bubbles: VOA > 5-6 mm : WC >1 in. diameter

Data Usability Worksheet

Project Name : Varian Medical Systems, Inc

Job Number : 152728.05

Prepared By: Ana Fioretti

Date : 7/2/2015

Matrix: Groundwater

Analyte Group : Ethane
Methane
Ethene

Analytical Method : RSK175

Completed MADEP CAM Certification Form included: Yes

Laboratory ID No. : RI504930

Chain of Custody included in Data Package ? Yes

Is it Complete ? Yes

Sample Collection Date	Analysis	Allowable Holding Time for extraction	Allowable Holding Time for analysis	Analysis Date
6/18/15	RSK 175		14 days	6/25/2015

Sample temperature within QC limits: Yes

Surrogate Recovery
Are all % recoveries within the allowable range ? Yes

If No, List sample ID where range was exceeded: NA

MS/MSD

Are all MS/MSD sample recoveries within the QC limits ? NA

If No, list sample ID, date and compound where limit was exceeded: NA

Laboratory Control Samples
Are all laboratory control sample recoveries within the QC limits ? Yes

If no, list sample ID where range was exceeded: N/A

Equipment Field Blank ID : NA
Trip Blank ID : NA

Method Blank: RSK 175 6/25/2015

Were any compounds identified in the method blank, field blank or trip blank above detection limits ? No

If so, list Sample ID/Compound/Concentration/Units: NA

Notes:

All samples were preserved in accordance with approved analytical methods.

All samples have been analyzed by the approved methods cited on the analytical results pages.

All holding times and associated QC were within limits.

No analytical or QC problems were encountered.

Reviewed By: Jennifer Gailey 7/7/2015

ALS Environmental
ALS Group USA, Corp
1565 Jefferson Rd, Building 300, Suite 360
Rochester, NY 14623
T: 585-288-5380
F: 585-288-8475
www.alsglobal.com

June 29, 2015

Analytical Report for Service Request No: R1504930

Mr. Ray Cadorette
CB&I Environmental & Infrastructure
150 Royall Street
Canton, MA 02021

Laboratory Results for: Varian Beverly/152728

Dear Mr. Cadorette:

Enclosed are the results of the sample(s) submitted to our laboratory on June 19, 2015. For your reference, these analyses have been assigned our service request number **R1504930**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s) for analysis of these samples, and represented by Laboratory Control Sample control limits. Any events, such as QC failures, which may add to the uncertainty are explained in the report narrative.

Please contact me if you have any questions. My extension is 7472. You may also contact me via email at Janice.Jaeger@alsglobal.com.

Respectfully submitted,

ALS Group USA Corp. dba ALS Environmental

Janice Jaeger
Project Manager

CC: Pernilla Haley

CASE NARRATIVE

This report contains analytical results for the following samples:
Service Request Number: R1504930

Lab ID	Client ID
R1504930-001	OB-44S
R1504930-002	OB-46S

All samples were received in good condition unless otherwise noted on the cooler receipt and preservation check form located at the end of this report.

All samples were preserved in accordance with approved analytical methods.

All samples have been analyzed by the approved methods cited on the analytical results pages.

All holding times and associated QC were within limits.

No analytical or QC problems were encountered.

All sampling activities performed by ALS personnel have been in accordance with "ALS Field Procedures and Measurements Manual" or by client specifications.

ALS Environmental

REPORT QUALIFIERS AND DEFINITIONS

U Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.

J Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Arclors).

B Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.

E Inorganics- Concentration is estimated due to the serial dilution was outside control limits.

E Organics- Concentration has exceeded the calibration range for that specific analysis.

D Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.

* Indicates that a quality control parameter has exceeded laboratory limits. Under the "Notes" column of the Form I, this qualifier denotes analysis was performed out of Holding Time.

H Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.

Spike was diluted out.

+ Correlation coefficient for MSA is <0.995.

N Inorganics- Matrix spike recovery was outside laboratory limits.

N Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.

S Concentration has been determined using Method of Standard Additions (MSA).

W Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.

P Concentration >40% (25% for CLP) difference between the two GC columns.

C Confirmed by GC/MS

Q DoD reports: indicates a pesticide/Aroclor is not confirmed (≥100% Difference between two GC columns).

X See Case Narrative for discussion.

MRL Method Reporting Limit. Also known as:
LOQ Limit of Quantitation (LOQ)
The lowest concentration at which the method analyte may be reliably quantified under the method conditions.

MDL Method Detection Limit. A statistical value derived from a study designed to provide the lowest concentration that will be detected 99% of the time. Values between the MDL and MRL are estimated (see J qualifier).

LOD Limit of Detection. A value at or above the MDL which has been verified to be detectable.

ND Non-Detect. Analyte was not detected at the concentration listed. Same as U qualifier.

Lab ID # for Massachusetts Certification

M-NY032

Analyses were conducted in accordance with Massachusetts Department of Environmental Protection certification standards, except as noted in the laboratory case narrative provided. A copy of the current Department issued parameter list is included in this report.

The Commonwealth of Massachusetts

Department of Environmental Protection

Division of Environmental Analysis
Senator William X. Wall Experiment Station

certifies

M-NY032

ALS ENVIRONMENTAL ROCHESTER
1565 JEFFERSON RD
BUILDING 300, SUITE 360
ROCHESTER, NY 14623-0000

Laboratory Director: **PETER FRICK**

for the analysis of **NON POTABLE WATER (CHEMISTRY)**

pursuant to 310 CMR 42.00

This certificate supersedes all previous Massachusetts certificates issued to this laboratory. The laboratory is regulated by and shall be responsible for being in compliance with Massachusetts regulations at 310 CMR 42.00.

This certificate is valid only when accompanied by the latest dated Certified Parameter List as issued by the Massachusetts D.E.P. Contact the Division of Environmental Analysis to verify the current certification status of the laboratory.

Certification is no guarantee of the validity of the data. This certification is subject to unannounced laboratory inspections.

Issued: **26 FEB 2015**

Expires: **30 JUN 2015**

Director, Division of Environmental Analysis

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 01 JUL 2014

M-NY032 ALS ENVIRONMENTAL ROCHESTER
ROCHESTER NY

NON POTABLE WATER (CHEMISTRY) **Effective Date** **01 JUL 2014** **Expiration Date** **30 JUN 2015**

Analytes	Methods
ALUMINUM	EPA 200.7
ANTIMONY	EPA 200.7
ANTIMONY	EPA 200.8
ARSENIC	EPA 200.7
ARSENIC	EPA 200.8
BERYLLIUM	EPA 200.7
BERYLLIUM	EPA 200.8
CADMIUM	EPA 200.7
CADMIUM	EPA 200.8
CHROMIUM	EPA 200.7
CHROMIUM	EPA 200.8
COBALT	EPA 200.7
COBALT	EPA 200.8
COPPER	EPA 200.7
COPPER	EPA 200.8
IRON	EPA 200.7
LEAD	EPA 200.7
LEAD	EPA 200.8
MANGANESE	EPA 200.7
MANGANESE	EPA 200.8
MERCURY	EPA 245.1
MOLYBDENUM	EPA 200.7
MOLYBDENUM	EPA 200.8
NICKEL	EPA 200.7
NICKEL	EPA 200.8
SELENIUM	EPA 200.7
SELENIUM	EPA 200.8
SILVER	EPA 200.7
SILVER	EPA 200.8
THALLIUM	EPA 200.7
THALLIUM	EPA 200.8
VANADIUM	EPA 200.7
VANADIUM	EPA 200.8
ZINC	EPA 200.7
ZINC	EPA 200.8
SPECIFIC CONDUCTIVITY	EPA 120.1
TOTAL DISSOLVED SOLIDS	SM 2540C
HARDNESS (CACO3), TOTAL	SM 2340C
CALCIUM	EPA 200.7
MAGNESIUM	EPA 200.7
SODIUM	EPA 200.7
POTASSIUM	EPA 200.7
ALKALINITY, TOTAL	SM 2320B

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 01 JUL 2014

M-NY032 ALS ENVIRONMENTAL ROCHESTER
ROCHESTER NY

NON POTABLE WATER (CHEMISTRY) Effective Date 01 JUL 2014 Expiration Date 30 JUN 2015

Analytes	Methods
CHLORIDE	SM 4500-CL-E
CHLORIDE	EPA 300.0
FLUORIDE	EPA 300.0
SULFATE	EPA 300.0
AMMONIA-N	EPA 350.1
NITRATE-N	EPA 300.0
NITRATE-N	EPA 353.2
KJELDAHL-N	EPA 351.2
ORTHOPHOSPHATE	EPA 365.1
PHOSPHORUS, TOTAL	EPA 365.1
CHEMICAL OXYGEN DEMAND	EPA 410.4
BIOCHEMICAL OXYGEN DEMAND	SM 5210B
TOTAL ORGANIC CARBON	SM 5310C
CYANIDE, TOTAL	EPA 335.4
NON-FILTERABLE RESIDUE	SM 2540D
OIL AND GREASE	EPA 1664
PHENOLICS, TOTAL	EPA 420.4
VOLATILE HALOCARBONS	EPA 601
VOLATILE HALOCARBONS	EPA 624
VOLATILE AROMATICS	EPA 602
VOLATILE AROMATICS	EPA 624
SVOC-ACID EXTRACTABLES	EPA 625
SVOC-BASE/NEUTRAL EXTRACTABLES	EPA 625
POLYCHLORINATED BIPHENYLS (WATEF	EPA 608

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504930
Project:	Varian Beverly/152728	**Date Collected:**	6/18/15 0930
Sample Matrix:	Water	**Date Received:**	6/19/15
		Date Analyzed:	6/25/15 10:50
Sample Name:	OB-44S	**Units:**	µg/L
Lab Code:	R1504930-001	**Basis:**	NA

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	450618
Data File Name:	1008.run	**Instrument Name:**	R-GC-02
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	5.8		1.0	
74-85-1	Ethene	10		1.0	
74-82-8	Methane	2.7		1.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504930
Project:	Varian Beverly/152728	**Date Collected:**	6/18/15 1000
Sample Matrix:	Water	**Date Received:**	6/19/15
		Date Analyzed:	6/25/15 11:05
Sample Name:	OB-46S	**Units:**	µg/L
Lab Code:	R1504930-002	**Basis:**	NA

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	450618
Data File Name:	1009.run	**Instrument Name:**	R-GC-02
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	**18**		1.0	
74-85-1	Ethene	**26**		1.0	
74-82-8	Methane	**36**		1.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1504930
Project:	Varian Beverly/152728	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	6/25/15 09:10
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1506999-01	**Basis:**	NA

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	450618
Data File Name:	1002.run	**Instrument Name:**	R-GC-02
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	1.0	U	1.0	
74-85-1	Ethene	1.0	U	1.0	
74-82-8	Methane	1.0	U	1.0	

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: CB&I
Project: Varian Beverly/152728
Sample Matrix: Water

Service Request: R1504930
Date Analyzed: 6/25/15

Lab Control Sample Summary
Dissolved Gases by GC/FID

Analytical Method: RSK 175

Units: µg/L
Basis: NA

Analysis Lot: 450618

Analyte Name	Lab Control Sample RQ1506999-02 Result	Spike Amount	% Rec	Duplicate Lab Control Sample RQ1506999-03 Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Ethane	24.7	25.9	95	26.9	25.9	104	75 - 118	9	30
Ethene	23.5	24.2	97	25.5	24.2	105	73 - 129	8	30
Methane	25.3	26.1	97	27.2	26.1	104	65 - 126	7	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

25964

ALS Environmental

1565 Jefferson Road, Building 300, Suite 360 • Rochester, NY 14623 | +1 585 288 5380 +1 585 288 8475 (fax) PAGE 1 OF 1

Project Name: Varian Beverly	Project Number: ~~152780~~ 152728
Project Manager: Raymond Cadorette	Report CC:
Company/Address: CB&I Environmental & Infrastructure, Inc. 150 Royall Street Canton, MA 02021	
Phone #: 617-589-6102	Email: Raymond.Cadorette@CBI.com
Sampler's Signature:	Sampler's Printed Name: Paul Hedderick

ANALYSIS REQUESTED *(Include Method Number and Container Preservative)*

PRESERVATIVE: 1

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	GC/MS VOAs • 8260 • 624 • CLP	GC/MS SVOAs • 8270 • 625	GC VOAs • 8021 • 601/602	PESTICIDES • 8081 • 608	PCBs • 8082 • 608	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below)	Ethene, Ethane, Methane							REMARKS/ ALTERNATE DESCRIPTION
OB 44S		6.18.15	0930	GW	3								1							
OB, 46S		6/18.15	1000	GW	3								1							

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

SPECIAL INSTRUCTIONS/COMMENTS

Metals

Massachusetts CAM analyses reporting and QA/QC.
Email GISKey formatted EDD & PDF of report to:
Catherine.Mainville@CBI.com

See QAPP ☐

STATE WHERE SAMPLES WERE COLLECTED

TURNAROUND REQUIREMENTS

_____ RUSH (SURCHARGES APPLY)

_____ 1 day _____ 2 day ✓ 3 day
_____ 4 day _____ 5 day

REQUESTED REPORT DATE

REPORT REQUIREMENTS

_____ I. Results Only
_____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
_____ III. Results + QC and Calibration Summaries
_____ IV. Data Validation Report with Raw Data

Edata _____ Yes _____ No

INVOICE INFORMATION

~~PO 915904~~
PO # Po#915964
BILL TO: CB&I

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY
Signature:	Signature: Valerie Sasso	Signature: Valerie Sasso	Signature:	Signature:
Printed Name:	Printed Name: CB&I	Printed Name: CB&I	Printed Name:	Printed Name:
Firm: 6.18.15 1400	Firm: 6/18/15 1400	Firm: 6/18/15 1500	Firm:	Firm:
Date/Time:	Date/Time:	Date/Time: TO UPS	Date/Time: 6/19/15 0915	Date/Time:

R1504930 7 Y
CB&I Environmental & Infrastructure
Varian Beverly - Non-Bio Wells

Distribution: White - Lab Copy; Yellow - Return to Originator

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Cooler Receipt and Preservation Check Form

Project/Client CB+I Folder Number R1504930

Cooler received on 6/19/15 by: @ COURIER: ALS (UPS) FEDEX VELOCITY CLIENT

1	Were **Custody seals** on outside of cooler?	Y (N)
2	**Custody papers** properly completed (ink, signed)?	(Y) N
3	Did all bottles arrive in good **condition** (unbroken)?	(Y) N
4	Circle: (**Wet Ice**) **Dry Ice** **Gel packs** present?	(Y) N

5a	**Perchlorate** samples have required headspace?	Y N (NA)
5b	Did VOA vials, Alk,or Sulfide have sig* **bubbles**?	Y (N) NA
6	Where did the bottles originate? (ALS/ROC) CLIENT	
7	Soil VOA received as: Bulk Encore 5035set (NA)	

8. Temperature Readings Date: 6/19/15 Time: 0931 ID: (IR#3) IR#5 From: Temp Blank (Sample Bottle)

Observed Temp (°C)	4.2						
Correction Factor (°C)	-0.6						
Corrected Temp (°C)	3.6						
Within 0-6°C?	(Y) N	Y N	Y N	Y N	Y N	Y N	Y N

If out of Temperature, note packing/ice condition: _____ Ice melted Poorly Packed Same Day Rule

&Client Approval to Run Samples: _____ Standing Approval Client aware at drop-off Client notified by: _____

All samples held in storage location: R-002 by @ on 6/19/15 at 0932
5035 samples placed in storage location: _____ by _____ on _____ at _____

PC Secondary Review: VMS 6/22/15

Cooler Breakdown: Date: 6-19-15 Time: 14:30 by: RZ

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

Explain any discrepancies:

pH	Reagent	Yes	No	Lot Received	Exp	Sample ID	Vol. Added	Lot Added	Final pH
≥12	NaOH								
≤2	HNO_3								
≤2	H_2SO_4								
<4	$NaHSO_4$								
Residual Chlorine (-)	For CN Phenol and 522			If +, contact PM to add $Na_2S_2O_3$ (CN), ascorbic (phenol).					
	$Na_2S_2O_3$	-	-						
	ZnAcetate	-	-						
	HCl	**	**	4114050	04/16				

**Not to be tested before analysis – pH tested and recorded by VOAs on a separate worksheet

Yes=All samples OK

No=Samples were preserved at The lab as listed

PM OK to Adjust: _____

Bottle lot numbers: 5-022-002

Other Comments:

PC Secondary Review: VMS 6/22/15

*significant air bubbles: VOA > 5-6 mm : WC >1 in. diameter

Data Usability Worksheet

Project Name : Varian Medical Systems, Inc

Job Number : 152728.05

Prepared By: Ana Fioretti

Date : 9/1/2015

Matrix: Groundwater

Analyte Group :

Ethane	SW3810/8015B
Methane	SW3810/8015B
Ethene	SW3810/8015B
Volatile Organics	SW-846 5030C/8260C
Total Organics	SW 5310C
Metals (Fe, Mn)	6010C
Nitrate/Sulfate	300.0A

Completed MADEP CAM Certification Form included: Yes

Laboratory ID No. : 33961

Chain of Custody included in Data Package ? Yes

Is it Complete ? Yes

Sample Collection Date	Analysis	Allowable Holding Time for extraction	Allowable Holding Time for analysis	Analysis Date
8/11/15	SW3810/8015B		14 Days	8/14/2015
8/11/15	SW-846 5030C/8260C	14 Days	10 Days	8/19/15, 8/21/15, 8/24/15
8/11/15	SW5310C		28 Days	8/26/15, 8/27/15
8/11/15	(Nitrate) 300.0A		48 Hours	8/13/15, 8/14/15
8/11/15	6010C	180 Days	180 Days	8/24/2015
8/11/15	(Sulfate) 300.0A		28 Days	8/13/15, 8/14/15

Sample temperature within QC limits: Yes, 2 degrees C

Surrogate Recovery

Are all % recoveries within the allowable range ? Yes

If No, List sample ID where range was exceeded: NA

MS/MSD

Are all MS/MSD sample recoveries within the QC limits ? NA

If No, list sample ID, date and compound where limit was exceeded: NA

Laboratory Control Samples

Are all laboratory control sample recoveries within the QC limits ? No

If no, list sample ID where range was exceeded: See notes

Equipment Field Blank ID : 8/19/2015

Trip Blank ID : 8/15/2015

Method Blank: N/A

Were any compounds identified in the method blank, field blank or trip blank above detection limits ? No

If so, list Sample ID/Compound/Concentration/Units: NA

Notes:

VOC: The LCS1502249 did not meet the acceptance criteria for bromomethane. This compound showed high recovery. There is no impact to the data as this analyte was not detected in the associated samples.

VOC: The LCS/D1502318 did not meet the acceptance criteria for trichloroethene due to carryover from a previous analysis. There is no impact to the data suspected as the samples responsible for the carryover are the over calibration analyses that are not being reported for TCE. Since <10% of the compounds were outside of the acceptance criteria, reanalysis is not required.

Anions: The samples required analysis at a dilution due to interferences from the unusual matrix. The following dilutions were analyzed beyond the recommended holding time: 33961-005, -010, -011. The samples have been qualified accordingly.
Qualify with a J/UJ

TOC: Due to matrix interferences, the RPD between the analytical replicates was outside the 10% acceptance range for the following samples: 33961-005, -007, -009. The reported results have been qualified as estimates.
Qualify with a J/UJ

Reviewed By: Jennifer Gailey 9/2/2015

Laboratory Report

Absolute Resource associates
124 Heritage Avenue Portsmouth NH 03801

Raymond Cadorette
CB&I Environmental & Infrastructure
150 Royall Street
Canton, MA 02021

PO Number: 953525
Job ID: 33961
Date Received: 8/12/15

Project: Varian Beverly 152728-05000000

Attached please find results for the analysis of the samples received on the date referenced above.

Unless otherwise noted in the attached report, the analyses performed met the requirements of Absolute Resource Associates' Quality Assurance Plan. The Standard Operating Procedures are based upon USEPA SW-846, USEPA Methods for Chemical Analysis of Water and Wastewater, Standard Methods for the Examination of Water and Wastewater and other recognized methodologies. The results contained in this report pertain only to the samples as indicated on the chain of custody.

Absolute Resource Associates maintains certification with the agencies listed below.

We appreciate the opportunity to provide laboratory services. If you have any questions regarding the enclosed report, please contact the laboratory and we will be glad to assist you.

Sincerely,
Absolute Resource Associates

(for)

Sue Sylvester
Principal, General Manager

Date of Approval: 8/28/2015
Total number of pages: 48

Absolute Resource Associates Certifications

New Hampshire	1732	Massachusetts	M-NH902
Maine	NH903		

Project ID: Varian Beverly 152728-05000000

Lab ID: 33961

Sample Association Table

Field ID	Matrix	Date-Time Sampled	Lab#	Analysis
EB-1	Water	8/11/2015 7:30	33961-001	VOCs 8260 site specific compounds in water by 8260
TB-1	Water	8/11/2015 0:00	33961-002	VOCs 8260 site specific compounds in water by 8260
AP25-DO (46.5)	Water	8/11/2015 8:00	33961-003	VOCs 8260 site specific compounds in water by 8260 DHG: Methane,Ethane&Ethene by 3810/8015 Total Organic Carbon by 5310C
RW-3 (56')	Water	8/11/2015 8:45	33961-004	VOCs 8260 site specific compounds in water by 8260 DHG: Methane,Ethane&Ethene by 3810/8015
AP13-DO (51')	Water	8/11/2015 8:05	33961-005	VOCs 8260 site specific compounds in water by 8260 DHG: Methane,Ethane&Ethene by 3810/8015 Nitrate-N in water (NO3) by 300.0A Sulfate in water (SO4) by 300.0A Total Organic Carbon by 5310C
RW-1 (37.8')	Water	8/11/2015 9:30	33961-006	VOCs 8260 site specific compounds in water by 8260 DHG: Methane,Ethane&Ethene by 3810/8015 Total Organic Carbon by 5310C
AP23-DO (42.8')	Water	8/11/2015 10:00	33961-007	VOCs 8260 site specific compounds in water by 8260 DHG: Methane,Ethane&Ethene by 3810/8015 Nitrate-N in water (NO3) by 300.0A Sulfate in water (SO4) by 300.0A Total Organic Carbon by 5310C
AP35-DO (35')	Water	8/11/2015 10:30	33961-008	Water Digestion for ICP Analysis Iron in water by 6010 Manganese in water by 6010 VOCs 8260 site specific compounds in water by 8260 DHG: Methane,Ethane&Ethene by 3810/8015 Nitrate-N in water (NO3) by 300.0A Sulfate in water (SO4) by 300.0A Total Organic Carbon by 5310C
AP34-DO (35.7')	Water	8/11/2015 11:20	33961-009	VOCs 8260 site specific compounds in water by 8260 DHG: Methane,Ethane&Ethene by 3810/8015 Nitrate-N in water (NO3) by 300.0A Sulfate in water (SO4) by 300.0A Total Organic Carbon by 5310C
AP33-DO (36')	Water	8/11/2015 10:05	33961-010	Water Digestion for ICP Analysis Iron in water by 6010 Manganese in water by 6010 VOCs 8260 site specific compounds in water by 8260 DHG: Methane,Ethane&Ethene by 3810/8015 Nitrate-N in water (NO3) by 300.0A Sulfate in water (SO4) by 300.0A Total Organic Carbon by 5310C
AP24-DO (47')	Water	8/11/2015 9:05	33961-011	

Project ID: Varian Beverly 152728-05000000

Lab ID: 33961

Sample Association Table

Field ID	Matrix	Date-Time Sampled	Lab#	Analysis
AP24-DO (47')	Water	8/11/2015 9:05	33961-011	
				VOCs 8260 site specific compounds in water by 8260
				DHG: Methane,Ethane&Ethene by 3810/8015
				Nitrate-N in water (NO3) by 300.0A
				Sulfate in water (SO4) by 300.0A
				Total Organic Carbon by 5310C
OB25-DO (68')	Water	8/11/2015 11:30	33961-012	
				VOCs 8260 site specific compounds in water by 8260
AP27-DO (57')	Water	8/11/2015 10:45	33961-013	
				VOCs 8260 site specific compounds in water by 8260
OB45-S	Water	8/11/2015 11:05	33961-014	
				VOCs 8260 site specific compounds in water by 8260
OB46-S (14')	Water	8/11/2015 12:15	33961-015	
				Water Digestion for ICP Analysis
				Iron in water by 6010
				Manganese in water by 6010
				VOCs 8260 site specific compounds in water by 8260
				DHG: Methane,Ethane&Ethene by 3810/8015
				Nitrate-N in water (NO3) by 300.0A
				Sulfate in water (SO4) by 300.0A
				Total Organic Carbon by 5310C
OB47-S	Water	8/11/2015 13:00	33961-016	
				VOCs 8260 site specific compounds in water by 8260

Project ID: Varian Beverly 152728-05000000
Job ID: 33961
Sample#: 33961-001
Sample ID: EB-1
Matrix: Water
Sampled: 8/11/15 7:30

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
chloromethane	< 2	2	ug/L	1	LMM		1502295	8/19/15	3:53	SW5030C8260C
vinyl chloride	< 2	2	ug/L	1	LMM		1502295	8/19/15	3:53	SW5030C8260C
bromomethane	< 2	2	ug/L	1	LMM		1502295	8/19/15	3:53	SW5030C8260C
chloroethane	< 2	2	ug/L	1	LMM		1502295	8/19/15	3:53	SW5030C8260C
trichlorofluoromethane	< 2	2	ug/L	1	LMM		1502295	8/19/15	3:53	SW5030C8260C
1,1-dichloroethene	< 1	1	ug/L	1	LMM		1502295	8/19/15	3:53	SW5030C8260C
methylene chloride	< 5	5	ug/L	1	LMM		1502295	8/19/15	3:53	SW5030C8260C
trans-1,2-dichloroethene	< 2	2	ug/L	1	LMM		1502295	8/19/15	3:53	SW5030C8260C
1,1-dichloroethane	< 2	2	ug/L	1	LMM		1502295	8/19/15	3:53	SW5030C8260C
cis-1,2-dichloroethene	< 2	2	ug/L	1	LMM		1502295	8/19/15	3:53	SW5030C8260C
chloroform	< 2	2	ug/L	1	LMM		1502295	8/19/15	3:53	SW5030C8260C
1,1,1-trichloroethane	< 2	2	ug/L	1	LMM		1502295	8/19/15	3:53	SW5030C8260C
carbon tetrachloride	< 2	2	ug/L	1	LMM		1502295	8/19/15	3:53	SW5030C8260C
1,2-dichloroethane	< 2	2	ug/L	1	LMM		1502295	8/19/15	3:53	SW5030C8260C
trichloroethene	< 2	2	ug/L	1	LMM		1502295	8/19/15	3:53	SW5030C8260C
1,2-dichloropropane	< 2	2	ug/L	1	LMM		1502295	8/19/15	3:53	SW5030C8260C
bromodichloromethane	< 2	2	ug/L	1	LMM		1502295	8/19/15	3:53	SW5030C8260C
cis-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1502295	8/19/15	3:53	SW5030C8260C
trans-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1502295	8/19/15	3:53	SW5030C8260C
1,1,2-trichloroethane	< 2	2	ug/L	1	LMM		1502295	8/19/15	3:53	SW5030C8260C
tetrachloroethene	< 2	2	ug/L	1	LMM		1502295	8/19/15	3:53	SW5030C8260C
dibromochloromethane	< 2	2	ug/L	1	LMM		1502295	8/19/15	3:53	SW5030C8260C
chlorobenzene	< 2	2	ug/L	1	LMM		1502295	8/19/15	3:53	SW5030C8260C
bromoform	< 2	2	ug/L	1	LMM		1502295	8/19/15	3:53	SW5030C8260C
1,1,2,2-tetrachloroethane	< 2	2	ug/L	1	LMM		1502295	8/19/15	3:53	SW5030C8260C
acetone	**11**	10	ug/L	1	LMM		1502295	8/19/15	3:53	SW5030C8260C
Surrogate Recovery		**Limits**								
dibromofluoromethane SUR	**92**	78-114	%	1	LMM		1502295	8/19/15	3:53	SW5030C8260C
toluene-D8 SUR	**102**	88-110	%	1	LMM		1502295	8/19/15	3:53	SW5030C8260C
4-bromofluorobenzene SUR	**94**	86-115	%	1	LMM		1502295	8/19/15	3:53	SW5030C8260C

Project ID: Varian Beverly 152728-05000000
Job ID: 33961
Sample#: 33961-002
Sample ID: TB-1
Matrix: Water
Sampled: 8/11/15 0:00

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
chloromethane	< 2	2	ug/L	1	LMM		1502295	8/15/15	3:02	SW5030C8260C
vinyl chloride	< 2	2	ug/L	1	LMM		1502295	8/15/15	3:02	SW5030C8260C
bromomethane	< 2	2	ug/L	1	LMM		1502295	8/15/15	3:02	SW5030C8260C
chloroethane	< 2	2	ug/L	1	LMM		1502295	8/15/15	3:02	SW5030C8260C
trichlorofluoromethane	< 2	2	ug/L	1	LMM		1502295	8/15/15	3:02	SW5030C8260C
1,1-dichloroethene	< 1	1	ug/L	1	LMM		1502295	8/15/15	3:02	SW5030C8260C
methylene chloride	< 5	5	ug/L	1	LMM		1502295	8/15/15	3:02	SW5030C8260C
trans-1,2-dichloroethene	< 2	2	ug/L	1	LMM		1502295	8/15/15	3:02	SW5030C8260C
1,1-dichloroethane	< 2	2	ug/L	1	LMM		1502295	8/15/15	3:02	SW5030C8260C
cis-1,2-dichloroethene	< 2	2	ug/L	1	LMM		1502295	8/15/15	3:02	SW5030C8260C
chloroform	< 2	2	ug/L	1	LMM		1502295	8/15/15	3:02	SW5030C8260C
1,1,1-trichloroethane	< 2	2	ug/L	1	LMM		1502295	8/15/15	3:02	SW5030C8260C
carbon tetrachloride	< 2	2	ug/L	1	LMM		1502295	8/15/15	3:02	SW5030C8260C
1,2-dichloroethane	< 2	2	ug/L	1	LMM		1502295	8/15/15	3:02	SW5030C8260C
trichloroethene	< 2	2	ug/L	1	LMM		1502295	8/15/15	3:02	SW5030C8260C
1,2-dichloropropane	< 2	2	ug/L	1	LMM		1502295	8/15/15	3:02	SW5030C8260C
bromodichloromethane	< 2	2	ug/L	1	LMM		1502295	8/15/15	3:02	SW5030C8260C
cis-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1502295	8/15/15	3:02	SW5030C8260C
trans-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1502295	8/15/15	3:02	SW5030C8260C
1,1,2-trichloroethane	< 2	2	ug/L	1	LMM		1502295	8/15/15	3:02	SW5030C8260C
tetrachloroethene	< 2	2	ug/L	1	LMM		1502295	8/15/15	3:02	SW5030C8260C
dibromochloromethane	< 2	2	ug/L	1	LMM		1502295	8/15/15	3:02	SW5030C8260C
chlorobenzene	< 2	2	ug/L	1	LMM		1502295	8/15/15	3:02	SW5030C8260C
bromoform	< 2	2	ug/L	1	LMM		1502295	8/15/15	3:02	SW5030C8260C
1,1,2,2-tetrachloroethane	< 2	2	ug/L	1	LMM		1502295	8/15/15	3:02	SW5030C8260C
acetone	< 10	10	ug/L	1	LMM		1502295	8/15/15	3:02	SW5030C8260C
Surrogate Recovery		**Limits**								
dibromofluoromethane SUR	**98**	78-114	%	1	LMM		1502295	8/15/15	3:02	SW5030C8260C
toluene-D8 SUR	**99**	88-110	%	1	LMM		1502295	8/15/15	3:02	SW5030C8260C
4-bromofluorobenzene SUR	**94**	86-115	%	1	LMM		1502295	8/15/15	3:02	SW5030C8260C

Project ID: Varian Beverly 152728-05000000
Job ID: 33961
Sample#: 33961-003
Sample ID: AP25-DO (46.5)
Matrix: Water
Sampled: 8/11/15 8:00

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
chloromethane	< 2	2	ug/L	1	LMM		1502336	8/24/15	20:58	SW5030C8260C
vinyl chloride	**700**	10	ug/L	5	LMM		1502336	8/18/15	3:27	SW5030C8260C
bromomethane	< 2	2	ug/L	1	LMM		1502336	8/24/15	20:58	SW5030C8260C
chloroethane	< 2	2	ug/L	1	LMM		1502336	8/24/15	20:58	SW5030C8260C
trichlorofluoromethane	< 2	2	ug/L	1	LMM		1502336	8/24/15	20:58	SW5030C8260C
1,1-dichloroethene	**8**	1	ug/L	1	LMM		1502336	8/24/15	20:58	SW5030C8260C
methylene chloride	< 5	5	ug/L	1	LMM		1502336	8/24/15	20:58	SW5030C8260C
trans-1,2-dichloroethene	**7**	2	ug/L	1	LMM		1502336	8/24/15	20:58	SW5030C8260C
1,1-dichloroethane	**16**	2	ug/L	1	LMM		1502336	8/24/15	20:58	SW5030C8260C
cis-1,2-dichloroethene	**2200**	10	ug/L	5	LMM		1502336	8/18/15	3:27	SW5030C8260C
chloroform	< 2	2	ug/L	1	LMM		1502336	8/24/15	20:58	SW5030C8260C
1,1,1-trichloroethane	**12**	2	ug/L	1	LMM		1502336	8/24/15	20:58	SW5030C8260C
carbon tetrachloride	< 2	2	ug/L	1	LMM		1502336	8/24/15	20:58	SW5030C8260C
1,2-dichloroethane	< 2	2	ug/L	1	LMM		1502336	8/24/15	20:58	SW5030C8260C
trichloroethene	< 2	2	ug/L	1	LMM		1502336	8/24/15	20:58	SW5030C8260C
1,2-dichloropropane	< 2	2	ug/L	1	LMM		1502336	8/24/15	20:58	SW5030C8260C
bromodichloromethane	< 2	2	ug/L	1	LMM		1502336	8/24/15	20:58	SW5030C8260C
cis-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1502336	8/24/15	20:58	SW5030C8260C
trans-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1502336	8/24/15	20:58	SW5030C8260C
1,1,2-trichloroethane	< 2	2	ug/L	1	LMM		1502336	8/24/15	20:58	SW5030C8260C
tetrachloroethene	**2**	2	ug/L	1	LMM		1502336	8/24/15	20:58	SW5030C8260C
dibromochloromethane	< 2	2	ug/L	1	LMM		1502336	8/24/15	20:58	SW5030C8260C
chlorobenzene	< 2	2	ug/L	1	LMM		1502336	8/24/15	20:58	SW5030C8260C
bromoform	< 2	2	ug/L	1	LMM		1502336	8/24/15	20:58	SW5030C8260C
1,1,2,2-tetrachloroethane	< 2	2	ug/L	1	LMM		1502336	8/24/15	20:58	SW5030C8260C
acetone	< 10	10	ug/L	1	LMM		1502336	8/24/15	20:58	SW5030C8260C
Surrogate Recovery		**Limits**								
dibromofluoromethane SUR	**99**	78-114	%	1	LMM		1502336	8/24/15	20:58	SW5030C8260C
toluene-D8 SUR	**100**	88-110	%	1	LMM		1502336	8/24/15	20:58	SW5030C8260C
4-bromofluorobenzene SUR	**98**	86-115	%	1	LMM		1502336	8/24/15	20:58	SW5030C8260C

Project ID: Varian Beverly 152728-05000000
Job ID: 33961
Sample#: 33961-004
Sample ID: RW-3 (56')
Matrix: Water
Sampled: 8/11/15 8:45

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
chloromethane	< 2	2	ug/L	1	LMM		1502336	8/24/15	20:31	SW5030C8260C
vinyl chloride	**170**	2	ug/L	1	LMM		1502336	8/24/15	20:31	SW5030C8260C
bromomethane	< 2	2	ug/L	1	LMM		1502336	8/24/15	20:31	SW5030C8260C
chloroethane	**4**	2	ug/L	1	LMM		1502336	8/24/15	20:31	SW5030C8260C
trichlorofluoromethane	< 2	2	ug/L	1	LMM		1502336	8/24/15	20:31	SW5030C8260C
1,1-dichloroethene	**8**	1	ug/L	1	LMM		1502336	8/24/15	20:31	SW5030C8260C
methylene chloride	< 5	5	ug/L	1	LMM		1502336	8/24/15	20:31	SW5030C8260C
trans-1,2-dichloroethene	< 2	2	ug/L	1	LMM		1502336	8/24/15	20:31	SW5030C8260C
1,1-dichloroethane	**17**	2	ug/L	1	LMM		1502336	8/24/15	20:31	SW5030C8260C
cis-1,2-dichloroethene	**640**	10	ug/L	5	LMM		1502336	8/18/15	2:32	SW5030C8260C
chloroform	< 2	2	ug/L	1	LMM		1502336	8/24/15	20:31	SW5030C8260C
1,1,1-trichloroethane	**8**	2	ug/L	1	LMM		1502336	8/24/15	20:31	SW5030C8260C
carbon tetrachloride	< 2	2	ug/L	1	LMM		1502336	8/24/15	20:31	SW5030C8260C
1,2-dichloroethane	< 2	2	ug/L	1	LMM		1502336	8/24/15	20:31	SW5030C8260C
trichloroethene	**7**	2	ug/L	1	LMM		1502336	8/24/15	20:31	SW5030C8260C
1,2-dichloropropane	< 2	2	ug/L	1	LMM		1502336	8/24/15	20:31	SW5030C8260C
bromodichloromethane	< 2	2	ug/L	1	LMM		1502336	8/24/15	20:31	SW5030C8260C
cis-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1502336	8/24/15	20:31	SW5030C8260C
trans-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1502336	8/24/15	20:31	SW5030C8260C
1,1,2-trichloroethane	< 2	2	ug/L	1	LMM		1502336	8/24/15	20:31	SW5030C8260C
tetrachloroethene	**3**	2	ug/L	1	LMM		1502336	8/24/15	20:31	SW5030C8260C
dibromochloromethane	< 2	2	ug/L	1	LMM		1502336	8/24/15	20:31	SW5030C8260C
chlorobenzene	< 2	2	ug/L	1	LMM		1502336	8/24/15	20:31	SW5030C8260C
bromoform	< 2	2	ug/L	1	LMM		1502336	8/24/15	20:31	SW5030C8260C
1,1,2,2-tetrachloroethane	< 2	2	ug/L	1	LMM		1502336	8/24/15	20:31	SW5030C8260C
acetone	< 10	10	ug/L	1	LMM		1502336	8/24/15	20:31	SW5030C8260C
Surrogate Recovery		**Limits**								
dibromofluoromethane SUR	**98**	78-114	%	1	LMM		1502336	8/24/15	20:31	SW5030C8260C
toluene-D8 SUR	**104**	88-110	%	1	LMM		1502336	8/24/15	20:31	SW5030C8260C
4-bromofluorobenzene SUR	**101**	86-115	%	1	LMM		1502336	8/24/15	20:31	SW5030C8260C

Project ID: Varian Beverly 152728-05000000
Job ID: 33961
Sample#: 33961-005
Sample ID: AP13-DO (51')
Matrix: Water
Sampled: 8/11/15 8:05

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
chloromethane	< 400	400	ug/L	200	LMM		1502318	8/21/15	22:31	SW5030C8260C
vinyl chloride	**3700**	400	ug/L	200	LMM		1502318	8/21/15	22:31	SW5030C8260C
bromomethane	< 400	400	ug/L	200	LMM		1502318	8/21/15	22:31	SW5030C8260C
chloroethane	< 400	400	ug/L	200	LMM		1502318	8/21/15	22:31	SW5030C8260C
trichlorofluoromethane	< 400	400	ug/L	200	LMM		1502318	8/21/15	22:31	SW5030C8260C
1,1-dichloroethene	**1700**	200	ug/L	200	LMM		1502318	8/21/15	22:31	SW5030C8260C
methylene chloride	< 1000	1000	ug/L	200	LMM		1502318	8/21/15	22:31	SW5030C8260C
trans-1,2-dichloroethene	< 400	400	ug/L	200	LMM		1502318	8/21/15	22:31	SW5030C8260C
1,1-dichloroethane	**1600**	400	ug/L	200	LMM		1502318	8/21/15	22:31	SW5030C8260C
cis-1,2-dichloroethene	**11000**	400	ug/L	200	LMM		1502318	8/21/15	22:31	SW5030C8260C
chloroform	**1100**	400	ug/L	200	LMM		1502318	8/21/15	22:31	SW5030C8260C
1,1,1-trichloroethane	**26000**	400	ug/L	200	LMM		1502318	8/21/15	22:31	SW5030C8260C
carbon tetrachloride	< 400	400	ug/L	200	LMM		1502318	8/21/15	22:31	SW5030C8260C
1,2-dichloroethane	< 400	400	ug/L	200	LMM		1502318	8/21/15	22:31	SW5030C8260C
trichloroethene	**310000**	2000	ug/L	1000	LMM		1502318	8/21/15	19:20	SW5030C8260C
1,2-dichloropropane	< 400	400	ug/L	200	LMM		1502318	8/21/15	22:31	SW5030C8260C
bromodichloromethane	< 400	400	ug/L	200	LMM		1502318	8/21/15	22:31	SW5030C8260C
cis-1,3-dichloropropene	< 400	400	ug/L	200	LMM		1502318	8/21/15	22:31	SW5030C8260C
trans-1,3-dichloropropene	< 400	400	ug/L	200	LMM		1502318	8/21/15	22:31	SW5030C8260C
1,1,2-trichloroethane	< 400	400	ug/L	200	LMM		1502318	8/21/15	22:31	SW5030C8260C
tetrachloroethene	**82000**	400	ug/L	200	LMM		1502318	8/21/15	22:31	SW5030C8260C
dibromochloromethane	< 400	400	ug/L	200	LMM		1502318	8/21/15	22:31	SW5030C8260C
chlorobenzene	< 400	400	ug/L	200	LMM		1502318	8/21/15	22:31	SW5030C8260C
bromoform	< 400	400	ug/L	200	LMM		1502318	8/21/15	22:31	SW5030C8260C
1,1,2,2-tetrachloroethane	< 400	400	ug/L	200	LMM		1502318	8/21/15	22:31	SW5030C8260C
acetone	**7100**	2000	ug/L	200	LMM		1502318	8/21/15	22:31	SW5030C8260C
Surrogate Recovery		**Limits**								
dibromofluoromethane SUR	**97**	78-114	%	200	LMM		1502318	8/21/15	22:31	SW5030C8260C
toluene-D8 SUR	**109**	88-110	%	200	LMM		1502318	8/21/15	22:31	SW5030C8260C
4-bromofluorobenzene SUR	**97**	86-115	%	200	LMM		1502318	8/21/15	22:31	SW5030C8260C

Project ID: Varian Beverly 152728-05000000
Job ID: 33961
Sample#: 33961-006
Sample ID: RW-1 (37.8')
Matrix: Water
Sampled: 8/11/15 9:30

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
chloromethane	< 10	10	ug/L	5	LMM		1502295	8/19/15	8:24	SW5030C8260C
vinyl chloride	**560**	10	ug/L	5	LMM		1502295	8/19/15	8:24	SW5030C8260C
bromomethane	< 10	10	ug/L	5	LMM		1502295	8/19/15	8:24	SW5030C8260C
chloroethane	< 10	10	ug/L	5	LMM		1502295	8/19/15	8:24	SW5030C8260C
trichlorofluoromethane	< 10	10	ug/L	5	LMM		1502295	8/19/15	8:24	SW5030C8260C
1,1-dichloroethene	**21**	5	ug/L	5	LMM		1502295	8/19/15	8:24	SW5030C8260C
methylene chloride	< 25	25	ug/L	5	LMM		1502295	8/19/15	8:24	SW5030C8260C
trans-1,2-dichloroethene	**300**	10	ug/L	5	LMM		1502295	8/19/15	8:24	SW5030C8260C
1,1-dichloroethane	**38**	10	ug/L	5	LMM		1502295	8/19/15	8:24	SW5030C8260C
cis-1,2-dichloroethene	**14000**	100	ug/L	50	LMM		1502295	8/18/15	4:21	SW5030C8260C
chloroform	**45**	10	ug/L	5	LMM		1502295	8/19/15	8:24	SW5030C8260C
1,1,1-trichloroethane	< 10	10	ug/L	5	LMM		1502295	8/19/15	8:24	SW5030C8260C
carbon tetrachloride	< 10	10	ug/L	5	LMM		1502295	8/19/15	8:24	SW5030C8260C
1,2-dichloroethane	< 10	10	ug/L	5	LMM		1502295	8/19/15	8:24	SW5030C8260C
trichloroethene	**2100**	10	ug/L	5	LMM		1502295	8/19/15	8:24	SW5030C8260C
1,2-dichloropropane	< 10	10	ug/L	5	LMM		1502295	8/19/15	8:24	SW5030C8260C
bromodichloromethane	< 10	10	ug/L	5	LMM		1502295	8/19/15	8:24	SW5030C8260C
cis-1,3-dichloropropene	< 10	10	ug/L	5	LMM		1502295	8/19/15	8:24	SW5030C8260C
trans-1,3-dichloropropene	< 10	10	ug/L	5	LMM		1502295	8/19/15	8:24	SW5030C8260C
1,1,2-trichloroethane	< 10	10	ug/L	5	LMM		1502295	8/19/15	8:24	SW5030C8260C
tetrachloroethene	**2200**	10	ug/L	5	LMM		1502295	8/19/15	8:24	SW5030C8260C
dibromochloromethane	< 10	10	ug/L	5	LMM		1502295	8/19/15	8:24	SW5030C8260C
chlorobenzene	< 10	10	ug/L	5	LMM		1502295	8/19/15	8:24	SW5030C8260C
bromoform	< 10	10	ug/L	5	LMM		1502295	8/19/15	8:24	SW5030C8260C
1,1,2,2-tetrachloroethane	< 10	10	ug/L	5	LMM		1502295	8/19/15	8:24	SW5030C8260C
acetone	< 50	50	ug/L	5	LMM		1502295	8/19/15	8:24	SW5030C8260C
Surrogate Recovery		**Limits**								
dibromofluoromethane SUR	**102**	78-114	%	5	LMM		1502295	8/19/15	8:24	SW5030C8260C
toluene-D8 SUR	**97**	88-110	%	5	LMM		1502295	8/19/15	8:24	SW5030C8260C
4-bromofluorobenzene SUR	**93**	86-115	%	5	LMM		1502295	8/19/15	8:24	SW5030C8260C

Project ID: Varian Beverly 152728-05000000
Job ID: 33961
Sample#: 33961-007
Sample ID: AP23-DO (42.8')
Matrix: Water
Sampled: 8/11/15 10:00

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
chloromethane	< 400	400	ug/L	200	LMM		1502318	8/21/15	22:59	SW5030C8260C
vinyl chloride	< 400	400	ug/L	200	LMM		1502318	8/21/15	22:59	SW5030C8260C
bromomethane	< 400	400	ug/L	200	LMM		1502318	8/21/15	22:59	SW5030C8260C
chloroethane	< 400	400	ug/L	200	LMM		1502318	8/21/15	22:59	SW5030C8260C
trichlorofluoromethane	< 400	400	ug/L	200	LMM		1502318	8/21/15	22:59	SW5030C8260C
1,1-dichloroethene	**250**	200	ug/L	200	LMM		1502318	8/21/15	22:59	SW5030C8260C
methylene chloride	< 1000	1000	ug/L	200	LMM		1502318	8/21/15	22:59	SW5030C8260C
trans-1,2-dichloroethene	< 400	400	ug/L	200	LMM		1502318	8/21/15	22:59	SW5030C8260C
1,1-dichloroethane	< 400	400	ug/L	200	LMM		1502318	8/21/15	22:59	SW5030C8260C
cis-1,2-dichloroethene	**1000**	400	ug/L	200	LMM		1502318	8/21/15	22:59	SW5030C8260C
chloroform	**1600**	400	ug/L	200	LMM		1502318	8/21/15	22:59	SW5030C8260C
1,1,1-trichloroethane	**860**	400	ug/L	200	LMM		1502318	8/21/15	22:59	SW5030C8260C
carbon tetrachloride	< 400	400	ug/L	200	LMM		1502318	8/21/15	22:59	SW5030C8260C
1,2-dichloroethane	< 400	400	ug/L	200	LMM		1502318	8/21/15	22:59	SW5030C8260C
trichloroethene	**400000**	2000	ug/L	1000	LMM		1502318	8/21/15	19:47	SW5030C8260C
1,2-dichloropropane	< 400	400	ug/L	200	LMM		1502318	8/21/15	22:59	SW5030C8260C
bromodichloromethane	< 400	400	ug/L	200	LMM		1502318	8/21/15	22:59	SW5030C8260C
cis-1,3-dichloropropene	< 400	400	ug/L	200	LMM		1502318	8/21/15	22:59	SW5030C8260C
trans-1,3-dichloropropene	< 400	400	ug/L	200	LMM		1502318	8/21/15	22:59	SW5030C8260C
1,1,2-trichloroethane	< 400	400	ug/L	200	LMM		1502318	8/21/15	22:59	SW5030C8260C
tetrachloroethene	**26000**	400	ug/L	200	LMM		1502318	8/21/15	22:59	SW5030C8260C
dibromochloromethane	< 400	400	ug/L	200	LMM		1502318	8/21/15	22:59	SW5030C8260C
chlorobenzene	< 400	400	ug/L	200	LMM		1502318	8/21/15	22:59	SW5030C8260C
bromoform	< 400	400	ug/L	200	LMM		1502318	8/21/15	22:59	SW5030C8260C
1,1,2,2-tetrachloroethane	< 400	400	ug/L	200	LMM		1502318	8/21/15	22:59	SW5030C8260C
acetone	**10000**	2000	ug/L	200	LMM		1502318	8/21/15	22:59	SW5030C8260C
Surrogate Recovery		**Limits**								
dibromofluoromethane SUR	**95**	78-114	%	200	LMM		1502318	8/21/15	22:59	SW5030C8260C
toluene-D8 SUR	**107**	88-110	%	200	LMM		1502318	8/21/15	22:59	SW5030C8260C
4-bromofluorobenzene SUR	**89**	86-115	%	200	LMM		1502318	8/21/15	22:59	SW5030C8260C

Project ID: Varian Beverly 152728-05000000
Job ID: 33961
Sample#: 33961-008
Sample ID: AP35-DO (35')
Matrix: Water
Sampled: 8/11/15 10:30

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
chloromethane	< 200	200	ug/L	100	LMM		1502318	8/21/15	21:09	SW5030C8260C
vinyl chloride	**1100**	200	ug/L	100	LMM		1502318	8/21/15	21:09	SW5030C8260C
bromomethane	< 200	200	ug/L	100	LMM		1502318	8/21/15	21:09	SW5030C8260C
chloroethane	< 200	200	ug/L	100	LMM		1502318	8/21/15	21:09	SW5030C8260C
trichlorofluoromethane	< 200	200	ug/L	100	LMM		1502318	8/21/15	21:09	SW5030C8260C
1,1-dichloroethene	**410**	100	ug/L	100	LMM		1502318	8/21/15	21:09	SW5030C8260C
methylene chloride	< 500	500	ug/L	100	LMM		1502318	8/21/15	21:09	SW5030C8260C
trans-1,2-dichloroethene	**630**	200	ug/L	100	LMM		1502318	8/21/15	21:09	SW5030C8260C
1,1-dichloroethane	< 200	200	ug/L	100	LMM		1502318	8/21/15	21:09	SW5030C8260C
cis-1,2-dichloroethene	**280000**	2000	ug/L	1000	LMM		1502318	8/24/15	20:03	SW5030C8260C
chloroform	< 200	200	ug/L	100	LMM		1502318	8/21/15	21:09	SW5030C8260C
1,1,1-trichloroethane	< 200	200	ug/L	100	LMM		1502318	8/21/15	21:09	SW5030C8260C
carbon tetrachloride	< 200	200	ug/L	100	LMM		1502318	8/21/15	21:09	SW5030C8260C
1,2-dichloroethane	< 200	200	ug/L	100	LMM		1502318	8/21/15	21:09	SW5030C8260C
trichloroethene	**1000**	200	ug/L	100	LMM		1502318	8/21/15	21:09	SW5030C8260C
1,2-dichloropropane	< 200	200	ug/L	100	LMM		1502318	8/21/15	21:09	SW5030C8260C
bromodichloromethane	< 200	200	ug/L	100	LMM		1502318	8/21/15	21:09	SW5030C8260C
cis-1,3-dichloropropene	< 200	200	ug/L	100	LMM		1502318	8/21/15	21:09	SW5030C8260C
trans-1,3-dichloropropene	< 200	200	ug/L	100	LMM		1502318	8/21/15	21:09	SW5030C8260C
1,1,2-trichloroethane	< 200	200	ug/L	100	LMM		1502318	8/21/15	21:09	SW5030C8260C
tetrachloroethene	< 200	200	ug/L	100	LMM		1502318	8/21/15	21:09	SW5030C8260C
dibromochloromethane	< 200	200	ug/L	100	LMM		1502318	8/21/15	21:09	SW5030C8260C
chlorobenzene	< 200	200	ug/L	100	LMM		1502318	8/21/15	21:09	SW5030C8260C
bromoform	< 200	200	ug/L	100	LMM		1502318	8/21/15	21:09	SW5030C8260C
1,1,2,2-tetrachloroethane	< 200	200	ug/L	100	LMM		1502318	8/21/15	21:09	SW5030C8260C
acetone	< 1000	1000	ug/L	100	LMM		1502318	8/21/15	21:09	SW5030C8260C
Surrogate Recovery		**Limits**								
dibromofluoromethane SUR	**96**	78-114	%	100	LMM		1502318	8/21/15	21:09	SW5030C8260C
toluene-D8 SUR	**98**	88-110	%	100	LMM		1502318	8/21/15	21:09	SW5030C8260C
4-bromofluorobenzene SUR	**94**	86-115	%	100	LMM		1502318	8/21/15	21:09	SW5030C8260C

Project ID: Varian Beverly 152728-05000000
Job ID: 33961
Sample#: 33961-009
Sample ID: AP34-DO (35.7')
Matrix: Water
Sampled: 8/11/15 11:20

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
chloromethane	< 200	200	ug/L	100	LMM		1502295	8/19/15	10:15	SW5030C8260C
vinyl chloride	**710**	200	ug/L	100	LMM		1502295	8/19/15	10:15	SW5030C8260C
bromomethane	< 200	200	ug/L	100	LMM		1502295	8/19/15	10:15	SW5030C8260C
chloroethane	< 200	200	ug/L	100	LMM		1502295	8/19/15	10:15	SW5030C8260C
trichlorofluoromethane	< 200	200	ug/L	100	LMM		1502295	8/19/15	10:15	SW5030C8260C
1,1-dichloroethene	**480**	100	ug/L	100	LMM		1502295	8/19/15	10:15	SW5030C8260C
methylene chloride	< 500	500	ug/L	100	LMM		1502295	8/19/15	10:15	SW5030C8260C
trans-1,2-dichloroethene	**360**	200	ug/L	100	LMM		1502295	8/19/15	10:15	SW5030C8260C
1,1-dichloroethane	**830**	200	ug/L	100	LMM		1502295	8/19/15	10:15	SW5030C8260C
cis-1,2-dichloroethene	**180000**	1000	ug/L	500	LMM		1502295	8/19/15	4:20	SW5030C8260C
chloroform	< 200	200	ug/L	100	LMM		1502295	8/19/15	10:15	SW5030C8260C
1,1,1-trichloroethane	**660**	200	ug/L	100	LMM		1502295	8/19/15	10:15	SW5030C8260C
carbon tetrachloride	< 200	200	ug/L	100	LMM		1502295	8/19/15	10:15	SW5030C8260C
1,2-dichloroethane	< 200	200	ug/L	100	LMM		1502295	8/19/15	10:15	SW5030C8260C
trichloroethene	**2000**	200	ug/L	100	LMM		1502295	8/19/15	10:15	SW5030C8260C
1,2-dichloropropane	< 200	200	ug/L	100	LMM		1502295	8/19/15	10:15	SW5030C8260C
bromodichloromethane	< 200	200	ug/L	100	LMM		1502295	8/19/15	10:15	SW5030C8260C
cis-1,3-dichloropropene	< 200	200	ug/L	100	LMM		1502295	8/19/15	10:15	SW5030C8260C
trans-1,3-dichloropropene	< 200	200	ug/L	100	LMM		1502295	8/19/15	10:15	SW5030C8260C
1,1,2-trichloroethane	< 200	200	ug/L	100	LMM		1502295	8/19/15	10:15	SW5030C8260C
tetrachloroethene	**270**	200	ug/L	100	LMM		1502295	8/19/15	10:15	SW5030C8260C
dibromochloromethane	< 200	200	ug/L	100	LMM		1502295	8/19/15	10:15	SW5030C8260C
chlorobenzene	< 200	200	ug/L	100	LMM		1502295	8/19/15	10:15	SW5030C8260C
bromoform	< 200	200	ug/L	100	LMM		1502295	8/19/15	10:15	SW5030C8260C
1,1,2,2-tetrachloroethane	< 200	200	ug/L	100	LMM		1502295	8/19/15	10:15	SW5030C8260C
acetone	< 1000	1000	ug/L	100	LMM		1502295	8/19/15	10:15	SW5030C8260C
Surrogate Recovery		**Limits**								
dibromofluoromethane SUR	**97**	78-114	%	100	LMM		1502295	8/19/15	10:15	SW5030C8260C
toluene-D8 SUR	**96**	88-110	%	100	LMM		1502295	8/19/15	10:15	SW5030C8260C
4-bromofluorobenzene SUR	**96**	86-115	%	100	LMM		1502295	8/19/15	10:15	SW5030C8260C

Project ID: Varian Beverly 152728-05000000
Job ID: 33961
Sample#: 33961-010
Sample ID: AP33-DO (36')
Matrix: Water
Sampled: 8/11/15 10:05

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
chloromethane	< 200	200	ug/L	100	LMM		1502318	8/21/15	21:36	SW5030C8260C
vinyl chloride	**4700**	200	ug/L	100	LMM		1502318	8/21/15	21:36	SW5030C8260C
bromomethane	< 200	200	ug/L	100	LMM		1502318	8/21/15	21:36	SW5030C8260C
chloroethane	< 200	200	ug/L	100	LMM		1502318	8/21/15	21:36	SW5030C8260C
trichlorofluoromethane	< 200	200	ug/L	100	LMM		1502318	8/21/15	21:36	SW5030C8260C
1,1-dichloroethene	**750**	100	ug/L	100	LMM		1502318	8/21/15	21:36	SW5030C8260C
methylene chloride	< 500	500	ug/L	100	LMM		1502318	8/21/15	21:36	SW5030C8260C
trans-1,2-dichloroethene	< 200	200	ug/L	100	LMM		1502318	8/21/15	21:36	SW5030C8260C
1,1-dichloroethane	**1300**	200	ug/L	100	LMM		1502318	8/21/15	21:36	SW5030C8260C
cis-1,2-dichloroethene	**220000**	1000	ug/L	500	LMM		1502318	8/21/15	20:41	SW5030C8260C
chloroform	< 200	200	ug/L	100	LMM		1502318	8/21/15	21:36	SW5030C8260C
1,1,1-trichloroethane	**48000**	200	ug/L	100	LMM		1502318	8/21/15	21:36	SW5030C8260C
carbon tetrachloride	< 200	200	ug/L	100	LMM		1502318	8/21/15	21:36	SW5030C8260C
1,2-dichloroethane	< 200	200	ug/L	100	LMM		1502318	8/21/15	21:36	SW5030C8260C
trichloroethene	**180000**	1000	ug/L	500	LMM		1502318	8/21/15	20:41	SW5030C8260C
1,2-dichloropropane	< 200	200	ug/L	100	LMM		1502318	8/21/15	21:36	SW5030C8260C
bromodichloromethane	< 200	200	ug/L	100	LMM		1502318	8/21/15	21:36	SW5030C8260C
cis-1,3-dichloropropene	< 200	200	ug/L	100	LMM		1502318	8/21/15	21:36	SW5030C8260C
trans-1,3-dichloropropene	< 200	200	ug/L	100	LMM		1502318	8/21/15	21:36	SW5030C8260C
1,1,2-trichloroethane	< 200	200	ug/L	100	LMM		1502318	8/21/15	21:36	SW5030C8260C
tetrachloroethene	**16000**	200	ug/L	100	LMM		1502318	8/21/15	21:36	SW5030C8260C
dibromochloromethane	< 200	200	ug/L	100	LMM		1502318	8/21/15	21:36	SW5030C8260C
chlorobenzene	< 200	200	ug/L	100	LMM		1502318	8/21/15	21:36	SW5030C8260C
bromoform	< 200	200	ug/L	100	LMM		1502318	8/21/15	21:36	SW5030C8260C
1,1,2,2-tetrachloroethane	< 200	200	ug/L	100	LMM		1502318	8/21/15	21:36	SW5030C8260C
acetone	< 1000	1000	ug/L	100	LMM		1502318	8/21/15	21:36	SW5030C8260C
Surrogate Recovery		**Limits**								
dibromofluoromethane SUR	**97**	78-114	%	100	LMM		1502318	8/21/15	21:36	SW5030C8260C
toluene-D8 SUR	**98**	88-110	%	100	LMM		1502318	8/21/15	21:36	SW5030C8260C
4-bromofluorobenzene SUR	**93**	86-115	%	100	LMM		1502318	8/21/15	21:36	SW5030C8260C

Project ID: Varian Beverly 152728-05000000
Job ID: 33961
Sample#: 33961-011
Sample ID: AP24-DO (47')
Matrix: Water
Sampled: 8/11/15 9:05

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
chloromethane	< 200	200	ug/L	100	LMM		1502295	8/19/15	11:09	SW5030C8260C
vinyl chloride	**1200**	200	ug/L	100	LMM		1502295	8/19/15	11:09	SW5030C8260C
bromomethane	< 200	200	ug/L	100	LMM		1502295	8/19/15	11:09	SW5030C8260C
chloroethane	< 200	200	ug/L	100	LMM		1502295	8/19/15	11:09	SW5030C8260C
trichlorofluoromethane	< 200	200	ug/L	100	LMM		1502295	8/19/15	11:09	SW5030C8260C
1,1-dichloroethene	**2400**	100	ug/L	100	LMM		1502295	8/19/15	11:09	SW5030C8260C
methylene chloride	< 500	500	ug/L	100	LMM		1502295	8/19/15	11:09	SW5030C8260C
trans-1,2-dichloroethene	**560**	200	ug/L	100	LMM		1502295	8/19/15	11:09	SW5030C8260C
1,1-dichloroethane	**580**	200	ug/L	100	LMM		1502295	8/19/15	11:09	SW5030C8260C
cis-1,2-dichloroethene	**200000**	1000	ug/L	500	LMM		1502295	8/19/15	4:47	SW5030C8260C
chloroform	**340**	200	ug/L	100	LMM		1502295	8/19/15	11:09	SW5030C8260C
1,1,1-trichloroethane	**31000**	200	ug/L	100	LMM		1502295	8/19/15	11:09	SW5030C8260C
carbon tetrachloride	< 200	200	ug/L	100	LMM		1502295	8/19/15	11:09	SW5030C8260C
1,2-dichloroethane	< 200	200	ug/L	100	LMM		1502295	8/19/15	11:09	SW5030C8260C
trichloroethene	**3600**	200	ug/L	100	LMM		1502295	8/19/15	11:09	SW5030C8260C
1,2-dichloropropane	< 200	200	ug/L	100	LMM		1502295	8/19/15	11:09	SW5030C8260C
bromodichloromethane	< 200	200	ug/L	100	LMM		1502295	8/19/15	11:09	SW5030C8260C
cis-1,3-dichloropropene	< 200	200	ug/L	100	LMM		1502295	8/19/15	11:09	SW5030C8260C
trans-1,3-dichloropropene	< 200	200	ug/L	100	LMM		1502295	8/19/15	11:09	SW5030C8260C
1,1,2-trichloroethane	< 200	200	ug/L	100	LMM		1502295	8/19/15	11:09	SW5030C8260C
tetrachloroethene	< 200	200	ug/L	100	LMM		1502295	8/19/15	11:09	SW5030C8260C
dibromochloromethane	< 200	200	ug/L	100	LMM		1502295	8/19/15	11:09	SW5030C8260C
chlorobenzene	< 200	200	ug/L	100	LMM		1502295	8/19/15	11:09	SW5030C8260C
bromoform	< 200	200	ug/L	100	LMM		1502295	8/19/15	11:09	SW5030C8260C
1,1,2,2-tetrachloroethane	< 200	200	ug/L	100	LMM		1502295	8/19/15	11:09	SW5030C8260C
acetone	< 1000	1000	ug/L	100	LMM		1502295	8/19/15	11:09	SW5030C8260C
Surrogate Recovery		**Limits**								
dibromofluoromethane SUR	**99**	78-114	%	100	LMM		1502295	8/19/15	11:09	SW5030C8260C
toluene-D8 SUR	**98**	88-110	%	100	LMM		1502295	8/19/15	11:09	SW5030C8260C
4-bromofluorobenzene SUR	**97**	86-115	%	100	LMM		1502295	8/19/15	11:09	SW5030C8260C

Project ID: Varian Beverly 152728-05000000
Job ID: 33961
Sample#: 33961-012
Sample ID: OB25-DO (68')
Matrix: Water
Sampled: 8/11/15 11:30

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
chloromethane	< 10	10	ug/L	5	LMM		1502295	8/19/15	7:30	SW5030C8260C
vinyl chloride	< 10	10	ug/L	5	LMM		1502295	8/19/15	7:30	SW5030C8260C
bromomethane	< 10	10	ug/L	5	LMM		1502295	8/19/15	7:30	SW5030C8260C
chloroethane	< 10	10	ug/L	5	LMM		1502295	8/19/15	7:30	SW5030C8260C
trichlorofluoromethane	< 10	10	ug/L	5	LMM		1502295	8/19/15	7:30	SW5030C8260C
1,1-dichloroethene	**6**	5	ug/L	5	LMM		1502295	8/19/15	7:30	SW5030C8260C
methylene chloride	< 25	25	ug/L	5	LMM		1502295	8/19/15	7:30	SW5030C8260C
trans-1,2-dichloroethene	< 10	10	ug/L	5	LMM		1502295	8/19/15	7:30	SW5030C8260C
1,1-dichloroethane	< 10	10	ug/L	5	LMM		1502295	8/19/15	7:30	SW5030C8260C
cis-1,2-dichloroethene	**260**	10	ug/L	5	LMM		1502295	8/19/15	7:30	SW5030C8260C
chloroform	< 10	10	ug/L	5	LMM		1502295	8/19/15	7:30	SW5030C8260C
1,1,1-trichloroethane	< 10	10	ug/L	5	LMM		1502295	8/19/15	7:30	SW5030C8260C
carbon tetrachloride	< 10	10	ug/L	5	LMM		1502295	8/19/15	7:30	SW5030C8260C
1,2-dichloroethane	< 10	10	ug/L	5	LMM		1502295	8/19/15	7:30	SW5030C8260C
trichloroethene	**9700**	100	ug/L	50	LMM		1502295	8/18/15	3:54	SW5030C8260C
1,2-dichloropropane	< 10	10	ug/L	5	LMM		1502295	8/19/15	7:30	SW5030C8260C
bromodichloromethane	< 10	10	ug/L	5	LMM		1502295	8/19/15	7:30	SW5030C8260C
cis-1,3-dichloropropene	< 10	10	ug/L	5	LMM		1502295	8/19/15	7:30	SW5030C8260C
trans-1,3-dichloropropene	< 10	10	ug/L	5	LMM		1502295	8/19/15	7:30	SW5030C8260C
1,1,2-trichloroethane	< 10	10	ug/L	5	LMM		1502295	8/19/15	7:30	SW5030C8260C
tetrachloroethene	**260**	10	ug/L	5	LMM		1502295	8/19/15	7:30	SW5030C8260C
dibromochloromethane	< 10	10	ug/L	5	LMM		1502295	8/19/15	7:30	SW5030C8260C
chlorobenzene	< 10	10	ug/L	5	LMM		1502295	8/19/15	7:30	SW5030C8260C
bromoform	< 10	10	ug/L	5	LMM		1502295	8/19/15	7:30	SW5030C8260C
1,1,2,2-tetrachloroethane	< 10	10	ug/L	5	LMM		1502295	8/19/15	7:30	SW5030C8260C
acetone	< 50	50	ug/L	5	LMM		1502295	8/19/15	7:30	SW5030C8260C
Surrogate Recovery		**Limits**								
dibromofluoromethane SUR	**95**	78-114	%	5	LMM		1502295	8/19/15	7:30	SW5030C8260C
toluene-D8 SUR	**109**	88-110	%	5	LMM		1502295	8/19/15	7:30	SW5030C8260C
4-bromofluorobenzene SUR	**92**	86-115	%	5	LMM		1502295	8/19/15	7:30	SW5030C8260C

Project ID: Varian Beverly 152728-05000000
Job ID: 33961
Sample#: 33961-013
Sample ID: AP27-DO (57')
Matrix: Water
Sampled: 8/11/15 10:45

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
chloromethane	< 20	20	ug/L	10	LMM		1502295	8/19/15	9:19	SW5030C8260C
vinyl chloride	< 20	20	ug/L	10	LMM		1502295	8/19/15	9:19	SW5030C8260C
bromomethane	< 20	20	ug/L	10	LMM		1502295	8/19/15	9:19	SW5030C8260C
chloroethane	< 20	20	ug/L	10	LMM		1502295	8/19/15	9:19	SW5030C8260C
trichlorofluoromethane	< 20	20	ug/L	10	LMM		1502295	8/19/15	9:19	SW5030C8260C
1,1-dichloroethene	< 10	10	ug/L	10	LMM		1502295	8/19/15	9:19	SW5030C8260C
methylene chloride	< 50	50	ug/L	10	LMM		1502295	8/19/15	9:19	SW5030C8260C
trans-1,2-dichloroethene	**42**	20	ug/L	10	LMM		1502295	8/19/15	9:19	SW5030C8260C
1,1-dichloroethane	< 20	20	ug/L	10	LMM		1502295	8/19/15	9:19	SW5030C8260C
cis-1,2-dichloroethene	**160**	20	ug/L	10	LMM		1502295	8/19/15	9:19	SW5030C8260C
chloroform	< 20	20	ug/L	10	LMM		1502295	8/19/15	9:19	SW5030C8260C
1,1,1-trichloroethane	< 20	20	ug/L	10	LMM		1502295	8/19/15	9:19	SW5030C8260C
carbon tetrachloride	< 20	20	ug/L	10	LMM		1502295	8/19/15	9:19	SW5030C8260C
1,2-dichloroethane	< 20	20	ug/L	10	LMM		1502295	8/19/15	9:19	SW5030C8260C
trichloroethene	**22000**	100	ug/L	50	LMM		1502295	8/18/15	4:48	SW5030C8260C
1,2-dichloropropane	< 20	20	ug/L	10	LMM		1502295	8/19/15	9:19	SW5030C8260C
bromodichloromethane	< 20	20	ug/L	10	LMM		1502295	8/19/15	9:19	SW5030C8260C
cis-1,3-dichloropropene	< 20	20	ug/L	10	LMM		1502295	8/19/15	9:19	SW5030C8260C
trans-1,3-dichloropropene	< 20	20	ug/L	10	LMM		1502295	8/19/15	9:19	SW5030C8260C
1,1,2-trichloroethane	< 20	20	ug/L	10	LMM		1502295	8/19/15	9:19	SW5030C8260C
tetrachloroethene	**520**	20	ug/L	10	LMM		1502295	8/19/15	9:19	SW5030C8260C
dibromochloromethane	< 20	20	ug/L	10	LMM		1502295	8/19/15	9:19	SW5030C8260C
chlorobenzene	< 20	20	ug/L	10	LMM		1502295	8/19/15	9:19	SW5030C8260C
bromoform	< 20	20	ug/L	10	LMM		1502295	8/19/15	9:19	SW5030C8260C
1,1,2,2-tetrachloroethane	< 20	20	ug/L	10	LMM		1502295	8/19/15	9:19	SW5030C8260C
acetone	< 100	100	ug/L	10	LMM		1502295	8/19/15	9:19	SW5030C8260C
Surrogate Recovery		**Limits**								
dibromofluoromethane SUR	**92**	78-114	%	10	LMM		1502295	8/19/15	9:19	SW5030C8260C
toluene-D8 SUR	**105**	88-110	%	10	LMM		1502295	8/19/15	9:19	SW5030C8260C
4-bromofluorobenzene SUR	**89**	86-115	%	10	LMM		1502295	8/19/15	9:19	SW5030C8260C

Project ID: Varian Beverly 152728-05000000
Job ID: 33961
Sample#: 33961-014
Sample ID: OB45-S
Matrix: Water
Sampled: 8/11/15 11:05

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
chloromethane	< 2	2	ug/L	1	LMM		1502249	8/18/15	2:05	SW5030C8260C
vinyl chloride	< 2	2	ug/L	1	LMM		1502249	8/18/15	2:05	SW5030C8260C
bromomethane	< 2	2	ug/L	1	LMM		1502249	8/18/15	2:05	SW5030C8260C
chloroethane	< 2	2	ug/L	1	LMM		1502249	8/18/15	2:05	SW5030C8260C
trichlorofluoromethane	< 2	2	ug/L	1	LMM		1502249	8/18/15	2:05	SW5030C8260C
1,1-dichloroethene	< 1	1	ug/L	1	LMM		1502249	8/18/15	2:05	SW5030C8260C
methylene chloride	< 5	5	ug/L	1	LMM		1502249	8/18/15	2:05	SW5030C8260C
trans-1,2-dichloroethene	< 2	2	ug/L	1	LMM		1502249	8/18/15	2:05	SW5030C8260C
1,1-dichloroethane	< 2	2	ug/L	1	LMM		1502249	8/18/15	2:05	SW5030C8260C
cis-1,2-dichloroethene	< 2	2	ug/L	1	LMM		1502249	8/18/15	2:05	SW5030C8260C
chloroform	< 2	2	ug/L	1	LMM		1502249	8/18/15	2:05	SW5030C8260C
1,1,1-trichloroethane	< 2	2	ug/L	1	LMM		1502249	8/18/15	2:05	SW5030C8260C
carbon tetrachloride	< 2	2	ug/L	1	LMM		1502249	8/18/15	2:05	SW5030C8260C
1,2-dichloroethane	< 2	2	ug/L	1	LMM		1502249	8/18/15	2:05	SW5030C8260C
trichloroethene	**2**	2	ug/L	1	LMM		1502249	8/18/15	2:05	SW5030C8260C
1,2-dichloropropane	< 2	2	ug/L	1	LMM		1502249	8/18/15	2:05	SW5030C8260C
bromodichloromethane	< 2	2	ug/L	1	LMM		1502249	8/18/15	2:05	SW5030C8260C
cis-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1502249	8/18/15	2:05	SW5030C8260C
trans-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1502249	8/18/15	2:05	SW5030C8260C
1,1,2-trichloroethane	< 2	2	ug/L	1	LMM		1502249	8/18/15	2:05	SW5030C8260C
tetrachloroethene	< 2	2	ug/L	1	LMM		1502249	8/18/15	2:05	SW5030C8260C
dibromochloromethane	< 2	2	ug/L	1	LMM		1502249	8/18/15	2:05	SW5030C8260C
chlorobenzene	< 2	2	ug/L	1	LMM		1502249	8/18/15	2:05	SW5030C8260C
bromoform	< 2	2	ug/L	1	LMM		1502249	8/18/15	2:05	SW5030C8260C
1,1,2,2-tetrachloroethane	< 2	2	ug/L	1	LMM		1502249	8/18/15	2:05	SW5030C8260C
acetone	< 10	10	ug/L	1	LMM		1502249	8/18/15	2:05	SW5030C8260C
Surrogate Recovery		**Limits**								
dibromofluoromethane SUR	**98**	78-114	%	1	LMM		1502249	8/18/15	2:05	SW5030C8260C
toluene-D8 SUR	**97**	88-110	%	1	LMM		1502249	8/18/15	2:05	SW5030C8260C
4-bromofluorobenzene SUR	**90**	86-115	%	1	LMM		1502249	8/18/15	2:05	SW5030C8260C

Project ID: Varian Beverly 152728-05000000
Job ID: 33961
Sample#: 33961-015
Sample ID: OB46-S (14')
Matrix: Water
Sampled: 8/11/15 12:15

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
chloromethane	< 2	2	ug/L	1	LMM		1502295	8/19/15	5:41	SW5030C8260C
vinyl chloride	**14**	2	ug/L	1	LMM		1502295	8/19/15	5:41	SW5030C8260C
bromomethane	< 2	2	ug/L	1	LMM		1502295	8/19/15	5:41	SW5030C8260C
chloroethane	< 2	2	ug/L	1	LMM		1502295	8/19/15	5:41	SW5030C8260C
trichlorofluoromethane	< 2	2	ug/L	1	LMM		1502295	8/19/15	5:41	SW5030C8260C
1,1-dichloroethene	**3**	1	ug/L	1	LMM		1502295	8/19/15	5:41	SW5030C8260C
methylene chloride	< 5	5	ug/L	1	LMM		1502295	8/19/15	5:41	SW5030C8260C
trans-1,2-dichloroethene	**5**	2	ug/L	1	LMM		1502295	8/19/15	5:41	SW5030C8260C
1,1-dichloroethane	< 2	2	ug/L	1	LMM		1502295	8/19/15	5:41	SW5030C8260C
cis-1,2-dichloroethene	**1600**	10	ug/L	5	LMM		1502295	8/18/15	2:59	SW5030C8260C
chloroform	< 2	2	ug/L	1	LMM		1502295	8/19/15	5:41	SW5030C8260C
1,1,1-trichloroethane	< 2	2	ug/L	1	LMM		1502295	8/19/15	5:41	SW5030C8260C
carbon tetrachloride	< 2	2	ug/L	1	LMM		1502295	8/19/15	5:41	SW5030C8260C
1,2-dichloroethane	< 2	2	ug/L	1	LMM		1502295	8/19/15	5:41	SW5030C8260C
trichloroethene	**6**	2	ug/L	1	LMM		1502295	8/19/15	5:41	SW5030C8260C
1,2-dichloropropane	< 2	2	ug/L	1	LMM		1502295	8/19/15	5:41	SW5030C8260C
bromodichloromethane	< 2	2	ug/L	1	LMM		1502295	8/19/15	5:41	SW5030C8260C
cis-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1502295	8/19/15	5:41	SW5030C8260C
trans-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1502295	8/19/15	5:41	SW5030C8260C
1,1,2-trichloroethane	< 2	2	ug/L	1	LMM		1502295	8/19/15	5:41	SW5030C8260C
tetrachloroethene	**19**	2	ug/L	1	LMM		1502295	8/19/15	5:41	SW5030C8260C
dibromochloromethane	< 2	2	ug/L	1	LMM		1502295	8/19/15	5:41	SW5030C8260C
chlorobenzene	< 2	2	ug/L	1	LMM		1502295	8/19/15	5:41	SW5030C8260C
bromoform	< 2	2	ug/L	1	LMM		1502295	8/19/15	5:41	SW5030C8260C
1,1,2,2-tetrachloroethane	< 2	2	ug/L	1	LMM		1502295	8/19/15	5:41	SW5030C8260C
acetone	< 10	10	ug/L	1	LMM		1502295	8/19/15	5:41	SW5030C8260C
Surrogate Recovery		**Limits**								
dibromofluoromethane SUR	**98**	78-114	%	1	LMM		1502295	8/19/15	5:41	SW5030C8260C
toluene-D8 SUR	**96**	88-110	%	1	LMM		1502295	8/19/15	5:41	SW5030C8260C
4-bromofluorobenzene SUR	**91**	86-115	%	1	LMM		1502295	8/19/15	5:41	SW5030C8260C

Project ID: Varian Beverly 152728-05000000
Job ID: 33961
Sample#: 33961-016
Sample ID: OB47-S
Matrix: Water
Sampled: 8/11/15 13:00

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
chloromethane	< 2	2	ug/L	1	LMM		1502249	8/18/15	1:37	SW5030C8260C
vinyl chloride	< 2	2	ug/L	1	LMM		1502249	8/18/15	1:37	SW5030C8260C
bromomethane	< 2	2	ug/L	1	LMM		1502249	8/18/15	1:37	SW5030C8260C
chloroethane	< 2	2	ug/L	1	LMM		1502249	8/18/15	1:37	SW5030C8260C
trichlorofluoromethane	< 2	2	ug/L	1	LMM		1502249	8/18/15	1:37	SW5030C8260C
1,1-dichloroethene	< 1	1	ug/L	1	LMM		1502249	8/18/15	1:37	SW5030C8260C
methylene chloride	< 5	5	ug/L	1	LMM		1502249	8/18/15	1:37	SW5030C8260C
trans-1,2-dichloroethene	< 2	2	ug/L	1	LMM		1502249	8/18/15	1:37	SW5030C8260C
1,1-dichloroethane	< 2	2	ug/L	1	LMM		1502249	8/18/15	1:37	SW5030C8260C
cis-1,2-dichloroethene	< 2	2	ug/L	1	LMM		1502249	8/18/15	1:37	SW5030C8260C
chloroform	< 2	2	ug/L	1	LMM		1502249	8/18/15	1:37	SW5030C8260C
1,1,1-trichloroethane	< 2	2	ug/L	1	LMM		1502249	8/18/15	1:37	SW5030C8260C
carbon tetrachloride	< 2	2	ug/L	1	LMM		1502249	8/18/15	1:37	SW5030C8260C
1,2-dichloroethane	< 2	2	ug/L	1	LMM		1502249	8/18/15	1:37	SW5030C8260C
trichloroethene	**8**	2	ug/L	1	LMM		1502249	8/18/15	1:37	SW5030C8260C
1,2-dichloropropane	< 2	2	ug/L	1	LMM		1502249	8/18/15	1:37	SW5030C8260C
bromodichloromethane	< 2	2	ug/L	1	LMM		1502249	8/18/15	1:37	SW5030C8260C
cis-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1502249	8/18/15	1:37	SW5030C8260C
trans-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1502249	8/18/15	1:37	SW5030C8260C
1,1,2-trichloroethane	< 2	2	ug/L	1	LMM		1502249	8/18/15	1:37	SW5030C8260C
tetrachloroethene	**7**	2	ug/L	1	LMM		1502249	8/18/15	1:37	SW5030C8260C
dibromochloromethane	< 2	2	ug/L	1	LMM		1502249	8/18/15	1:37	SW5030C8260C
chlorobenzene	< 2	2	ug/L	1	LMM		1502249	8/18/15	1:37	SW5030C8260C
bromoform	< 2	2	ug/L	1	LMM		1502249	8/18/15	1:37	SW5030C8260C
1,1,2,2-tetrachloroethane	< 2	2	ug/L	1	LMM		1502249	8/18/15	1:37	SW5030C8260C
acetone	< 10	10	ug/L	1	LMM		1502249	8/18/15	1:37	SW5030C8260C
Surrogate Recovery		**Limits**								
dibromofluoromethane SUR	**97**	78-114	%	1	LMM		1502249	8/18/15	1:37	SW5030C8260C
toluene-D8 SUR	**100**	88-110	%	1	LMM		1502249	8/18/15	1:37	SW5030C8260C
4-bromofluorobenzene SUR	**100**	86-115	%	1	LMM		1502249	8/18/15	1:37	SW5030C8260C

Project ID: Varian Beverly 152728-05000000

Job ID: 33961

Sample#: 33961-003

Sample ID: AP25-DO (46.5)

Matrix: Water

Sampled: 8/11/15 8:00

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Batch	Analysis Date	Analysis Time	Reference
methane	< 10	10	ug/L	1	AJD		1502217	8/14/15	11:29	SW3810/8015B
ethane	< 20	20	ug/L	1	AJD		1502217	8/14/15	11:29	SW3810/8015B
ethene	< 20	20	ug/L	1	AJD		1502217	8/14/15	11:29	SW3810/8015B

Sample#: 33961-004

Sample ID: RW-3 (56')

Matrix: Water

Sampled: 8/11/15 8:45

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Batch	Analysis Date	Analysis Time	Reference
methane	**860**	10	ug/L	1	AJD		1502217	8/14/15	10:38	SW3810/8015B
ethane	< 20	20	ug/L	1	AJD		1502217	8/14/15	10:38	SW3810/8015B
ethene	< 20	20	ug/L	1	AJD		1502217	8/14/15	10:38	SW3810/8015B

Sample#: 33961-005

Sample ID: AP13-DO (51')

Matrix: Water

Sampled: 8/11/15 8:05

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Batch	Analysis Date	Analysis Time	Reference
methane	< 10	10	ug/L	1	AJD		1502217	8/14/15	10:41	SW3810/8015B
ethane	< 20	20	ug/L	1	AJD		1502217	8/14/15	10:41	SW3810/8015B
ethene	< 20	20	ug/L	1	AJD		1502217	8/14/15	10:41	SW3810/8015B

Sample#: 33961-006

Sample ID: RW-1 (37.8')

Matrix: Water

Sampled: 8/11/15 9:30

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Analysis Batch	Analysis Date	Analysis Time	Reference
methane	**150**	10	ug/L	1	AJD		1502217	8/14/15	10:44	SW3810/8015B
ethane	< 20	20	ug/L	1	AJD		1502217	8/14/15	10:44	SW3810/8015B
ethene	< 20	20	ug/L	1	AJD		1502217	8/14/15	10:44	SW3810/8015B

Project ID: Varian Beverly 152728-05000000

Job ID: 33961

Sample#: 33961-007

Sample ID: AP23-DO (42.8')

Matrix: Water

Sampled: 8/11/15 10:00

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
methane	**24**	10	ug/L	1	AJD		1502217	8/14/15	10:47	SW3810/8015B
ethane	< 20	20	ug/L	1	AJD		1502217	8/14/15	10:47	SW3810/8015B
ethene	**75**	20	ug/L	1	AJD		1502217	8/14/15	10:47	SW3810/8015B

Sample#: 33961-008

Sample ID: AP35-DO (35')

Matrix: Water

Sampled: 8/11/15 10:30

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
methane	**620**	10	ug/L	1	AJD		1502217	8/14/15	10:50	SW3810/8015B
ethane	< 20	20	ug/L	1	AJD		1502217	8/14/15	10:50	SW3810/8015B
ethene	**110**	20	ug/L	1	AJD		1502217	8/14/15	10:50	SW3810/8015B

Sample#: 33961-009

Sample ID: AP34-DO (35.7')

Matrix: Water

Sampled: 8/11/15 11:20

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
methane	**78**	10	ug/L	1	AJD		1502217	8/14/15	10:53	SW3810/8015B
ethane	**26**	20	ug/L	1	AJD		1502217	8/14/15	10:53	SW3810/8015B
ethene	**170**	20	ug/L	1	AJD		1502217	8/14/15	10:53	SW3810/8015B

Sample#: 33961-010

Sample ID: AP33-DO (36')

Matrix: Water

Sampled: 8/11/15 10:05

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
methane	< 10	10	ug/L	1	AJD		1502217	8/14/15	11:02	SW3810/8015B
ethane	< 20	20	ug/L	1	AJD		1502217	8/14/15	11:02	SW3810/8015B
ethene	**21**	20	ug/L	1	AJD		1502217	8/14/15	11:02	SW3810/8015B

Project ID: Varian Beverly 152728-05000000

Job ID: 33961

Sample#: 33961-011
Sample ID: AP24-DO (47')
Matrix: Water
Sampled: 8/11/15 9:05

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
methane	**12**	10	ug/L	1	AJD		1502217	8/14/15	11:05	SW3810/8015B
ethane	**35**	20	ug/L	1	AJD		1502217	8/14/15	11:05	SW3810/8015B
ethene	< 20	20	ug/L	1	AJD		1502217	8/14/15	11:05	SW3810/8015B

Sample#: 33961-015
Sample ID: OB46-S (14')
Matrix: Water
Sampled: 8/11/15 12:15

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
methane	< 10	10	ug/L	1	AJD		1502217	8/14/15	11:07	SW3810/8015B
ethane	< 20	20	ug/L	1	AJD		1502217	8/14/15	11:07	SW3810/8015B
ethene	< 20	20	ug/L	1	AJD		1502217	8/14/15	11:07	SW3810/8015B

Sample#: 33961-008
Sample ID: AP35-DO (35')
Matrix: Water
Sampled: 8/11/15 10:30

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Iron	**6.2**	0.05	mg/L	1	AC	8/24/15	8118	8/24/15	19:27	SW3005A6010C
Manganese	**1.3**	0.03	mg/L	1	AC	8/24/15	8118	8/24/15	19:27	SW3005A6010C

Sample#: 33961-010
Sample ID: AP33-DO (36')
Matrix: Water
Sampled: 8/11/15 10:05

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Iron	**1.4**	0.05	mg/L	1	AC	8/24/15	8118	8/24/15	19:34	SW3005A6010C
Manganese	**0.15**	0.03	mg/L	1	AC	8/24/15	8118	8/24/15	19:34	SW3005A6010C

Sample#: 33961-015
Sample ID: OB46-S (14')
Matrix: Water
Sampled: 8/11/15 12:15

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Iron	**0.06**	0.05	mg/L	1	AC	8/24/15	8118	8/24/15	19:41	SW3005A6010C
Manganese	**0.03**	0.03	mg/L	1	AC	8/24/15	8118	8/24/15	19:41	SW3005A6010C

Project ID: Varian Beverly 152728-05000000
Job ID: 33961

Sample#: 33961-005
Sample ID: AP13-DO (51')
Matrix: Water
Sampled: 8/11/15 8:05

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Nitrate-N	< 10	10	mg/L	100	AJC		1502220	8/13/15	9:39	E300.0A
Due to a analysis at an appropriate dilution, this sample was analyzed beyond the recommended holding time.										
Sulfate	**92**	50	mg/L	100	AJC		1502220	8/13/15	9:39	E300.0A

Sample#: 33961-007
Sample ID: AP23-DO (42.8')
Matrix: Water
Sampled: 8/11/15 10:00

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Nitrate-N	< 10	10	mg/L	100	AJC		1502220	8/13/15	9:56	E300.0A
Sulfate	**63**	50	mg/L	100	AJC		1502220	8/13/15	9:56	E300.0A

Sample#: 33961-008
Sample ID: AP35-DO (35')
Matrix: Water
Sampled: 8/11/15 10:30

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Nitrate-N	< 2.0	2.0	mg/L	20	AJC		1502220	8/13/15	10:12	E300.0A
Sulfate	< 10	10	mg/L	20	AJC		1502220	8/13/15	10:12	E300.0A

Sample#: 33961-009
Sample ID: AP34-DO (35.7')
Matrix: Water
Sampled: 8/11/15 11:20

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Nitrate-N	< 10	10	mg/L	100	AJC		1502220	8/13/15	10:29	E300.0A
Sulfate	< 50	50	mg/L	100	AJC		1502220	8/13/15	10:29	E300.0A

Sample#: 33961-010
Sample ID: AP33-DO (36')
Matrix: Water
Sampled: 8/11/15 10:05

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Nitrate-N	< 2.0	2.0	mg/L	20	AJC		1502228	8/14/15	17:08	E300.0A
Due to a analysis at an appropriate dilution, this sample was analyzed beyond the recommended holding time.										
Sulfate	< 10	10	mg/L	20	AJC		1502228	8/14/15	17:08	E300.0A

Project ID: Varian Beverly 152728-05000000

Job ID: 33961

Sample#: 33961-011

Sample ID: AP24-DO (47')

Matrix: Water

Sampled: 8/11/15 9:05

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
Nitrate-N	< 10	10	mg/L	100	AJC		1502220	8/13/15	10:45	E300.0A
Due to a analysis at an appropriate dilution, this sample was analyzed beyond the recommended holding time.										
Sulfate	< 50	50	mg/L	100	AJC		1502220	8/13/15	10:45	E300.0A

Sample#: 33961-015

Sample ID: OB46-S (14')

Matrix: Water

Sampled: 8/11/15 12:15

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
Nitrate-N	< 2.0	2.0	mg/L	20	AJC		1502220	8/13/15	11:01	E300.0A
Sulfate	< 10	10	mg/L	20	AJC		1502220	8/13/15	11:01	E300.0A

Project ID: Varian Beverly 152728-05000000

Job ID: 33961

Sample#: 33961-003

Sample ID: AP25-DO (46.5)

Matrix: Water

Sampled: 8/11/15 8:00

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Total Organic Carbon (TOC)	**5.8**	1.0	mg/L	1	AJD		1502380	8/26/15	13:41	SM5310C

Sample#: 33961-005

Sample ID: AP13-DO (51')

Matrix: Water

Sampled: 8/11/15 8:05

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Total Organic Carbon (TOC)	**46000**	10000	mg/L	10000	AJD		1502380	8/26/15	17:25	SM5310C

Note: The RPD between the analytical replicates was 16%, outside the 10% acceptance range. The reported result is an estimate.

Sample#: 33961-006

Sample ID: RW-1 (37.8')

Matrix: Water

Sampled: 8/11/15 9:30

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Total Organic Carbon (TOC)	**5.5**	1.0	mg/L	1	AJD		1502390	8/27/15	14:18	SM5310C

Sample#: 33961-007

Sample ID: AP23-DO (42.8')

Matrix: Water

Sampled: 8/11/15 10:00

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Total Organic Carbon (TOC)	**18000**	5000	mg/L	5000	AJD		1502380	8/26/15	17:03	SM5310C

Note: The RPD between the analytical replicates was 11%, outside the 10% acceptance range. The reported result is an estimate.

Sample#: 33961-008

Sample ID: AP35-DO (35')

Matrix: Water

Sampled: 8/11/15 10:30

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Total Organic Carbon (TOC)	**19**	10	mg/L	10	AJD		1502390	8/27/15	12:23	SM5310C

Sample#: 33961-009

Sample ID: AP34-DO (35.7')

Matrix: Water

Sampled: 8/11/15 11:20

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Total Organic Carbon (TOC)	**4000**	1000	mg/L	1000	AJD		1502380	8/26/15	16:21	SM5310C

Note: The RPD between the analytical replicates was 11%, outside the 10% acceptance range. The reported result is an estimate.

Project ID: Varian Beverly 152728-05000000
Job ID: 33961

Sample#: 33961-010
Sample ID: AP33-DO (36')
Matrix: Water
Sampled: 8/11/15 10:05

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Total Organic Carbon (TOC)	**49**	10	mg/L	10	AJD		1502390	8/27/15	12:43	SM5310C

Sample#: 33961-011
Sample ID: AP24-DO (47')
Matrix: Water
Sampled: 8/11/15 9:05

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Total Organic Carbon (TOC)	**8300**	2000	mg/L	2000	AJD		1502380	8/26/15	16:42	SM5310C

Sample#: 33961-015
Sample ID: OB46-S (14')
Matrix: Water
Sampled: 8/11/15 12:15

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Total Organic Carbon (TOC)	**8.1**	1.0	mg/L	1	AJD		1502390	8/27/15	13:03	SM5310C

Quality Control Report

124 Heritage Avenue Unit 16
Portsmouth, NH 03801
www.absoluteresourceassociates.com

MassDEP Analytical Protocol Certification Form

Laboratory Name: **Absolute Resource Associates** Project #: 152728-05000000

Project Location: Massachusetts RTN:

This Form provides certifications for the following data set: **33961**

Matrices: Groundwater/Surface Water ☑ Soil/Sediment ☐ Drinking Water ☐ Air ☐ Other:

CAM Protocol (check all that apply below):

8260 VOC CAM II A ☑	7470/7471 Hg CAM III B ☐	MassDEP VPH CAM IV A ☐	8081 Pesticides CAM V B ☐	7196 Hex Cr CAM VI B ☐	MassDEP APH CAM IX A ☐
8270 SVOC CAM II B ☐	7010 Metals CAM III C ☐	MassDEP EPH CAM IV B ☐	8151 Herbicides CAM V C ☐	8330 Explosives CAM VIII A ☐	TO-15 VOC CAM IX B ☐
6010 Metals CAM III A ☑	6020 Metals CAM III D ☐	8082 PCB CAM V A ☐	9014 Total Cyanide/PAC CAM VIA ☐	6860 Perchlorate CAM VIII B ☐	

Affirmative Responses to Questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	Yes☑ No☐
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	Yes☑ No☐
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	Yes☑ No☐
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	Yes☑ No☐
E	a. VPH, EPH, and APH Methods only: Was each method conducted without significant modifications(s)? (Refer to the individual methods for a list of significant modifications). b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	Yes☐ No☐ Yes☐ No☐
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	Yes☑ No☐

Responses to Questions G, H and I below are required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	Yes☐ No*☑

Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.

H	Were all QC performance standards specified in the CAM protocol(s) achieved?	Yes☑ No*☐
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	Yes☐ No*☑

* All negative responses must be addressed in an attached laboratory narrative.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Signature: (for) **Position: Lab Director**

Printed Name: Susan C. Sylvester **Date: 8/28/15**

Sample Integrity Table

Parameter	Method	Matrix	Minimum Volume	Recommended Container(s)	Required Preservation	Holding Time
Volatile Organics	EPA 8260	Aqueous	40mL	2 x 40mL VOA Vials with Teflon lined septa	Cool to ≤6°C 1:1 HCl to pH <2	14 Days
Volatile Organics	EPA 8260	Solid	40mL	1 x 40mL VOA Vial with 10mLs Methanol and 1 unpreserved container for percent moisture	Cool to ≤6°C Methanol	14 Days
Semivolatile Organics	EPA 8270	Aqueous	1L	1L Amber Glass Bottle w/Teflon liner	Cool to ≤6°C	7 Days
Semivolatile Organics	EPA 8270	Solid	20g	4oz Amber Glass Jar w/Teflon liner	Cool to ≤6°C	14 Days
Organochlorine Pesticides	EPA 8081	Aqueous	1L	1L Amber Glass Bottle w/Teflon liner	Cool to ≤6°C	7 Days
Organochlorine Pesticides	EPA 8081	Solid	20g	4oz Glass Jar w/Teflon liner	Cool to ≤6°C	14 Days
PCBs	EPA 8082	Aqueous	1L	1L Amber Glass Bottle w/Teflon liner	Cool to ≤6°C	365 Days
PCBs	EPA 8082	Solid	20g	4oz Glass Jar w/Teflon liner	Cool to ≤6°C	365 Days
Herbicides (subcontracted)	EPA 8151	Aqueous	1L	1L Amber Glass Bottle w/Teflon liner	Cool to ≤6°C	7 Days
Herbicides (subcontracted)	EPA 8151	Solid	30g	4oz Glass Jar w/Teflon liner	Cool to ≤6°C	14 Days
MA DEP VPH	MADEP VPH	Aqueous	40mL	2 x 40mL VOA Vials with Teflon lined septa	Cool to ≤6°C 1:1 HCl to pH <2	14 Days
MA DEP VPH	MADEP VPH	Solid	40mL	1 x 40mL VOA Vial with 10mLs Methanol and 1 unpreserved container for percent moisture	Cool to ≤6°C Methanol	28 Days
MA DEP EPH	MADEP EPH	Aqueous	1L	1L Amber Glass Bottle w/Teflon liner	Cool to ≤6°C 1:1 HCl to pH <2	14 Days
MA DEP EPH	MADEP EPH	Solid	30g	4oz Amber Glass Jar w/Teflon liner	Cool to ≤6°C	14 Days
Total Metals	EPA 6010	Aqueous	100mL	250mL Polyethylene Bottle	1:1 HNO_3 to pH <2	180 Days
Dissolved Metals	EPA 6010	Aqueous	100mL	250mL Polyethylene Bottle	Filter First 1:1 HNO_3 to pH <2	180 Days
Total Metals	EPA 6010	Solid	15g	4oz Glass Jar w/Teflon liner	Cool to ≤6°C	180 Days
Total Mercury (may be combined with Total Metals)	EPA 7470	Aqueous	100mL	125mL Polyethylene Bottle	1:1 HNO_3 to pH <2	28 Days
Total Mercury (may be combined with Total Metals)	EPA 7471	Solid	15g	4oz Glass Jar w/Teflon liner	Cool to ≤6°C	28 Days
Chromium, Hexavalent	EPA 7196	Aqueous	100mL	125mL Polyethylene Bottle	Cool to ≤6°C (NH4)2SO4 buffer	28 Days
Chromium, Hexavalent (subcontract)	EPA 7196	Solid	15g	4oz Glass Jar w/Teflon liner	Cool to ≤6°C	30 Days
Cyanide, Total	EPA 9014	Aqueous	125mL	125mL Polyethylene Bottle	Cool to ≤6°C 1:1 NaOH to pH >8	14 Days
Cyanide, Total	EPA 9014	Solid	15g	4oz Glass Jar w/Teflon liner	Cool to ≤6°C	14 Days

Absolute Resource Associates
124 Heritage Avenue Unit 16
Portsmouth, NH 03801
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Absolute Resource associates

Case Narrative
Lab # 33961

Sample Receiving and Chain of Custody Discrepancies

Samples were received in acceptable condition, at 2 degrees C, on ice, and in accordance with sample handling, preservation and integrity guidelines.

Calibration

See the included table for a list of compounds quantitated by quadratic equation.

Method Blank

No exceptions noted.

Surrogate Recoveries

No exceptions noted.

Laboratory Control Sample Results

VOC: The LCS1502249 did not meet the acceptance criteria for bromomethane. This compound showed high recovery. There is no impact to the data as this analyte was not detected in the associated samples.
VOC: The LCS/D1502318 did not meet the acceptance criteria for trichloroethene due to carryover from a previous analysis. There is no impact to the data suspected as the samples responsible for the carryover are the over calibration analyses that are not being reported for TCE. Since <10% of the compounds were outside of the acceptance criteria, reanalysis is not required.

Matrix Spike/Matrix Spike Duplicate/Duplicate Results

Not requested for this project.

Other

Anions: The samples required analysis at a dilution due to interferences from the unusual matrix. The following dilutions were analyzed beyond the recommended holding time: 33961-005, -010, -011. The samples have been qualified accordingly.
TOC: Due to matrix interferences, the RPD between the analytical replicates was outside the 10% acceptance range for the following samples: 33961-005, -007, -009. The reported results have been qualified as estimates.

MassDEP Analytical Protocol Certification Form Questions A through I

No explanation is needed for Questions A through I answered in the affirmative.
Question G: The CAM protocol reporting limits were not followed for this project as there are specific reporting limits listed in the QAPP. Box G is "No."
Question I: Metals: The MCP required metals were not requested by the customer. Box I is "No."

Quantitation by Quadratic Equation
Lab # 33961

Quantitation of the following compounds was based on a quadratic equation

Bromomethane
Carbon tetrachloride
Bromodichloromethane
cis-1,3-dichloropropene
trans-1,3-Dichloropropene
Dibromochloromethane
Bromoform

- QC Report -

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW3810/8015B	BLK1502217	methane		<	10	ug/L						
		ethane		<	20	ug/L						
		ethene		<	20	ug/L						
SW3810/8015B	DUP1502217	methane	33961-015	<	10	ug/L						20
		ethane	33961-015	<	20	ug/L						20
		ethene	33961-015	<	20	ug/L						20
SW3810/8015B	LCS1502217	methane			94	ug/L	92	103	75	125		
		ethane			200	ug/L	184	106	75	125		
SW3810/8015B	LCSD1502217	methane			87	ug/L	92	94	75	125	8	20
		ethane			190	ug/L	184	105	75	125	1	20

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW5030C8260C	BLK1502249	chloromethane		<	2	ug/L						
		vinyl chloride		<	2	ug/L						
		bromomethane		<	2	ug/L						
		chloroethane		<	2	ug/L						
		trichlorofluoromethane		<	2	ug/L						
		acetone		<	50	ug/L						
		1,1-dichloroethene		<	1	ug/L						
		methylene chloride		<	5	ug/L						
		trans-1,2-dichloroethene		<	2	ug/L						
		1,1-dichloroethane		<	2	ug/L						
		cis-1,2-dichloroethene		<	2	ug/L						
		chloroform		<	2	ug/L						
		1,1,1-trichloroethane		<	2	ug/L						
		carbon tetrachloride		<	2	ug/L						
		1,2-dichloroethane		<	2	ug/L						
		trichloroethene		<	2	ug/L						
		1,2-dichloropropane		<	2	ug/L						
		bromodichloromethane		<	0.6	ug/L						
		cis-1,3-dichloropropene		<	2	ug/L						
		trans-1,3-dichloropropene		<	2	ug/L						
		1,1,2-trichloroethane		<	2	ug/L						
		tetrachloroethene		<	2	ug/L						
		dibromochloromethane		<	2	ug/L						
		chlorobenzene		<	2	ug/L						
		bromoform		<	2	ug/L						
		1,1,2,2-tetrachloroethane		<	2	ug/L						
		dibromofluoromethane SUR			94	%			78	114		
		toluene-D8 SUR			98	%			88	110		

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R		Limits		RPD	RPD Limit
SW5030C8260C	LCS1502249	chloromethane			20	ug/L	20	98		70	130		
		vinyl chloride			18	ug/L	20	90		70	130		
		bromomethane			32	ug/L	20	158	*	70	130		
		chloroethane			20	ug/L	20	100		70	130		
		trichlorofluoromethane			20	ug/L	20	99		70	130		
		acetone		<	50	ug/L	20	102					
		1,1-dichloroethene			18	ug/L	20	88		70	130		
		methylene chloride			19	ug/L	20	96		70	130		
		trans-1,2-dichloroethene			19	ug/L	20	95		70	130		
		1,1-dichloroethane			18	ug/L	20	90		70	130		
		cis-1,2-dichloroethene			18	ug/L	20	90		70	130		
		chloroform			18	ug/L	20	92		70	130		
		1,1,1-trichloroethane			20	ug/L	20	98		70	130		
		carbon tetrachloride			18	ug/L	20	92		70	130		
		1,2-dichloroethane			19	ug/L	20	97		70	130		
		trichloroethene			21	ug/L	20	107		70	130		
		1,2-dichloropropane			19	ug/L	20	94		70	130		
		bromodichloromethane			20	ug/L	20	102		70	130		
		cis-1,3-dichloropropene			19	ug/L	20	93		70	130		
		trans-1,3-dichloropropene			18	ug/L	20	90		70	130		
		1,1,2-trichloroethane			18	ug/L	20	91		70	130		
		tetrachloroethene			20	ug/L	20	99		70	130		
		dibromochloromethane			20	ug/L	20	98		70	130		
		chlorobenzene			18	ug/L	20	92		70	130		
		bromoform			19	ug/L	20	96		70	130		
		1,1,2,2-tetrachloroethane			19	ug/L	20	97		70	130		
		dibromofluoromethane SUR			100	%				78	114		
		toluene-D8 SUR			99	%				88	110		
		4-bromofluorobenzene SUR			99	%				86	115		

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW5030C8260C	LCSD1502249	chloromethane			18	ug/L	20	92	70	130		20
		vinyl chloride			18	ug/L	20	88	70	130		20
		bromomethane			24	ug/L	20	119	70	130		20
		chloroethane			20	ug/L	20	98	70	130		20
		trichlorofluoromethane			20	ug/L	20	100	70	130		20
		acetone		<	50	ug/L	20	95				20
		1,1-dichloroethene			18	ug/L	20	89	70	130		20
		methylene chloride			19	ug/L	20	97	70	130		20
		trans-1,2-dichloroethene			19	ug/L	20	96	70	130		20
		1,1-dichloroethane			19	ug/L	20	93	70	130		20
		cis-1,2-dichloroethene			19	ug/L	20	93	70	130		20
		chloroform			19	ug/L	20	94	70	130		20
		1,1,1-trichloroethane			19	ug/L	20	97	70	130		20
		carbon tetrachloride			18	ug/L	20	91	70	130		20
		1,2-dichloroethane			20	ug/L	20	100	70	130		20
		trichloroethene			23	ug/L	20	117	70	130		20
		1,2-dichloropropane			20	ug/L	20	98	70	130		20
		bromodichloromethane			20	ug/L	20	101	70	130		20
		cis-1,3-dichloropropene			18	ug/L	20	90	70	130		20
		trans-1,3-dichloropropene			18	ug/L	20	88	70	130		20
		1,1,2-trichloroethane			18	ug/L	20	92	70	130		20
		tetrachloroethene			20	ug/L	20	99	70	130		20
		dibromochloromethane			19	ug/L	20	97	70	130		20
		chlorobenzene			18	ug/L	20	91	70	130		20
		bromoform			19	ug/L	20	93	70	130		20
		1,1,2,2-tetrachloroethane			16	ug/L	20	82	70	130		20
		dibromofluoromethane SUR			98	%			78	114		
		toluene-D8 SUR			101	%			88	110		
		4-bromofluorobenzene SUR			101	%			86	115		

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW5030C8260C	BLK1502295	chloromethane		<	2	ug/L						
		vinyl chloride		<	2	ug/L						
		bromomethane		<	2	ug/L						
		chloroethane		<	2	ug/L						
		trichlorofluoromethane		<	2	ug/L						
		acetone		<	50	ug/L						
		1,1-dichloroethene		<	1	ug/L						
		methylene chloride		<	5	ug/L						
		trans-1,2-dichloroethene		<	2	ug/L						
		1,1-dichloroethane		<	2	ug/L						
		cis-1,2-dichloroethene		<	2	ug/L						
		chloroform		<	2	ug/L						
		1,1,1-trichloroethane		<	2	ug/L						
		carbon tetrachloride		<	2	ug/L						
		1,2-dichloroethane		<	2	ug/L						
		trichloroethene		<	2	ug/L						
		1,2-dichloropropane		<	2	ug/L						
		bromodichloromethane		<	0.6	ug/L						
		cis-1,3-dichloropropene		<	2	ug/L						
		trans-1,3-dichloropropene		<	2	ug/L						
		1,1,2-trichloroethane		<	2	ug/L						
		tetrachloroethene		<	2	ug/L						
		dibromochloromethane		<	2	ug/L						
		chlorobenzene		<	2	ug/L						
		bromoform		<	2	ug/L						
		1,1,2,2-tetrachloroethane		<	2	ug/L						
		dibromofluoromethane SUR			96	%			78	114		
		toluene-D8 SUR			101	%			88	110		

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW5030C8260C	LCS1502295	chloromethane			18	ug/L	20	91	70	130		
		vinyl chloride			18	ug/L	20	90	70	130		
		bromomethane			25	ug/L	20	124	70	130		
		chloroethane			20	ug/L	20	101	70	130		
		trichlorofluoromethane			20	ug/L	20	102	70	130		
		acetone		<	50	ug/L	20	103				
		1,1-dichloroethene			19	ug/L	20	93	70	130		
		methylene chloride			20	ug/L	20	100	70	130		
		trans-1,2-dichloroethene			20	ug/L	20	99	70	130		
		1,1-dichloroethane			19	ug/L	20	95	70	130		
		cis-1,2-dichloroethene			21	ug/L	20	107	70	130		
		chloroform			20	ug/L	20	98	70	130		
		1,1,1-trichloroethane			21	ug/L	20	103	70	130		
		carbon tetrachloride			19	ug/L	20	93	70	130		
		1,2-dichloroethane			21	ug/L	20	104	70	130		
		trichloroethene			20	ug/L	20	98	70	130		
		1,2-dichloropropane			20	ug/L	20	99	70	130		
		bromodichloromethane			21	ug/L	20	103	70	130		
		cis-1,3-dichloropropene			19	ug/L	20	95	70	130		
		trans-1,3-dichloropropene			19	ug/L	20	94	70	130		
		1,1,2-trichloroethane			19	ug/L	20	93	70	130		
		tetrachloroethene			20	ug/L	20	100	70	130		
		dibromochloromethane			19	ug/L	20	96	70	130		
		chlorobenzene			19	ug/L	20	94	70	130		
		bromoform			19	ug/L	20	93	70	130		
		1,1,2,2-tetrachloroethane			24	ug/L	20	119	70	130		
		dibromofluoromethane SUR			101	%			78	114		
		toluene-D8 SUR			100	%			88	110		
		4-bromofluorobenzene SUR			103	%			86	115		

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW5030C8260C	LCSD1502295	chloromethane			18	ug/L	20	91	70	130	1	20
		vinyl chloride			17	ug/L	20	87	70	130	4	20
		bromomethane			25	ug/L	20	127	70	130	3	20
		chloroethane			20	ug/L	20	101	70	130	1	20
		trichlorofluoromethane			20	ug/L	20	98	70	130	4	20
		acetone		<	50	ug/L	20	99			4	20
		1,1-dichloroethene			19	ug/L	20	93	70	130	1	20
		methylene chloride			20	ug/L	20	99	70	130	1	20
		trans-1,2-dichloroethene			20	ug/L	20	100	70	130	1	20
		1,1-dichloroethane			19	ug/L	20	95	70	130	0	20
		cis-1,2-dichloroethene			20	ug/L	20	101	70	130	6	20
		chloroform			19	ug/L	20	96	70	130	2	20
		1,1,1-trichloroethane			20	ug/L	20	100	70	130	2	20
		carbon tetrachloride			19	ug/L	20	93	70	130	0	20
		1,2-dichloroethane			20	ug/L	20	99	70	130	5	20
		trichloroethene			19	ug/L	20	97	70	130	1	20
		1,2-dichloropropane			20	ug/L	20	99	70	130	1	20
		bromodichloromethane			20	ug/L	20	101	70	130	2	20
		cis-1,3-dichloropropene			19	ug/L	20	93	70	130	2	20
		trans-1,3-dichloropropene			18	ug/L	20	92	70	130	3	20
		1,1,2-trichloroethane			18	ug/L	20	92	70	130	1	20
		tetrachloroethene			20	ug/L	20	100	70	130	0	20
		dibromochloromethane			19	ug/L	20	97	70	130	0	20
		chlorobenzene			18	ug/L	20	92	70	130	2	20
		bromoform			19	ug/L	20	94	70	130	1	20
		1,1,2,2-tetrachloroethane			22	ug/L	20	112	70	130	6	20
		dibromofluoromethane SUR			97	%			78	114		
		toluene-D8 SUR			101	%			88	110		
		4-bromofluorobenzene SUR			102	%			86	115		

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW5030C8260C	BLK1502318	chloromethane		<	2	ug/L						
		vinyl chloride		<	2	ug/L						
		bromomethane		<	2	ug/L						
		chloroethane		<	2	ug/L						
		trichlorofluoromethane		<	2	ug/L						
		acetone		<	50	ug/L						
		1,1-dichloroethene		<	1	ug/L						
		methylene chloride		<	5	ug/L						
		trans-1,2-dichloroethene		<	2	ug/L						
		1,1-dichloroethane		<	2	ug/L						
		cis-1,2-dichloroethene		<	2	ug/L						
		chloroform		<	2	ug/L						
		1,1,1-trichloroethane		<	2	ug/L						
		carbon tetrachloride		<	2	ug/L						
		1,2-dichloroethane		<	2	ug/L						
		trichloroethene		<	2	ug/L						
		1,2-dichloropropane		<	2	ug/L						
		bromodichloromethane		<	0.6	ug/L						
		cis-1,3-dichloropropene		<	2	ug/L						
		trans-1,3-dichloropropene		<	2	ug/L						
		1,1,2-trichloroethane		<	2	ug/L						
		tetrachloroethene		<	2	ug/L						
		dibromochloromethane		<	2	ug/L						
		chlorobenzene		<	2	ug/L						
		bromoform		<	2	ug/L						
		1,1,2,2-tetrachloroethane		<	2	ug/L						
		dibromofluoromethane SUR			93	%			78	114		
		toluene-D8 SUR			100	%			88	110		

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R		Limits		RPD	RPD Limit
SW5030C8260C	LCS1502318	chloromethane			19	ug/L	20	97		70	130		
		vinyl chloride			20	ug/L	20	102		70	130		
		bromomethane			17	ug/L	20	84		70	130		
		chloroethane			23	ug/L	20	113		70	130		
		trichlorofluoromethane			22	ug/L	20	108		70	130		
		acetone		<	50	ug/L	20	110					
		1,1-dichloroethene			21	ug/L	20	106		70	130		
		methylene chloride			21	ug/L	20	106		70	130		
		trans-1,2-dichloroethene			20	ug/L	20	102		70	130		
		1,1-dichloroethane			20	ug/L	20	102		70	130		
		cis-1,2-dichloroethene			21	ug/L	20	103		70	130		
		chloroform			20	ug/L	20	98		70	130		
		1,1,1-trichloroethane			21	ug/L	20	103		70	130		
		carbon tetrachloride			19	ug/L	20	94		70	130		
		1,2-dichloroethane			21	ug/L	20	104		70	130		
		trichloroethene			30	ug/L	20	152	*	70	130		
		1,2-dichloropropane			20	ug/L	20	101		70	130		
		bromodichloromethane			19	ug/L	20	97		70	130		
		cis-1,3-dichloropropene			19	ug/L	20	97		70	130		
		trans-1,3-dichloropropene			19	ug/L	20	93		70	130		
		1,1,2-trichloroethane			20	ug/L	20	98		70	130		
		tetrachloroethene			22	ug/L	20	108		70	130		
		dibromochloromethane			18	ug/L	20	88		70	130		
		chlorobenzene			19	ug/L	20	94		70	130		
		bromoform			18	ug/L	20	88		70	130		
		1,1,2,2-tetrachloroethane			20	ug/L	20	98		70	130		
		dibromofluoromethane SUR			96	%				78	114		
		toluene-D8 SUR			101	%				88	110		
		4-bromofluorobenzene SUR			98	%				86	115		

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R		Limits		RPD	RPD Limit
SW5030C8260C	LCSD1502318	chloromethane			19	ug/L	20	94		70	130	4	20
		vinyl chloride			20	ug/L	20	98		70	130	4	20
		bromomethane			19	ug/L	20	93		70	130	11	20
		chloroethane			22	ug/L	20	108		70	130	4	20
		trichlorofluoromethane			22	ug/L	20	109		70	130	1	20
		acetone		<	50	ug/L	20	103				6	20
		1,1-dichloroethene			21	ug/L	20	105		70	130	1	20
		methylene chloride			20	ug/L	20	102		70	130	4	20
		trans-1,2-dichloroethene			21	ug/L	20	103		70	130	1	20
		1,1-dichloroethane			20	ug/L	20	99		70	130	3	20
		cis-1,2-dichloroethene			20	ug/L	20	100		70	130	3	20
		chloroform			19	ug/L	20	97		70	130	2	20
		1,1,1-trichloroethane			20	ug/L	20	101		70	130	2	20
		carbon tetrachloride			19	ug/L	20	93		70	130	1	20
		1,2-dichloroethane			21	ug/L	20	103		70	130	1	20
		trichloroethene			28	ug/L	20	139	*	70	130	9	20
		1,2-dichloropropane			20	ug/L	20	98		70	130	3	20
		bromodichloromethane			20	ug/L	20	98		70	130	1	20
		cis-1,3-dichloropropene			19	ug/L	20	95		70	130	3	20
		trans-1,3-dichloropropene			18	ug/L	20	92		70	130	2	20
		1,1,2-trichloroethane			19	ug/L	20	96		70	130	2	20
		tetrachloroethene			22	ug/L	20	108		70	130	0	20
		dibromochloromethane			19	ug/L	20	95		70	130	7	20
		chlorobenzene			18	ug/L	20	91		70	130	3	20
		bromoform			18	ug/L	20	92		70	130	4	20
		1,1,2,2-tetrachloroethane			20	ug/L	20	99		70	130	1	20
		dibromofluoromethane SUR			96	%				78	114		
		toluene-D8 SUR			99	%				88	110		
		4-bromofluorobenzene SUR			99	%				86	115		

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW5030C8260C	BLK1502336	chloromethane		<	2	ug/L						
		vinyl chloride		<	2	ug/L						
		bromomethane		<	2	ug/L						
		chloroethane		<	2	ug/L						
		trichlorofluoromethane		<	2	ug/L						
		acetone		<	50	ug/L						
		1,1-dichloroethene		<	1	ug/L						
		methylene chloride		<	5	ug/L						
		trans-1,2-dichloroethene		<	2	ug/L						
		1,1-dichloroethane		<	2	ug/L						
		cis-1,2-dichloroethene		<	2	ug/L						
		chloroform		<	2	ug/L						
		1,1,1-trichloroethane		<	2	ug/L						
		carbon tetrachloride		<	2	ug/L						
		1,2-dichloroethane		<	2	ug/L						
		trichloroethene		<	2	ug/L						
		1,2-dichloropropane		<	2	ug/L						
		bromodichloromethane		<	0.6	ug/L						
		cis-1,3-dichloropropene		<	2	ug/L						
		trans-1,3-dichloropropene		<	2	ug/L						
		1,1,2-trichloroethane		<	2	ug/L						
		tetrachloroethene		<	2	ug/L						
		dibromochloromethane		<	2	ug/L						
		chlorobenzene		<	2	ug/L						
		bromoform		<	2	ug/L						
		1,1,2,2-tetrachloroethane		<	2	ug/L						
		dibromofluoromethane SUR			92	%			78	114		
		toluene-D8 SUR			100	%			88	110		

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW5030C8260C	LCS1502336	chloromethane			18	ug/L	20	88	70	130		
		vinyl chloride			19	ug/L	20	93	70	130		
		bromomethane			15	ug/L	20	76	70	130		
		chloroethane			21	ug/L	20	106	70	130		
		trichlorofluoromethane			21	ug/L	20	107	70	130		
		acetone		<	50	ug/L	20	111				
		1,1-dichloroethene			20	ug/L	20	98	70	130		
		methylene chloride			20	ug/L	20	102	70	130		
		trans-1,2-dichloroethene			20	ug/L	20	102	70	130		
		1,1-dichloroethane			20	ug/L	20	98	70	130		
		cis-1,2-dichloroethene			20	ug/L	20	100	70	130		
		chloroform			20	ug/L	20	102	70	130		
		1,1,1-trichloroethane			21	ug/L	20	104	70	130		
		carbon tetrachloride			19	ug/L	20	94	70	130		
		1,2-dichloroethane			21	ug/L	20	107	70	130		
		trichloroethene			23	ug/L	20	114	70	130		
		1,2-dichloropropane			20	ug/L	20	102	70	130		
		bromodichloromethane			20	ug/L	20	99	70	130		
		cis-1,3-dichloropropene			20	ug/L	20	99	70	130		
		trans-1,3-dichloropropene			20	ug/L	20	98	70	130		
		1,1,2-trichloroethane			20	ug/L	20	100	70	130		
		tetrachloroethene			21	ug/L	20	103	70	130		
		dibromochloromethane			18	ug/L	20	91	70	130		
		chlorobenzene			19	ug/L	20	93	70	130		
		bromoform			18	ug/L	20	88	70	130		
		1,1,2,2-tetrachloroethane			20	ug/L	20	98	70	130		
		dibromofluoromethane SUR			97	%			78	114		
		toluene-D8 SUR			103	%			88	110		
		4-bromofluorobenzene SUR			99	%			86	115		

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW5030C8260C	LCSD1502336	chloromethane			18	ug/L	20	88	70	130	0	20
		vinyl chloride			18	ug/L	20	90	70	130	4	20
		bromomethane			17	ug/L	20	85	70	130	11	20
		chloroethane			21	ug/L	20	103	70	130	2	20
		trichlorofluoromethane			21	ug/L	20	107	70	130	0	20
		acetone		<	50	ug/L	20	110			1	20
		1,1-dichloroethene			19	ug/L	20	95	70	130	4	20
		methylene chloride			20	ug/L	20	102	70	130	0	20
		trans-1,2-dichloroethene			20	ug/L	20	101	70	130	1	20
		1,1-dichloroethane			19	ug/L	20	95	70	130	2	20
		cis-1,2-dichloroethene			20	ug/L	20	100	70	130	0	20
		chloroform			20	ug/L	20	100	70	130	1	20
		1,1,1-trichloroethane			21	ug/L	20	104	70	130	0	20
		carbon tetrachloride			19	ug/L	20	94	70	130	1	20
		1,2-dichloroethane			21	ug/L	20	106	70	130	1	20
		trichloroethene			22	ug/L	20	110	70	130	4	20
		1,2-dichloropropane			20	ug/L	20	100	70	130	2	20
		bromodichloromethane			21	ug/L	20	103	70	130	4	20
		cis-1,3-dichloropropene			19	ug/L	20	97	70	130	1	20
		trans-1,3-dichloropropene			20	ug/L	20	98	70	130	0	20
		1,1,2-trichloroethane			20	ug/L	20	98	70	130	2	20
		tetrachloroethene			20	ug/L	20	102	70	130	0	20
		dibromochloromethane			19	ug/L	20	94	70	130	3	20
		chlorobenzene			19	ug/L	20	94	70	130	1	20
		bromoform			18	ug/L	20	92	70	130	5	20
		1,1,2,2-tetrachloroethane			19	ug/L	20	97	70	130	1	20
		dibromofluoromethane SUR			103	%			78	114		
		toluene-D8 SUR			104	%			88	110		
		4-bromofluorobenzene SUR			105	%			86	115		

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW3005A6010C	BLK8118	Iron		<	0.05	mg/L						
		Manganese		<	0.03	mg/L						
SW3005A6010C	LCS8118	Iron			0.54	mg/L	0.5	107	80	120		
		Manganese			0.52	mg/L	0.5	104	80	120		
SW3005A6010C	LCSD8118	Iron			0.54	mg/L	0.5	109	80	120	1	20
		Manganese			0.52	mg/L	0.5	105	80	120	1	20

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
E300.0A	BLK1502220	Nitrate-N		<	0.1	mg/L						
		Sulfate		<	0.5	mg/L						
E300.0A	DUP1502220	Nitrate-N	33938-001	<	0.1	mg/L					3	10
E300.0A	LCS1502220	Nitrate-N			1.0	mg/L	1	100	90	110		
		Sulfate			9.9	mg/L	10	99	90	110		
E300.0A	MS1502220	Nitrate-N	33938-001		1.6	mg/L	1.66	99	90	110		
E300.0A	MS1502220	Nitrate-N	33961-015		34	mg/L	33	101	90	110		
		Sulfate	33961-015		340	mg/L	333	100	90	110		
E300.0A	BLK1502228	Nitrate-N		<	0.1	mg/L						
		Sulfate		<	0.5	mg/L						
E300.0A	DUP1502228	Sulfate	33944-002		8.6	mg/L					0	10
E300.0A	LCS1502228	Nitrate-N			1.0	mg/L	1	104	90	110		
		Sulfate			10	mg/L	10	101	90	110		
E300.0A	MS1502228	Sulfate	33944-002		24	mg/L	16	92	90	110		
SM5310C	BLK1502380	Total Organic Carbon (TOC)		<	1	mg/L						
SM5310C	LCS1502380	Total Organic Carbon (TOC)			10	mg/L	10	104	80	120		
SM5310C	LCSD1502380	Total Organic Carbon (TOC)			10	mg/L	10	103	80	120	0	20
SM5310C	BLK1502390	Total Organic Carbon (TOC)		<	1	mg/L						
SM5310C	LCS1502390	Total Organic Carbon (TOC)			9	mg/L	10	94	80	120		
SM5310C	LCSD1502390	Total Organic Carbon (TOC)			9	mg/L	10	95	80	120	1	20

Absolute Resource associates
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603-436-2001
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CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

33961

Company Name: CB&I Environmental & Infrastructure
Company Address: 150 Royall Street, Canton, MA 02021
Report To: Raymond Cadorette
Phone #: 617-589-6102
Invoice To: Same
☐ Email: Raymond.Cadorette@CBI.com

Project Name: Varian Beverly
Project #: 152728-05000000
Project Location: NH (MA) ME VT Other
Protocol: RCRA SDWA NPDES MCP NHDES OTHER
Reporting Limits: QAPP GW-1 S-1 EPA DW Other
Quote # ☐ NH Reimbursement Pricing
PO # 953525

ANALYSIS REQUEST

| Lab Sample ID (Lab Use Only) | Field ID | # CONTAINERS | Matrix: WATER | SOLID | OTHER | Preservation Method: HCl | HNO_3 | H_2SO_4 | NaOH | Methanol | Sampling: DATE | TIME | SAMPLER | ☐ VOC 8260 NHDES | ☒ VOC 8260 MADEP | ☐ VOC 624 | ☐ VOC BTEX | ☐ MtBE, only | ☐ VOC 8021VT | ☐ VPH MADEP | ☐ MEGRO | ☐ GRO 8015 | ☐ 1,4-Dioxane | ☐ VOC 524.2 | ☐ VOC 524.2 NH List | ☐ Gases-List: | ☐ TPH | ☐ DRO 8015 | ☐ MEDRO | ☐ EPH MADEP | ☐ TPH Fingerprint | ☐ 8270PAH | ☐ 8270BN | ☐ 625 | ☐ EDB 504.1 | ☐ 8082 PCB | ☐ 8081 Pesticides | ☐ 608 Pest/PCB | ☐ O&G 1664 | ☐ Mineral O&G SM5520F | ☐ pH | ☐ BOD | ☐ Conductivity | ☐ Turbidity | ☐ TSS | ☐ TDS | ☐ TS | ☐ TVS | ☐ Alkalinity | ☐ RCRA Metals | ☐ Priority Pollutant Metals | ☐ TAL Metals | ☐ Hardness | ☐ Total Metals-list: | ☒ Dissolved Metals-list: Mn, Fe | ☐ Ammonia | ☐ COD | ☐ TKN | ☐ TN | ☐ TON | ☒ TOC | ☐ T-Phosphorus | ☐ Phenols | ☐ Bacteria P/A | ☐ Bacteria MPN | ☐ Cyanide | ☐ Sulfide | ☐ Nitrate + Nitrite | ☐ Ortho P | ☐ Nitrate | ☐ Nitrite | ☐ Chloride | ☒ Sulfate | ☐ Bromide | ☐ Fluoride | ☐ Corrosivity | ☐ Reactive CN | ☐ Reactive S- | ☐ Ignitability/FP | ☐ TCLP Metals | ☐ TCLP VOC | ☐ TCLP SVOC | ☐ TCLP Pesticide | Subcontract: ☐ Grain Size | ☐ Herbicides | ☐ Formaldehyde | Methanol, ethanol, acetone | | | | Grab (G) or Composite (C) |
|---|---|---

Absolute Resource associates
124 Heritage Avenue #16
Portsmouth, NH 03801
603-436-2001
absoluteresourceassociates.com

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

33961

Company Name: CB&I Environmental & Infrastructure
Company Address: 150 Royall Street, Canton, MA 02021
Report To: Raymond Cadorette
Phone #: 617-589-6102
Invoice To: Same
☐ Email: Raymond.Cadorette@CBI.com

Project Name: Varian Beverly
Project #: 152728-05000000
Project Location: NH (MA) ME VT Other
Protocol: RCRA MCP SDWA NHDES NPDES OTHER
Reporting Limits: QAPP EPA DW GW-1 S-1 Other
Quote # ☐ NH Reimbursement Pricing
PO # 953525

ANALYSIS REQUEST

Lab Sample ID (Lab Use Only)	Field ID	# CONTAINERS	Matrix: WATER	SOLID	OTHER	Preservation Method: HCl	HNO_3	H_2SO_4	NaOH	MeOH	Sampling: DATE	TIME	SAMPLER	☐ VOC 8260 ☐ VOC 8260 NHDES ☒ VOC 8260 MADEP	☐ VOC 624 ☐ VOC BTEX ☐ MtBE only ☐ VOC 8021VT	☐ VPH MADEP ☐ MEGRO ☐ GRO 8015 ☐ 1,4-Dioxane	☐ VOC 524.2 ☐ VOC 524.2 NH List ☐ Gases-List:	☐ TPH ☐ DRO 8015 ☐ MEDRO ☐ EPH MADEP ☐ TPH Fingerprint	☐ 8270PAH ☐ 8270ABN ☐ 625 ☐ EDB 504.1	☐ 8082 PCB ☐ 8081 Pesticides ☐ 608 Pest/PCB	☐ O&G 1664 ☐ Mineral O&G SM5520F	☐ pH ☐ BOD ☐ Conductivity ☐ Turbidity	☐ TSS ☐ TDS ☐ TS ☐ TVS ☐ Alkalinity	☐ RCRA Metals ☐ Priority Pollutant Metals ☐ TAL Metals ☐ Hardness	☐ Total Metals-list:	☒ Dissolved Metals-list: Mn, Fe	☐ Ammonia ☐ COD ☐ TKN ☐ TN ☐ TON ☒ TOC	☐ T-Phosphorus ☐ Phenols ☐ Bacteria P/A ☐ Bacteria MPN	☐ Cyanide ☐ Sulfide ☐ Nitrate + Nitrite ☐ Ortho P	☒ Nitrate ☐ Nitrite ☐ Chloride ☒ Sulfate ☐ Bromide ☐ Fluoride	☐ Corrosivity ☐ Reactive CN ☐ Reactive S= ☐ Ignitability/FP	☐ TCLP Metals ☐ TCLP VOC ☐ TCLP SVOC ☐ TCLP Pesticide	Subcontract: ☐ Grain Size ☐ Herbicides ☐ Formaldehyde	Methane, Ethane, Ethene			Grab (G) or Composite (C)
33961-12	OB25-D0(5')		✓			2					8-11-15	1130	AM	2														1	2			1			2			G
-13	AP27-D0(5')					2					8-11-15	1045	AM	2																									G
-14	OB45-S					2					8-11-15	1105	AM	2																									G
-15	OB46-S(14')					8					8-11-15	1215	AM	2																									G
-16	OB47-S					2					8-11-15	1300	AM	2																									G

TAT REQUESTED
Priority (24 hr)* ☐
Expedited (48 hr)* ☐
Standard (10 Business Days) ☒
*Date Needed _____

See absoluteresourceassociates.com for sample acceptance policy and current accreditation lists.

SPECIAL INSTRUCTIONS 1) Site specific VOC list 2) QA/QC by MADEP CAM

REPORTING INSTRUCTIONS ☒ PDF (e-mail address) Catherine.Mainville@CBI.com
☐ HARD COPY REQUIRED ☐ FAX (FAX#) Please email GISKey formatted EDD & PDF.

RECEIVED ON ICE ☑ YES ☐ NO
TEMPERATURE 2 °C

CUSTODY RECORD
QSD-01 Revision 03/21/13

	Relinquished by Sampler:	Date	Time	Received by:	Date	Time
1		8-11-15	1500		8-11-15	1745
2	Relinquished by: Diane Matanes			Received by:	8-12	14:23
3	Relinquished by:	8-12-15	14:23	Received by Laboratory:	8/12/15	14:23

48

Data Usability Worksheet

Project Name : Varian Medical Systems, Inc

Job Number : 152728.05

Prepared By: Jennifer Gailey

Date : 9/21/2015

Matrix: Groundwater

Analyte Group :	**Analytical Method :**
Ethane	SW3810/8015B
Methane	SW3810/8015B
Ethene	SW3810/8015B
Volatile Organics	SW-846 5030C/8260C
Total Organics	SW 5310C
Metals (Fe, Mn)	6010C
Nitrate/Sulfate	300.0A

Completed MADEP CAM Certification Form included: Yes

Laboratory ID No. : 34069

Chain of Custody included in Data Package ? Yes

Is it Complete ? Yes

Sample Collection Date	Analysis	Allowable Holding Time for extraction	Allowable Holding Time for analysis	Analysis Date
8/21/15	SW3810/8015B		14 Days	9/2/2015
8/20/15	SW-846 5030C/8260C	14 Days	10 Days	8/24, 8/26/2015
8/21/15	SW5310C		28 Days	9/2/2015
8/21/15	(Nitrate) 300.0A		48 Hours	8/21/2015
8/21/15	6010C	180 Days	180 Days	8/28/2015
8/21/15	(Sulfate) 300.0A		28 Days	8/21/2015

Sample temperature within QC limits: Yes, 3 degrees C

Surrogate Recovery
Are all % recoveries within the allowable range ? Yes

If No, List sample ID where range was exceeded: NA

MS/MSD

Are all MS/MSD sample recoveries within the QC limits ? NA

If No, list sample ID, date and compound where limit was exceeded: NA

Laboratory Control Samples
Are all laboratory control sample recoveries within the QC limits ? Yes

If no, list sample ID where range was exceeded: N/A

Equipment Field Blank ID : N/A
Trip Blank ID : TB-9 (8/20/2015)

Method Blank: N/A

Were any compounds identified in the method blank, field blank or trip blank above detection limits ? No

If so, list Sample ID/Compound/Concentration/Units: NA

Notes:

Reviewed By: Catherine Joe Mainville 10/16/2015

Laboratory Report

Absolute Resource associates
124 Heritage Avenue Portsmouth NH 03801

Raymond Cadorette
CB&I Environmental & Infrastructure
150 Royall Street
Canton, MA 02021

PO Number: 953525
Job ID: 34069
Date Received: 8/21/15

Project: Varian Beverly 152780-05000000

Attached please find results for the analysis of the samples received on the date referenced above.

Unless otherwise noted in the attached report, the analyses performed met the requirements of Absolute Resource Associates' Quality Assurance Plan. The Standard Operating Procedures are based upon USEPA SW-846, USEPA Methods for Chemical Analysis of Water and Wastewater, Standard Methods for the Examination of Water and Wastewater and other recognized methodologies. The results contained in this report pertain only to the samples as indicated on the chain of custody.

Absolute Resource Associates maintains certification with the agencies listed below.

We appreciate the opportunity to provide laboratory services. If you have any questions regarding the enclosed report, please contact the laboratory and we will be glad to assist you.

Sincerely,
Absolute Resource Associates

(for)

Sue Sylvester
Principal, General Manager

Date of Approval: 9/10/2015
Total number of pages: 22

Absolute Resource Associates Certifications

New Hampshire	1732	Massachusetts	M-NH902
Maine	NH903		

Project ID: Varian Beverly 152780-05000000

Lab ID: 34069

Sample Association Table

Field ID	Matrix	Date-Time Sampled	Lab#	Analysis
TB-9	Water	8/20/2015 10:10	34069-001	VOCs 8260 site specific compounds in water by 8260
OB44-S(17.8)	Water	8/20/2015 13:30	34069-002	VOCs 8260 site specific compounds in water by 8260
OB35-DO(67.5)	Water	8/20/2015 14:00	34069-003	VOCs 8260 site specific compounds in water by 8260
OB35-DO(67.5)	Water	8/21/2015 5:45	34069-004	DHG: Methane,Ethane&Ethene by 3810/8015
OB44-S(17.8)	Water	8/21/2015 6:00	34069-005	Water Digestion for ICP Analysis Iron in water by 6010 Manganese in water by 6010 DHG: Methane,Ethane&Ethene by 3810/8015 Nitrate-N in water (NO3) by 300.0A Sulfate in water (SO4) by 300.0A Total Organic Carbon by 5310C

Project ID: Varian Beverly 152780-05000000
Job ID: 34069
Sample#: 34069-001
Sample ID: TB-9
Matrix: Water
Sampled: 8/20/15 10:10

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
chloromethane	< 2	2	ug/L	1	LMM		1502336	8/24/15	14:36	SW5030C8260C
vinyl chloride	< 2	2	ug/L	1	LMM		1502336	8/24/15	14:36	SW5030C8260C
bromomethane	< 2	2	ug/L	1	LMM		1502336	8/24/15	14:36	SW5030C8260C
chloroethane	< 2	2	ug/L	1	LMM		1502336	8/24/15	14:36	SW5030C8260C
trichlorofluoromethane	< 2	2	ug/L	1	LMM		1502336	8/24/15	14:36	SW5030C8260C
1,1-dichloroethene	< 1	1	ug/L	1	LMM		1502336	8/24/15	14:36	SW5030C8260C
methylene chloride	< 5	5	ug/L	1	LMM		1502336	8/24/15	14:36	SW5030C8260C
trans-1,2-dichloroethene	< 2	2	ug/L	1	LMM		1502336	8/24/15	14:36	SW5030C8260C
1,1-dichloroethane	< 2	2	ug/L	1	LMM		1502336	8/24/15	14:36	SW5030C8260C
cis-1,2-dichloroethene	< 2	2	ug/L	1	LMM		1502336	8/24/15	14:36	SW5030C8260C
chloroform	< 2	2	ug/L	1	LMM		1502336	8/24/15	14:36	SW5030C8260C
1,1,1-trichloroethane	< 2	2	ug/L	1	LMM		1502336	8/24/15	14:36	SW5030C8260C
carbon tetrachloride	< 2	2	ug/L	1	LMM		1502336	8/24/15	14:36	SW5030C8260C
1,2-dichloroethane	< 2	2	ug/L	1	LMM		1502336	8/24/15	14:36	SW5030C8260C
trichloroethene	< 2	2	ug/L	1	LMM		1502336	8/24/15	14:36	SW5030C8260C
1,2-dichloropropane	< 2	2	ug/L	1	LMM		1502336	8/24/15	14:36	SW5030C8260C
bromodichloromethane	< 2	2	ug/L	1	LMM		1502336	8/24/15	14:36	SW5030C8260C
cis-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1502336	8/24/15	14:36	SW5030C8260C
trans-1,3-dichloropropene	< 2	2	ug/L	1	LMM		1502336	8/24/15	14:36	SW5030C8260C
1,1,2-trichloroethane	< 2	2	ug/L	1	LMM		1502336	8/24/15	14:36	SW5030C8260C
tetrachloroethene	< 2	2	ug/L	1	LMM		1502336	8/24/15	14:36	SW5030C8260C
dibromochloromethane	< 2	2	ug/L	1	LMM		1502336	8/24/15	14:36	SW5030C8260C
chlorobenzene	< 2	2	ug/L	1	LMM		1502336	8/24/15	14:36	SW5030C8260C
bromoform	< 2	2	ug/L	1	LMM		1502336	8/24/15	14:36	SW5030C8260C
1,1,2,2-tetrachloroethane	< 2	2	ug/L	1	LMM		1502336	8/24/15	14:36	SW5030C8260C
acetone	< 10	10	ug/L	1	LMM		1502336	8/24/15	14:36	SW5030C8260C
Surrogate Recovery		**Limits**								
dibromofluoromethane SUR	**94**	78-114	%	1	LMM		1502336	8/24/15	14:36	SW5030C8260C
toluene-D8 SUR	**103**	88-110	%	1	LMM		1502336	8/24/15	14:36	SW5030C8260C
4-bromofluorobenzene SUR	**92**	86-115	%	1	LMM		1502336	8/24/15	14:36	SW5030C8260C

Project ID: Varian Beverly 152780-05000000
Job ID: 34069
Sample#: 34069-002
Sample ID: OB44-S(17.8)
Matrix: Water
Sampled: 8/20/15 13:30

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
chloromethane	< 20	20	ug/L	10	LMM		1502393	8/26/15	20:29	SW5030C8260C
vinyl chloride	**160**	20	ug/L	10	LMM		1502393	8/26/15	20:29	SW5030C8260C
bromomethane	< 20	20	ug/L	10	LMM		1502393	8/26/15	20:29	SW5030C8260C
chloroethane	< 20	20	ug/L	10	LMM		1502393	8/26/15	20:29	SW5030C8260C
trichlorofluoromethane	< 20	20	ug/L	10	LMM		1502393	8/26/15	20:29	SW5030C8260C
1,1-dichloroethene	**16**	10	ug/L	10	LMM		1502393	8/26/15	20:29	SW5030C8260C
methylene chloride	< 50	50	ug/L	10	LMM		1502393	8/26/15	20:29	SW5030C8260C
trans-1,2-dichloroethene	< 20	20	ug/L	10	LMM		1502393	8/26/15	20:29	SW5030C8260C
1,1-dichloroethane	< 20	20	ug/L	10	LMM		1502393	8/26/15	20:29	SW5030C8260C
cis-1,2-dichloroethene	**1100**	20	ug/L	10	LMM		1502393	8/26/15	20:29	SW5030C8260C
chloroform	< 20	20	ug/L	10	LMM		1502393	8/26/15	20:29	SW5030C8260C
1,1,1-trichloroethane	< 20	20	ug/L	10	LMM		1502393	8/26/15	20:29	SW5030C8260C
carbon tetrachloride	< 20	20	ug/L	10	LMM		1502393	8/26/15	20:29	SW5030C8260C
1,2-dichloroethane	< 20	20	ug/L	10	LMM		1502393	8/26/15	20:29	SW5030C8260C
trichloroethene	**5700**	1000	ug/L	500	LMM		1502393	8/24/15	21:52	SW5030C8260C
1,2-dichloropropane	< 20	20	ug/L	10	LMM		1502393	8/26/15	20:29	SW5030C8260C
bromodichloromethane	< 20	20	ug/L	10	LMM		1502393	8/26/15	20:29	SW5030C8260C
cis-1,3-dichloropropene	< 20	20	ug/L	10	LMM		1502393	8/26/15	20:29	SW5030C8260C
trans-1,3-dichloropropene	< 20	20	ug/L	10	LMM		1502393	8/26/15	20:29	SW5030C8260C
1,1,2-trichloroethane	< 20	20	ug/L	10	LMM		1502393	8/26/15	20:29	SW5030C8260C
tetrachloroethene	**29000**	1000	ug/L	500	LMM		1502393	8/24/15	21:52	SW5030C8260C
dibromochloromethane	< 20	20	ug/L	10	LMM		1502393	8/26/15	20:29	SW5030C8260C
chlorobenzene	< 20	20	ug/L	10	LMM		1502393	8/26/15	20:29	SW5030C8260C
bromoform	< 20	20	ug/L	10	LMM		1502393	8/26/15	20:29	SW5030C8260C
1,1,2,2-tetrachloroethane	< 20	20	ug/L	10	LMM		1502393	8/26/15	20:29	SW5030C8260C
acetone	< 100	100	ug/L	10	LMM		1502393	8/26/15	20:29	SW5030C8260C
Surrogate Recovery		**Limits**								
dibromofluoromethane SUR	**95**	78-114	%	10	LMM		1502393	8/26/15	20:29	SW5030C8260C
toluene-D8 SUR	**105**	88-110	%	10	LMM		1502393	8/26/15	20:29	SW5030C8260C
4-bromofluorobenzene SUR	**90**	86-115	%	10	LMM		1502393	8/26/15	20:29	SW5030C8260C

Project ID: Varian Beverly 152780-05000000
Job ID: 34069
Sample#: 34069-003
Sample ID: OB35-DO(67.5)
Matrix: Water
Sampled: 8/20/15 14:00

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
chloromethane	< 40	40	ug/L	20	LMM		1502393	8/26/15	20:57	SW5030C8260C
vinyl chloride	< 40	40	ug/L	20	LMM		1502393	8/26/15	20:57	SW5030C8260C
bromomethane	< 40	40	ug/L	20	LMM		1502393	8/26/15	20:57	SW5030C8260C
chloroethane	< 40	40	ug/L	20	LMM		1502393	8/26/15	20:57	SW5030C8260C
trichlorofluoromethane	< 40	40	ug/L	20	LMM		1502393	8/26/15	20:57	SW5030C8260C
1,1-dichloroethene	**49**	20	ug/L	20	LMM		1502393	8/26/15	20:57	SW5030C8260C
methylene chloride	< 100	100	ug/L	20	LMM		1502393	8/26/15	20:57	SW5030C8260C
trans-1,2-dichloroethene	**230**	40	ug/L	20	LMM		1502393	8/26/15	20:57	SW5030C8260C
1,1-dichloroethane	< 40	40	ug/L	20	LMM		1502393	8/26/15	20:57	SW5030C8260C
cis-1,2-dichloroethene	**40000**	1000	ug/L	500	LMM		1502393	8/24/15	22:20	SW5030C8260C
chloroform	< 40	40	ug/L	20	LMM		1502393	8/26/15	20:57	SW5030C8260C
1,1,1-trichloroethane	< 40	40	ug/L	20	LMM		1502393	8/26/15	20:57	SW5030C8260C
carbon tetrachloride	< 40	40	ug/L	20	LMM		1502393	8/26/15	20:57	SW5030C8260C
1,2-dichloroethane	< 40	40	ug/L	20	LMM		1502393	8/26/15	20:57	SW5030C8260C
trichloroethene	**140**	40	ug/L	20	LMM		1502393	8/26/15	20:57	SW5030C8260C
1,2-dichloropropane	< 40	40	ug/L	20	LMM		1502393	8/26/15	20:57	SW5030C8260C
bromodichloromethane	< 40	40	ug/L	20	LMM		1502393	8/26/15	20:57	SW5030C8260C
cis-1,3-dichloropropene	< 40	40	ug/L	20	LMM		1502393	8/26/15	20:57	SW5030C8260C
trans-1,3-dichloropropene	< 40	40	ug/L	20	LMM		1502393	8/26/15	20:57	SW5030C8260C
1,1,2-trichloroethane	< 40	40	ug/L	20	LMM		1502393	8/26/15	20:57	SW5030C8260C
tetrachloroethene	**180**	40	ug/L	20	LMM		1502393	8/26/15	20:57	SW5030C8260C
dibromochloromethane	< 40	40	ug/L	20	LMM		1502393	8/26/15	20:57	SW5030C8260C
chlorobenzene	< 40	40	ug/L	20	LMM		1502393	8/26/15	20:57	SW5030C8260C
bromoform	< 40	40	ug/L	20	LMM		1502393	8/26/15	20:57	SW5030C8260C
1,1,2,2-tetrachloroethane	< 40	40	ug/L	20	LMM		1502393	8/26/15	20:57	SW5030C8260C
acetone	< 200	200	ug/L	20	LMM		1502393	8/26/15	20:57	SW5030C8260C
Surrogate Recovery		**Limits**								
dibromofluoromethane SUR	**101**	78-114	%	20	LMM		1502393	8/26/15	20:57	SW5030C8260C
toluene-D8 SUR	**101**	88-110	%	20	LMM		1502393	8/26/15	20:57	SW5030C8260C
4-bromofluorobenzene SUR	**102**	86-115	%	20	LMM		1502393	8/26/15	20:57	SW5030C8260C

Project ID: Varian Beverly 152780-05000000
Job ID: 34069

Sample#: 34069-004
Sample ID: OB35-DO(67.5)
Matrix: Water
Sampled: 8/21/15 5:45

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
methane	**23**	10	ug/L	1	AJD		1502473	9/2/15	12:15	SW3810/8015B
ethane	< 20	20	ug/L	1	AJD		1502473	9/2/15	12:15	SW3810/8015B
ethene	< 20	20	ug/L	1	AJD		1502473	9/2/15	12:15	SW3810/8015B

Sample#: 34069-005
Sample ID: OB44-S(17.8)
Matrix: Water
Sampled: 8/21/15 6:00

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
methane	< 10	10	ug/L	1	AJD		1502473	9/2/15	12:14	SW3810/8015B
ethane	< 20	20	ug/L	1	AJD		1502473	9/2/15	12:14	SW3810/8015B
ethene	< 20	20	ug/L	1	AJD		1502473	9/2/15	12:14	SW3810/8015B

Sample#: 34069-005
Sample ID: OB44-S(17.8)
Matrix: Water
Sampled: 8/21/15 6:00

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
Iron	**0.09**	0.05	mg/L	1	AC	8/28/15	8133	8/28/15	16:12	SW3005A6010C
Manganese	**0.78**	0.03	mg/L	1	AC	8/28/15	8133	8/28/15	16:12	SW3005A6010C

Project ID: Varian Beverly 152780-05000000
Job ID: 34069

Sample#: 34069-005
Sample ID: OB44-S(17.8)
Matrix: Water
Sampled: 8/21/15 6:00

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Nitrate-N	< 0.1	0.1	mg/L	1	AJC		1502340	8/21/15	19:01	E300.0A
Sulfate	**76**	0.5	mg/L	1	AJC		1502340	8/21/15	19:01	E300.0A

Sample#: 34069-005
Sample ID: OB44-S(17.8)
Matrix: Water
Sampled: 8/21/15 6:00

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Total Organic Carbon (TOC)	**16**	1.0	mg/L	1	AJD		1502478	9/2/15	12:16	SM5310C

Quality Control Report

124 Heritage Avenue Unit 16
Portsmouth, NH 03801
www.absoluteresourceassociates.com

MassDEP Analytical Protocol Certification Form

Laboratory Name: **Absolute Resource Associates** Project #: 152780-05000000

Project Location: Massachusetts RTN:

This Form provides certifications for the following data set: **34069**

Matrices: Groundwater/Surface Water ☑ Soil/Sediment ☐ Drinking Water ☐ Air ☐ Other:

CAM Protocol (check all that apply below):

8260 VOC CAM II A ☑	7470/7471 Hg CAM III B ☐	MassDEP VPH CAM IV A ☐	8081 Pesticides CAM V B ☐	7196 Hex Cr CAM VI B ☐	MassDEP APH CAM IX A ☐
8270 SVOC CAM II B ☐	7010 Metals CAM III C ☐	MassDEP EPH CAM IV B ☐	8151 Herbicides CAM V C ☐	8330 Explosives CAM VIII A ☐	TO-15 VOC CAM IX B ☐
6010 Metals CAM III A ☐	6020 Metals CAM III D ☐	8082 PCB CAM V A ☐	9014 Total Cyanide/PAC CAM VIA ☐	6860 Perchlorate CAM VIII B ☐	

Affirmative Responses to Questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	Yes☑ No☐
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	Yes☑ No☐
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	Yes☑ No☐
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	Yes☑ No☐
E	a. VPH, EPH, and APH Methods only: Was each method conducted without significant modifications(s)? (Refer to the individual methods for a list of significant modifications). b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	Yes☐ No☐ Yes☐ No☐
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	Yes☑ No☐

Responses to Questions G, H and I below are required for "Presumptive Certainty" status

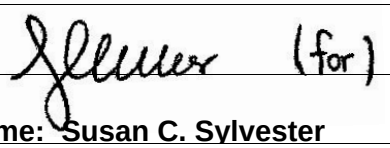
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	Yes☐ No*☑

Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.

H	Were all QC performance standards specified in the CAM protocol(s) achieved?	Yes☑ No*☐
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	Yes☐ No*☑

* All negative responses must be addressed in an attached laboratory narrative.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Signature:  **Position: Lab Director**

Printed Name: Susan C. Sylvester **Date: 9/10/15**

Sample Integrity Table

Parameter	Method	Matrix	Minimum Volume	Recommended Container(s)	Required Preservation	Holding Time
Volatile Organics	EPA 8260	Aqueous	40mL	2 x 40mL VOA Vials with Teflon lined septa	Cool to ≤6°C 1:1 HCl to pH <2	14 Days
Volatile Organics	EPA 8260	Solid	40mL	1 x 40mL VOA Vial with 10mLs Methanol and 1 unpreserved container for percent moisture	Cool to ≤6°C Methanol	14 Days
Semivolatile Organics	EPA 8270	Aqueous	1L	1L Amber Glass Bottle w/Teflon liner	Cool to ≤6°C	7 Days
Semivolatile Organics	EPA 8270	Solid	20g	4oz Amber Glass Jar w/Teflon liner	Cool to ≤6°C	14 Days
Organochlorine Pesticides	EPA 8081	Aqueous	1L	1L Amber Glass Bottle w/Teflon liner	Cool to ≤6°C	7 Days
Organochlorine Pesticides	EPA 8081	Solid	20g	4oz Glass Jar w/Teflon liner	Cool to ≤6°C	14 Days
PCBs	EPA 8082	Aqueous	1L	1L Amber Glass Bottle w/Teflon liner	Cool to ≤6°C	365 Days
PCBs	EPA 8082	Solid	20g	4oz Glass Jar w/Teflon liner	Cool to ≤6°C	365 Days
Herbicides (subcontracted)	EPA 8151	Aqueous	1L	1L Amber Glass Bottle w/Teflon liner	Cool to ≤6°C	7 Days
Herbicides (subcontracted)	EPA 8151	Solid	30g	4oz Glass Jar w/Teflon liner	Cool to ≤6°C	14 Days
MA DEP VPH	MADEP VPH	Aqueous	40mL	2 x 40mL VOA Vials with Teflon lined septa	Cool to ≤6°C 1:1 HCl to pH <2	14 Days
MA DEP VPH	MADEP VPH	Solid	40mL	1 x 40mL VOA Vial with 10mLs Methanol and 1 unpreserved container for percent moisture	Cool to ≤6°C Methanol	28 Days
MA DEP EPH	MADEP EPH	Aqueous	1L	1L Amber Glass Bottle w/Teflon liner	Cool to ≤6°C 1:1 HCl to pH <2	14 Days
MA DEP EPH	MADEP EPH	Solid	30g	4oz Amber Glass Jar w/Teflon liner	Cool to ≤6°C	14 Days
Total Metals	EPA 6010	Aqueous	100mL	250mL Polyethylene Bottle	1:1 HNO_3 to pH <2	180 Days
Dissolved Metals	EPA 6010	Aqueous	100mL	250mL Polyethylene Bottle	Filter First 1:1 HNO_3 to pH <2	180 Days
Total Metals	EPA 6010	Solid	15g	4oz Glass Jar w/Teflon liner	Cool to ≤6°C	180 Days
Total Mercury (may be combined with Total Metals)	EPA 7470	Aqueous	100mL	125mL Polyethylene Bottle	1:1 HNO_3 to pH <2	28 Days
Total Mercury (may be combined with Total Metals)	EPA 7471	Solid	15g	4oz Glass Jar w/Teflon liner	Cool to ≤6°C	28 Days
Chromium, Hexavalent	EPA 7196	Aqueous	100mL	125mL Polyethylene Bottle	Cool to ≤6°C (NH4)2SO4 buffer	28 Days
Chromium, Hexavalent (subcontract)	EPA 7196	Solid	15g	4oz Glass Jar w/Teflon liner	Cool to ≤6°C	30 Days
Cyanide, Total	EPA 9014	Aqueous	125mL	125mL Polyethylene Bottle	Cool to ≤6°C 1:1 NaOH to pH >8	14 Days
Cyanide, Total	EPA 9014	Solid	15g	4oz Glass Jar w/Teflon liner	Cool to ≤6°C	14 Days

Absolute Resource Associates
124 Heritage Avenue Unit 16
Portsmouth, NH 03801
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Absolute Resource associates

Case Narrative
Lab # 34069

Sample Receiving and Chain of Custody Discrepancies

Samples were received in acceptable condition, at 3 degrees C, on ice, and in accordance with sample handling, preservation and integrity guidelines.

Calibration

See the included table for a list of compounds quantitated by quadratic equation.

Method Blank

No exceptions noted.

Surrogate Recoveries

No exceptions noted.

Laboratory Control Sample Results

No exceptions noted.

Matrix Spike/Matrix Spike Duplicate/Duplicate Results

Not requested for this project.

Other

No other exceptions noted.

MassDEP Analytical Protocol Certification Form Questions A through I

No explanation is needed for Questions A through I answered in the affirmative.
Question G: The CAM protocol reporting limits were not achieved for this project due to dilutions necessary for sample analysis. Box G is "No."
Question I: Metals: The MCP required metals were not requested by the customer. Box I is "No."

Quantitation by Quadratic Equation
Lab # 34124

Quantitation of the following compounds was based on a quadratic equation

Bromomethane
Carbon tetrachloride
Bromodichloromethane
2-Hexanone
cis-1,3-dichloropropene
trans-1,3-Dichloropropene
Dibromochloromethane
1,1,1,2-Tetrachloroethane
Bromoform
bromobenzene
1,2-dibromo-3-chloropropane (DBCP)
hexachlorobutadiene

- QC Report -

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW3810/8015B	BLK1502473	methane		<	10	ug/L						
		ethane		<	20	ug/L						
		ethene		<	20	ug/L						
SW3810/8015B	LCS1502473	methane			86	ug/L	92	93	75	125		
		ethane			190	ug/L	184	103	75	125		
SW3810/8015B	LCSD1502473	methane			89	ug/L	92	96	75	125	3	20
		ethane			200	ug/L	184	106	75	125	3	20

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW5030C8260C	BLK1502336	chloromethane		<	2	ug/L						
		vinyl chloride		<	2	ug/L						
		bromomethane		<	2	ug/L						
		chloroethane		<	2	ug/L						
		trichlorofluoromethane		<	2	ug/L						
		acetone		<	50	ug/L						
		1,1-dichloroethene		<	1	ug/L						
		methylene chloride		<	5	ug/L						
		trans-1,2-dichloroethene		<	2	ug/L						
		1,1-dichloroethane		<	2	ug/L						
		cis-1,2-dichloroethene		<	2	ug/L						
		chloroform		<	2	ug/L						
		1,1,1-trichloroethane		<	2	ug/L						
		carbon tetrachloride		<	2	ug/L						
		1,2-dichloroethane		<	2	ug/L						
		trichloroethene		<	2	ug/L						
		1,2-dichloropropane		<	2	ug/L						
		bromodichloromethane		<	0.6	ug/L						
		cis-1,3-dichloropropene		<	2	ug/L						
		trans-1,3-dichloropropene		<	2	ug/L						
		1,1,2-trichloroethane		<	2	ug/L						
		tetrachloroethene		<	2	ug/L						
		dibromochloromethane		<	2	ug/L						
		chlorobenzene		<	2	ug/L						
		bromoform		<	2	ug/L						
		1,1,2,2-tetrachloroethane		<	2	ug/L						
		dibromofluoromethane SUR			92	%			78	114		
		toluene-D8 SUR			100	%			88	110		

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW5030C8260C	LCS1502336	chloromethane			18	ug/L	20	88	70	130		
		vinyl chloride			19	ug/L	20	93	70	130		
		bromomethane			15	ug/L	20	76	70	130		
		chloroethane			21	ug/L	20	106	70	130		
		trichlorofluoromethane			21	ug/L	20	107	70	130		
		acetone		<	50	ug/L	20	111				
		1,1-dichloroethene			20	ug/L	20	98	70	130		
		methylene chloride			20	ug/L	20	102	70	130		
		trans-1,2-dichloroethene			20	ug/L	20	102	70	130		
		1,1-dichloroethane			20	ug/L	20	98	70	130		
		cis-1,2-dichloroethene			20	ug/L	20	100	70	130		
		chloroform			20	ug/L	20	102	70	130		
		1,1,1-trichloroethane			21	ug/L	20	104	70	130		
		carbon tetrachloride			19	ug/L	20	94	70	130		
		1,2-dichloroethane			21	ug/L	20	107	70	130		
		trichloroethene			23	ug/L	20	114	70	130		
		1,2-dichloropropane			20	ug/L	20	102	70	130		
		bromodichloromethane			20	ug/L	20	99	70	130		
		cis-1,3-dichloropropene			20	ug/L	20	99	70	130		
		trans-1,3-dichloropropene			20	ug/L	20	98	70	130		
		1,1,2-trichloroethane			20	ug/L	20	100	70	130		
		tetrachloroethene			21	ug/L	20	103	70	130		
		dibromochloromethane			18	ug/L	20	91	70	130		
		chlorobenzene			19	ug/L	20	93	70	130		
		bromoform			18	ug/L	20	88	70	130		
		1,1,2,2-tetrachloroethane			20	ug/L	20	98	70	130		
		dibromofluoromethane SUR			97	%			78	114		
		toluene-D8 SUR			103	%			88	110		
		4-bromofluorobenzene SUR			99	%			86	115		

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW5030C8260C	LCSD1502336	chloromethane			18	ug/L	20	88	70	130	0	20
		vinyl chloride			18	ug/L	20	90	70	130	4	20
		bromomethane			17	ug/L	20	85	70	130	11	20
		chloroethane			21	ug/L	20	103	70	130	2	20
		trichlorofluoromethane			21	ug/L	20	107	70	130	0	20
		acetone		<	50	ug/L	20	110			1	20
		1,1-dichloroethene			19	ug/L	20	95	70	130	4	20
		methylene chloride			20	ug/L	20	102	70	130	0	20
		trans-1,2-dichloroethene			20	ug/L	20	101	70	130	1	20
		1,1-dichloroethane			19	ug/L	20	95	70	130	2	20
		cis-1,2-dichloroethene			20	ug/L	20	100	70	130	0	20
		chloroform			20	ug/L	20	100	70	130	1	20
		1,1,1-trichloroethane			21	ug/L	20	104	70	130	0	20
		carbon tetrachloride			19	ug/L	20	94	70	130	1	20
		1,2-dichloroethane			21	ug/L	20	106	70	130	1	20
		trichloroethene			22	ug/L	20	110	70	130	4	20
		1,2-dichloropropane			20	ug/L	20	100	70	130	2	20
		bromodichloromethane			21	ug/L	20	103	70	130	4	20
		cis-1,3-dichloropropene			19	ug/L	20	97	70	130	1	20
		trans-1,3-dichloropropene			20	ug/L	20	98	70	130	0	20
		1,1,2-trichloroethane			20	ug/L	20	98	70	130	2	20
		tetrachloroethene			20	ug/L	20	102	70	130	0	20
		dibromochloromethane			19	ug/L	20	94	70	130	3	20
		chlorobenzene			19	ug/L	20	94	70	130	1	20
		bromoform			18	ug/L	20	92	70	130	5	20
		1,1,2,2-tetrachloroethane			19	ug/L	20	97	70	130	1	20
		dibromofluoromethane SUR			103	%			78	114		
		toluene-D8 SUR			104	%			88	110		
		4-bromofluorobenzene SUR			105	%			86	115		

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW5030C8260C	BLK1502393	chloromethane		<	2	ug/L						
		vinyl chloride		<	2	ug/L						
		bromomethane		<	2	ug/L						
		chloroethane		<	2	ug/L						
		trichlorofluoromethane		<	2	ug/L						
		acetone		<	50	ug/L						
		1,1-dichloroethene		<	1	ug/L						
		methylene chloride		<	5	ug/L						
		trans-1,2-dichloroethene		<	2	ug/L						
		1,1-dichloroethane		<	2	ug/L						
		cis-1,2-dichloroethene		<	2	ug/L						
		chloroform		<	2	ug/L						
		1,1,1-trichloroethane		<	2	ug/L						
		carbon tetrachloride		<	2	ug/L						
		1,2-dichloroethane		<	2	ug/L						
		trichloroethene		<	2	ug/L						
		1,2-dichloropropane		<	2	ug/L						
		bromodichloromethane		<	0.6	ug/L						
		cis-1,3-dichloropropene		<	2	ug/L						
		trans-1,3-dichloropropene		<	2	ug/L						
		1,1,2-trichloroethane		<	2	ug/L						
		tetrachloroethene		<	2	ug/L						
		dibromochloromethane		<	2	ug/L						
		chlorobenzene		<	2	ug/L						
		bromoform		<	2	ug/L						
		1,1,2,2-tetrachloroethane		<	2	ug/L						
		dibromofluoromethane SUR			93	%			78	114		
		toluene-D8 SUR			101	%			88	110		

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW5030C8260C	LCS1502393	chloromethane			18	ug/L	20	92	70	130		
		vinyl chloride			19	ug/L	20	97	70	130		
		bromomethane			17	ug/L	20	85	70	130		
		chloroethane			22	ug/L	20	109	70	130		
		trichlorofluoromethane			22	ug/L	20	110	70	130		
		acetone		<	50	ug/L	20	109				
		1,1-dichloroethene			20	ug/L	20	100	70	130		
		methylene chloride			22	ug/L	20	112	70	130		
		trans-1,2-dichloroethene			22	ug/L	20	109	70	130		
		1,1-dichloroethane			20	ug/L	20	100	70	130		
		cis-1,2-dichloroethene			21	ug/L	20	104	70	130		
		chloroform			21	ug/L	20	104	70	130		
		1,1,1-trichloroethane			22	ug/L	20	111	70	130		
		carbon tetrachloride			21	ug/L	20	104	70	130		
		1,2-dichloroethane			22	ug/L	20	111	70	130		
		trichloroethene			22	ug/L	20	112	70	130		
		1,2-dichloropropane			21	ug/L	20	105	70	130		
		bromodichloromethane			22	ug/L	20	108	70	130		
		cis-1,3-dichloropropene			20	ug/L	20	102	70	130		
		trans-1,3-dichloropropene			21	ug/L	20	103	70	130		
		1,1,2-trichloroethane			20	ug/L	20	102	70	130		
		tetrachloroethene			22	ug/L	20	109	70	130		
		dibromochloromethane			20	ug/L	20	98	70	130		
		chlorobenzene			19	ug/L	20	93	70	130		
		bromoform			20	ug/L	20	98	70	130		
		1,1,2,2-tetrachloroethane			22	ug/L	20	111	70	130		
		dibromofluoromethane SUR			100	%			78	114		
		toluene-D8 SUR			109	%			88	110		
		4-bromofluorobenzene SUR			106	%			86	115		

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW5030C8260C	LCSD1502393	chloromethane			19	ug/L	20	95	70	130	3	20
		vinyl chloride			19	ug/L	20	95	70	130	2	20
		bromomethane			18	ug/L	20	88	70	130	3	20
		chloroethane			22	ug/L	20	109	70	130	0	20
		trichlorofluoromethane			23	ug/L	20	113	70	130	3	20
		acetone		<	50	ug/L	20	126			14	20
		1,1-dichloroethene			20	ug/L	20	99	70	130	1	20
		methylene chloride			21	ug/L	20	107	70	130	5	20
		trans-1,2-dichloroethene			21	ug/L	20	106	70	130	3	20
		1,1-dichloroethane			20	ug/L	20	100	70	130	0	20
		cis-1,2-dichloroethene			21	ug/L	20	105	70	130	1	20
		chloroform			21	ug/L	20	106	70	130	2	20
		1,1,1-trichloroethane			22	ug/L	20	111	70	130	0	20
		carbon tetrachloride			21	ug/L	20	103	70	130	0	20
		1,2-dichloroethane			22	ug/L	20	110	70	130	1	20
		trichloroethene			22	ug/L	20	111	70	130	1	20
		1,2-dichloropropane			21	ug/L	20	104	70	130	1	20
		bromodichloromethane			22	ug/L	20	112	70	130	4	20
		cis-1,3-dichloropropene			21	ug/L	20	104	70	130	2	20
		trans-1,3-dichloropropene			21	ug/L	20	106	70	130	3	20
		1,1,2-trichloroethane			20	ug/L	20	102	70	130	1	20
		tetrachloroethene			21	ug/L	20	107	70	130	2	20
		dibromochloromethane			20	ug/L	20	102	70	130	4	20
		chlorobenzene			19	ug/L	20	93	70	130	0	20
		bromoform			20	ug/L	20	98	70	130	0	20
		1,1,2,2-tetrachloroethane			22	ug/L	20	108	70	130	2	20
		dibromofluoromethane SUR			99	%			78	114		
		toluene-D8 SUR			105	%			88	110		
		4-bromofluorobenzene SUR			101	%			86	115		

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW3005A6010C	BLK8133	Iron		<	0.05	mg/L						
		Manganese		<	0.03	mg/L						
SW3005A6010C	LCS8133	Iron			0.53	mg/L	0.5	106	80	120		
		Manganese			0.52	mg/L	0.5	104	80	120		
SW3005A6010C	LCSD8133	Iron			0.52	mg/L	0.5	105	80	120	2	20
		Manganese			0.52	mg/L	0.5	104	80	120	0	20

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
E300.0A	BLK1502340	Nitrate-N		<	0.1	mg/L						
		Sulfate		<	0.5	mg/L						
E300.0A	LCS1502340	Nitrate-N			1.1	mg/L	1	109	90	110		
		Sulfate			11	mg/L	10	110	90	110		
SM5310C	BLK1502478	Total Organic Carbon (TOC)		<	1	mg/L						
SM5310C	LCS1502478	Total Organic Carbon (TOC)			10	mg/L	10	102	80	120		
SM5310C	LCSD1502478	Total Organic Carbon (TOC)			10	mg/L	10	100	80	120	2	20

Absolute Resource associates
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CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

34069

Company Name: CB&I Environmental & Infrastructure
Company Address: 150 Royall Street, Canton, MA 02021
Report To: Raymodn Cadorette
Phone #: 617-589-6102
Invoice To: Email: raymond.cadorette@cbi.com

Project Name: Varian Beverly
Project #: 152780
152728-05000000
Project Location: NH (MA) ME VT Other
Protocol: RCRA SDWA NPDES MCP NHDES OTHER
Reporting Limits: QAPP GW-1 S-1 EPA DW Other
Quote # ☐ NH Reimbursement Pricing
PO # 953525

ANALYSIS REQUEST

Lab Sample ID (Lab Use Only)	Field ID	# CONTAINERS	Matrix: WATER	SOLID	OTHER	Preservation Method: HCl	HNO_3	H_2SO_4	NaOH	MeOH	Sampling: DATE	TIME	SAMPLER	VOC 8260	Grab (G) or Composite (C)
340690	TB-9	2	2			2					8/20/15	1010	DL	2	G
02	OB44-SG(7.8)	2	2			2					8/20/15	1330	DL	2	G
03	OB35-DO(67.5)	2	2			2					8/20/15	1400	DL	2	G
04	OB35-DO(67.6)	2	2			[illegible]					8/21/15	0545	DL	[illegible]	G
05	OB44-S (17.8')	6	6			4	1		1		8/21/15	0600	DL		G

| Lab Sample ID (Lab Use Only) | VOC 8260 NHDES | VOC 8260 MADEP | VOC 624 | VOC BTEX | MtBE only | VOC 8021VT | VPH MADEP | MEGRO | GRO 8015 | 1,4-Dioxane | VOC 524.2 | VOC 524.2 NH List | Gases-List: | TPH | DRO 8015 | MEDRO | EPH MADEP | TPH Fingerprint | 8270PAH | 8270ABN | 625 | EDB 504.1 | 8082 PCB | 8081 Pesticides | 608 Pest/PCB | O&G 1664 | Mineral O&G SM5520F | pH | BOD | Conductivity | Turbidity | TSS | TDS | TS | TVS | Alkalinity | RCRA Metals | Priority Pollutant Metals | TAL Metals | Hardness | Total Metals-list: | Dissolved Metals-list: | Ammonia | COD | TKN | TN | TOC | TDN | T-Phosphorus | Phenols | Bacteria P/A | Bacteria MPN | Cyanide | Sulfide | Nitrate + Nitrite | Ortho P | Nitrate | Nitrite | Chloride | Sulfate | Bromide | Fluoride | Corrosivity | Reactive CN | Reactive S- | Ignitibility/FP | TCLP Metals | TCLP VOC | TCLP SVOC | TCLP Pesticide | Subcontract: | Grain Size | Herbicides | Formaldehyde | Sulfide/Sulfite | Grab (G) or Composite (C) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---

Data Usability Worksheet

Project Name : Varian Medical Systems, Inc
Job Number : 155349

Prepared By: Jennifer Gailey
Date : 10/27/2015

Matrix: Air

Analyte Group : Volatile Organics
Analytical Method : TO-15

Completed MADEP CAM Certification Form included: Yes
Laboratory ID No. : MC40894

Chain of Custody included in Data Package ? Yes
Is it Complete ? Yes

Sample Collection Date	Analysis	Allowable Holding Time for extraction	Allowable Holding Time for analysis	Analysis Date
8/19/15	To-15		30 Days	8/29/2015 and 9/05/2015

Sample temperature within QC limits: NA-Air

Surrogate Recovery
Are all % recoveries within the allowable range ? Yes

If No, List sample ID where range was exceeded: NA

MS/MSD

Are all MS/MSD sample recoveries within the QC limits ? NA

If No, list sample ID, date and compound where limit was exceeded: NA

Laboratory Control Samples
Are all laboratory control sample recoveries within the QC limits ? Yes

If no, list sample ID where range was exceeded: N/A

Equipment Field Blank ID : NA
Trip Blank ID : NA

Method Blank: TO-15 8/11, 8/28, 9/5/2015

Were any compounds identified in the method blank, field blank or trip blank above detection limits ? No

If so, list Sample ID/Compound/Concentration/Units: NA

Notes:

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Only selected compounds requested.

Reviewed By: Pernilla Haley 10/28/15

New England ACCUTEST LABORATORIES

09/09/15

Technical Report for

CB&I

Varian Beverly, 150 Sohier Road, Beverly, MA

152780-01

Accutest Job Number: MC40894

Sampling Date: 08/19/15

Report to:

CB&I
150 Royall Street
Canton, MA 02021
Raymond.Cadorette@cbi.com

ATTN: Raymond Cadorette

Total number of pages in report: **103**

NELAP ACCREDITED TNI LABORATORY

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Reza Tand
Lab Director

Client Service contact: Frank DAgostino 508-481-6200

Certifications: MA (M-MA136,SW846 NELAC) CT (PH-0109) NH (250210) RI (00071) ME (MA00136) FL (E87579) NY (11791) NJ (MA926) PA (6801121) ND (R-188) CO MN (11546AA) NC (653) IL (002337) WI (399080220) DoD ELAP (L-A-B L2235)

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Sample Summary

CB&I

Job No: MC40894

Varian Beverly, 150 Sohier Road, Beverly, MA
Project No: 152780-01

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
MC40894-1	08/19/15	17:55	AF	08/20/15	AIR	Air	BLDG 3-3
MC40894-2	08/19/15	18:00	AF	08/20/15	AIR	Air	BLDG 3-4
MC40894-3	08/19/15	18:05	AF	08/20/15	AIR	Air	BLDG 3-2
MC40894-4	08/19/15	18:10	AF	08/20/15	AIR	Air	BLDG 2-6

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	CB&I	**Job No**	MC40894
Site:	Varian Beverly, 150 Sohier Road, Beverly, MA	**Report Date**	9/9/2015 9:12:07 AM

4 Sample(s) were collected on 08/19/2015 and were received at Accutest on 08/20/2015, at AMB and intact. These Samples received an Accutest job number of MC40894. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Volatiles by GCMS By Method TO-15

Matrix: AIR **Batch ID:** MSQ1362

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Only selected compounds requested.

Matrix: AIR **Batch ID:** MSQ1364

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

The Accutest Laboratories of New England certifies that all analysis were performed within method specification. It is further recommended that this report to be used in its entirety.The Accutest Laboratories of NE, Laboratory Director or assignee as verified by the signature on the cover page has authorized the release of this report(MC40894).

Summary of Hits

Job Number: MC40894
Account: CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA
Collected: 08/19/15

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC40894-1	**BLDG 3-3**					
Acetone		563	25		ppbv	TO-15
Chloromethane		0.57	0.50		ppbv	TO-15
trans-1,2-Dichloroethylene		0.56	0.20		ppbv	TO-15
1,1,1-Trichloroethane		0.40	0.20		ppbv	TO-15
Tetrachloroethylene		9.0	0.20		ppbv	TO-15
Trichloroethylene		1.1	0.20		ppbv	TO-15
Acetone		1340	59		ug/m3	TO-15
Chloromethane		1.2	1.0		ug/m3	TO-15
trans-1,2-Dichloroethylene		2.2	0.79		ug/m3	TO-15
1,1,1-Trichloroethane		2.2	1.1		ug/m3	TO-15
Tetrachloroethylene		61	1.4		ug/m3	TO-15
Trichloroethylene		5.9	1.1		ug/m3	TO-15
MC40894-2	**BLDG 3-4**					
Acetone		981	25		ppbv	TO-15
Chloromethane		0.54	0.50		ppbv	TO-15
trans-1,2-Dichloroethylene		0.52	0.20		ppbv	TO-15
Tetrachloroethylene		0.56	0.20		ppbv	TO-15
Trichloroethylene		0.60	0.20		ppbv	TO-15
Acetone		2330	59		ug/m3	TO-15
Chloromethane		1.1	1.0		ug/m3	TO-15
trans-1,2-Dichloroethylene		2.1	0.79		ug/m3	TO-15
Tetrachloroethylene		3.8	1.4		ug/m3	TO-15
Trichloroethylene		3.2	1.1		ug/m3	TO-15
MC40894-3	**BLDG 3-2**					
Acetone		1420	50		ppbv	TO-15
Chloromethane		0.62	0.50		ppbv	TO-15
trans-1,2-Dichloroethylene		0.58	0.20		ppbv	TO-15
1,1,1-Trichloroethane		0.38	0.20		ppbv	TO-15
Tetrachloroethylene		0.48	0.20		ppbv	TO-15
Trichloroethylene		0.61	0.20		ppbv	TO-15
Acetone		3370	120		ug/m3	TO-15
Chloromethane		1.3	1.0		ug/m3	TO-15
trans-1,2-Dichloroethylene		2.3	0.79		ug/m3	TO-15
1,1,1-Trichloroethane		2.1	1.1		ug/m3	TO-15
Tetrachloroethylene		3.3	1.4		ug/m3	TO-15
Trichloroethylene		3.3	1.1		ug/m3	TO-15

Summary of Hits

Job Number: MC40894
Account: CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA
Collected: 08/19/15

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC40894-4	**BLDG 2-6**					
Acetone		86.0	5.0		ppbv	TO-15
trans-1,2-Dichloroethylene		0.42	0.20		ppbv	TO-15
Tetrachloroethylene		0.58	0.20		ppbv	TO-15
Trichloroethylene		0.87	0.20		ppbv	TO-15
Acetone		204	12		ug/m3	TO-15
trans-1,2-Dichloroethylene		1.7	0.79		ug/m3	TO-15
Tetrachloroethylene		3.9	1.4		ug/m3	TO-15
Trichloroethylene		4.7	1.1		ug/m3	TO-15

New England ACCUTEST LABORATORIES

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID: BLDG 3-3
Lab Sample ID: MC40894-1
Matrix: AIR - Air Summa ID: M135,M413
Method: TO-15
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Date Sampled: 08/19/15
Date Received: 08/20/15
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q31340.D	1	08/29/15	AA	n/a	n/a	MSQ1362
Run #2	Q31424.D	50	09/05/15	PN	n/a	n/a	MSQ1364

	Initial Volume
Run #1	400 ml
Run #2	400 ml

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	58.08	Acetone	563 [a]	25	ppbv		1340 [a]	59	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	0.50	ppbv		ND	3.3	ug/m3
75-25-2	252.8	Bromoform	ND	0.50	ppbv		ND	5.2	ug/m3
74-83-9	94.94	Bromomethane	ND	0.50	ppbv		ND	1.9	ug/m3
108-90-7	112.6	Chlorobenzene	ND	0.50	ppbv		ND	2.3	ug/m3
75-00-3	64.52	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	119.4	Chloroform	ND	0.50	ppbv		ND	2.4	ug/m3
74-87-3	50.49	Chloromethane	0.57	0.50	ppbv		1.2	1.0	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	0.20	ppbv		ND	1.3	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	0.50	ppbv		ND	2.3	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	0.50	ppbv		ND	4.3	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	0.56	0.20	ppbv		2.2	0.79	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	0.50	ppbv		ND	2.3	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	0.50	ppbv		ND	2.3	ug/m3
75-09-2	84.94	Methylene chloride	ND	0.50	ppbv		ND	1.7	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	0.40	0.20	ppbv		2.2	1.1	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	0.20	ppbv		ND	1.4	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
127-18-4	165.8	Tetrachloroethylene	9.0	0.20	ppbv		61	1.4	ug/m3
79-01-6	131.4	Trichloroethylene	1.1	0.20	ppbv		5.9	1.1	ug/m3
75-69-4	137.4	Trichlorofluoromethane	ND	0.50	ppbv		ND	2.8	ug/m3
75-01-4	62.5	Vinyl chloride	ND	0.20	ppbv		ND	0.51	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	103%	99%	50-129%

(a) Result is from Run# 2

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: BLDG 3-4
Lab Sample ID: MC40894-2
Matrix: AIR - Air Summa ID: M132,M397
Method: TO-15
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Date Sampled: 08/19/15
Date Received: 08/20/15
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q31341.D	1	08/29/15	AA	n/a	n/a	MSQ1362
Run #2	Q31422.D	50	09/05/15	PN	n/a	n/a	MSQ1364

	Initial Volume
Run #1	400 ml
Run #2	400 ml

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	58.08	Acetone	981 [a]	25	ppbv		2330 [a]	59	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	0.50	ppbv		ND	3.3	ug/m3
75-25-2	252.8	Bromoform	ND	0.50	ppbv		ND	5.2	ug/m3
74-83-9	94.94	Bromomethane	ND	0.50	ppbv		ND	1.9	ug/m3
108-90-7	112.6	Chlorobenzene	ND	0.50	ppbv		ND	2.3	ug/m3
75-00-3	64.52	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	119.4	Chloroform	ND	0.50	ppbv		ND	2.4	ug/m3
74-87-3	50.49	Chloromethane	0.54	0.50	ppbv		1.1	1.0	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	0.20	ppbv		ND	1.3	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	0.50	ppbv		ND	2.3	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	0.50	ppbv		ND	4.3	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	0.52	0.20	ppbv		2.1	0.79	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	0.50	ppbv		ND	2.3	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	0.50	ppbv		ND	2.3	ug/m3
75-09-2	84.94	Methylene chloride	ND	0.50	ppbv		ND	1.7	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	0.20	ppbv		ND	1.4	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
127-18-4	165.8	Tetrachloroethylene	0.56	0.20	ppbv		3.8	1.4	ug/m3
79-01-6	131.4	Trichloroethylene	0.60	0.20	ppbv		3.2	1.1	ug/m3
75-69-4	137.4	Trichlorofluoromethane	ND	0.50	ppbv		ND	2.8	ug/m3
75-01-4	62.5	Vinyl chloride	ND	0.20	ppbv		ND	0.51	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	105%	95%	50-129%

(a) Result is from Run# 2

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: BLDG 3-2
Lab Sample ID: MC40894-3
Matrix: AIR - Air Summa ID: M002,M226
Method: TO-15
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Date Sampled: 08/19/15
Date Received: 08/20/15
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q31342.D	1	08/29/15	AA	n/a	n/a	MSQ1362
Run #2	Q31423.D	100	09/05/15	PN	n/a	n/a	MSQ1364

	Initial Volume
Run #1	400 ml
Run #2	400 ml

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	58.08	Acetone	1420 [a]	50	ppbv		3370 [a]	120	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	0.50	ppbv		ND	3.3	ug/m3
75-25-2	252.8	Bromoform	ND	0.50	ppbv		ND	5.2	ug/m3
74-83-9	94.94	Bromomethane	ND	0.50	ppbv		ND	1.9	ug/m3
108-90-7	112.6	Chlorobenzene	ND	0.50	ppbv		ND	2.3	ug/m3
75-00-3	64.52	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	119.4	Chloroform	ND	0.50	ppbv		ND	2.4	ug/m3
74-87-3	50.49	Chloromethane	0.62	0.50	ppbv		1.3	1.0	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	0.20	ppbv		ND	1.3	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	0.50	ppbv		ND	2.3	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	0.50	ppbv		ND	4.3	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	0.58	0.20	ppbv		2.3	0.79	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	0.50	ppbv		ND	2.3	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	0.50	ppbv		ND	2.3	ug/m3
75-09-2	84.94	Methylene chloride	ND	0.50	ppbv		ND	1.7	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	0.38	0.20	ppbv		2.1	1.1	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	0.20	ppbv		ND	1.4	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
127-18-4	165.8	Tetrachloroethylene	0.48	0.20	ppbv		3.3	1.4	ug/m3
79-01-6	131.4	Trichloroethylene	0.61	0.20	ppbv		3.3	1.1	ug/m3
75-69-4	137.4	Trichlorofluoromethane	ND	0.50	ppbv		ND	2.8	ug/m3
75-01-4	62.5	Vinyl chloride	ND	0.20	ppbv		ND	0.51	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	104%	94%	50-129%

(a) Result is from Run# 2

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: BLDG 2-6
Lab Sample ID: MC40894-4
Matrix: AIR - Air Summa ID: M174
Method: TO-15
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Date Sampled: 08/19/15
Date Received: 08/20/15
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q31343.D	1	08/29/15	AA	n/a	n/a	MSQ1362
Run #2	Q31420.D	10	09/05/15	PN	n/a	n/a	MSQ1364

	Initial Volume
Run #1	400 ml
Run #2	400 ml

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	58.08	Acetone	86.0 [a]	5.0	ppbv		204 [a]	12	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	0.50	ppbv		ND	3.3	ug/m3
75-25-2	252.8	Bromoform	ND	0.50	ppbv		ND	5.2	ug/m3
74-83-9	94.94	Bromomethane	ND	0.50	ppbv		ND	1.9	ug/m3
108-90-7	112.6	Chlorobenzene	ND	0.50	ppbv		ND	2.3	ug/m3
75-00-3	64.52	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	119.4	Chloroform	ND	0.50	ppbv		ND	2.4	ug/m3
74-87-3	50.49	Chloromethane	ND	0.50	ppbv		ND	1.0	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	0.20	ppbv		ND	1.3	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	0.50	ppbv		ND	2.3	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	0.50	ppbv		ND	4.3	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	0.42	0.20	ppbv		1.7	0.79	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	0.50	ppbv		ND	2.3	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	0.50	ppbv		ND	2.3	ug/m3
75-09-2	84.94	Methylene chloride	ND	0.50	ppbv		ND	1.7	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	0.20	ppbv		ND	1.4	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
127-18-4	165.8	Tetrachloroethylene	0.58	0.20	ppbv		3.9	1.4	ug/m3
79-01-6	131.4	Trichloroethylene	0.87	0.20	ppbv		4.7	1.1	ug/m3
75-69-4	137.4	Trichlorofluoromethane	ND	0.50	ppbv		ND	2.8	ug/m3
75-01-4	62.5	Vinyl chloride	ND	0.20	ppbv		ND	0.51	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	106%	95%	50-129%

(a) Result is from Run# 2

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

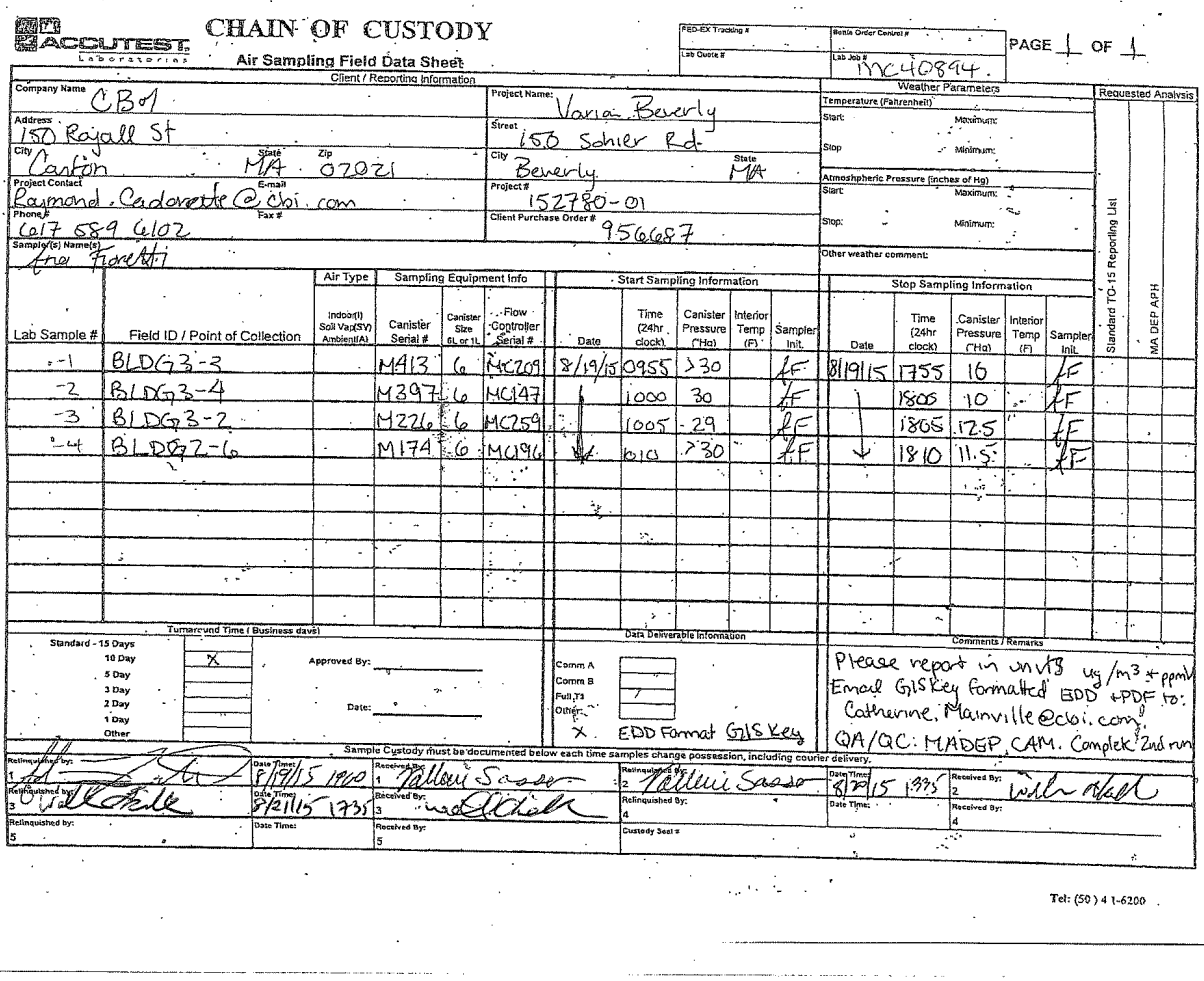
New England ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- MCP Form
- Summa Canister and Flow Controller Log
- Sample Tracking Chronicle
- QC Evaluation: MA MCP Limits



CHAIN OF CUSTODY

ACCUTEST Laboratories

Air Sampling Field Data Sheet

FED-EX Tracking #: | Bottle Order Control #: | PAGE 1 OF 1

Lab Quote #: | Lab Job #: MC40894

Client / Reporting Information

Company Name: CBI
Address: 150 Rajall St
City: Canton State: MA Zip: 02021
Project Contact: Raymond.Cadorette@cbi.com E-mail:
Phone #: 617 589 6102 Fax #:
Sampler(s) Name(s): Eric Fiorletti

Project Name: Varian Beverly
Street: 150 Sohier Rd
City: Beverly State: MA
Project #: 152780-01
Client Purchase Order #: 956687

Weather Parameters

Temperature (Fahrenheit)
Start: Maximum:
Stop: Minimum:
Atmospheric Pressure (inches of Hg)
Start: Maximum:
Stop: Minimum:
Other weather comment:

Requested Analysis

Standard TO-15 Reporting List | MA DEP APH

Lab Sample #	Field ID / Point of Collection	Air Type: Indoor(I) Soil Vap(SV) Ambient(A)	Sampling Equipment Info: Canister Serial #	Canister Size 6L or 1L	Flow Controller Serial #	Start Sampling Information: Date	Time (24hr clock)	Canister Pressure ("Hg)	Interior Temp (F)	Sampler Init.	Stop Sampling Information: Date	Time (24hr clock)	Canister Pressure ("Hg)	Interior Temp (F)	Sampler Init.
-1	BLDG3-3		M413	6	MC209	8/19/15	0955	>30		EF	8/19/15	1755	16		EF
-2	BLDG3-4		M397	6	MC147	"	1000	30		EF	"	1805	10		EF
-3	BLDG3-2		M226	6	MC259	"	1005	29		EF	"	1805	12.5		EF
-4	BLDG7-6		M174	6	MC196	"	610	>30		EF	"	1810	11.5		EF

Turnaround Time (Business days)

Standard - 15 Days
10 Day: X
5 Day
3 Day
2 Day
1 Day
Other

Approved By:
Date:

Data Deliverable Information

Comm A
Comm B
Full T3
Other: X EDD Format GISKey

Comments / Remarks

Please report in units ug/m3 + ppmv
Email GISKey formatted EDD + PDF to: Catherine.Mainville@cbi.com
QA/QC: MADEP CAM. Complex 2nd run

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	8/19/15 1900	1 Fallon Sasso	2 Fallon Sasso	8/20/15 1335	2
3	8/21/15 1735	3	4		4
5		5	Custody Seal #		

Tel: (508) 481-6200

MC40894: Chain of Custody
Page 1 of 3

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC40894 **Client:** CBI **Immediate Client Services Action Required:** No

Date / Time Received: 8/20/2015 5:35:00 PM **Delivery Method:**

Project: VARIAN BAVERLY **No. Coolers:** 0 **Airbill #'s:**

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:			
3. Cooler media:			

Quality Control Preservation	Y	N	N/A
1. Trip Blank present / cooler:	☐	☐	
2. Trip Blank listed on COC:	☐	☐	
3. Samples preserved properly:	☑	☐	
4. VOCs headspace free:	☐	☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample rec'd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	N	N/A
1. Analysis requested is clear:	☐	☑	
2. Bottles received for unspecified tests	☐	☑	
3. Sufficient volume rec'd for analysis:	☑	☐	
4. Compositing instructions clear:	☐	☐	☑
5. Filtering instructions clear:	☐	☐	☑

Comments

No analysis requested on COC.

Accutest Laboratories
V:508.481.6200

495 Technology Center West, Bldg One
F: 508.481.7753

Marlborough, MA
www/accutest.com

MC40894: Chain of Custody
Page 2 of 3

Sample Receipt Summary - Problem Resolution

Accutest Job Number: MC40894

CSR: Frank D'Agostino **Response Date:** 8/21/2015

Response: Run for TO15

Accutest Laboratories
V:508.481.6200

495 Technology Center West, Bldg One
F: 508.481.7753

Marlborough, MA
www/accutest.com

MC40894: Chain of Custody
Page 3 of 3

Exhibit VII A-2: MassDEP Analytical Protocol Certification Form

MassDEP Analytical Protocol Certification Form

Laboratory Name:	Accutest Laboratories of New England	Project #:	MC40894
Project Location:	Varian Beverly, 150 Sohier Road, Beverly, MA	MADEP RTN	None

This form provides certifications for the following data set: list Laboratory Sample ID Numbers(s)
MC40894-1,MC40894-2,MC40894-3,MC40894-4

Matrices: Groundwater/Surface Water ( ) Soil/Sediment ( ) Drinking Water ( ) Air ( ) Air (X) Other ( )

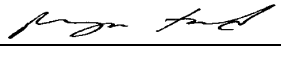
CAM Protocol (check all that apply below):

8260 VOC ( ) CAM IIA	7470/7471 Hg ( ) CAM III B	MassDEP VPH ( ) CAM IV A	8081 Pesticides ( ) CAM V B	7196 Hex Cr ( ) CAM VI B	Mass DEP APH ( ) CAM IX A
8270 SVOC ( ) CAM II B	7010 Metals ( ) CAM III C	MassDEP EPH ( ) CAM IV B	8151 Herbicides ( ) CAM V C	8330 Explosives ( ) CAM VIII A	TO-15 VOC (X) CAM IX B
6010 Metals ( ) CAM III A	6020 Metals ( ) CAM III D	8082 PCB ( ) CAM V A	9014 Total Cyanide/PAC ( ) CAM VI A	6860 Perchlorate ( ) CAM VIII B	

	Affirmative Responses to Questions A Through F are required for "Presumptive Certainty status			
A	Were all samples received in a condition consistent with those described on the Chain-of Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	☑ Yes	☐ No	
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	☑ Yes	☐ No	
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☑ Yes	☐ No	
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	☑ Yes	☐ No	
E	VPH, EPH, APH, and TO-15 only: a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	☑ Yes	☐ No	
	b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	☑ Yes	☐ No	
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	☑ Yes	☐ No	
	Responses to questions G, H, and I below is required for "Presumptive Certainty" status			
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocols	☑ Yes	☐ No [1]	
	Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data useability and representativeness requirements described in 310 CMR 40.1056(2)(k) and WSC-07-350			
H	Were **all** QC performance standards specified in the CAM protocol(s) achieved?	☑ Yes	☐ No [1]	
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☐ Yes	☑ No [1]	

[1] ***All Negative responses must be addressed in an attached Environmental Laboratory case narrative.***

I the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Signature:  **Position:** **Laboratory Director**

Printed Name: **Reza Tand** **Date:** **09/09/2015**

Summa Canister and Flow Controller Log

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA
Received: 08/20/15

SUMMA CANISTERS

Shipping							Receiving					
Summa ID	L	Vac " Hg	Date Out	By	SCC Batch	SCC FileID	Sample Number	Date In	By	Vac " Hg	Pres psig	Final psig	Dil Fact
M413	6	29.4	08/16/15	AA	CP1695	J32397.D	MC40894-1	08/28/15	AA	9		2	1.63
M397	6	29.4	08/16/15	AA	CP1694	J32396.D	MC40894-2	08/28/15	AA	10		1.2	1.62
M226	6	29.4	08/16/15	AA	CP1695	J32397.D	MC40894-3	08/28/15	AA	12		1.8	1.87
M174	6	29.4	08/16/15	AA	CP1694	J32396.D	MC40894-4	08/28/15	AA	10		1.8	1.69

FLOW CONTROLLERS / OTHER

Shipping					Receiving			
Flow Crtl ID	Date Out	By	cc/ min	Time hrs.	Date In	By	cc/ min	Equipment Type
MC147	08/18/15	AA	10	8	08/28/15	PN	10.3	Flow Controller
MC196	08/16/15	AA	10	8	08/28/15	PN	9.6	Flow Controller
MC209	08/16/15	AA	10	8	08/28/15	PN	10.3	Flow Controller
MC259	08/16/15	AA	10	8	08/28/15	PN	9.6	Flow Controller

Accutest Bottle Order(s):
AA/08-16-15/CBI/BERERLY

Prep Date	Room Temp(F)	Bar Pres "Hg
08/16/15	70	29.92

Internal Sample Tracking Chronicle

CB&I

Job No: MC40894

Varian Beverly, 150 Sohier Road, Beverly, MA
Project No: 152780-01

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC40894-1	Collected: 19-AUG-15 17:55 By: AF		Received: 20-AUG-15 By:			
BLDG 3-3						
MC40894-1	TO-15	29-AUG-15 07:53	AA			VTO15SL
MC40894-1	TO-15	05-SEP-15 09:34	PN			VTO15SL
MC40894-2	Collected: 19-AUG-15 18:00 By: AF		Received: 20-AUG-15 By:			
BLDG 3-4						
MC40894-2	TO-15	29-AUG-15 08:42	AA			VTO15SL
MC40894-2	TO-15	05-SEP-15 07:57	PN			VTO15SL
MC40894-3	Collected: 19-AUG-15 18:05 By: AF		Received: 20-AUG-15 By:			
BLDG 3-2						
MC40894-3	TO-15	29-AUG-15 09:31	AA			VTO15SL
MC40894-3	TO-15	05-SEP-15 08:45	PN			VTO15SL
MC40894-4	Collected: 19-AUG-15 18:10 By: AF		Received: 20-AUG-15 By:			
BLDG 2-6						
MC40894-4	TO-15	29-AUG-15 10:19	AA			VTO15SL
MC40894-4	TO-15	05-SEP-15 06:22	PN			VTO15SL

QC Evaluation: MA MCP Limits

Job Number: MC40894
Account: CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA
Collected: 08/19/15

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits

No Exceptions found.

* Sample used for QC is not from job MC40894

New England ACCUTEST LABORATORIES

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Internal Standard Area Summaries
- Initial Calibration RT/ISTD Area Summaries
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSQ1362-MB	Q31324.D	1	08/28/15	AA	n/a	n/a	MSQ1362

The QC reported here applies to the following samples: **Method:** TO-15

MC40894-1, MC40894-2, MC40894-3, MC40894-4

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
75-27-4	Bromodichloromethane	ND	0.50	ppbv		ND	3.3	ug/m3
75-25-2	Bromoform	ND	0.50	ppbv		ND	5.2	ug/m3
74-83-9	Bromomethane	ND	0.50	ppbv		ND	1.9	ug/m3
108-90-7	Chlorobenzene	ND	0.50	ppbv		ND	2.3	ug/m3
75-00-3	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.50	ppbv		ND	2.4	ug/m3
74-87-3	Chloromethane	ND	0.50	ppbv		ND	1.0	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	ppbv		ND	1.3	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.50	ppbv		ND	2.3	ug/m3
124-48-1	Dibromochloromethane	ND	0.50	ppbv		ND	4.3	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ppbv		ND	2.3	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ppbv		ND	2.3	ug/m3
75-09-2	Methylene chloride	ND	0.50	ppbv		ND	1.7	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
127-18-4	Tetrachloroethylene	ND	0.20	ppbv		ND	1.4	ug/m3
79-01-6	Trichloroethylene	ND	0.20	ppbv		ND	1.1	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.50	ppbv		ND	2.8	ug/m3
75-01-4	Vinyl chloride	ND	0.20	ppbv		ND	0.51	ug/m3

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	104%	50-129%

Method Blank Summary

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSQ1364-MB	Q31419.D	1	09/05/15	PN	n/a	n/a	MSQ1364

The QC reported here applies to the following samples: **Method:** TO-15

MC40894-1, MC40894-2, MC40894-3, MC40894-4

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	Acetone	ND	0.50	ppbv		ND	1.2	ug/m3

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	99%	50-129%

Method Blank Summary

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSQ1348-MB	Q31037.D	1	08/11/15	AA	n/a	n/a	MSQ1348

The QC reported here applies to the following samples: **Method:** TO-15

MSQ1348-SCC

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	Acetone	ND	1.0	ppbv		ND	2.4	ug/m3
75-27-4	Bromodichloromethane	ND	0.50	ppbv		ND	3.3	ug/m3
75-25-2	Bromoform	ND	0.50	ppbv		ND	5.2	ug/m3
74-83-9	Bromomethane	ND	0.50	ppbv		ND	1.9	ug/m3
108-90-7	Chlorobenzene	ND	0.50	ppbv		ND	2.3	ug/m3
75-00-3	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.50	ppbv		ND	2.4	ug/m3
74-87-3	Chloromethane	ND	0.50	ppbv		ND	1.0	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	ppbv		ND	1.3	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.50	ppbv		ND	2.3	ug/m3
124-48-1	Dibromochloromethane	ND	0.50	ppbv		ND	4.3	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ppbv		ND	2.3	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ppbv		ND	2.3	ug/m3
75-09-2	Methylene chloride	ND	0.50	ppbv		ND	1.7	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
127-18-4	Tetrachloroethylene	ND	0.20	ppbv		ND	1.4	ug/m3
79-01-6	Trichloroethylene	ND	0.20	ppbv		ND	1.1	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.50	ppbv		ND	2.8	ug/m3
75-01-4	Vinyl chloride	ND	0.20	ppbv		ND	0.51	ug/m3

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	99%	50-129%

Blank Spike Summary

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSQ1362-BS	Q31321A.D	1	08/28/15	AA	n/a	n/a	MSQ1362

The QC reported here applies to the following samples: **Method:** TO-15

MC40894-1, MC40894-2, MC40894-3, MC40894-4

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	Limits
75-27-4	Bromodichloromethane	10	11.0	110	70-130
75-25-2	Bromoform	10	11.8	118	70-130
74-83-9	Bromomethane	10	10.3	103	70-130
108-90-7	Chlorobenzene	10	11.4	114	70-130
75-00-3	Chloroethane	10	9.4	94	70-130
67-66-3	Chloroform	10	10.8	108	70-130
74-87-3	Chloromethane	10	8.9	89	70-130
56-23-5	Carbon tetrachloride	10	11.2	112	70-130
75-34-3	1,1-Dichloroethane	10	9.8	98	70-130
75-35-4	1,1-Dichloroethylene	10	10.3	103	70-130
107-06-2	1,2-Dichloroethane	10	11.4	114	70-130
78-87-5	1,2-Dichloropropane	10	9.6	96	70-130
124-48-1	Dibromochloromethane	10	11.6	116	70-130
156-60-5	trans-1,2-Dichloroethylene	10	10.3	103	70-130
156-59-2	cis-1,2-Dichloroethylene	10	10.4	104	70-130
10061-01-5	cis-1,3-Dichloropropene	10	10.5	105	70-130
10061-02-6	trans-1,3-Dichloropropene	10	11.0	110	70-130
75-09-2	Methylene chloride	10	9.5	95	70-130
71-55-6	1,1,1-Trichloroethane	10	12.8	128	70-130
79-34-5	1,1,2,2-Tetrachloroethane	10	10.6	106	70-130
79-00-5	1,1,2-Trichloroethane	10	10.3	103	70-130
127-18-4	Tetrachloroethylene	10	11.6	116	70-130
79-01-6	Trichloroethylene	10	12.2	122	70-130
75-69-4	Trichlorofluoromethane	10	11.2	112	70-130
75-01-4	Vinyl chloride	10	9.8	98	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	4-Bromofluorobenzene	106%	50-129%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSQ1364-BS	Q31416B.D	1	09/05/15	PN	n/a	n/a	MSQ1364

The QC reported here applies to the following samples: **Method:** TO-15

MC40894-1, MC40894-2, MC40894-3, MC40894-4

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	Limits
67-64-1	Acetone	10	11.1	111	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	4-Bromofluorobenzene	102%	50-129%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSQ1348-BS	Q31035A.D	1	08/11/15	AA	n/a	n/a	MSQ1348

The QC reported here applies to the following samples: **Method:** TO-15

MSQ1348-SCC

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	Limits
67-64-1	Acetone	10	9.1	91	70-130
75-27-4	Bromodichloromethane	10	10.1	101	70-130
75-25-2	Bromoform	10	11.6	116	70-130
74-83-9	Bromomethane	10	9.7	97	70-130
108-90-7	Chlorobenzene	10	11.1	111	70-130
75-00-3	Chloroethane	10	9.3	93	70-130
67-66-3	Chloroform	10	9.8	98	70-130
74-87-3	Chloromethane	10	9.0	90	70-130
56-23-5	Carbon tetrachloride	10	9.9	99	70-130
75-34-3	1,1-Dichloroethane	10	9.6	96	70-130
75-35-4	1,1-Dichloroethylene	10	9.7	97	70-130
107-06-2	1,2-Dichloroethane	10	9.7	97	70-130
78-87-5	1,2-Dichloropropane	10	10	100	70-130
124-48-1	Dibromochloromethane	10	11.5	115	70-130
156-60-5	trans-1,2-Dichloroethylene	10	9.7	97	70-130
156-59-2	cis-1,2-Dichloroethylene	10	10.0	100	70-130
10061-01-5	cis-1,3-Dichloropropene	10	10.2	102	70-130
10061-02-6	trans-1,3-Dichloropropene	10	9.9	99	70-130
75-09-2	Methylene chloride	10	9.3	93	70-130
71-55-6	1,1,1-Trichloroethane	10	9.9	99	70-130
79-34-5	1,1,2,2-Tetrachloroethane	10	10.9	109	70-130
79-00-5	1,1,2-Trichloroethane	10	10.4	104	70-130
127-18-4	Tetrachloroethylene	10	11.5	115	70-130
79-01-6	Trichloroethylene	10	9.6	96	70-130
75-69-4	Trichlorofluoromethane	10	9.6	96	70-130
75-01-4	Vinyl chloride	10	9.3	93	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	4-Bromofluorobenzene	104%	50-129%

* = Outside of Control Limits.

Summa Cleaning Certification

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSQ1348-SCC	Q31036.D	1	08/11/15	AA	n/a	n/a	MSQ1348

The QC reported here (Summa M219) applies to the following samples: **Method:** TO-15

Batch CP1694 cleaned 08/05/15: MC40894-2(M397), MC40894-4(M174)

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	Acetone	ND	1.0	ppbv		ND	2.4	ug/m3
75-27-4	Bromodichloromethane	ND	0.50	ppbv		ND	3.3	ug/m3
75-25-2	Bromoform	ND	0.50	ppbv		ND	5.2	ug/m3
74-83-9	Bromomethane	ND	0.50	ppbv		ND	1.9	ug/m3
108-90-7	Chlorobenzene	ND	0.50	ppbv		ND	2.3	ug/m3
75-00-3	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.50	ppbv		ND	2.4	ug/m3
74-87-3	Chloromethane	ND	0.50	ppbv		ND	1.0	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	ppbv		ND	1.3	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.50	ppbv		ND	2.3	ug/m3
124-48-1	Dibromochloromethane	ND	0.50	ppbv		ND	4.3	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ppbv		ND	2.3	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ppbv		ND	2.3	ug/m3
75-09-2	Methylene chloride	ND	0.50	ppbv		ND	1.7	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
127-18-4	Tetrachloroethylene	ND	0.20	ppbv		ND	1.4	ug/m3
79-01-6	Trichloroethylene	ND	0.20	ppbv		ND	1.1	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.50	ppbv		ND	2.8	ug/m3
75-01-4	Vinyl chloride	ND	0.20	ppbv		ND	0.51	ug/m3

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	104%	50-129%

Summa Cleaning Certification

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSQ1348-SCC	Q31038.D	1	08/11/15	AA	n/a	n/a	MSQ1348

The QC reported here (Summa M236) applies to the following samples: **Method:** TO-15

Batch CP1695 cleaned 08/06/15: MC40894-1(M413), MC40894-3(M226)

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	Acetone	ND	1.0	ppbv		ND	2.4	ug/m3
75-27-4	Bromodichloromethane	ND	0.50	ppbv		ND	3.3	ug/m3
75-25-2	Bromoform	ND	0.50	ppbv		ND	5.2	ug/m3
74-83-9	Bromomethane	ND	0.50	ppbv		ND	1.9	ug/m3
108-90-7	Chlorobenzene	ND	0.50	ppbv		ND	2.3	ug/m3
75-00-3	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.50	ppbv		ND	2.4	ug/m3
74-87-3	Chloromethane	ND	0.50	ppbv		ND	1.0	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	ppbv		ND	1.3	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.50	ppbv		ND	2.3	ug/m3
124-48-1	Dibromochloromethane	ND	0.50	ppbv		ND	4.3	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ppbv		ND	2.3	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ppbv		ND	2.3	ug/m3
75-09-2	Methylene chloride	ND	0.50	ppbv		ND	1.7	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
127-18-4	Tetrachloroethylene	ND	0.20	ppbv		ND	1.4	ug/m3
79-01-6	Trichloroethylene	ND	0.20	ppbv		ND	1.1	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.50	ppbv		ND	2.8	ug/m3
75-01-4	Vinyl chloride	ND	0.20	ppbv		ND	0.51	ug/m3

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	106%	50-129%

Volatile Internal Standard Area Summary

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Check Std:	MSQ1348-CC1344	**Injection Date:**	08/11/15
Lab File ID:	Q31035.D	**Injection Time:**	10:11
Instrument ID:	GCMSQ	**Method:**	TO-15

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
Check Std	425628	9.14	1925472	11.79	938566	18.85
Upper Limit [a]	595879	9.47	2695661	12.12	1313992	19.18
Lower Limit [b]	255377	8.81	1155283	11.46	563140	18.52

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
MSQ1348-BS	425628	9.14	1925472	11.79	938566	18.85
MSQ1348-SCC	432469	9.14	1938235	11.79	913805	18.85
MSQ1348-MB	433280	9.14	2015877	11.79	916418	18.85
MSQ1348-SCC	433280	9.14	2015877	11.79	916418	18.85
MSQ1348-SCC	426981	9.14	1879556	11.79	906480	18.85
ZZZZZZ	426968	9.13	1771332	11.79	800369	18.85
ZZZZZZ	404736	9.15	1925751	11.80	881489	18.85
ZZZZZZ	400681	9.14	1742340	11.79	870330	18.85
ZZZZZZ	449899	9.14	2162117	11.79	1002021	18.85
ZZZZZZ	426293	9.14	1861430	11.80	921918	18.85
ZZZZZZ	404013	9.14	1755447	11.79	889279	18.85
ZZZZZZ	427496	9.14	1915920	11.80	943929	18.85
ZZZZZZ	408745	9.14	1838868	11.79	886382	18.85
ZZZZZZ	422508	9.14	1903331	11.80	931984	18.85
ZZZZZZ	407678	9.14	1871464	11.79	884404	18.85
MC40579-1	425232	9.14	1987671	11.80	947416	18.85
MC40579-1DUP	416076	9.14	1964142	11.80	923192	18.85
MC40579-1	456098	9.14	2146324	11.79	995113	18.85

IS 1 = Bromochloromethane
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5

(a) Upper Limit = + 40% of check standard area; Retention time + 0.33 minutes.
(b) Lower Limit = -40% of check standard area; Retention time -0.33 minutes.

Volatile Internal Standard Area Summary

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Check Std:	MSQ1362-CC1355	**Injection Date:**	08/28/15
Lab File ID:	Q31321.D	**Injection Time:**	15:48
Instrument ID:	GCMSQ	**Method:**	TO-15

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
Check Std	390674	9.12	1839635	11.77	958638	18.82
Upper Limit [a]	546944	9.45	2575489	12.10	1342093	19.15
Lower Limit [b]	234404	8.79	1103781	11.44	575183	18.49

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
MSQ1362-BS	390674	9.12	1839635	11.77	958638	18.82
MSQ1362-MB	377335	9.12	1497625	11.77	754962	18.82
MC40971-1	350701	9.13	1755770	11.80	956930	18.86
MC40971-1DUP	351605	9.13	1710357	11.80	911419	18.85
MC40971-1	401881	9.12	1799561	11.77	879323	18.82
ZZZZZZ	367179	9.13	1776753	11.80	906399	18.85
ZZZZZZ	327063	9.12	1433261	11.77	787293	18.82
ZZZZZZ	390933	9.13	1941674	11.80	998195	18.84
ZZZZZZ	359586	9.12	1550861	11.77	783338	18.82
ZZZZZZ	308536	9.13	1342329	11.78	716277	18.83
ZZZZZZ	318902	9.12	1465493	11.77	773640	18.82
ZZZZZZ	397419	9.17	1887608	11.83	935774	18.86
ZZZZZZ	311900	9.12	1390039	11.77	814661	18.82
ZZZZZZ	369334	9.13	1830318	11.80	941264	18.83
ZZZZZZ	318181	9.12	1501853	11.77	767763	18.82
MC40894-1	360559	9.13	1642170	11.78	820077	18.82
MC40894-2	362188	9.15	1633858	11.79	851543	18.82
MC40894-3	368854	9.15	1778851	11.79	900452	18.82
MC40894-4	364417	9.13	1749826	11.77	875893	18.82
MC40971-1	345826	9.12	1631524	11.77	825314	18.82
ZZZZZZ	355739	9.12	1676770	11.77	830564	18.82
ZZZZZZ	334011	9.12	1553342	11.77	794978	18.82
ZZZZZZ	343259	9.12	1519170	11.77	805599	18.82

IS 1 = Bromochloromethane
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5

(a) Upper Limit = + 40% of check standard area; Retention time + 0.33 minutes.
(b) Lower Limit = -40% of check standard area; Retention time -0.33 minutes.

Volatile Internal Standard Area Summary

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Check Std:	MSQ1364-CC1364	**Injection Date:**	09/05/15
Lab File ID:	Q31416.D	**Injection Time:**	03:12
Instrument ID:	GCMSQ	**Method:**	TO-15

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
Check Std	1159499	9.12	5370930	11.76	2891694	18.81
Upper Limit [a]	1623299	9.45	7519302	12.09	4048372	19.14
Lower Limit [b]	695699	8.79	3222558	11.43	1735016	18.48

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
MSQ1364-BS	1159499	9.12	5370930	11.76	2891694	18.81
MSQ1364-MB	1104783	9.11	4921510	11.76	2471192	18.80
MC40894-4	971303	9.11	4087861	11.76	2105578	18.80
MC40894-4DUP	1120177	9.11	5341743	11.76	2570287	18.80
MC40894-2	1091319	9.11	5120768	11.76	2466742	18.80
MC40894-3	1090490	9.11	5108494	11.76	2457609	18.80
MC40894-1	1138201	9.11	5463597	11.76	2631576	18.80

IS 1 = Bromochloromethane
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5

(a) Upper Limit = + 40% of check standard area; Retention time + 0.33 minutes.
(b) Lower Limit = -40% of check standard area; Retention time -0.33 minutes.

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1344-IC1344	Q30928.D	08/03/15 18:53	AA	0.2	GCMSQ	TO-15	Reporting this level
MSQ1344-IC1344	Q30929.D	08/03/15 19:44	AA	0.5	GCMSQ	TO-15	
MSQ1344-IC1344	Q30930.D	08/03/15 20:34	AA	2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30931.D	08/03/15 21:25	AA	5	GCMSQ	TO-15	
MSQ1344-ICC1344	Q30932.D	08/03/15 22:15	AA	10	GCMSQ	TO-15	
MSQ1344-IC1344	Q30933.D	08/03/15 23:06	AA	20	GCMSQ	TO-15	
MSQ1344-IC1344	Q30934.D	08/03/15 23:56	AA	30	GCMSQ	TO-15	
MSQ1344-IC1344	Q30935.D	08/04/15 00:47	AA	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.56	9.14	0.608	ok	0.608	0.548-0.668
Acrolein	5.42	9.14	0.593	ok	0.593	0.533-0.653
Acrylonitrile	6.04	9.14	0.661	ok	0.661	0.601-0.721
1,3-Butadiene	4.51	9.14	0.493	ok	0.493	0.433-0.553
Benzene	11.29	11.80	0.957	ok	0.957	0.897-1.017
Bromodichloromethane	12.76	11.80	1.081	ok	1.082	1.022-1.142
Bromoform	19.97	18.85	1.059	ok	1.059	0.999-1.119
Bromomethane	4.78	9.14	0.523	ok	0.523	0.463-0.583
Bromoethene	5.31	9.14	0.581	ok	0.581	0.521-0.641
n-Butylbenzene	24.89	18.85	1.320	ok	1.320	1.260-1.380
sec-Butylbenzene	23.92	18.85	1.269	ok	1.269	1.209-1.329
Benzyl Chloride	23.69	18.85	1.257	ok	1.256	1.196-1.316
Carbon disulfide	6.92	9.14	0.757	ok	0.757	0.697-0.817
Chlorobenzene	18.93	18.85	1.004	ok	1.004	0.944-1.064
Chloroethane	4.96	9.14	0.543	ok	0.542	0.482-0.602
Chloroform	9.31	9.14	1.019	ok	1.018	0.958-1.078
Chloromethane	4.15	9.14	0.454	ok	0.454	0.394-0.514
3-Chloropropene	6.70	9.14	0.733	ok	0.733	0.673-0.793
2-Chlorotoluene	22.37	18.85	1.187	ok	1.186	1.126-1.246
Carbon tetrachloride	11.50	9.14	1.258	ok	1.257	1.197-1.317
Cyclohexane	11.68	11.80	0.990	ok	0.990	0.930-1.050
1,1-Dichloroethane	7.89	9.14	0.863	ok	0.863	0.803-0.923
1,1-Dichloroethylene	6.44	9.14	0.705	ok	0.705	0.645-0.765
1,2-Dibromoethane	16.89	18.85	0.896	ok	0.896	0.836-0.956
1,2-Dichloroethane	10.29	9.14	1.126	ok	1.125	1.065-1.185
1,2-Dichloropropane	12.47	11.80	1.057	ok	1.058	0.998-1.118
1,3-Dichloropropane	15.82	11.80	1.341	ok	1.341	1.281-1.401
1,4-Dioxane	12.89	11.80	1.092	ok	1.088	1.028-1.148
Dichlorodifluoromethane	3.99	9.14	0.437	ok	0.436	0.376-0.496
Dibromochloromethane	16.47	18.85	0.874	ok	0.874	0.814-0.934
trans-1,2-Dichloroethylene	7.65	9.14	0.837	ok	0.837	0.777-0.897
cis-1,2-Dichloroethylene	8.93	9.14	0.977	ok	0.976	0.916-1.036
cis-1,3-Dichloropropene	14.18	11.80	1.202	ok	1.202	1.142-1.262
m-Dichlorobenzene	23.70	18.85	1.257	ok	1.257	1.197-1.317
o-Dichlorobenzene	24.38	18.85	1.293	ok	1.293	1.233-1.353
p-Dichlorobenzene	23.82	18.85	1.264	ok	1.263	1.203-1.323
trans-1,3-Dichloropropene	15.03	11.80	1.274	ok	1.274	1.214-1.334
Ethanol	5.06	9.14	0.554	ok	0.553	0.493-0.613
Ethylbenzene	19.59	18.85	1.039	ok	1.039	0.979-1.099
Ethyl Acetate	9.22	9.14	1.009	ok	1.007	0.947-1.067

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1344-IC1344	Q30928.D	08/03/15 18:53	AA	0.2	GCMSQ	TO-15	Reporting this level
MSQ1344-IC1344	Q30929.D	08/03/15 19:44	AA	0.5	GCMSQ	TO-15	
MSQ1344-IC1344	Q30930.D	08/03/15 20:34	AA	2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30931.D	08/03/15 21:25	AA	5	GCMSQ	TO-15	
MSQ1344-ICC1344	Q30932.D	08/03/15 22:15	AA	10	GCMSQ	TO-15	
MSQ1344-IC1344	Q30933.D	08/03/15 23:06	AA	20	GCMSQ	TO-15	
MSQ1344-IC1344	Q30934.D	08/03/15 23:56	AA	30	GCMSQ	TO-15	
MSQ1344-IC1344	Q30935.D	08/04/15 00:47	AA	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
4-Ethyltoluene	22.82	18.85	1.211	ok	1.204	1.144-1.264
Freon 113	6.87	9.14	0.752	ok	0.751	0.691-0.811
Freon 114	4.25	9.14	0.465	ok	0.465	0.405-0.525
Heptane	13.31	11.80	1.128	ok	1.128	1.068-1.188
Hexachlorobutadiene	27.70	18.85	1.469	ok	1.469	1.409-1.529
Hexane	9.21	9.14	1.008	ok	1.007	0.947-1.067
2-Hexanone	16.29	18.85	0.864	ok	0.862	0.802-0.922
Isopropylbenzene	21.63	18.85	1.147	ok	1.147	1.087-1.207
Isopropyl Alcohol	5.87	9.14	0.642	ok	0.637	0.577-0.697
p-Isopropyltoluene	24.19	18.85	1.283	ok	1.283	1.223-1.343
Methylene chloride	6.57	9.14	0.719	ok	0.718	0.658-0.778
Methyl ethyl ketone	8.38	9.14	0.917	ok	0.915	0.855-0.975
Methyl Isobutyl Ketone	14.29	11.80	1.211	ok	1.208	1.148-1.268
Methyl Tert Butyl Ether	7.98	9.14	0.873	ok	0.871	0.811-0.931
Methylmethacrylate	13.16	11.80	1.115	ok	1.115	1.055-1.175
Naphthalene	27.25	18.85	1.446	ok	1.445	1.385-1.505
Nonane	21.09	18.85	1.119	ok	1.119	1.059-1.179
Pentane	6.13	9.14	0.671	ok	0.670	0.610-0.730
Propylene	3.92	9.14	0.429	ok	0.428	0.368-0.488
Styrene	20.49	18.85	1.087	ok	1.087	1.027-1.147
1,1,1-Trichloroethane	10.64	9.14	1.164	ok	1.164	1.104-1.224
1,1,1,2-Tetrachloroethane	18.90	18.85	1.003	ok	1.003	0.943-1.063
1,1,2,2-Tetrachloroethane	20.64	18.85	1.095	ok	1.095	1.035-1.155
1,1,2-Trichloroethane	15.31	11.80	1.297	ok	1.297	1.237-1.357
1,2,4-Trichlorobenzene	27.11	18.85	1.438	ok	1.438	1.378-1.498
1,2,4-Trimethylbenzene	23.49	18.85	1.246	ok	1.246	1.186-1.306
1,3,5-Trimethylbenzene	22.82	18.85	1.211	ok	1.211	1.151-1.271
2,2,4-Trimethylpentane	12.90	11.80	1.093	ok	1.093	1.033-1.153
Tertiary Butyl Alcohol	6.56	9.14	0.718	ok	0.710	0.650-0.770
tert-Butylbenzene	23.47	18.85	1.245	ok	1.245	1.185-1.305
Tetrachloroethylene	17.73	18.85	0.941	ok	0.941	0.881-1.001
Tetrahydrofuran	9.87	9.14	1.080	ok	1.076	1.016-1.136
Toluene	15.77	11.80	1.336	ok	1.337	1.277-1.397
Trichloroethylene	12.83	11.80	1.087	ok	1.088	1.028-1.148
Trichlorofluoromethane	5.76	9.14	0.630	ok	0.630	0.570-0.690
Vinyl chloride	4.37	9.14	0.478	ok	0.478	0.418-0.538
Vinyl Acetate	8.06	9.14	0.882	ok	0.882	0.822-0.942
m,p-Xylene	19.91	18.85	1.056	ok	1.056	0.996-1.116
o-Xylene	20.66	18.85	1.096	ok	1.096	1.036-1.156

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1344-IC1344	Q30928.D	08/03/15 18:53	AA	0.2	GCMSQ	TO-15	Reporting this level
MSQ1344-IC1344	Q30929.D	08/03/15 19:44	AA	0.5	GCMSQ	TO-15	
MSQ1344-IC1344	Q30930.D	08/03/15 20:34	AA	2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30931.D	08/03/15 21:25	AA	5	GCMSQ	TO-15	
MSQ1344-ICC1344	Q30932.D	08/03/15 22:15	AA	10	GCMSQ	TO-15	
MSQ1344-IC1344	Q30933.D	08/03/15 23:06	AA	20	GCMSQ	TO-15	
MSQ1344-IC1344	Q30934.D	08/03/15 23:56	AA	30	GCMSQ	TO-15	
MSQ1344-IC1344	Q30935.D	08/04/15 00:47	AA	40	GCMSQ	TO-15	

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	9.14	ok	9.15	8.82-9.48	411111	ok	420767	252460-589074
1,4-Difluorobenzene	11.80	ok	11.80	11.47-12.13	1842251	ok	1928277	1156966-2699588
Chlorobenzene-D5	18.85	ok	18.86	18.53-19.19	912281	ok	996697	598018-1395376

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1344-IC1344	Q30928.D	08/03/15 18:53	AA	0.2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30929.D	08/03/15 19:44	AA	0.5	GCMSQ	TO-15	Reporting this level
MSQ1344-IC1344	Q30930.D	08/03/15 20:34	AA	2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30931.D	08/03/15 21:25	AA	5	GCMSQ	TO-15	
MSQ1344-ICC1344	Q30932.D	08/03/15 22:15	AA	10	GCMSQ	TO-15	
MSQ1344-IC1344	Q30933.D	08/03/15 23:06	AA	20	GCMSQ	TO-15	
MSQ1344-IC1344	Q30934.D	08/03/15 23:56	AA	30	GCMSQ	TO-15	
MSQ1344-IC1344	Q30935.D	08/04/15 00:47	AA	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.56	9.14	0.608	ok	0.608	0.548-0.668
Acrolein	5.42	9.14	0.593	ok	0.593	0.533-0.653
Acrylonitrile	6.05	9.14	0.662	ok	0.661	0.601-0.721
1,3-Butadiene	4.51	9.14	0.493	ok	0.493	0.433-0.553
Benzene	11.29	11.80	0.957	ok	0.957	0.897-1.017
Bromodichloromethane	12.77	11.80	1.082	ok	1.082	1.022-1.142
Bromoform	19.97	18.86	1.059	ok	1.059	0.999-1.119
Bromomethane	4.79	9.14	0.524	ok	0.523	0.463-0.583
Bromoethene	5.32	9.14	0.582	ok	0.581	0.521-0.641
n-Butylbenzene	24.89	18.86	1.320	ok	1.320	1.260-1.380
sec-Butylbenzene	23.92	18.86	1.268	ok	1.269	1.209-1.329
Benzyl Chloride	23.69	18.86	1.256	ok	1.256	1.196-1.316
Carbon disulfide	6.93	9.14	0.758	ok	0.757	0.697-0.817
Chlorobenzene	18.93	18.86	1.004	ok	1.004	0.944-1.064
Chloroethane	4.96	9.14	0.543	ok	0.542	0.482-0.602
Chloroform	9.31	9.14	1.019	ok	1.018	0.958-1.078
Chloromethane	4.15	9.14	0.454	ok	0.454	0.394-0.514
3-Chloropropene	6.71	9.14	0.734	ok	0.733	0.673-0.793
2-Chlorotoluene	22.37	18.86	1.186	ok	1.186	1.126-1.246
Carbon tetrachloride	11.50	9.14	1.258	ok	1.257	1.197-1.317
Cyclohexane	11.68	11.80	0.990	ok	0.990	0.930-1.050
1,1-Dichloroethane	7.90	9.14	0.864	ok	0.863	0.803-0.923
1,1-Dichloroethylene	6.45	9.14	0.706	ok	0.705	0.645-0.765
1,2-Dibromoethane	16.90	18.86	0.896	ok	0.896	0.836-0.956
1,2-Dichloroethane	10.29	9.14	1.126	ok	1.125	1.065-1.185
1,2-Dichloropropane	12.48	11.80	1.058	ok	1.058	0.998-1.118
1,3-Dichloropropane	15.82	11.80	1.341	ok	1.341	1.281-1.401
1,4-Dioxane	12.87	11.80	1.091	ok	1.088	1.028-1.148
Dichlorodifluoromethane	3.99	9.14	0.437	ok	0.436	0.376-0.496
Dibromochloromethane	16.47	18.86	0.873	ok	0.874	0.814-0.934
trans-1,2-Dichloroethylene	7.66	9.14	0.838	ok	0.837	0.777-0.897
cis-1,2-Dichloroethylene	8.93	9.14	0.977	ok	0.976	0.916-1.036
cis-1,3-Dichloropropene	14.18	11.80	1.202	ok	1.202	1.142-1.262
m-Dichlorobenzene	23.71	18.86	1.257	ok	1.257	1.197-1.317
o-Dichlorobenzene	24.38	18.86	1.293	ok	1.293	1.233-1.353
p-Dichlorobenzene	23.82	18.86	1.263	ok	1.263	1.203-1.323
trans-1,3-Dichloropropene	15.03	11.80	1.274	ok	1.274	1.214-1.334
Ethanol	5.06	9.14	0.554	ok	0.553	0.493-0.613
Ethylbenzene	19.59	18.86	1.039	ok	1.039	0.979-1.099
Ethyl Acetate	9.22	9.14	1.009	ok	1.007	0.947-1.067

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1344-IC1344	Q30928.D	08/03/15 18:53	AA	0.2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30929.D	08/03/15 19:44	AA	0.5	GCMSQ	TO-15	Reporting this level
MSQ1344-IC1344	Q30930.D	08/03/15 20:34	AA	2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30931.D	08/03/15 21:25	AA	5	GCMSQ	TO-15	
MSQ1344-ICC1344	Q30932.D	08/03/15 22:15	AA	10	GCMSQ	TO-15	
MSQ1344-IC1344	Q30933.D	08/03/15 23:06	AA	20	GCMSQ	TO-15	
MSQ1344-IC1344	Q30934.D	08/03/15 23:56	AA	30	GCMSQ	TO-15	
MSQ1344-IC1344	Q30935.D	08/04/15 00:47	AA	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
4-Ethyltoluene	22.69	18.86	1.203	ok	1.204	1.144-1.264
Freon 113	6.87	9.14	0.752	ok	0.751	0.691-0.811
Freon 114	4.25	9.14	0.465	ok	0.465	0.405-0.525
Heptane	13.32	11.80	1.129	ok	1.128	1.068-1.188
Hexachlorobutadiene	27.70	18.86	1.469	ok	1.469	1.409-1.529
Hexane	9.21	9.14	1.008	ok	1.007	0.947-1.067
2-Hexanone	16.27	18.86	0.863	ok	0.862	0.802-0.922
Isopropylbenzene	21.63	18.86	1.147	ok	1.147	1.087-1.207
Isopropyl Alcohol	5.84	9.14	0.639	ok	0.637	0.577-0.697
p-Isopropyltoluene	24.20	18.86	1.283	ok	1.283	1.223-1.343
Methylene chloride	6.57	9.14	0.719	ok	0.718	0.658-0.778
Methyl ethyl ketone	8.38	9.14	0.917	ok	0.915	0.855-0.975
Methyl Isobutyl Ketone	14.28	11.80	1.210	ok	1.208	1.148-1.268
Methyl Tert Butyl Ether	7.98	9.14	0.873	ok	0.871	0.811-0.931
Methylmethacrylate	13.16	11.80	1.115	ok	1.115	1.055-1.175
Naphthalene	27.25	18.86	1.445	ok	1.445	1.385-1.505
Nonane	21.09	18.86	1.118	ok	1.119	1.059-1.179
Pentane	6.14	9.14	0.672	ok	0.670	0.610-0.730
Propylene	3.92	9.14	0.429	ok	0.428	0.368-0.488
Styrene	20.49	18.86	1.086	ok	1.087	1.027-1.147
1,1,1-Trichloroethane	10.65	9.14	1.165	ok	1.164	1.104-1.224
1,1,1,2-Tetrachloroethane	18.91	18.86	1.003	ok	1.003	0.943-1.063
1,1,2,2-Tetrachloroethane	20.64	18.86	1.094	ok	1.095	1.035-1.155
1,1,2-Trichloroethane	15.31	11.80	1.297	ok	1.297	1.237-1.357
1,2,4-Trichlorobenzene	27.11	18.86	1.437	ok	1.438	1.378-1.498
1,2,4-Trimethylbenzene	23.49	18.86	1.245	ok	1.246	1.186-1.306
1,3,5-Trimethylbenzene	22.83	18.86	1.210	ok	1.211	1.151-1.271
2,2,4-Trimethylpentane	12.90	11.80	1.093	ok	1.093	1.033-1.153
Tertiary Butyl Alcohol	6.53	9.14	0.714	ok	0.710	0.650-0.770
tert-Butylbenzene	23.47	18.86	1.244	ok	1.245	1.185-1.305
Tetrachloroethylene	17.74	18.86	0.941	ok	0.941	0.881-1.001
Tetrahydrofuran	9.86	9.14	1.079	ok	1.076	1.016-1.136
Toluene	15.77	11.80	1.336	ok	1.337	1.277-1.397
Trichloroethylene	12.83	11.80	1.087	ok	1.088	1.028-1.148
Trichlorofluoromethane	5.76	9.14	0.630	ok	0.630	0.570-0.690
Vinyl chloride	4.37	9.14	0.478	ok	0.478	0.418-0.538
Vinyl Acetate	8.06	9.14	0.882	ok	0.882	0.822-0.942
m,p-Xylene	19.91	18.86	1.056	ok	1.056	0.996-1.116
o-Xylene	20.66	18.86	1.095	ok	1.096	1.036-1.156

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1344-IC1344	Q30928.D	08/03/15 18:53	AA	0.2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30929.D	08/03/15 19:44	AA	0.5	GCMSQ	TO-15	Reporting this level
MSQ1344-IC1344	Q30930.D	08/03/15 20:34	AA	2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30931.D	08/03/15 21:25	AA	5	GCMSQ	TO-15	
MSQ1344-ICC1344	Q30932.D	08/03/15 22:15	AA	10	GCMSQ	TO-15	
MSQ1344-IC1344	Q30933.D	08/03/15 23:06	AA	20	GCMSQ	TO-15	
MSQ1344-IC1344	Q30934.D	08/03/15 23:56	AA	30	GCMSQ	TO-15	
MSQ1344-IC1344	Q30935.D	08/04/15 00:47	AA	40	GCMSQ	TO-15	

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	9.14	ok	9.15	8.82-9.48	412015	ok	420767	252460-589074
1,4-Difluorobenzene	11.80	ok	11.80	11.47-12.13	1874780	ok	1928277	1156966-2699588
Chlorobenzene-D5	18.86	ok	18.86	18.53-19.19	931401	ok	996697	598018-1395376

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1344-IC1344	Q30928.D	08/03/15 18:53	AA	0.2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30929.D	08/03/15 19:44	AA	0.5	GCMSQ	TO-15	
MSQ1344-IC1344	Q30930.D	08/03/15 20:34	AA	2	GCMSQ	TO-15	Reporting this level
MSQ1344-IC1344	Q30931.D	08/03/15 21:25	AA	5	GCMSQ	TO-15	
MSQ1344-ICC1344	Q30932.D	08/03/15 22:15	AA	10	GCMSQ	TO-15	
MSQ1344-IC1344	Q30933.D	08/03/15 23:06	AA	20	GCMSQ	TO-15	
MSQ1344-IC1344	Q30934.D	08/03/15 23:56	AA	30	GCMSQ	TO-15	
MSQ1344-IC1344	Q30935.D	08/04/15 00:47	AA	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.56	9.15	0.608	ok	0.608	0.548-0.668
Acrolein	5.42	9.15	0.592	ok	0.593	0.533-0.653
Acrylonitrile	6.05	9.15	0.661	ok	0.661	0.601-0.721
1,3-Butadiene	4.51	9.15	0.493	ok	0.493	0.433-0.553
Benzene	11.29	11.80	0.957	ok	0.957	0.897-1.017
Bromodichloromethane	12.77	11.80	1.082	ok	1.082	1.022-1.142
Bromoform	19.97	18.86	1.059	ok	1.059	0.999-1.119
Bromomethane	4.79	9.15	0.523	ok	0.523	0.463-0.583
Bromoethene	5.32	9.15	0.581	ok	0.581	0.521-0.641
n-Butylbenzene	24.89	18.86	1.320	ok	1.320	1.260-1.380
sec-Butylbenzene	23.92	18.86	1.268	ok	1.269	1.209-1.329
Benzyl Chloride	23.69	18.86	1.256	ok	1.256	1.196-1.316
Carbon disulfide	6.93	9.15	0.757	ok	0.757	0.697-0.817
Chlorobenzene	18.93	18.86	1.004	ok	1.004	0.944-1.064
Chloroethane	4.96	9.15	0.542	ok	0.542	0.482-0.602
Chloroform	9.31	9.15	1.017	ok	1.018	0.958-1.078
Chloromethane	4.15	9.15	0.454	ok	0.454	0.394-0.514
3-Chloropropene	6.71	9.15	0.733	ok	0.733	0.673-0.793
2-Chlorotoluene	22.37	18.86	1.186	ok	1.186	1.126-1.246
Carbon tetrachloride	11.50	9.15	1.257	ok	1.257	1.197-1.317
Cyclohexane	11.68	11.80	0.990	ok	0.990	0.930-1.050
1,1-Dichloroethane	7.90	9.15	0.863	ok	0.863	0.803-0.923
1,1-Dichloroethylene	6.45	9.15	0.705	ok	0.705	0.645-0.765
1,2-Dibromoethane	16.89	18.86	0.896	ok	0.896	0.836-0.956
1,2-Dichloroethane	10.29	9.15	1.125	ok	1.125	1.065-1.185
1,2-Dichloropropane	12.48	11.80	1.058	ok	1.058	0.998-1.118
1,3-Dichloropropane	15.82	11.80	1.341	ok	1.341	1.281-1.401
1,4-Dioxane	12.85	11.80	1.089	ok	1.088	1.028-1.148
Dichlorodifluoromethane	3.99	9.15	0.436	ok	0.436	0.376-0.496
Dibromochloromethane	16.47	18.86	0.873	ok	0.874	0.814-0.934
trans-1,2-Dichloroethylene	7.66	9.15	0.837	ok	0.837	0.777-0.897
cis-1,2-Dichloroethylene	8.93	9.15	0.976	ok	0.976	0.916-1.036
cis-1,3-Dichloropropene	14.18	11.80	1.202	ok	1.202	1.142-1.262
m-Dichlorobenzene	23.70	18.86	1.257	ok	1.257	1.197-1.317
o-Dichlorobenzene	24.38	18.86	1.293	ok	1.293	1.233-1.353
p-Dichlorobenzene	23.82	18.86	1.263	ok	1.263	1.203-1.323
trans-1,3-Dichloropropene	15.03	11.80	1.274	ok	1.274	1.214-1.334
Ethanol	5.06	9.15	0.553	ok	0.553	0.493-0.613
Ethylbenzene	19.59	18.86	1.039	ok	1.039	0.979-1.099
Ethyl Acetate	9.21	9.15	1.007	ok	1.007	0.947-1.067

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1344-IC1344	Q30928.D	08/03/15 18:53	AA	0.2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30929.D	08/03/15 19:44	AA	0.5	GCMSQ	TO-15	
MSQ1344-IC1344	Q30930.D	08/03/15 20:34	AA	2	GCMSQ	TO-15	Reporting this level
MSQ1344-IC1344	Q30931.D	08/03/15 21:25	AA	5	GCMSQ	TO-15	
MSQ1344-ICC1344	Q30932.D	08/03/15 22:15	AA	10	GCMSQ	TO-15	
MSQ1344-IC1344	Q30933.D	08/03/15 23:06	AA	20	GCMSQ	TO-15	
MSQ1344-IC1344	Q30934.D	08/03/15 23:56	AA	30	GCMSQ	TO-15	
MSQ1344-IC1344	Q30935.D	08/04/15 00:47	AA	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
4-Ethyltoluene	22.69	18.86	1.203	ok	1.204	1.144-1.264
Freon 113	6.87	9.15	0.751	ok	0.751	0.691-0.811
Freon 114	4.25	9.15	0.464	ok	0.465	0.405-0.525
Heptane	13.31	11.80	1.128	ok	1.128	1.068-1.188
Hexachlorobutadiene	27.70	18.86	1.469	ok	1.469	1.409-1.529
Hexane	9.21	9.15	1.007	ok	1.007	0.947-1.067
2-Hexanone	16.27	18.86	0.863	ok	0.862	0.802-0.922
Isopropylbenzene	21.63	18.86	1.147	ok	1.147	1.087-1.207
Isopropyl Alcohol	5.82	9.15	0.636	ok	0.637	0.577-0.697
p-Isopropyltoluene	24.19	18.86	1.283	ok	1.283	1.223-1.343
Methylene chloride	6.57	9.15	0.718	ok	0.718	0.658-0.778
Methyl ethyl ketone	8.37	9.15	0.915	ok	0.915	0.855-0.975
Methyl Isobutyl Ketone	14.26	11.80	1.208	ok	1.208	1.148-1.268
Methyl Tert Butyl Ether	7.97	9.15	0.871	ok	0.871	0.811-0.931
Methylmethacrylate	13.16	11.80	1.115	ok	1.115	1.055-1.175
Naphthalene	27.25	18.86	1.445	ok	1.445	1.385-1.505
Nonane	21.09	18.86	1.118	ok	1.119	1.059-1.179
Pentane	6.13	9.15	0.670	ok	0.670	0.610-0.730
Propylene	3.92	9.15	0.428	ok	0.428	0.368-0.488
Styrene	20.49	18.86	1.086	ok	1.087	1.027-1.147
1,1,1-Trichloroethane	10.65	9.15	1.164	ok	1.164	1.104-1.224
1,1,1,2-Tetrachloroethane	18.91	18.86	1.003	ok	1.003	0.943-1.063
1,1,2,2-Tetrachloroethane	20.64	18.86	1.094	ok	1.095	1.035-1.155
1,1,2-Trichloroethane	15.30	11.80	1.297	ok	1.297	1.237-1.357
1,2,4-Trichlorobenzene	27.11	18.86	1.437	ok	1.438	1.378-1.498
1,2,4-Trimethylbenzene	23.49	18.86	1.245	ok	1.246	1.186-1.306
1,3,5-Trimethylbenzene	22.83	18.86	1.210	ok	1.211	1.151-1.271
2,2,4-Trimethylpentane	12.90	11.80	1.093	ok	1.093	1.033-1.153
Tertiary Butyl Alcohol	6.49	9.15	0.709	ok	0.710	0.650-0.770
tert-Butylbenzene	23.47	18.86	1.244	ok	1.245	1.185-1.305
Tetrachloroethylene	17.74	18.86	0.941	ok	0.941	0.881-1.001
Tetrahydrofuran	9.85	9.15	1.077	ok	1.076	1.016-1.136
Toluene	15.77	11.80	1.336	ok	1.337	1.277-1.397
Trichloroethylene	12.83	11.80	1.087	ok	1.088	1.028-1.148
Trichlorofluoromethane	5.76	9.15	0.630	ok	0.630	0.570-0.690
Vinyl chloride	4.37	9.15	0.478	ok	0.478	0.418-0.538
Vinyl Acetate	8.06	9.15	0.881	ok	0.882	0.822-0.942
m,p-Xylene	19.91	18.86	1.056	ok	1.056	0.996-1.116
o-Xylene	20.66	18.86	1.095	ok	1.096	1.036-1.156

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1344-IC1344	Q30928.D	08/03/15 18:53	AA	0.2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30929.D	08/03/15 19:44	AA	0.5	GCMSQ	TO-15	
MSQ1344-IC1344	Q30930.D	08/03/15 20:34	AA	2	GCMSQ	TO-15	Reporting this level
MSQ1344-IC1344	Q30931.D	08/03/15 21:25	AA	5	GCMSQ	TO-15	
MSQ1344-ICC1344	Q30932.D	08/03/15 22:15	AA	10	GCMSQ	TO-15	
MSQ1344-IC1344	Q30933.D	08/03/15 23:06	AA	20	GCMSQ	TO-15	
MSQ1344-IC1344	Q30934.D	08/03/15 23:56	AA	30	GCMSQ	TO-15	
MSQ1344-IC1344	Q30935.D	08/04/15 00:47	AA	40	GCMSQ	TO-15	

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	9.15	ok	9.15	8.82-9.48	422218	ok	420767	252460-589074
1,4-Difluorobenzene	11.80	ok	11.80	11.47-12.13	1943780	ok	1928277	1156966-2699588
Chlorobenzene-D5	18.86	ok	18.86	18.53-19.19	943478	ok	996697	598018-1395376

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1344-IC1344	Q30928.D	08/03/15 18:53	AA	0.2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30929.D	08/03/15 19:44	AA	0.5	GCMSQ	TO-15	
MSQ1344-IC1344	Q30930.D	08/03/15 20:34	AA	2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30931.D	08/03/15 21:25	AA	5	GCMSQ	TO-15	Reporting this level
MSQ1344-ICC1344	Q30932.D	08/03/15 22:15	AA	10	GCMSQ	TO-15	
MSQ1344-IC1344	Q30933.D	08/03/15 23:06	AA	20	GCMSQ	TO-15	
MSQ1344-IC1344	Q30934.D	08/03/15 23:56	AA	30	GCMSQ	TO-15	
MSQ1344-IC1344	Q30935.D	08/04/15 00:47	AA	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.56	9.15	0.608	ok	0.608	0.548-0.668
Acrolein	5.43	9.15	0.593	ok	0.593	0.533-0.653
Acrylonitrile	6.05	9.15	0.661	ok	0.661	0.601-0.721
1,3-Butadiene	4.51	9.15	0.493	ok	0.493	0.433-0.553
Benzene	11.29	11.80	0.957	ok	0.957	0.897-1.017
Bromodichloromethane	12.77	11.80	1.082	ok	1.082	1.022-1.142
Bromoform	19.98	18.86	1.059	ok	1.059	0.999-1.119
Bromomethane	4.79	9.15	0.523	ok	0.523	0.463-0.583
Bromoethene	5.32	9.15	0.581	ok	0.581	0.521-0.641
n-Butylbenzene	24.89	18.86	1.320	ok	1.320	1.260-1.380
sec-Butylbenzene	23.92	18.86	1.268	ok	1.269	1.209-1.329
Benzyl Chloride	23.69	18.86	1.256	ok	1.256	1.196-1.316
Carbon disulfide	6.93	9.15	0.757	ok	0.757	0.697-0.817
Chlorobenzene	18.93	18.86	1.004	ok	1.004	0.944-1.064
Chloroethane	4.96	9.15	0.542	ok	0.542	0.482-0.602
Chloroform	9.31	9.15	1.017	ok	1.018	0.958-1.078
Chloromethane	4.16	9.15	0.455	ok	0.454	0.394-0.514
3-Chloropropene	6.71	9.15	0.733	ok	0.733	0.673-0.793
2-Chlorotoluene	22.37	18.86	1.186	ok	1.186	1.126-1.246
Carbon tetrachloride	11.50	9.15	1.257	ok	1.257	1.197-1.317
Cyclohexane	11.68	11.80	0.990	ok	0.990	0.930-1.050
1,1-Dichloroethane	7.90	9.15	0.863	ok	0.863	0.803-0.923
1,1-Dichloroethylene	6.45	9.15	0.705	ok	0.705	0.645-0.765
1,2-Dibromoethane	16.89	18.86	0.896	ok	0.896	0.836-0.956
1,2-Dichloroethane	10.29	9.15	1.125	ok	1.125	1.065-1.185
1,2-Dichloropropane	12.48	11.80	1.058	ok	1.058	0.998-1.118
1,3-Dichloropropane	15.82	11.80	1.341	ok	1.341	1.281-1.401
1,4-Dioxane	12.83	11.80	1.087	ok	1.088	1.028-1.148
Dichlorodifluoromethane	3.99	9.15	0.436	ok	0.436	0.376-0.496
Dibromochloromethane	16.47	18.86	0.873	ok	0.874	0.814-0.934
trans-1,2-Dichloroethylene	7.66	9.15	0.837	ok	0.837	0.777-0.897
cis-1,2-Dichloroethylene	8.93	9.15	0.976	ok	0.976	0.916-1.036
cis-1,3-Dichloropropene	14.18	11.80	1.202	ok	1.202	1.142-1.262
m-Dichlorobenzene	23.71	18.86	1.257	ok	1.257	1.197-1.317
o-Dichlorobenzene	24.38	18.86	1.293	ok	1.293	1.233-1.353
p-Dichlorobenzene	23.82	18.86	1.263	ok	1.263	1.203-1.323
trans-1,3-Dichloropropene	15.03	11.80	1.274	ok	1.274	1.214-1.334
Ethanol	5.06	9.15	0.553	ok	0.553	0.493-0.613
Ethylbenzene	19.60	18.86	1.039	ok	1.039	0.979-1.099
Ethyl Acetate	9.21	9.15	1.007	ok	1.007	0.947-1.067

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1344-IC1344	Q30928.D	08/03/15 18:53	AA	0.2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30929.D	08/03/15 19:44	AA	0.5	GCMSQ	TO-15	
MSQ1344-IC1344	Q30930.D	08/03/15 20:34	AA	2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30931.D	08/03/15 21:25	AA	5	GCMSQ	TO-15	Reporting this level
MSQ1344-ICC1344	Q30932.D	08/03/15 22:15	AA	10	GCMSQ	TO-15	
MSQ1344-IC1344	Q30933.D	08/03/15 23:06	AA	20	GCMSQ	TO-15	
MSQ1344-IC1344	Q30934.D	08/03/15 23:56	AA	30	GCMSQ	TO-15	
MSQ1344-IC1344	Q30935.D	08/04/15 00:47	AA	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
4-Ethyltoluene	22.69	18.86	1.203	ok	1.204	1.144-1.264
Freon 113	6.87	9.15	0.751	ok	0.751	0.691-0.811
Freon 114	4.26	9.15	0.466	ok	0.465	0.405-0.525
Heptane	13.32	11.80	1.129	ok	1.128	1.068-1.188
Hexachlorobutadiene	27.70	18.86	1.469	ok	1.469	1.409-1.529
Hexane	9.21	9.15	1.007	ok	1.007	0.947-1.067
2-Hexanone	16.25	18.86	0.862	ok	0.862	0.802-0.922
Isopropylbenzene	21.63	18.86	1.147	ok	1.147	1.087-1.207
Isopropyl Alcohol	5.81	9.15	0.635	ok	0.637	0.577-0.697
p-Isopropyltoluene	24.19	18.86	1.283	ok	1.283	1.223-1.343
Methylene chloride	6.57	9.15	0.718	ok	0.718	0.658-0.778
Methyl ethyl ketone	8.37	9.15	0.915	ok	0.915	0.855-0.975
Methyl Isobutyl Ketone	14.25	11.80	1.208	ok	1.208	1.148-1.268
Methyl Tert Butyl Ether	7.97	9.15	0.871	ok	0.871	0.811-0.931
Methylmethacrylate	13.16	11.80	1.115	ok	1.115	1.055-1.175
Naphthalene	27.25	18.86	1.445	ok	1.445	1.385-1.505
Nonane	21.09	18.86	1.118	ok	1.119	1.059-1.179
Pentane	6.14	9.15	0.671	ok	0.670	0.610-0.730
Propylene	3.92	9.15	0.428	ok	0.428	0.368-0.488
Styrene	20.49	18.86	1.086	ok	1.087	1.027-1.147
1,1,1-Trichloroethane	10.65	9.15	1.164	ok	1.164	1.104-1.224
1,1,1,2-Tetrachloroethane	18.91	18.86	1.003	ok	1.003	0.943-1.063
1,1,2,2-Tetrachloroethane	20.64	18.86	1.094	ok	1.095	1.035-1.155
1,1,2-Trichloroethane	15.30	11.80	1.297	ok	1.297	1.237-1.357
1,2,4-Trichlorobenzene	27.11	18.86	1.437	ok	1.438	1.378-1.498
1,2,4-Trimethylbenzene	23.49	18.86	1.245	ok	1.246	1.186-1.306
1,3,5-Trimethylbenzene	22.83	18.86	1.210	ok	1.211	1.151-1.271
2,2,4-Trimethylpentane	12.90	11.80	1.093	ok	1.093	1.033-1.153
Tertiary Butyl Alcohol	6.48	9.15	0.708	ok	0.710	0.650-0.770
tert-Butylbenzene	23.47	18.86	1.244	ok	1.245	1.185-1.305
Tetrachloroethylene	17.74	18.86	0.941	ok	0.941	0.881-1.001
Tetrahydrofuran	9.84	9.15	1.075	ok	1.076	1.016-1.136
Toluene	15.77	11.80	1.336	ok	1.337	1.277-1.397
Trichloroethylene	12.84	11.80	1.088	ok	1.088	1.028-1.148
Trichlorofluoromethane	5.76	9.15	0.630	ok	0.630	0.570-0.690
Vinyl chloride	4.38	9.15	0.479	ok	0.478	0.418-0.538
Vinyl Acetate	8.07	9.15	0.882	ok	0.882	0.822-0.942
m,p-Xylene	19.92	18.86	1.056	ok	1.056	0.996-1.116
o-Xylene	20.66	18.86	1.095	ok	1.096	1.036-1.156

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1344-IC1344	Q30928.D	08/03/15 18:53	AA	0.2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30929.D	08/03/15 19:44	AA	0.5	GCMSQ	TO-15	
MSQ1344-IC1344	Q30930.D	08/03/15 20:34	AA	2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30931.D	08/03/15 21:25	AA	5	GCMSQ	TO-15	Reporting this level
MSQ1344-ICC1344	Q30932.D	08/03/15 22:15	AA	10	GCMSQ	TO-15	
MSQ1344-IC1344	Q30933.D	08/03/15 23:06	AA	20	GCMSQ	TO-15	
MSQ1344-IC1344	Q30934.D	08/03/15 23:56	AA	30	GCMSQ	TO-15	
MSQ1344-IC1344	Q30935.D	08/04/15 00:47	AA	40	GCMSQ	TO-15	

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	9.15	ok	9.15	8.82-9.48	428219	ok	420767	252460-589074
1,4-Difluorobenzene	11.80	ok	11.80	11.47-12.13	2002512	ok	1928277	1156966-2699588
Chlorobenzene-D5	18.86	ok	18.86	18.53-19.19	984228	ok	996697	598018-1395376

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1344-IC1344	Q30928.D	08/03/15 18:53	AA	0.2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30929.D	08/03/15 19:44	AA	0.5	GCMSQ	TO-15	
MSQ1344-IC1344	Q30930.D	08/03/15 20:34	AA	2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30931.D	08/03/15 21:25	AA	5	GCMSQ	TO-15	
MSQ1344-ICC1344	Q30932.D	08/03/15 22:15	AA	10	GCMSQ	TO-15	Reporting this level
MSQ1344-IC1344	Q30933.D	08/03/15 23:06	AA	20	GCMSQ	TO-15	
MSQ1344-IC1344	Q30934.D	08/03/15 23:56	AA	30	GCMSQ	TO-15	
MSQ1344-IC1344	Q30935.D	08/04/15 00:47	AA	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.55	9.15	0.607	ok	0.608	0.548-0.668
Acrolein	5.42	9.15	0.592	ok	0.593	0.533-0.653
Acrylonitrile	6.04	9.15	0.660	ok	0.661	0.601-0.721
1,3-Butadiene	4.51	9.15	0.493	ok	0.493	0.433-0.553
Benzene	11.29	11.80	0.957	ok	0.957	0.897-1.017
Bromodichloromethane	12.77	11.80	1.082	ok	1.082	1.022-1.142
Bromoform	19.98	18.86	1.059	ok	1.059	0.999-1.119
Bromomethane	4.78	9.15	0.522	ok	0.523	0.463-0.583
Bromoethene	5.32	9.15	0.581	ok	0.581	0.521-0.641
n-Butylbenzene	24.89	18.86	1.320	ok	1.320	1.260-1.380
sec-Butylbenzene	23.92	18.86	1.268	ok	1.269	1.209-1.329
Benzyl Chloride	23.69	18.86	1.256	ok	1.256	1.196-1.316
Carbon disulfide	6.92	9.15	0.756	ok	0.757	0.697-0.817
Chlorobenzene	18.93	18.86	1.004	ok	1.004	0.944-1.064
Chloroethane	4.95	9.15	0.541	ok	0.542	0.482-0.602
Chloroform	9.31	9.15	1.017	ok	1.018	0.958-1.078
Chloromethane	4.15	9.15	0.454	ok	0.454	0.394-0.514
3-Chloropropene	6.70	9.15	0.732	ok	0.733	0.673-0.793
2-Chlorotoluene	22.37	18.86	1.186	ok	1.186	1.126-1.246
Carbon tetrachloride	11.50	9.15	1.257	ok	1.257	1.197-1.317
Cyclohexane	11.68	11.80	0.990	ok	0.990	0.930-1.050
1,1-Dichloroethane	7.89	9.15	0.862	ok	0.863	0.803-0.923
1,1-Dichloroethylene	6.44	9.15	0.704	ok	0.705	0.645-0.765
1,2-Dibromoethane	16.90	18.86	0.896	ok	0.896	0.836-0.956
1,2-Dichloroethane	10.29	9.15	1.125	ok	1.125	1.065-1.185
1,2-Dichloropropane	12.48	11.80	1.058	ok	1.058	0.998-1.118
1,3-Dichloropropane	15.82	11.80	1.341	ok	1.341	1.281-1.401
1,4-Dioxane	12.83	11.80	1.087	ok	1.088	1.028-1.148
Dichlorodifluoromethane	3.99	9.15	0.436	ok	0.436	0.376-0.496
Dibromochloromethane	16.47	18.86	0.873	ok	0.874	0.814-0.934
trans-1,2-Dichloroethylene	7.65	9.15	0.836	ok	0.837	0.777-0.897
cis-1,2-Dichloroethylene	8.93	9.15	0.976	ok	0.976	0.916-1.036
cis-1,3-Dichloropropene	14.18	11.80	1.202	ok	1.202	1.142-1.262
m-Dichlorobenzene	23.71	18.86	1.257	ok	1.257	1.197-1.317
o-Dichlorobenzene	24.38	18.86	1.293	ok	1.293	1.233-1.353
p-Dichlorobenzene	23.83	18.86	1.264	ok	1.263	1.203-1.323
trans-1,3-Dichloropropene	15.03	11.80	1.274	ok	1.274	1.214-1.334
Ethanol	5.06	9.15	0.553	ok	0.553	0.493-0.613
Ethylbenzene	19.60	18.86	1.039	ok	1.039	0.979-1.099
Ethyl Acetate	9.21	9.15	1.007	ok	1.007	0.947-1.067

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1344-IC1344	Q30928.D	08/03/15 18:53	AA	0.2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30929.D	08/03/15 19:44	AA	0.5	GCMSQ	TO-15	
MSQ1344-IC1344	Q30930.D	08/03/15 20:34	AA	2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30931.D	08/03/15 21:25	AA	5	GCMSQ	TO-15	
MSQ1344-ICC1344	Q30932.D	08/03/15 22:15	AA	10	GCMSQ	TO-15	Reporting this level
MSQ1344-IC1344	Q30933.D	08/03/15 23:06	AA	20	GCMSQ	TO-15	
MSQ1344-IC1344	Q30934.D	08/03/15 23:56	AA	30	GCMSQ	TO-15	
MSQ1344-IC1344	Q30935.D	08/04/15 00:47	AA	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
4-Ethyltoluene	22.69	18.86	1.203	ok	1.204	1.144-1.264
Freon 113	6.87	9.15	0.751	ok	0.751	0.691-0.811
Freon 114	4.25	9.15	0.464	ok	0.465	0.405-0.525
Heptane	13.32	11.80	1.129	ok	1.128	1.068-1.188
Hexachlorobutadiene	27.70	18.86	1.469	ok	1.469	1.409-1.529
Hexane	9.21	9.15	1.007	ok	1.007	0.947-1.067
2-Hexanone	16.24	18.86	0.861	ok	0.862	0.802-0.922
Isopropylbenzene	21.63	18.86	1.147	ok	1.147	1.087-1.207
Isopropyl Alcohol	5.81	9.15	0.635	ok	0.637	0.577-0.697
p-Isopropyltoluene	24.20	18.86	1.283	ok	1.283	1.223-1.343
Methylene chloride	6.57	9.15	0.718	ok	0.718	0.658-0.778
Methyl ethyl ketone	8.36	9.15	0.914	ok	0.915	0.855-0.975
Methyl Isobutyl Ketone	14.24	11.80	1.207	ok	1.208	1.148-1.268
Methyl Tert Butyl Ether	7.96	9.15	0.870	ok	0.871	0.811-0.931
Methylmethacrylate	13.16	11.80	1.115	ok	1.115	1.055-1.175
Naphthalene	27.25	18.86	1.445	ok	1.445	1.385-1.505
Nonane	21.09	18.86	1.118	ok	1.119	1.059-1.179
Pentane	6.13	9.15	0.670	ok	0.670	0.610-0.730
Propylene	3.92	9.15	0.428	ok	0.428	0.368-0.488
Styrene	20.49	18.86	1.086	ok	1.087	1.027-1.147
1,1,1-Trichloroethane	10.65	9.15	1.164	ok	1.164	1.104-1.224
1,1,1,2-Tetrachloroethane	18.91	18.86	1.003	ok	1.003	0.943-1.063
1,1,2,2-Tetrachloroethane	20.65	18.86	1.095	ok	1.095	1.035-1.155
1,1,2-Trichloroethane	15.30	11.80	1.297	ok	1.297	1.237-1.357
1,2,4-Trichlorobenzene	27.11	18.86	1.437	ok	1.438	1.378-1.498
1,2,4-Trimethylbenzene	23.49	18.86	1.245	ok	1.246	1.186-1.306
1,3,5-Trimethylbenzene	22.83	18.86	1.210	ok	1.211	1.151-1.271
2,2,4-Trimethylpentane	12.90	11.80	1.093	ok	1.093	1.033-1.153
Tertiary Butyl Alcohol	6.46	9.15	0.706	ok	0.710	0.650-0.770
tert-Butylbenzene	23.47	18.86	1.244	ok	1.245	1.185-1.305
Tetrachloroethylene	17.74	18.86	0.941	ok	0.941	0.881-1.001
Tetrahydrofuran	9.84	9.15	1.075	ok	1.076	1.016-1.136
Toluene	15.77	11.80	1.336	ok	1.337	1.277-1.397
Trichloroethylene	12.83	11.80	1.087	ok	1.088	1.028-1.148
Trichlorofluoromethane	5.76	9.15	0.630	ok	0.630	0.570-0.690
Vinyl chloride	4.37	9.15	0.478	ok	0.478	0.418-0.538
Vinyl Acetate	8.06	9.15	0.881	ok	0.882	0.822-0.942
m,p-Xylene	19.92	18.86	1.056	ok	1.056	0.996-1.116
o-Xylene	20.66	18.86	1.095	ok	1.096	1.036-1.156

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1344-IC1344	Q30928.D	08/03/15 18:53	AA	0.2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30929.D	08/03/15 19:44	AA	0.5	GCMSQ	TO-15	
MSQ1344-IC1344	Q30930.D	08/03/15 20:34	AA	2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30931.D	08/03/15 21:25	AA	5	GCMSQ	TO-15	
MSQ1344-ICC1344	Q30932.D	08/03/15 22:15	AA	10	GCMSQ	TO-15	Reporting this level
MSQ1344-IC1344	Q30933.D	08/03/15 23:06	AA	20	GCMSQ	TO-15	
MSQ1344-IC1344	Q30934.D	08/03/15 23:56	AA	30	GCMSQ	TO-15	
MSQ1344-IC1344	Q30935.D	08/04/15 00:47	AA	40	GCMSQ	TO-15	

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	9.15	ok	9.15	8.82-9.48	420601	ok	420767	252460-589074
1,4-Difluorobenzene	11.80	ok	11.80	11.47-12.13	1890207	ok	1928277	1156966-2699588
Chlorobenzene-D5	18.86	ok	18.86	18.53-19.19	976285	ok	996697	598018-1395376

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1344-IC1344	Q30928.D	08/03/15 18:53	AA	0.2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30929.D	08/03/15 19:44	AA	0.5	GCMSQ	TO-15	
MSQ1344-IC1344	Q30930.D	08/03/15 20:34	AA	2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30931.D	08/03/15 21:25	AA	5	GCMSQ	TO-15	
MSQ1344-ICC1344	Q30932.D	08/03/15 22:15	AA	10	GCMSQ	TO-15	
MSQ1344-IC1344	Q30933.D	08/03/15 23:06	AA	20	GCMSQ	TO-15	Reporting this level
MSQ1344-IC1344	Q30934.D	08/03/15 23:56	AA	30	GCMSQ	TO-15	
MSQ1344-IC1344	Q30935.D	08/04/15 00:47	AA	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.56	9.15	0.608	ok	0.608	0.548-0.668
Acrolein	5.42	9.15	0.592	ok	0.593	0.533-0.653
Acrylonitrile	6.05	9.15	0.661	ok	0.661	0.601-0.721
1,3-Butadiene	4.51	9.15	0.493	ok	0.493	0.433-0.553
Benzene	11.29	11.80	0.957	ok	0.957	0.897-1.017
Bromodichloromethane	12.77	11.80	1.082	ok	1.082	1.022-1.142
Bromoform	19.99	18.86	1.060	ok	1.059	0.999-1.119
Bromomethane	4.79	9.15	0.523	ok	0.523	0.463-0.583
Bromoethene	5.32	9.15	0.581	ok	0.581	0.521-0.641
n-Butylbenzene	24.89	18.86	1.320	ok	1.320	1.260-1.380
sec-Butylbenzene	23.92	18.86	1.268	ok	1.269	1.209-1.329
Benzyl Chloride	23.69	18.86	1.256	ok	1.256	1.196-1.316
Carbon disulfide	6.92	9.15	0.756	ok	0.757	0.697-0.817
Chlorobenzene	18.94	18.86	1.004	ok	1.004	0.944-1.064
Chloroethane	4.96	9.15	0.542	ok	0.542	0.482-0.602
Chloroform	9.32	9.15	1.019	ok	1.018	0.958-1.078
Chloromethane	4.15	9.15	0.454	ok	0.454	0.394-0.514
3-Chloropropene	6.71	9.15	0.733	ok	0.733	0.673-0.793
2-Chlorotoluene	22.38	18.86	1.187	ok	1.186	1.126-1.246
Carbon tetrachloride	11.51	9.15	1.258	ok	1.257	1.197-1.317
Cyclohexane	11.69	11.80	0.991	ok	0.990	0.930-1.050
1,1-Dichloroethane	7.90	9.15	0.863	ok	0.863	0.803-0.923
1,1-Dichloroethylene	6.45	9.15	0.705	ok	0.705	0.645-0.765
1,2-Dibromoethane	16.91	18.86	0.897	ok	0.896	0.836-0.956
1,2-Dichloroethane	10.30	9.15	1.126	ok	1.125	1.065-1.185
1,2-Dichloropropane	12.48	11.80	1.058	ok	1.058	0.998-1.118
1,3-Dichloropropane	15.82	11.80	1.341	ok	1.341	1.281-1.401
1,4-Dioxane	12.83	11.80	1.087	ok	1.088	1.028-1.148
Dichlorodifluoromethane	3.99	9.15	0.436	ok	0.436	0.376-0.496
Dibromochloromethane	16.48	18.86	0.874	ok	0.874	0.814-0.934
trans-1,2-Dichloroethylene	7.66	9.15	0.837	ok	0.837	0.777-0.897
cis-1,2-Dichloroethylene	8.93	9.15	0.976	ok	0.976	0.916-1.036
cis-1,3-Dichloropropene	14.18	11.80	1.202	ok	1.202	1.142-1.262
m-Dichlorobenzene	23.71	18.86	1.257	ok	1.257	1.197-1.317
o-Dichlorobenzene	24.38	18.86	1.293	ok	1.293	1.233-1.353
p-Dichlorobenzene	23.83	18.86	1.264	ok	1.263	1.203-1.323
trans-1,3-Dichloropropene	15.04	11.80	1.275	ok	1.274	1.214-1.334
Ethanol	5.06	9.15	0.553	ok	0.553	0.493-0.613
Ethylbenzene	19.60	18.86	1.039	ok	1.039	0.979-1.099
Ethyl Acetate	9.21	9.15	1.007	ok	1.007	0.947-1.067

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1344-IC1344	Q30928.D	08/03/15 18:53	AA	0.2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30929.D	08/03/15 19:44	AA	0.5	GCMSQ	TO-15	
MSQ1344-IC1344	Q30930.D	08/03/15 20:34	AA	2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30931.D	08/03/15 21:25	AA	5	GCMSQ	TO-15	
MSQ1344-ICC1344	Q30932.D	08/03/15 22:15	AA	10	GCMSQ	TO-15	
MSQ1344-IC1344	Q30933.D	08/03/15 23:06	AA	20	GCMSQ	TO-15	Reporting this level
MSQ1344-IC1344	Q30934.D	08/03/15 23:56	AA	30	GCMSQ	TO-15	
MSQ1344-IC1344	Q30935.D	08/04/15 00:47	AA	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
4-Ethyltoluene	22.70	18.86	1.204	ok	1.204	1.144-1.264
Freon 113	6.87	9.15	0.751	ok	0.751	0.691-0.811
Freon 114	4.25	9.15	0.464	ok	0.465	0.405-0.525
Heptane	13.32	11.80	1.129	ok	1.128	1.068-1.188
Hexachlorobutadiene	27.70	18.86	1.469	ok	1.469	1.409-1.529
Hexane	9.21	9.15	1.007	ok	1.007	0.947-1.067
2-Hexanone	16.25	18.86	0.862	ok	0.862	0.802-0.922
Isopropylbenzene	21.63	18.86	1.147	ok	1.147	1.087-1.207
Isopropyl Alcohol	5.81	9.15	0.635	ok	0.637	0.577-0.697
p-Isopropyltoluene	24.20	18.86	1.283	ok	1.283	1.223-1.343
Methylene chloride	6.57	9.15	0.718	ok	0.718	0.658-0.778
Methyl ethyl ketone	8.37	9.15	0.915	ok	0.915	0.855-0.975
Methyl Isobutyl Ketone	14.24	11.80	1.207	ok	1.208	1.148-1.268
Methyl Tert Butyl Ether	7.96	9.15	0.870	ok	0.871	0.811-0.931
Methylmethacrylate	13.16	11.80	1.115	ok	1.115	1.055-1.175
Naphthalene	27.25	18.86	1.445	ok	1.445	1.385-1.505
Nonane	21.10	18.86	1.119	ok	1.119	1.059-1.179
Pentane	6.13	9.15	0.670	ok	0.670	0.610-0.730
Propylene	3.92	9.15	0.428	ok	0.428	0.368-0.488
Styrene	20.49	18.86	1.086	ok	1.087	1.027-1.147
1,1,1-Trichloroethane	10.65	9.15	1.164	ok	1.164	1.104-1.224
1,1,1,2-Tetrachloroethane	18.91	18.86	1.003	ok	1.003	0.943-1.063
1,1,2,2-Tetrachloroethane	20.65	18.86	1.095	ok	1.095	1.035-1.155
1,1,2-Trichloroethane	15.31	11.80	1.297	ok	1.297	1.237-1.357
1,2,4-Trichlorobenzene	27.11	18.86	1.437	ok	1.438	1.378-1.498
1,2,4-Trimethylbenzene	23.49	18.86	1.245	ok	1.246	1.186-1.306
1,3,5-Trimethylbenzene	22.83	18.86	1.210	ok	1.211	1.151-1.271
2,2,4-Trimethylpentane	12.91	11.80	1.094	ok	1.093	1.033-1.153
Tertiary Butyl Alcohol	6.47	9.15	0.707	ok	0.710	0.650-0.770
tert-Butylbenzene	23.48	18.86	1.245	ok	1.245	1.185-1.305
Tetrachloroethylene	17.74	18.86	0.941	ok	0.941	0.881-1.001
Tetrahydrofuran	9.83	9.15	1.074	ok	1.076	1.016-1.136
Toluene	15.78	11.80	1.337	ok	1.337	1.277-1.397
Trichloroethylene	12.84	11.80	1.088	ok	1.088	1.028-1.148
Trichlorofluoromethane	5.76	9.15	0.630	ok	0.630	0.570-0.690
Vinyl chloride	4.37	9.15	0.478	ok	0.478	0.418-0.538
Vinyl Acetate	8.07	9.15	0.882	ok	0.882	0.822-0.942
m,p-Xylene	19.92	18.86	1.056	ok	1.056	0.996-1.116
o-Xylene	20.67	18.86	1.096	ok	1.096	1.036-1.156

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1344-IC1344	Q30928.D	08/03/15 18:53	AA	0.2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30929.D	08/03/15 19:44	AA	0.5	GCMSQ	TO-15	
MSQ1344-IC1344	Q30930.D	08/03/15 20:34	AA	2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30931.D	08/03/15 21:25	AA	5	GCMSQ	TO-15	
MSQ1344-ICC1344	Q30932.D	08/03/15 22:15	AA	10	GCMSQ	TO-15	
MSQ1344-IC1344	Q30933.D	08/03/15 23:06	AA	20	GCMSQ	TO-15	Reporting this level
MSQ1344-IC1344	Q30934.D	08/03/15 23:56	AA	30	GCMSQ	TO-15	
MSQ1344-IC1344	Q30935.D	08/04/15 00:47	AA	40	GCMSQ	TO-15	

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	9.15	ok	9.15	8.82-9.48	428058	ok	420767	252460-589074
1,4-Difluorobenzene	11.80	ok	11.80	11.47-12.13	2018711	ok	1928277	1156966-2699588
Chlorobenzene-D5	18.86	ok	18.86	18.53-19.19	1060160	ok	996697	598018-1395376

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1344-IC1344	Q30928.D	08/03/15 18:53	AA	0.2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30929.D	08/03/15 19:44	AA	0.5	GCMSQ	TO-15	
MSQ1344-IC1344	Q30930.D	08/03/15 20:34	AA	2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30931.D	08/03/15 21:25	AA	5	GCMSQ	TO-15	
MSQ1344-ICC1344	Q30932.D	08/03/15 22:15	AA	10	GCMSQ	TO-15	
MSQ1344-IC1344	Q30933.D	08/03/15 23:06	AA	20	GCMSQ	TO-15	
MSQ1344-IC1344	Q30934.D	08/03/15 23:56	AA	30	GCMSQ	TO-15	Reporting this level
MSQ1344-IC1344	Q30935.D	08/04/15 00:47	AA	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.56	9.15	0.608	ok	0.608	0.548-0.668
Acrolein	5.42	9.15	0.592	ok	0.593	0.533-0.653
Acrylonitrile	6.06	9.15	0.662	ok	0.661	0.601-0.721
1,3-Butadiene	4.51	9.15	0.493	ok	0.493	0.433-0.553
Benzene	11.30	11.81	0.957	ok	0.957	0.897-1.017
Bromodichloromethane	12.78	11.81	1.082	ok	1.082	1.022-1.142
Bromoform	19.99	18.86	1.060	ok	1.059	0.999-1.119
Bromomethane	4.79	9.15	0.523	ok	0.523	0.463-0.583
Bromoethene	5.32	9.15	0.581	ok	0.581	0.521-0.641
n-Butylbenzene	24.90	18.86	1.320	ok	1.320	1.260-1.380
sec-Butylbenzene	23.93	18.86	1.269	ok	1.269	1.209-1.329
Benzyl Chloride	23.70	18.86	1.257	ok	1.256	1.196-1.316
Carbon disulfide	6.93	9.15	0.757	ok	0.757	0.697-0.817
Chlorobenzene	18.94	18.86	1.004	ok	1.004	0.944-1.064
Chloroethane	4.96	9.15	0.542	ok	0.542	0.482-0.602
Chloroform	9.32	9.15	1.019	ok	1.018	0.958-1.078
Chloromethane	4.15	9.15	0.454	ok	0.454	0.394-0.514
3-Chloropropene	6.71	9.15	0.733	ok	0.733	0.673-0.793
2-Chlorotoluene	22.38	18.86	1.187	ok	1.186	1.126-1.246
Carbon tetrachloride	11.51	9.15	1.258	ok	1.257	1.197-1.317
Cyclohexane	11.69	11.81	0.990	ok	0.990	0.930-1.050
1,1-Dichloroethane	7.90	9.15	0.863	ok	0.863	0.803-0.923
1,1-Dichloroethylene	6.45	9.15	0.705	ok	0.705	0.645-0.765
1,2-Dibromoethane	16.91	18.86	0.897	ok	0.896	0.836-0.956
1,2-Dichloroethane	10.30	9.15	1.126	ok	1.125	1.065-1.185
1,2-Dichloropropane	12.49	11.81	1.058	ok	1.058	0.998-1.118
1,3-Dichloropropane	15.83	11.81	1.340	ok	1.341	1.281-1.401
1,4-Dioxane	12.83	11.81	1.086	ok	1.088	1.028-1.148
Dichlorodifluoromethane	4.00	9.15	0.437	ok	0.436	0.376-0.496
Dibromochloromethane	16.49	18.86	0.874	ok	0.874	0.814-0.934
trans-1,2-Dichloroethylene	7.66	9.15	0.837	ok	0.837	0.777-0.897
cis-1,2-Dichloroethylene	8.94	9.15	0.977	ok	0.976	0.916-1.036
cis-1,3-Dichloropropene	14.19	11.81	1.202	ok	1.202	1.142-1.262
m-Dichlorobenzene	23.72	18.86	1.258	ok	1.257	1.197-1.317
o-Dichlorobenzene	24.39	18.86	1.293	ok	1.293	1.233-1.353
p-Dichlorobenzene	23.83	18.86	1.264	ok	1.263	1.203-1.323
trans-1,3-Dichloropropene	15.04	11.81	1.273	ok	1.274	1.214-1.334
Ethanol	5.06	9.15	0.553	ok	0.553	0.493-0.613
Ethylbenzene	19.60	18.86	1.039	ok	1.039	0.979-1.099
Ethyl Acetate	9.22	9.15	1.008	ok	1.007	0.947-1.067

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1344-IC1344	Q30928.D	08/03/15 18:53	AA	0.2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30929.D	08/03/15 19:44	AA	0.5	GCMSQ	TO-15	
MSQ1344-IC1344	Q30930.D	08/03/15 20:34	AA	2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30931.D	08/03/15 21:25	AA	5	GCMSQ	TO-15	
MSQ1344-ICC1344	Q30932.D	08/03/15 22:15	AA	10	GCMSQ	TO-15	
MSQ1344-IC1344	Q30933.D	08/03/15 23:06	AA	20	GCMSQ	TO-15	
MSQ1344-IC1344	Q30934.D	08/03/15 23:56	AA	30	GCMSQ	TO-15	Reporting this level
MSQ1344-IC1344	Q30935.D	08/04/15 00:47	AA	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
4-Ethyltoluene	22.70	18.86	1.204	ok	1.204	1.144-1.264
Freon 113	6.87	9.15	0.751	ok	0.751	0.691-0.811
Freon 114	4.25	9.15	0.464	ok	0.465	0.405-0.525
Heptane	13.32	11.81	1.128	ok	1.128	1.068-1.188
Hexachlorobutadiene	27.70	18.86	1.469	ok	1.469	1.409-1.529
Hexane	9.21	9.15	1.007	ok	1.007	0.947-1.067
2-Hexanone	16.25	18.86	0.862	ok	0.862	0.802-0.922
Isopropylbenzene	21.63	18.86	1.147	ok	1.147	1.087-1.207
Isopropyl Alcohol	5.81	9.15	0.635	ok	0.637	0.577-0.697
p-Isopropyltoluene	24.20	18.86	1.283	ok	1.283	1.223-1.343
Methylene chloride	6.57	9.15	0.718	ok	0.718	0.658-0.778
Methyl ethyl ketone	8.37	9.15	0.915	ok	0.915	0.855-0.975
Methyl Isobutyl Ketone	14.25	11.81	1.207	ok	1.208	1.148-1.268
Methyl Tert Butyl Ether	7.96	9.15	0.870	ok	0.871	0.811-0.931
Methylmethacrylate	13.16	11.81	1.114	ok	1.115	1.055-1.175
Naphthalene	27.25	18.86	1.445	ok	1.445	1.385-1.505
Nonane	21.10	18.86	1.119	ok	1.119	1.059-1.179
Pentane	6.13	9.15	0.670	ok	0.670	0.610-0.730
Propylene	3.92	9.15	0.428	ok	0.428	0.368-0.488
Styrene	20.50	18.86	1.087	ok	1.087	1.027-1.147
1,1,1-Trichloroethane	10.65	9.15	1.164	ok	1.164	1.104-1.224
1,1,1,2-Tetrachloroethane	18.92	18.86	1.003	ok	1.003	0.943-1.063
1,1,2,2-Tetrachloroethane	20.66	18.86	1.095	ok	1.095	1.035-1.155
1,1,2-Trichloroethane	15.32	11.81	1.297	ok	1.297	1.237-1.357
1,2,4-Trichlorobenzene	27.11	18.86	1.437	ok	1.438	1.378-1.498
1,2,4-Trimethylbenzene	23.50	18.86	1.246	ok	1.246	1.186-1.306
1,3,5-Trimethylbenzene	22.83	18.86	1.210	ok	1.211	1.151-1.271
2,2,4-Trimethylpentane	12.91	11.81	1.093	ok	1.093	1.033-1.153
Tertiary Butyl Alcohol	6.47	9.15	0.707	ok	0.710	0.650-0.770
tert-Butylbenzene	23.49	18.86	1.245	ok	1.245	1.185-1.305
Tetrachloroethylene	17.75	18.86	0.941	ok	0.941	0.881-1.001
Tetrahydrofuran	9.83	9.15	1.074	ok	1.076	1.016-1.136
Toluene	15.78	11.81	1.336	ok	1.337	1.277-1.397
Trichloroethylene	12.85	11.81	1.088	ok	1.088	1.028-1.148
Trichlorofluoromethane	5.76	9.15	0.630	ok	0.630	0.570-0.690
Vinyl chloride	4.37	9.15	0.478	ok	0.478	0.418-0.538
Vinyl Acetate	8.07	9.15	0.882	ok	0.882	0.822-0.942
m,p-Xylene	19.92	18.86	1.056	ok	1.056	0.996-1.116
o-Xylene	20.67	18.86	1.096	ok	1.096	1.036-1.156

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1344-IC1344	Q30928.D	08/03/15 18:53	AA	0.2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30929.D	08/03/15 19:44	AA	0.5	GCMSQ	TO-15	
MSQ1344-IC1344	Q30930.D	08/03/15 20:34	AA	2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30931.D	08/03/15 21:25	AA	5	GCMSQ	TO-15	
MSQ1344-ICC1344	Q30932.D	08/03/15 22:15	AA	10	GCMSQ	TO-15	
MSQ1344-IC1344	Q30933.D	08/03/15 23:06	AA	20	GCMSQ	TO-15	
MSQ1344-IC1344	Q30934.D	08/03/15 23:56	AA	30	GCMSQ	TO-15	Reporting this level
MSQ1344-IC1344	Q30935.D	08/04/15 00:47	AA	40	GCMSQ	TO-15	

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	9.15	ok	9.15	8.82-9.48	424545	ok	420767	252460-589074
1,4-Difluorobenzene	11.81	ok	11.80	11.47-12.13	1955156	ok	1928277	1156966-2699588
Chlorobenzene-D5	18.86	ok	18.86	18.53-19.19	1071714	ok	996697	598018-1395376

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1344-IC1344	Q30928.D	08/03/15 18:53	AA	0.2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30929.D	08/03/15 19:44	AA	0.5	GCMSQ	TO-15	
MSQ1344-IC1344	Q30930.D	08/03/15 20:34	AA	2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30931.D	08/03/15 21:25	AA	5	GCMSQ	TO-15	
MSQ1344-ICC1344	Q30932.D	08/03/15 22:15	AA	10	GCMSQ	TO-15	
MSQ1344-IC1344	Q30933.D	08/03/15 23:06	AA	20	GCMSQ	TO-15	
MSQ1344-IC1344	Q30934.D	08/03/15 23:56	AA	30	GCMSQ	TO-15	
MSQ1344-IC1344	Q30935.D	08/04/15 00:47	AA	40	GCMSQ	TO-15	Reporting this level

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.56	9.16	0.607	ok	0.608	0.548-0.668
Acrolein	5.43	9.16	0.593	ok	0.593	0.533-0.653
Acrylonitrile	6.06	9.16	0.662	ok	0.661	0.601-0.721
1,3-Butadiene	4.51	9.16	0.492	ok	0.493	0.433-0.553
Benzene	11.30	11.81	0.957	ok	0.957	0.897-1.017
Bromodichloromethane	12.78	11.81	1.082	ok	1.082	1.022-1.142
Bromoform	19.99	18.86	1.060	ok	1.059	0.999-1.119
Bromomethane	4.79	9.16	0.523	ok	0.523	0.463-0.583
Bromoethene	5.32	9.16	0.581	ok	0.581	0.521-0.641
n-Butylbenzene	24.90	18.86	1.320	ok	1.320	1.260-1.380
sec-Butylbenzene	23.93	18.86	1.269	ok	1.269	1.209-1.329
Benzyl Chloride	23.70	18.86	1.257	ok	1.256	1.196-1.316
Carbon disulfide	6.93	9.16	0.757	ok	0.757	0.697-0.817
Chlorobenzene	18.95	18.86	1.005	ok	1.004	0.944-1.064
Chloroethane	4.96	9.16	0.541	ok	0.542	0.482-0.602
Chloroform	9.32	9.16	1.017	ok	1.018	0.958-1.078
Chloromethane	4.15	9.16	0.453	ok	0.454	0.394-0.514
3-Chloropropene	6.71	9.16	0.733	ok	0.733	0.673-0.793
2-Chlorotoluene	22.38	18.86	1.187	ok	1.186	1.126-1.246
Carbon tetrachloride	11.51	9.16	1.257	ok	1.257	1.197-1.317
Cyclohexane	11.69	11.81	0.990	ok	0.990	0.930-1.050
1,1-Dichloroethane	7.90	9.16	0.862	ok	0.863	0.803-0.923
1,1-Dichloroethylene	6.45	9.16	0.704	ok	0.705	0.645-0.765
1,2-Dibromoethane	16.91	18.86	0.897	ok	0.896	0.836-0.956
1,2-Dichloroethane	10.30	9.16	1.124	ok	1.125	1.065-1.185
1,2-Dichloropropane	12.49	11.81	1.058	ok	1.058	0.998-1.118
1,3-Dichloropropane	15.83	11.81	1.340	ok	1.341	1.281-1.401
1,4-Dioxane	12.83	11.81	1.086	ok	1.088	1.028-1.148
Dichlorodifluoromethane	3.99	9.16	0.436	ok	0.436	0.376-0.496
Dibromochloromethane	16.49	18.86	0.874	ok	0.874	0.814-0.934
trans-1,2-Dichloroethylene	7.66	9.16	0.836	ok	0.837	0.777-0.897
cis-1,2-Dichloroethylene	8.94	9.16	0.976	ok	0.976	0.916-1.036
cis-1,3-Dichloropropene	14.19	11.81	1.202	ok	1.202	1.142-1.262
m-Dichlorobenzene	23.72	18.86	1.258	ok	1.257	1.197-1.317
o-Dichlorobenzene	24.39	18.86	1.293	ok	1.293	1.233-1.353
p-Dichlorobenzene	23.83	18.86	1.264	ok	1.263	1.203-1.323
trans-1,3-Dichloropropene	15.04	11.81	1.273	ok	1.274	1.214-1.334
Ethanol	5.06	9.16	0.552	ok	0.553	0.493-0.613
Ethylbenzene	19.61	18.86	1.040	ok	1.039	0.979-1.099
Ethyl Acetate	9.22	9.16	1.007	ok	1.007	0.947-1.067

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1344-IC1344	Q30928.D	08/03/15 18:53	AA	0.2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30929.D	08/03/15 19:44	AA	0.5	GCMSQ	TO-15	
MSQ1344-IC1344	Q30930.D	08/03/15 20:34	AA	2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30931.D	08/03/15 21:25	AA	5	GCMSQ	TO-15	
MSQ1344-ICC1344	Q30932.D	08/03/15 22:15	AA	10	GCMSQ	TO-15	
MSQ1344-IC1344	Q30933.D	08/03/15 23:06	AA	20	GCMSQ	TO-15	
MSQ1344-IC1344	Q30934.D	08/03/15 23:56	AA	30	GCMSQ	TO-15	
MSQ1344-IC1344	Q30935.D	08/04/15 00:47	AA	40	GCMSQ	TO-15	Reporting this level

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
4-Ethyltoluene	22.70	18.86	1.204	ok	1.204	1.144-1.264
Freon 113	6.87	9.16	0.750	ok	0.751	0.691-0.811
Freon 114	4.25	9.16	0.464	ok	0.465	0.405-0.525
Heptane	13.33	11.81	1.129	ok	1.128	1.068-1.188
Hexachlorobutadiene	27.70	18.86	1.469	ok	1.469	1.409-1.529
Hexane	9.22	9.16	1.007	ok	1.007	0.947-1.067
2-Hexanone	16.25	18.86	0.862	ok	0.862	0.802-0.922
Isopropylbenzene	21.64	18.86	1.147	ok	1.147	1.087-1.207
Isopropyl Alcohol	5.82	9.16	0.635	ok	0.637	0.577-0.697
p-Isopropyltoluene	24.20	18.86	1.283	ok	1.283	1.223-1.343
Methylene chloride	6.57	9.16	0.717	ok	0.718	0.658-0.778
Methyl ethyl ketone	8.37	9.16	0.914	ok	0.915	0.855-0.975
Methyl Isobutyl Ketone	14.25	11.81	1.207	ok	1.208	1.148-1.268
Methyl Tert Butyl Ether	7.96	9.16	0.869	ok	0.871	0.811-0.931
Methylmethacrylate	13.16	11.81	1.114	ok	1.115	1.055-1.175
Naphthalene	27.25	18.86	1.445	ok	1.445	1.385-1.505
Nonane	21.10	18.86	1.119	ok	1.119	1.059-1.179
Pentane	6.13	9.16	0.669	ok	0.670	0.610-0.730
Propylene	3.92	9.16	0.428	ok	0.428	0.368-0.488
Styrene	20.50	18.86	1.087	ok	1.087	1.027-1.147
1,1,1-Trichloroethane	10.65	9.16	1.163	ok	1.164	1.104-1.224
1,1,1,2-Tetrachloroethane	18.93	18.86	1.004	ok	1.003	0.943-1.063
1,1,2,2-Tetrachloroethane	20.66	18.86	1.095	ok	1.095	1.035-1.155
1,1,2-Trichloroethane	15.32	11.81	1.297	ok	1.297	1.237-1.357
1,2,4-Trichlorobenzene	27.12	18.86	1.438	ok	1.438	1.378-1.498
1,2,4-Trimethylbenzene	23.50	18.86	1.246	ok	1.246	1.186-1.306
1,3,5-Trimethylbenzene	22.84	18.86	1.211	ok	1.211	1.151-1.271
2,2,4-Trimethylpentane	12.91	11.81	1.093	ok	1.093	1.033-1.153
Tertiary Butyl Alcohol	6.48	9.16	0.707	ok	0.710	0.650-0.770
tert-Butylbenzene	23.49	18.86	1.245	ok	1.245	1.185-1.305
Tetrachloroethylene	17.75	18.86	0.941	ok	0.941	0.881-1.001
Tetrahydrofuran	9.83	9.16	1.073	ok	1.076	1.016-1.136
Toluene	15.79	11.81	1.337	ok	1.337	1.277-1.397
Trichloroethylene	12.85	11.81	1.088	ok	1.088	1.028-1.148
Trichlorofluoromethane	5.76	9.16	0.629	ok	0.630	0.570-0.690
Vinyl chloride	4.37	9.16	0.477	ok	0.478	0.418-0.538
Vinyl Acetate	8.07	9.16	0.881	ok	0.882	0.822-0.942
m,p-Xylene	19.93	18.86	1.057	ok	1.056	0.996-1.116
o-Xylene	20.67	18.86	1.096	ok	1.096	1.036-1.156

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1344-IC1344	Q30928.D	08/03/15 18:53	AA	0.2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30929.D	08/03/15 19:44	AA	0.5	GCMSQ	TO-15	
MSQ1344-IC1344	Q30930.D	08/03/15 20:34	AA	2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30931.D	08/03/15 21:25	AA	5	GCMSQ	TO-15	
MSQ1344-ICC1344	Q30932.D	08/03/15 22:15	AA	10	GCMSQ	TO-15	
MSQ1344-IC1344	Q30933.D	08/03/15 23:06	AA	20	GCMSQ	TO-15	
MSQ1344-IC1344	Q30934.D	08/03/15 23:56	AA	30	GCMSQ	TO-15	
MSQ1344-IC1344	Q30935.D	08/04/15 00:47	AA	40	GCMSQ	TO-15	Reporting this level

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	9.16	ok	9.15	8.82-9.48	419368	ok	420767	252460-589074
1,4-Difluorobenzene	11.81	ok	11.80	11.47-12.13	1898819	ok	1928277	1156966-2699588
Chlorobenzene-D5	18.86	ok	18.86	18.53-19.19	1094030	ok	996697	598018-1395376

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1355-IC1355	Q31195.D	08/20/15 18:36	AA	0.2	GCMSQ	TO-15	Reporting this level
MSQ1355-IC1355	Q31196.D	08/20/15 19:27	AA	0.5	GCMSQ	TO-15	
MSQ1355-IC1355	Q31197.D	08/20/15 20:18	AA	2	GCMSQ	TO-15	
MSQ1355-IC1355	Q31198.D	08/20/15 21:08	AA	5	GCMSQ	TO-15	
MSQ1355-ICC1355	Q31199.D	08/20/15 21:58	AA	10	GCMSQ	TO-15	
MSQ1355-IC1355	Q31200.D	08/20/15 22:48	AA	20	GCMSQ	TO-15	
MSQ1355-IC1355	Q31201.D	08/20/15 23:38	AA	30	GCMSQ	TO-15	
MSQ1355-IC1355	Q31202.D	08/21/15 00:28	AA	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.57	9.13	0.610	ok	0.608	0.548-0.668
Acrolein	5.43	9.13	0.595	ok	0.594	0.534-0.654
Acrylonitrile	6.04	9.13	0.662	ok	0.662	0.602-0.722
1,3-Butadiene	4.51	9.13	0.494	ok	0.494	0.434-0.554
Benzene	11.27	11.79	0.956	ok	0.956	0.896-1.016
Bromodichloromethane	12.75	11.79	1.081	ok	1.082	1.022-1.142
Bromoform	19.96	18.84	1.059	ok	1.060	1.000-1.120
Bromomethane	4.79	9.13	0.525	ok	0.524	0.464-0.584
Bromoethene	5.32	9.13	0.583	ok	0.582	0.522-0.642
n-Butylbenzene	24.88	18.84	1.321	ok	1.320	1.260-1.380
sec-Butylbenzene	23.91	18.84	1.269	ok	1.269	1.209-1.329
Benzyl Chloride	23.68	18.84	1.257	ok	1.257	1.197-1.317
Carbon disulfide	6.92	9.13	0.758	ok	0.758	0.698-0.818
Chlorobenzene	18.92	18.84	1.004	ok	1.004	0.944-1.064
Chloroethane	4.96	9.13	0.543	ok	0.543	0.483-0.603
Chloroform	9.30	9.13	1.019	ok	1.019	0.959-1.079
Chloromethane	4.16	9.13	0.456	ok	0.454	0.394-0.514
3-Chloropropene	6.70	9.13	0.734	ok	0.733	0.673-0.793
2-Chlorotoluene	22.36	18.84	1.187	ok	1.187	1.127-1.247
Carbon tetrachloride	11.49	9.13	1.258	ok	1.258	1.198-1.318
Cyclohexane	11.67	11.79	0.990	ok	0.990	0.930-1.050
1,1-Dichloroethane	7.89	9.13	0.864	ok	0.863	0.803-0.923
1,1-Dichloroethylene	6.43	9.13	0.704	ok	0.705	0.645-0.765
1,2-Dibromoethane	16.88	18.84	0.896	ok	0.896	0.836-0.956
1,2-Dichloroethane	10.28	9.13	1.126	ok	1.126	1.066-1.186
1,2-Dichloropropane	12.46	11.79	1.057	ok	1.057	0.997-1.117
1,3-Dichloropropane	15.80	11.79	1.340	ok	1.340	1.280-1.400
1,4-Dioxane	12.90	11.79	1.094	ok	1.089	1.029-1.149
Dichlorodifluoromethane	3.99	9.13	0.437	ok	0.437	0.377-0.497
Dibromochloromethane	16.46	18.84	0.874	ok	0.874	0.814-0.934
trans-1,2-Dichloroethylene	7.65	9.13	0.838	ok	0.837	0.777-0.897
cis-1,2-Dichloroethylene	8.92	9.13	0.977	ok	0.977	0.917-1.037
cis-1,3-Dichloropropene	14.16	11.79	1.201	ok	1.201	1.141-1.261
m-Dichlorobenzene	23.69	18.84	1.257	ok	1.257	1.197-1.317
o-Dichlorobenzene	24.36	18.84	1.293	ok	1.293	1.233-1.353
p-Dichlorobenzene	23.81	18.84	1.264	ok	1.264	1.204-1.324
trans-1,3-Dichloropropene	15.01	11.79	1.273	ok	1.274	1.214-1.334
Ethanol	5.09	9.13	0.558	ok	0.554	0.494-0.614
Ethylbenzene	19.58	18.84	1.039	ok	1.039	0.979-1.099
Ethyl Acetate	9.22	9.13	1.010	ok	1.008	0.948-1.068

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1355-IC1355	Q31195.D	08/20/15 18:36	AA	0.2	GCMSQ	TO-15	Reporting this level
MSQ1355-IC1355	Q31196.D	08/20/15 19:27	AA	0.5	GCMSQ	TO-15	
MSQ1355-IC1355	Q31197.D	08/20/15 20:18	AA	2	GCMSQ	TO-15	
MSQ1355-IC1355	Q31198.D	08/20/15 21:08	AA	5	GCMSQ	TO-15	
MSQ1355-ICC1355	Q31199.D	08/20/15 21:58	AA	10	GCMSQ	TO-15	
MSQ1355-IC1355	Q31200.D	08/20/15 22:48	AA	20	GCMSQ	TO-15	
MSQ1355-IC1355	Q31201.D	08/20/15 23:38	AA	30	GCMSQ	TO-15	
MSQ1355-IC1355	Q31202.D	08/21/15 00:28	AA	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
4-Ethyltoluene	22.68	18.84	1.204	ok	1.204	1.144-1.264
Freon 113	6.87	9.13	0.752	ok	0.752	0.692-0.812
Freon 114	4.25	9.13	0.465	ok	0.465	0.405-0.525
Heptane	13.30	11.79	1.128	ok	1.128	1.068-1.188
Hexachlorobutadiene	27.69	18.84	1.470	ok	1.470	1.410-1.530
Hexane	9.20	9.13	1.008	ok	1.007	0.947-1.067
2-Hexanone	16.29	18.84	0.865	ok	0.862	0.802-0.922
Isopropylbenzene	21.61	18.84	1.147	ok	1.147	1.087-1.207
Isopropyl Alcohol	5.87	9.13	0.643	ok	0.638	0.578-0.698
p-Isopropyltoluene	24.18	18.84	1.283	ok	1.283	1.223-1.343
Methylene chloride	6.56	9.13	0.719	ok	0.719	0.659-0.779
Methyl ethyl ketone	8.38	9.13	0.918	ok	0.915	0.855-0.975
Methyl Isobutyl Ketone	14.29	11.79	1.212	ok	1.208	1.148-1.268
Methyl Tert Butyl Ether	7.99	9.13	0.875	ok	0.872	0.812-0.932
Methylmethacrylate	13.15	11.79	1.115	ok	1.115	1.055-1.175
Naphthalene	27.23	18.84	1.445	ok	1.446	1.386-1.506
Nonane	21.08	18.84	1.119	ok	1.119	1.059-1.179
Pentane	6.13	9.13	0.671	ok	0.671	0.611-0.731
Propylene	3.92	9.13	0.429	ok	0.429	0.369-0.489
Styrene	20.48	18.84	1.087	ok	1.087	1.027-1.147
1,1,1-Trichloroethane	10.63	9.13	1.164	ok	1.164	1.104-1.224
1,1,1,2-Tetrachloroethane	18.89	18.84	1.003	ok	1.003	0.943-1.063
1,1,2,2-Tetrachloroethane	20.63	18.84	1.095	ok	1.095	1.035-1.155
1,1,2-Trichloroethane	15.29	11.79	1.297	ok	1.297	1.237-1.357
1,2,4-Trichlorobenzene	27.10	18.84	1.438	ok	1.438	1.378-1.498
1,2,4-Trimethylbenzene	23.47	18.84	1.246	ok	1.246	1.186-1.306
1,3,5-Trimethylbenzene	22.81	18.84	1.211	ok	1.211	1.151-1.271
2,2,4-Trimethylpentane	12.88	11.79	1.092	ok	1.093	1.033-1.153
Tertiary Butyl Alcohol	6.58	9.13	0.721	ok	0.711	0.651-0.771
tert-Butylbenzene	23.46	18.84	1.245	ok	1.245	1.185-1.305
Tetrachloroethylene	17.71	18.84	0.940	ok	0.940	0.880-1.000
Tetrahydrofuran	9.87	9.13	1.081	ok	1.077	1.017-1.137
Toluene	15.75	11.79	1.336	ok	1.336	1.276-1.396
Trichloroethylene	12.82	11.79	1.087	ok	1.088	1.028-1.148
Trichlorofluoromethane	5.76	9.13	0.631	ok	0.630	0.570-0.690
Vinyl chloride	4.37	9.13	0.479	ok	0.479	0.419-0.539
Vinyl Acetate	8.06	9.13	0.883	ok	0.882	0.822-0.942
m,p-Xylene	19.90	18.84	1.056	ok	1.056	0.996-1.116
o-Xylene	20.64	18.84	1.096	ok	1.096	1.036-1.156

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1355-IC1355	Q31195.D	08/20/15 18:36	AA	0.2	GCMSQ	TO-15	Reporting this level
MSQ1355-IC1355	Q31196.D	08/20/15 19:27	AA	0.5	GCMSQ	TO-15	
MSQ1355-IC1355	Q31197.D	08/20/15 20:18	AA	2	GCMSQ	TO-15	
MSQ1355-IC1355	Q31198.D	08/20/15 21:08	AA	5	GCMSQ	TO-15	
MSQ1355-ICC1355	Q31199.D	08/20/15 21:58	AA	10	GCMSQ	TO-15	
MSQ1355-IC1355	Q31200.D	08/20/15 22:48	AA	20	GCMSQ	TO-15	
MSQ1355-IC1355	Q31201.D	08/20/15 23:38	AA	30	GCMSQ	TO-15	
MSQ1355-IC1355	Q31202.D	08/21/15 00:28	AA	40	GCMSQ	TO-15	

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	9.13	ok	9.13	8.80-9.46	380117	ok	422297	253378-591216
1,4-Difluorobenzene	11.79	ok	11.79	11.46-12.12	1692889	ok	1942547	1165528-2719566
Chlorobenzene-D5	18.84	ok	18.84	18.51-19.17	852962	ok	1054904	632942-1476866

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1355-IC1355	Q31195.D	08/20/15 18:36	AA	0.2	GCMSQ	TO-15	
MSQ1355-IC1355	Q31196.D	08/20/15 19:27	AA	0.5	GCMSQ	TO-15	Reporting this level
MSQ1355-IC1355	Q31197.D	08/20/15 20:18	AA	2	GCMSQ	TO-15	
MSQ1355-IC1355	Q31198.D	08/20/15 21:08	AA	5	GCMSQ	TO-15	
MSQ1355-ICC1355	Q31199.D	08/20/15 21:58	AA	10	GCMSQ	TO-15	
MSQ1355-IC1355	Q31200.D	08/20/15 22:48	AA	20	GCMSQ	TO-15	
MSQ1355-IC1355	Q31201.D	08/20/15 23:38	AA	30	GCMSQ	TO-15	
MSQ1355-IC1355	Q31202.D	08/21/15 00:28	AA	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.56	9.13	0.609	ok	0.608	0.548-0.668
Acrolein	5.43	9.13	0.595	ok	0.594	0.534-0.654
Acrylonitrile	6.04	9.13	0.662	ok	0.662	0.602-0.722
1,3-Butadiene	4.51	9.13	0.494	ok	0.494	0.434-0.554
Benzene	11.27	11.79	0.956	ok	0.956	0.896-1.016
Bromodichloromethane	12.75	11.79	1.081	ok	1.082	1.022-1.142
Bromoform	19.96	18.84	1.059	ok	1.060	1.000-1.120
Bromomethane	4.78	9.13	0.524	ok	0.524	0.464-0.584
Bromoethene	5.32	9.13	0.583	ok	0.582	0.522-0.642
n-Butylbenzene	24.88	18.84	1.321	ok	1.320	1.260-1.380
sec-Butylbenzene	23.91	18.84	1.269	ok	1.269	1.209-1.329
Benzyl Chloride	23.67	18.84	1.256	ok	1.257	1.197-1.317
Carbon disulfide	6.92	9.13	0.758	ok	0.758	0.698-0.818
Chlorobenzene	18.91	18.84	1.004	ok	1.004	0.944-1.064
Chloroethane	4.95	9.13	0.542	ok	0.543	0.483-0.603
Chloroform	9.30	9.13	1.019	ok	1.019	0.959-1.079
Chloromethane	4.15	9.13	0.455	ok	0.454	0.394-0.514
3-Chloropropene	6.70	9.13	0.734	ok	0.733	0.673-0.793
2-Chlorotoluene	22.36	18.84	1.187	ok	1.187	1.127-1.247
Carbon tetrachloride	11.49	9.13	1.258	ok	1.258	1.198-1.318
Cyclohexane	11.66	11.79	0.989	ok	0.990	0.930-1.050
1,1-Dichloroethane	7.88	9.13	0.863	ok	0.863	0.803-0.923
1,1-Dichloroethylene	6.44	9.13	0.705	ok	0.705	0.645-0.765
1,2-Dibromoethane	16.88	18.84	0.896	ok	0.896	0.836-0.956
1,2-Dichloroethane	10.28	9.13	1.126	ok	1.126	1.066-1.186
1,2-Dichloropropane	12.46	11.79	1.057	ok	1.057	0.997-1.117
1,3-Dichloropropane	15.80	11.79	1.340	ok	1.340	1.280-1.400
1,4-Dioxane	12.87	11.79	1.092	ok	1.089	1.029-1.149
Dichlorodifluoromethane	3.99	9.13	0.437	ok	0.437	0.377-0.497
Dibromochloromethane	16.46	18.84	0.874	ok	0.874	0.814-0.934
trans-1,2-Dichloroethylene	7.65	9.13	0.838	ok	0.837	0.777-0.897
cis-1,2-Dichloroethylene	8.92	9.13	0.977	ok	0.977	0.917-1.037
cis-1,3-Dichloropropene	14.16	11.79	1.201	ok	1.201	1.141-1.261
m-Dichlorobenzene	23.69	18.84	1.257	ok	1.257	1.197-1.317
o-Dichlorobenzene	24.36	18.84	1.293	ok	1.293	1.233-1.353
p-Dichlorobenzene	23.81	18.84	1.264	ok	1.264	1.204-1.324
trans-1,3-Dichloropropene	15.02	11.79	1.274	ok	1.274	1.214-1.334
Ethanol	5.07	9.13	0.555	ok	0.554	0.494-0.614
Ethylbenzene	19.58	18.84	1.039	ok	1.039	0.979-1.099
Ethyl Acetate	9.21	9.13	1.009	ok	1.008	0.948-1.068

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1355-IC1355	Q31195.D	08/20/15 18:36	AA	0.2	GCMSQ	TO-15	
MSQ1355-IC1355	Q31196.D	08/20/15 19:27	AA	0.5	GCMSQ	TO-15	Reporting this level
MSQ1355-IC1355	Q31197.D	08/20/15 20:18	AA	2	GCMSQ	TO-15	
MSQ1355-IC1355	Q31198.D	08/20/15 21:08	AA	5	GCMSQ	TO-15	
MSQ1355-ICC1355	Q31199.D	08/20/15 21:58	AA	10	GCMSQ	TO-15	
MSQ1355-IC1355	Q31200.D	08/20/15 22:48	AA	20	GCMSQ	TO-15	
MSQ1355-IC1355	Q31201.D	08/20/15 23:38	AA	30	GCMSQ	TO-15	
MSQ1355-IC1355	Q31202.D	08/21/15 00:28	AA	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
4-Ethyltoluene	22.68	18.84	1.204	ok	1.204	1.144-1.264
Freon 113	6.87	9.13	0.752	ok	0.752	0.692-0.812
Freon 114	4.25	9.13	0.465	ok	0.465	0.405-0.525
Heptane	13.30	11.79	1.128	ok	1.128	1.068-1.188
Hexachlorobutadiene	27.69	18.84	1.470	ok	1.470	1.410-1.530
Hexane	9.20	9.13	1.008	ok	1.007	0.947-1.067
2-Hexanone	16.27	18.84	0.864	ok	0.862	0.802-0.922
Isopropylbenzene	21.61	18.84	1.147	ok	1.147	1.087-1.207
Isopropyl Alcohol	5.85	9.13	0.641	ok	0.638	0.578-0.698
p-Isopropyltoluene	24.19	18.84	1.284	ok	1.283	1.223-1.343
Methylene chloride	6.56	9.13	0.719	ok	0.719	0.659-0.779
Methyl ethyl ketone	8.38	9.13	0.918	ok	0.915	0.855-0.975
Methyl Isobutyl Ketone	14.27	11.79	1.210	ok	1.208	1.148-1.268
Methyl Tert Butyl Ether	7.98	9.13	0.874	ok	0.872	0.812-0.932
Methylmethacrylate	13.15	11.79	1.115	ok	1.115	1.055-1.175
Naphthalene	27.24	18.84	1.446	ok	1.446	1.386-1.506
Nonane	21.08	18.84	1.119	ok	1.119	1.059-1.179
Pentane	6.13	9.13	0.671	ok	0.671	0.611-0.731
Propylene	3.92	9.13	0.429	ok	0.429	0.369-0.489
Styrene	20.47	18.84	1.087	ok	1.087	1.027-1.147
1,1,1-Trichloroethane	10.63	9.13	1.164	ok	1.164	1.104-1.224
1,1,1,2-Tetrachloroethane	18.89	18.84	1.003	ok	1.003	0.943-1.063
1,1,2,2-Tetrachloroethane	20.63	18.84	1.095	ok	1.095	1.035-1.155
1,1,2-Trichloroethane	15.29	11.79	1.297	ok	1.297	1.237-1.357
1,2,4-Trichlorobenzene	27.11	18.84	1.439	ok	1.438	1.378-1.498
1,2,4-Trimethylbenzene	23.47	18.84	1.246	ok	1.246	1.186-1.306
1,3,5-Trimethylbenzene	22.81	18.84	1.211	ok	1.211	1.151-1.271
2,2,4-Trimethylpentane	12.88	11.79	1.092	ok	1.093	1.033-1.153
Tertiary Butyl Alcohol	6.54	9.13	0.716	ok	0.711	0.651-0.771
tert-Butylbenzene	23.46	18.84	1.245	ok	1.245	1.185-1.305
Tetrachloroethylene	17.72	18.84	0.941	ok	0.940	0.880-1.000
Tetrahydrofuran	9.86	9.13	1.080	ok	1.077	1.017-1.137
Toluene	15.75	11.79	1.336	ok	1.336	1.276-1.396
Trichloroethylene	12.82	11.79	1.087	ok	1.088	1.028-1.148
Trichlorofluoromethane	5.75	9.13	0.630	ok	0.630	0.570-0.690
Vinyl chloride	4.37	9.13	0.479	ok	0.479	0.419-0.539
Vinyl Acetate	8.06	9.13	0.883	ok	0.882	0.822-0.942
m,p-Xylene	19.89	18.84	1.056	ok	1.056	0.996-1.116
o-Xylene	20.64	18.84	1.096	ok	1.096	1.036-1.156

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1355-IC1355	Q31195.D	08/20/15 18:36	AA	0.2	GCMSQ	TO-15	
MSQ1355-IC1355	Q31196.D	08/20/15 19:27	AA	0.5	GCMSQ	TO-15	Reporting this level
MSQ1355-IC1355	Q31197.D	08/20/15 20:18	AA	2	GCMSQ	TO-15	
MSQ1355-IC1355	Q31198.D	08/20/15 21:08	AA	5	GCMSQ	TO-15	
MSQ1355-ICC1355	Q31199.D	08/20/15 21:58	AA	10	GCMSQ	TO-15	
MSQ1355-IC1355	Q31200.D	08/20/15 22:48	AA	20	GCMSQ	TO-15	
MSQ1355-IC1355	Q31201.D	08/20/15 23:38	AA	30	GCMSQ	TO-15	
MSQ1355-IC1355	Q31202.D	08/21/15 00:28	AA	40	GCMSQ	TO-15	

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	9.13	ok	9.13	8.80-9.46	410402	ok	422297	253378-591216
1,4-Difluorobenzene	11.79	ok	11.79	11.46-12.12	1953427	ok	1942547	1165528-2719566
Chlorobenzene-D5	18.84	ok	18.84	18.51-19.17	958702	ok	1054904	632942-1476866

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1355-IC1355	Q31195.D	08/20/15 18:36	AA	0.2	GCMSQ	TO-15	
MSQ1355-IC1355	Q31196.D	08/20/15 19:27	AA	0.5	GCMSQ	TO-15	
MSQ1355-IC1355	Q31197.D	08/20/15 20:18	AA	2	GCMSQ	TO-15	Reporting this level
MSQ1355-IC1355	Q31198.D	08/20/15 21:08	AA	5	GCMSQ	TO-15	
MSQ1355-ICC1355	Q31199.D	08/20/15 21:58	AA	10	GCMSQ	TO-15	
MSQ1355-IC1355	Q31200.D	08/20/15 22:48	AA	20	GCMSQ	TO-15	
MSQ1355-IC1355	Q31201.D	08/20/15 23:38	AA	30	GCMSQ	TO-15	
MSQ1355-IC1355	Q31202.D	08/21/15 00:28	AA	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.56	9.13	0.609	ok	0.608	0.548-0.668
Acrolein	5.43	9.13	0.595	ok	0.594	0.534-0.654
Acrylonitrile	6.04	9.13	0.662	ok	0.662	0.602-0.722
1,3-Butadiene	4.51	9.13	0.494	ok	0.494	0.434-0.554
Benzene	11.27	11.79	0.956	ok	0.956	0.896-1.016
Bromodichloromethane	12.76	11.79	1.082	ok	1.082	1.022-1.142
Bromoform	19.96	18.84	1.059	ok	1.060	1.000-1.120
Bromomethane	4.79	9.13	0.525	ok	0.524	0.464-0.584
Bromoethene	5.32	9.13	0.583	ok	0.582	0.522-0.642
n-Butylbenzene	24.88	18.84	1.321	ok	1.320	1.260-1.380
sec-Butylbenzene	23.91	18.84	1.269	ok	1.269	1.209-1.329
Benzyl Chloride	23.67	18.84	1.256	ok	1.257	1.197-1.317
Carbon disulfide	6.92	9.13	0.758	ok	0.758	0.698-0.818
Chlorobenzene	18.91	18.84	1.004	ok	1.004	0.944-1.064
Chloroethane	4.96	9.13	0.543	ok	0.543	0.483-0.603
Chloroform	9.30	9.13	1.019	ok	1.019	0.959-1.079
Chloromethane	4.15	9.13	0.455	ok	0.454	0.394-0.514
3-Chloropropene	6.70	9.13	0.734	ok	0.733	0.673-0.793
2-Chlorotoluene	22.36	18.84	1.187	ok	1.187	1.127-1.247
Carbon tetrachloride	11.49	9.13	1.258	ok	1.258	1.198-1.318
Cyclohexane	11.67	11.79	0.990	ok	0.990	0.930-1.050
1,1-Dichloroethane	7.88	9.13	0.863	ok	0.863	0.803-0.923
1,1-Dichloroethylene	6.44	9.13	0.705	ok	0.705	0.645-0.765
1,2-Dibromoethane	16.88	18.84	0.896	ok	0.896	0.836-0.956
1,2-Dichloroethane	10.28	9.13	1.126	ok	1.126	1.066-1.186
1,2-Dichloropropane	12.46	11.79	1.057	ok	1.057	0.997-1.117
1,3-Dichloropropane	15.80	11.79	1.340	ok	1.340	1.280-1.400
1,4-Dioxane	12.83	11.79	1.088	ok	1.089	1.029-1.149
Dichlorodifluoromethane	4.00	9.13	0.438	ok	0.437	0.377-0.497
Dibromochloromethane	16.46	18.84	0.874	ok	0.874	0.814-0.934
trans-1,2-Dichloroethylene	7.65	9.13	0.838	ok	0.837	0.777-0.897
cis-1,2-Dichloroethylene	8.92	9.13	0.977	ok	0.977	0.917-1.037
cis-1,3-Dichloropropene	14.16	11.79	1.201	ok	1.201	1.141-1.261
m-Dichlorobenzene	23.69	18.84	1.257	ok	1.257	1.197-1.317
o-Dichlorobenzene	24.36	18.84	1.293	ok	1.293	1.233-1.353
p-Dichlorobenzene	23.81	18.84	1.264	ok	1.264	1.204-1.324
trans-1,3-Dichloropropene	15.01	11.79	1.273	ok	1.274	1.214-1.334
Ethanol	5.06	9.13	0.554	ok	0.554	0.494-0.614
Ethylbenzene	19.58	18.84	1.039	ok	1.039	0.979-1.099
Ethyl Acetate	9.21	9.13	1.009	ok	1.008	0.948-1.068

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1355-IC1355	Q31195.D	08/20/15 18:36	AA	0.2	GCMSQ	TO-15	
MSQ1355-IC1355	Q31196.D	08/20/15 19:27	AA	0.5	GCMSQ	TO-15	
MSQ1355-IC1355	Q31197.D	08/20/15 20:18	AA	2	GCMSQ	TO-15	Reporting this level
MSQ1355-IC1355	Q31198.D	08/20/15 21:08	AA	5	GCMSQ	TO-15	
MSQ1355-ICC1355	Q31199.D	08/20/15 21:58	AA	10	GCMSQ	TO-15	
MSQ1355-IC1355	Q31200.D	08/20/15 22:48	AA	20	GCMSQ	TO-15	
MSQ1355-IC1355	Q31201.D	08/20/15 23:38	AA	30	GCMSQ	TO-15	
MSQ1355-IC1355	Q31202.D	08/21/15 00:28	AA	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
4-Ethyltoluene	22.68	18.84	1.204	ok	1.204	1.144-1.264
Freon 113	6.87	9.13	0.752	ok	0.752	0.692-0.812
Freon 114	4.25	9.13	0.465	ok	0.465	0.405-0.525
Heptane	13.30	11.79	1.128	ok	1.128	1.068-1.188
Hexachlorobutadiene	27.69	18.84	1.470	ok	1.470	1.410-1.530
Hexane	9.20	9.13	1.008	ok	1.007	0.947-1.067
2-Hexanone	16.25	18.84	0.863	ok	0.862	0.802-0.922
Isopropylbenzene	21.61	18.84	1.147	ok	1.147	1.087-1.207
Isopropyl Alcohol	5.82	9.13	0.637	ok	0.638	0.578-0.698
p-Isopropyltoluene	24.18	18.84	1.283	ok	1.283	1.223-1.343
Methylene chloride	6.56	9.13	0.719	ok	0.719	0.659-0.779
Methyl ethyl ketone	8.37	9.13	0.917	ok	0.915	0.855-0.975
Methyl Isobutyl Ketone	14.25	11.79	1.209	ok	1.208	1.148-1.268
Methyl Tert Butyl Ether	7.96	9.13	0.872	ok	0.872	0.812-0.932
Methylmethacrylate	13.15	11.79	1.115	ok	1.115	1.055-1.175
Naphthalene	27.24	18.84	1.446	ok	1.446	1.386-1.506
Nonane	21.08	18.84	1.119	ok	1.119	1.059-1.179
Pentane	6.13	9.13	0.671	ok	0.671	0.611-0.731
Propylene	3.92	9.13	0.429	ok	0.429	0.369-0.489
Styrene	20.47	18.84	1.087	ok	1.087	1.027-1.147
1,1,1-Trichloroethane	10.63	9.13	1.164	ok	1.164	1.104-1.224
1,1,1,2-Tetrachloroethane	18.89	18.84	1.003	ok	1.003	0.943-1.063
1,1,2,2-Tetrachloroethane	20.63	18.84	1.095	ok	1.095	1.035-1.155
1,1,2-Trichloroethane	15.29	11.79	1.297	ok	1.297	1.237-1.357
1,2,4-Trichlorobenzene	27.10	18.84	1.438	ok	1.438	1.378-1.498
1,2,4-Trimethylbenzene	23.47	18.84	1.246	ok	1.246	1.186-1.306
1,3,5-Trimethylbenzene	22.81	18.84	1.211	ok	1.211	1.151-1.271
2,2,4-Trimethylpentane	12.88	11.79	1.092	ok	1.093	1.033-1.153
Tertiary Butyl Alcohol	6.49	9.13	0.711	ok	0.711	0.651-0.771
tert-Butylbenzene	23.46	18.84	1.245	ok	1.245	1.185-1.305
Tetrachloroethylene	17.72	18.84	0.941	ok	0.940	0.880-1.000
Tetrahydrofuran	9.84	9.13	1.078	ok	1.077	1.017-1.137
Toluene	15.76	11.79	1.337	ok	1.336	1.276-1.396
Trichloroethylene	12.82	11.79	1.087	ok	1.088	1.028-1.148
Trichlorofluoromethane	5.76	9.13	0.631	ok	0.630	0.570-0.690
Vinyl chloride	4.38	9.13	0.480	ok	0.479	0.419-0.539
Vinyl Acetate	8.06	9.13	0.883	ok	0.882	0.822-0.942
m,p-Xylene	19.90	18.84	1.056	ok	1.056	0.996-1.116
o-Xylene	20.65	18.84	1.096	ok	1.096	1.036-1.156

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1355-IC1355	Q31195.D	08/20/15 18:36	AA	0.2	GCMSQ	TO-15	
MSQ1355-IC1355	Q31196.D	08/20/15 19:27	AA	0.5	GCMSQ	TO-15	
MSQ1355-IC1355	Q31197.D	08/20/15 20:18	AA	2	GCMSQ	TO-15	Reporting this level
MSQ1355-IC1355	Q31198.D	08/20/15 21:08	AA	5	GCMSQ	TO-15	
MSQ1355-ICC1355	Q31199.D	08/20/15 21:58	AA	10	GCMSQ	TO-15	
MSQ1355-IC1355	Q31200.D	08/20/15 22:48	AA	20	GCMSQ	TO-15	
MSQ1355-IC1355	Q31201.D	08/20/15 23:38	AA	30	GCMSQ	TO-15	
MSQ1355-IC1355	Q31202.D	08/21/15 00:28	AA	40	GCMSQ	TO-15	

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	9.13	ok	9.13	8.80-9.46	393361	ok	422297	253378-591216
1,4-Difluorobenzene	11.79	ok	11.79	11.46-12.12	1755178	ok	1942547	1165528-2719566
Chlorobenzene-D5	18.84	ok	18.84	18.51-19.17	945942	ok	1054904	632942-1476866

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1355-IC1355	Q31195.D	08/20/15 18:36	AA	0.2	GCMSQ	TO-15	
MSQ1355-IC1355	Q31196.D	08/20/15 19:27	AA	0.5	GCMSQ	TO-15	
MSQ1355-IC1355	Q31197.D	08/20/15 20:18	AA	2	GCMSQ	TO-15	
MSQ1355-IC1355	Q31198.D	08/20/15 21:08	AA	5	GCMSQ	TO-15	Reporting this level
MSQ1355-ICC1355	Q31199.D	08/20/15 21:58	AA	10	GCMSQ	TO-15	
MSQ1355-IC1355	Q31200.D	08/20/15 22:48	AA	20	GCMSQ	TO-15	
MSQ1355-IC1355	Q31201.D	08/20/15 23:38	AA	30	GCMSQ	TO-15	
MSQ1355-IC1355	Q31202.D	08/21/15 00:28	AA	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.56	9.13	0.609	ok	0.608	0.548-0.668
Acrolein	5.42	9.13	0.594	ok	0.594	0.534-0.654
Acrylonitrile	6.04	9.13	0.662	ok	0.662	0.602-0.722
1,3-Butadiene	4.51	9.13	0.494	ok	0.494	0.434-0.554
Benzene	11.27	11.79	0.956	ok	0.956	0.896-1.016
Bromodichloromethane	12.75	11.79	1.081	ok	1.082	1.022-1.142
Bromoform	19.96	18.84	1.059	ok	1.060	1.000-1.120
Bromomethane	4.79	9.13	0.525	ok	0.524	0.464-0.584
Bromoethene	5.32	9.13	0.583	ok	0.582	0.522-0.642
n-Butylbenzene	24.88	18.84	1.321	ok	1.320	1.260-1.380
sec-Butylbenzene	23.91	18.84	1.269	ok	1.269	1.209-1.329
Benzyl Chloride	23.67	18.84	1.256	ok	1.257	1.197-1.317
Carbon disulfide	6.92	9.13	0.758	ok	0.758	0.698-0.818
Chlorobenzene	18.91	18.84	1.004	ok	1.004	0.944-1.064
Chloroethane	4.96	9.13	0.543	ok	0.543	0.483-0.603
Chloroform	9.30	9.13	1.019	ok	1.019	0.959-1.079
Chloromethane	4.15	9.13	0.455	ok	0.454	0.394-0.514
3-Chloropropene	6.70	9.13	0.734	ok	0.733	0.673-0.793
2-Chlorotoluene	22.36	18.84	1.187	ok	1.187	1.127-1.247
Carbon tetrachloride	11.49	9.13	1.258	ok	1.258	1.198-1.318
Cyclohexane	11.67	11.79	0.990	ok	0.990	0.930-1.050
1,1-Dichloroethane	7.89	9.13	0.864	ok	0.863	0.803-0.923
1,1-Dichloroethylene	6.44	9.13	0.705	ok	0.705	0.645-0.765
1,2-Dibromoethane	16.88	18.84	0.896	ok	0.896	0.836-0.956
1,2-Dichloroethane	10.28	9.13	1.126	ok	1.126	1.066-1.186
1,2-Dichloropropane	12.46	11.79	1.057	ok	1.057	0.997-1.117
1,3-Dichloropropane	15.80	11.79	1.340	ok	1.340	1.280-1.400
1,4-Dioxane	12.82	11.79	1.087	ok	1.089	1.029-1.149
Dichlorodifluoromethane	4.00	9.13	0.438	ok	0.437	0.377-0.497
Dibromochloromethane	16.46	18.84	0.874	ok	0.874	0.814-0.934
trans-1,2-Dichloroethylene	7.65	9.13	0.838	ok	0.837	0.777-0.897
cis-1,2-Dichloroethylene	8.92	9.13	0.977	ok	0.977	0.917-1.037
cis-1,3-Dichloropropene	14.16	11.79	1.201	ok	1.201	1.141-1.261
m-Dichlorobenzene	23.69	18.84	1.257	ok	1.257	1.197-1.317
o-Dichlorobenzene	24.37	18.84	1.294	ok	1.293	1.233-1.353
p-Dichlorobenzene	23.81	18.84	1.264	ok	1.264	1.204-1.324
trans-1,3-Dichloropropene	15.01	11.79	1.273	ok	1.274	1.214-1.334
Ethanol	5.06	9.13	0.554	ok	0.554	0.494-0.614
Ethylbenzene	19.58	18.84	1.039	ok	1.039	0.979-1.099
Ethyl Acetate	9.20	9.13	1.008	ok	1.008	0.948-1.068

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1355-IC1355	Q31195.D	08/20/15 18:36	AA	0.2	GCMSQ	TO-15	
MSQ1355-IC1355	Q31196.D	08/20/15 19:27	AA	0.5	GCMSQ	TO-15	
MSQ1355-IC1355	Q31197.D	08/20/15 20:18	AA	2	GCMSQ	TO-15	
MSQ1355-IC1355	Q31198.D	08/20/15 21:08	AA	5	GCMSQ	TO-15	Reporting this level
MSQ1355-ICC1355	Q31199.D	08/20/15 21:58	AA	10	GCMSQ	TO-15	
MSQ1355-IC1355	Q31200.D	08/20/15 22:48	AA	20	GCMSQ	TO-15	
MSQ1355-IC1355	Q31201.D	08/20/15 23:38	AA	30	GCMSQ	TO-15	
MSQ1355-IC1355	Q31202.D	08/21/15 00:28	AA	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
4-Ethyltoluene	22.68	18.84	1.204	ok	1.204	1.144-1.264
Freon 113	6.87	9.13	0.752	ok	0.752	0.692-0.812
Freon 114	4.25	9.13	0.465	ok	0.465	0.405-0.525
Heptane	13.30	11.79	1.128	ok	1.128	1.068-1.188
Hexachlorobutadiene	27.69	18.84	1.470	ok	1.470	1.410-1.530
Hexane	9.20	9.13	1.008	ok	1.007	0.947-1.067
2-Hexanone	16.24	18.84	0.862	ok	0.862	0.802-0.922
Isopropylbenzene	21.61	18.84	1.147	ok	1.147	1.087-1.207
Isopropyl Alcohol	5.81	9.13	0.636	ok	0.638	0.578-0.698
p-Isopropyltoluene	24.18	18.84	1.283	ok	1.283	1.223-1.343
Methylene chloride	6.57	9.13	0.720	ok	0.719	0.659-0.779
Methyl ethyl ketone	8.36	9.13	0.916	ok	0.915	0.855-0.975
Methyl Isobutyl Ketone	14.24	11.79	1.208	ok	1.208	1.148-1.268
Methyl Tert Butyl Ether	7.96	9.13	0.872	ok	0.872	0.812-0.932
Methylmethacrylate	13.15	11.79	1.115	ok	1.115	1.055-1.175
Naphthalene	27.24	18.84	1.446	ok	1.446	1.386-1.506
Nonane	21.08	18.84	1.119	ok	1.119	1.059-1.179
Pentane	6.14	9.13	0.673	ok	0.671	0.611-0.731
Propylene	3.92	9.13	0.429	ok	0.429	0.369-0.489
Styrene	20.47	18.84	1.087	ok	1.087	1.027-1.147
1,1,1-Trichloroethane	10.63	9.13	1.164	ok	1.164	1.104-1.224
1,1,1,2-Tetrachloroethane	18.89	18.84	1.003	ok	1.003	0.943-1.063
1,1,2,2-Tetrachloroethane	20.63	18.84	1.095	ok	1.095	1.035-1.155
1,1,2-Trichloroethane	15.29	11.79	1.297	ok	1.297	1.237-1.357
1,2,4-Trichlorobenzene	27.10	18.84	1.438	ok	1.438	1.378-1.498
1,2,4-Trimethylbenzene	23.47	18.84	1.246	ok	1.246	1.186-1.306
1,3,5-Trimethylbenzene	22.81	18.84	1.211	ok	1.211	1.151-1.271
2,2,4-Trimethylpentane	12.88	11.79	1.092	ok	1.093	1.033-1.153
Tertiary Butyl Alcohol	6.47	9.13	0.709	ok	0.711	0.651-0.771
tert-Butylbenzene	23.46	18.84	1.245	ok	1.245	1.185-1.305
Tetrachloroethylene	17.72	18.84	0.941	ok	0.940	0.880-1.000
Tetrahydrofuran	9.83	9.13	1.077	ok	1.077	1.017-1.137
Toluene	15.76	11.79	1.337	ok	1.336	1.276-1.396
Trichloroethylene	12.82	11.79	1.087	ok	1.088	1.028-1.148
Trichlorofluoromethane	5.76	9.13	0.631	ok	0.630	0.570-0.690
Vinyl chloride	4.38	9.13	0.480	ok	0.479	0.419-0.539
Vinyl Acetate	8.06	9.13	0.883	ok	0.882	0.822-0.942
m,p-Xylene	19.90	18.84	1.056	ok	1.056	0.996-1.116
o-Xylene	20.64	18.84	1.096	ok	1.096	1.036-1.156

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1355-IC1355	Q31195.D	08/20/15 18:36	AA	0.2	GCMSQ	TO-15	
MSQ1355-IC1355	Q31196.D	08/20/15 19:27	AA	0.5	GCMSQ	TO-15	
MSQ1355-IC1355	Q31197.D	08/20/15 20:18	AA	2	GCMSQ	TO-15	
MSQ1355-IC1355	Q31198.D	08/20/15 21:08	AA	5	GCMSQ	TO-15	Reporting this level
MSQ1355-ICC1355	Q31199.D	08/20/15 21:58	AA	10	GCMSQ	TO-15	
MSQ1355-IC1355	Q31200.D	08/20/15 22:48	AA	20	GCMSQ	TO-15	
MSQ1355-IC1355	Q31201.D	08/20/15 23:38	AA	30	GCMSQ	TO-15	
MSQ1355-IC1355	Q31202.D	08/21/15 00:28	AA	40	GCMSQ	TO-15	

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	9.13	ok	9.13	8.80-9.46	384375	ok	422297	253378-591216
1,4-Difluorobenzene	11.79	ok	11.79	11.46-12.12	1711901	ok	1942547	1165528-2719566
Chlorobenzene-D5	18.84	ok	18.84	18.51-19.17	961724	ok	1054904	632942-1476866

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1355-IC1355	Q31195.D	08/20/15 18:36	AA	0.2	GCMSQ	TO-15	
MSQ1355-IC1355	Q31196.D	08/20/15 19:27	AA	0.5	GCMSQ	TO-15	
MSQ1355-IC1355	Q31197.D	08/20/15 20:18	AA	2	GCMSQ	TO-15	
MSQ1355-IC1355	Q31198.D	08/20/15 21:08	AA	5	GCMSQ	TO-15	
MSQ1355-ICC1355	Q31199.D	08/20/15 21:58	AA	10	GCMSQ	TO-15	Reporting this level
MSQ1355-IC1355	Q31200.D	08/20/15 22:48	AA	20	GCMSQ	TO-15	
MSQ1355-IC1355	Q31201.D	08/20/15 23:38	AA	30	GCMSQ	TO-15	
MSQ1355-IC1355	Q31202.D	08/21/15 00:28	AA	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.55	9.13	0.608	ok	0.608	0.548-0.668
Acrolein	5.42	9.13	0.594	ok	0.594	0.534-0.654
Acrylonitrile	6.04	9.13	0.662	ok	0.662	0.602-0.722
1,3-Butadiene	4.51	9.13	0.494	ok	0.494	0.434-0.554
Benzene	11.27	11.79	0.956	ok	0.956	0.896-1.016
Bromodichloromethane	12.76	11.79	1.082	ok	1.082	1.022-1.142
Bromoform	19.96	18.84	1.059	ok	1.060	1.000-1.120
Bromomethane	4.78	9.13	0.524	ok	0.524	0.464-0.584
Bromoethene	5.32	9.13	0.583	ok	0.582	0.522-0.642
n-Butylbenzene	24.88	18.84	1.321	ok	1.320	1.260-1.380
sec-Butylbenzene	23.91	18.84	1.269	ok	1.269	1.209-1.329
Benzyl Chloride	23.68	18.84	1.257	ok	1.257	1.197-1.317
Carbon disulfide	6.92	9.13	0.758	ok	0.758	0.698-0.818
Chlorobenzene	18.92	18.84	1.004	ok	1.004	0.944-1.064
Chloroethane	4.95	9.13	0.542	ok	0.543	0.483-0.603
Chloroform	9.30	9.13	1.019	ok	1.019	0.959-1.079
Chloromethane	4.15	9.13	0.455	ok	0.454	0.394-0.514
3-Chloropropene	6.70	9.13	0.734	ok	0.733	0.673-0.793
2-Chlorotoluene	22.36	18.84	1.187	ok	1.187	1.127-1.247
Carbon tetrachloride	11.49	9.13	1.258	ok	1.258	1.198-1.318
Cyclohexane	11.67	11.79	0.990	ok	0.990	0.930-1.050
1,1-Dichloroethane	7.88	9.13	0.863	ok	0.863	0.803-0.923
1,1-Dichloroethylene	6.44	9.13	0.705	ok	0.705	0.645-0.765
1,2-Dibromoethane	16.88	18.84	0.896	ok	0.896	0.836-0.956
1,2-Dichloroethane	10.28	9.13	1.126	ok	1.126	1.066-1.186
1,2-Dichloropropane	12.46	11.79	1.057	ok	1.057	0.997-1.117
1,3-Dichloropropane	15.80	11.79	1.340	ok	1.340	1.280-1.400
1,4-Dioxane	12.82	11.79	1.087	ok	1.089	1.029-1.149
Dichlorodifluoromethane	3.99	9.13	0.437	ok	0.437	0.377-0.497
Dibromochloromethane	16.46	18.84	0.874	ok	0.874	0.814-0.934
trans-1,2-Dichloroethylene	7.65	9.13	0.838	ok	0.837	0.777-0.897
cis-1,2-Dichloroethylene	8.92	9.13	0.977	ok	0.977	0.917-1.037
cis-1,3-Dichloropropene	14.16	11.79	1.201	ok	1.201	1.141-1.261
m-Dichlorobenzene	23.69	18.84	1.257	ok	1.257	1.197-1.317
o-Dichlorobenzene	24.37	18.84	1.294	ok	1.293	1.233-1.353
p-Dichlorobenzene	23.81	18.84	1.264	ok	1.264	1.204-1.324
trans-1,3-Dichloropropene	15.02	11.79	1.274	ok	1.274	1.214-1.334
Ethanol	5.06	9.13	0.554	ok	0.554	0.494-0.614
Ethylbenzene	19.58	18.84	1.039	ok	1.039	0.979-1.099
Ethyl Acetate	9.20	9.13	1.008	ok	1.008	0.948-1.068

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1355-IC1355	Q31195.D	08/20/15 18:36	AA	0.2	GCMSQ	TO-15	
MSQ1355-IC1355	Q31196.D	08/20/15 19:27	AA	0.5	GCMSQ	TO-15	
MSQ1355-IC1355	Q31197.D	08/20/15 20:18	AA	2	GCMSQ	TO-15	
MSQ1355-IC1355	Q31198.D	08/20/15 21:08	AA	5	GCMSQ	TO-15	
MSQ1355-ICC1355	Q31199.D	08/20/15 21:58	AA	10	GCMSQ	TO-15	Reporting this level
MSQ1355-IC1355	Q31200.D	08/20/15 22:48	AA	20	GCMSQ	TO-15	
MSQ1355-IC1355	Q31201.D	08/20/15 23:38	AA	30	GCMSQ	TO-15	
MSQ1355-IC1355	Q31202.D	08/21/15 00:28	AA	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
4-Ethyltoluene	22.68	18.84	1.204	ok	1.204	1.144-1.264
Freon 113	6.87	9.13	0.752	ok	0.752	0.692-0.812
Freon 114	4.25	9.13	0.465	ok	0.465	0.405-0.525
Heptane	13.30	11.79	1.128	ok	1.128	1.068-1.188
Hexachlorobutadiene	27.69	18.84	1.470	ok	1.470	1.410-1.530
Hexane	9.20	9.13	1.008	ok	1.007	0.947-1.067
2-Hexanone	16.24	18.84	0.862	ok	0.862	0.802-0.922
Isopropylbenzene	21.61	18.84	1.147	ok	1.147	1.087-1.207
Isopropyl Alcohol	5.81	9.13	0.636	ok	0.638	0.578-0.698
p-Isopropyltoluene	24.18	18.84	1.283	ok	1.283	1.223-1.343
Methylene chloride	6.57	9.13	0.720	ok	0.719	0.659-0.779
Methyl ethyl ketone	8.35	9.13	0.915	ok	0.915	0.855-0.975
Methyl Isobutyl Ketone	14.23	11.79	1.207	ok	1.208	1.148-1.268
Methyl Tert Butyl Ether	7.96	9.13	0.872	ok	0.872	0.812-0.932
Methylmethacrylate	13.14	11.79	1.115	ok	1.115	1.055-1.175
Naphthalene	27.24	18.84	1.446	ok	1.446	1.386-1.506
Nonane	21.08	18.84	1.119	ok	1.119	1.059-1.179
Pentane	6.13	9.13	0.671	ok	0.671	0.611-0.731
Propylene	3.92	9.13	0.429	ok	0.429	0.369-0.489
Styrene	20.47	18.84	1.087	ok	1.087	1.027-1.147
1,1,1-Trichloroethane	10.63	9.13	1.164	ok	1.164	1.104-1.224
1,1,1,2-Tetrachloroethane	18.89	18.84	1.003	ok	1.003	0.943-1.063
1,1,2,2-Tetrachloroethane	20.63	18.84	1.095	ok	1.095	1.035-1.155
1,1,2-Trichloroethane	15.29	11.79	1.297	ok	1.297	1.237-1.357
1,2,4-Trichlorobenzene	27.10	18.84	1.438	ok	1.438	1.378-1.498
1,2,4-Trimethylbenzene	23.47	18.84	1.246	ok	1.246	1.186-1.306
1,3,5-Trimethylbenzene	22.81	18.84	1.211	ok	1.211	1.151-1.271
2,2,4-Trimethylpentane	12.88	11.79	1.092	ok	1.093	1.033-1.153
Tertiary Butyl Alcohol	6.46	9.13	0.708	ok	0.711	0.651-0.771
tert-Butylbenzene	23.46	18.84	1.245	ok	1.245	1.185-1.305
Tetrachloroethylene	17.72	18.84	0.941	ok	0.940	0.880-1.000
Tetrahydrofuran	9.82	9.13	1.076	ok	1.077	1.017-1.137
Toluene	15.75	11.79	1.336	ok	1.336	1.276-1.396
Trichloroethylene	12.82	11.79	1.087	ok	1.088	1.028-1.148
Trichlorofluoromethane	5.75	9.13	0.630	ok	0.630	0.570-0.690
Vinyl chloride	4.37	9.13	0.479	ok	0.479	0.419-0.539
Vinyl Acetate	8.06	9.13	0.883	ok	0.882	0.822-0.942
m,p-Xylene	19.90	18.84	1.056	ok	1.056	0.996-1.116
o-Xylene	20.65	18.84	1.096	ok	1.096	1.036-1.156

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1355-IC1355	Q31195.D	08/20/15 18:36	AA	0.2	GCMSQ	TO-15	
MSQ1355-IC1355	Q31196.D	08/20/15 19:27	AA	0.5	GCMSQ	TO-15	
MSQ1355-IC1355	Q31197.D	08/20/15 20:18	AA	2	GCMSQ	TO-15	
MSQ1355-IC1355	Q31198.D	08/20/15 21:08	AA	5	GCMSQ	TO-15	
MSQ1355-ICC1355	Q31199.D	08/20/15 21:58	AA	10	GCMSQ	TO-15	Reporting this level
MSQ1355-IC1355	Q31200.D	08/20/15 22:48	AA	20	GCMSQ	TO-15	
MSQ1355-IC1355	Q31201.D	08/20/15 23:38	AA	30	GCMSQ	TO-15	
MSQ1355-IC1355	Q31202.D	08/21/15 00:28	AA	40	GCMSQ	TO-15	

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	9.13	ok	9.13	8.80-9.46	426626	ok	422297	253378-591216
1,4-Difluorobenzene	11.79	ok	11.79	11.46-12.12	1991659	ok	1942547	1165528-2719566
Chlorobenzene-D5	18.84	ok	18.84	18.51-19.17	1061642	ok	1054904	632942-1476866

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1355-IC1355	Q31195.D	08/20/15 18:36	AA	0.2	GCMSQ	TO-15	
MSQ1355-IC1355	Q31196.D	08/20/15 19:27	AA	0.5	GCMSQ	TO-15	
MSQ1355-IC1355	Q31197.D	08/20/15 20:18	AA	2	GCMSQ	TO-15	
MSQ1355-IC1355	Q31198.D	08/20/15 21:08	AA	5	GCMSQ	TO-15	
MSQ1355-ICC1355	Q31199.D	08/20/15 21:58	AA	10	GCMSQ	TO-15	
MSQ1355-IC1355	Q31200.D	08/20/15 22:48	AA	20	GCMSQ	TO-15	Reporting this level
MSQ1355-IC1355	Q31201.D	08/20/15 23:38	AA	30	GCMSQ	TO-15	
MSQ1355-IC1355	Q31202.D	08/21/15 00:28	AA	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.55	9.14	0.607	ok	0.608	0.548-0.668
Acrolein	5.42	9.14	0.593	ok	0.594	0.534-0.654
Acrylonitrile	6.04	9.14	0.661	ok	0.662	0.602-0.722
1,3-Butadiene	4.51	9.14	0.493	ok	0.494	0.434-0.554
Benzene	11.28	11.79	0.957	ok	0.956	0.896-1.016
Bromodichloromethane	12.76	11.79	1.082	ok	1.082	1.022-1.142
Bromoform	19.97	18.85	1.059	ok	1.060	1.000-1.120
Bromomethane	4.79	9.14	0.524	ok	0.524	0.464-0.584
Bromoethene	5.32	9.14	0.582	ok	0.582	0.522-0.642
n-Butylbenzene	24.88	18.85	1.320	ok	1.320	1.260-1.380
sec-Butylbenzene	23.91	18.85	1.268	ok	1.269	1.209-1.329
Benzyl Chloride	23.68	18.85	1.256	ok	1.257	1.197-1.317
Carbon disulfide	6.92	9.14	0.757	ok	0.758	0.698-0.818
Chlorobenzene	18.93	18.85	1.004	ok	1.004	0.944-1.064
Chloroethane	4.96	9.14	0.543	ok	0.543	0.483-0.603
Chloroform	9.31	9.14	1.019	ok	1.019	0.959-1.079
Chloromethane	4.15	9.14	0.454	ok	0.454	0.394-0.514
3-Chloropropene	6.70	9.14	0.733	ok	0.733	0.673-0.793
2-Chlorotoluene	22.36	18.85	1.186	ok	1.187	1.127-1.247
Carbon tetrachloride	11.49	9.14	1.257	ok	1.258	1.198-1.318
Cyclohexane	11.67	11.79	0.990	ok	0.990	0.930-1.050
1,1-Dichloroethane	7.89	9.14	0.863	ok	0.863	0.803-0.923
1,1-Dichloroethylene	6.44	9.14	0.705	ok	0.705	0.645-0.765
1,2-Dibromoethane	16.88	18.85	0.895	ok	0.896	0.836-0.956
1,2-Dichloroethane	10.29	9.14	1.126	ok	1.126	1.066-1.186
1,2-Dichloropropane	12.47	11.79	1.058	ok	1.057	0.997-1.117
1,3-Dichloropropane	15.80	11.79	1.340	ok	1.340	1.280-1.400
1,4-Dioxane	12.82	11.79	1.087	ok	1.089	1.029-1.149
Dichlorodifluoromethane	4.00	9.14	0.438	ok	0.437	0.377-0.497
Dibromochloromethane	16.46	18.85	0.873	ok	0.874	0.814-0.934
trans-1,2-Dichloroethylene	7.65	9.14	0.837	ok	0.837	0.777-0.897
cis-1,2-Dichloroethylene	8.93	9.14	0.977	ok	0.977	0.917-1.037
cis-1,3-Dichloropropene	14.17	11.79	1.202	ok	1.201	1.141-1.261
m-Dichlorobenzene	23.70	18.85	1.257	ok	1.257	1.197-1.317
o-Dichlorobenzene	24.37	18.85	1.293	ok	1.293	1.233-1.353
p-Dichlorobenzene	23.81	18.85	1.263	ok	1.264	1.204-1.324
trans-1,3-Dichloropropene	15.02	11.79	1.274	ok	1.274	1.214-1.334
Ethanol	5.06	9.14	0.554	ok	0.554	0.494-0.614
Ethylbenzene	19.58	18.85	1.039	ok	1.039	0.979-1.099
Ethyl Acetate	9.21	9.14	1.008	ok	1.008	0.948-1.068

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1355-IC1355	Q31195.D	08/20/15 18:36	AA	0.2	GCMSQ	TO-15	
MSQ1355-IC1355	Q31196.D	08/20/15 19:27	AA	0.5	GCMSQ	TO-15	
MSQ1355-IC1355	Q31197.D	08/20/15 20:18	AA	2	GCMSQ	TO-15	
MSQ1355-IC1355	Q31198.D	08/20/15 21:08	AA	5	GCMSQ	TO-15	
MSQ1355-ICC1355	Q31199.D	08/20/15 21:58	AA	10	GCMSQ	TO-15	
MSQ1355-IC1355	Q31200.D	08/20/15 22:48	AA	20	GCMSQ	TO-15	Reporting this level
MSQ1355-IC1355	Q31201.D	08/20/15 23:38	AA	30	GCMSQ	TO-15	
MSQ1355-IC1355	Q31202.D	08/21/15 00:28	AA	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
4-Ethyltoluene	22.69	18.85	1.204	ok	1.204	1.144-1.264
Freon 113	6.87	9.14	0.752	ok	0.752	0.692-0.812
Freon 114	4.25	9.14	0.465	ok	0.465	0.405-0.525
Heptane	13.30	11.79	1.128	ok	1.128	1.068-1.188
Hexachlorobutadiene	27.69	18.85	1.469	ok	1.470	1.410-1.530
Hexane	9.20	9.14	1.007	ok	1.007	0.947-1.067
2-Hexanone	16.23	18.85	0.861	ok	0.862	0.802-0.922
Isopropylbenzene	21.62	18.85	1.147	ok	1.147	1.087-1.207
Isopropyl Alcohol	5.81	9.14	0.636	ok	0.638	0.578-0.698
p-Isopropyltoluene	24.19	18.85	1.283	ok	1.283	1.223-1.343
Methylene chloride	6.57	9.14	0.719	ok	0.719	0.659-0.779
Methyl ethyl ketone	8.35	9.14	0.914	ok	0.915	0.855-0.975
Methyl Isobutyl Ketone	14.23	11.79	1.207	ok	1.208	1.148-1.268
Methyl Tert Butyl Ether	7.95	9.14	0.870	ok	0.872	0.812-0.932
Methylmethacrylate	13.15	11.79	1.115	ok	1.115	1.055-1.175
Naphthalene	27.24	18.85	1.445	ok	1.446	1.386-1.506
Nonane	21.08	18.85	1.118	ok	1.119	1.059-1.179
Pentane	6.13	9.14	0.671	ok	0.671	0.611-0.731
Propylene	3.92	9.14	0.429	ok	0.429	0.369-0.489
Styrene	20.48	18.85	1.086	ok	1.087	1.027-1.147
1,1,1-Trichloroethane	10.63	9.14	1.163	ok	1.164	1.104-1.224
1,1,1,2-Tetrachloroethane	18.89	18.85	1.002	ok	1.003	0.943-1.063
1,1,2,2-Tetrachloroethane	20.64	18.85	1.095	ok	1.095	1.035-1.155
1,1,2-Trichloroethane	15.30	11.79	1.298	ok	1.297	1.237-1.357
1,2,4-Trichlorobenzene	27.11	18.85	1.438	ok	1.438	1.378-1.498
1,2,4-Trimethylbenzene	23.47	18.85	1.245	ok	1.246	1.186-1.306
1,3,5-Trimethylbenzene	22.81	18.85	1.210	ok	1.211	1.151-1.271
2,2,4-Trimethylpentane	12.89	11.79	1.093	ok	1.093	1.033-1.153
Tertiary Butyl Alcohol	6.46	9.14	0.707	ok	0.711	0.651-0.771
tert-Butylbenzene	23.47	18.85	1.245	ok	1.245	1.185-1.305
Tetrachloroethylene	17.72	18.85	0.940	ok	0.940	0.880-1.000
Tetrahydrofuran	9.82	9.14	1.074	ok	1.077	1.017-1.137
Toluene	15.76	11.79	1.337	ok	1.336	1.276-1.396
Trichloroethylene	12.83	11.79	1.088	ok	1.088	1.028-1.148
Trichlorofluoromethane	5.75	9.14	0.629	ok	0.630	0.570-0.690
Vinyl chloride	4.37	9.14	0.478	ok	0.479	0.419-0.539
Vinyl Acetate	8.06	9.14	0.882	ok	0.882	0.822-0.942
m,p-Xylene	19.91	18.85	1.056	ok	1.056	0.996-1.116
o-Xylene	20.65	18.85	1.095	ok	1.096	1.036-1.156

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1355-IC1355	Q31195.D	08/20/15 18:36	AA	0.2	GCMSQ	TO-15	
MSQ1355-IC1355	Q31196.D	08/20/15 19:27	AA	0.5	GCMSQ	TO-15	
MSQ1355-IC1355	Q31197.D	08/20/15 20:18	AA	2	GCMSQ	TO-15	
MSQ1355-IC1355	Q31198.D	08/20/15 21:08	AA	5	GCMSQ	TO-15	
MSQ1355-ICC1355	Q31199.D	08/20/15 21:58	AA	10	GCMSQ	TO-15	
MSQ1355-IC1355	Q31200.D	08/20/15 22:48	AA	20	GCMSQ	TO-15	Reporting this level
MSQ1355-IC1355	Q31201.D	08/20/15 23:38	AA	30	GCMSQ	TO-15	
MSQ1355-IC1355	Q31202.D	08/21/15 00:28	AA	40	GCMSQ	TO-15	

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	9.14	ok	9.13	8.80-9.46	450369	ok	422297	253378-591216
1,4-Difluorobenzene	11.79	ok	11.79	11.46-12.12	2090220	ok	1942547	1165528-2719566
Chlorobenzene-D5	18.85	ok	18.84	18.51-19.17	1134236	ok	1054904	632942-1476866

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1355-IC1355	Q31195.D	08/20/15 18:36	AA	0.2	GCMSQ	TO-15	
MSQ1355-IC1355	Q31196.D	08/20/15 19:27	AA	0.5	GCMSQ	TO-15	
MSQ1355-IC1355	Q31197.D	08/20/15 20:18	AA	2	GCMSQ	TO-15	
MSQ1355-IC1355	Q31198.D	08/20/15 21:08	AA	5	GCMSQ	TO-15	
MSQ1355-ICC1355	Q31199.D	08/20/15 21:58	AA	10	GCMSQ	TO-15	
MSQ1355-IC1355	Q31200.D	08/20/15 22:48	AA	20	GCMSQ	TO-15	
MSQ1355-IC1355	Q31201.D	08/20/15 23:38	AA	30	GCMSQ	TO-15	Reporting this level
MSQ1355-IC1355	Q31202.D	08/21/15 00:28	AA	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.55	9.14	0.607	ok	0.608	0.548-0.668
Acrolein	5.42	9.14	0.593	ok	0.594	0.534-0.654
Acrylonitrile	6.05	9.14	0.662	ok	0.662	0.602-0.722
1,3-Butadiene	4.51	9.14	0.493	ok	0.494	0.434-0.554
Benzene	11.28	11.79	0.957	ok	0.956	0.896-1.016
Bromodichloromethane	12.76	11.79	1.082	ok	1.082	1.022-1.142
Bromoform	19.97	18.85	1.059	ok	1.060	1.000-1.120
Bromomethane	4.78	9.14	0.523	ok	0.524	0.464-0.584
Bromoethene	5.31	9.14	0.581	ok	0.582	0.522-0.642
n-Butylbenzene	24.88	18.85	1.320	ok	1.320	1.260-1.380
sec-Butylbenzene	23.91	18.85	1.268	ok	1.269	1.209-1.329
Benzyl Chloride	23.69	18.85	1.257	ok	1.257	1.197-1.317
Carbon disulfide	6.92	9.14	0.757	ok	0.758	0.698-0.818
Chlorobenzene	18.93	18.85	1.004	ok	1.004	0.944-1.064
Chloroethane	4.95	9.14	0.542	ok	0.543	0.483-0.603
Chloroform	9.31	9.14	1.019	ok	1.019	0.959-1.079
Chloromethane	4.15	9.14	0.454	ok	0.454	0.394-0.514
3-Chloropropene	6.70	9.14	0.733	ok	0.733	0.673-0.793
2-Chlorotoluene	22.36	18.85	1.186	ok	1.187	1.127-1.247
Carbon tetrachloride	11.49	9.14	1.257	ok	1.258	1.198-1.318
Cyclohexane	11.67	11.79	0.990	ok	0.990	0.930-1.050
1,1-Dichloroethane	7.89	9.14	0.863	ok	0.863	0.803-0.923
1,1-Dichloroethylene	6.43	9.14	0.704	ok	0.705	0.645-0.765
1,2-Dibromoethane	16.89	18.85	0.896	ok	0.896	0.836-0.956
1,2-Dichloroethane	10.29	9.14	1.126	ok	1.126	1.066-1.186
1,2-Dichloropropane	12.47	11.79	1.058	ok	1.057	0.997-1.117
1,3-Dichloropropane	15.81	11.79	1.341	ok	1.340	1.280-1.400
1,4-Dioxane	12.82	11.79	1.087	ok	1.089	1.029-1.149
Dichlorodifluoromethane	3.99	9.14	0.437	ok	0.437	0.377-0.497
Dibromochloromethane	16.47	18.85	0.874	ok	0.874	0.814-0.934
trans-1,2-Dichloroethylene	7.65	9.14	0.837	ok	0.837	0.777-0.897
cis-1,2-Dichloroethylene	8.93	9.14	0.977	ok	0.977	0.917-1.037
cis-1,3-Dichloropropene	14.17	11.79	1.202	ok	1.201	1.141-1.261
m-Dichlorobenzene	23.70	18.85	1.257	ok	1.257	1.197-1.317
o-Dichlorobenzene	24.37	18.85	1.293	ok	1.293	1.233-1.353
p-Dichlorobenzene	23.81	18.85	1.263	ok	1.264	1.204-1.324
trans-1,3-Dichloropropene	15.02	11.79	1.274	ok	1.274	1.214-1.334
Ethanol	5.06	9.14	0.554	ok	0.554	0.494-0.614
Ethylbenzene	19.58	18.85	1.039	ok	1.039	0.979-1.099
Ethyl Acetate	9.21	9.14	1.008	ok	1.008	0.948-1.068

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1355-IC1355	Q31195.D	08/20/15 18:36	AA	0.2	GCMSQ	TO-15	
MSQ1355-IC1355	Q31196.D	08/20/15 19:27	AA	0.5	GCMSQ	TO-15	
MSQ1355-IC1355	Q31197.D	08/20/15 20:18	AA	2	GCMSQ	TO-15	
MSQ1355-IC1355	Q31198.D	08/20/15 21:08	AA	5	GCMSQ	TO-15	
MSQ1355-ICC1355	Q31199.D	08/20/15 21:58	AA	10	GCMSQ	TO-15	
MSQ1355-IC1355	Q31200.D	08/20/15 22:48	AA	20	GCMSQ	TO-15	
MSQ1355-IC1355	Q31201.D	08/20/15 23:38	AA	30	GCMSQ	TO-15	Reporting this level
MSQ1355-IC1355	Q31202.D	08/21/15 00:28	AA	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
4-Ethyltoluene	22.69	18.85	1.204	ok	1.204	1.144-1.264
Freon 113	6.86	9.14	0.751	ok	0.752	0.692-0.812
Freon 114	4.24	9.14	0.464	ok	0.465	0.405-0.525
Heptane	13.31	11.79	1.129	ok	1.128	1.068-1.188
Hexachlorobutadiene	27.70	18.85	1.469	ok	1.470	1.410-1.530
Hexane	9.20	9.14	1.007	ok	1.007	0.947-1.067
2-Hexanone	16.24	18.85	0.862	ok	0.862	0.802-0.922
Isopropylbenzene	21.62	18.85	1.147	ok	1.147	1.087-1.207
Isopropyl Alcohol	5.81	9.14	0.636	ok	0.638	0.578-0.698
p-Isopropyltoluene	24.19	18.85	1.283	ok	1.283	1.223-1.343
Methylene chloride	6.56	9.14	0.718	ok	0.719	0.659-0.779
Methyl ethyl ketone	8.35	9.14	0.914	ok	0.915	0.855-0.975
Methyl Isobutyl Ketone	14.23	11.79	1.207	ok	1.208	1.148-1.268
Methyl Tert Butyl Ether	7.95	9.14	0.870	ok	0.872	0.812-0.932
Methylmethacrylate	13.15	11.79	1.115	ok	1.115	1.055-1.175
Naphthalene	27.24	18.85	1.445	ok	1.446	1.386-1.506
Nonane	21.08	18.85	1.118	ok	1.119	1.059-1.179
Pentane	6.13	9.14	0.671	ok	0.671	0.611-0.731
Propylene	3.92	9.14	0.429	ok	0.429	0.369-0.489
Styrene	20.48	18.85	1.086	ok	1.087	1.027-1.147
1,1,1-Trichloroethane	10.63	9.14	1.163	ok	1.164	1.104-1.224
1,1,1,2-Tetrachloroethane	18.90	18.85	1.003	ok	1.003	0.943-1.063
1,1,2,2-Tetrachloroethane	20.64	18.85	1.095	ok	1.095	1.035-1.155
1,1,2-Trichloroethane	15.30	11.79	1.298	ok	1.297	1.237-1.357
1,2,4-Trichlorobenzene	27.11	18.85	1.438	ok	1.438	1.378-1.498
1,2,4-Trimethylbenzene	23.48	18.85	1.246	ok	1.246	1.186-1.306
1,3,5-Trimethylbenzene	22.82	18.85	1.211	ok	1.211	1.151-1.271
2,2,4-Trimethylpentane	12.89	11.79	1.093	ok	1.093	1.033-1.153
Tertiary Butyl Alcohol	6.46	9.14	0.707	ok	0.711	0.651-0.771
tert-Butylbenzene	23.47	18.85	1.245	ok	1.245	1.185-1.305
Tetrachloroethylene	17.72	18.85	0.940	ok	0.940	0.880-1.000
Tetrahydrofuran	9.82	9.14	1.074	ok	1.077	1.017-1.137
Toluene	15.76	11.79	1.337	ok	1.336	1.276-1.396
Trichloroethylene	12.83	11.79	1.088	ok	1.088	1.028-1.148
Trichlorofluoromethane	5.75	9.14	0.629	ok	0.630	0.570-0.690
Vinyl chloride	4.37	9.14	0.478	ok	0.479	0.419-0.539
Vinyl Acetate	8.06	9.14	0.882	ok	0.882	0.822-0.942
m,p-Xylene	19.91	18.85	1.056	ok	1.056	0.996-1.116
o-Xylene	20.66	18.85	1.096	ok	1.096	1.036-1.156

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1355-IC1355	Q31195.D	08/20/15 18:36	AA	0.2	GCMSQ	TO-15	
MSQ1355-IC1355	Q31196.D	08/20/15 19:27	AA	0.5	GCMSQ	TO-15	
MSQ1355-IC1355	Q31197.D	08/20/15 20:18	AA	2	GCMSQ	TO-15	
MSQ1355-IC1355	Q31198.D	08/20/15 21:08	AA	5	GCMSQ	TO-15	
MSQ1355-ICC1355	Q31199.D	08/20/15 21:58	AA	10	GCMSQ	TO-15	
MSQ1355-IC1355	Q31200.D	08/20/15 22:48	AA	20	GCMSQ	TO-15	
MSQ1355-IC1355	Q31201.D	08/20/15 23:38	AA	30	GCMSQ	TO-15	Reporting this level
MSQ1355-IC1355	Q31202.D	08/21/15 00:28	AA	40	GCMSQ	TO-15	

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	9.14	ok	9.13	8.80-9.46	451112	ok	422297	253378-591216
1,4-Difluorobenzene	11.79	ok	11.79	11.46-12.12	2008937	ok	1942547	1165528-2719566
Chlorobenzene-D5	18.85	ok	18.84	18.51-19.17	1197100	ok	1054904	632942-1476866

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1355-IC1355	Q31195.D	08/20/15 18:36	AA	0.2	GCMSQ	TO-15	
MSQ1355-IC1355	Q31196.D	08/20/15 19:27	AA	0.5	GCMSQ	TO-15	
MSQ1355-IC1355	Q31197.D	08/20/15 20:18	AA	2	GCMSQ	TO-15	
MSQ1355-IC1355	Q31198.D	08/20/15 21:08	AA	5	GCMSQ	TO-15	
MSQ1355-ICC1355	Q31199.D	08/20/15 21:58	AA	10	GCMSQ	TO-15	
MSQ1355-IC1355	Q31200.D	08/20/15 22:48	AA	20	GCMSQ	TO-15	
MSQ1355-IC1355	Q31201.D	08/20/15 23:38	AA	30	GCMSQ	TO-15	
MSQ1355-IC1355	Q31202.D	08/21/15 00:28	AA	40	GCMSQ	TO-15	Reporting this level

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.56	9.15	0.608	ok	0.608	0.548-0.668
Acrolein	5.42	9.15	0.592	ok	0.594	0.534-0.654
Acrylonitrile	6.06	9.15	0.662	ok	0.662	0.602-0.722
1,3-Butadiene	4.51	9.15	0.493	ok	0.494	0.434-0.554
Benzene	11.29	11.80	0.957	ok	0.956	0.896-1.016
Bromodichloromethane	12.77	11.80	1.082	ok	1.082	1.022-1.142
Bromoform	19.98	18.85	1.060	ok	1.060	1.000-1.120
Bromomethane	4.79	9.15	0.523	ok	0.524	0.464-0.584
Bromoethene	5.32	9.15	0.581	ok	0.582	0.522-0.642
n-Butylbenzene	24.89	18.85	1.320	ok	1.320	1.260-1.380
sec-Butylbenzene	23.92	18.85	1.269	ok	1.269	1.209-1.329
Benzyl Chloride	23.69	18.85	1.257	ok	1.257	1.197-1.317
Carbon disulfide	6.92	9.15	0.756	ok	0.758	0.698-0.818
Chlorobenzene	18.93	18.85	1.004	ok	1.004	0.944-1.064
Chloroethane	4.96	9.15	0.542	ok	0.543	0.483-0.603
Chloroform	9.32	9.15	1.019	ok	1.019	0.959-1.079
Chloromethane	4.15	9.15	0.454	ok	0.454	0.394-0.514
3-Chloropropene	6.70	9.15	0.732	ok	0.733	0.673-0.793
2-Chlorotoluene	22.37	18.85	1.187	ok	1.187	1.127-1.247
Carbon tetrachloride	11.50	9.15	1.257	ok	1.258	1.198-1.318
Cyclohexane	11.68	11.80	0.990	ok	0.990	0.930-1.050
1,1-Dichloroethane	7.90	9.15	0.863	ok	0.863	0.803-0.923
1,1-Dichloroethylene	6.44	9.15	0.704	ok	0.705	0.645-0.765
1,2-Dibromoethane	16.90	18.85	0.897	ok	0.896	0.836-0.956
1,2-Dichloroethane	10.29	9.15	1.125	ok	1.126	1.066-1.186
1,2-Dichloropropane	12.48	11.80	1.058	ok	1.057	0.997-1.117
1,3-Dichloropropane	15.82	11.80	1.341	ok	1.340	1.280-1.400
1,4-Dioxane	12.82	11.80	1.086	ok	1.089	1.029-1.149
Dichlorodifluoromethane	4.00	9.15	0.437	ok	0.437	0.377-0.497
Dibromochloromethane	16.47	18.85	0.874	ok	0.874	0.814-0.934
trans-1,2-Dichloroethylene	7.65	9.15	0.836	ok	0.837	0.777-0.897
cis-1,2-Dichloroethylene	8.93	9.15	0.976	ok	0.977	0.917-1.037
cis-1,3-Dichloropropene	14.18	11.80	1.202	ok	1.201	1.141-1.261
m-Dichlorobenzene	23.70	18.85	1.257	ok	1.257	1.197-1.317
o-Dichlorobenzene	24.38	18.85	1.293	ok	1.293	1.233-1.353
p-Dichlorobenzene	23.82	18.85	1.264	ok	1.264	1.204-1.324
trans-1,3-Dichloropropene	15.03	11.80	1.274	ok	1.274	1.214-1.334
Ethanol	5.06	9.15	0.553	ok	0.554	0.494-0.614
Ethylbenzene	19.59	18.85	1.039	ok	1.039	0.979-1.099
Ethyl Acetate	9.21	9.15	1.007	ok	1.008	0.948-1.068

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1355-IC1355	Q31195.D	08/20/15 18:36	AA	0.2	GCMSQ	TO-15	
MSQ1355-IC1355	Q31196.D	08/20/15 19:27	AA	0.5	GCMSQ	TO-15	
MSQ1355-IC1355	Q31197.D	08/20/15 20:18	AA	2	GCMSQ	TO-15	
MSQ1355-IC1355	Q31198.D	08/20/15 21:08	AA	5	GCMSQ	TO-15	
MSQ1355-ICC1355	Q31199.D	08/20/15 21:58	AA	10	GCMSQ	TO-15	
MSQ1355-IC1355	Q31200.D	08/20/15 22:48	AA	20	GCMSQ	TO-15	
MSQ1355-IC1355	Q31201.D	08/20/15 23:38	AA	30	GCMSQ	TO-15	
MSQ1355-IC1355	Q31202.D	08/21/15 00:28	AA	40	GCMSQ	TO-15	Reporting this level

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
4-Ethyltoluene	22.69	18.85	1.204	ok	1.204	1.144-1.264
Freon 113	6.87	9.15	0.751	ok	0.752	0.692-0.812
Freon 114	4.25	9.15	0.464	ok	0.465	0.405-0.525
Heptane	13.31	11.80	1.128	ok	1.128	1.068-1.188
Hexachlorobutadiene	27.70	18.85	1.469	ok	1.470	1.410-1.530
Hexane	9.21	9.15	1.007	ok	1.007	0.947-1.067
2-Hexanone	16.24	18.85	0.862	ok	0.862	0.802-0.922
Isopropylbenzene	21.62	18.85	1.147	ok	1.147	1.087-1.207
Isopropyl Alcohol	5.81	9.15	0.635	ok	0.638	0.578-0.698
p-Isopropyltoluene	24.19	18.85	1.283	ok	1.283	1.223-1.343
Methylene chloride	6.57	9.15	0.718	ok	0.719	0.659-0.779
Methyl ethyl ketone	8.36	9.15	0.914	ok	0.915	0.855-0.975
Methyl Isobutyl Ketone	14.24	11.80	1.207	ok	1.208	1.148-1.268
Methyl Tert Butyl Ether	7.95	9.15	0.869	ok	0.872	0.812-0.932
Methylmethacrylate	13.15	11.80	1.114	ok	1.115	1.055-1.175
Naphthalene	27.24	18.85	1.445	ok	1.446	1.386-1.506
Nonane	21.08	18.85	1.118	ok	1.119	1.059-1.179
Pentane	6.13	9.15	0.670	ok	0.671	0.611-0.731
Propylene	3.92	9.15	0.428	ok	0.429	0.369-0.489
Styrene	20.49	18.85	1.087	ok	1.087	1.027-1.147
1,1,1-Trichloroethane	10.64	9.15	1.163	ok	1.164	1.104-1.224
1,1,1,2-Tetrachloroethane	18.91	18.85	1.003	ok	1.003	0.943-1.063
1,1,2,2-Tetrachloroethane	20.64	18.85	1.095	ok	1.095	1.035-1.155
1,1,2-Trichloroethane	15.30	11.80	1.297	ok	1.297	1.237-1.357
1,2,4-Trichlorobenzene	27.11	18.85	1.438	ok	1.438	1.378-1.498
1,2,4-Trimethylbenzene	23.49	18.85	1.246	ok	1.246	1.186-1.306
1,3,5-Trimethylbenzene	22.82	18.85	1.211	ok	1.211	1.151-1.271
2,2,4-Trimethylpentane	12.90	11.80	1.093	ok	1.093	1.033-1.153
Tertiary Butyl Alcohol	6.47	9.15	0.707	ok	0.711	0.651-0.771
tert-Butylbenzene	23.47	18.85	1.245	ok	1.245	1.185-1.305
Tetrachloroethylene	17.73	18.85	0.941	ok	0.940	0.880-1.000
Tetrahydrofuran	9.82	9.15	1.073	ok	1.077	1.017-1.137
Toluene	15.77	11.80	1.336	ok	1.336	1.276-1.396
Trichloroethylene	12.83	11.80	1.087	ok	1.088	1.028-1.148
Trichlorofluoromethane	5.76	9.15	0.630	ok	0.630	0.570-0.690
Vinyl chloride	4.37	9.15	0.478	ok	0.479	0.419-0.539
Vinyl Acetate	8.07	9.15	0.882	ok	0.882	0.822-0.942
m,p-Xylene	19.92	18.85	1.057	ok	1.056	0.996-1.116
o-Xylene	20.66	18.85	1.096	ok	1.096	1.036-1.156

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1355-IC1355	Q31195.D	08/20/15 18:36	AA	0.2	GCMSQ	TO-15	
MSQ1355-IC1355	Q31196.D	08/20/15 19:27	AA	0.5	GCMSQ	TO-15	
MSQ1355-IC1355	Q31197.D	08/20/15 20:18	AA	2	GCMSQ	TO-15	
MSQ1355-IC1355	Q31198.D	08/20/15 21:08	AA	5	GCMSQ	TO-15	
MSQ1355-ICC1355	Q31199.D	08/20/15 21:58	AA	10	GCMSQ	TO-15	
MSQ1355-IC1355	Q31200.D	08/20/15 22:48	AA	20	GCMSQ	TO-15	
MSQ1355-IC1355	Q31201.D	08/20/15 23:38	AA	30	GCMSQ	TO-15	
MSQ1355-IC1355	Q31202.D	08/21/15 00:28	AA	40	GCMSQ	TO-15	Reporting this level

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	9.15	ok	9.13	8.80-9.46	482010	ok	422297	253378-591216
1,4-Difluorobenzene	11.80	ok	11.79	11.46-12.12	2336161	ok	1942547	1165528-2719566
Chlorobenzene-D5	18.85	ok	18.84	18.51-19.17	1326921	ok	1054904	632942-1476866

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1364-IC1364	Q31408.D	09/04/15 20:47	PN	0.2	GCMSQ	TO-15	Reporting this level
MSQ1364-IC1364	Q31409.D	09/04/15 21:36	PN	0.5	GCMSQ	TO-15	
MSQ1364-IC1364	Q31410.D	09/04/15 22:24	PN	2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31411.D	09/04/15 23:12	PN	5	GCMSQ	TO-15	
MSQ1364-ICC1364	Q31412.D	09/05/15 00:00	PN	10	GCMSQ	TO-15	
MSQ1364-IC1364	Q31413.D	09/05/15 00:49	PN	20	GCMSQ	TO-15	
MSQ1364-IC1364	Q31414.D	09/05/15 01:36	PN	30	GCMSQ	TO-15	
MSQ1364-IC1364	Q31415.D	09/05/15 02:24	PN	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.59	9.11	0.614	ok	0.611	0.551-0.671
Acrylonitrile	6.05	9.11	0.664	ok	0.663	0.603-0.723
1,3-Butadiene	4.50	9.11	0.494	ok	0.494	0.434-0.554
Benzene	11.24	11.76	0.956	ok	0.956	0.896-1.016
Bromoform	19.93	18.80	1.060	ok	1.060	1.000-1.120
Bromomethane	4.78	9.11	0.525	ok	0.524	0.464-0.584
Bromoethene	5.31	9.11	0.583	ok	0.582	0.522-0.642
n-Butylbenzene	24.86	18.80	1.322	ok	1.322	1.262-1.382
sec-Butylbenzene	23.88	18.80	1.270	ok	1.270	1.210-1.330
Benzyl Chloride	23.66	18.80	1.259	ok	1.258	1.198-1.318
Carbon disulfide	6.90	9.11	0.757	ok	0.757	0.697-0.817
Chlorobenzene	18.88	18.80	1.004	ok	1.004	0.944-1.064
Chloroethane	4.95	9.11	0.543	ok	0.543	0.483-0.603
Chloroform	9.27	9.11	1.018	ok	1.018	0.958-1.078
Chloromethane	4.15	9.11	0.456	ok	0.455	0.395-0.515
3-Chloropropene	6.68	9.11	0.733	ok	0.733	0.673-0.793
2-Chlorotoluene	22.33	18.80	1.188	ok	1.187	1.127-1.247
Carbon tetrachloride	11.45	9.11	1.257	ok	1.257	1.197-1.317
Cyclohexane	11.63	11.76	0.989	ok	0.989	0.929-1.049
1,1-Dichloroethane	7.87	9.11	0.864	ok	0.863	0.803-0.923
1,1-Dichloroethylene	6.42	9.11	0.705	ok	0.704	0.644-0.764
1,2-Dibromoethane	16.85	18.80	0.896	ok	0.896	0.836-0.956
1,2-Dichloroethane	10.26	9.11	1.126	ok	1.126	1.066-1.186
1,2-Dichloropropane	12.43	11.76	1.057	ok	1.057	0.997-1.117
1,3-Dichloropropane	15.77	11.76	1.341	ok	1.341	1.281-1.401
Dichlorodifluoromethane	3.99	9.11	0.438	ok	0.438	0.378-0.498
Dibromochloromethane	16.43	18.80	0.874	ok	0.874	0.814-0.934
trans-1,2-Dichloroethylene	7.62	9.11	0.836	ok	0.836	0.776-0.896
cis-1,2-Dichloroethylene	8.90	9.11	0.977	ok	0.976	0.916-1.036
cis-1,3-Dichloropropene	14.13	11.76	1.202	ok	1.202	1.142-1.262
m-Dichlorobenzene	23.67	18.80	1.259	ok	1.259	1.199-1.319
o-Dichlorobenzene	24.34	18.80	1.295	ok	1.294	1.234-1.354
p-Dichlorobenzene	23.78	18.80	1.265	ok	1.265	1.205-1.325
trans-1,3-Dichloropropene	14.98	11.76	1.274	ok	1.274	1.214-1.334
Ethanol	5.10	9.11	0.560	ok	0.556	0.496-0.616
Ethylbenzene	19.54	18.80	1.039	ok	1.039	0.979-1.099
4-Ethyltoluene	22.65	18.80	1.205	ok	1.205	1.145-1.265
Freon 113	6.85	9.11	0.752	ok	0.751	0.691-0.811
Freon 114	4.25	9.11	0.467	ok	0.466	0.406-0.526
Heptane	13.26	11.76	1.128	ok	1.128	1.068-1.188

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1364-IC1364	Q31408.D	09/04/15 20:47	PN	0.2	GCMSQ	TO-15	Reporting this level
MSQ1364-IC1364	Q31409.D	09/04/15 21:36	PN	0.5	GCMSQ	TO-15	
MSQ1364-IC1364	Q31410.D	09/04/15 22:24	PN	2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31411.D	09/04/15 23:12	PN	5	GCMSQ	TO-15	
MSQ1364-ICC1364	Q31412.D	09/05/15 00:00	PN	10	GCMSQ	TO-15	
MSQ1364-IC1364	Q31413.D	09/05/15 00:49	PN	20	GCMSQ	TO-15	
MSQ1364-IC1364	Q31414.D	09/05/15 01:36	PN	30	GCMSQ	TO-15	
MSQ1364-IC1364	Q31415.D	09/05/15 02:24	PN	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Hexachlorobutadiene	27.67	18.80	1.472	ok	1.471	1.411-1.531
Hexane	9.16	9.11	1.005	ok	1.005	0.945-1.065
2-Hexanone	16.29	18.80	0.866	ok	0.864	0.804-0.924
Isopropylbenzene	21.58	18.80	1.148	ok	1.147	1.087-1.207
p-Isopropyltoluene	24.16	18.80	1.285	ok	1.285	1.225-1.345
Methylene chloride	6.55	9.11	0.719	ok	0.719	0.659-0.779
Methyl ethyl ketone	8.41	9.11	0.923	ok	0.919	0.859-0.979
Methyl Isobutyl Ketone	14.29	11.76	1.215	ok	1.211	1.151-1.271
Methylmethacrylate	13.15	11.76	1.118	ok	1.117	1.057-1.177
Naphthalene	27.22	18.80	1.448	ok	1.447	1.387-1.507
Nonane	21.04	18.80	1.119	ok	1.119	1.059-1.179
Pentane	6.11	9.11	0.671	ok	0.670	0.610-0.730
Propylene	3.92	9.11	0.430	ok	0.430	0.370-0.490
Styrene	20.44	18.80	1.087	ok	1.087	1.027-1.147
1,1,1-Trichloroethane	10.60	9.11	1.164	ok	1.163	1.103-1.223
1,1,1,2-Tetrachloroethane	18.86	18.80	1.003	ok	1.003	0.943-1.063
1,1,2,2-Tetrachloroethane	20.61	18.80	1.096	ok	1.096	1.036-1.156
1,1,2-Trichloroethane	15.26	11.76	1.298	ok	1.298	1.238-1.358
1,2,4-Trichlorobenzene	27.08	18.80	1.440	ok	1.440	1.380-1.500
1,2,4-Trimethylbenzene	23.44	18.80	1.247	ok	1.247	1.187-1.307
1,3,5-Trimethylbenzene	22.78	18.80	1.212	ok	1.211	1.151-1.271
2,2,4-Trimethylpentane	12.84	11.76	1.092	ok	1.092	1.032-1.152
tert-Butylbenzene	23.43	18.80	1.246	ok	1.246	1.186-1.306
Tetrachloroethylene	17.68	18.80	0.940	ok	0.940	0.880-1.000
Tetrahydrofuran	9.91	9.11	1.088	ok	1.081	1.021-1.141
Toluene	15.72	11.76	1.337	ok	1.337	1.277-1.397
Trichloroethylene	12.79	11.76	1.088	ok	1.088	1.028-1.148
Trichlorofluoromethane	5.74	9.11	0.630	ok	0.629	0.569-0.689
Vinyl chloride	4.37	9.11	0.480	ok	0.479	0.419-0.539
Vinyl Acetate	8.06	9.11	0.885	ok	0.883	0.823-0.943
m,p-Xylene	19.86	18.80	1.056	ok	1.056	0.996-1.116
o-Xylene	20.61	18.80	1.096	ok	1.096	1.036-1.156

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	9.11	ok	9.12	8.79-9.45	1105053	ok	1138575	683145-1594005
1,4-Difluorobenzene	11.76	ok	11.76	11.43-12.09	5030144	ok	5251287	3150772-7351802
Chlorobenzene-D5	18.80	ok	18.81	18.48-19.14	2423109	ok	2827891	1696735-3959047

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1364-IC1364	Q31408.D	09/04/15 20:47	PN	0.2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31409.D	09/04/15 21:36	PN	0.5	GCMSQ	TO-15	Reporting this level
MSQ1364-IC1364	Q31410.D	09/04/15 22:24	PN	2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31411.D	09/04/15 23:12	PN	5	GCMSQ	TO-15	
MSQ1364-ICC1364	Q31412.D	09/05/15 00:00	PN	10	GCMSQ	TO-15	
MSQ1364-IC1364	Q31413.D	09/05/15 00:49	PN	20	GCMSQ	TO-15	
MSQ1364-IC1364	Q31414.D	09/05/15 01:36	PN	30	GCMSQ	TO-15	
MSQ1364-IC1364	Q31415.D	09/05/15 02:24	PN	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.58	9.11	0.613	ok	0.611	0.551-0.671
Acrolein	5.43	9.11	0.596	ok	0.595	0.535-0.655
Acrylonitrile	6.04	9.11	0.663	ok	0.663	0.603-0.723
1,3-Butadiene	4.51	9.11	0.495	ok	0.494	0.434-0.554
Benzene	11.24	11.76	0.956	ok	0.956	0.896-1.016
Bromodichloromethane	12.72	11.76	1.082	ok	1.082	1.022-1.142
Bromoform	19.93	18.80	1.060	ok	1.060	1.000-1.120
Bromomethane	4.78	9.11	0.525	ok	0.524	0.464-0.584
Bromoethene	5.31	9.11	0.583	ok	0.582	0.522-0.642
n-Butylbenzene	24.86	18.80	1.322	ok	1.322	1.262-1.382
sec-Butylbenzene	23.88	18.80	1.270	ok	1.270	1.210-1.330
Benzyl Chloride	23.65	18.80	1.258	ok	1.258	1.198-1.318
Carbon disulfide	6.90	9.11	0.757	ok	0.757	0.697-0.817
Chlorobenzene	18.88	18.80	1.004	ok	1.004	0.944-1.064
Chloroethane	4.95	9.11	0.543	ok	0.543	0.483-0.603
Chloroform	9.28	9.11	1.019	ok	1.018	0.958-1.078
Chloromethane	4.15	9.11	0.456	ok	0.455	0.395-0.515
3-Chloropropene	6.68	9.11	0.733	ok	0.733	0.673-0.793
2-Chlorotoluene	22.33	18.80	1.188	ok	1.187	1.127-1.247
Carbon tetrachloride	11.45	9.11	1.257	ok	1.257	1.197-1.317
Cyclohexane	11.63	11.76	0.989	ok	0.989	0.929-1.049
1,1-Dichloroethane	7.87	9.11	0.864	ok	0.863	0.803-0.923
1,1-Dichloroethylene	6.42	9.11	0.705	ok	0.704	0.644-0.764
1,2-Dibromoethane	16.85	18.80	0.896	ok	0.896	0.836-0.956
1,2-Dichloroethane	10.26	9.11	1.126	ok	1.126	1.066-1.186
1,2-Dichloropropane	12.43	11.76	1.057	ok	1.057	0.997-1.117
1,3-Dichloropropane	15.77	11.76	1.341	ok	1.341	1.281-1.401
1,4-Dioxane	12.88	11.76	1.095	ok	1.091	1.031-1.151
Dichlorodifluoromethane	3.99	9.11	0.438	ok	0.438	0.378-0.498
Dibromochloromethane	16.43	18.80	0.874	ok	0.874	0.814-0.934
trans-1,2-Dichloroethylene	7.62	9.11	0.836	ok	0.836	0.776-0.896
cis-1,2-Dichloroethylene	8.90	9.11	0.977	ok	0.976	0.916-1.036
cis-1,3-Dichloropropene	14.13	11.76	1.202	ok	1.202	1.142-1.262
m-Dichlorobenzene	23.67	18.80	1.259	ok	1.259	1.199-1.319
o-Dichlorobenzene	24.34	18.80	1.295	ok	1.294	1.234-1.354
p-Dichlorobenzene	23.78	18.80	1.265	ok	1.265	1.205-1.325
trans-1,3-Dichloropropene	14.99	11.76	1.275	ok	1.274	1.214-1.334
Ethanol	5.09	9.11	0.559	ok	0.556	0.496-0.616
Ethylbenzene	19.54	18.80	1.039	ok	1.039	0.979-1.099
Ethyl Acetate	9.23	9.11	1.013	ok	1.011	0.951-1.071

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1364-IC1364	Q31408.D	09/04/15 20:47	PN	0.2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31409.D	09/04/15 21:36	PN	0.5	GCMSQ	TO-15	Reporting this level
MSQ1364-IC1364	Q31410.D	09/04/15 22:24	PN	2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31411.D	09/04/15 23:12	PN	5	GCMSQ	TO-15	
MSQ1364-ICC1364	Q31412.D	09/05/15 00:00	PN	10	GCMSQ	TO-15	
MSQ1364-IC1364	Q31413.D	09/05/15 00:49	PN	20	GCMSQ	TO-15	
MSQ1364-IC1364	Q31414.D	09/05/15 01:36	PN	30	GCMSQ	TO-15	
MSQ1364-IC1364	Q31415.D	09/05/15 02:24	PN	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
4-Ethyltoluene	22.65	18.80	1.205	ok	1.205	1.145-1.265
Freon 113	6.85	9.11	0.752	ok	0.751	0.691-0.811
Freon 114	4.25	9.11	0.467	ok	0.466	0.406-0.526
Heptane	13.26	11.76	1.128	ok	1.128	1.068-1.188
Hexachlorobutadiene	27.67	18.80	1.472	ok	1.471	1.411-1.531
Hexane	9.16	9.11	1.005	ok	1.005	0.945-1.065
2-Hexanone	16.27	18.80	0.865	ok	0.864	0.804-0.924
Isopropylbenzene	21.58	18.80	1.148	ok	1.147	1.087-1.207
Isopropyl Alcohol	5.87	9.11	0.644	ok	0.639	0.579-0.699
p-Isopropyltoluene	24.16	18.80	1.285	ok	1.285	1.225-1.345
Methylene chloride	6.56	9.11	0.720	ok	0.719	0.659-0.779
Methyl ethyl ketone	8.40	9.11	0.922	ok	0.919	0.859-0.979
Methyl Isobutyl Ketone	14.27	11.76	1.213	ok	1.211	1.151-1.271
Methyl Tert Butyl Ether	8.00	9.11	0.878	ok	0.874	0.814-0.934
Methylmethacrylate	13.14	11.76	1.117	ok	1.117	1.057-1.177
Naphthalene	27.22	18.80	1.448	ok	1.447	1.387-1.507
Nonane	21.04	18.80	1.119	ok	1.119	1.059-1.179
Pentane	6.12	9.11	0.672	ok	0.670	0.610-0.730
Propylene	3.92	9.11	0.430	ok	0.430	0.370-0.490
Styrene	20.44	18.80	1.087	ok	1.087	1.027-1.147
1,1,1-Trichloroethane	10.60	9.11	1.164	ok	1.163	1.103-1.223
1,1,1,2-Tetrachloroethane	18.86	18.80	1.003	ok	1.003	0.943-1.063
1,1,2,2-Tetrachloroethane	20.61	18.80	1.096	ok	1.096	1.036-1.156
1,1,2-Trichloroethane	15.26	11.76	1.298	ok	1.298	1.238-1.358
1,2,4-Trichlorobenzene	27.08	18.80	1.440	ok	1.440	1.380-1.500
1,2,4-Trimethylbenzene	23.44	18.80	1.247	ok	1.247	1.187-1.307
1,3,5-Trimethylbenzene	22.78	18.80	1.212	ok	1.211	1.151-1.271
2,2,4-Trimethylpentane	12.84	11.76	1.092	ok	1.092	1.032-1.152
Tertiary Butyl Alcohol	6.56	9.11	0.720	ok	0.712	0.652-0.772
tert-Butylbenzene	23.43	18.80	1.246	ok	1.246	1.186-1.306
Tetrachloroethylene	17.68	18.80	0.940	ok	0.940	0.880-1.000
Tetrahydrofuran	9.89	9.11	1.086	ok	1.081	1.021-1.141
Toluene	15.72	11.76	1.337	ok	1.337	1.277-1.397
Trichloroethylene	12.79	11.76	1.088	ok	1.088	1.028-1.148
Trichlorofluoromethane	5.74	9.11	0.630	ok	0.629	0.569-0.689
Vinyl chloride	4.37	9.11	0.480	ok	0.479	0.419-0.539
Vinyl Acetate	8.06	9.11	0.885	ok	0.883	0.823-0.943
m,p-Xylene	19.86	18.80	1.056	ok	1.056	0.996-1.116
o-Xylene	20.61	18.80	1.096	ok	1.096	1.036-1.156

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1364-IC1364	Q31408.D	09/04/15 20:47	PN	0.2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31409.D	09/04/15 21:36	PN	0.5	GCMSQ	TO-15	Reporting this level
MSQ1364-IC1364	Q31410.D	09/04/15 22:24	PN	2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31411.D	09/04/15 23:12	PN	5	GCMSQ	TO-15	
MSQ1364-ICC1364	Q31412.D	09/05/15 00:00	PN	10	GCMSQ	TO-15	
MSQ1364-IC1364	Q31413.D	09/05/15 00:49	PN	20	GCMSQ	TO-15	
MSQ1364-IC1364	Q31414.D	09/05/15 01:36	PN	30	GCMSQ	TO-15	
MSQ1364-IC1364	Q31415.D	09/05/15 02:24	PN	40	GCMSQ	TO-15	

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	9.11	ok	9.12	8.79-9.45	1094741	ok	1138575	683145-1594005
1,4-Difluorobenzene	11.76	ok	11.76	11.43-12.09	4982233	ok	5251287	3150772-7351802
Chlorobenzene-D5	18.80	ok	18.81	18.48-19.14	2432240	ok	2827891	1696735-3959047

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1364-IC1364	Q31408.D	09/04/15 20:47	PN	0.2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31409.D	09/04/15 21:36	PN	0.5	GCMSQ	TO-15	
MSQ1364-IC1364	Q31410.D	09/04/15 22:24	PN	2	GCMSQ	TO-15	Reporting this level
MSQ1364-IC1364	Q31411.D	09/04/15 23:12	PN	5	GCMSQ	TO-15	
MSQ1364-ICC1364	Q31412.D	09/05/15 00:00	PN	10	GCMSQ	TO-15	
MSQ1364-IC1364	Q31413.D	09/05/15 00:49	PN	20	GCMSQ	TO-15	
MSQ1364-IC1364	Q31414.D	09/05/15 01:36	PN	30	GCMSQ	TO-15	
MSQ1364-IC1364	Q31415.D	09/05/15 02:24	PN	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.57	9.11	0.611	ok	0.611	0.551-0.671
Acrolein	5.42	9.11	0.595	ok	0.595	0.535-0.655
Acrylonitrile	6.04	9.11	0.663	ok	0.663	0.603-0.723
1,3-Butadiene	4.50	9.11	0.494	ok	0.494	0.434-0.554
Benzene	11.24	11.76	0.956	ok	0.956	0.896-1.016
Bromodichloromethane	12.73	11.76	1.082	ok	1.082	1.022-1.142
Bromoform	19.93	18.80	1.060	ok	1.060	1.000-1.120
Bromomethane	4.78	9.11	0.525	ok	0.524	0.464-0.584
Bromoethene	5.31	9.11	0.583	ok	0.582	0.522-0.642
n-Butylbenzene	24.86	18.80	1.322	ok	1.322	1.262-1.382
sec-Butylbenzene	23.88	18.80	1.270	ok	1.270	1.210-1.330
Benzyl Chloride	23.65	18.80	1.258	ok	1.258	1.198-1.318
Carbon disulfide	6.89	9.11	0.756	ok	0.757	0.697-0.817
Chlorobenzene	18.88	18.80	1.004	ok	1.004	0.944-1.064
Chloroethane	4.95	9.11	0.543	ok	0.543	0.483-0.603
Chloroform	9.27	9.11	1.018	ok	1.018	0.958-1.078
Chloromethane	4.15	9.11	0.456	ok	0.455	0.395-0.515
3-Chloropropene	6.68	9.11	0.733	ok	0.733	0.673-0.793
2-Chlorotoluene	22.33	18.80	1.188	ok	1.187	1.127-1.247
Carbon tetrachloride	11.45	9.11	1.257	ok	1.257	1.197-1.317
Cyclohexane	11.63	11.76	0.989	ok	0.989	0.929-1.049
1,1-Dichloroethane	7.86	9.11	0.863	ok	0.863	0.803-0.923
1,1-Dichloroethylene	6.42	9.11	0.705	ok	0.704	0.644-0.764
1,2-Dibromoethane	16.85	18.80	0.896	ok	0.896	0.836-0.956
1,2-Dichloroethane	10.26	9.11	1.126	ok	1.126	1.066-1.186
1,2-Dichloropropane	12.43	11.76	1.057	ok	1.057	0.997-1.117
1,3-Dichloropropane	15.77	11.76	1.341	ok	1.341	1.281-1.401
1,4-Dioxane	12.85	11.76	1.093	ok	1.091	1.031-1.151
Dichlorodifluoromethane	3.99	9.11	0.438	ok	0.438	0.378-0.498
Dibromochloromethane	16.43	18.80	0.874	ok	0.874	0.814-0.934
trans-1,2-Dichloroethylene	7.62	9.11	0.836	ok	0.836	0.776-0.896
cis-1,2-Dichloroethylene	8.89	9.11	0.976	ok	0.976	0.916-1.036
cis-1,3-Dichloropropene	14.13	11.76	1.202	ok	1.202	1.142-1.262
m-Dichlorobenzene	23.67	18.80	1.259	ok	1.259	1.199-1.319
o-Dichlorobenzene	24.34	18.80	1.295	ok	1.294	1.234-1.354
p-Dichlorobenzene	23.78	18.80	1.265	ok	1.265	1.205-1.325
trans-1,3-Dichloropropene	14.98	11.76	1.274	ok	1.274	1.214-1.334
Ethanol	5.07	9.11	0.557	ok	0.556	0.496-0.616
Ethylbenzene	19.54	18.80	1.039	ok	1.039	0.979-1.099
Ethyl Acetate	9.22	9.11	1.012	ok	1.011	0.951-1.071

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1364-IC1364	Q31408.D	09/04/15 20:47	PN	0.2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31409.D	09/04/15 21:36	PN	0.5	GCMSQ	TO-15	
MSQ1364-IC1364	Q31410.D	09/04/15 22:24	PN	2	GCMSQ	TO-15	Reporting this level
MSQ1364-IC1364	Q31411.D	09/04/15 23:12	PN	5	GCMSQ	TO-15	
MSQ1364-ICC1364	Q31412.D	09/05/15 00:00	PN	10	GCMSQ	TO-15	
MSQ1364-IC1364	Q31413.D	09/05/15 00:49	PN	20	GCMSQ	TO-15	
MSQ1364-IC1364	Q31414.D	09/05/15 01:36	PN	30	GCMSQ	TO-15	
MSQ1364-IC1364	Q31415.D	09/05/15 02:24	PN	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
4-Ethyltoluene	22.65	18.80	1.205	ok	1.205	1.145-1.265
Freon 113	6.84	9.11	0.751	ok	0.751	0.691-0.811
Freon 114	4.25	9.11	0.467	ok	0.466	0.406-0.526
Heptane	13.26	11.76	1.128	ok	1.128	1.068-1.188
Hexachlorobutadiene	27.67	18.80	1.472	ok	1.471	1.411-1.531
Hexane	9.16	9.11	1.005	ok	1.005	0.945-1.065
2-Hexanone	16.25	18.80	0.864	ok	0.864	0.804-0.924
Isopropylbenzene	21.58	18.80	1.148	ok	1.147	1.087-1.207
Isopropyl Alcohol	5.83	9.11	0.640	ok	0.639	0.579-0.699
p-Isopropyltoluene	24.16	18.80	1.285	ok	1.285	1.225-1.345
Methylene chloride	6.55	9.11	0.719	ok	0.719	0.659-0.779
Methyl ethyl ketone	8.37	9.11	0.919	ok	0.919	0.859-0.979
Methyl Isobutyl Ketone	14.25	11.76	1.212	ok	1.211	1.151-1.271
Methyl Tert Butyl Ether	7.97	9.11	0.875	ok	0.874	0.814-0.934
Methylmethacrylate	13.13	11.76	1.116	ok	1.117	1.057-1.177
Naphthalene	27.22	18.80	1.448	ok	1.447	1.387-1.507
Nonane	21.04	18.80	1.119	ok	1.119	1.059-1.179
Pentane	6.11	9.11	0.671	ok	0.670	0.610-0.730
Propylene	3.92	9.11	0.430	ok	0.430	0.370-0.490
Styrene	20.44	18.80	1.087	ok	1.087	1.027-1.147
1,1,1-Trichloroethane	10.60	9.11	1.164	ok	1.163	1.103-1.223
1,1,1,2-Tetrachloroethane	18.86	18.80	1.003	ok	1.003	0.943-1.063
1,1,2,2-Tetrachloroethane	20.61	18.80	1.096	ok	1.096	1.036-1.156
1,1,2-Trichloroethane	15.26	11.76	1.298	ok	1.298	1.238-1.358
1,2,4-Trichlorobenzene	27.08	18.80	1.440	ok	1.440	1.380-1.500
1,2,4-Trimethylbenzene	23.44	18.80	1.247	ok	1.247	1.187-1.307
1,3,5-Trimethylbenzene	22.78	18.80	1.212	ok	1.211	1.151-1.271
2,2,4-Trimethylpentane	12.84	11.76	1.092	ok	1.092	1.032-1.152
Tertiary Butyl Alcohol	6.50	9.11	0.714	ok	0.712	0.652-0.772
tert-Butylbenzene	23.43	18.80	1.246	ok	1.246	1.186-1.306
Tetrachloroethylene	17.68	18.80	0.940	ok	0.940	0.880-1.000
Tetrahydrofuran	9.86	9.11	1.082	ok	1.081	1.021-1.141
Toluene	15.72	11.76	1.337	ok	1.337	1.277-1.397
Trichloroethylene	12.79	11.76	1.088	ok	1.088	1.028-1.148
Trichlorofluoromethane	5.73	9.11	0.629	ok	0.629	0.569-0.689
Vinyl chloride	4.37	9.11	0.480	ok	0.479	0.419-0.539
Vinyl Acetate	8.05	9.11	0.884	ok	0.883	0.823-0.943
m,p-Xylene	19.86	18.80	1.056	ok	1.056	0.996-1.116
o-Xylene	20.61	18.80	1.096	ok	1.096	1.036-1.156

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1364-IC1364	Q31408.D	09/04/15 20:47	PN	0.2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31409.D	09/04/15 21:36	PN	0.5	GCMSQ	TO-15	
MSQ1364-IC1364	Q31410.D	09/04/15 22:24	PN	2	GCMSQ	TO-15	Reporting this level
MSQ1364-IC1364	Q31411.D	09/04/15 23:12	PN	5	GCMSQ	TO-15	
MSQ1364-ICC1364	Q31412.D	09/05/15 00:00	PN	10	GCMSQ	TO-15	
MSQ1364-IC1364	Q31413.D	09/05/15 00:49	PN	20	GCMSQ	TO-15	
MSQ1364-IC1364	Q31414.D	09/05/15 01:36	PN	30	GCMSQ	TO-15	
MSQ1364-IC1364	Q31415.D	09/05/15 02:24	PN	40	GCMSQ	TO-15	

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	9.11	ok	9.12	8.79-9.45	1058508	ok	1138575	683145-1594005
1,4-Difluorobenzene	11.76	ok	11.76	11.43-12.09	4951774	ok	5251287	3150772-7351802
Chlorobenzene-D5	18.80	ok	18.81	18.48-19.14	2472746	ok	2827891	1696735-3959047

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1364-IC1364	Q31408.D	09/04/15 20:47	PN	0.2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31409.D	09/04/15 21:36	PN	0.5	GCMSQ	TO-15	
MSQ1364-IC1364	Q31410.D	09/04/15 22:24	PN	2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31411.D	09/04/15 23:12	PN	5	GCMSQ	TO-15	Reporting this level
MSQ1364-ICC1364	Q31412.D	09/05/15 00:00	PN	10	GCMSQ	TO-15	
MSQ1364-IC1364	Q31413.D	09/05/15 00:49	PN	20	GCMSQ	TO-15	
MSQ1364-IC1364	Q31414.D	09/05/15 01:36	PN	30	GCMSQ	TO-15	
MSQ1364-IC1364	Q31415.D	09/05/15 02:24	PN	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.56	9.11	0.610	ok	0.611	0.551-0.671
Acrolein	5.42	9.11	0.595	ok	0.595	0.535-0.655
Acrylonitrile	6.04	9.11	0.663	ok	0.663	0.603-0.723
1,3-Butadiene	4.50	9.11	0.494	ok	0.494	0.434-0.554
Benzene	11.24	11.76	0.956	ok	0.956	0.896-1.016
Bromodichloromethane	12.73	11.76	1.082	ok	1.082	1.022-1.142
Bromoform	19.93	18.80	1.060	ok	1.060	1.000-1.120
Bromomethane	4.78	9.11	0.525	ok	0.524	0.464-0.584
Bromoethene	5.31	9.11	0.583	ok	0.582	0.522-0.642
n-Butylbenzene	24.86	18.80	1.322	ok	1.322	1.262-1.382
sec-Butylbenzene	23.88	18.80	1.270	ok	1.270	1.210-1.330
Benzyl Chloride	23.66	18.80	1.259	ok	1.258	1.198-1.318
Carbon disulfide	6.90	9.11	0.757	ok	0.757	0.697-0.817
Chlorobenzene	18.88	18.80	1.004	ok	1.004	0.944-1.064
Chloroethane	4.95	9.11	0.543	ok	0.543	0.483-0.603
Chloroform	9.28	9.11	1.019	ok	1.018	0.958-1.078
Chloromethane	4.15	9.11	0.456	ok	0.455	0.395-0.515
3-Chloropropene	6.68	9.11	0.733	ok	0.733	0.673-0.793
2-Chlorotoluene	22.33	18.80	1.188	ok	1.187	1.127-1.247
Carbon tetrachloride	11.45	9.11	1.257	ok	1.257	1.197-1.317
Cyclohexane	11.63	11.76	0.989	ok	0.989	0.929-1.049
1,1-Dichloroethane	7.87	9.11	0.864	ok	0.863	0.803-0.923
1,1-Dichloroethylene	6.42	9.11	0.705	ok	0.704	0.644-0.764
1,2-Dibromoethane	16.85	18.80	0.896	ok	0.896	0.836-0.956
1,2-Dichloroethane	10.26	9.11	1.126	ok	1.126	1.066-1.186
1,2-Dichloropropane	12.43	11.76	1.057	ok	1.057	0.997-1.117
1,3-Dichloropropane	15.77	11.76	1.341	ok	1.341	1.281-1.401
1,4-Dioxane	12.83	11.76	1.091	ok	1.091	1.031-1.151
Dichlorodifluoromethane	3.99	9.11	0.438	ok	0.438	0.378-0.498
Dibromochloromethane	16.43	18.80	0.874	ok	0.874	0.814-0.934
trans-1,2-Dichloroethylene	7.62	9.11	0.836	ok	0.836	0.776-0.896
cis-1,2-Dichloroethylene	8.90	9.11	0.977	ok	0.976	0.916-1.036
cis-1,3-Dichloropropene	14.13	11.76	1.202	ok	1.202	1.142-1.262
m-Dichlorobenzene	23.67	18.80	1.259	ok	1.259	1.199-1.319
o-Dichlorobenzene	24.34	18.80	1.295	ok	1.294	1.234-1.354
p-Dichlorobenzene	23.78	18.80	1.265	ok	1.265	1.205-1.325
trans-1,3-Dichloropropene	14.99	11.76	1.275	ok	1.274	1.214-1.334
Ethanol	5.06	9.11	0.555	ok	0.556	0.496-0.616
Ethylbenzene	19.54	18.80	1.039	ok	1.039	0.979-1.099
Ethyl Acetate	9.21	9.11	1.011	ok	1.011	0.951-1.071

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1364-IC1364	Q31408.D	09/04/15 20:47	PN	0.2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31409.D	09/04/15 21:36	PN	0.5	GCMSQ	TO-15	
MSQ1364-IC1364	Q31410.D	09/04/15 22:24	PN	2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31411.D	09/04/15 23:12	PN	5	GCMSQ	TO-15	Reporting this level
MSQ1364-ICC1364	Q31412.D	09/05/15 00:00	PN	10	GCMSQ	TO-15	
MSQ1364-IC1364	Q31413.D	09/05/15 00:49	PN	20	GCMSQ	TO-15	
MSQ1364-IC1364	Q31414.D	09/05/15 01:36	PN	30	GCMSQ	TO-15	
MSQ1364-IC1364	Q31415.D	09/05/15 02:24	PN	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
4-Ethyltoluene	22.65	18.80	1.205	ok	1.205	1.145-1.265
Freon 113	6.84	9.11	0.751	ok	0.751	0.691-0.811
Freon 114	4.25	9.11	0.467	ok	0.466	0.406-0.526
Heptane	13.26	11.76	1.128	ok	1.128	1.068-1.188
Hexachlorobutadiene	27.67	18.80	1.472	ok	1.471	1.411-1.531
Hexane	9.16	9.11	1.005	ok	1.005	0.945-1.065
2-Hexanone	16.24	18.80	0.864	ok	0.864	0.804-0.924
Isopropylbenzene	21.58	18.80	1.148	ok	1.147	1.087-1.207
Isopropyl Alcohol	5.81	9.11	0.638	ok	0.639	0.579-0.699
p-Isopropyltoluene	24.16	18.80	1.285	ok	1.285	1.225-1.345
Methylene chloride	6.55	9.11	0.719	ok	0.719	0.659-0.779
Methyl ethyl ketone	8.37	9.11	0.919	ok	0.919	0.859-0.979
Methyl Isobutyl Ketone	14.23	11.76	1.210	ok	1.211	1.151-1.271
Methyl Tert Butyl Ether	7.96	9.11	0.874	ok	0.874	0.814-0.934
Methylmethacrylate	13.13	11.76	1.116	ok	1.117	1.057-1.177
Naphthalene	27.22	18.80	1.448	ok	1.447	1.387-1.507
Nonane	21.04	18.80	1.119	ok	1.119	1.059-1.179
Pentane	6.11	9.11	0.671	ok	0.670	0.610-0.730
Propylene	3.92	9.11	0.430	ok	0.430	0.370-0.490
Styrene	20.44	18.80	1.087	ok	1.087	1.027-1.147
1,1,1-Trichloroethane	10.60	9.11	1.164	ok	1.163	1.103-1.223
1,1,1,2-Tetrachloroethane	18.86	18.80	1.003	ok	1.003	0.943-1.063
1,1,2,2-Tetrachloroethane	20.61	18.80	1.096	ok	1.096	1.036-1.156
1,1,2-Trichloroethane	15.26	11.76	1.298	ok	1.298	1.238-1.358
1,2,4-Trichlorobenzene	27.08	18.80	1.440	ok	1.440	1.380-1.500
1,2,4-Trimethylbenzene	23.44	18.80	1.247	ok	1.247	1.187-1.307
1,3,5-Trimethylbenzene	22.78	18.80	1.212	ok	1.211	1.151-1.271
2,2,4-Trimethylpentane	12.84	11.76	1.092	ok	1.092	1.032-1.152
Tertiary Butyl Alcohol	6.48	9.11	0.711	ok	0.712	0.652-0.772
tert-Butylbenzene	23.43	18.80	1.246	ok	1.246	1.186-1.306
Tetrachloroethylene	17.68	18.80	0.940	ok	0.940	0.880-1.000
Tetrahydrofuran	9.84	9.11	1.080	ok	1.081	1.021-1.141
Toluene	15.72	11.76	1.337	ok	1.337	1.277-1.397
Trichloroethylene	12.79	11.76	1.088	ok	1.088	1.028-1.148
Trichlorofluoromethane	5.74	9.11	0.630	ok	0.629	0.569-0.689
Vinyl chloride	4.37	9.11	0.480	ok	0.479	0.419-0.539
Vinyl Acetate	8.04	9.11	0.883	ok	0.883	0.823-0.943
m,p-Xylene	19.86	18.80	1.056	ok	1.056	0.996-1.116
o-Xylene	20.61	18.80	1.096	ok	1.096	1.036-1.156

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1364-IC1364	Q31408.D	09/04/15 20:47	PN	0.2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31409.D	09/04/15 21:36	PN	0.5	GCMSQ	TO-15	
MSQ1364-IC1364	Q31410.D	09/04/15 22:24	PN	2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31411.D	09/04/15 23:12	PN	5	GCMSQ	TO-15	Reporting this level
MSQ1364-ICC1364	Q31412.D	09/05/15 00:00	PN	10	GCMSQ	TO-15	
MSQ1364-IC1364	Q31413.D	09/05/15 00:49	PN	20	GCMSQ	TO-15	
MSQ1364-IC1364	Q31414.D	09/05/15 01:36	PN	30	GCMSQ	TO-15	
MSQ1364-IC1364	Q31415.D	09/05/15 02:24	PN	40	GCMSQ	TO-15	

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	9.11	ok	9.12	8.79-9.45	1089189	ok	1138575	683145-1594005
1,4-Difluorobenzene	11.76	ok	11.76	11.43-12.09	5110200	ok	5251287	3150772-7351802
Chlorobenzene-D5	18.80	ok	18.81	18.48-19.14	2633669	ok	2827891	1696735-3959047

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1364-IC1364	Q31408.D	09/04/15 20:47	PN	0.2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31409.D	09/04/15 21:36	PN	0.5	GCMSQ	TO-15	
MSQ1364-IC1364	Q31410.D	09/04/15 22:24	PN	2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31411.D	09/04/15 23:12	PN	5	GCMSQ	TO-15	
MSQ1364-ICC1364	Q31412.D	09/05/15 00:00	PN	10	GCMSQ	TO-15	Reporting this level
MSQ1364-IC1364	Q31413.D	09/05/15 00:49	PN	20	GCMSQ	TO-15	
MSQ1364-IC1364	Q31414.D	09/05/15 01:36	PN	30	GCMSQ	TO-15	
MSQ1364-IC1364	Q31415.D	09/05/15 02:24	PN	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.56	9.12	0.610	ok	0.611	0.551-0.671
Acrolein	5.42	9.12	0.594	ok	0.595	0.535-0.655
Acrylonitrile	6.04	9.12	0.662	ok	0.663	0.603-0.723
1,3-Butadiene	4.50	9.12	0.493	ok	0.494	0.434-0.554
Benzene	11.24	11.76	0.956	ok	0.956	0.896-1.016
Bromodichloromethane	12.73	11.76	1.082	ok	1.082	1.022-1.142
Bromoform	19.94	18.81	1.060	ok	1.060	1.000-1.120
Bromomethane	4.78	9.12	0.524	ok	0.524	0.464-0.584
Bromoethene	5.31	9.12	0.582	ok	0.582	0.522-0.642
n-Butylbenzene	24.86	18.81	1.322	ok	1.322	1.262-1.382
sec-Butylbenzene	23.88	18.81	1.270	ok	1.270	1.210-1.330
Benzyl Chloride	23.66	18.81	1.258	ok	1.258	1.198-1.318
Carbon disulfide	6.90	9.12	0.757	ok	0.757	0.697-0.817
Chlorobenzene	18.88	18.81	1.004	ok	1.004	0.944-1.064
Chloroethane	4.95	9.12	0.543	ok	0.543	0.483-0.603
Chloroform	9.28	9.12	1.018	ok	1.018	0.958-1.078
Chloromethane	4.15	9.12	0.455	ok	0.455	0.395-0.515
3-Chloropropene	6.68	9.12	0.732	ok	0.733	0.673-0.793
2-Chlorotoluene	22.33	18.81	1.187	ok	1.187	1.127-1.247
Carbon tetrachloride	11.45	9.12	1.255	ok	1.257	1.197-1.317
Cyclohexane	11.63	11.76	0.989	ok	0.989	0.929-1.049
1,1-Dichloroethane	7.87	9.12	0.863	ok	0.863	0.803-0.923
1,1-Dichloroethylene	6.42	9.12	0.704	ok	0.704	0.644-0.764
1,2-Dibromoethane	16.85	18.81	0.896	ok	0.896	0.836-0.956
1,2-Dichloroethane	10.26	9.12	1.125	ok	1.126	1.066-1.186
1,2-Dichloropropane	12.43	11.76	1.057	ok	1.057	0.997-1.117
1,3-Dichloropropane	15.77	11.76	1.341	ok	1.341	1.281-1.401
1,4-Dioxane	12.82	11.76	1.090	ok	1.091	1.031-1.151
Dichlorodifluoromethane	3.99	9.12	0.438	ok	0.438	0.378-0.498
Dibromochloromethane	16.43	18.81	0.873	ok	0.874	0.814-0.934
trans-1,2-Dichloroethylene	7.62	9.12	0.836	ok	0.836	0.776-0.896
cis-1,2-Dichloroethylene	8.90	9.12	0.976	ok	0.976	0.916-1.036
cis-1,3-Dichloropropene	14.13	11.76	1.202	ok	1.202	1.142-1.262
m-Dichlorobenzene	23.67	18.81	1.258	ok	1.259	1.199-1.319
o-Dichlorobenzene	24.34	18.81	1.294	ok	1.294	1.234-1.354
p-Dichlorobenzene	23.78	18.81	1.264	ok	1.265	1.205-1.325
trans-1,3-Dichloropropene	14.99	11.76	1.275	ok	1.274	1.214-1.334
Ethanol	5.06	9.12	0.555	ok	0.556	0.496-0.616
Ethylbenzene	19.55	18.81	1.039	ok	1.039	0.979-1.099
Ethyl Acetate	9.21	9.12	1.010	ok	1.011	0.951-1.071

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1364-IC1364	Q31408.D	09/04/15 20:47	PN	0.2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31409.D	09/04/15 21:36	PN	0.5	GCMSQ	TO-15	
MSQ1364-IC1364	Q31410.D	09/04/15 22:24	PN	2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31411.D	09/04/15 23:12	PN	5	GCMSQ	TO-15	
MSQ1364-ICC1364	Q31412.D	09/05/15 00:00	PN	10	GCMSQ	TO-15	Reporting this level
MSQ1364-IC1364	Q31413.D	09/05/15 00:49	PN	20	GCMSQ	TO-15	
MSQ1364-IC1364	Q31414.D	09/05/15 01:36	PN	30	GCMSQ	TO-15	
MSQ1364-IC1364	Q31415.D	09/05/15 02:24	PN	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
4-Ethyltoluene	22.66	18.81	1.205	ok	1.205	1.145-1.265
Freon 113	6.84	9.12	0.750	ok	0.751	0.691-0.811
Freon 114	4.25	9.12	0.466	ok	0.466	0.406-0.526
Heptane	13.26	11.76	1.128	ok	1.128	1.068-1.188
Hexachlorobutadiene	27.67	18.81	1.471	ok	1.471	1.411-1.531
Hexane	9.16	9.12	1.004	ok	1.005	0.945-1.065
2-Hexanone	16.23	18.81	0.863	ok	0.864	0.804-0.924
Isopropylbenzene	21.58	18.81	1.147	ok	1.147	1.087-1.207
Isopropyl Alcohol	5.81	9.12	0.637	ok	0.639	0.579-0.699
p-Isopropyltoluene	24.16	18.81	1.284	ok	1.285	1.225-1.345
Methylene chloride	6.55	9.12	0.718	ok	0.719	0.659-0.779
Methyl ethyl ketone	8.37	9.12	0.918	ok	0.919	0.859-0.979
Methyl Isobutyl Ketone	14.23	11.76	1.210	ok	1.211	1.151-1.271
Methyl Tert Butyl Ether	7.96	9.12	0.873	ok	0.874	0.814-0.934
Methylmethacrylate	13.13	11.76	1.116	ok	1.117	1.057-1.177
Naphthalene	27.22	18.81	1.447	ok	1.447	1.387-1.507
Nonane	21.04	18.81	1.119	ok	1.119	1.059-1.179
Pentane	6.11	9.12	0.670	ok	0.670	0.610-0.730
Propylene	3.92	9.12	0.430	ok	0.430	0.370-0.490
Styrene	20.44	18.81	1.087	ok	1.087	1.027-1.147
1,1,1-Trichloroethane	10.60	9.12	1.162	ok	1.163	1.103-1.223
1,1,1,2-Tetrachloroethane	18.86	18.81	1.003	ok	1.003	0.943-1.063
1,1,2,2-Tetrachloroethane	20.61	18.81	1.096	ok	1.096	1.036-1.156
1,1,2-Trichloroethane	15.26	11.76	1.298	ok	1.298	1.238-1.358
1,2,4-Trichlorobenzene	27.08	18.81	1.440	ok	1.440	1.380-1.500
1,2,4-Trimethylbenzene	23.45	18.81	1.247	ok	1.247	1.187-1.307
1,3,5-Trimethylbenzene	22.78	18.81	1.211	ok	1.211	1.151-1.271
2,2,4-Trimethylpentane	12.84	11.76	1.092	ok	1.092	1.032-1.152
Tertiary Butyl Alcohol	6.48	9.12	0.711	ok	0.712	0.652-0.772
tert-Butylbenzene	23.44	18.81	1.246	ok	1.246	1.186-1.306
Tetrachloroethylene	17.68	18.81	0.940	ok	0.940	0.880-1.000
Tetrahydrofuran	9.84	9.12	1.079	ok	1.081	1.021-1.141
Toluene	15.72	11.76	1.337	ok	1.337	1.277-1.397
Trichloroethylene	12.79	11.76	1.088	ok	1.088	1.028-1.148
Trichlorofluoromethane	5.74	9.12	0.629	ok	0.629	0.569-0.689
Vinyl chloride	4.37	9.12	0.479	ok	0.479	0.419-0.539
Vinyl Acetate	8.04	9.12	0.882	ok	0.883	0.823-0.943
m,p-Xylene	19.87	18.81	1.056	ok	1.056	0.996-1.116
o-Xylene	20.61	18.81	1.096	ok	1.096	1.036-1.156

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1364-IC1364	Q31408.D	09/04/15 20:47	PN	0.2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31409.D	09/04/15 21:36	PN	0.5	GCMSQ	TO-15	
MSQ1364-IC1364	Q31410.D	09/04/15 22:24	PN	2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31411.D	09/04/15 23:12	PN	5	GCMSQ	TO-15	
MSQ1364-ICC1364	Q31412.D	09/05/15 00:00	PN	10	GCMSQ	TO-15	Reporting this level
MSQ1364-IC1364	Q31413.D	09/05/15 00:49	PN	20	GCMSQ	TO-15	
MSQ1364-IC1364	Q31414.D	09/05/15 01:36	PN	30	GCMSQ	TO-15	
MSQ1364-IC1364	Q31415.D	09/05/15 02:24	PN	40	GCMSQ	TO-15	

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	9.12	ok	9.12	8.79-9.45	1192430	ok	1138575	683145-1594005
1,4-Difluorobenzene	11.76	ok	11.76	11.43-12.09	5647578	ok	5251287	3150772-7351802
Chlorobenzene-D5	18.81	ok	18.81	18.48-19.14	3000935	ok	2827891	1696735-3959047

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1364-IC1364	Q31408.D	09/04/15 20:47	PN	0.2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31409.D	09/04/15 21:36	PN	0.5	GCMSQ	TO-15	
MSQ1364-IC1364	Q31410.D	09/04/15 22:24	PN	2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31411.D	09/04/15 23:12	PN	5	GCMSQ	TO-15	
MSQ1364-ICC1364	Q31412.D	09/05/15 00:00	PN	10	GCMSQ	TO-15	
MSQ1364-IC1364	Q31413.D	09/05/15 00:49	PN	20	GCMSQ	TO-15	Reporting this level
MSQ1364-IC1364	Q31414.D	09/05/15 01:36	PN	30	GCMSQ	TO-15	
MSQ1364-IC1364	Q31415.D	09/05/15 02:24	PN	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.56	9.12	0.610	ok	0.611	0.551-0.671
Acrolein	5.42	9.12	0.594	ok	0.595	0.535-0.655
Acrylonitrile	6.04	9.12	0.662	ok	0.663	0.603-0.723
1,3-Butadiene	4.50	9.12	0.493	ok	0.494	0.434-0.554
Benzene	11.25	11.76	0.957	ok	0.956	0.896-1.016
Bromodichloromethane	12.73	11.76	1.082	ok	1.082	1.022-1.142
Bromoform	19.94	18.81	1.060	ok	1.060	1.000-1.120
Bromomethane	4.78	9.12	0.524	ok	0.524	0.464-0.584
Bromoethene	5.31	9.12	0.582	ok	0.582	0.522-0.642
n-Butylbenzene	24.86	18.81	1.322	ok	1.322	1.262-1.382
sec-Butylbenzene	23.89	18.81	1.270	ok	1.270	1.210-1.330
Benzyl Chloride	23.66	18.81	1.258	ok	1.258	1.198-1.318
Carbon disulfide	6.89	9.12	0.755	ok	0.757	0.697-0.817
Chlorobenzene	18.89	18.81	1.004	ok	1.004	0.944-1.064
Chloroethane	4.95	9.12	0.543	ok	0.543	0.483-0.603
Chloroform	9.29	9.12	1.019	ok	1.018	0.958-1.078
Chloromethane	4.15	9.12	0.455	ok	0.455	0.395-0.515
3-Chloropropene	6.68	9.12	0.732	ok	0.733	0.673-0.793
2-Chlorotoluene	22.33	18.81	1.187	ok	1.187	1.127-1.247
Carbon tetrachloride	11.46	9.12	1.257	ok	1.257	1.197-1.317
Cyclohexane	11.63	11.76	0.989	ok	0.989	0.929-1.049
1,1-Dichloroethane	7.87	9.12	0.863	ok	0.863	0.803-0.923
1,1-Dichloroethylene	6.42	9.12	0.704	ok	0.704	0.644-0.764
1,2-Dibromoethane	16.85	18.81	0.896	ok	0.896	0.836-0.956
1,2-Dichloroethane	10.26	9.12	1.125	ok	1.126	1.066-1.186
1,2-Dichloropropane	12.44	11.76	1.058	ok	1.057	0.997-1.117
1,3-Dichloropropane	15.77	11.76	1.341	ok	1.341	1.281-1.401
1,4-Dioxane	12.82	11.76	1.090	ok	1.091	1.031-1.151
Dichlorodifluoromethane	3.99	9.12	0.438	ok	0.438	0.378-0.498
Dibromochloromethane	16.43	18.81	0.873	ok	0.874	0.814-0.934
trans-1,2-Dichloroethylene	7.62	9.12	0.836	ok	0.836	0.776-0.896
cis-1,2-Dichloroethylene	8.90	9.12	0.976	ok	0.976	0.916-1.036
cis-1,3-Dichloropropene	14.14	11.76	1.202	ok	1.202	1.142-1.262
m-Dichlorobenzene	23.67	18.81	1.258	ok	1.259	1.199-1.319
o-Dichlorobenzene	24.34	18.81	1.294	ok	1.294	1.234-1.354
p-Dichlorobenzene	23.79	18.81	1.265	ok	1.265	1.205-1.325
trans-1,3-Dichloropropene	14.99	11.76	1.275	ok	1.274	1.214-1.334
Ethanol	5.06	9.12	0.555	ok	0.556	0.496-0.616
Ethylbenzene	19.55	18.81	1.039	ok	1.039	0.979-1.099
Ethyl Acetate	9.21	9.12	1.010	ok	1.011	0.951-1.071

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1364-IC1364	Q31408.D	09/04/15 20:47	PN	0.2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31409.D	09/04/15 21:36	PN	0.5	GCMSQ	TO-15	
MSQ1364-IC1364	Q31410.D	09/04/15 22:24	PN	2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31411.D	09/04/15 23:12	PN	5	GCMSQ	TO-15	
MSQ1364-ICC1364	Q31412.D	09/05/15 00:00	PN	10	GCMSQ	TO-15	
MSQ1364-IC1364	Q31413.D	09/05/15 00:49	PN	20	GCMSQ	TO-15	Reporting this level
MSQ1364-IC1364	Q31414.D	09/05/15 01:36	PN	30	GCMSQ	TO-15	
MSQ1364-IC1364	Q31415.D	09/05/15 02:24	PN	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
4-Ethyltoluene	22.66	18.81	1.205	ok	1.205	1.145-1.265
Freon 113	6.84	9.12	0.750	ok	0.751	0.691-0.811
Freon 114	4.25	9.12	0.466	ok	0.466	0.406-0.526
Heptane	13.26	11.76	1.128	ok	1.128	1.068-1.188
Hexachlorobutadiene	27.67	18.81	1.471	ok	1.471	1.411-1.531
Hexane	9.17	9.12	1.005	ok	1.005	0.945-1.065
2-Hexanone	16.23	18.81	0.863	ok	0.864	0.804-0.924
Isopropylbenzene	21.58	18.81	1.147	ok	1.147	1.087-1.207
Isopropyl Alcohol	5.82	9.12	0.638	ok	0.639	0.579-0.699
p-Isopropyltoluene	24.16	18.81	1.284	ok	1.285	1.225-1.345
Methylene chloride	6.55	9.12	0.718	ok	0.719	0.659-0.779
Methyl ethyl ketone	8.37	9.12	0.918	ok	0.919	0.859-0.979
Methyl Isobutyl Ketone	14.23	11.76	1.210	ok	1.211	1.151-1.271
Methyl Tert Butyl Ether	7.96	9.12	0.873	ok	0.874	0.814-0.934
Methylmethacrylate	13.13	11.76	1.116	ok	1.117	1.057-1.177
Naphthalene	27.22	18.81	1.447	ok	1.447	1.387-1.507
Nonane	21.05	18.81	1.119	ok	1.119	1.059-1.179
Pentane	6.11	9.12	0.670	ok	0.670	0.610-0.730
Propylene	3.92	9.12	0.430	ok	0.430	0.370-0.490
Styrene	20.45	18.81	1.087	ok	1.087	1.027-1.147
1,1,1-Trichloroethane	10.60	9.12	1.162	ok	1.163	1.103-1.223
1,1,1,2-Tetrachloroethane	18.86	18.81	1.003	ok	1.003	0.943-1.063
1,1,2,2-Tetrachloroethane	20.61	18.81	1.096	ok	1.096	1.036-1.156
1,1,2-Trichloroethane	15.27	11.76	1.298	ok	1.298	1.238-1.358
1,2,4-Trichlorobenzene	27.08	18.81	1.440	ok	1.440	1.380-1.500
1,2,4-Trimethylbenzene	23.45	18.81	1.247	ok	1.247	1.187-1.307
1,3,5-Trimethylbenzene	22.79	18.81	1.212	ok	1.211	1.151-1.271
2,2,4-Trimethylpentane	12.85	11.76	1.093	ok	1.092	1.032-1.152
Tertiary Butyl Alcohol	6.48	9.12	0.711	ok	0.712	0.652-0.772
tert-Butylbenzene	23.44	18.81	1.246	ok	1.246	1.186-1.306
Tetrachloroethylene	17.68	18.81	0.940	ok	0.940	0.880-1.000
Tetrahydrofuran	9.84	9.12	1.079	ok	1.081	1.021-1.141
Toluene	15.72	11.76	1.337	ok	1.337	1.277-1.397
Trichloroethylene	12.79	11.76	1.088	ok	1.088	1.028-1.148
Trichlorofluoromethane	5.73	9.12	0.628	ok	0.629	0.569-0.689
Vinyl chloride	4.37	9.12	0.479	ok	0.479	0.419-0.539
Vinyl Acetate	8.05	9.12	0.883	ok	0.883	0.823-0.943
m,p-Xylene	19.88	18.81	1.057	ok	1.056	0.996-1.116
o-Xylene	20.62	18.81	1.096	ok	1.096	1.036-1.156

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1364-IC1364	Q31408.D	09/04/15 20:47	PN	0.2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31409.D	09/04/15 21:36	PN	0.5	GCMSQ	TO-15	
MSQ1364-IC1364	Q31410.D	09/04/15 22:24	PN	2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31411.D	09/04/15 23:12	PN	5	GCMSQ	TO-15	
MSQ1364-ICC1364	Q31412.D	09/05/15 00:00	PN	10	GCMSQ	TO-15	
MSQ1364-IC1364	Q31413.D	09/05/15 00:49	PN	20	GCMSQ	TO-15	Reporting this level
MSQ1364-IC1364	Q31414.D	09/05/15 01:36	PN	30	GCMSQ	TO-15	
MSQ1364-IC1364	Q31415.D	09/05/15 02:24	PN	40	GCMSQ	TO-15	

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	9.12	ok	9.12	8.79-9.45	1203032	ok	1138575	683145-1594005
1,4-Difluorobenzene	11.76	ok	11.76	11.43-12.09	5501602	ok	5251287	3150772-7351802
Chlorobenzene-D5	18.81	ok	18.81	18.48-19.14	3084432	ok	2827891	1696735-3959047

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1364-IC1364	Q31408.D	09/04/15 20:47	PN	0.2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31409.D	09/04/15 21:36	PN	0.5	GCMSQ	TO-15	
MSQ1364-IC1364	Q31410.D	09/04/15 22:24	PN	2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31411.D	09/04/15 23:12	PN	5	GCMSQ	TO-15	
MSQ1364-ICC1364	Q31412.D	09/05/15 00:00	PN	10	GCMSQ	TO-15	
MSQ1364-IC1364	Q31413.D	09/05/15 00:49	PN	20	GCMSQ	TO-15	
MSQ1364-IC1364	Q31414.D	09/05/15 01:36	PN	30	GCMSQ	TO-15	Reporting this level
MSQ1364-IC1364	Q31415.D	09/05/15 02:24	PN	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.56	9.12	0.610	ok	0.611	0.551-0.671
Acrolein	5.42	9.12	0.594	ok	0.595	0.535-0.655
Acrylonitrile	6.04	9.12	0.662	ok	0.663	0.603-0.723
1,3-Butadiene	4.50	9.12	0.493	ok	0.494	0.434-0.554
Benzene	11.25	11.77	0.956	ok	0.956	0.896-1.016
Bromodichloromethane	12.74	11.77	1.082	ok	1.082	1.022-1.142
Bromoform	19.94	18.82	1.060	ok	1.060	1.000-1.120
Bromomethane	4.78	9.12	0.524	ok	0.524	0.464-0.584
Bromoethene	5.31	9.12	0.582	ok	0.582	0.522-0.642
n-Butylbenzene	24.86	18.82	1.321	ok	1.322	1.262-1.382
sec-Butylbenzene	23.88	18.82	1.269	ok	1.270	1.210-1.330
Benzyl Chloride	23.66	18.82	1.257	ok	1.258	1.198-1.318
Carbon disulfide	6.90	9.12	0.757	ok	0.757	0.697-0.817
Chlorobenzene	18.89	18.82	1.004	ok	1.004	0.944-1.064
Chloroethane	4.95	9.12	0.543	ok	0.543	0.483-0.603
Chloroform	9.29	9.12	1.019	ok	1.018	0.958-1.078
Chloromethane	4.15	9.12	0.455	ok	0.455	0.395-0.515
3-Chloropropene	6.68	9.12	0.732	ok	0.733	0.673-0.793
2-Chlorotoluene	22.33	18.82	1.187	ok	1.187	1.127-1.247
Carbon tetrachloride	11.46	9.12	1.257	ok	1.257	1.197-1.317
Cyclohexane	11.64	11.77	0.989	ok	0.989	0.929-1.049
1,1-Dichloroethane	7.87	9.12	0.863	ok	0.863	0.803-0.923
1,1-Dichloroethylene	6.42	9.12	0.704	ok	0.704	0.644-0.764
1,2-Dibromoethane	16.86	18.82	0.896	ok	0.896	0.836-0.956
1,2-Dichloroethane	10.27	9.12	1.126	ok	1.126	1.066-1.186
1,2-Dichloropropane	12.44	11.77	1.057	ok	1.057	0.997-1.117
1,3-Dichloropropane	15.78	11.77	1.341	ok	1.341	1.281-1.401
1,4-Dioxane	12.83	11.77	1.090	ok	1.091	1.031-1.151
Dichlorodifluoromethane	3.99	9.12	0.438	ok	0.438	0.378-0.498
Dibromochloromethane	16.44	18.82	0.874	ok	0.874	0.814-0.934
trans-1,2-Dichloroethylene	7.63	9.12	0.837	ok	0.836	0.776-0.896
cis-1,2-Dichloroethylene	8.90	9.12	0.976	ok	0.976	0.916-1.036
cis-1,3-Dichloropropene	14.14	11.77	1.201	ok	1.202	1.142-1.262
m-Dichlorobenzene	23.67	18.82	1.258	ok	1.259	1.199-1.319
o-Dichlorobenzene	24.34	18.82	1.293	ok	1.294	1.234-1.354
p-Dichlorobenzene	23.79	18.82	1.264	ok	1.265	1.205-1.325
trans-1,3-Dichloropropene	14.99	11.77	1.274	ok	1.274	1.214-1.334
Ethanol	5.06	9.12	0.555	ok	0.556	0.496-0.616
Ethylbenzene	19.55	18.82	1.039	ok	1.039	0.979-1.099
Ethyl Acetate	9.21	9.12	1.010	ok	1.011	0.951-1.071

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1364-IC1364	Q31408.D	09/04/15 20:47	PN	0.2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31409.D	09/04/15 21:36	PN	0.5	GCMSQ	TO-15	
MSQ1364-IC1364	Q31410.D	09/04/15 22:24	PN	2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31411.D	09/04/15 23:12	PN	5	GCMSQ	TO-15	
MSQ1364-ICC1364	Q31412.D	09/05/15 00:00	PN	10	GCMSQ	TO-15	
MSQ1364-IC1364	Q31413.D	09/05/15 00:49	PN	20	GCMSQ	TO-15	
MSQ1364-IC1364	Q31414.D	09/05/15 01:36	PN	30	GCMSQ	TO-15	Reporting this level
MSQ1364-IC1364	Q31415.D	09/05/15 02:24	PN	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
4-Ethyltoluene	22.66	18.82	1.204	ok	1.205	1.145-1.265
Freon 113	6.84	9.12	0.750	ok	0.751	0.691-0.811
Freon 114	4.25	9.12	0.466	ok	0.466	0.406-0.526
Heptane	13.27	11.77	1.127	ok	1.128	1.068-1.188
Hexachlorobutadiene	27.67	18.82	1.470	ok	1.471	1.411-1.531
Hexane	9.17	9.12	1.005	ok	1.005	0.945-1.065
2-Hexanone	16.24	18.82	0.863	ok	0.864	0.804-0.924
Isopropylbenzene	21.58	18.82	1.147	ok	1.147	1.087-1.207
Isopropyl Alcohol	5.82	9.12	0.638	ok	0.639	0.579-0.699
p-Isopropyltoluene	24.16	18.82	1.284	ok	1.285	1.225-1.345
Methylene chloride	6.55	9.12	0.718	ok	0.719	0.659-0.779
Methyl ethyl ketone	8.37	9.12	0.918	ok	0.919	0.859-0.979
Methyl Isobutyl Ketone	14.23	11.77	1.209	ok	1.211	1.151-1.271
Methyl Tert Butyl Ether	7.96	9.12	0.873	ok	0.874	0.814-0.934
Methylmethacrylate	13.14	11.77	1.116	ok	1.117	1.057-1.177
Naphthalene	27.22	18.82	1.446	ok	1.447	1.387-1.507
Nonane	21.04	18.82	1.118	ok	1.119	1.059-1.179
Pentane	6.11	9.12	0.670	ok	0.670	0.610-0.730
Propylene	3.92	9.12	0.430	ok	0.430	0.370-0.490
Styrene	20.45	18.82	1.087	ok	1.087	1.027-1.147
1,1,1-Trichloroethane	10.61	9.12	1.163	ok	1.163	1.103-1.223
1,1,1,2-Tetrachloroethane	18.87	18.82	1.003	ok	1.003	0.943-1.063
1,1,2,2-Tetrachloroethane	20.62	18.82	1.096	ok	1.096	1.036-1.156
1,1,2-Trichloroethane	15.27	11.77	1.297	ok	1.298	1.238-1.358
1,2,4-Trichlorobenzene	27.08	18.82	1.439	ok	1.440	1.380-1.500
1,2,4-Trimethylbenzene	23.45	18.82	1.246	ok	1.247	1.187-1.307
1,3,5-Trimethylbenzene	22.79	18.82	1.211	ok	1.211	1.151-1.271
2,2,4-Trimethylpentane	12.84	11.77	1.091	ok	1.092	1.032-1.152
Tertiary Butyl Alcohol	6.48	9.12	0.711	ok	0.712	0.652-0.772
tert-Butylbenzene	23.44	18.82	1.245	ok	1.246	1.186-1.306
Tetrachloroethylene	17.69	18.82	0.940	ok	0.940	0.880-1.000
Tetrahydrofuran	9.84	9.12	1.079	ok	1.081	1.021-1.141
Toluene	15.73	11.77	1.336	ok	1.337	1.277-1.397
Trichloroethylene	12.80	11.77	1.088	ok	1.088	1.028-1.148
Trichlorofluoromethane	5.74	9.12	0.629	ok	0.629	0.569-0.689
Vinyl chloride	4.37	9.12	0.479	ok	0.479	0.419-0.539
Vinyl Acetate	8.05	9.12	0.883	ok	0.883	0.823-0.943
m,p-Xylene	19.88	18.82	1.056	ok	1.056	0.996-1.116
o-Xylene	20.63	18.82	1.096	ok	1.096	1.036-1.156

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1364-IC1364	Q31408.D	09/04/15 20:47	PN	0.2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31409.D	09/04/15 21:36	PN	0.5	GCMSQ	TO-15	
MSQ1364-IC1364	Q31410.D	09/04/15 22:24	PN	2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31411.D	09/04/15 23:12	PN	5	GCMSQ	TO-15	
MSQ1364-ICC1364	Q31412.D	09/05/15 00:00	PN	10	GCMSQ	TO-15	
MSQ1364-IC1364	Q31413.D	09/05/15 00:49	PN	20	GCMSQ	TO-15	
MSQ1364-IC1364	Q31414.D	09/05/15 01:36	PN	30	GCMSQ	TO-15	Reporting this level
MSQ1364-IC1364	Q31415.D	09/05/15 02:24	PN	40	GCMSQ	TO-15	

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	9.12	ok	9.12	8.79-9.45	1238382	ok	1138575	683145-1594005
1,4-Difluorobenzene	11.77	ok	11.76	11.43-12.09	5539635	ok	5251287	3150772-7351802
Chlorobenzene-D5	18.82	ok	18.81	18.48-19.14	3267200	ok	2827891	1696735-3959047

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1364-IC1364	Q31408.D	09/04/15 20:47	PN	0.2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31409.D	09/04/15 21:36	PN	0.5	GCMSQ	TO-15	
MSQ1364-IC1364	Q31410.D	09/04/15 22:24	PN	2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31411.D	09/04/15 23:12	PN	5	GCMSQ	TO-15	
MSQ1364-ICC1364	Q31412.D	09/05/15 00:00	PN	10	GCMSQ	TO-15	
MSQ1364-IC1364	Q31413.D	09/05/15 00:49	PN	20	GCMSQ	TO-15	
MSQ1364-IC1364	Q31414.D	09/05/15 01:36	PN	30	GCMSQ	TO-15	
MSQ1364-IC1364	Q31415.D	09/05/15 02:24	PN	40	GCMSQ	TO-15	Reporting this level

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.56	9.12	0.610	ok	0.611	0.551-0.671
Acrolein	5.42	9.12	0.594	ok	0.595	0.535-0.655
Acrylonitrile	6.04	9.12	0.662	ok	0.663	0.603-0.723
1,3-Butadiene	4.50	9.12	0.493	ok	0.494	0.434-0.554
Benzene	11.25	11.77	0.956	ok	0.956	0.896-1.016
Bromodichloromethane	12.74	11.77	1.082	ok	1.082	1.022-1.142
Bromoform	19.95	18.82	1.060	ok	1.060	1.000-1.120
Bromomethane	4.78	9.12	0.524	ok	0.524	0.464-0.584
Bromoethene	5.30	9.12	0.581	ok	0.582	0.522-0.642
n-Butylbenzene	24.85	18.82	1.320	ok	1.322	1.262-1.382
sec-Butylbenzene	23.88	18.82	1.269	ok	1.270	1.210-1.330
Benzyl Chloride	23.66	18.82	1.257	ok	1.258	1.198-1.318
Carbon disulfide	6.89	9.12	0.755	ok	0.757	0.697-0.817
Chlorobenzene	18.89	18.82	1.004	ok	1.004	0.944-1.064
Chloroethane	4.95	9.12	0.543	ok	0.543	0.483-0.603
Chloroform	9.29	9.12	1.019	ok	1.018	0.958-1.078
Chloromethane	4.15	9.12	0.455	ok	0.455	0.395-0.515
3-Chloropropene	6.68	9.12	0.732	ok	0.733	0.673-0.793
2-Chlorotoluene	22.33	18.82	1.187	ok	1.187	1.127-1.247
Carbon tetrachloride	11.46	9.12	1.257	ok	1.257	1.197-1.317
Cyclohexane	11.63	11.77	0.988	ok	0.989	0.929-1.049
1,1-Dichloroethane	7.87	9.12	0.863	ok	0.863	0.803-0.923
1,1-Dichloroethylene	6.42	9.12	0.704	ok	0.704	0.644-0.764
1,2-Dibromoethane	16.86	18.82	0.896	ok	0.896	0.836-0.956
1,2-Dichloroethane	10.27	9.12	1.126	ok	1.126	1.066-1.186
1,2-Dichloropropane	12.44	11.77	1.057	ok	1.057	0.997-1.117
1,3-Dichloropropane	15.78	11.77	1.341	ok	1.341	1.281-1.401
1,4-Dioxane	12.83	11.77	1.090	ok	1.091	1.031-1.151
Dichlorodifluoromethane	3.99	9.12	0.438	ok	0.438	0.378-0.498
Dibromochloromethane	16.44	18.82	0.874	ok	0.874	0.814-0.934
trans-1,2-Dichloroethylene	7.63	9.12	0.837	ok	0.836	0.776-0.896
cis-1,2-Dichloroethylene	8.90	9.12	0.976	ok	0.976	0.916-1.036
cis-1,3-Dichloropropene	14.14	11.77	1.201	ok	1.202	1.142-1.262
m-Dichlorobenzene	23.68	18.82	1.258	ok	1.259	1.199-1.319
o-Dichlorobenzene	24.35	18.82	1.294	ok	1.294	1.234-1.354
p-Dichlorobenzene	23.80	18.82	1.265	ok	1.265	1.205-1.325
trans-1,3-Dichloropropene	15.00	11.77	1.274	ok	1.274	1.214-1.334
Ethanol	5.06	9.12	0.555	ok	0.556	0.496-0.616
Ethylbenzene	19.55	18.82	1.039	ok	1.039	0.979-1.099
Ethyl Acetate	9.21	9.12	1.010	ok	1.011	0.951-1.071

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1364-IC1364	Q31408.D	09/04/15 20:47	PN	0.2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31409.D	09/04/15 21:36	PN	0.5	GCMSQ	TO-15	
MSQ1364-IC1364	Q31410.D	09/04/15 22:24	PN	2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31411.D	09/04/15 23:12	PN	5	GCMSQ	TO-15	
MSQ1364-ICC1364	Q31412.D	09/05/15 00:00	PN	10	GCMSQ	TO-15	
MSQ1364-IC1364	Q31413.D	09/05/15 00:49	PN	20	GCMSQ	TO-15	
MSQ1364-IC1364	Q31414.D	09/05/15 01:36	PN	30	GCMSQ	TO-15	
MSQ1364-IC1364	Q31415.D	09/05/15 02:24	PN	40	GCMSQ	TO-15	Reporting this level

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
4-Ethyltoluene	22.65	18.82	1.204	ok	1.205	1.145-1.265
Freon 113	6.84	9.12	0.750	ok	0.751	0.691-0.811
Freon 114	4.25	9.12	0.466	ok	0.466	0.406-0.526
Heptane	13.27	11.77	1.127	ok	1.128	1.068-1.188
Hexachlorobutadiene	27.67	18.82	1.470	ok	1.471	1.411-1.531
Hexane	9.17	9.12	1.005	ok	1.005	0.945-1.065
2-Hexanone	16.24	18.82	0.863	ok	0.864	0.804-0.924
Isopropylbenzene	21.58	18.82	1.147	ok	1.147	1.087-1.207
Isopropyl Alcohol	5.82	9.12	0.638	ok	0.639	0.579-0.699
p-Isopropyltoluene	24.16	18.82	1.284	ok	1.285	1.225-1.345
Methylene chloride	6.55	9.12	0.718	ok	0.719	0.659-0.779
Methyl ethyl ketone	8.37	9.12	0.918	ok	0.919	0.859-0.979
Methyl Isobutyl Ketone	14.24	11.77	1.210	ok	1.211	1.151-1.271
Methyl Tert Butyl Ether	7.96	9.12	0.873	ok	0.874	0.814-0.934
Methylmethacrylate	13.14	11.77	1.116	ok	1.117	1.057-1.177
Naphthalene	27.22	18.82	1.446	ok	1.447	1.387-1.507
Nonane	21.04	18.82	1.118	ok	1.119	1.059-1.179
Pentane	6.11	9.12	0.670	ok	0.670	0.610-0.730
Propylene	3.92	9.12	0.430	ok	0.430	0.370-0.490
Styrene	20.46	18.82	1.087	ok	1.087	1.027-1.147
1,1,1-Trichloroethane	10.61	9.12	1.163	ok	1.163	1.103-1.223
1,1,1,2-Tetrachloroethane	18.87	18.82	1.003	ok	1.003	0.943-1.063
1,1,2,2-Tetrachloroethane	20.62	18.82	1.096	ok	1.096	1.036-1.156
1,1,2-Trichloroethane	15.27	11.77	1.297	ok	1.298	1.238-1.358
1,2,4-Trichlorobenzene	27.08	18.82	1.439	ok	1.440	1.380-1.500
1,2,4-Trimethylbenzene	23.45	18.82	1.246	ok	1.247	1.187-1.307
1,3,5-Trimethylbenzene	22.78	18.82	1.210	ok	1.211	1.151-1.271
2,2,4-Trimethylpentane	12.83	11.77	1.090	ok	1.092	1.032-1.152
Tertiary Butyl Alcohol	6.48	9.12	0.711	ok	0.712	0.652-0.772
tert-Butylbenzene	23.44	18.82	1.245	ok	1.246	1.186-1.306
Tetrachloroethylene	17.69	18.82	0.940	ok	0.940	0.880-1.000
Tetrahydrofuran	9.84	9.12	1.079	ok	1.081	1.021-1.141
Toluene	15.73	11.77	1.336	ok	1.337	1.277-1.397
Trichloroethylene	12.80	11.77	1.088	ok	1.088	1.028-1.148
Trichlorofluoromethane	5.73	9.12	0.628	ok	0.629	0.569-0.689
Vinyl chloride	4.37	9.12	0.479	ok	0.479	0.419-0.539
Vinyl Acetate	8.04	9.12	0.882	ok	0.883	0.823-0.943
m,p-Xylene	19.88	18.82	1.056	ok	1.056	0.996-1.116
o-Xylene	20.63	18.82	1.096	ok	1.096	1.036-1.156

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1364-IC1364	Q31408.D	09/04/15 20:47	PN	0.2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31409.D	09/04/15 21:36	PN	0.5	GCMSQ	TO-15	
MSQ1364-IC1364	Q31410.D	09/04/15 22:24	PN	2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31411.D	09/04/15 23:12	PN	5	GCMSQ	TO-15	
MSQ1364-ICC1364	Q31412.D	09/05/15 00:00	PN	10	GCMSQ	TO-15	
MSQ1364-IC1364	Q31413.D	09/05/15 00:49	PN	20	GCMSQ	TO-15	
MSQ1364-IC1364	Q31414.D	09/05/15 01:36	PN	30	GCMSQ	TO-15	
MSQ1364-IC1364	Q31415.D	09/05/15 02:24	PN	40	GCMSQ	TO-15	Reporting this level

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	9.12	ok	9.12	8.79-9.45	1127266	ok	1138575	683145-1594005
1,4-Difluorobenzene	11.77	ok	11.76	11.43-12.09	5247131	ok	5251287	3150772-7351802
Chlorobenzene-D5	18.82	ok	18.81	18.48-19.14	3308795	ok	2827891	1696735-3959047

Volatile Surrogate Recovery Summary

Job Number: MC40894
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Method: TO-15 **Matrix:** AIR

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1
MC40894-1	Q31424.D	99
MC40894-1	Q31340.D	103
MC40894-2	Q31422.D	95
MC40894-2	Q31341.D	105
MC40894-3	Q31423.D	94
MC40894-3	Q31342.D	104
MC40894-4	Q31420.D	95
MC40894-4	Q31343.D	106
MSQ1348-SCC	Q31036.D	104
MSQ1348-SCC	Q31038.D	106
MSQ1362-BS	Q31321A.D	106
MSQ1362-MB	Q31324.D	104
MSQ1364-BS	Q31416B.D	102
MSQ1364-MB	Q31419.D	99
MSQ1348-BS	Q31035A.D	104
MSQ1348-MB	Q31037.D	99

Surrogate Compounds	Recovery Limits
S1 = 4-Bromofluorobenzene	50-129%

Data Usability Worksheet

Project Name : Varian Medical Systems, Inc
Job Number : 155349
Prepared By: Jennifer Gailey
Date : 10/27/2015
Matrix: Air
Analyte Group : Volatile Organics
Analytical Method : TO-15

Completed MADEP CAM Certification Form included: Yes
Laboratory ID No. : MC40930
Chain of Custody included in Data Package ? Yes
Is it Complete ? Yes

Sample Collection Date	Analysis	Allowable Holding Time for extraction	Allowable Holding Time for analysis	Analysis Date
8/20/15	To-15		30 Days	9/8, 9/10, 9/11/2015

Sample temperature within QC limits: NA-Air

Surrogate Recovery
Are all % recoveries within the allowable range ? Yes

If No, List sample ID where range was exceeded: NA

MS/MSD

Are all MS/MSD sample recoveries within the QC limits ? NA

If No, list sample ID, date and compound where limit was exceeded: NA

Laboratory Control Samples
Are all laboratory control sample recoveries within the QC limits ? Yes

If no, list sample ID where range was exceeded: N/A

Equipment Field Blank ID : NA
Trip Blank ID : NA

Method Blank: TO-15 9/7, 9/10, 9/11/2015

Were any compounds identified in the method blank, field blank or trip blank above detection limits ? No

If so, list Sample ID/Compound/Concentration/Units: NA

Notes:

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Initial calibration verification MSQ1364-ICV1364 for BROMOFORM, 1,1,2,2-TETRACHLOROETHANE exceed 30% Difference (response biased high). Associated samples are non-detect for this compound and therefore data is not impacted.

Only selected compounds requested.

Reviewed By: Pernilla Haley 10/28/15

New England ACCUTEST LABORATORIES

09/14/15

Technical Report for

CB&I

Varian Beverly, 150 Sohier Road, Beverly, MA

152780-01

Accutest Job Number: MC40930

Sampling Date: 08/20/15

Report to:

vallerie.sasso@cbi.com

ATTN: Distribution6

Total number of pages in report: **108**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Reza Tand
Lab Director

Client Service contact: Frank DAgostino 508-481-6200

Certifications: MA (M-MA136,SW846 NELAC) CT (PH-0109) NH (250210) RI (00071) ME (MA00136) FL (E87579) NY (11791) NJ (MA926) PA (6801121) ND (R-188) CO MN (11546AA) NC (653) IL (002337) WI (399080220) DoD ELAP (L-A-B L2235)

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Test results relate only to samples analyzed.

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Sample Summary

CB&I

Job No: MC40930

Varian Beverly, 150 Sohier Road, Beverly, MA
Project No: 152780-01

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
MC40930-1	08/20/15	11:25	JW	08/21/15	AIR	Air	BLDG 3-VP3
MC40930-2	08/20/15	11:50	JW	08/21/15	AIR	Air	BLDG 3-VP2
MC40930-3	08/20/15	12:00	JW	08/21/15	AIR	Air	BLDG 3-VP1
MC40930-4	08/20/15	12:15	JW	08/21/15	AIR	Air	BLDG 2-SV1

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: CB&I **Job No** MC40930

Site: Varian Beverly, 150 Sohier Road, Beverly, MA **Report Date** 9/14/2015 4:25:48 PM

4 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were collected on 08/20/2015 and were received at Accutest on 08/21/2015 AMB and intact. These Samples received an Accutest job number of MC40930. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Volatiles by GCMS By Method TO-15

Matrix: AIR **Batch ID:** MSQ1365

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Initial calibration verification MSQ1364-ICV1364 for BROMOFORM, 1,1,2,2-TETRACHLOROETHANE exceed 30% Difference (response biased high). Associated samples are non-detect for this compound.
- Only selected compounds requested.

Matrix: AIR **Batch ID:** MSQ1367

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Only selected compounds requested.

Matrix: AIR **Batch ID:** MSQ1368

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Only selected compounds requested.

The Accutest Laboratories of New England certifies that all analysis were performed within method specification. It is further recommended that this report to be used in its entirety.The Accutest Laboratories of NE, Laboratory Director or assignee as verified by the signature on the cover page has authorized the release of this report(MC40930).

Summary of Hits

Job Number: MC40930
Account: CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA
Collected: 08/20/15

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC40930-1	**BLDG 3-VP3**					
Acetone		171	10		ppbv	TO-15
Tetrachloroethylene		15.7	1.0		ppbv	TO-15
Trichloroethylene		4.7	1.0		ppbv	TO-15
Acetone		406	24		ug/m3	TO-15
Tetrachloroethylene		106	6.8		ug/m3	TO-15
Trichloroethylene		25	5.4		ug/m3	TO-15
MC40930-2	**BLDG 3-VP2**					
Acetone		182	2.5		ppbv	TO-15
Tetrachloroethylene		7.4	1.0		ppbv	TO-15
Acetone		432	5.9		ug/m3	TO-15
Tetrachloroethylene		50	6.8		ug/m3	TO-15
MC40930-3	**BLDG 3-VP1**					
Acetone		150	2.5		ppbv	TO-15
Tetrachloroethylene		7.3	1.0		ppbv	TO-15
Acetone		356	5.9		ug/m3	TO-15
Tetrachloroethylene		50	6.8		ug/m3	TO-15
MC40930-4	**BLDG 2-SV1**					
Acetone		3820	60		ppbv	TO-15
Chloroform		0.50	0.50		ppbv	TO-15
Chloromethane		0.88	0.50		ppbv	TO-15
Tetrachloroethylene		0.52	0.20		ppbv	TO-15
Trichloroethylene		0.39	0.20		ppbv	TO-15
Acetone		9070	140		ug/m3	TO-15
Chloroform		2.4	2.4		ug/m3	TO-15
Chloromethane		1.8	1.0		ug/m3	TO-15
Tetrachloroethylene		3.5	1.4		ug/m3	TO-15
Trichloroethylene		2.1	1.1		ug/m3	TO-15

New England ACCUTEST LABORATORIES

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Sample Results

Report of Analysis

Report of Analysis

Client Sample ID: BLDG 3-VP3
Lab Sample ID: MC40930-1
Matrix: AIR - Air Summa ID: M260
Method: TO-15
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Date Sampled: 08/20/15
Date Received: 08/21/15
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q31480.D	5	09/10/15	AA	n/a	n/a	MSQ1367
Run #2	Q31451.D	20	09/08/15	AA	n/a	n/a	MSQ1365

	Initial Volume
Run #1	400 ml
Run #2	400 ml

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	58.08	Acetone	171 [a]	10	ppbv		406 [a]	24	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	2.5	ppbv		ND	17	ug/m3
75-25-2	252.8	Bromoform	ND	2.5	ppbv		ND	26	ug/m3
74-83-9	94.94	Bromomethane	ND	2.5	ppbv		ND	9.7	ug/m3
108-90-7	112.6	Chlorobenzene	ND	2.5	ppbv		ND	12	ug/m3
75-00-3	64.52	Chloroethane	ND	1.0	ppbv		ND	2.6	ug/m3
67-66-3	119.4	Chloroform	ND	2.5	ppbv		ND	12	ug/m3
74-87-3	50.49	Chloromethane	ND	2.5	ppbv		ND	5.2	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	1.0	ppbv		ND	6.3	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	1.0	ppbv		ND	4.0	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	1.0	ppbv		ND	4.0	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	1.0	ppbv		ND	4.0	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	2.5	ppbv		ND	12	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	2.5	ppbv		ND	21	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	1.0	ppbv		ND	4.0	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	1.0	ppbv		ND	4.0	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	2.5	ppbv		ND	11	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	2.5	ppbv		ND	11	ug/m3
75-09-2	84.94	Methylene chloride	ND	2.5	ppbv		ND	8.7	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	1.0	ppbv		ND	5.5	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	1.0	ppbv		ND	6.9	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	1.0	ppbv		ND	5.5	ug/m3
127-18-4	165.8	Tetrachloroethylene	15.7	1.0	ppbv		106	6.8	ug/m3
79-01-6	131.4	Trichloroethylene	4.7	1.0	ppbv		25	5.4	ug/m3
75-69-4	137.4	Trichlorofluoromethane	ND	2.5	ppbv		ND	14	ug/m3
75-01-4	62.5	Vinyl chloride	ND	1.0	ppbv		ND	2.6	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	85%	117%	50-129%

(a) Result is from Run# 2

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: BLDG 3-VP2
Lab Sample ID: MC40930-2
Matrix: AIR - Air Summa ID: M133
Method: TO-15
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Date Sampled: 08/20/15
Date Received: 08/21/15
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q31481.D	5	09/10/15	AA	n/a	n/a	MSQ1367
Run #2							

	Initial Volume
Run #1	400 ml
Run #2	

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	58.08	Acetone	182	2.5	ppbv		432	5.9	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	2.5	ppbv		ND	17	ug/m3
75-25-2	252.8	Bromoform	ND	2.5	ppbv		ND	26	ug/m3
74-83-9	94.94	Bromomethane	ND	2.5	ppbv		ND	9.7	ug/m3
108-90-7	112.6	Chlorobenzene	ND	2.5	ppbv		ND	12	ug/m3
75-00-3	64.52	Chloroethane	ND	1.0	ppbv		ND	2.6	ug/m3
67-66-3	119.4	Chloroform	ND	2.5	ppbv		ND	12	ug/m3
74-87-3	50.49	Chloromethane	ND	2.5	ppbv		ND	5.2	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	1.0	ppbv		ND	6.3	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	1.0	ppbv		ND	4.0	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	1.0	ppbv		ND	4.0	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	1.0	ppbv		ND	4.0	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	2.5	ppbv		ND	12	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	2.5	ppbv		ND	21	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	1.0	ppbv		ND	4.0	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	1.0	ppbv		ND	4.0	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	2.5	ppbv		ND	11	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	2.5	ppbv		ND	11	ug/m3
75-09-2	84.94	Methylene chloride	ND	2.5	ppbv		ND	8.7	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	1.0	ppbv		ND	5.5	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	1.0	ppbv		ND	6.9	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	1.0	ppbv		ND	5.5	ug/m3
127-18-4	165.8	Tetrachloroethylene	7.4	1.0	ppbv		50	6.8	ug/m3
79-01-6	131.4	Trichloroethylene	ND	1.0	ppbv		ND	5.4	ug/m3
75-69-4	137.4	Trichlorofluoromethane	ND	2.5	ppbv		ND	14	ug/m3
75-01-4	62.5	Vinyl chloride	ND	1.0	ppbv		ND	2.6	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	85%		50-129%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: BLDG 3-VP1
Lab Sample ID: MC40930-3
Matrix: AIR - Air Summa ID: M223
Method: TO-15
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Date Sampled: 08/20/15
Date Received: 08/21/15
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q31482.D	5	09/10/15	AA	n/a	n/a	MSQ1367
Run #2							

	Initial Volume
Run #1	400 ml
Run #2	

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	58.08	Acetone	150	2.5	ppbv		356	5.9	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	2.5	ppbv		ND	17	ug/m3
75-25-2	252.8	Bromoform	ND	2.5	ppbv		ND	26	ug/m3
74-83-9	94.94	Bromomethane	ND	2.5	ppbv		ND	9.7	ug/m3
108-90-7	112.6	Chlorobenzene	ND	2.5	ppbv		ND	12	ug/m3
75-00-3	64.52	Chloroethane	ND	1.0	ppbv		ND	2.6	ug/m3
67-66-3	119.4	Chloroform	ND	2.5	ppbv		ND	12	ug/m3
74-87-3	50.49	Chloromethane	ND	2.5	ppbv		ND	5.2	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	1.0	ppbv		ND	6.3	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	1.0	ppbv		ND	4.0	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	1.0	ppbv		ND	4.0	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	1.0	ppbv		ND	4.0	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	2.5	ppbv		ND	12	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	2.5	ppbv		ND	21	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	1.0	ppbv		ND	4.0	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	1.0	ppbv		ND	4.0	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	2.5	ppbv		ND	11	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	2.5	ppbv		ND	11	ug/m3
75-09-2	84.94	Methylene chloride	ND	2.5	ppbv		ND	8.7	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	1.0	ppbv		ND	5.5	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	1.0	ppbv		ND	6.9	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	1.0	ppbv		ND	5.5	ug/m3
127-18-4	165.8	Tetrachloroethylene	7.3	1.0	ppbv		50	6.8	ug/m3
79-01-6	131.4	Trichloroethylene	ND	1.0	ppbv		ND	5.4	ug/m3
75-69-4	137.4	Trichlorofluoromethane	ND	2.5	ppbv		ND	14	ug/m3
75-01-4	62.5	Vinyl chloride	ND	1.0	ppbv		ND	2.6	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	86%		50-129%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: BLDG 2-SV1
Lab Sample ID: MC40930-4
Matrix: AIR - Air Summa ID: M008
Method: TO-15
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Date Sampled: 08/20/15
Date Received: 08/21/15
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q31478.D	1	09/10/15	AA	n/a	n/a	MSQ1367
Run #2	Q31497.D	120	09/11/15	AA	n/a	n/a	MSQ1368

	Initial Volume
Run #1	400 ml
Run #2	400 ml

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	58.08	Acetone	3820 [a]	60	ppbv		9070 [a]	140	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	0.50	ppbv		ND	3.3	ug/m3
75-25-2	252.8	Bromoform	ND	0.50	ppbv		ND	5.2	ug/m3
74-83-9	94.94	Bromomethane	ND	0.50	ppbv		ND	1.9	ug/m3
108-90-7	112.6	Chlorobenzene	ND	0.50	ppbv		ND	2.3	ug/m3
75-00-3	64.52	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	119.4	Chloroform	0.50	0.50	ppbv		2.4	2.4	ug/m3
74-87-3	50.49	Chloromethane	0.88	0.50	ppbv		1.8	1.0	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	0.20	ppbv		ND	1.3	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	0.50	ppbv		ND	2.3	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	0.50	ppbv		ND	4.3	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	0.50	ppbv		ND	2.3	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	0.50	ppbv		ND	2.3	ug/m3
75-09-2	84.94	Methylene chloride	ND	0.50	ppbv		ND	1.7	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	0.20	ppbv		ND	1.4	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
127-18-4	165.8	Tetrachloroethylene	0.52	0.20	ppbv		3.5	1.4	ug/m3
79-01-6	131.4	Trichloroethylene	0.39	0.20	ppbv		2.1	1.1	ug/m3
75-69-4	137.4	Trichlorofluoromethane	ND	0.50	ppbv		ND	2.8	ug/m3
75-01-4	62.5	Vinyl chloride	ND	0.20	ppbv		ND	0.51	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	89%	87%	50-129%

(a) Result is from Run# 2

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

New England ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- MCP Form
- Summa Canister and Flow Controller Log
- Sample Tracking Chronicle
- QC Evaluation: MA MCP Limits

ACCUTEST LABORATORIES

CHAIN OF CUSTODY

Accutest Laboratories of New England
495 Technology Center West, Building One
TEL. 508-481-6200 FAX: 508-481-7753
www.accutest.com

PAGE 1 OF 1

FED-EX Tracking #: | Bottle Order Control #:
Accutest Quote #: | Accutest Job # MC40930

Client / Reporting Information

Company Name: CB&I Environmental
Street Address: 150 Royall Street
City State Zip: Canton, MA 02021
Project Contact E-mail: Raymond.Cadorette@cbi.com
Phone # Fax #: 617-589-6102
Sampler(s) Name(s) Phone #: Daniel Leahy 617-589-8276

Project Information

Project Name: Varian Beverly
Street: 150 Sohier Road
City: Beverly, MA
Project#: 152780-01
Client PO#: 956687
Project Manager: Rayond Cadorette

Billing Information (If different from Report to)

Company Name:
Street Address:
City State Zip:
Attention: PO#:

Requested Analysis (see TEST CODE sheet)

TO-15 (VOCs - Site Specific List)

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL- Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB-Field Blank
EB- Equipment Blank
RB- Rinse Blank
TB-Trip Blank

Accutest Sample #	Field ID / Point of Collection	Summa # (MSOUD/Vial #)	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	Number of preserved Bottles: HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	Bisulfate	TO-15 (VOCs - Site Specific List)	LAB USE ONLY
-1	BLDG 3 - VP3	M260	8/20/15	1125	DL	Air	1					1					1	
-2	BLDG 3 - VP2	M133	8/20/15	1150	DL	AIR	1					1					1	
-3	BLDG 3 - VP1	M223	8/20/15	1200	DL	AIR	1					1					1	
-4	BLDG 2 - SV1	M008	8/20/15	1215	DL	AIR	1					1					1	

4-Hour Regulator used. Y.S.

Ver. AMB.

* LAB TO COMPARE A SECOND RUN TO ACHIEVE LOWEST DETECTION LIMITS ON VOC's, CBI Ray CADORETTE WITH ANY QUESTIONS (RC)

Turnaround Time (Business days)

Approved By (Accutest PM): / Date:

- Std. 10 Business Days
- Std. 5 Business Days (By Contract only)
- 5 Day *RUSH*
- 3 Day *EMERGENCY*
- 2 Day *EMERGENCY*
- 1 Day *EMERGENCY*

Emergency & Rush T/A data available VIA Lablink

Data Deliverable Information

- Commercial "A" (Level 1)
- Commercial "B" (Level 2)
- FULLT1 (Level 3+4)
- CT RCP
- MA MCP
- NYASP Category A
- NYASP Category B
- State Forms
- EDD Format GISKey
- Other

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary

Comments / Special Instructions

Please report in units ug/m3 & ppmV.

Email GISKey formatted EDD & PDF to: Catherine.Mainville@cbi.com.

QA/QC: MADEP CAM. Complete 2nd run.

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time: 8/20/15	Received By: 1	Relinquished By: 2	Date Time: 8/21/15	Received By: 2		
Relinquished by Sampler: 3	Date/Time: 8/21/15 1450	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4		
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal #	Intact / Not Intact	Preserved where applicable	On Ice	Cooler Temp.

5.1 5

MC40930: Chain of Custody
Page 1 of 2

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC40930 **Client:** CB&I **Project:** BEVERLY

Date / Time Received: 8/21/2015 3:50:00 PM **Delivery Method:** **Airbill #'s:**

Cooler Temps (Initial/Adjusted):

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Thermometer ID:			
3. Cooler media:			
4. No. Coolers:	0		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☐	☑
2. Trip Blank listed on COC:	☐		☐	☑
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Comments

Accutest Laboratories
V:(508) 481-6200

495 Technology Center West, Bldg One
F: (508) 481-7753

Marlborough, MA 01752
www/accutest.com

MC40930: Chain of Custody
Page 2 of 2

Exhibit VII A-2: MassDEP Analytical Protocol Certification Form

MassDEP Analytical Protocol Certification Form

Laboratory Name:	Accutest Laboratories of New England	Project #:	MC40930
Project Location:	Varian Beverly, 150 Sohier Road, Beverly, MA	MADEP RTN	None

This form provides certifications for the following data set: list Laboratory Sample ID Numbers(s)
MC40930-1,MC40930-2,MC40930-3,MC40930-4

Matrices: Groundwater/Surface Water ( ) Soil/Sediment ( ) Drinking Water ( ) Air ( ) Air (X) Other ( )

CAM Protocol (check all that apply below):

8260 VOC ( ) CAM IIA	7470/7471 Hg ( ) CAM III B	MassDEP VPH ( ) CAM IV A	8081 Pesticides ( ) CAM V B	7196 Hex Cr ( ) CAM VI B	Mass DEP APH ( ) CAM IX A
8270 SVOC ( ) CAM II B	7010 Metals ( ) CAM III C	MassDEP EPH ( ) CAM IV B	8151 Herbicides ( ) CAM V C	8330 Explosives ( ) CAM VIII A	TO-15 VOC (X) CAM IX B
6010 Metals ( ) CAM III A	6020 Metals ( ) CAM III D	8082 PCB ( ) CAM V A	9014 Total Cyanide/PAC ( ) CAM VI A	6860 Perchlorate ( ) CAM VIII B	

Affirmative Responses to Questions A Through F are required for "Presumptive Certainty status

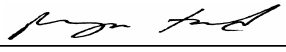
A	Were all samples received in a condition consistent with those described on the Chain-of Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	☑ Yes	☐ No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	☑ Yes	☐ No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☑ Yes	☐ No
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	☑ Yes	☐ No
E	VPH, EPH, APH, and TO-15 only: a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	☑ Yes	☐ No
	b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	☑ Yes	☐ No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	☑ Yes	☐ No

Responses to questions G, H, and I below is required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocols	☑ Yes	☐ No [1]
	Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data useability and representativeness requirements described in 310 CMR 40.1056(2)(k) and WSC-07-350.		
H	Were **all** QC performance standards specified in the CAM protocol(s) achieved?	☐ Yes	☑ No [1]
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☐ Yes	☑ No [1]

[1] ***All Negative responses must be addressed in an attached Environmental Laboratory case narrative.***

I the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Signature:  **Position:** **Laboratory Director**

Printed Name: **Reza Tand** **Date:** **09/14/2015**

Summa Canister and Flow Controller Log

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA
Received: 08/21/15

SUMMA CANISTERS

Shipping							Receiving					
Summa ID	L	Vac " Hg	Date Out	By	SCC Batch	SCC FileID	Sample Number	Date In	By	Vac " Hg	Pres psig	Final psig	Dil Fact
M260	6	29.4	08/16/15	AA	CP1690	J32359A.D	MC40930-1	09/07/15	AA	0			1
M133	6	29.4	08/16/15	AA	CP1694	J32396.D	MC40930-2	09/07/15	AA	0			1
M223	6	29.4	08/16/15	AA	CP1694	J32396.D	MC40930-3	09/07/15	AA	0			1
M008	6	29.4	08/16/15	AA	CP1695	J32397.D	MC40930-4	09/07/15	AA	0			1

FLOW CONTROLLERS / OTHER

Shipping					Receiving			
Flow Crtl ID	Date Out	By	cc/ min	Time hrs.	Date In	By	cc/ min	Equipment Type
MC152	08/16/15	AA	20	4	09/14/15	AA	21.2	Flow Controller
MC189	08/16/15	AA	20	4	09/14/15	AA	19.2	Flow Controller
MC224	08/16/15	AA	20	4	09/14/15	AA	20.7	Flow Controller
MC230	08/16/15	AA	20	4	09/14/15	AA	20	Flow Controller

Accutest Bottle Order(s):
AA/08-16-15/CBI/BERERLY

Prep Date	Room Temp(F)	Bar Pres "Hg
08/16/15	70	29.92

Internal Sample Tracking Chronicle

CB&I

Job No: MC40930

Varian Beverly, 150 Sohier Road, Beverly, MA
Project No: 152780-01

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC40930-1 Collected: 20-AUG-15 11:25 By: JW BLDG 3-VP3			Received: 21-AUG-15 By: SAP			
MC40930-1	TO-15	08-SEP-15 08:09	AA			VTO15SL
MC40930-1	TO-15	10-SEP-15 19:43	AA			VTO15SL
MC40930-2 Collected: 20-AUG-15 11:50 By: JW BLDG 3-VP2			Received: 21-AUG-15 By: SAP			
MC40930-2	TO-15	10-SEP-15 20:31	AA			VTO15SL
MC40930-3 Collected: 20-AUG-15 12:00 By: JW BLDG 3-VP1			Received: 21-AUG-15 By: SAP			
MC40930-3	TO-15	10-SEP-15 21:20	AA			VTO15SL
MC40930-4 Collected: 20-AUG-15 12:15 By: JW BLDG 2-SV1			Received: 21-AUG-15 By: SAP			
MC40930-4	TO-15	10-SEP-15 17:12	AA			VTO15SL
MC40930-4	TO-15	11-SEP-15 14:22	AA			VTO15SL

QC Evaluation: MA MCP Limits

Job Number: MC40930
Account: CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA
Collected: 08/20/15

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits

No Exceptions found.

* Sample used for QC is not from job MC40930

New England ACCUTEST LABORATORIES

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Internal Standard Area Summaries
- Initial Calibration RT/ISTD Area Summaries
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSQ1365-MB	Q31433.D	1	09/07/15	AA	n/a	n/a	MSQ1365

The QC reported here applies to the following samples: **Method:** TO-15

MC40930-1

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	Acetone	ND	0.50	ppbv		ND	1.2	ug/m3

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	106%	50-129%

Method Blank Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSQ1367-MB	Q31474.D	1	09/10/15	AA	n/a	n/a	MSQ1367

The QC reported here applies to the following samples: **Method:** TO-15

MC40930-1, MC40930-2, MC40930-3, MC40930-4

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	Acetone	ND	0.50	ppbv		ND	1.2	ug/m3
75-27-4	Bromodichloromethane	ND	0.50	ppbv		ND	3.3	ug/m3
75-25-2	Bromoform	ND	0.50	ppbv		ND	5.2	ug/m3
74-83-9	Bromomethane	ND	0.50	ppbv		ND	1.9	ug/m3
108-90-7	Chlorobenzene	ND	0.50	ppbv		ND	2.3	ug/m3
75-00-3	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.50	ppbv		ND	2.4	ug/m3
74-87-3	Chloromethane	ND	0.50	ppbv		ND	1.0	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	ppbv		ND	1.3	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.50	ppbv		ND	2.3	ug/m3
124-48-1	Dibromochloromethane	ND	0.50	ppbv		ND	4.3	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ppbv		ND	2.3	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ppbv		ND	2.3	ug/m3
75-09-2	Methylene chloride	ND	0.50	ppbv		ND	1.7	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
127-18-4	Tetrachloroethylene	ND	0.20	ppbv		ND	1.4	ug/m3
79-01-6	Trichloroethylene	ND	0.20	ppbv		ND	1.1	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.50	ppbv		ND	2.8	ug/m3
75-01-4	Vinyl chloride	ND	0.20	ppbv		ND	0.51	ug/m3

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	93%	50-129%

Method Blank Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSQ1368-MB	Q31494.D	1	09/11/15	AA	n/a	n/a	MSQ1368

The QC reported here applies to the following samples: **Method:** TO-15

MC40930-4

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	Acetone	ND	0.50	ppbv		ND	1.2	ug/m3

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	83%	50-129%

Method Blank Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSQ1345-MB	Q30939.D	1	08/04/15	AA	n/a	n/a	MSQ1345

The QC reported here applies to the following samples: **Method:** TO-15

MSQ1345-SCC

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	Acetone	ND	1.0	ppbv		ND	2.4	ug/m3
75-27-4	Bromodichloromethane	ND	0.50	ppbv		ND	3.3	ug/m3
75-25-2	Bromoform	ND	0.50	ppbv		ND	5.2	ug/m3
74-83-9	Bromomethane	ND	0.50	ppbv		ND	1.9	ug/m3
108-90-7	Chlorobenzene	ND	0.50	ppbv		ND	2.3	ug/m3
75-00-3	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.50	ppbv		ND	2.4	ug/m3
74-87-3	Chloromethane	ND	0.50	ppbv		ND	1.0	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	ppbv		ND	1.3	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.50	ppbv		ND	2.3	ug/m3
124-48-1	Dibromochloromethane	ND	0.50	ppbv		ND	4.3	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ppbv		ND	2.3	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ppbv		ND	2.3	ug/m3
75-09-2	Methylene chloride	ND	0.50	ppbv		ND	1.7	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
127-18-4	Tetrachloroethylene	ND	0.20	ppbv		ND	1.4	ug/m3
79-01-6	Trichloroethylene	ND	0.20	ppbv		ND	1.1	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.50	ppbv		ND	2.8	ug/m3
75-01-4	Vinyl chloride	ND	0.20	ppbv		ND	0.51	ug/m3

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	100%	50-129%

Method Blank Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSQ1348-MB	Q31037.D	1	08/11/15	AA	n/a	n/a	MSQ1348

The QC reported here applies to the following samples: **Method:** TO-15

MSQ1348-SCC

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	Acetone	ND	1.0	ppbv		ND	2.4	ug/m3
75-27-4	Bromodichloromethane	ND	0.50	ppbv		ND	3.3	ug/m3
75-25-2	Bromoform	ND	0.50	ppbv		ND	5.2	ug/m3
74-83-9	Bromomethane	ND	0.50	ppbv		ND	1.9	ug/m3
108-90-7	Chlorobenzene	ND	0.50	ppbv		ND	2.3	ug/m3
75-00-3	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.50	ppbv		ND	2.4	ug/m3
74-87-3	Chloromethane	ND	0.50	ppbv		ND	1.0	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	ppbv		ND	1.3	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.50	ppbv		ND	2.3	ug/m3
124-48-1	Dibromochloromethane	ND	0.50	ppbv		ND	4.3	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ppbv		ND	2.3	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ppbv		ND	2.3	ug/m3
75-09-2	Methylene chloride	ND	0.50	ppbv		ND	1.7	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
127-18-4	Tetrachloroethylene	ND	0.20	ppbv		ND	1.4	ug/m3
79-01-6	Trichloroethylene	ND	0.20	ppbv		ND	1.1	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.50	ppbv		ND	2.8	ug/m3
75-01-4	Vinyl chloride	ND	0.20	ppbv		ND	0.51	ug/m3

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	99%	50-129%

Blank Spike Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSQ1365-BS	Q31428.D	1	09/07/15	AA	n/a	n/a	MSQ1365

The QC reported here applies to the following samples: **Method:** TO-15

MC40930-1

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	Limits
67-64-1	Acetone	10	11.3	113	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	4-Bromofluorobenzene	112%	50-129%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSQ1367-BS	Q31473A.D	1	09/10/15	AA	n/a	n/a	MSQ1367

The QC reported here applies to the following samples: **Method:** TO-15

MC40930-1, MC40930-2, MC40930-3, MC40930-4

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	Limits
67-64-1	Acetone	10	8.0	80	70-130
75-27-4	Bromodichloromethane	10	9.4	94	70-130
75-25-2	Bromoform	10	8.6	86	70-130
74-83-9	Bromomethane	10	9.9	99	70-130
108-90-7	Chlorobenzene	10	8.7	87	70-130
75-00-3	Chloroethane	10	10.2	102	70-130
67-66-3	Chloroform	10	9.7	97	70-130
74-87-3	Chloromethane	10	9.8	98	70-130
56-23-5	Carbon tetrachloride	10	9.6	96	70-130
75-34-3	1,1-Dichloroethane	10	9.8	98	70-130
75-35-4	1,1-Dichloroethylene	10	9.9	99	70-130
107-06-2	1,2-Dichloroethane	10	9.2	92	70-130
78-87-5	1,2-Dichloropropane	10	8.9	89	70-130
124-48-1	Dibromochloromethane	10	9.2	92	70-130
156-60-5	trans-1,2-Dichloroethylene	10	9.8	98	70-130
156-59-2	cis-1,2-Dichloroethylene	10	9.8	98	70-130
10061-01-5	cis-1,3-Dichloropropene	10	9.0	90	70-130
10061-02-6	trans-1,3-Dichloropropene	10	8.8	88	70-130
75-09-2	Methylene chloride	10	9.1	91	70-130
71-55-6	1,1,1-Trichloroethane	10	9.5	95	70-130
79-34-5	1,1,2,2-Tetrachloroethane	10	8.1	81	70-130
79-00-5	1,1,2-Trichloroethane	10	8.8	88	70-130
127-18-4	Tetrachloroethylene	10	9.3	93	70-130
79-01-6	Trichloroethylene	10	9.3	93	70-130
75-69-4	Trichlorofluoromethane	10	9.9	99	70-130
75-01-4	Vinyl chloride	10	9.5	95	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	4-Bromofluorobenzene	95%	50-129%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSQ1368-BS	Q31492A.D	1	09/11/15	AA	n/a	n/a	MSQ1368

The QC reported here applies to the following samples: **Method:** TO-15

MC40930-4

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	Limits
67-64-1	Acetone	10	9.8	98	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	4-Bromofluorobenzene	91%	50-129%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSQ1345-BS	Q30938B.D	1	08/04/15	AA	n/a	n/a	MSQ1345

The QC reported here applies to the following samples: **Method:** TO-15

MSQ1345-SCC

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	Limits
67-64-1	Acetone	10	10.0	100	70-130
75-27-4	Bromodichloromethane	10	10.6	106	70-130
75-25-2	Bromoform	10	12.0	120	70-130
74-83-9	Bromomethane	10	9.7	97	70-130
108-90-7	Chlorobenzene	10	11.8	118	70-130
75-00-3	Chloroethane	10	9.3	93	70-130
67-66-3	Chloroform	10	10.1	101	70-130
74-87-3	Chloromethane	10	9.3	93	70-130
56-23-5	Carbon tetrachloride	10	10.2	102	70-130
75-34-3	1,1-Dichloroethane	10	9.8	98	70-130
75-35-4	1,1-Dichloroethylene	10	9.8	98	70-130
107-06-2	1,2-Dichloroethane	10	10.7	107	70-130
78-87-5	1,2-Dichloropropane	10	11.2	112	70-130
124-48-1	Dibromochloromethane	10	11.5	115	70-130
156-60-5	trans-1,2-Dichloroethylene	10	9.9	99	70-130
156-59-2	cis-1,2-Dichloroethylene	10	10.1	101	70-130
10061-01-5	cis-1,3-Dichloropropene	10	11.4	114	70-130
10061-02-6	trans-1,3-Dichloropropene	10	11.8	118	70-130
75-09-2	Methylene chloride	10	9.6	96	70-130
71-55-6	1,1,1-Trichloroethane	10	10.2	102	70-130
79-34-5	1,1,2,2-Tetrachloroethane	10	11.6	116	70-130
79-00-5	1,1,2-Trichloroethane	10	11.5	115	70-130
127-18-4	Tetrachloroethylene	10	11.1	111	70-130
79-01-6	Trichloroethylene	10	10.1	101	70-130
75-69-4	Trichlorofluoromethane	10	9.8	98	70-130
75-01-4	Vinyl chloride	10	9.7	97	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	4-Bromofluorobenzene	107%	50-129%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSQ1348-BS	Q31035A.D	1	08/11/15	AA	n/a	n/a	MSQ1348

The QC reported here applies to the following samples: **Method:** TO-15

MSQ1348-SCC

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	Limits
67-64-1	Acetone	10	9.1	91	70-130
75-27-4	Bromodichloromethane	10	10.1	101	70-130
75-25-2	Bromoform	10	11.6	116	70-130
74-83-9	Bromomethane	10	9.7	97	70-130
108-90-7	Chlorobenzene	10	11.1	111	70-130
75-00-3	Chloroethane	10	9.3	93	70-130
67-66-3	Chloroform	10	9.8	98	70-130
74-87-3	Chloromethane	10	9.0	90	70-130
56-23-5	Carbon tetrachloride	10	9.9	99	70-130
75-34-3	1,1-Dichloroethane	10	9.6	96	70-130
75-35-4	1,1-Dichloroethylene	10	9.7	97	70-130
107-06-2	1,2-Dichloroethane	10	9.7	97	70-130
78-87-5	1,2-Dichloropropane	10	10	100	70-130
124-48-1	Dibromochloromethane	10	11.5	115	70-130
156-60-5	trans-1,2-Dichloroethylene	10	9.7	97	70-130
156-59-2	cis-1,2-Dichloroethylene	10	10.0	100	70-130
10061-01-5	cis-1,3-Dichloropropene	10	10.2	102	70-130
10061-02-6	trans-1,3-Dichloropropene	10	9.9	99	70-130
75-09-2	Methylene chloride	10	9.3	93	70-130
71-55-6	1,1,1-Trichloroethane	10	9.9	99	70-130
79-34-5	1,1,2,2-Tetrachloroethane	10	10.9	109	70-130
79-00-5	1,1,2-Trichloroethane	10	10.4	104	70-130
127-18-4	Tetrachloroethylene	10	11.5	115	70-130
79-01-6	Trichloroethylene	10	9.6	96	70-130
75-69-4	Trichlorofluoromethane	10	9.6	96	70-130
75-01-4	Vinyl chloride	10	9.3	93	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	4-Bromofluorobenzene	104%	50-129%

* = Outside of Control Limits.

Summa Cleaning Certification

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSQ1345-SCC	Q30956.D	1	08/05/15	AA	n/a	n/a	MSQ1345

The QC reported here (Summa M014) applies to the following samples: **Method:** TO-15

Batch CP1690 cleaned 07/31/15: MC40930-1(M260)

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	Acetone	ND	1.0	ppbv		ND	2.4	ug/m3
75-27-4	Bromodichloromethane	ND	0.50	ppbv		ND	3.3	ug/m3
75-25-2	Bromoform	ND	0.50	ppbv		ND	5.2	ug/m3
74-83-9	Bromomethane	ND	0.50	ppbv		ND	1.9	ug/m3
108-90-7	Chlorobenzene	ND	0.50	ppbv		ND	2.3	ug/m3
75-00-3	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.50	ppbv		ND	2.4	ug/m3
74-87-3	Chloromethane	ND	0.50	ppbv		ND	1.0	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	ppbv		ND	1.3	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.50	ppbv		ND	2.3	ug/m3
124-48-1	Dibromochloromethane	ND	0.50	ppbv		ND	4.3	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ppbv		ND	2.3	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ppbv		ND	2.3	ug/m3
75-09-2	Methylene chloride	ND	0.50	ppbv		ND	1.7	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
127-18-4	Tetrachloroethylene	ND	0.20	ppbv		ND	1.4	ug/m3
79-01-6	Trichloroethylene	ND	0.20	ppbv		ND	1.1	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.50	ppbv		ND	2.8	ug/m3
75-01-4	Vinyl chloride	ND	0.20	ppbv		ND	0.51	ug/m3

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	99%	50-129%

Summa Cleaning Certification

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSQ1348-SCC	Q31036.D	1	08/11/15	AA	n/a	n/a	MSQ1348

The QC reported here (Summa M219) applies to the following samples: **Method:** TO-15

Batch CP1694 cleaned 08/05/15: MC40930-2(M133), MC40930-3(M223)

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	Acetone	ND	1.0	ppbv		ND	2.4	ug/m3
75-27-4	Bromodichloromethane	ND	0.50	ppbv		ND	3.3	ug/m3
75-25-2	Bromoform	ND	0.50	ppbv		ND	5.2	ug/m3
74-83-9	Bromomethane	ND	0.50	ppbv		ND	1.9	ug/m3
108-90-7	Chlorobenzene	ND	0.50	ppbv		ND	2.3	ug/m3
75-00-3	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.50	ppbv		ND	2.4	ug/m3
74-87-3	Chloromethane	ND	0.50	ppbv		ND	1.0	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	ppbv		ND	1.3	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.50	ppbv		ND	2.3	ug/m3
124-48-1	Dibromochloromethane	ND	0.50	ppbv		ND	4.3	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ppbv		ND	2.3	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ppbv		ND	2.3	ug/m3
75-09-2	Methylene chloride	ND	0.50	ppbv		ND	1.7	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
127-18-4	Tetrachloroethylene	ND	0.20	ppbv		ND	1.4	ug/m3
79-01-6	Trichloroethylene	ND	0.20	ppbv		ND	1.1	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.50	ppbv		ND	2.8	ug/m3
75-01-4	Vinyl chloride	ND	0.20	ppbv		ND	0.51	ug/m3

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	104%	50-129%

Summa Cleaning Certification

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSQ1348-SCC	Q31038.D	1	08/11/15	AA	n/a	n/a	MSQ1348

The QC reported here (Summa M236) applies to the following samples: **Method:** TO-15

Batch CP1695 cleaned 08/06/15: MC40930-4(M008)

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	Acetone	ND	1.0	ppbv		ND	2.4	ug/m3
75-27-4	Bromodichloromethane	ND	0.50	ppbv		ND	3.3	ug/m3
75-25-2	Bromoform	ND	0.50	ppbv		ND	5.2	ug/m3
74-83-9	Bromomethane	ND	0.50	ppbv		ND	1.9	ug/m3
108-90-7	Chlorobenzene	ND	0.50	ppbv		ND	2.3	ug/m3
75-00-3	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.50	ppbv		ND	2.4	ug/m3
74-87-3	Chloromethane	ND	0.50	ppbv		ND	1.0	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	ppbv		ND	1.3	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.50	ppbv		ND	2.3	ug/m3
124-48-1	Dibromochloromethane	ND	0.50	ppbv		ND	4.3	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ppbv		ND	2.3	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ppbv		ND	2.3	ug/m3
75-09-2	Methylene chloride	ND	0.50	ppbv		ND	1.7	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
127-18-4	Tetrachloroethylene	ND	0.20	ppbv		ND	1.4	ug/m3
79-01-6	Trichloroethylene	ND	0.20	ppbv		ND	1.1	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.50	ppbv		ND	2.8	ug/m3
75-01-4	Vinyl chloride	ND	0.20	ppbv		ND	0.51	ug/m3

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	106%	50-129%

Volatile Internal Standard Area Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Check Std:	MSQ1345-CC1344	**Injection Date:**	08/04/15
Lab File ID:	Q30938.D	**Injection Time:**	11:56
Instrument ID:	GCMSQ	**Method:**	TO-15

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
Check Std	413148	9.15	1876059	11.80	960713	18.86
Upper Limit [a]	578407	9.48	2626483	12.13	1344998	19.19
Lower Limit [b]	247889	8.82	1125635	11.47	576428	18.53

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
MSQ1345-BS	413148	9.15	1876059	11.80	960713	18.86
MSQ1345-MB	400633	9.15	1827062	11.80	874243	18.85
MSQ1345-SCC	400633	9.15	1827062	11.80	874243	18.85
MSQ1345-SCC	392587	9.14	1782996	11.80	827537	18.86
MSQ1345-SCC	382470	9.14	1615848	11.79	819842	18.85
MSQ1345-SCC	385738	9.14	1539744	11.80	744496	18.85
MSQ1345-SCC	387251	9.15	1711235	11.80	851667	18.85
MSQ1345-SCC	370466	9.15	1637046	11.80	791267	18.85
MSQ1345-SCC	365557	9.15	1544578	11.80	781679	18.85
MC40225-1	380298	9.15	1762126	11.80	860624	18.86
MC40225-1DUP	350534	9.15	1611475	11.80	798017	18.86
ZZZZZZ	388492	9.15	1808207	11.80	871587	18.86
ZZZZZZ	359115	9.16	1499832	11.81	764258	18.86
ZZZZZZ	361016	9.15	1612775	11.80	808158	18.86
ZZZZZZ	370718	9.15	1773106	11.80	826182	18.85
ZZZZZZ	381520	9.15	1747470	11.80	841247	18.86
ZZZZZZ	361611	9.15	1649894	11.80	775893	18.85
ZZZZZZ	356143	9.16	1556666	11.82	797379	18.86
MSQ1345-SCC	371540	9.15	1607347	11.80	801441	18.85
ZZZZZZ	380163	9.15	1790264	11.80	903771	18.87
MC40225-1	371967	9.15	1733403	11.80	813545	18.85
ZZZZZZ	349952	9.14	1668002	11.80	789914	18.85
ZZZZZZ	329075	9.14	1478921	11.80	745384	18.85
ZZZZZZ	349046	9.15	1593200	11.80	770605	18.85
ZZZZZZ	346618	9.14	1617660	11.80	775581	18.85

IS 1 = Bromochloromethane
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5

(a) Upper Limit = + 40% of check standard area; Retention time + 0.33 minutes.
(b) Lower Limit = -40% of check standard area; Retention time -0.33 minutes.

Volatile Internal Standard Area Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Check Std:	MSQ1348-CC1344	**Injection Date:**	08/11/15
Lab File ID:	Q31035.D	**Injection Time:**	10:11
Instrument ID:	GCMSQ	**Method:**	TO-15

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
Check Std	425628	9.14	1925472	11.79	938566	18.85
Upper Limit [a]	595879	9.47	2695661	12.12	1313992	19.18
Lower Limit [b]	255377	8.81	1155283	11.46	563140	18.52

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
MSQ1348-BS	425628	9.14	1925472	11.79	938566	18.85
MSQ1348-SCC	432469	9.14	1938235	11.79	913805	18.85
MSQ1348-MB	433280	9.14	2015877	11.79	916418	18.85
MSQ1348-SCC	433280	9.14	2015877	11.79	916418	18.85
MSQ1348-SCC	426981	9.14	1879556	11.79	906480	18.85
ZZZZZZ	426968	9.13	1771332	11.79	800369	18.85
ZZZZZZ	404736	9.15	1925751	11.80	881489	18.85
ZZZZZZ	400681	9.14	1742340	11.79	870330	18.85
ZZZZZZ	449899	9.14	2162117	11.79	1002021	18.85
ZZZZZZ	426293	9.14	1861430	11.80	921918	18.85
ZZZZZZ	404013	9.14	1755447	11.79	889279	18.85
ZZZZZZ	427496	9.14	1915920	11.80	943929	18.85
ZZZZZZ	408745	9.14	1838868	11.79	886382	18.85
ZZZZZZ	422508	9.14	1903331	11.80	931984	18.85
ZZZZZZ	407678	9.14	1871464	11.79	884404	18.85
MC40579-1	425232	9.14	1987671	11.80	947416	18.85
MC40579-1DUP	416076	9.14	1964142	11.80	923192	18.85
MC40579-1	456098	9.14	2146324	11.79	995113	18.85

IS 1 = Bromochloromethane
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5

(a) Upper Limit = + 40% of check standard area; Retention time + 0.33 minutes.
(b) Lower Limit = -40% of check standard area; Retention time -0.33 minutes.

Volatile Internal Standard Area Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Check Std:	MSQ1365-CC1364	**Injection Date:**	09/07/15
Lab File ID:	Q31427.D	**Injection Time:**	11:11
Instrument ID:	GCMSQ	**Method:**	TO-15

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
Check Std	1002606	9.11	4730169	11.76	2700781	18.80
Upper Limit [a]	1403648	9.44	6622237	12.09	3781093	19.13
Lower Limit [b]	601564	8.78	2838101	11.43	1620469	18.47

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
MSQ1365-BS	1023616	9.11	4861027	11.76	2824001	18.80
MSQ1365-MB	1114549	9.10	5300063	11.75	2659621	18.80
MC40842-1	1173122	9.13	5469091	11.79	2769166	18.82
MC40842-1DUP	1128052	9.13	5267936	11.79	2668248	18.82
ZZZZZZ	998929	9.11	4685600	11.76	2398795	18.80
ZZZZZZ	993459	9.11	4634509	11.76	2370069	18.80
ZZZZZZ	1025774	9.12	4839937	11.76	2469328	18.80
ZZZZZZ	1047335	9.10	4546836	11.75	2506396	18.80
ZZZZZZ	922604	9.11	4093323	11.76	2173769	18.80
ZZZZZZ	1062081	9.10	5094752	11.75	2609907	18.80
ZZZZZZ	857401	9.11	3765342	11.76	2024712	18.80
ZZZZZZ	1005016	9.12	4735280	11.77	2491708	18.80
ZZZZZZ	949763	9.10	4527179	11.76	2360478	18.80
ZZZZZZ	1095955	9.11	5727010	11.76	7601532*	18.83
ZZZZZZ	1152296	9.11	5543187	11.76	3404182	18.81
MC40930-1	1081515	9.10	5290979	11.75	2602273	18.80

IS 1 = Bromochloromethane
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5

(a) Upper Limit = + 40% of check standard area; Retention time + 0.33 minutes.
(b) Lower Limit = -40% of check standard area; Retention time -0.33 minutes.

Volatile Internal Standard Area Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Check Std:	MSQ1367-CC1367	**Injection Date:**	09/10/15
Lab File ID:	Q31472.D	**Injection Time:**	10:03
Instrument ID:	GCMSQ	**Method:**	TO-15

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
Check Std	545385	9.10	2547460	11.75	1168227	18.80
Upper Limit [a]	763539	9.43	3566444	12.08	1635518	19.13
Lower Limit [b]	327231	8.77	1528476	11.42	700936	18.47

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
MSQ1367-BS	532158	9.11	2487981	11.76	1139860	18.80
MSQ1367-MB	509814	9.11	2163432	11.75	974464	18.80
MC40581-1	539101	9.10	2504913	11.74	1075696	18.79
MC40581-1DUP	540127	9.10	2521493	11.75	1102620	18.80
ZZZZZZ	556519	9.10	2568465	11.74	1207140	18.79
MC40930-4	556736	9.14	2414862	11.77	1050983	18.80
MC40930-1	549856	9.11	2546869	11.75	1032151	18.80
MC40930-2	517050	9.10	2289061	11.75	979676	18.80
MC40930-3	525265	9.10	2443160	11.74	1044248	18.79
ZZZZZZ	525619	9.10	2366982	11.75	988645	18.79
ZZZZZZ	499355	9.10	2283472	11.75	908563	18.79
ZZZZZZ	492337	9.10	2219735	11.75	969184	18.80
ZZZZZZ	533277	9.10	2460986	11.74	1076953	18.79
ZZZZZZ	525891	9.10	2439211	11.74	1048122	18.79
ZZZZZZ	539415	9.10	2544871	11.75	1094582	18.79
ZZZZZZ	557709	9.10	2655132	11.74	1099046	18.79
ZZZZZZ	493191	9.10	2096427	11.75	964668	18.79

IS 1 = Bromochloromethane
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5

(a) Upper Limit = + 40% of check standard area; Retention time + 0.33 minutes.
(b) Lower Limit = -40% of check standard area; Retention time -0.33 minutes.

Volatile Internal Standard Area Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Check Std:	MSQ1368-CC1367	**Injection Date:**	09/11/15
Lab File ID:	Q31492.D	**Injection Time:**	08:39
Instrument ID:	GCMSQ	**Method:**	TO-15

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
Check Std	542773	9.10	2533314	11.74	1169562	18.79
Upper Limit [a]	759882	9.43	3546640	12.07	1637387	19.12
Lower Limit [b]	325664	8.77	1519988	11.41	701737	18.46

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
MSQ1368-BS	542773	9.10	2533314	11.74	1169562	18.79
MSQ1368-MB	549615	9.10	2627399	11.74	1106889	18.79
ZZZZZZ	541201	9.10	2515586	11.74	1126522	18.78
ZZZZZZ	573760	9.11	2699995	11.76	1185681	18.80
MC40930-4	539932	9.10	2414018	11.74	1046497	18.79
ZZZZZZ	652299	9.12	2874750	11.76	1265570	18.80
ZZZZZZ	592809	9.10	2763036	11.74	1198257	18.79
ZZZZZZ	530267	9.10	2482589	11.74	1101263	18.79
ZZZZZZ	530396	9.10	2493494	11.74	1200723	18.80
ZZZZZZ	574490	9.10	2710678	11.74	1169740	18.79
ZZZZZZ	639636	9.13	2869640	11.77	1400358	18.82
MC41090-3	527659	9.16	2572106	11.79	2283364*	18.98
ZZZZZZ	530882	9.10	2527899	11.74	1084699	18.79
ZZZZZZ	551630	9.12	2420535	11.76	1042101	18.79
ZZZZZZ	552655	9.10	2585305	11.74	1123086	18.79
MC41398-3	537063	9.10	2400374	11.74	1137247	18.79
MC41398-3DUP	511210	9.10	2240466	11.74	1042562	18.79
ZZZZZZ	521217	9.10	2302765	11.74	1155181	18.79
ZZZZZZ	516666	9.10	2484183	11.74	1149955	18.79
ZZZZZZ	553708	9.10	2655278	11.74	1196015	18.79
MC41398-3	523299	9.09	2407999	11.74	1103246	18.78
ZZZZZZ	569055	9.10	2678543	11.74	1188874	18.78

IS 1 = Bromochloromethane
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5

(a) Upper Limit = + 40% of check standard area; Retention time + 0.33 minutes.
(b) Lower Limit = -40% of check standard area; Retention time -0.33 minutes.

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1344-IC1344	Q30928.D	08/03/15 18:53	AA	0.2	GCMSQ	TO-15	Reporting this level
MSQ1344-IC1344	Q30929.D	08/03/15 19:44	AA	0.5	GCMSQ	TO-15	
MSQ1344-IC1344	Q30930.D	08/03/15 20:34	AA	2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30931.D	08/03/15 21:25	AA	5	GCMSQ	TO-15	
MSQ1344-ICC1344	Q30932.D	08/03/15 22:15	AA	10	GCMSQ	TO-15	
MSQ1344-IC1344	Q30933.D	08/03/15 23:06	AA	20	GCMSQ	TO-15	
MSQ1344-IC1344	Q30934.D	08/03/15 23:56	AA	30	GCMSQ	TO-15	
MSQ1344-IC1344	Q30935.D	08/04/15 00:47	AA	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.56	9.14	0.608	ok	0.608	0.548-0.668
Acrolein	5.42	9.14	0.593	ok	0.593	0.533-0.653
Acrylonitrile	6.04	9.14	0.661	ok	0.661	0.601-0.721
1,3-Butadiene	4.51	9.14	0.493	ok	0.493	0.433-0.553
Benzene	11.29	11.80	0.957	ok	0.957	0.897-1.017
Bromodichloromethane	12.76	11.80	1.081	ok	1.082	1.022-1.142
Bromoform	19.97	18.85	1.059	ok	1.059	0.999-1.119
Bromomethane	4.78	9.14	0.523	ok	0.523	0.463-0.583
Bromoethene	5.31	9.14	0.581	ok	0.581	0.521-0.641
n-Butylbenzene	24.89	18.85	1.320	ok	1.320	1.260-1.380
sec-Butylbenzene	23.92	18.85	1.269	ok	1.269	1.209-1.329
Benzyl Chloride	23.69	18.85	1.257	ok	1.256	1.196-1.316
Carbon disulfide	6.92	9.14	0.757	ok	0.757	0.697-0.817
Chlorobenzene	18.93	18.85	1.004	ok	1.004	0.944-1.064
Chloroethane	4.96	9.14	0.543	ok	0.542	0.482-0.602
Chloroform	9.31	9.14	1.019	ok	1.018	0.958-1.078
Chloromethane	4.15	9.14	0.454	ok	0.454	0.394-0.514
3-Chloropropene	6.70	9.14	0.733	ok	0.733	0.673-0.793
2-Chlorotoluene	22.37	18.85	1.187	ok	1.186	1.126-1.246
Carbon tetrachloride	11.50	9.14	1.258	ok	1.257	1.197-1.317
Cyclohexane	11.68	11.80	0.990	ok	0.990	0.930-1.050
1,1-Dichloroethane	7.89	9.14	0.863	ok	0.863	0.803-0.923
1,1-Dichloroethylene	6.44	9.14	0.705	ok	0.705	0.645-0.765
1,2-Dibromoethane	16.89	18.85	0.896	ok	0.896	0.836-0.956
1,2-Dichloroethane	10.29	9.14	1.126	ok	1.125	1.065-1.185
1,2-Dichloropropane	12.47	11.80	1.057	ok	1.058	0.998-1.118
1,3-Dichloropropane	15.82	11.80	1.341	ok	1.341	1.281-1.401
1,4-Dioxane	12.89	11.80	1.092	ok	1.088	1.028-1.148
Dichlorodifluoromethane	3.99	9.14	0.437	ok	0.436	0.376-0.496
Dibromochloromethane	16.47	18.85	0.874	ok	0.874	0.814-0.934
trans-1,2-Dichloroethylene	7.65	9.14	0.837	ok	0.837	0.777-0.897
cis-1,2-Dichloroethylene	8.93	9.14	0.977	ok	0.976	0.916-1.036
cis-1,3-Dichloropropene	14.18	11.80	1.202	ok	1.202	1.142-1.262
m-Dichlorobenzene	23.70	18.85	1.257	ok	1.257	1.197-1.317
o-Dichlorobenzene	24.38	18.85	1.293	ok	1.293	1.233-1.353
p-Dichlorobenzene	23.82	18.85	1.264	ok	1.263	1.203-1.323
trans-1,3-Dichloropropene	15.03	11.80	1.274	ok	1.274	1.214-1.334
Ethanol	5.06	9.14	0.554	ok	0.553	0.493-0.613
Ethylbenzene	19.59	18.85	1.039	ok	1.039	0.979-1.099
Ethyl Acetate	9.22	9.14	1.009	ok	1.007	0.947-1.067

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1344-IC1344	Q30928.D	08/03/15 18:53	AA	0.2	GCMSQ	TO-15	Reporting this level
MSQ1344-IC1344	Q30929.D	08/03/15 19:44	AA	0.5	GCMSQ	TO-15	
MSQ1344-IC1344	Q30930.D	08/03/15 20:34	AA	2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30931.D	08/03/15 21:25	AA	5	GCMSQ	TO-15	
MSQ1344-ICC1344	Q30932.D	08/03/15 22:15	AA	10	GCMSQ	TO-15	
MSQ1344-IC1344	Q30933.D	08/03/15 23:06	AA	20	GCMSQ	TO-15	
MSQ1344-IC1344	Q30934.D	08/03/15 23:56	AA	30	GCMSQ	TO-15	
MSQ1344-IC1344	Q30935.D	08/04/15 00:47	AA	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
4-Ethyltoluene	22.82	18.85	1.211	ok	1.204	1.144-1.264
Freon 113	6.87	9.14	0.752	ok	0.751	0.691-0.811
Freon 114	4.25	9.14	0.465	ok	0.465	0.405-0.525
Heptane	13.31	11.80	1.128	ok	1.128	1.068-1.188
Hexachlorobutadiene	27.70	18.85	1.469	ok	1.469	1.409-1.529
Hexane	9.21	9.14	1.008	ok	1.007	0.947-1.067
2-Hexanone	16.29	18.85	0.864	ok	0.862	0.802-0.922
Isopropylbenzene	21.63	18.85	1.147	ok	1.147	1.087-1.207
Isopropyl Alcohol	5.87	9.14	0.642	ok	0.637	0.577-0.697
p-Isopropyltoluene	24.19	18.85	1.283	ok	1.283	1.223-1.343
Methylene chloride	6.57	9.14	0.719	ok	0.718	0.658-0.778
Methyl ethyl ketone	8.38	9.14	0.917	ok	0.915	0.855-0.975
Methyl Isobutyl Ketone	14.29	11.80	1.211	ok	1.208	1.148-1.268
Methyl Tert Butyl Ether	7.98	9.14	0.873	ok	0.871	0.811-0.931
Methylmethacrylate	13.16	11.80	1.115	ok	1.115	1.055-1.175
Naphthalene	27.25	18.85	1.446	ok	1.445	1.385-1.505
Nonane	21.09	18.85	1.119	ok	1.119	1.059-1.179
Pentane	6.13	9.14	0.671	ok	0.670	0.610-0.730
Propylene	3.92	9.14	0.429	ok	0.428	0.368-0.488
Styrene	20.49	18.85	1.087	ok	1.087	1.027-1.147
1,1,1-Trichloroethane	10.64	9.14	1.164	ok	1.164	1.104-1.224
1,1,1,2-Tetrachloroethane	18.90	18.85	1.003	ok	1.003	0.943-1.063
1,1,2,2-Tetrachloroethane	20.64	18.85	1.095	ok	1.095	1.035-1.155
1,1,2-Trichloroethane	15.31	11.80	1.297	ok	1.297	1.237-1.357
1,2,4-Trichlorobenzene	27.11	18.85	1.438	ok	1.438	1.378-1.498
1,2,4-Trimethylbenzene	23.49	18.85	1.246	ok	1.246	1.186-1.306
1,3,5-Trimethylbenzene	22.82	18.85	1.211	ok	1.211	1.151-1.271
2,2,4-Trimethylpentane	12.90	11.80	1.093	ok	1.093	1.033-1.153
Tertiary Butyl Alcohol	6.56	9.14	0.718	ok	0.710	0.650-0.770
tert-Butylbenzene	23.47	18.85	1.245	ok	1.245	1.185-1.305
Tetrachloroethylene	17.73	18.85	0.941	ok	0.941	0.881-1.001
Tetrahydrofuran	9.87	9.14	1.080	ok	1.076	1.016-1.136
Toluene	15.77	11.80	1.336	ok	1.337	1.277-1.397
Trichloroethylene	12.83	11.80	1.087	ok	1.088	1.028-1.148
Trichlorofluoromethane	5.76	9.14	0.630	ok	0.630	0.570-0.690
Vinyl chloride	4.37	9.14	0.478	ok	0.478	0.418-0.538
Vinyl Acetate	8.06	9.14	0.882	ok	0.882	0.822-0.942
m,p-Xylene	19.91	18.85	1.056	ok	1.056	0.996-1.116
o-Xylene	20.66	18.85	1.096	ok	1.096	1.036-1.156

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1344-IC1344	Q30928.D	08/03/15 18:53	AA	0.2	GCMSQ	TO-15	Reporting this level
MSQ1344-IC1344	Q30929.D	08/03/15 19:44	AA	0.5	GCMSQ	TO-15	
MSQ1344-IC1344	Q30930.D	08/03/15 20:34	AA	2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30931.D	08/03/15 21:25	AA	5	GCMSQ	TO-15	
MSQ1344-ICC1344	Q30932.D	08/03/15 22:15	AA	10	GCMSQ	TO-15	
MSQ1344-IC1344	Q30933.D	08/03/15 23:06	AA	20	GCMSQ	TO-15	
MSQ1344-IC1344	Q30934.D	08/03/15 23:56	AA	30	GCMSQ	TO-15	
MSQ1344-IC1344	Q30935.D	08/04/15 00:47	AA	40	GCMSQ	TO-15	

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	9.14	ok	9.15	8.82-9.48	411111	ok	420767	252460-589074
1,4-Difluorobenzene	11.80	ok	11.80	11.47-12.13	1842251	ok	1928277	1156966-2699588
Chlorobenzene-D5	18.85	ok	18.86	18.53-19.19	912281	ok	996697	598018-1395376

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1344-IC1344	Q30928.D	08/03/15 18:53	AA	0.2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30929.D	08/03/15 19:44	AA	0.5	GCMSQ	TO-15	Reporting this level
MSQ1344-IC1344	Q30930.D	08/03/15 20:34	AA	2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30931.D	08/03/15 21:25	AA	5	GCMSQ	TO-15	
MSQ1344-ICC1344	Q30932.D	08/03/15 22:15	AA	10	GCMSQ	TO-15	
MSQ1344-IC1344	Q30933.D	08/03/15 23:06	AA	20	GCMSQ	TO-15	
MSQ1344-IC1344	Q30934.D	08/03/15 23:56	AA	30	GCMSQ	TO-15	
MSQ1344-IC1344	Q30935.D	08/04/15 00:47	AA	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.56	9.14	0.608	ok	0.608	0.548-0.668
Acrolein	5.42	9.14	0.593	ok	0.593	0.533-0.653
Acrylonitrile	6.05	9.14	0.662	ok	0.661	0.601-0.721
1,3-Butadiene	4.51	9.14	0.493	ok	0.493	0.433-0.553
Benzene	11.29	11.80	0.957	ok	0.957	0.897-1.017
Bromodichloromethane	12.77	11.80	1.082	ok	1.082	1.022-1.142
Bromoform	19.97	18.86	1.059	ok	1.059	0.999-1.119
Bromomethane	4.79	9.14	0.524	ok	0.523	0.463-0.583
Bromoethene	5.32	9.14	0.582	ok	0.581	0.521-0.641
n-Butylbenzene	24.89	18.86	1.320	ok	1.320	1.260-1.380
sec-Butylbenzene	23.92	18.86	1.268	ok	1.269	1.209-1.329
Benzyl Chloride	23.69	18.86	1.256	ok	1.256	1.196-1.316
Carbon disulfide	6.93	9.14	0.758	ok	0.757	0.697-0.817
Chlorobenzene	18.93	18.86	1.004	ok	1.004	0.944-1.064
Chloroethane	4.96	9.14	0.543	ok	0.542	0.482-0.602
Chloroform	9.31	9.14	1.019	ok	1.018	0.958-1.078
Chloromethane	4.15	9.14	0.454	ok	0.454	0.394-0.514
3-Chloropropene	6.71	9.14	0.734	ok	0.733	0.673-0.793
2-Chlorotoluene	22.37	18.86	1.186	ok	1.186	1.126-1.246
Carbon tetrachloride	11.50	9.14	1.258	ok	1.257	1.197-1.317
Cyclohexane	11.68	11.80	0.990	ok	0.990	0.930-1.050
1,1-Dichloroethane	7.90	9.14	0.864	ok	0.863	0.803-0.923
1,1-Dichloroethylene	6.45	9.14	0.706	ok	0.705	0.645-0.765
1,2-Dibromoethane	16.90	18.86	0.896	ok	0.896	0.836-0.956
1,2-Dichloroethane	10.29	9.14	1.126	ok	1.125	1.065-1.185
1,2-Dichloropropane	12.48	11.80	1.058	ok	1.058	0.998-1.118
1,3-Dichloropropane	15.82	11.80	1.341	ok	1.341	1.281-1.401
1,4-Dioxane	12.87	11.80	1.091	ok	1.088	1.028-1.148
Dichlorodifluoromethane	3.99	9.14	0.437	ok	0.436	0.376-0.496
Dibromochloromethane	16.47	18.86	0.873	ok	0.874	0.814-0.934
trans-1,2-Dichloroethylene	7.66	9.14	0.838	ok	0.837	0.777-0.897
cis-1,2-Dichloroethylene	8.93	9.14	0.977	ok	0.976	0.916-1.036
cis-1,3-Dichloropropene	14.18	11.80	1.202	ok	1.202	1.142-1.262
m-Dichlorobenzene	23.71	18.86	1.257	ok	1.257	1.197-1.317
o-Dichlorobenzene	24.38	18.86	1.293	ok	1.293	1.233-1.353
p-Dichlorobenzene	23.82	18.86	1.263	ok	1.263	1.203-1.323
trans-1,3-Dichloropropene	15.03	11.80	1.274	ok	1.274	1.214-1.334
Ethanol	5.06	9.14	0.554	ok	0.553	0.493-0.613
Ethylbenzene	19.59	18.86	1.039	ok	1.039	0.979-1.099
Ethyl Acetate	9.22	9.14	1.009	ok	1.007	0.947-1.067

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1344-IC1344	Q30928.D	08/03/15 18:53	AA	0.2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30929.D	08/03/15 19:44	AA	0.5	GCMSQ	TO-15	Reporting this level
MSQ1344-IC1344	Q30930.D	08/03/15 20:34	AA	2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30931.D	08/03/15 21:25	AA	5	GCMSQ	TO-15	
MSQ1344-ICC1344	Q30932.D	08/03/15 22:15	AA	10	GCMSQ	TO-15	
MSQ1344-IC1344	Q30933.D	08/03/15 23:06	AA	20	GCMSQ	TO-15	
MSQ1344-IC1344	Q30934.D	08/03/15 23:56	AA	30	GCMSQ	TO-15	
MSQ1344-IC1344	Q30935.D	08/04/15 00:47	AA	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
4-Ethyltoluene	22.69	18.86	1.203	ok	1.204	1.144-1.264
Freon 113	6.87	9.14	0.752	ok	0.751	0.691-0.811
Freon 114	4.25	9.14	0.465	ok	0.465	0.405-0.525
Heptane	13.32	11.80	1.129	ok	1.128	1.068-1.188
Hexachlorobutadiene	27.70	18.86	1.469	ok	1.469	1.409-1.529
Hexane	9.21	9.14	1.008	ok	1.007	0.947-1.067
2-Hexanone	16.27	18.86	0.863	ok	0.862	0.802-0.922
Isopropylbenzene	21.63	18.86	1.147	ok	1.147	1.087-1.207
Isopropyl Alcohol	5.84	9.14	0.639	ok	0.637	0.577-0.697
p-Isopropyltoluene	24.20	18.86	1.283	ok	1.283	1.223-1.343
Methylene chloride	6.57	9.14	0.719	ok	0.718	0.658-0.778
Methyl ethyl ketone	8.38	9.14	0.917	ok	0.915	0.855-0.975
Methyl Isobutyl Ketone	14.28	11.80	1.210	ok	1.208	1.148-1.268
Methyl Tert Butyl Ether	7.98	9.14	0.873	ok	0.871	0.811-0.931
Methylmethacrylate	13.16	11.80	1.115	ok	1.115	1.055-1.175
Naphthalene	27.25	18.86	1.445	ok	1.445	1.385-1.505
Nonane	21.09	18.86	1.118	ok	1.119	1.059-1.179
Pentane	6.14	9.14	0.672	ok	0.670	0.610-0.730
Propylene	3.92	9.14	0.429	ok	0.428	0.368-0.488
Styrene	20.49	18.86	1.086	ok	1.087	1.027-1.147
1,1,1-Trichloroethane	10.65	9.14	1.165	ok	1.164	1.104-1.224
1,1,1,2-Tetrachloroethane	18.91	18.86	1.003	ok	1.003	0.943-1.063
1,1,2,2-Tetrachloroethane	20.64	18.86	1.094	ok	1.095	1.035-1.155
1,1,2-Trichloroethane	15.31	11.80	1.297	ok	1.297	1.237-1.357
1,2,4-Trichlorobenzene	27.11	18.86	1.437	ok	1.438	1.378-1.498
1,2,4-Trimethylbenzene	23.49	18.86	1.245	ok	1.246	1.186-1.306
1,3,5-Trimethylbenzene	22.83	18.86	1.210	ok	1.211	1.151-1.271
2,2,4-Trimethylpentane	12.90	11.80	1.093	ok	1.093	1.033-1.153
Tertiary Butyl Alcohol	6.53	9.14	0.714	ok	0.710	0.650-0.770
tert-Butylbenzene	23.47	18.86	1.244	ok	1.245	1.185-1.305
Tetrachloroethylene	17.74	18.86	0.941	ok	0.941	0.881-1.001
Tetrahydrofuran	9.86	9.14	1.079	ok	1.076	1.016-1.136
Toluene	15.77	11.80	1.336	ok	1.337	1.277-1.397
Trichloroethylene	12.83	11.80	1.087	ok	1.088	1.028-1.148
Trichlorofluoromethane	5.76	9.14	0.630	ok	0.630	0.570-0.690
Vinyl chloride	4.37	9.14	0.478	ok	0.478	0.418-0.538
Vinyl Acetate	8.06	9.14	0.882	ok	0.882	0.822-0.942
m,p-Xylene	19.91	18.86	1.056	ok	1.056	0.996-1.116
o-Xylene	20.66	18.86	1.095	ok	1.096	1.036-1.156

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1344-IC1344	Q30928.D	08/03/15 18:53	AA	0.2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30929.D	08/03/15 19:44	AA	0.5	GCMSQ	TO-15	Reporting this level
MSQ1344-IC1344	Q30930.D	08/03/15 20:34	AA	2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30931.D	08/03/15 21:25	AA	5	GCMSQ	TO-15	
MSQ1344-ICC1344	Q30932.D	08/03/15 22:15	AA	10	GCMSQ	TO-15	
MSQ1344-IC1344	Q30933.D	08/03/15 23:06	AA	20	GCMSQ	TO-15	
MSQ1344-IC1344	Q30934.D	08/03/15 23:56	AA	30	GCMSQ	TO-15	
MSQ1344-IC1344	Q30935.D	08/04/15 00:47	AA	40	GCMSQ	TO-15	

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	9.14	ok	9.15	8.82-9.48	412015	ok	420767	252460-589074
1,4-Difluorobenzene	11.80	ok	11.80	11.47-12.13	1874780	ok	1928277	1156966-2699588
Chlorobenzene-D5	18.86	ok	18.86	18.53-19.19	931401	ok	996697	598018-1395376

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1344-IC1344	Q30928.D	08/03/15 18:53	AA	0.2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30929.D	08/03/15 19:44	AA	0.5	GCMSQ	TO-15	
MSQ1344-IC1344	Q30930.D	08/03/15 20:34	AA	2	GCMSQ	TO-15	Reporting this level
MSQ1344-IC1344	Q30931.D	08/03/15 21:25	AA	5	GCMSQ	TO-15	
MSQ1344-ICC1344	Q30932.D	08/03/15 22:15	AA	10	GCMSQ	TO-15	
MSQ1344-IC1344	Q30933.D	08/03/15 23:06	AA	20	GCMSQ	TO-15	
MSQ1344-IC1344	Q30934.D	08/03/15 23:56	AA	30	GCMSQ	TO-15	
MSQ1344-IC1344	Q30935.D	08/04/15 00:47	AA	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.56	9.15	0.608	ok	0.608	0.548-0.668
Acrolein	5.42	9.15	0.592	ok	0.593	0.533-0.653
Acrylonitrile	6.05	9.15	0.661	ok	0.661	0.601-0.721
1,3-Butadiene	4.51	9.15	0.493	ok	0.493	0.433-0.553
Benzene	11.29	11.80	0.957	ok	0.957	0.897-1.017
Bromodichloromethane	12.77	11.80	1.082	ok	1.082	1.022-1.142
Bromoform	19.97	18.86	1.059	ok	1.059	0.999-1.119
Bromomethane	4.79	9.15	0.523	ok	0.523	0.463-0.583
Bromoethene	5.32	9.15	0.581	ok	0.581	0.521-0.641
n-Butylbenzene	24.89	18.86	1.320	ok	1.320	1.260-1.380
sec-Butylbenzene	23.92	18.86	1.268	ok	1.269	1.209-1.329
Benzyl Chloride	23.69	18.86	1.256	ok	1.256	1.196-1.316
Carbon disulfide	6.93	9.15	0.757	ok	0.757	0.697-0.817
Chlorobenzene	18.93	18.86	1.004	ok	1.004	0.944-1.064
Chloroethane	4.96	9.15	0.542	ok	0.542	0.482-0.602
Chloroform	9.31	9.15	1.017	ok	1.018	0.958-1.078
Chloromethane	4.15	9.15	0.454	ok	0.454	0.394-0.514
3-Chloropropene	6.71	9.15	0.733	ok	0.733	0.673-0.793
2-Chlorotoluene	22.37	18.86	1.186	ok	1.186	1.126-1.246
Carbon tetrachloride	11.50	9.15	1.257	ok	1.257	1.197-1.317
Cyclohexane	11.68	11.80	0.990	ok	0.990	0.930-1.050
1,1-Dichloroethane	7.90	9.15	0.863	ok	0.863	0.803-0.923
1,1-Dichloroethylene	6.45	9.15	0.705	ok	0.705	0.645-0.765
1,2-Dibromoethane	16.89	18.86	0.896	ok	0.896	0.836-0.956
1,2-Dichloroethane	10.29	9.15	1.125	ok	1.125	1.065-1.185
1,2-Dichloropropane	12.48	11.80	1.058	ok	1.058	0.998-1.118
1,3-Dichloropropane	15.82	11.80	1.341	ok	1.341	1.281-1.401
1,4-Dioxane	12.85	11.80	1.089	ok	1.088	1.028-1.148
Dichlorodifluoromethane	3.99	9.15	0.436	ok	0.436	0.376-0.496
Dibromochloromethane	16.47	18.86	0.873	ok	0.874	0.814-0.934
trans-1,2-Dichloroethylene	7.66	9.15	0.837	ok	0.837	0.777-0.897
cis-1,2-Dichloroethylene	8.93	9.15	0.976	ok	0.976	0.916-1.036
cis-1,3-Dichloropropene	14.18	11.80	1.202	ok	1.202	1.142-1.262
m-Dichlorobenzene	23.70	18.86	1.257	ok	1.257	1.197-1.317
o-Dichlorobenzene	24.38	18.86	1.293	ok	1.293	1.233-1.353
p-Dichlorobenzene	23.82	18.86	1.263	ok	1.263	1.203-1.323
trans-1,3-Dichloropropene	15.03	11.80	1.274	ok	1.274	1.214-1.334
Ethanol	5.06	9.15	0.553	ok	0.553	0.493-0.613
Ethylbenzene	19.59	18.86	1.039	ok	1.039	0.979-1.099
Ethyl Acetate	9.21	9.15	1.007	ok	1.007	0.947-1.067

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1344-IC1344	Q30928.D	08/03/15 18:53	AA	0.2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30929.D	08/03/15 19:44	AA	0.5	GCMSQ	TO-15	
MSQ1344-IC1344	Q30930.D	08/03/15 20:34	AA	2	GCMSQ	TO-15	Reporting this level
MSQ1344-IC1344	Q30931.D	08/03/15 21:25	AA	5	GCMSQ	TO-15	
MSQ1344-ICC1344	Q30932.D	08/03/15 22:15	AA	10	GCMSQ	TO-15	
MSQ1344-IC1344	Q30933.D	08/03/15 23:06	AA	20	GCMSQ	TO-15	
MSQ1344-IC1344	Q30934.D	08/03/15 23:56	AA	30	GCMSQ	TO-15	
MSQ1344-IC1344	Q30935.D	08/04/15 00:47	AA	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
4-Ethyltoluene	22.69	18.86	1.203	ok	1.204	1.144-1.264
Freon 113	6.87	9.15	0.751	ok	0.751	0.691-0.811
Freon 114	4.25	9.15	0.464	ok	0.465	0.405-0.525
Heptane	13.31	11.80	1.128	ok	1.128	1.068-1.188
Hexachlorobutadiene	27.70	18.86	1.469	ok	1.469	1.409-1.529
Hexane	9.21	9.15	1.007	ok	1.007	0.947-1.067
2-Hexanone	16.27	18.86	0.863	ok	0.862	0.802-0.922
Isopropylbenzene	21.63	18.86	1.147	ok	1.147	1.087-1.207
Isopropyl Alcohol	5.82	9.15	0.636	ok	0.637	0.577-0.697
p-Isopropyltoluene	24.19	18.86	1.283	ok	1.283	1.223-1.343
Methylene chloride	6.57	9.15	0.718	ok	0.718	0.658-0.778
Methyl ethyl ketone	8.37	9.15	0.915	ok	0.915	0.855-0.975
Methyl Isobutyl Ketone	14.26	11.80	1.208	ok	1.208	1.148-1.268
Methyl Tert Butyl Ether	7.97	9.15	0.871	ok	0.871	0.811-0.931
Methylmethacrylate	13.16	11.80	1.115	ok	1.115	1.055-1.175
Naphthalene	27.25	18.86	1.445	ok	1.445	1.385-1.505
Nonane	21.09	18.86	1.118	ok	1.119	1.059-1.179
Pentane	6.13	9.15	0.670	ok	0.670	0.610-0.730
Propylene	3.92	9.15	0.428	ok	0.428	0.368-0.488
Styrene	20.49	18.86	1.086	ok	1.087	1.027-1.147
1,1,1-Trichloroethane	10.65	9.15	1.164	ok	1.164	1.104-1.224
1,1,1,2-Tetrachloroethane	18.91	18.86	1.003	ok	1.003	0.943-1.063
1,1,2,2-Tetrachloroethane	20.64	18.86	1.094	ok	1.095	1.035-1.155
1,1,2-Trichloroethane	15.30	11.80	1.297	ok	1.297	1.237-1.357
1,2,4-Trichlorobenzene	27.11	18.86	1.437	ok	1.438	1.378-1.498
1,2,4-Trimethylbenzene	23.49	18.86	1.245	ok	1.246	1.186-1.306
1,3,5-Trimethylbenzene	22.83	18.86	1.210	ok	1.211	1.151-1.271
2,2,4-Trimethylpentane	12.90	11.80	1.093	ok	1.093	1.033-1.153
Tertiary Butyl Alcohol	6.49	9.15	0.709	ok	0.710	0.650-0.770
tert-Butylbenzene	23.47	18.86	1.244	ok	1.245	1.185-1.305
Tetrachloroethylene	17.74	18.86	0.941	ok	0.941	0.881-1.001
Tetrahydrofuran	9.85	9.15	1.077	ok	1.076	1.016-1.136
Toluene	15.77	11.80	1.336	ok	1.337	1.277-1.397
Trichloroethylene	12.83	11.80	1.087	ok	1.088	1.028-1.148
Trichlorofluoromethane	5.76	9.15	0.630	ok	0.630	0.570-0.690
Vinyl chloride	4.37	9.15	0.478	ok	0.478	0.418-0.538
Vinyl Acetate	8.06	9.15	0.881	ok	0.882	0.822-0.942
m,p-Xylene	19.91	18.86	1.056	ok	1.056	0.996-1.116
o-Xylene	20.66	18.86	1.095	ok	1.096	1.036-1.156

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1344-IC1344	Q30928.D	08/03/15 18:53	AA	0.2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30929.D	08/03/15 19:44	AA	0.5	GCMSQ	TO-15	
MSQ1344-IC1344	Q30930.D	08/03/15 20:34	AA	2	GCMSQ	TO-15	Reporting this level
MSQ1344-IC1344	Q30931.D	08/03/15 21:25	AA	5	GCMSQ	TO-15	
MSQ1344-ICC1344	Q30932.D	08/03/15 22:15	AA	10	GCMSQ	TO-15	
MSQ1344-IC1344	Q30933.D	08/03/15 23:06	AA	20	GCMSQ	TO-15	
MSQ1344-IC1344	Q30934.D	08/03/15 23:56	AA	30	GCMSQ	TO-15	
MSQ1344-IC1344	Q30935.D	08/04/15 00:47	AA	40	GCMSQ	TO-15	

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	9.15	ok	9.15	8.82-9.48	422218	ok	420767	252460-589074
1,4-Difluorobenzene	11.80	ok	11.80	11.47-12.13	1943780	ok	1928277	1156966-2699588
Chlorobenzene-D5	18.86	ok	18.86	18.53-19.19	943478	ok	996697	598018-1395376

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1344-IC1344	Q30928.D	08/03/15 18:53	AA	0.2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30929.D	08/03/15 19:44	AA	0.5	GCMSQ	TO-15	
MSQ1344-IC1344	Q30930.D	08/03/15 20:34	AA	2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30931.D	08/03/15 21:25	AA	5	GCMSQ	TO-15	Reporting this level
MSQ1344-ICC1344	Q30932.D	08/03/15 22:15	AA	10	GCMSQ	TO-15	
MSQ1344-IC1344	Q30933.D	08/03/15 23:06	AA	20	GCMSQ	TO-15	
MSQ1344-IC1344	Q30934.D	08/03/15 23:56	AA	30	GCMSQ	TO-15	
MSQ1344-IC1344	Q30935.D	08/04/15 00:47	AA	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.56	9.15	0.608	ok	0.608	0.548-0.668
Acrolein	5.43	9.15	0.593	ok	0.593	0.533-0.653
Acrylonitrile	6.05	9.15	0.661	ok	0.661	0.601-0.721
1,3-Butadiene	4.51	9.15	0.493	ok	0.493	0.433-0.553
Benzene	11.29	11.80	0.957	ok	0.957	0.897-1.017
Bromodichloromethane	12.77	11.80	1.082	ok	1.082	1.022-1.142
Bromoform	19.98	18.86	1.059	ok	1.059	0.999-1.119
Bromomethane	4.79	9.15	0.523	ok	0.523	0.463-0.583
Bromoethene	5.32	9.15	0.581	ok	0.581	0.521-0.641
n-Butylbenzene	24.89	18.86	1.320	ok	1.320	1.260-1.380
sec-Butylbenzene	23.92	18.86	1.268	ok	1.269	1.209-1.329
Benzyl Chloride	23.69	18.86	1.256	ok	1.256	1.196-1.316
Carbon disulfide	6.93	9.15	0.757	ok	0.757	0.697-0.817
Chlorobenzene	18.93	18.86	1.004	ok	1.004	0.944-1.064
Chloroethane	4.96	9.15	0.542	ok	0.542	0.482-0.602
Chloroform	9.31	9.15	1.017	ok	1.018	0.958-1.078
Chloromethane	4.16	9.15	0.455	ok	0.454	0.394-0.514
3-Chloropropene	6.71	9.15	0.733	ok	0.733	0.673-0.793
2-Chlorotoluene	22.37	18.86	1.186	ok	1.186	1.126-1.246
Carbon tetrachloride	11.50	9.15	1.257	ok	1.257	1.197-1.317
Cyclohexane	11.68	11.80	0.990	ok	0.990	0.930-1.050
1,1-Dichloroethane	7.90	9.15	0.863	ok	0.863	0.803-0.923
1,1-Dichloroethylene	6.45	9.15	0.705	ok	0.705	0.645-0.765
1,2-Dibromoethane	16.89	18.86	0.896	ok	0.896	0.836-0.956
1,2-Dichloroethane	10.29	9.15	1.125	ok	1.125	1.065-1.185
1,2-Dichloropropane	12.48	11.80	1.058	ok	1.058	0.998-1.118
1,3-Dichloropropane	15.82	11.80	1.341	ok	1.341	1.281-1.401
1,4-Dioxane	12.83	11.80	1.087	ok	1.088	1.028-1.148
Dichlorodifluoromethane	3.99	9.15	0.436	ok	0.436	0.376-0.496
Dibromochloromethane	16.47	18.86	0.873	ok	0.874	0.814-0.934
trans-1,2-Dichloroethylene	7.66	9.15	0.837	ok	0.837	0.777-0.897
cis-1,2-Dichloroethylene	8.93	9.15	0.976	ok	0.976	0.916-1.036
cis-1,3-Dichloropropene	14.18	11.80	1.202	ok	1.202	1.142-1.262
m-Dichlorobenzene	23.71	18.86	1.257	ok	1.257	1.197-1.317
o-Dichlorobenzene	24.38	18.86	1.293	ok	1.293	1.233-1.353
p-Dichlorobenzene	23.82	18.86	1.263	ok	1.263	1.203-1.323
trans-1,3-Dichloropropene	15.03	11.80	1.274	ok	1.274	1.214-1.334
Ethanol	5.06	9.15	0.553	ok	0.553	0.493-0.613
Ethylbenzene	19.60	18.86	1.039	ok	1.039	0.979-1.099
Ethyl Acetate	9.21	9.15	1.007	ok	1.007	0.947-1.067

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1344-IC1344	Q30928.D	08/03/15 18:53	AA	0.2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30929.D	08/03/15 19:44	AA	0.5	GCMSQ	TO-15	
MSQ1344-IC1344	Q30930.D	08/03/15 20:34	AA	2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30931.D	08/03/15 21:25	AA	5	GCMSQ	TO-15	Reporting this level
MSQ1344-ICC1344	Q30932.D	08/03/15 22:15	AA	10	GCMSQ	TO-15	
MSQ1344-IC1344	Q30933.D	08/03/15 23:06	AA	20	GCMSQ	TO-15	
MSQ1344-IC1344	Q30934.D	08/03/15 23:56	AA	30	GCMSQ	TO-15	
MSQ1344-IC1344	Q30935.D	08/04/15 00:47	AA	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
4-Ethyltoluene	22.69	18.86	1.203	ok	1.204	1.144-1.264
Freon 113	6.87	9.15	0.751	ok	0.751	0.691-0.811
Freon 114	4.26	9.15	0.466	ok	0.465	0.405-0.525
Heptane	13.32	11.80	1.129	ok	1.128	1.068-1.188
Hexachlorobutadiene	27.70	18.86	1.469	ok	1.469	1.409-1.529
Hexane	9.21	9.15	1.007	ok	1.007	0.947-1.067
2-Hexanone	16.25	18.86	0.862	ok	0.862	0.802-0.922
Isopropylbenzene	21.63	18.86	1.147	ok	1.147	1.087-1.207
Isopropyl Alcohol	5.81	9.15	0.635	ok	0.637	0.577-0.697
p-Isopropyltoluene	24.19	18.86	1.283	ok	1.283	1.223-1.343
Methylene chloride	6.57	9.15	0.718	ok	0.718	0.658-0.778
Methyl ethyl ketone	8.37	9.15	0.915	ok	0.915	0.855-0.975
Methyl Isobutyl Ketone	14.25	11.80	1.208	ok	1.208	1.148-1.268
Methyl Tert Butyl Ether	7.97	9.15	0.871	ok	0.871	0.811-0.931
Methylmethacrylate	13.16	11.80	1.115	ok	1.115	1.055-1.175
Naphthalene	27.25	18.86	1.445	ok	1.445	1.385-1.505
Nonane	21.09	18.86	1.118	ok	1.119	1.059-1.179
Pentane	6.14	9.15	0.671	ok	0.670	0.610-0.730
Propylene	3.92	9.15	0.428	ok	0.428	0.368-0.488
Styrene	20.49	18.86	1.086	ok	1.087	1.027-1.147
1,1,1-Trichloroethane	10.65	9.15	1.164	ok	1.164	1.104-1.224
1,1,1,2-Tetrachloroethane	18.91	18.86	1.003	ok	1.003	0.943-1.063
1,1,2,2-Tetrachloroethane	20.64	18.86	1.094	ok	1.095	1.035-1.155
1,1,2-Trichloroethane	15.30	11.80	1.297	ok	1.297	1.237-1.357
1,2,4-Trichlorobenzene	27.11	18.86	1.437	ok	1.438	1.378-1.498
1,2,4-Trimethylbenzene	23.49	18.86	1.245	ok	1.246	1.186-1.306
1,3,5-Trimethylbenzene	22.83	18.86	1.210	ok	1.211	1.151-1.271
2,2,4-Trimethylpentane	12.90	11.80	1.093	ok	1.093	1.033-1.153
Tertiary Butyl Alcohol	6.48	9.15	0.708	ok	0.710	0.650-0.770
tert-Butylbenzene	23.47	18.86	1.244	ok	1.245	1.185-1.305
Tetrachloroethylene	17.74	18.86	0.941	ok	0.941	0.881-1.001
Tetrahydrofuran	9.84	9.15	1.075	ok	1.076	1.016-1.136
Toluene	15.77	11.80	1.336	ok	1.337	1.277-1.397
Trichloroethylene	12.84	11.80	1.088	ok	1.088	1.028-1.148
Trichlorofluoromethane	5.76	9.15	0.630	ok	0.630	0.570-0.690
Vinyl chloride	4.38	9.15	0.479	ok	0.478	0.418-0.538
Vinyl Acetate	8.07	9.15	0.882	ok	0.882	0.822-0.942
m,p-Xylene	19.92	18.86	1.056	ok	1.056	0.996-1.116
o-Xylene	20.66	18.86	1.095	ok	1.096	1.036-1.156

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1344-IC1344	Q30928.D	08/03/15 18:53	AA	0.2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30929.D	08/03/15 19:44	AA	0.5	GCMSQ	TO-15	
MSQ1344-IC1344	Q30930.D	08/03/15 20:34	AA	2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30931.D	08/03/15 21:25	AA	5	GCMSQ	TO-15	Reporting this level
MSQ1344-ICC1344	Q30932.D	08/03/15 22:15	AA	10	GCMSQ	TO-15	
MSQ1344-IC1344	Q30933.D	08/03/15 23:06	AA	20	GCMSQ	TO-15	
MSQ1344-IC1344	Q30934.D	08/03/15 23:56	AA	30	GCMSQ	TO-15	
MSQ1344-IC1344	Q30935.D	08/04/15 00:47	AA	40	GCMSQ	TO-15	

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	9.15	ok	9.15	8.82-9.48	428219	ok	420767	252460-589074
1,4-Difluorobenzene	11.80	ok	11.80	11.47-12.13	2002512	ok	1928277	1156966-2699588
Chlorobenzene-D5	18.86	ok	18.86	18.53-19.19	984228	ok	996697	598018-1395376

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1344-IC1344	Q30928.D	08/03/15 18:53	AA	0.2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30929.D	08/03/15 19:44	AA	0.5	GCMSQ	TO-15	
MSQ1344-IC1344	Q30930.D	08/03/15 20:34	AA	2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30931.D	08/03/15 21:25	AA	5	GCMSQ	TO-15	
MSQ1344-ICC1344	Q30932.D	08/03/15 22:15	AA	10	GCMSQ	TO-15	Reporting this level
MSQ1344-IC1344	Q30933.D	08/03/15 23:06	AA	20	GCMSQ	TO-15	
MSQ1344-IC1344	Q30934.D	08/03/15 23:56	AA	30	GCMSQ	TO-15	
MSQ1344-IC1344	Q30935.D	08/04/15 00:47	AA	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.55	9.15	0.607	ok	0.608	0.548-0.668
Acrolein	5.42	9.15	0.592	ok	0.593	0.533-0.653
Acrylonitrile	6.04	9.15	0.660	ok	0.661	0.601-0.721
1,3-Butadiene	4.51	9.15	0.493	ok	0.493	0.433-0.553
Benzene	11.29	11.80	0.957	ok	0.957	0.897-1.017
Bromodichloromethane	12.77	11.80	1.082	ok	1.082	1.022-1.142
Bromoform	19.98	18.86	1.059	ok	1.059	0.999-1.119
Bromomethane	4.78	9.15	0.522	ok	0.523	0.463-0.583
Bromoethene	5.32	9.15	0.581	ok	0.581	0.521-0.641
n-Butylbenzene	24.89	18.86	1.320	ok	1.320	1.260-1.380
sec-Butylbenzene	23.92	18.86	1.268	ok	1.269	1.209-1.329
Benzyl Chloride	23.69	18.86	1.256	ok	1.256	1.196-1.316
Carbon disulfide	6.92	9.15	0.756	ok	0.757	0.697-0.817
Chlorobenzene	18.93	18.86	1.004	ok	1.004	0.944-1.064
Chloroethane	4.95	9.15	0.541	ok	0.542	0.482-0.602
Chloroform	9.31	9.15	1.017	ok	1.018	0.958-1.078
Chloromethane	4.15	9.15	0.454	ok	0.454	0.394-0.514
3-Chloropropene	6.70	9.15	0.732	ok	0.733	0.673-0.793
2-Chlorotoluene	22.37	18.86	1.186	ok	1.186	1.126-1.246
Carbon tetrachloride	11.50	9.15	1.257	ok	1.257	1.197-1.317
Cyclohexane	11.68	11.80	0.990	ok	0.990	0.930-1.050
1,1-Dichloroethane	7.89	9.15	0.862	ok	0.863	0.803-0.923
1,1-Dichloroethylene	6.44	9.15	0.704	ok	0.705	0.645-0.765
1,2-Dibromoethane	16.90	18.86	0.896	ok	0.896	0.836-0.956
1,2-Dichloroethane	10.29	9.15	1.125	ok	1.125	1.065-1.185
1,2-Dichloropropane	12.48	11.80	1.058	ok	1.058	0.998-1.118
1,3-Dichloropropane	15.82	11.80	1.341	ok	1.341	1.281-1.401
1,4-Dioxane	12.83	11.80	1.087	ok	1.088	1.028-1.148
Dichlorodifluoromethane	3.99	9.15	0.436	ok	0.436	0.376-0.496
Dibromochloromethane	16.47	18.86	0.873	ok	0.874	0.814-0.934
trans-1,2-Dichloroethylene	7.65	9.15	0.836	ok	0.837	0.777-0.897
cis-1,2-Dichloroethylene	8.93	9.15	0.976	ok	0.976	0.916-1.036
cis-1,3-Dichloropropene	14.18	11.80	1.202	ok	1.202	1.142-1.262
m-Dichlorobenzene	23.71	18.86	1.257	ok	1.257	1.197-1.317
o-Dichlorobenzene	24.38	18.86	1.293	ok	1.293	1.233-1.353
p-Dichlorobenzene	23.83	18.86	1.264	ok	1.263	1.203-1.323
trans-1,3-Dichloropropene	15.03	11.80	1.274	ok	1.274	1.214-1.334
Ethanol	5.06	9.15	0.553	ok	0.553	0.493-0.613
Ethylbenzene	19.60	18.86	1.039	ok	1.039	0.979-1.099
Ethyl Acetate	9.21	9.15	1.007	ok	1.007	0.947-1.067

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1344-IC1344	Q30928.D	08/03/15 18:53	AA	0.2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30929.D	08/03/15 19:44	AA	0.5	GCMSQ	TO-15	
MSQ1344-IC1344	Q30930.D	08/03/15 20:34	AA	2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30931.D	08/03/15 21:25	AA	5	GCMSQ	TO-15	
MSQ1344-ICC1344	Q30932.D	08/03/15 22:15	AA	10	GCMSQ	TO-15	Reporting this level
MSQ1344-IC1344	Q30933.D	08/03/15 23:06	AA	20	GCMSQ	TO-15	
MSQ1344-IC1344	Q30934.D	08/03/15 23:56	AA	30	GCMSQ	TO-15	
MSQ1344-IC1344	Q30935.D	08/04/15 00:47	AA	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
4-Ethyltoluene	22.69	18.86	1.203	ok	1.204	1.144-1.264
Freon 113	6.87	9.15	0.751	ok	0.751	0.691-0.811
Freon 114	4.25	9.15	0.464	ok	0.465	0.405-0.525
Heptane	13.32	11.80	1.129	ok	1.128	1.068-1.188
Hexachlorobutadiene	27.70	18.86	1.469	ok	1.469	1.409-1.529
Hexane	9.21	9.15	1.007	ok	1.007	0.947-1.067
2-Hexanone	16.24	18.86	0.861	ok	0.862	0.802-0.922
Isopropylbenzene	21.63	18.86	1.147	ok	1.147	1.087-1.207
Isopropyl Alcohol	5.81	9.15	0.635	ok	0.637	0.577-0.697
p-Isopropyltoluene	24.20	18.86	1.283	ok	1.283	1.223-1.343
Methylene chloride	6.57	9.15	0.718	ok	0.718	0.658-0.778
Methyl ethyl ketone	8.36	9.15	0.914	ok	0.915	0.855-0.975
Methyl Isobutyl Ketone	14.24	11.80	1.207	ok	1.208	1.148-1.268
Methyl Tert Butyl Ether	7.96	9.15	0.870	ok	0.871	0.811-0.931
Methylmethacrylate	13.16	11.80	1.115	ok	1.115	1.055-1.175
Naphthalene	27.25	18.86	1.445	ok	1.445	1.385-1.505
Nonane	21.09	18.86	1.118	ok	1.119	1.059-1.179
Pentane	6.13	9.15	0.670	ok	0.670	0.610-0.730
Propylene	3.92	9.15	0.428	ok	0.428	0.368-0.488
Styrene	20.49	18.86	1.086	ok	1.087	1.027-1.147
1,1,1-Trichloroethane	10.65	9.15	1.164	ok	1.164	1.104-1.224
1,1,1,2-Tetrachloroethane	18.91	18.86	1.003	ok	1.003	0.943-1.063
1,1,2,2-Tetrachloroethane	20.65	18.86	1.095	ok	1.095	1.035-1.155
1,1,2-Trichloroethane	15.30	11.80	1.297	ok	1.297	1.237-1.357
1,2,4-Trichlorobenzene	27.11	18.86	1.437	ok	1.438	1.378-1.498
1,2,4-Trimethylbenzene	23.49	18.86	1.245	ok	1.246	1.186-1.306
1,3,5-Trimethylbenzene	22.83	18.86	1.210	ok	1.211	1.151-1.271
2,2,4-Trimethylpentane	12.90	11.80	1.093	ok	1.093	1.033-1.153
Tertiary Butyl Alcohol	6.46	9.15	0.706	ok	0.710	0.650-0.770
tert-Butylbenzene	23.47	18.86	1.244	ok	1.245	1.185-1.305
Tetrachloroethylene	17.74	18.86	0.941	ok	0.941	0.881-1.001
Tetrahydrofuran	9.84	9.15	1.075	ok	1.076	1.016-1.136
Toluene	15.77	11.80	1.336	ok	1.337	1.277-1.397
Trichloroethylene	12.83	11.80	1.087	ok	1.088	1.028-1.148
Trichlorofluoromethane	5.76	9.15	0.630	ok	0.630	0.570-0.690
Vinyl chloride	4.37	9.15	0.478	ok	0.478	0.418-0.538
Vinyl Acetate	8.06	9.15	0.881	ok	0.882	0.822-0.942
m,p-Xylene	19.92	18.86	1.056	ok	1.056	0.996-1.116
o-Xylene	20.66	18.86	1.095	ok	1.096	1.036-1.156

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1344-IC1344	Q30928.D	08/03/15 18:53	AA	0.2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30929.D	08/03/15 19:44	AA	0.5	GCMSQ	TO-15	
MSQ1344-IC1344	Q30930.D	08/03/15 20:34	AA	2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30931.D	08/03/15 21:25	AA	5	GCMSQ	TO-15	
MSQ1344-ICC1344	Q30932.D	08/03/15 22:15	AA	10	GCMSQ	TO-15	Reporting this level
MSQ1344-IC1344	Q30933.D	08/03/15 23:06	AA	20	GCMSQ	TO-15	
MSQ1344-IC1344	Q30934.D	08/03/15 23:56	AA	30	GCMSQ	TO-15	
MSQ1344-IC1344	Q30935.D	08/04/15 00:47	AA	40	GCMSQ	TO-15	

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	9.15	ok	9.15	8.82-9.48	420601	ok	420767	252460-589074
1,4-Difluorobenzene	11.80	ok	11.80	11.47-12.13	1890207	ok	1928277	1156966-2699588
Chlorobenzene-D5	18.86	ok	18.86	18.53-19.19	976285	ok	996697	598018-1395376

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1344-IC1344	Q30928.D	08/03/15 18:53	AA	0.2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30929.D	08/03/15 19:44	AA	0.5	GCMSQ	TO-15	
MSQ1344-IC1344	Q30930.D	08/03/15 20:34	AA	2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30931.D	08/03/15 21:25	AA	5	GCMSQ	TO-15	
MSQ1344-ICC1344	Q30932.D	08/03/15 22:15	AA	10	GCMSQ	TO-15	
MSQ1344-IC1344	Q30933.D	08/03/15 23:06	AA	20	GCMSQ	TO-15	Reporting this level
MSQ1344-IC1344	Q30934.D	08/03/15 23:56	AA	30	GCMSQ	TO-15	
MSQ1344-IC1344	Q30935.D	08/04/15 00:47	AA	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.56	9.15	0.608	ok	0.608	0.548-0.668
Acrolein	5.42	9.15	0.592	ok	0.593	0.533-0.653
Acrylonitrile	6.05	9.15	0.661	ok	0.661	0.601-0.721
1,3-Butadiene	4.51	9.15	0.493	ok	0.493	0.433-0.553
Benzene	11.29	11.80	0.957	ok	0.957	0.897-1.017
Bromodichloromethane	12.77	11.80	1.082	ok	1.082	1.022-1.142
Bromoform	19.99	18.86	1.060	ok	1.059	0.999-1.119
Bromomethane	4.79	9.15	0.523	ok	0.523	0.463-0.583
Bromoethene	5.32	9.15	0.581	ok	0.581	0.521-0.641
n-Butylbenzene	24.89	18.86	1.320	ok	1.320	1.260-1.380
sec-Butylbenzene	23.92	18.86	1.268	ok	1.269	1.209-1.329
Benzyl Chloride	23.69	18.86	1.256	ok	1.256	1.196-1.316
Carbon disulfide	6.92	9.15	0.756	ok	0.757	0.697-0.817
Chlorobenzene	18.94	18.86	1.004	ok	1.004	0.944-1.064
Chloroethane	4.96	9.15	0.542	ok	0.542	0.482-0.602
Chloroform	9.32	9.15	1.019	ok	1.018	0.958-1.078
Chloromethane	4.15	9.15	0.454	ok	0.454	0.394-0.514
3-Chloropropene	6.71	9.15	0.733	ok	0.733	0.673-0.793
2-Chlorotoluene	22.38	18.86	1.187	ok	1.186	1.126-1.246
Carbon tetrachloride	11.51	9.15	1.258	ok	1.257	1.197-1.317
Cyclohexane	11.69	11.80	0.991	ok	0.990	0.930-1.050
1,1-Dichloroethane	7.90	9.15	0.863	ok	0.863	0.803-0.923
1,1-Dichloroethylene	6.45	9.15	0.705	ok	0.705	0.645-0.765
1,2-Dibromoethane	16.91	18.86	0.897	ok	0.896	0.836-0.956
1,2-Dichloroethane	10.30	9.15	1.126	ok	1.125	1.065-1.185
1,2-Dichloropropane	12.48	11.80	1.058	ok	1.058	0.998-1.118
1,3-Dichloropropane	15.82	11.80	1.341	ok	1.341	1.281-1.401
1,4-Dioxane	12.83	11.80	1.087	ok	1.088	1.028-1.148
Dichlorodifluoromethane	3.99	9.15	0.436	ok	0.436	0.376-0.496
Dibromochloromethane	16.48	18.86	0.874	ok	0.874	0.814-0.934
trans-1,2-Dichloroethylene	7.66	9.15	0.837	ok	0.837	0.777-0.897
cis-1,2-Dichloroethylene	8.93	9.15	0.976	ok	0.976	0.916-1.036
cis-1,3-Dichloropropene	14.18	11.80	1.202	ok	1.202	1.142-1.262
m-Dichlorobenzene	23.71	18.86	1.257	ok	1.257	1.197-1.317
o-Dichlorobenzene	24.38	18.86	1.293	ok	1.293	1.233-1.353
p-Dichlorobenzene	23.83	18.86	1.264	ok	1.263	1.203-1.323
trans-1,3-Dichloropropene	15.04	11.80	1.275	ok	1.274	1.214-1.334
Ethanol	5.06	9.15	0.553	ok	0.553	0.493-0.613
Ethylbenzene	19.60	18.86	1.039	ok	1.039	0.979-1.099
Ethyl Acetate	9.21	9.15	1.007	ok	1.007	0.947-1.067

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1344-IC1344	Q30928.D	08/03/15 18:53	AA	0.2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30929.D	08/03/15 19:44	AA	0.5	GCMSQ	TO-15	
MSQ1344-IC1344	Q30930.D	08/03/15 20:34	AA	2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30931.D	08/03/15 21:25	AA	5	GCMSQ	TO-15	
MSQ1344-ICC1344	Q30932.D	08/03/15 22:15	AA	10	GCMSQ	TO-15	
MSQ1344-IC1344	Q30933.D	08/03/15 23:06	AA	20	GCMSQ	TO-15	Reporting this level
MSQ1344-IC1344	Q30934.D	08/03/15 23:56	AA	30	GCMSQ	TO-15	
MSQ1344-IC1344	Q30935.D	08/04/15 00:47	AA	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
4-Ethyltoluene	22.70	18.86	1.204	ok	1.204	1.144-1.264
Freon 113	6.87	9.15	0.751	ok	0.751	0.691-0.811
Freon 114	4.25	9.15	0.464	ok	0.465	0.405-0.525
Heptane	13.32	11.80	1.129	ok	1.128	1.068-1.188
Hexachlorobutadiene	27.70	18.86	1.469	ok	1.469	1.409-1.529
Hexane	9.21	9.15	1.007	ok	1.007	0.947-1.067
2-Hexanone	16.25	18.86	0.862	ok	0.862	0.802-0.922
Isopropylbenzene	21.63	18.86	1.147	ok	1.147	1.087-1.207
Isopropyl Alcohol	5.81	9.15	0.635	ok	0.637	0.577-0.697
p-Isopropyltoluene	24.20	18.86	1.283	ok	1.283	1.223-1.343
Methylene chloride	6.57	9.15	0.718	ok	0.718	0.658-0.778
Methyl ethyl ketone	8.37	9.15	0.915	ok	0.915	0.855-0.975
Methyl Isobutyl Ketone	14.24	11.80	1.207	ok	1.208	1.148-1.268
Methyl Tert Butyl Ether	7.96	9.15	0.870	ok	0.871	0.811-0.931
Methylmethacrylate	13.16	11.80	1.115	ok	1.115	1.055-1.175
Naphthalene	27.25	18.86	1.445	ok	1.445	1.385-1.505
Nonane	21.10	18.86	1.119	ok	1.119	1.059-1.179
Pentane	6.13	9.15	0.670	ok	0.670	0.610-0.730
Propylene	3.92	9.15	0.428	ok	0.428	0.368-0.488
Styrene	20.49	18.86	1.086	ok	1.087	1.027-1.147
1,1,1-Trichloroethane	10.65	9.15	1.164	ok	1.164	1.104-1.224
1,1,1,2-Tetrachloroethane	18.91	18.86	1.003	ok	1.003	0.943-1.063
1,1,2,2-Tetrachloroethane	20.65	18.86	1.095	ok	1.095	1.035-1.155
1,1,2-Trichloroethane	15.31	11.80	1.297	ok	1.297	1.237-1.357
1,2,4-Trichlorobenzene	27.11	18.86	1.437	ok	1.438	1.378-1.498
1,2,4-Trimethylbenzene	23.49	18.86	1.245	ok	1.246	1.186-1.306
1,3,5-Trimethylbenzene	22.83	18.86	1.210	ok	1.211	1.151-1.271
2,2,4-Trimethylpentane	12.91	11.80	1.094	ok	1.093	1.033-1.153
Tertiary Butyl Alcohol	6.47	9.15	0.707	ok	0.710	0.650-0.770
tert-Butylbenzene	23.48	18.86	1.245	ok	1.245	1.185-1.305
Tetrachloroethylene	17.74	18.86	0.941	ok	0.941	0.881-1.001
Tetrahydrofuran	9.83	9.15	1.074	ok	1.076	1.016-1.136
Toluene	15.78	11.80	1.337	ok	1.337	1.277-1.397
Trichloroethylene	12.84	11.80	1.088	ok	1.088	1.028-1.148
Trichlorofluoromethane	5.76	9.15	0.630	ok	0.630	0.570-0.690
Vinyl chloride	4.37	9.15	0.478	ok	0.478	0.418-0.538
Vinyl Acetate	8.07	9.15	0.882	ok	0.882	0.822-0.942
m,p-Xylene	19.92	18.86	1.056	ok	1.056	0.996-1.116
o-Xylene	20.67	18.86	1.096	ok	1.096	1.036-1.156

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1344-IC1344	Q30928.D	08/03/15 18:53	AA	0.2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30929.D	08/03/15 19:44	AA	0.5	GCMSQ	TO-15	
MSQ1344-IC1344	Q30930.D	08/03/15 20:34	AA	2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30931.D	08/03/15 21:25	AA	5	GCMSQ	TO-15	
MSQ1344-ICC1344	Q30932.D	08/03/15 22:15	AA	10	GCMSQ	TO-15	
MSQ1344-IC1344	Q30933.D	08/03/15 23:06	AA	20	GCMSQ	TO-15	Reporting this level
MSQ1344-IC1344	Q30934.D	08/03/15 23:56	AA	30	GCMSQ	TO-15	
MSQ1344-IC1344	Q30935.D	08/04/15 00:47	AA	40	GCMSQ	TO-15	

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	9.15	ok	9.15	8.82-9.48	428058	ok	420767	252460-589074
1,4-Difluorobenzene	11.80	ok	11.80	11.47-12.13	2018711	ok	1928277	1156966-2699588
Chlorobenzene-D5	18.86	ok	18.86	18.53-19.19	1060160	ok	996697	598018-1395376

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1344-IC1344	Q30928.D	08/03/15 18:53	AA	0.2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30929.D	08/03/15 19:44	AA	0.5	GCMSQ	TO-15	
MSQ1344-IC1344	Q30930.D	08/03/15 20:34	AA	2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30931.D	08/03/15 21:25	AA	5	GCMSQ	TO-15	
MSQ1344-ICC1344	Q30932.D	08/03/15 22:15	AA	10	GCMSQ	TO-15	
MSQ1344-IC1344	Q30933.D	08/03/15 23:06	AA	20	GCMSQ	TO-15	
MSQ1344-IC1344	Q30934.D	08/03/15 23:56	AA	30	GCMSQ	TO-15	Reporting this level
MSQ1344-IC1344	Q30935.D	08/04/15 00:47	AA	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.56	9.15	0.608	ok	0.608	0.548-0.668
Acrolein	5.42	9.15	0.592	ok	0.593	0.533-0.653
Acrylonitrile	6.06	9.15	0.662	ok	0.661	0.601-0.721
1,3-Butadiene	4.51	9.15	0.493	ok	0.493	0.433-0.553
Benzene	11.30	11.81	0.957	ok	0.957	0.897-1.017
Bromodichloromethane	12.78	11.81	1.082	ok	1.082	1.022-1.142
Bromoform	19.99	18.86	1.060	ok	1.059	0.999-1.119
Bromomethane	4.79	9.15	0.523	ok	0.523	0.463-0.583
Bromoethene	5.32	9.15	0.581	ok	0.581	0.521-0.641
n-Butylbenzene	24.90	18.86	1.320	ok	1.320	1.260-1.380
sec-Butylbenzene	23.93	18.86	1.269	ok	1.269	1.209-1.329
Benzyl Chloride	23.70	18.86	1.257	ok	1.256	1.196-1.316
Carbon disulfide	6.93	9.15	0.757	ok	0.757	0.697-0.817
Chlorobenzene	18.94	18.86	1.004	ok	1.004	0.944-1.064
Chloroethane	4.96	9.15	0.542	ok	0.542	0.482-0.602
Chloroform	9.32	9.15	1.019	ok	1.018	0.958-1.078
Chloromethane	4.15	9.15	0.454	ok	0.454	0.394-0.514
3-Chloropropene	6.71	9.15	0.733	ok	0.733	0.673-0.793
2-Chlorotoluene	22.38	18.86	1.187	ok	1.186	1.126-1.246
Carbon tetrachloride	11.51	9.15	1.258	ok	1.257	1.197-1.317
Cyclohexane	11.69	11.81	0.990	ok	0.990	0.930-1.050
1,1-Dichloroethane	7.90	9.15	0.863	ok	0.863	0.803-0.923
1,1-Dichloroethylene	6.45	9.15	0.705	ok	0.705	0.645-0.765
1,2-Dibromoethane	16.91	18.86	0.897	ok	0.896	0.836-0.956
1,2-Dichloroethane	10.30	9.15	1.126	ok	1.125	1.065-1.185
1,2-Dichloropropane	12.49	11.81	1.058	ok	1.058	0.998-1.118
1,3-Dichloropropane	15.83	11.81	1.340	ok	1.341	1.281-1.401
1,4-Dioxane	12.83	11.81	1.086	ok	1.088	1.028-1.148
Dichlorodifluoromethane	4.00	9.15	0.437	ok	0.436	0.376-0.496
Dibromochloromethane	16.49	18.86	0.874	ok	0.874	0.814-0.934
trans-1,2-Dichloroethylene	7.66	9.15	0.837	ok	0.837	0.777-0.897
cis-1,2-Dichloroethylene	8.94	9.15	0.977	ok	0.976	0.916-1.036
cis-1,3-Dichloropropene	14.19	11.81	1.202	ok	1.202	1.142-1.262
m-Dichlorobenzene	23.72	18.86	1.258	ok	1.257	1.197-1.317
o-Dichlorobenzene	24.39	18.86	1.293	ok	1.293	1.233-1.353
p-Dichlorobenzene	23.83	18.86	1.264	ok	1.263	1.203-1.323
trans-1,3-Dichloropropene	15.04	11.81	1.273	ok	1.274	1.214-1.334
Ethanol	5.06	9.15	0.553	ok	0.553	0.493-0.613
Ethylbenzene	19.60	18.86	1.039	ok	1.039	0.979-1.099
Ethyl Acetate	9.22	9.15	1.008	ok	1.007	0.947-1.067

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1344-IC1344	Q30928.D	08/03/15 18:53	AA	0.2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30929.D	08/03/15 19:44	AA	0.5	GCMSQ	TO-15	
MSQ1344-IC1344	Q30930.D	08/03/15 20:34	AA	2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30931.D	08/03/15 21:25	AA	5	GCMSQ	TO-15	
MSQ1344-ICC1344	Q30932.D	08/03/15 22:15	AA	10	GCMSQ	TO-15	
MSQ1344-IC1344	Q30933.D	08/03/15 23:06	AA	20	GCMSQ	TO-15	
MSQ1344-IC1344	Q30934.D	08/03/15 23:56	AA	30	GCMSQ	TO-15	Reporting this level
MSQ1344-IC1344	Q30935.D	08/04/15 00:47	AA	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
4-Ethyltoluene	22.70	18.86	1.204	ok	1.204	1.144-1.264
Freon 113	6.87	9.15	0.751	ok	0.751	0.691-0.811
Freon 114	4.25	9.15	0.464	ok	0.465	0.405-0.525
Heptane	13.32	11.81	1.128	ok	1.128	1.068-1.188
Hexachlorobutadiene	27.70	18.86	1.469	ok	1.469	1.409-1.529
Hexane	9.21	9.15	1.007	ok	1.007	0.947-1.067
2-Hexanone	16.25	18.86	0.862	ok	0.862	0.802-0.922
Isopropylbenzene	21.63	18.86	1.147	ok	1.147	1.087-1.207
Isopropyl Alcohol	5.81	9.15	0.635	ok	0.637	0.577-0.697
p-Isopropyltoluene	24.20	18.86	1.283	ok	1.283	1.223-1.343
Methylene chloride	6.57	9.15	0.718	ok	0.718	0.658-0.778
Methyl ethyl ketone	8.37	9.15	0.915	ok	0.915	0.855-0.975
Methyl Isobutyl Ketone	14.25	11.81	1.207	ok	1.208	1.148-1.268
Methyl Tert Butyl Ether	7.96	9.15	0.870	ok	0.871	0.811-0.931
Methylmethacrylate	13.16	11.81	1.114	ok	1.115	1.055-1.175
Naphthalene	27.25	18.86	1.445	ok	1.445	1.385-1.505
Nonane	21.10	18.86	1.119	ok	1.119	1.059-1.179
Pentane	6.13	9.15	0.670	ok	0.670	0.610-0.730
Propylene	3.92	9.15	0.428	ok	0.428	0.368-0.488
Styrene	20.50	18.86	1.087	ok	1.087	1.027-1.147
1,1,1-Trichloroethane	10.65	9.15	1.164	ok	1.164	1.104-1.224
1,1,1,2-Tetrachloroethane	18.92	18.86	1.003	ok	1.003	0.943-1.063
1,1,2,2-Tetrachloroethane	20.66	18.86	1.095	ok	1.095	1.035-1.155
1,1,2-Trichloroethane	15.32	11.81	1.297	ok	1.297	1.237-1.357
1,2,4-Trichlorobenzene	27.11	18.86	1.437	ok	1.438	1.378-1.498
1,2,4-Trimethylbenzene	23.50	18.86	1.246	ok	1.246	1.186-1.306
1,3,5-Trimethylbenzene	22.83	18.86	1.210	ok	1.211	1.151-1.271
2,2,4-Trimethylpentane	12.91	11.81	1.093	ok	1.093	1.033-1.153
Tertiary Butyl Alcohol	6.47	9.15	0.707	ok	0.710	0.650-0.770
tert-Butylbenzene	23.49	18.86	1.245	ok	1.245	1.185-1.305
Tetrachloroethylene	17.75	18.86	0.941	ok	0.941	0.881-1.001
Tetrahydrofuran	9.83	9.15	1.074	ok	1.076	1.016-1.136
Toluene	15.78	11.81	1.336	ok	1.337	1.277-1.397
Trichloroethylene	12.85	11.81	1.088	ok	1.088	1.028-1.148
Trichlorofluoromethane	5.76	9.15	0.630	ok	0.630	0.570-0.690
Vinyl chloride	4.37	9.15	0.478	ok	0.478	0.418-0.538
Vinyl Acetate	8.07	9.15	0.882	ok	0.882	0.822-0.942
m,p-Xylene	19.92	18.86	1.056	ok	1.056	0.996-1.116
o-Xylene	20.67	18.86	1.096	ok	1.096	1.036-1.156

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1344-IC1344	Q30928.D	08/03/15 18:53	AA	0.2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30929.D	08/03/15 19:44	AA	0.5	GCMSQ	TO-15	
MSQ1344-IC1344	Q30930.D	08/03/15 20:34	AA	2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30931.D	08/03/15 21:25	AA	5	GCMSQ	TO-15	
MSQ1344-ICC1344	Q30932.D	08/03/15 22:15	AA	10	GCMSQ	TO-15	
MSQ1344-IC1344	Q30933.D	08/03/15 23:06	AA	20	GCMSQ	TO-15	
MSQ1344-IC1344	Q30934.D	08/03/15 23:56	AA	30	GCMSQ	TO-15	Reporting this level
MSQ1344-IC1344	Q30935.D	08/04/15 00:47	AA	40	GCMSQ	TO-15	

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	9.15	ok	9.15	8.82-9.48	424545	ok	420767	252460-589074
1,4-Difluorobenzene	11.81	ok	11.80	11.47-12.13	1955156	ok	1928277	1156966-2699588
Chlorobenzene-D5	18.86	ok	18.86	18.53-19.19	1071714	ok	996697	598018-1395376

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1344-IC1344	Q30928.D	08/03/15 18:53	AA	0.2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30929.D	08/03/15 19:44	AA	0.5	GCMSQ	TO-15	
MSQ1344-IC1344	Q30930.D	08/03/15 20:34	AA	2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30931.D	08/03/15 21:25	AA	5	GCMSQ	TO-15	
MSQ1344-ICC1344	Q30932.D	08/03/15 22:15	AA	10	GCMSQ	TO-15	
MSQ1344-IC1344	Q30933.D	08/03/15 23:06	AA	20	GCMSQ	TO-15	
MSQ1344-IC1344	Q30934.D	08/03/15 23:56	AA	30	GCMSQ	TO-15	
MSQ1344-IC1344	Q30935.D	08/04/15 00:47	AA	40	GCMSQ	TO-15	Reporting this level

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.56	9.16	0.607	ok	0.608	0.548-0.668
Acrolein	5.43	9.16	0.593	ok	0.593	0.533-0.653
Acrylonitrile	6.06	9.16	0.662	ok	0.661	0.601-0.721
1,3-Butadiene	4.51	9.16	0.492	ok	0.493	0.433-0.553
Benzene	11.30	11.81	0.957	ok	0.957	0.897-1.017
Bromodichloromethane	12.78	11.81	1.082	ok	1.082	1.022-1.142
Bromoform	19.99	18.86	1.060	ok	1.059	0.999-1.119
Bromomethane	4.79	9.16	0.523	ok	0.523	0.463-0.583
Bromoethene	5.32	9.16	0.581	ok	0.581	0.521-0.641
n-Butylbenzene	24.90	18.86	1.320	ok	1.320	1.260-1.380
sec-Butylbenzene	23.93	18.86	1.269	ok	1.269	1.209-1.329
Benzyl Chloride	23.70	18.86	1.257	ok	1.256	1.196-1.316
Carbon disulfide	6.93	9.16	0.757	ok	0.757	0.697-0.817
Chlorobenzene	18.95	18.86	1.005	ok	1.004	0.944-1.064
Chloroethane	4.96	9.16	0.541	ok	0.542	0.482-0.602
Chloroform	9.32	9.16	1.017	ok	1.018	0.958-1.078
Chloromethane	4.15	9.16	0.453	ok	0.454	0.394-0.514
3-Chloropropene	6.71	9.16	0.733	ok	0.733	0.673-0.793
2-Chlorotoluene	22.38	18.86	1.187	ok	1.186	1.126-1.246
Carbon tetrachloride	11.51	9.16	1.257	ok	1.257	1.197-1.317
Cyclohexane	11.69	11.81	0.990	ok	0.990	0.930-1.050
1,1-Dichloroethane	7.90	9.16	0.862	ok	0.863	0.803-0.923
1,1-Dichloroethylene	6.45	9.16	0.704	ok	0.705	0.645-0.765
1,2-Dibromoethane	16.91	18.86	0.897	ok	0.896	0.836-0.956
1,2-Dichloroethane	10.30	9.16	1.124	ok	1.125	1.065-1.185
1,2-Dichloropropane	12.49	11.81	1.058	ok	1.058	0.998-1.118
1,3-Dichloropropane	15.83	11.81	1.340	ok	1.341	1.281-1.401
1,4-Dioxane	12.83	11.81	1.086	ok	1.088	1.028-1.148
Dichlorodifluoromethane	3.99	9.16	0.436	ok	0.436	0.376-0.496
Dibromochloromethane	16.49	18.86	0.874	ok	0.874	0.814-0.934
trans-1,2-Dichloroethylene	7.66	9.16	0.836	ok	0.837	0.777-0.897
cis-1,2-Dichloroethylene	8.94	9.16	0.976	ok	0.976	0.916-1.036
cis-1,3-Dichloropropene	14.19	11.81	1.202	ok	1.202	1.142-1.262
m-Dichlorobenzene	23.72	18.86	1.258	ok	1.257	1.197-1.317
o-Dichlorobenzene	24.39	18.86	1.293	ok	1.293	1.233-1.353
p-Dichlorobenzene	23.83	18.86	1.264	ok	1.263	1.203-1.323
trans-1,3-Dichloropropene	15.04	11.81	1.273	ok	1.274	1.214-1.334
Ethanol	5.06	9.16	0.552	ok	0.553	0.493-0.613
Ethylbenzene	19.61	18.86	1.040	ok	1.039	0.979-1.099
Ethyl Acetate	9.22	9.16	1.007	ok	1.007	0.947-1.067

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1344-IC1344	Q30928.D	08/03/15 18:53	AA	0.2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30929.D	08/03/15 19:44	AA	0.5	GCMSQ	TO-15	
MSQ1344-IC1344	Q30930.D	08/03/15 20:34	AA	2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30931.D	08/03/15 21:25	AA	5	GCMSQ	TO-15	
MSQ1344-ICC1344	Q30932.D	08/03/15 22:15	AA	10	GCMSQ	TO-15	
MSQ1344-IC1344	Q30933.D	08/03/15 23:06	AA	20	GCMSQ	TO-15	
MSQ1344-IC1344	Q30934.D	08/03/15 23:56	AA	30	GCMSQ	TO-15	
MSQ1344-IC1344	Q30935.D	08/04/15 00:47	AA	40	GCMSQ	TO-15	Reporting this level

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
4-Ethyltoluene	22.70	18.86	1.204	ok	1.204	1.144-1.264
Freon 113	6.87	9.16	0.750	ok	0.751	0.691-0.811
Freon 114	4.25	9.16	0.464	ok	0.465	0.405-0.525
Heptane	13.33	11.81	1.129	ok	1.128	1.068-1.188
Hexachlorobutadiene	27.70	18.86	1.469	ok	1.469	1.409-1.529
Hexane	9.22	9.16	1.007	ok	1.007	0.947-1.067
2-Hexanone	16.25	18.86	0.862	ok	0.862	0.802-0.922
Isopropylbenzene	21.64	18.86	1.147	ok	1.147	1.087-1.207
Isopropyl Alcohol	5.82	9.16	0.635	ok	0.637	0.577-0.697
p-Isopropyltoluene	24.20	18.86	1.283	ok	1.283	1.223-1.343
Methylene chloride	6.57	9.16	0.717	ok	0.718	0.658-0.778
Methyl ethyl ketone	8.37	9.16	0.914	ok	0.915	0.855-0.975
Methyl Isobutyl Ketone	14.25	11.81	1.207	ok	1.208	1.148-1.268
Methyl Tert Butyl Ether	7.96	9.16	0.869	ok	0.871	0.811-0.931
Methylmethacrylate	13.16	11.81	1.114	ok	1.115	1.055-1.175
Naphthalene	27.25	18.86	1.445	ok	1.445	1.385-1.505
Nonane	21.10	18.86	1.119	ok	1.119	1.059-1.179
Pentane	6.13	9.16	0.669	ok	0.670	0.610-0.730
Propylene	3.92	9.16	0.428	ok	0.428	0.368-0.488
Styrene	20.50	18.86	1.087	ok	1.087	1.027-1.147
1,1,1-Trichloroethane	10.65	9.16	1.163	ok	1.164	1.104-1.224
1,1,1,2-Tetrachloroethane	18.93	18.86	1.004	ok	1.003	0.943-1.063
1,1,2,2-Tetrachloroethane	20.66	18.86	1.095	ok	1.095	1.035-1.155
1,1,2-Trichloroethane	15.32	11.81	1.297	ok	1.297	1.237-1.357
1,2,4-Trichlorobenzene	27.12	18.86	1.438	ok	1.438	1.378-1.498
1,2,4-Trimethylbenzene	23.50	18.86	1.246	ok	1.246	1.186-1.306
1,3,5-Trimethylbenzene	22.84	18.86	1.211	ok	1.211	1.151-1.271
2,2,4-Trimethylpentane	12.91	11.81	1.093	ok	1.093	1.033-1.153
Tertiary Butyl Alcohol	6.48	9.16	0.707	ok	0.710	0.650-0.770
tert-Butylbenzene	23.49	18.86	1.245	ok	1.245	1.185-1.305
Tetrachloroethylene	17.75	18.86	0.941	ok	0.941	0.881-1.001
Tetrahydrofuran	9.83	9.16	1.073	ok	1.076	1.016-1.136
Toluene	15.79	11.81	1.337	ok	1.337	1.277-1.397
Trichloroethylene	12.85	11.81	1.088	ok	1.088	1.028-1.148
Trichlorofluoromethane	5.76	9.16	0.629	ok	0.630	0.570-0.690
Vinyl chloride	4.37	9.16	0.477	ok	0.478	0.418-0.538
Vinyl Acetate	8.07	9.16	0.881	ok	0.882	0.822-0.942
m,p-Xylene	19.93	18.86	1.057	ok	1.056	0.996-1.116
o-Xylene	20.67	18.86	1.096	ok	1.096	1.036-1.156

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1344-IC1344	Q30928.D	08/03/15 18:53	AA	0.2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30929.D	08/03/15 19:44	AA	0.5	GCMSQ	TO-15	
MSQ1344-IC1344	Q30930.D	08/03/15 20:34	AA	2	GCMSQ	TO-15	
MSQ1344-IC1344	Q30931.D	08/03/15 21:25	AA	5	GCMSQ	TO-15	
MSQ1344-ICC1344	Q30932.D	08/03/15 22:15	AA	10	GCMSQ	TO-15	
MSQ1344-IC1344	Q30933.D	08/03/15 23:06	AA	20	GCMSQ	TO-15	
MSQ1344-IC1344	Q30934.D	08/03/15 23:56	AA	30	GCMSQ	TO-15	
MSQ1344-IC1344	Q30935.D	08/04/15 00:47	AA	40	GCMSQ	TO-15	Reporting this level

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	9.16	ok	9.15	8.82-9.48	419368	ok	420767	252460-589074
1,4-Difluorobenzene	11.81	ok	11.80	11.47-12.13	1898819	ok	1928277	1156966-2699588
Chlorobenzene-D5	18.86	ok	18.86	18.53-19.19	1094030	ok	996697	598018-1395376

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1364-IC1364	Q31408.D	09/04/15 20:47	PN	0.2	GCMSQ	TO-15	Reporting this level
MSQ1364-IC1364	Q31409.D	09/04/15 21:36	PN	0.5	GCMSQ	TO-15	
MSQ1364-IC1364	Q31410.D	09/04/15 22:24	PN	2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31411.D	09/04/15 23:12	PN	5	GCMSQ	TO-15	
MSQ1364-ICC1364	Q31412.D	09/05/15 00:00	PN	10	GCMSQ	TO-15	
MSQ1364-IC1364	Q31413.D	09/05/15 00:49	PN	20	GCMSQ	TO-15	
MSQ1364-IC1364	Q31414.D	09/05/15 01:36	PN	30	GCMSQ	TO-15	
MSQ1364-IC1364	Q31415.D	09/05/15 02:24	PN	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.59	9.11	0.614	ok	0.611	0.551-0.671
Acrylonitrile	6.05	9.11	0.664	ok	0.663	0.603-0.723
1,3-Butadiene	4.50	9.11	0.494	ok	0.494	0.434-0.554
Benzene	11.24	11.76	0.956	ok	0.956	0.896-1.016
Bromoform	19.93	18.80	1.060	ok	1.060	1.000-1.120
Bromomethane	4.78	9.11	0.525	ok	0.524	0.464-0.584
Bromoethene	5.31	9.11	0.583	ok	0.582	0.522-0.642
n-Butylbenzene	24.86	18.80	1.322	ok	1.322	1.262-1.382
sec-Butylbenzene	23.88	18.80	1.270	ok	1.270	1.210-1.330
Benzyl Chloride	23.66	18.80	1.259	ok	1.258	1.198-1.318
Carbon disulfide	6.90	9.11	0.757	ok	0.757	0.697-0.817
Chlorobenzene	18.88	18.80	1.004	ok	1.004	0.944-1.064
Chloroethane	4.95	9.11	0.543	ok	0.543	0.483-0.603
Chloroform	9.27	9.11	1.018	ok	1.018	0.958-1.078
Chloromethane	4.15	9.11	0.456	ok	0.455	0.395-0.515
3-Chloropropene	6.68	9.11	0.733	ok	0.733	0.673-0.793
2-Chlorotoluene	22.33	18.80	1.188	ok	1.187	1.127-1.247
Carbon tetrachloride	11.45	9.11	1.257	ok	1.257	1.197-1.317
Cyclohexane	11.63	11.76	0.989	ok	0.989	0.929-1.049
1,1-Dichloroethane	7.87	9.11	0.864	ok	0.863	0.803-0.923
1,1-Dichloroethylene	6.42	9.11	0.705	ok	0.704	0.644-0.764
1,2-Dibromoethane	16.85	18.80	0.896	ok	0.896	0.836-0.956
1,2-Dichloroethane	10.26	9.11	1.126	ok	1.126	1.066-1.186
1,2-Dichloropropane	12.43	11.76	1.057	ok	1.057	0.997-1.117
1,3-Dichloropropane	15.77	11.76	1.341	ok	1.341	1.281-1.401
Dichlorodifluoromethane	3.99	9.11	0.438	ok	0.438	0.378-0.498
Dibromochloromethane	16.43	18.80	0.874	ok	0.874	0.814-0.934
trans-1,2-Dichloroethylene	7.62	9.11	0.836	ok	0.836	0.776-0.896
cis-1,2-Dichloroethylene	8.90	9.11	0.977	ok	0.976	0.916-1.036
cis-1,3-Dichloropropene	14.13	11.76	1.202	ok	1.202	1.142-1.262
m-Dichlorobenzene	23.67	18.80	1.259	ok	1.259	1.199-1.319
o-Dichlorobenzene	24.34	18.80	1.295	ok	1.294	1.234-1.354
p-Dichlorobenzene	23.78	18.80	1.265	ok	1.265	1.205-1.325
trans-1,3-Dichloropropene	14.98	11.76	1.274	ok	1.274	1.214-1.334
Ethanol	5.10	9.11	0.560	ok	0.556	0.496-0.616
Ethylbenzene	19.54	18.80	1.039	ok	1.039	0.979-1.099
4-Ethyltoluene	22.65	18.80	1.205	ok	1.205	1.145-1.265
Freon 113	6.85	9.11	0.752	ok	0.751	0.691-0.811
Freon 114	4.25	9.11	0.467	ok	0.466	0.406-0.526
Heptane	13.26	11.76	1.128	ok	1.128	1.068-1.188

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1364-IC1364	Q31408.D	09/04/15 20:47	PN	0.2	GCMSQ	TO-15	Reporting this level
MSQ1364-IC1364	Q31409.D	09/04/15 21:36	PN	0.5	GCMSQ	TO-15	
MSQ1364-IC1364	Q31410.D	09/04/15 22:24	PN	2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31411.D	09/04/15 23:12	PN	5	GCMSQ	TO-15	
MSQ1364-ICC1364	Q31412.D	09/05/15 00:00	PN	10	GCMSQ	TO-15	
MSQ1364-IC1364	Q31413.D	09/05/15 00:49	PN	20	GCMSQ	TO-15	
MSQ1364-IC1364	Q31414.D	09/05/15 01:36	PN	30	GCMSQ	TO-15	
MSQ1364-IC1364	Q31415.D	09/05/15 02:24	PN	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Hexachlorobutadiene	27.67	18.80	1.472	ok	1.471	1.411-1.531
Hexane	9.16	9.11	1.005	ok	1.005	0.945-1.065
2-Hexanone	16.29	18.80	0.866	ok	0.864	0.804-0.924
Isopropylbenzene	21.58	18.80	1.148	ok	1.147	1.087-1.207
p-Isopropyltoluene	24.16	18.80	1.285	ok	1.285	1.225-1.345
Methylene chloride	6.55	9.11	0.719	ok	0.719	0.659-0.779
Methyl ethyl ketone	8.41	9.11	0.923	ok	0.919	0.859-0.979
Methyl Isobutyl Ketone	14.29	11.76	1.215	ok	1.211	1.151-1.271
Methylmethacrylate	13.15	11.76	1.118	ok	1.117	1.057-1.177
Naphthalene	27.22	18.80	1.448	ok	1.447	1.387-1.507
Nonane	21.04	18.80	1.119	ok	1.119	1.059-1.179
Pentane	6.11	9.11	0.671	ok	0.670	0.610-0.730
Propylene	3.92	9.11	0.430	ok	0.430	0.370-0.490
Styrene	20.44	18.80	1.087	ok	1.087	1.027-1.147
1,1,1-Trichloroethane	10.60	9.11	1.164	ok	1.163	1.103-1.223
1,1,1,2-Tetrachloroethane	18.86	18.80	1.003	ok	1.003	0.943-1.063
1,1,2,2-Tetrachloroethane	20.61	18.80	1.096	ok	1.096	1.036-1.156
1,1,2-Trichloroethane	15.26	11.76	1.298	ok	1.298	1.238-1.358
1,2,4-Trichlorobenzene	27.08	18.80	1.440	ok	1.440	1.380-1.500
1,2,4-Trimethylbenzene	23.44	18.80	1.247	ok	1.247	1.187-1.307
1,3,5-Trimethylbenzene	22.78	18.80	1.212	ok	1.211	1.151-1.271
2,2,4-Trimethylpentane	12.84	11.76	1.092	ok	1.092	1.032-1.152
tert-Butylbenzene	23.43	18.80	1.246	ok	1.246	1.186-1.306
Tetrachloroethylene	17.68	18.80	0.940	ok	0.940	0.880-1.000
Tetrahydrofuran	9.91	9.11	1.088	ok	1.081	1.021-1.141
Toluene	15.72	11.76	1.337	ok	1.337	1.277-1.397
Trichloroethylene	12.79	11.76	1.088	ok	1.088	1.028-1.148
Trichlorofluoromethane	5.74	9.11	0.630	ok	0.629	0.569-0.689
Vinyl chloride	4.37	9.11	0.480	ok	0.479	0.419-0.539
Vinyl Acetate	8.06	9.11	0.885	ok	0.883	0.823-0.943
m,p-Xylene	19.86	18.80	1.056	ok	1.056	0.996-1.116
o-Xylene	20.61	18.80	1.096	ok	1.096	1.036-1.156

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	9.11	ok	9.12	8.79-9.45	1105053	ok	1138575	683145-1594005
1,4-Difluorobenzene	11.76	ok	11.76	11.43-12.09	5030144	ok	5251287	3150772-7351802
Chlorobenzene-D5	18.80	ok	18.81	18.48-19.14	2423109	ok	2827891	1696735-3959047

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1364-IC1364	Q31408.D	09/04/15 20:47	PN	0.2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31409.D	09/04/15 21:36	PN	0.5	GCMSQ	TO-15	Reporting this level
MSQ1364-IC1364	Q31410.D	09/04/15 22:24	PN	2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31411.D	09/04/15 23:12	PN	5	GCMSQ	TO-15	
MSQ1364-ICC1364	Q31412.D	09/05/15 00:00	PN	10	GCMSQ	TO-15	
MSQ1364-IC1364	Q31413.D	09/05/15 00:49	PN	20	GCMSQ	TO-15	
MSQ1364-IC1364	Q31414.D	09/05/15 01:36	PN	30	GCMSQ	TO-15	
MSQ1364-IC1364	Q31415.D	09/05/15 02:24	PN	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.58	9.11	0.613	ok	0.611	0.551-0.671
Acrolein	5.43	9.11	0.596	ok	0.595	0.535-0.655
Acrylonitrile	6.04	9.11	0.663	ok	0.663	0.603-0.723
1,3-Butadiene	4.51	9.11	0.495	ok	0.494	0.434-0.554
Benzene	11.24	11.76	0.956	ok	0.956	0.896-1.016
Bromodichloromethane	12.72	11.76	1.082	ok	1.082	1.022-1.142
Bromoform	19.93	18.80	1.060	ok	1.060	1.000-1.120
Bromomethane	4.78	9.11	0.525	ok	0.524	0.464-0.584
Bromoethene	5.31	9.11	0.583	ok	0.582	0.522-0.642
n-Butylbenzene	24.86	18.80	1.322	ok	1.322	1.262-1.382
sec-Butylbenzene	23.88	18.80	1.270	ok	1.270	1.210-1.330
Benzyl Chloride	23.65	18.80	1.258	ok	1.258	1.198-1.318
Carbon disulfide	6.90	9.11	0.757	ok	0.757	0.697-0.817
Chlorobenzene	18.88	18.80	1.004	ok	1.004	0.944-1.064
Chloroethane	4.95	9.11	0.543	ok	0.543	0.483-0.603
Chloroform	9.28	9.11	1.019	ok	1.018	0.958-1.078
Chloromethane	4.15	9.11	0.456	ok	0.455	0.395-0.515
3-Chloropropene	6.68	9.11	0.733	ok	0.733	0.673-0.793
2-Chlorotoluene	22.33	18.80	1.188	ok	1.187	1.127-1.247
Carbon tetrachloride	11.45	9.11	1.257	ok	1.257	1.197-1.317
Cyclohexane	11.63	11.76	0.989	ok	0.989	0.929-1.049
1,1-Dichloroethane	7.87	9.11	0.864	ok	0.863	0.803-0.923
1,1-Dichloroethylene	6.42	9.11	0.705	ok	0.704	0.644-0.764
1,2-Dibromoethane	16.85	18.80	0.896	ok	0.896	0.836-0.956
1,2-Dichloroethane	10.26	9.11	1.126	ok	1.126	1.066-1.186
1,2-Dichloropropane	12.43	11.76	1.057	ok	1.057	0.997-1.117
1,3-Dichloropropane	15.77	11.76	1.341	ok	1.341	1.281-1.401
1,4-Dioxane	12.88	11.76	1.095	ok	1.091	1.031-1.151
Dichlorodifluoromethane	3.99	9.11	0.438	ok	0.438	0.378-0.498
Dibromochloromethane	16.43	18.80	0.874	ok	0.874	0.814-0.934
trans-1,2-Dichloroethylene	7.62	9.11	0.836	ok	0.836	0.776-0.896
cis-1,2-Dichloroethylene	8.90	9.11	0.977	ok	0.976	0.916-1.036
cis-1,3-Dichloropropene	14.13	11.76	1.202	ok	1.202	1.142-1.262
m-Dichlorobenzene	23.67	18.80	1.259	ok	1.259	1.199-1.319
o-Dichlorobenzene	24.34	18.80	1.295	ok	1.294	1.234-1.354
p-Dichlorobenzene	23.78	18.80	1.265	ok	1.265	1.205-1.325
trans-1,3-Dichloropropene	14.99	11.76	1.275	ok	1.274	1.214-1.334
Ethanol	5.09	9.11	0.559	ok	0.556	0.496-0.616
Ethylbenzene	19.54	18.80	1.039	ok	1.039	0.979-1.099
Ethyl Acetate	9.23	9.11	1.013	ok	1.011	0.951-1.071

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1364-IC1364	Q31408.D	09/04/15 20:47	PN	0.2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31409.D	09/04/15 21:36	PN	0.5	GCMSQ	TO-15	Reporting this level
MSQ1364-IC1364	Q31410.D	09/04/15 22:24	PN	2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31411.D	09/04/15 23:12	PN	5	GCMSQ	TO-15	
MSQ1364-ICC1364	Q31412.D	09/05/15 00:00	PN	10	GCMSQ	TO-15	
MSQ1364-IC1364	Q31413.D	09/05/15 00:49	PN	20	GCMSQ	TO-15	
MSQ1364-IC1364	Q31414.D	09/05/15 01:36	PN	30	GCMSQ	TO-15	
MSQ1364-IC1364	Q31415.D	09/05/15 02:24	PN	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
4-Ethyltoluene	22.65	18.80	1.205	ok	1.205	1.145-1.265
Freon 113	6.85	9.11	0.752	ok	0.751	0.691-0.811
Freon 114	4.25	9.11	0.467	ok	0.466	0.406-0.526
Heptane	13.26	11.76	1.128	ok	1.128	1.068-1.188
Hexachlorobutadiene	27.67	18.80	1.472	ok	1.471	1.411-1.531
Hexane	9.16	9.11	1.005	ok	1.005	0.945-1.065
2-Hexanone	16.27	18.80	0.865	ok	0.864	0.804-0.924
Isopropylbenzene	21.58	18.80	1.148	ok	1.147	1.087-1.207
Isopropyl Alcohol	5.87	9.11	0.644	ok	0.639	0.579-0.699
p-Isopropyltoluene	24.16	18.80	1.285	ok	1.285	1.225-1.345
Methylene chloride	6.56	9.11	0.720	ok	0.719	0.659-0.779
Methyl ethyl ketone	8.40	9.11	0.922	ok	0.919	0.859-0.979
Methyl Isobutyl Ketone	14.27	11.76	1.213	ok	1.211	1.151-1.271
Methyl Tert Butyl Ether	8.00	9.11	0.878	ok	0.874	0.814-0.934
Methylmethacrylate	13.14	11.76	1.117	ok	1.117	1.057-1.177
Naphthalene	27.22	18.80	1.448	ok	1.447	1.387-1.507
Nonane	21.04	18.80	1.119	ok	1.119	1.059-1.179
Pentane	6.12	9.11	0.672	ok	0.670	0.610-0.730
Propylene	3.92	9.11	0.430	ok	0.430	0.370-0.490
Styrene	20.44	18.80	1.087	ok	1.087	1.027-1.147
1,1,1-Trichloroethane	10.60	9.11	1.164	ok	1.163	1.103-1.223
1,1,1,2-Tetrachloroethane	18.86	18.80	1.003	ok	1.003	0.943-1.063
1,1,2,2-Tetrachloroethane	20.61	18.80	1.096	ok	1.096	1.036-1.156
1,1,2-Trichloroethane	15.26	11.76	1.298	ok	1.298	1.238-1.358
1,2,4-Trichlorobenzene	27.08	18.80	1.440	ok	1.440	1.380-1.500
1,2,4-Trimethylbenzene	23.44	18.80	1.247	ok	1.247	1.187-1.307
1,3,5-Trimethylbenzene	22.78	18.80	1.212	ok	1.211	1.151-1.271
2,2,4-Trimethylpentane	12.84	11.76	1.092	ok	1.092	1.032-1.152
Tertiary Butyl Alcohol	6.56	9.11	0.720	ok	0.712	0.652-0.772
tert-Butylbenzene	23.43	18.80	1.246	ok	1.246	1.186-1.306
Tetrachloroethylene	17.68	18.80	0.940	ok	0.940	0.880-1.000
Tetrahydrofuran	9.89	9.11	1.086	ok	1.081	1.021-1.141
Toluene	15.72	11.76	1.337	ok	1.337	1.277-1.397
Trichloroethylene	12.79	11.76	1.088	ok	1.088	1.028-1.148
Trichlorofluoromethane	5.74	9.11	0.630	ok	0.629	0.569-0.689
Vinyl chloride	4.37	9.11	0.480	ok	0.479	0.419-0.539
Vinyl Acetate	8.06	9.11	0.885	ok	0.883	0.823-0.943
m,p-Xylene	19.86	18.80	1.056	ok	1.056	0.996-1.116
o-Xylene	20.61	18.80	1.096	ok	1.096	1.036-1.156

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1364-IC1364	Q31408.D	09/04/15 20:47	PN	0.2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31409.D	09/04/15 21:36	PN	0.5	GCMSQ	TO-15	Reporting this level
MSQ1364-IC1364	Q31410.D	09/04/15 22:24	PN	2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31411.D	09/04/15 23:12	PN	5	GCMSQ	TO-15	
MSQ1364-ICC1364	Q31412.D	09/05/15 00:00	PN	10	GCMSQ	TO-15	
MSQ1364-IC1364	Q31413.D	09/05/15 00:49	PN	20	GCMSQ	TO-15	
MSQ1364-IC1364	Q31414.D	09/05/15 01:36	PN	30	GCMSQ	TO-15	
MSQ1364-IC1364	Q31415.D	09/05/15 02:24	PN	40	GCMSQ	TO-15	

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	9.11	ok	9.12	8.79-9.45	1094741	ok	1138575	683145-1594005
1,4-Difluorobenzene	11.76	ok	11.76	11.43-12.09	4982233	ok	5251287	3150772-7351802
Chlorobenzene-D5	18.80	ok	18.81	18.48-19.14	2432240	ok	2827891	1696735-3959047

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1364-IC1364	Q31408.D	09/04/15 20:47	PN	0.2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31409.D	09/04/15 21:36	PN	0.5	GCMSQ	TO-15	
MSQ1364-IC1364	Q31410.D	09/04/15 22:24	PN	2	GCMSQ	TO-15	Reporting this level
MSQ1364-IC1364	Q31411.D	09/04/15 23:12	PN	5	GCMSQ	TO-15	
MSQ1364-ICC1364	Q31412.D	09/05/15 00:00	PN	10	GCMSQ	TO-15	
MSQ1364-IC1364	Q31413.D	09/05/15 00:49	PN	20	GCMSQ	TO-15	
MSQ1364-IC1364	Q31414.D	09/05/15 01:36	PN	30	GCMSQ	TO-15	
MSQ1364-IC1364	Q31415.D	09/05/15 02:24	PN	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.57	9.11	0.611	ok	0.611	0.551-0.671
Acrolein	5.42	9.11	0.595	ok	0.595	0.535-0.655
Acrylonitrile	6.04	9.11	0.663	ok	0.663	0.603-0.723
1,3-Butadiene	4.50	9.11	0.494	ok	0.494	0.434-0.554
Benzene	11.24	11.76	0.956	ok	0.956	0.896-1.016
Bromodichloromethane	12.73	11.76	1.082	ok	1.082	1.022-1.142
Bromoform	19.93	18.80	1.060	ok	1.060	1.000-1.120
Bromomethane	4.78	9.11	0.525	ok	0.524	0.464-0.584
Bromoethene	5.31	9.11	0.583	ok	0.582	0.522-0.642
n-Butylbenzene	24.86	18.80	1.322	ok	1.322	1.262-1.382
sec-Butylbenzene	23.88	18.80	1.270	ok	1.270	1.210-1.330
Benzyl Chloride	23.65	18.80	1.258	ok	1.258	1.198-1.318
Carbon disulfide	6.89	9.11	0.756	ok	0.757	0.697-0.817
Chlorobenzene	18.88	18.80	1.004	ok	1.004	0.944-1.064
Chloroethane	4.95	9.11	0.543	ok	0.543	0.483-0.603
Chloroform	9.27	9.11	1.018	ok	1.018	0.958-1.078
Chloromethane	4.15	9.11	0.456	ok	0.455	0.395-0.515
3-Chloropropene	6.68	9.11	0.733	ok	0.733	0.673-0.793
2-Chlorotoluene	22.33	18.80	1.188	ok	1.187	1.127-1.247
Carbon tetrachloride	11.45	9.11	1.257	ok	1.257	1.197-1.317
Cyclohexane	11.63	11.76	0.989	ok	0.989	0.929-1.049
1,1-Dichloroethane	7.86	9.11	0.863	ok	0.863	0.803-0.923
1,1-Dichloroethylene	6.42	9.11	0.705	ok	0.704	0.644-0.764
1,2-Dibromoethane	16.85	18.80	0.896	ok	0.896	0.836-0.956
1,2-Dichloroethane	10.26	9.11	1.126	ok	1.126	1.066-1.186
1,2-Dichloropropane	12.43	11.76	1.057	ok	1.057	0.997-1.117
1,3-Dichloropropane	15.77	11.76	1.341	ok	1.341	1.281-1.401
1,4-Dioxane	12.85	11.76	1.093	ok	1.091	1.031-1.151
Dichlorodifluoromethane	3.99	9.11	0.438	ok	0.438	0.378-0.498
Dibromochloromethane	16.43	18.80	0.874	ok	0.874	0.814-0.934
trans-1,2-Dichloroethylene	7.62	9.11	0.836	ok	0.836	0.776-0.896
cis-1,2-Dichloroethylene	8.89	9.11	0.976	ok	0.976	0.916-1.036
cis-1,3-Dichloropropene	14.13	11.76	1.202	ok	1.202	1.142-1.262
m-Dichlorobenzene	23.67	18.80	1.259	ok	1.259	1.199-1.319
o-Dichlorobenzene	24.34	18.80	1.295	ok	1.294	1.234-1.354
p-Dichlorobenzene	23.78	18.80	1.265	ok	1.265	1.205-1.325
trans-1,3-Dichloropropene	14.98	11.76	1.274	ok	1.274	1.214-1.334
Ethanol	5.07	9.11	0.557	ok	0.556	0.496-0.616
Ethylbenzene	19.54	18.80	1.039	ok	1.039	0.979-1.099
Ethyl Acetate	9.22	9.11	1.012	ok	1.011	0.951-1.071

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1364-IC1364	Q31408.D	09/04/15 20:47	PN	0.2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31409.D	09/04/15 21:36	PN	0.5	GCMSQ	TO-15	
MSQ1364-IC1364	Q31410.D	09/04/15 22:24	PN	2	GCMSQ	TO-15	Reporting this level
MSQ1364-IC1364	Q31411.D	09/04/15 23:12	PN	5	GCMSQ	TO-15	
MSQ1364-ICC1364	Q31412.D	09/05/15 00:00	PN	10	GCMSQ	TO-15	
MSQ1364-IC1364	Q31413.D	09/05/15 00:49	PN	20	GCMSQ	TO-15	
MSQ1364-IC1364	Q31414.D	09/05/15 01:36	PN	30	GCMSQ	TO-15	
MSQ1364-IC1364	Q31415.D	09/05/15 02:24	PN	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
4-Ethyltoluene	22.65	18.80	1.205	ok	1.205	1.145-1.265
Freon 113	6.84	9.11	0.751	ok	0.751	0.691-0.811
Freon 114	4.25	9.11	0.467	ok	0.466	0.406-0.526
Heptane	13.26	11.76	1.128	ok	1.128	1.068-1.188
Hexachlorobutadiene	27.67	18.80	1.472	ok	1.471	1.411-1.531
Hexane	9.16	9.11	1.005	ok	1.005	0.945-1.065
2-Hexanone	16.25	18.80	0.864	ok	0.864	0.804-0.924
Isopropylbenzene	21.58	18.80	1.148	ok	1.147	1.087-1.207
Isopropyl Alcohol	5.83	9.11	0.640	ok	0.639	0.579-0.699
p-Isopropyltoluene	24.16	18.80	1.285	ok	1.285	1.225-1.345
Methylene chloride	6.55	9.11	0.719	ok	0.719	0.659-0.779
Methyl ethyl ketone	8.37	9.11	0.919	ok	0.919	0.859-0.979
Methyl Isobutyl Ketone	14.25	11.76	1.212	ok	1.211	1.151-1.271
Methyl Tert Butyl Ether	7.97	9.11	0.875	ok	0.874	0.814-0.934
Methylmethacrylate	13.13	11.76	1.116	ok	1.117	1.057-1.177
Naphthalene	27.22	18.80	1.448	ok	1.447	1.387-1.507
Nonane	21.04	18.80	1.119	ok	1.119	1.059-1.179
Pentane	6.11	9.11	0.671	ok	0.670	0.610-0.730
Propylene	3.92	9.11	0.430	ok	0.430	0.370-0.490
Styrene	20.44	18.80	1.087	ok	1.087	1.027-1.147
1,1,1-Trichloroethane	10.60	9.11	1.164	ok	1.163	1.103-1.223
1,1,1,2-Tetrachloroethane	18.86	18.80	1.003	ok	1.003	0.943-1.063
1,1,2,2-Tetrachloroethane	20.61	18.80	1.096	ok	1.096	1.036-1.156
1,1,2-Trichloroethane	15.26	11.76	1.298	ok	1.298	1.238-1.358
1,2,4-Trichlorobenzene	27.08	18.80	1.440	ok	1.440	1.380-1.500
1,2,4-Trimethylbenzene	23.44	18.80	1.247	ok	1.247	1.187-1.307
1,3,5-Trimethylbenzene	22.78	18.80	1.212	ok	1.211	1.151-1.271
2,2,4-Trimethylpentane	12.84	11.76	1.092	ok	1.092	1.032-1.152
Tertiary Butyl Alcohol	6.50	9.11	0.714	ok	0.712	0.652-0.772
tert-Butylbenzene	23.43	18.80	1.246	ok	1.246	1.186-1.306
Tetrachloroethylene	17.68	18.80	0.940	ok	0.940	0.880-1.000
Tetrahydrofuran	9.86	9.11	1.082	ok	1.081	1.021-1.141
Toluene	15.72	11.76	1.337	ok	1.337	1.277-1.397
Trichloroethylene	12.79	11.76	1.088	ok	1.088	1.028-1.148
Trichlorofluoromethane	5.73	9.11	0.629	ok	0.629	0.569-0.689
Vinyl chloride	4.37	9.11	0.480	ok	0.479	0.419-0.539
Vinyl Acetate	8.05	9.11	0.884	ok	0.883	0.823-0.943
m,p-Xylene	19.86	18.80	1.056	ok	1.056	0.996-1.116
o-Xylene	20.61	18.80	1.096	ok	1.096	1.036-1.156

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1364-IC1364	Q31408.D	09/04/15 20:47	PN	0.2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31409.D	09/04/15 21:36	PN	0.5	GCMSQ	TO-15	
MSQ1364-IC1364	Q31410.D	09/04/15 22:24	PN	2	GCMSQ	TO-15	Reporting this level
MSQ1364-IC1364	Q31411.D	09/04/15 23:12	PN	5	GCMSQ	TO-15	
MSQ1364-ICC1364	Q31412.D	09/05/15 00:00	PN	10	GCMSQ	TO-15	
MSQ1364-IC1364	Q31413.D	09/05/15 00:49	PN	20	GCMSQ	TO-15	
MSQ1364-IC1364	Q31414.D	09/05/15 01:36	PN	30	GCMSQ	TO-15	
MSQ1364-IC1364	Q31415.D	09/05/15 02:24	PN	40	GCMSQ	TO-15	

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	9.11	ok	9.12	8.79-9.45	1058508	ok	1138575	683145-1594005
1,4-Difluorobenzene	11.76	ok	11.76	11.43-12.09	4951774	ok	5251287	3150772-7351802
Chlorobenzene-D5	18.80	ok	18.81	18.48-19.14	2472746	ok	2827891	1696735-3959047

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1364-IC1364	Q31408.D	09/04/15 20:47	PN	0.2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31409.D	09/04/15 21:36	PN	0.5	GCMSQ	TO-15	
MSQ1364-IC1364	Q31410.D	09/04/15 22:24	PN	2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31411.D	09/04/15 23:12	PN	5	GCMSQ	TO-15	Reporting this level
MSQ1364-ICC1364	Q31412.D	09/05/15 00:00	PN	10	GCMSQ	TO-15	
MSQ1364-IC1364	Q31413.D	09/05/15 00:49	PN	20	GCMSQ	TO-15	
MSQ1364-IC1364	Q31414.D	09/05/15 01:36	PN	30	GCMSQ	TO-15	
MSQ1364-IC1364	Q31415.D	09/05/15 02:24	PN	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.56	9.11	0.610	ok	0.611	0.551-0.671
Acrolein	5.42	9.11	0.595	ok	0.595	0.535-0.655
Acrylonitrile	6.04	9.11	0.663	ok	0.663	0.603-0.723
1,3-Butadiene	4.50	9.11	0.494	ok	0.494	0.434-0.554
Benzene	11.24	11.76	0.956	ok	0.956	0.896-1.016
Bromodichloromethane	12.73	11.76	1.082	ok	1.082	1.022-1.142
Bromoform	19.93	18.80	1.060	ok	1.060	1.000-1.120
Bromomethane	4.78	9.11	0.525	ok	0.524	0.464-0.584
Bromoethene	5.31	9.11	0.583	ok	0.582	0.522-0.642
n-Butylbenzene	24.86	18.80	1.322	ok	1.322	1.262-1.382
sec-Butylbenzene	23.88	18.80	1.270	ok	1.270	1.210-1.330
Benzyl Chloride	23.66	18.80	1.259	ok	1.258	1.198-1.318
Carbon disulfide	6.90	9.11	0.757	ok	0.757	0.697-0.817
Chlorobenzene	18.88	18.80	1.004	ok	1.004	0.944-1.064
Chloroethane	4.95	9.11	0.543	ok	0.543	0.483-0.603
Chloroform	9.28	9.11	1.019	ok	1.018	0.958-1.078
Chloromethane	4.15	9.11	0.456	ok	0.455	0.395-0.515
3-Chloropropene	6.68	9.11	0.733	ok	0.733	0.673-0.793
2-Chlorotoluene	22.33	18.80	1.188	ok	1.187	1.127-1.247
Carbon tetrachloride	11.45	9.11	1.257	ok	1.257	1.197-1.317
Cyclohexane	11.63	11.76	0.989	ok	0.989	0.929-1.049
1,1-Dichloroethane	7.87	9.11	0.864	ok	0.863	0.803-0.923
1,1-Dichloroethylene	6.42	9.11	0.705	ok	0.704	0.644-0.764
1,2-Dibromoethane	16.85	18.80	0.896	ok	0.896	0.836-0.956
1,2-Dichloroethane	10.26	9.11	1.126	ok	1.126	1.066-1.186
1,2-Dichloropropane	12.43	11.76	1.057	ok	1.057	0.997-1.117
1,3-Dichloropropane	15.77	11.76	1.341	ok	1.341	1.281-1.401
1,4-Dioxane	12.83	11.76	1.091	ok	1.091	1.031-1.151
Dichlorodifluoromethane	3.99	9.11	0.438	ok	0.438	0.378-0.498
Dibromochloromethane	16.43	18.80	0.874	ok	0.874	0.814-0.934
trans-1,2-Dichloroethylene	7.62	9.11	0.836	ok	0.836	0.776-0.896
cis-1,2-Dichloroethylene	8.90	9.11	0.977	ok	0.976	0.916-1.036
cis-1,3-Dichloropropene	14.13	11.76	1.202	ok	1.202	1.142-1.262
m-Dichlorobenzene	23.67	18.80	1.259	ok	1.259	1.199-1.319
o-Dichlorobenzene	24.34	18.80	1.295	ok	1.294	1.234-1.354
p-Dichlorobenzene	23.78	18.80	1.265	ok	1.265	1.205-1.325
trans-1,3-Dichloropropene	14.99	11.76	1.275	ok	1.274	1.214-1.334
Ethanol	5.06	9.11	0.555	ok	0.556	0.496-0.616
Ethylbenzene	19.54	18.80	1.039	ok	1.039	0.979-1.099
Ethyl Acetate	9.21	9.11	1.011	ok	1.011	0.951-1.071

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1364-IC1364	Q31408.D	09/04/15 20:47	PN	0.2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31409.D	09/04/15 21:36	PN	0.5	GCMSQ	TO-15	
MSQ1364-IC1364	Q31410.D	09/04/15 22:24	PN	2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31411.D	09/04/15 23:12	PN	5	GCMSQ	TO-15	Reporting this level
MSQ1364-ICC1364	Q31412.D	09/05/15 00:00	PN	10	GCMSQ	TO-15	
MSQ1364-IC1364	Q31413.D	09/05/15 00:49	PN	20	GCMSQ	TO-15	
MSQ1364-IC1364	Q31414.D	09/05/15 01:36	PN	30	GCMSQ	TO-15	
MSQ1364-IC1364	Q31415.D	09/05/15 02:24	PN	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
4-Ethyltoluene	22.65	18.80	1.205	ok	1.205	1.145-1.265
Freon 113	6.84	9.11	0.751	ok	0.751	0.691-0.811
Freon 114	4.25	9.11	0.467	ok	0.466	0.406-0.526
Heptane	13.26	11.76	1.128	ok	1.128	1.068-1.188
Hexachlorobutadiene	27.67	18.80	1.472	ok	1.471	1.411-1.531
Hexane	9.16	9.11	1.005	ok	1.005	0.945-1.065
2-Hexanone	16.24	18.80	0.864	ok	0.864	0.804-0.924
Isopropylbenzene	21.58	18.80	1.148	ok	1.147	1.087-1.207
Isopropyl Alcohol	5.81	9.11	0.638	ok	0.639	0.579-0.699
p-Isopropyltoluene	24.16	18.80	1.285	ok	1.285	1.225-1.345
Methylene chloride	6.55	9.11	0.719	ok	0.719	0.659-0.779
Methyl ethyl ketone	8.37	9.11	0.919	ok	0.919	0.859-0.979
Methyl Isobutyl Ketone	14.23	11.76	1.210	ok	1.211	1.151-1.271
Methyl Tert Butyl Ether	7.96	9.11	0.874	ok	0.874	0.814-0.934
Methylmethacrylate	13.13	11.76	1.116	ok	1.117	1.057-1.177
Naphthalene	27.22	18.80	1.448	ok	1.447	1.387-1.507
Nonane	21.04	18.80	1.119	ok	1.119	1.059-1.179
Pentane	6.11	9.11	0.671	ok	0.670	0.610-0.730
Propylene	3.92	9.11	0.430	ok	0.430	0.370-0.490
Styrene	20.44	18.80	1.087	ok	1.087	1.027-1.147
1,1,1-Trichloroethane	10.60	9.11	1.164	ok	1.163	1.103-1.223
1,1,1,2-Tetrachloroethane	18.86	18.80	1.003	ok	1.003	0.943-1.063
1,1,2,2-Tetrachloroethane	20.61	18.80	1.096	ok	1.096	1.036-1.156
1,1,2-Trichloroethane	15.26	11.76	1.298	ok	1.298	1.238-1.358
1,2,4-Trichlorobenzene	27.08	18.80	1.440	ok	1.440	1.380-1.500
1,2,4-Trimethylbenzene	23.44	18.80	1.247	ok	1.247	1.187-1.307
1,3,5-Trimethylbenzene	22.78	18.80	1.212	ok	1.211	1.151-1.271
2,2,4-Trimethylpentane	12.84	11.76	1.092	ok	1.092	1.032-1.152
Tertiary Butyl Alcohol	6.48	9.11	0.711	ok	0.712	0.652-0.772
tert-Butylbenzene	23.43	18.80	1.246	ok	1.246	1.186-1.306
Tetrachloroethylene	17.68	18.80	0.940	ok	0.940	0.880-1.000
Tetrahydrofuran	9.84	9.11	1.080	ok	1.081	1.021-1.141
Toluene	15.72	11.76	1.337	ok	1.337	1.277-1.397
Trichloroethylene	12.79	11.76	1.088	ok	1.088	1.028-1.148
Trichlorofluoromethane	5.74	9.11	0.630	ok	0.629	0.569-0.689
Vinyl chloride	4.37	9.11	0.480	ok	0.479	0.419-0.539
Vinyl Acetate	8.04	9.11	0.883	ok	0.883	0.823-0.943
m,p-Xylene	19.86	18.80	1.056	ok	1.056	0.996-1.116
o-Xylene	20.61	18.80	1.096	ok	1.096	1.036-1.156

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1364-IC1364	Q31408.D	09/04/15 20:47	PN	0.2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31409.D	09/04/15 21:36	PN	0.5	GCMSQ	TO-15	
MSQ1364-IC1364	Q31410.D	09/04/15 22:24	PN	2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31411.D	09/04/15 23:12	PN	5	GCMSQ	TO-15	Reporting this level
MSQ1364-ICC1364	Q31412.D	09/05/15 00:00	PN	10	GCMSQ	TO-15	
MSQ1364-IC1364	Q31413.D	09/05/15 00:49	PN	20	GCMSQ	TO-15	
MSQ1364-IC1364	Q31414.D	09/05/15 01:36	PN	30	GCMSQ	TO-15	
MSQ1364-IC1364	Q31415.D	09/05/15 02:24	PN	40	GCMSQ	TO-15	

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	9.11	ok	9.12	8.79-9.45	1089189	ok	1138575	683145-1594005
1,4-Difluorobenzene	11.76	ok	11.76	11.43-12.09	5110200	ok	5251287	3150772-7351802
Chlorobenzene-D5	18.80	ok	18.81	18.48-19.14	2633669	ok	2827891	1696735-3959047

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1364-IC1364	Q31408.D	09/04/15 20:47	PN	0.2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31409.D	09/04/15 21:36	PN	0.5	GCMSQ	TO-15	
MSQ1364-IC1364	Q31410.D	09/04/15 22:24	PN	2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31411.D	09/04/15 23:12	PN	5	GCMSQ	TO-15	
MSQ1364-ICC1364	Q31412.D	09/05/15 00:00	PN	10	GCMSQ	TO-15	Reporting this level
MSQ1364-IC1364	Q31413.D	09/05/15 00:49	PN	20	GCMSQ	TO-15	
MSQ1364-IC1364	Q31414.D	09/05/15 01:36	PN	30	GCMSQ	TO-15	
MSQ1364-IC1364	Q31415.D	09/05/15 02:24	PN	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.56	9.12	0.610	ok	0.611	0.551-0.671
Acrolein	5.42	9.12	0.594	ok	0.595	0.535-0.655
Acrylonitrile	6.04	9.12	0.662	ok	0.663	0.603-0.723
1,3-Butadiene	4.50	9.12	0.493	ok	0.494	0.434-0.554
Benzene	11.24	11.76	0.956	ok	0.956	0.896-1.016
Bromodichloromethane	12.73	11.76	1.082	ok	1.082	1.022-1.142
Bromoform	19.94	18.81	1.060	ok	1.060	1.000-1.120
Bromomethane	4.78	9.12	0.524	ok	0.524	0.464-0.584
Bromoethene	5.31	9.12	0.582	ok	0.582	0.522-0.642
n-Butylbenzene	24.86	18.81	1.322	ok	1.322	1.262-1.382
sec-Butylbenzene	23.88	18.81	1.270	ok	1.270	1.210-1.330
Benzyl Chloride	23.66	18.81	1.258	ok	1.258	1.198-1.318
Carbon disulfide	6.90	9.12	0.757	ok	0.757	0.697-0.817
Chlorobenzene	18.88	18.81	1.004	ok	1.004	0.944-1.064
Chloroethane	4.95	9.12	0.543	ok	0.543	0.483-0.603
Chloroform	9.28	9.12	1.018	ok	1.018	0.958-1.078
Chloromethane	4.15	9.12	0.455	ok	0.455	0.395-0.515
3-Chloropropene	6.68	9.12	0.732	ok	0.733	0.673-0.793
2-Chlorotoluene	22.33	18.81	1.187	ok	1.187	1.127-1.247
Carbon tetrachloride	11.45	9.12	1.255	ok	1.257	1.197-1.317
Cyclohexane	11.63	11.76	0.989	ok	0.989	0.929-1.049
1,1-Dichloroethane	7.87	9.12	0.863	ok	0.863	0.803-0.923
1,1-Dichloroethylene	6.42	9.12	0.704	ok	0.704	0.644-0.764
1,2-Dibromoethane	16.85	18.81	0.896	ok	0.896	0.836-0.956
1,2-Dichloroethane	10.26	9.12	1.125	ok	1.126	1.066-1.186
1,2-Dichloropropane	12.43	11.76	1.057	ok	1.057	0.997-1.117
1,3-Dichloropropane	15.77	11.76	1.341	ok	1.341	1.281-1.401
1,4-Dioxane	12.82	11.76	1.090	ok	1.091	1.031-1.151
Dichlorodifluoromethane	3.99	9.12	0.438	ok	0.438	0.378-0.498
Dibromochloromethane	16.43	18.81	0.873	ok	0.874	0.814-0.934
trans-1,2-Dichloroethylene	7.62	9.12	0.836	ok	0.836	0.776-0.896
cis-1,2-Dichloroethylene	8.90	9.12	0.976	ok	0.976	0.916-1.036
cis-1,3-Dichloropropene	14.13	11.76	1.202	ok	1.202	1.142-1.262
m-Dichlorobenzene	23.67	18.81	1.258	ok	1.259	1.199-1.319
o-Dichlorobenzene	24.34	18.81	1.294	ok	1.294	1.234-1.354
p-Dichlorobenzene	23.78	18.81	1.264	ok	1.265	1.205-1.325
trans-1,3-Dichloropropene	14.99	11.76	1.275	ok	1.274	1.214-1.334
Ethanol	5.06	9.12	0.555	ok	0.556	0.496-0.616
Ethylbenzene	19.55	18.81	1.039	ok	1.039	0.979-1.099
Ethyl Acetate	9.21	9.12	1.010	ok	1.011	0.951-1.071

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1364-IC1364	Q31408.D	09/04/15 20:47	PN	0.2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31409.D	09/04/15 21:36	PN	0.5	GCMSQ	TO-15	
MSQ1364-IC1364	Q31410.D	09/04/15 22:24	PN	2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31411.D	09/04/15 23:12	PN	5	GCMSQ	TO-15	
MSQ1364-ICC1364	Q31412.D	09/05/15 00:00	PN	10	GCMSQ	TO-15	Reporting this level
MSQ1364-IC1364	Q31413.D	09/05/15 00:49	PN	20	GCMSQ	TO-15	
MSQ1364-IC1364	Q31414.D	09/05/15 01:36	PN	30	GCMSQ	TO-15	
MSQ1364-IC1364	Q31415.D	09/05/15 02:24	PN	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
4-Ethyltoluene	22.66	18.81	1.205	ok	1.205	1.145-1.265
Freon 113	6.84	9.12	0.750	ok	0.751	0.691-0.811
Freon 114	4.25	9.12	0.466	ok	0.466	0.406-0.526
Heptane	13.26	11.76	1.128	ok	1.128	1.068-1.188
Hexachlorobutadiene	27.67	18.81	1.471	ok	1.471	1.411-1.531
Hexane	9.16	9.12	1.004	ok	1.005	0.945-1.065
2-Hexanone	16.23	18.81	0.863	ok	0.864	0.804-0.924
Isopropylbenzene	21.58	18.81	1.147	ok	1.147	1.087-1.207
Isopropyl Alcohol	5.81	9.12	0.637	ok	0.639	0.579-0.699
p-Isopropyltoluene	24.16	18.81	1.284	ok	1.285	1.225-1.345
Methylene chloride	6.55	9.12	0.718	ok	0.719	0.659-0.779
Methyl ethyl ketone	8.37	9.12	0.918	ok	0.919	0.859-0.979
Methyl Isobutyl Ketone	14.23	11.76	1.210	ok	1.211	1.151-1.271
Methyl Tert Butyl Ether	7.96	9.12	0.873	ok	0.874	0.814-0.934
Methylmethacrylate	13.13	11.76	1.116	ok	1.117	1.057-1.177
Naphthalene	27.22	18.81	1.447	ok	1.447	1.387-1.507
Nonane	21.04	18.81	1.119	ok	1.119	1.059-1.179
Pentane	6.11	9.12	0.670	ok	0.670	0.610-0.730
Propylene	3.92	9.12	0.430	ok	0.430	0.370-0.490
Styrene	20.44	18.81	1.087	ok	1.087	1.027-1.147
1,1,1-Trichloroethane	10.60	9.12	1.162	ok	1.163	1.103-1.223
1,1,1,2-Tetrachloroethane	18.86	18.81	1.003	ok	1.003	0.943-1.063
1,1,2,2-Tetrachloroethane	20.61	18.81	1.096	ok	1.096	1.036-1.156
1,1,2-Trichloroethane	15.26	11.76	1.298	ok	1.298	1.238-1.358
1,2,4-Trichlorobenzene	27.08	18.81	1.440	ok	1.440	1.380-1.500
1,2,4-Trimethylbenzene	23.45	18.81	1.247	ok	1.247	1.187-1.307
1,3,5-Trimethylbenzene	22.78	18.81	1.211	ok	1.211	1.151-1.271
2,2,4-Trimethylpentane	12.84	11.76	1.092	ok	1.092	1.032-1.152
Tertiary Butyl Alcohol	6.48	9.12	0.711	ok	0.712	0.652-0.772
tert-Butylbenzene	23.44	18.81	1.246	ok	1.246	1.186-1.306
Tetrachloroethylene	17.68	18.81	0.940	ok	0.940	0.880-1.000
Tetrahydrofuran	9.84	9.12	1.079	ok	1.081	1.021-1.141
Toluene	15.72	11.76	1.337	ok	1.337	1.277-1.397
Trichloroethylene	12.79	11.76	1.088	ok	1.088	1.028-1.148
Trichlorofluoromethane	5.74	9.12	0.629	ok	0.629	0.569-0.689
Vinyl chloride	4.37	9.12	0.479	ok	0.479	0.419-0.539
Vinyl Acetate	8.04	9.12	0.882	ok	0.883	0.823-0.943
m,p-Xylene	19.87	18.81	1.056	ok	1.056	0.996-1.116
o-Xylene	20.61	18.81	1.096	ok	1.096	1.036-1.156

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1364-IC1364	Q31408.D	09/04/15 20:47	PN	0.2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31409.D	09/04/15 21:36	PN	0.5	GCMSQ	TO-15	
MSQ1364-IC1364	Q31410.D	09/04/15 22:24	PN	2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31411.D	09/04/15 23:12	PN	5	GCMSQ	TO-15	
MSQ1364-ICC1364	Q31412.D	09/05/15 00:00	PN	10	GCMSQ	TO-15	Reporting this level
MSQ1364-IC1364	Q31413.D	09/05/15 00:49	PN	20	GCMSQ	TO-15	
MSQ1364-IC1364	Q31414.D	09/05/15 01:36	PN	30	GCMSQ	TO-15	
MSQ1364-IC1364	Q31415.D	09/05/15 02:24	PN	40	GCMSQ	TO-15	

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	9.12	ok	9.12	8.79-9.45	1192430	ok	1138575	683145-1594005
1,4-Difluorobenzene	11.76	ok	11.76	11.43-12.09	5647578	ok	5251287	3150772-7351802
Chlorobenzene-D5	18.81	ok	18.81	18.48-19.14	3000935	ok	2827891	1696735-3959047

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1364-IC1364	Q31408.D	09/04/15 20:47	PN	0.2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31409.D	09/04/15 21:36	PN	0.5	GCMSQ	TO-15	
MSQ1364-IC1364	Q31410.D	09/04/15 22:24	PN	2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31411.D	09/04/15 23:12	PN	5	GCMSQ	TO-15	
MSQ1364-ICC1364	Q31412.D	09/05/15 00:00	PN	10	GCMSQ	TO-15	
MSQ1364-IC1364	Q31413.D	09/05/15 00:49	PN	20	GCMSQ	TO-15	Reporting this level
MSQ1364-IC1364	Q31414.D	09/05/15 01:36	PN	30	GCMSQ	TO-15	
MSQ1364-IC1364	Q31415.D	09/05/15 02:24	PN	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.56	9.12	0.610	ok	0.611	0.551-0.671
Acrolein	5.42	9.12	0.594	ok	0.595	0.535-0.655
Acrylonitrile	6.04	9.12	0.662	ok	0.663	0.603-0.723
1,3-Butadiene	4.50	9.12	0.493	ok	0.494	0.434-0.554
Benzene	11.25	11.76	0.957	ok	0.956	0.896-1.016
Bromodichloromethane	12.73	11.76	1.082	ok	1.082	1.022-1.142
Bromoform	19.94	18.81	1.060	ok	1.060	1.000-1.120
Bromomethane	4.78	9.12	0.524	ok	0.524	0.464-0.584
Bromoethene	5.31	9.12	0.582	ok	0.582	0.522-0.642
n-Butylbenzene	24.86	18.81	1.322	ok	1.322	1.262-1.382
sec-Butylbenzene	23.89	18.81	1.270	ok	1.270	1.210-1.330
Benzyl Chloride	23.66	18.81	1.258	ok	1.258	1.198-1.318
Carbon disulfide	6.89	9.12	0.755	ok	0.757	0.697-0.817
Chlorobenzene	18.89	18.81	1.004	ok	1.004	0.944-1.064
Chloroethane	4.95	9.12	0.543	ok	0.543	0.483-0.603
Chloroform	9.29	9.12	1.019	ok	1.018	0.958-1.078
Chloromethane	4.15	9.12	0.455	ok	0.455	0.395-0.515
3-Chloropropene	6.68	9.12	0.732	ok	0.733	0.673-0.793
2-Chlorotoluene	22.33	18.81	1.187	ok	1.187	1.127-1.247
Carbon tetrachloride	11.46	9.12	1.257	ok	1.257	1.197-1.317
Cyclohexane	11.63	11.76	0.989	ok	0.989	0.929-1.049
1,1-Dichloroethane	7.87	9.12	0.863	ok	0.863	0.803-0.923
1,1-Dichloroethylene	6.42	9.12	0.704	ok	0.704	0.644-0.764
1,2-Dibromoethane	16.85	18.81	0.896	ok	0.896	0.836-0.956
1,2-Dichloroethane	10.26	9.12	1.125	ok	1.126	1.066-1.186
1,2-Dichloropropane	12.44	11.76	1.058	ok	1.057	0.997-1.117
1,3-Dichloropropane	15.77	11.76	1.341	ok	1.341	1.281-1.401
1,4-Dioxane	12.82	11.76	1.090	ok	1.091	1.031-1.151
Dichlorodifluoromethane	3.99	9.12	0.438	ok	0.438	0.378-0.498
Dibromochloromethane	16.43	18.81	0.873	ok	0.874	0.814-0.934
trans-1,2-Dichloroethylene	7.62	9.12	0.836	ok	0.836	0.776-0.896
cis-1,2-Dichloroethylene	8.90	9.12	0.976	ok	0.976	0.916-1.036
cis-1,3-Dichloropropene	14.14	11.76	1.202	ok	1.202	1.142-1.262
m-Dichlorobenzene	23.67	18.81	1.258	ok	1.259	1.199-1.319
o-Dichlorobenzene	24.34	18.81	1.294	ok	1.294	1.234-1.354
p-Dichlorobenzene	23.79	18.81	1.265	ok	1.265	1.205-1.325
trans-1,3-Dichloropropene	14.99	11.76	1.275	ok	1.274	1.214-1.334
Ethanol	5.06	9.12	0.555	ok	0.556	0.496-0.616
Ethylbenzene	19.55	18.81	1.039	ok	1.039	0.979-1.099
Ethyl Acetate	9.21	9.12	1.010	ok	1.011	0.951-1.071

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1364-IC1364	Q31408.D	09/04/15 20:47	PN	0.2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31409.D	09/04/15 21:36	PN	0.5	GCMSQ	TO-15	
MSQ1364-IC1364	Q31410.D	09/04/15 22:24	PN	2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31411.D	09/04/15 23:12	PN	5	GCMSQ	TO-15	
MSQ1364-ICC1364	Q31412.D	09/05/15 00:00	PN	10	GCMSQ	TO-15	
MSQ1364-IC1364	Q31413.D	09/05/15 00:49	PN	20	GCMSQ	TO-15	Reporting this level
MSQ1364-IC1364	Q31414.D	09/05/15 01:36	PN	30	GCMSQ	TO-15	
MSQ1364-IC1364	Q31415.D	09/05/15 02:24	PN	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
4-Ethyltoluene	22.66	18.81	1.205	ok	1.205	1.145-1.265
Freon 113	6.84	9.12	0.750	ok	0.751	0.691-0.811
Freon 114	4.25	9.12	0.466	ok	0.466	0.406-0.526
Heptane	13.26	11.76	1.128	ok	1.128	1.068-1.188
Hexachlorobutadiene	27.67	18.81	1.471	ok	1.471	1.411-1.531
Hexane	9.17	9.12	1.005	ok	1.005	0.945-1.065
2-Hexanone	16.23	18.81	0.863	ok	0.864	0.804-0.924
Isopropylbenzene	21.58	18.81	1.147	ok	1.147	1.087-1.207
Isopropyl Alcohol	5.82	9.12	0.638	ok	0.639	0.579-0.699
p-Isopropyltoluene	24.16	18.81	1.284	ok	1.285	1.225-1.345
Methylene chloride	6.55	9.12	0.718	ok	0.719	0.659-0.779
Methyl ethyl ketone	8.37	9.12	0.918	ok	0.919	0.859-0.979
Methyl Isobutyl Ketone	14.23	11.76	1.210	ok	1.211	1.151-1.271
Methyl Tert Butyl Ether	7.96	9.12	0.873	ok	0.874	0.814-0.934
Methylmethacrylate	13.13	11.76	1.116	ok	1.117	1.057-1.177
Naphthalene	27.22	18.81	1.447	ok	1.447	1.387-1.507
Nonane	21.05	18.81	1.119	ok	1.119	1.059-1.179
Pentane	6.11	9.12	0.670	ok	0.670	0.610-0.730
Propylene	3.92	9.12	0.430	ok	0.430	0.370-0.490
Styrene	20.45	18.81	1.087	ok	1.087	1.027-1.147
1,1,1-Trichloroethane	10.60	9.12	1.162	ok	1.163	1.103-1.223
1,1,1,2-Tetrachloroethane	18.86	18.81	1.003	ok	1.003	0.943-1.063
1,1,2,2-Tetrachloroethane	20.61	18.81	1.096	ok	1.096	1.036-1.156
1,1,2-Trichloroethane	15.27	11.76	1.298	ok	1.298	1.238-1.358
1,2,4-Trichlorobenzene	27.08	18.81	1.440	ok	1.440	1.380-1.500
1,2,4-Trimethylbenzene	23.45	18.81	1.247	ok	1.247	1.187-1.307
1,3,5-Trimethylbenzene	22.79	18.81	1.212	ok	1.211	1.151-1.271
2,2,4-Trimethylpentane	12.85	11.76	1.093	ok	1.092	1.032-1.152
Tertiary Butyl Alcohol	6.48	9.12	0.711	ok	0.712	0.652-0.772
tert-Butylbenzene	23.44	18.81	1.246	ok	1.246	1.186-1.306
Tetrachloroethylene	17.68	18.81	0.940	ok	0.940	0.880-1.000
Tetrahydrofuran	9.84	9.12	1.079	ok	1.081	1.021-1.141
Toluene	15.72	11.76	1.337	ok	1.337	1.277-1.397
Trichloroethylene	12.79	11.76	1.088	ok	1.088	1.028-1.148
Trichlorofluoromethane	5.73	9.12	0.628	ok	0.629	0.569-0.689
Vinyl chloride	4.37	9.12	0.479	ok	0.479	0.419-0.539
Vinyl Acetate	8.05	9.12	0.883	ok	0.883	0.823-0.943
m,p-Xylene	19.88	18.81	1.057	ok	1.056	0.996-1.116
o-Xylene	20.62	18.81	1.096	ok	1.096	1.036-1.156

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1364-IC1364	Q31408.D	09/04/15 20:47	PN	0.2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31409.D	09/04/15 21:36	PN	0.5	GCMSQ	TO-15	
MSQ1364-IC1364	Q31410.D	09/04/15 22:24	PN	2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31411.D	09/04/15 23:12	PN	5	GCMSQ	TO-15	
MSQ1364-ICC1364	Q31412.D	09/05/15 00:00	PN	10	GCMSQ	TO-15	
MSQ1364-IC1364	Q31413.D	09/05/15 00:49	PN	20	GCMSQ	TO-15	Reporting this level
MSQ1364-IC1364	Q31414.D	09/05/15 01:36	PN	30	GCMSQ	TO-15	
MSQ1364-IC1364	Q31415.D	09/05/15 02:24	PN	40	GCMSQ	TO-15	

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	9.12	ok	9.12	8.79-9.45	1203032	ok	1138575	683145-1594005
1,4-Difluorobenzene	11.76	ok	11.76	11.43-12.09	5501602	ok	5251287	3150772-7351802
Chlorobenzene-D5	18.81	ok	18.81	18.48-19.14	3084432	ok	2827891	1696735-3959047

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1364-IC1364	Q31408.D	09/04/15 20:47	PN	0.2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31409.D	09/04/15 21:36	PN	0.5	GCMSQ	TO-15	
MSQ1364-IC1364	Q31410.D	09/04/15 22:24	PN	2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31411.D	09/04/15 23:12	PN	5	GCMSQ	TO-15	
MSQ1364-ICC1364	Q31412.D	09/05/15 00:00	PN	10	GCMSQ	TO-15	
MSQ1364-IC1364	Q31413.D	09/05/15 00:49	PN	20	GCMSQ	TO-15	
MSQ1364-IC1364	Q31414.D	09/05/15 01:36	PN	30	GCMSQ	TO-15	Reporting this level
MSQ1364-IC1364	Q31415.D	09/05/15 02:24	PN	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.56	9.12	0.610	ok	0.611	0.551-0.671
Acrolein	5.42	9.12	0.594	ok	0.595	0.535-0.655
Acrylonitrile	6.04	9.12	0.662	ok	0.663	0.603-0.723
1,3-Butadiene	4.50	9.12	0.493	ok	0.494	0.434-0.554
Benzene	11.25	11.77	0.956	ok	0.956	0.896-1.016
Bromodichloromethane	12.74	11.77	1.082	ok	1.082	1.022-1.142
Bromoform	19.94	18.82	1.060	ok	1.060	1.000-1.120
Bromomethane	4.78	9.12	0.524	ok	0.524	0.464-0.584
Bromoethene	5.31	9.12	0.582	ok	0.582	0.522-0.642
n-Butylbenzene	24.86	18.82	1.321	ok	1.322	1.262-1.382
sec-Butylbenzene	23.88	18.82	1.269	ok	1.270	1.210-1.330
Benzyl Chloride	23.66	18.82	1.257	ok	1.258	1.198-1.318
Carbon disulfide	6.90	9.12	0.757	ok	0.757	0.697-0.817
Chlorobenzene	18.89	18.82	1.004	ok	1.004	0.944-1.064
Chloroethane	4.95	9.12	0.543	ok	0.543	0.483-0.603
Chloroform	9.29	9.12	1.019	ok	1.018	0.958-1.078
Chloromethane	4.15	9.12	0.455	ok	0.455	0.395-0.515
3-Chloropropene	6.68	9.12	0.732	ok	0.733	0.673-0.793
2-Chlorotoluene	22.33	18.82	1.187	ok	1.187	1.127-1.247
Carbon tetrachloride	11.46	9.12	1.257	ok	1.257	1.197-1.317
Cyclohexane	11.64	11.77	0.989	ok	0.989	0.929-1.049
1,1-Dichloroethane	7.87	9.12	0.863	ok	0.863	0.803-0.923
1,1-Dichloroethylene	6.42	9.12	0.704	ok	0.704	0.644-0.764
1,2-Dibromoethane	16.86	18.82	0.896	ok	0.896	0.836-0.956
1,2-Dichloroethane	10.27	9.12	1.126	ok	1.126	1.066-1.186
1,2-Dichloropropane	12.44	11.77	1.057	ok	1.057	0.997-1.117
1,3-Dichloropropane	15.78	11.77	1.341	ok	1.341	1.281-1.401
1,4-Dioxane	12.83	11.77	1.090	ok	1.091	1.031-1.151
Dichlorodifluoromethane	3.99	9.12	0.438	ok	0.438	0.378-0.498
Dibromochloromethane	16.44	18.82	0.874	ok	0.874	0.814-0.934
trans-1,2-Dichloroethylene	7.63	9.12	0.837	ok	0.836	0.776-0.896
cis-1,2-Dichloroethylene	8.90	9.12	0.976	ok	0.976	0.916-1.036
cis-1,3-Dichloropropene	14.14	11.77	1.201	ok	1.202	1.142-1.262
m-Dichlorobenzene	23.67	18.82	1.258	ok	1.259	1.199-1.319
o-Dichlorobenzene	24.34	18.82	1.293	ok	1.294	1.234-1.354
p-Dichlorobenzene	23.79	18.82	1.264	ok	1.265	1.205-1.325
trans-1,3-Dichloropropene	14.99	11.77	1.274	ok	1.274	1.214-1.334
Ethanol	5.06	9.12	0.555	ok	0.556	0.496-0.616
Ethylbenzene	19.55	18.82	1.039	ok	1.039	0.979-1.099
Ethyl Acetate	9.21	9.12	1.010	ok	1.011	0.951-1.071

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1364-IC1364	Q31408.D	09/04/15 20:47	PN	0.2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31409.D	09/04/15 21:36	PN	0.5	GCMSQ	TO-15	
MSQ1364-IC1364	Q31410.D	09/04/15 22:24	PN	2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31411.D	09/04/15 23:12	PN	5	GCMSQ	TO-15	
MSQ1364-ICC1364	Q31412.D	09/05/15 00:00	PN	10	GCMSQ	TO-15	
MSQ1364-IC1364	Q31413.D	09/05/15 00:49	PN	20	GCMSQ	TO-15	
MSQ1364-IC1364	Q31414.D	09/05/15 01:36	PN	30	GCMSQ	TO-15	Reporting this level
MSQ1364-IC1364	Q31415.D	09/05/15 02:24	PN	40	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
4-Ethyltoluene	22.66	18.82	1.204	ok	1.205	1.145-1.265
Freon 113	6.84	9.12	0.750	ok	0.751	0.691-0.811
Freon 114	4.25	9.12	0.466	ok	0.466	0.406-0.526
Heptane	13.27	11.77	1.127	ok	1.128	1.068-1.188
Hexachlorobutadiene	27.67	18.82	1.470	ok	1.471	1.411-1.531
Hexane	9.17	9.12	1.005	ok	1.005	0.945-1.065
2-Hexanone	16.24	18.82	0.863	ok	0.864	0.804-0.924
Isopropylbenzene	21.58	18.82	1.147	ok	1.147	1.087-1.207
Isopropyl Alcohol	5.82	9.12	0.638	ok	0.639	0.579-0.699
p-Isopropyltoluene	24.16	18.82	1.284	ok	1.285	1.225-1.345
Methylene chloride	6.55	9.12	0.718	ok	0.719	0.659-0.779
Methyl ethyl ketone	8.37	9.12	0.918	ok	0.919	0.859-0.979
Methyl Isobutyl Ketone	14.23	11.77	1.209	ok	1.211	1.151-1.271
Methyl Tert Butyl Ether	7.96	9.12	0.873	ok	0.874	0.814-0.934
Methylmethacrylate	13.14	11.77	1.116	ok	1.117	1.057-1.177
Naphthalene	27.22	18.82	1.446	ok	1.447	1.387-1.507
Nonane	21.04	18.82	1.118	ok	1.119	1.059-1.179
Pentane	6.11	9.12	0.670	ok	0.670	0.610-0.730
Propylene	3.92	9.12	0.430	ok	0.430	0.370-0.490
Styrene	20.45	18.82	1.087	ok	1.087	1.027-1.147
1,1,1-Trichloroethane	10.61	9.12	1.163	ok	1.163	1.103-1.223
1,1,1,2-Tetrachloroethane	18.87	18.82	1.003	ok	1.003	0.943-1.063
1,1,2,2-Tetrachloroethane	20.62	18.82	1.096	ok	1.096	1.036-1.156
1,1,2-Trichloroethane	15.27	11.77	1.297	ok	1.298	1.238-1.358
1,2,4-Trichlorobenzene	27.08	18.82	1.439	ok	1.440	1.380-1.500
1,2,4-Trimethylbenzene	23.45	18.82	1.246	ok	1.247	1.187-1.307
1,3,5-Trimethylbenzene	22.79	18.82	1.211	ok	1.211	1.151-1.271
2,2,4-Trimethylpentane	12.84	11.77	1.091	ok	1.092	1.032-1.152
Tertiary Butyl Alcohol	6.48	9.12	0.711	ok	0.712	0.652-0.772
tert-Butylbenzene	23.44	18.82	1.245	ok	1.246	1.186-1.306
Tetrachloroethylene	17.69	18.82	0.940	ok	0.940	0.880-1.000
Tetrahydrofuran	9.84	9.12	1.079	ok	1.081	1.021-1.141
Toluene	15.73	11.77	1.336	ok	1.337	1.277-1.397
Trichloroethylene	12.80	11.77	1.088	ok	1.088	1.028-1.148
Trichlorofluoromethane	5.74	9.12	0.629	ok	0.629	0.569-0.689
Vinyl chloride	4.37	9.12	0.479	ok	0.479	0.419-0.539
Vinyl Acetate	8.05	9.12	0.883	ok	0.883	0.823-0.943
m,p-Xylene	19.88	18.82	1.056	ok	1.056	0.996-1.116
o-Xylene	20.63	18.82	1.096	ok	1.096	1.036-1.156

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1364-IC1364	Q31408.D	09/04/15 20:47	PN	0.2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31409.D	09/04/15 21:36	PN	0.5	GCMSQ	TO-15	
MSQ1364-IC1364	Q31410.D	09/04/15 22:24	PN	2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31411.D	09/04/15 23:12	PN	5	GCMSQ	TO-15	
MSQ1364-ICC1364	Q31412.D	09/05/15 00:00	PN	10	GCMSQ	TO-15	
MSQ1364-IC1364	Q31413.D	09/05/15 00:49	PN	20	GCMSQ	TO-15	
MSQ1364-IC1364	Q31414.D	09/05/15 01:36	PN	30	GCMSQ	TO-15	Reporting this level
MSQ1364-IC1364	Q31415.D	09/05/15 02:24	PN	40	GCMSQ	TO-15	

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	9.12	ok	9.12	8.79-9.45	1238382	ok	1138575	683145-1594005
1,4-Difluorobenzene	11.77	ok	11.76	11.43-12.09	5539635	ok	5251287	3150772-7351802
Chlorobenzene-D5	18.82	ok	18.81	18.48-19.14	3267200	ok	2827891	1696735-3959047

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1364-IC1364	Q31408.D	09/04/15 20:47	PN	0.2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31409.D	09/04/15 21:36	PN	0.5	GCMSQ	TO-15	
MSQ1364-IC1364	Q31410.D	09/04/15 22:24	PN	2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31411.D	09/04/15 23:12	PN	5	GCMSQ	TO-15	
MSQ1364-ICC1364	Q31412.D	09/05/15 00:00	PN	10	GCMSQ	TO-15	
MSQ1364-IC1364	Q31413.D	09/05/15 00:49	PN	20	GCMSQ	TO-15	
MSQ1364-IC1364	Q31414.D	09/05/15 01:36	PN	30	GCMSQ	TO-15	
MSQ1364-IC1364	Q31415.D	09/05/15 02:24	PN	40	GCMSQ	TO-15	Reporting this level

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.56	9.12	0.610	ok	0.611	0.551-0.671
Acrolein	5.42	9.12	0.594	ok	0.595	0.535-0.655
Acrylonitrile	6.04	9.12	0.662	ok	0.663	0.603-0.723
1,3-Butadiene	4.50	9.12	0.493	ok	0.494	0.434-0.554
Benzene	11.25	11.77	0.956	ok	0.956	0.896-1.016
Bromodichloromethane	12.74	11.77	1.082	ok	1.082	1.022-1.142
Bromoform	19.95	18.82	1.060	ok	1.060	1.000-1.120
Bromomethane	4.78	9.12	0.524	ok	0.524	0.464-0.584
Bromoethene	5.30	9.12	0.581	ok	0.582	0.522-0.642
n-Butylbenzene	24.85	18.82	1.320	ok	1.322	1.262-1.382
sec-Butylbenzene	23.88	18.82	1.269	ok	1.270	1.210-1.330
Benzyl Chloride	23.66	18.82	1.257	ok	1.258	1.198-1.318
Carbon disulfide	6.89	9.12	0.755	ok	0.757	0.697-0.817
Chlorobenzene	18.89	18.82	1.004	ok	1.004	0.944-1.064
Chloroethane	4.95	9.12	0.543	ok	0.543	0.483-0.603
Chloroform	9.29	9.12	1.019	ok	1.018	0.958-1.078
Chloromethane	4.15	9.12	0.455	ok	0.455	0.395-0.515
3-Chloropropene	6.68	9.12	0.732	ok	0.733	0.673-0.793
2-Chlorotoluene	22.33	18.82	1.187	ok	1.187	1.127-1.247
Carbon tetrachloride	11.46	9.12	1.257	ok	1.257	1.197-1.317
Cyclohexane	11.63	11.77	0.988	ok	0.989	0.929-1.049
1,1-Dichloroethane	7.87	9.12	0.863	ok	0.863	0.803-0.923
1,1-Dichloroethylene	6.42	9.12	0.704	ok	0.704	0.644-0.764
1,2-Dibromoethane	16.86	18.82	0.896	ok	0.896	0.836-0.956
1,2-Dichloroethane	10.27	9.12	1.126	ok	1.126	1.066-1.186
1,2-Dichloropropane	12.44	11.77	1.057	ok	1.057	0.997-1.117
1,3-Dichloropropane	15.78	11.77	1.341	ok	1.341	1.281-1.401
1,4-Dioxane	12.83	11.77	1.090	ok	1.091	1.031-1.151
Dichlorodifluoromethane	3.99	9.12	0.438	ok	0.438	0.378-0.498
Dibromochloromethane	16.44	18.82	0.874	ok	0.874	0.814-0.934
trans-1,2-Dichloroethylene	7.63	9.12	0.837	ok	0.836	0.776-0.896
cis-1,2-Dichloroethylene	8.90	9.12	0.976	ok	0.976	0.916-1.036
cis-1,3-Dichloropropene	14.14	11.77	1.201	ok	1.202	1.142-1.262
m-Dichlorobenzene	23.68	18.82	1.258	ok	1.259	1.199-1.319
o-Dichlorobenzene	24.35	18.82	1.294	ok	1.294	1.234-1.354
p-Dichlorobenzene	23.80	18.82	1.265	ok	1.265	1.205-1.325
trans-1,3-Dichloropropene	15.00	11.77	1.274	ok	1.274	1.214-1.334
Ethanol	5.06	9.12	0.555	ok	0.556	0.496-0.616
Ethylbenzene	19.55	18.82	1.039	ok	1.039	0.979-1.099
Ethyl Acetate	9.21	9.12	1.010	ok	1.011	0.951-1.071

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1364-IC1364	Q31408.D	09/04/15 20:47	PN	0.2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31409.D	09/04/15 21:36	PN	0.5	GCMSQ	TO-15	
MSQ1364-IC1364	Q31410.D	09/04/15 22:24	PN	2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31411.D	09/04/15 23:12	PN	5	GCMSQ	TO-15	
MSQ1364-ICC1364	Q31412.D	09/05/15 00:00	PN	10	GCMSQ	TO-15	
MSQ1364-IC1364	Q31413.D	09/05/15 00:49	PN	20	GCMSQ	TO-15	
MSQ1364-IC1364	Q31414.D	09/05/15 01:36	PN	30	GCMSQ	TO-15	
MSQ1364-IC1364	Q31415.D	09/05/15 02:24	PN	40	GCMSQ	TO-15	Reporting this level

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
4-Ethyltoluene	22.65	18.82	1.204	ok	1.205	1.145-1.265
Freon 113	6.84	9.12	0.750	ok	0.751	0.691-0.811
Freon 114	4.25	9.12	0.466	ok	0.466	0.406-0.526
Heptane	13.27	11.77	1.127	ok	1.128	1.068-1.188
Hexachlorobutadiene	27.67	18.82	1.470	ok	1.471	1.411-1.531
Hexane	9.17	9.12	1.005	ok	1.005	0.945-1.065
2-Hexanone	16.24	18.82	0.863	ok	0.864	0.804-0.924
Isopropylbenzene	21.58	18.82	1.147	ok	1.147	1.087-1.207
Isopropyl Alcohol	5.82	9.12	0.638	ok	0.639	0.579-0.699
p-Isopropyltoluene	24.16	18.82	1.284	ok	1.285	1.225-1.345
Methylene chloride	6.55	9.12	0.718	ok	0.719	0.659-0.779
Methyl ethyl ketone	8.37	9.12	0.918	ok	0.919	0.859-0.979
Methyl Isobutyl Ketone	14.24	11.77	1.210	ok	1.211	1.151-1.271
Methyl Tert Butyl Ether	7.96	9.12	0.873	ok	0.874	0.814-0.934
Methylmethacrylate	13.14	11.77	1.116	ok	1.117	1.057-1.177
Naphthalene	27.22	18.82	1.446	ok	1.447	1.387-1.507
Nonane	21.04	18.82	1.118	ok	1.119	1.059-1.179
Pentane	6.11	9.12	0.670	ok	0.670	0.610-0.730
Propylene	3.92	9.12	0.430	ok	0.430	0.370-0.490
Styrene	20.46	18.82	1.087	ok	1.087	1.027-1.147
1,1,1-Trichloroethane	10.61	9.12	1.163	ok	1.163	1.103-1.223
1,1,1,2-Tetrachloroethane	18.87	18.82	1.003	ok	1.003	0.943-1.063
1,1,2,2-Tetrachloroethane	20.62	18.82	1.096	ok	1.096	1.036-1.156
1,1,2-Trichloroethane	15.27	11.77	1.297	ok	1.298	1.238-1.358
1,2,4-Trichlorobenzene	27.08	18.82	1.439	ok	1.440	1.380-1.500
1,2,4-Trimethylbenzene	23.45	18.82	1.246	ok	1.247	1.187-1.307
1,3,5-Trimethylbenzene	22.78	18.82	1.210	ok	1.211	1.151-1.271
2,2,4-Trimethylpentane	12.83	11.77	1.090	ok	1.092	1.032-1.152
Tertiary Butyl Alcohol	6.48	9.12	0.711	ok	0.712	0.652-0.772
tert-Butylbenzene	23.44	18.82	1.245	ok	1.246	1.186-1.306
Tetrachloroethylene	17.69	18.82	0.940	ok	0.940	0.880-1.000
Tetrahydrofuran	9.84	9.12	1.079	ok	1.081	1.021-1.141
Toluene	15.73	11.77	1.336	ok	1.337	1.277-1.397
Trichloroethylene	12.80	11.77	1.088	ok	1.088	1.028-1.148
Trichlorofluoromethane	5.73	9.12	0.628	ok	0.629	0.569-0.689
Vinyl chloride	4.37	9.12	0.479	ok	0.479	0.419-0.539
Vinyl Acetate	8.04	9.12	0.882	ok	0.883	0.823-0.943
m,p-Xylene	19.88	18.82	1.056	ok	1.056	0.996-1.116
o-Xylene	20.63	18.82	1.096	ok	1.096	1.036-1.156

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1364-IC1364	Q31408.D	09/04/15 20:47	PN	0.2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31409.D	09/04/15 21:36	PN	0.5	GCMSQ	TO-15	
MSQ1364-IC1364	Q31410.D	09/04/15 22:24	PN	2	GCMSQ	TO-15	
MSQ1364-IC1364	Q31411.D	09/04/15 23:12	PN	5	GCMSQ	TO-15	
MSQ1364-ICC1364	Q31412.D	09/05/15 00:00	PN	10	GCMSQ	TO-15	
MSQ1364-IC1364	Q31413.D	09/05/15 00:49	PN	20	GCMSQ	TO-15	
MSQ1364-IC1364	Q31414.D	09/05/15 01:36	PN	30	GCMSQ	TO-15	
MSQ1364-IC1364	Q31415.D	09/05/15 02:24	PN	40	GCMSQ	TO-15	Reporting this level

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	9.12	ok	9.12	8.79-9.45	1127266	ok	1138575	683145-1594005
1,4-Difluorobenzene	11.77	ok	11.76	11.43-12.09	5247131	ok	5251287	3150772-7351802
Chlorobenzene-D5	18.82	ok	18.81	18.48-19.14	3308795	ok	2827891	1696735-3959047

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1367-IC1367	Q31458.D	09/09/15 12:07	AA	2	GCMSQ	TO-15	Reporting this level
MSQ1367-IC1367	Q31459.D	09/09/15 13:00	AA	20	GCMSQ	TO-15	
MSQ1367-IC1367	Q31460.D	09/09/15 15:23	AA	40	GCMSQ	TO-15	
MSQ1367-IC1367	Q31463.D	09/09/15 18:26	AA	0.2	GCMSQ	TO-15	
MSQ1367-IC1367	Q31464.D	09/09/15 19:19	AA	0.5	GCMSQ	TO-15	
MSQ1367-ICC1367	Q31465.D	09/09/15 20:12	AA	10	GCMSQ	TO-15	
MSQ1367-IC1367	Q31466.D	09/09/15 21:05	AA	5	GCMSQ	TO-15	
MSQ1367-IC1367	Q31467.D	09/09/15 21:57	AA	30	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.56	9.10	0.611	ok	0.611	0.551-0.671
Acrolein	5.42	9.10	0.596	ok	0.595	0.535-0.655
Acrylonitrile	6.03	9.10	0.663	ok	0.663	0.603-0.723
1,3-Butadiene	4.49	9.10	0.493	ok	0.494	0.434-0.554
Benzene	11.23	11.74	0.957	ok	0.956	0.896-1.016
Bromodichloromethane	12.71	11.74	1.083	ok	1.082	1.022-1.142
Bromoform	19.92	18.79	1.060	ok	1.060	1.000-1.120
Bromomethane	4.77	9.10	0.524	ok	0.525	0.465-0.585
Bromoethene	5.30	9.10	0.582	ok	0.583	0.523-0.643
n-Butylbenzene	24.85	18.79	1.323	ok	1.322	1.262-1.382
sec-Butylbenzene	23.88	18.79	1.271	ok	1.270	1.210-1.330
Benzyl Chloride	23.64	18.79	1.258	ok	1.258	1.198-1.318
Carbon disulfide	6.88	9.10	0.756	ok	0.756	0.696-0.816
Chlorobenzene	18.87	18.79	1.004	ok	1.004	0.944-1.064
Chloroethane	4.94	9.10	0.543	ok	0.543	0.483-0.603
Chloroform	9.27	9.10	1.019	ok	1.018	0.958-1.078
Chloromethane	4.15	9.10	0.456	ok	0.456	0.396-0.516
3-Chloropropene	6.67	9.10	0.733	ok	0.733	0.673-0.793
2-Chlorotoluene	22.32	18.79	1.188	ok	1.188	1.128-1.248
Carbon tetrachloride	11.44	9.10	1.257	ok	1.257	1.197-1.317
Cyclohexane	11.62	11.74	0.990	ok	0.989	0.929-1.049
1,1-Dichloroethane	7.85	9.10	0.863	ok	0.863	0.803-0.923
1,1-Dichloroethylene	6.41	9.10	0.704	ok	0.705	0.645-0.765
1,2-Dibromoethane	16.83	18.79	0.896	ok	0.896	0.836-0.956
1,2-Dichloroethane	10.24	9.10	1.125	ok	1.126	1.066-1.186
1,2-Dichloropropane	12.42	11.74	1.058	ok	1.058	0.998-1.118
1,3-Dichloropropane	15.75	11.74	1.342	ok	1.341	1.281-1.401
1,4-Dioxane	12.84	11.74	1.094	ok	1.092	1.032-1.152
Dichlorodifluoromethane	3.98	9.10	0.437	ok	0.438	0.378-0.498
Dibromochloromethane	16.41	18.79	0.873	ok	0.874	0.814-0.934
trans-1,2-Dichloroethylene	7.62	9.10	0.837	ok	0.837	0.777-0.897
cis-1,2-Dichloroethylene	8.88	9.10	0.976	ok	0.976	0.916-1.036
cis-1,3-Dichloropropene	14.12	11.74	1.203	ok	1.202	1.142-1.262
m-Dichlorobenzene	23.66	18.79	1.259	ok	1.259	1.199-1.319
o-Dichlorobenzene	24.33	18.79	1.295	ok	1.294	1.234-1.354
p-Dichlorobenzene	23.78	18.79	1.266	ok	1.265	1.205-1.325
trans-1,3-Dichloropropene	14.97	11.74	1.275	ok	1.274	1.214-1.334
Ethanol	5.06	9.10	0.556	ok	0.556	0.496-0.616
Ethylbenzene	19.53	18.79	1.039	ok	1.039	0.979-1.099
Ethyl Acetate	9.21	9.10	1.012	ok	1.012	0.952-1.072

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1367-IC1367	Q31458.D	09/09/15 12:07	AA	2	GCMSQ	TO-15	Reporting this level
MSQ1367-IC1367	Q31459.D	09/09/15 13:00	AA	20	GCMSQ	TO-15	
MSQ1367-IC1367	Q31460.D	09/09/15 15:23	AA	40	GCMSQ	TO-15	
MSQ1367-IC1367	Q31463.D	09/09/15 18:26	AA	0.2	GCMSQ	TO-15	
MSQ1367-IC1367	Q31464.D	09/09/15 19:19	AA	0.5	GCMSQ	TO-15	
MSQ1367-ICC1367	Q31465.D	09/09/15 20:12	AA	10	GCMSQ	TO-15	
MSQ1367-IC1367	Q31466.D	09/09/15 21:05	AA	5	GCMSQ	TO-15	
MSQ1367-IC1367	Q31467.D	09/09/15 21:57	AA	30	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
4-Ethyltoluene	22.64	18.79	1.205	ok	1.205	1.145-1.265
Freon 113	6.83	9.10	0.751	ok	0.751	0.691-0.811
Freon 114	4.24	9.10	0.466	ok	0.466	0.406-0.526
Heptane	13.24	11.74	1.128	ok	1.128	1.068-1.188
Hexachlorobutadiene	27.67	18.79	1.473	ok	1.472	1.412-1.532
Hexane	9.16	9.10	1.007	ok	1.006	0.946-1.066
2-Hexanone	16.24	18.79	0.864	ok	0.864	0.804-0.924
Isopropylbenzene	21.58	18.79	1.148	ok	1.148	1.088-1.208
Isopropyl Alcohol	5.82	9.10	0.640	ok	0.639	0.579-0.699
p-Isopropyltoluene	24.15	18.79	1.285	ok	1.285	1.225-1.345
Methylene chloride	6.54	9.10	0.719	ok	0.719	0.659-0.779
Methyl ethyl ketone	8.37	9.10	0.920	ok	0.919	0.859-0.979
Methyl Isobutyl Ketone	14.24	11.74	1.213	ok	1.211	1.151-1.271
Methyl Tert Butyl Ether	7.96	9.10	0.875	ok	0.875	0.815-0.935
Methylmethacrylate	13.12	11.74	1.118	ok	1.117	1.057-1.177
Naphthalene	27.22	18.79	1.449	ok	1.448	1.388-1.508
Nonane	21.03	18.79	1.119	ok	1.119	1.059-1.179
Pentane	6.10	9.10	0.670	ok	0.670	0.610-0.730
Propylene	3.92	9.10	0.431	ok	0.430	0.370-0.490
Styrene	20.43	18.79	1.087	ok	1.087	1.027-1.147
1,1,1-Trichloroethane	10.59	9.10	1.164	ok	1.163	1.103-1.223
1,1,1,2-Tetrachloroethane	18.85	18.79	1.003	ok	1.003	0.943-1.063
1,1,2,2-Tetrachloroethane	20.60	18.79	1.096	ok	1.096	1.036-1.156
1,1,2-Trichloroethane	15.25	11.74	1.299	ok	1.298	1.238-1.358
1,2,4-Trichlorobenzene	27.08	18.79	1.441	ok	1.440	1.380-1.500
1,2,4-Trimethylbenzene	23.44	18.79	1.247	ok	1.247	1.187-1.307
1,3,5-Trimethylbenzene	22.78	18.79	1.212	ok	1.212	1.152-1.272
2,2,4-Trimethylpentane	12.83	11.74	1.093	ok	1.092	1.032-1.152
Tertiary Butyl Alcohol	6.49	9.10	0.713	ok	0.713	0.653-0.773
tert-Butylbenzene	23.42	18.79	1.246	ok	1.246	1.186-1.306
Tetrachloroethylene	17.67	18.79	0.940	ok	0.940	0.880-1.000
Tetrahydrofuran	9.85	9.10	1.082	ok	1.082	1.022-1.142
Toluene	15.71	11.74	1.338	ok	1.337	1.277-1.397
Trichloroethylene	12.77	11.74	1.088	ok	1.088	1.028-1.148
Trichlorofluoromethane	5.73	9.10	0.630	ok	0.630	0.570-0.690
Vinyl chloride	4.36	9.10	0.479	ok	0.480	0.420-0.540
Vinyl Acetate	8.04	9.10	0.884	ok	0.883	0.823-0.943
m,p-Xylene	19.86	18.79	1.057	ok	1.057	0.997-1.117
o-Xylene	20.60	18.79	1.096	ok	1.096	1.036-1.156

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1367-IC1367	Q31458.D	09/09/15 12:07	AA	2	GCMSQ	TO-15	Reporting this level
MSQ1367-IC1367	Q31459.D	09/09/15 13:00	AA	20	GCMSQ	TO-15	
MSQ1367-IC1367	Q31460.D	09/09/15 15:23	AA	40	GCMSQ	TO-15	
MSQ1367-IC1367	Q31463.D	09/09/15 18:26	AA	0.2	GCMSQ	TO-15	
MSQ1367-IC1367	Q31464.D	09/09/15 19:19	AA	0.5	GCMSQ	TO-15	
MSQ1367-ICC1367	Q31465.D	09/09/15 20:12	AA	10	GCMSQ	TO-15	
MSQ1367-IC1367	Q31466.D	09/09/15 21:05	AA	5	GCMSQ	TO-15	
MSQ1367-IC1367	Q31467.D	09/09/15 21:57	AA	30	GCMSQ	TO-15	

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	9.10	ok	9.11	8.78-9.44	413477	ok	474110	284466-663754
1,4-Difluorobenzene	11.74	ok	11.75	11.42-12.08	1767239	ok	2184854	1310912-3058796
Chlorobenzene-D5	18.79	ok	18.80	18.47-19.13	856979	ok	995369	597221-1393517

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1367-IC1367	Q31458.D	09/09/15 12:07	AA	2	GCMSQ	TO-15	
MSQ1367-IC1367	Q31459.D	09/09/15 13:00	AA	20	GCMSQ	TO-15	Reporting this level
MSQ1367-IC1367	Q31460.D	09/09/15 15:23	AA	40	GCMSQ	TO-15	
MSQ1367-IC1367	Q31463.D	09/09/15 18:26	AA	0.2	GCMSQ	TO-15	
MSQ1367-IC1367	Q31464.D	09/09/15 19:19	AA	0.5	GCMSQ	TO-15	
MSQ1367-ICC1367	Q31465.D	09/09/15 20:12	AA	10	GCMSQ	TO-15	
MSQ1367-IC1367	Q31466.D	09/09/15 21:05	AA	5	GCMSQ	TO-15	
MSQ1367-IC1367	Q31467.D	09/09/15 21:57	AA	30	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.56	9.11	0.610	ok	0.611	0.551-0.671
Acrolein	5.42	9.11	0.595	ok	0.595	0.535-0.655
Acrylonitrile	6.04	9.11	0.663	ok	0.663	0.603-0.723
1,3-Butadiene	4.50	9.11	0.494	ok	0.494	0.434-0.554
Benzene	11.24	11.76	0.956	ok	0.956	0.896-1.016
Bromodichloromethane	12.73	11.76	1.082	ok	1.082	1.022-1.142
Bromoform	19.93	18.80	1.060	ok	1.060	1.000-1.120
Bromomethane	4.78	9.11	0.525	ok	0.525	0.465-0.585
Bromoethene	5.31	9.11	0.583	ok	0.583	0.523-0.643
n-Butylbenzene	24.85	18.80	1.322	ok	1.322	1.262-1.382
sec-Butylbenzene	23.88	18.80	1.270	ok	1.270	1.210-1.330
Benzyl Chloride	23.65	18.80	1.258	ok	1.258	1.198-1.318
Carbon disulfide	6.89	9.11	0.756	ok	0.756	0.696-0.816
Chlorobenzene	18.88	18.80	1.004	ok	1.004	0.944-1.064
Chloroethane	4.95	9.11	0.543	ok	0.543	0.483-0.603
Chloroform	9.28	9.11	1.019	ok	1.018	0.958-1.078
Chloromethane	4.15	9.11	0.456	ok	0.456	0.396-0.516
3-Chloropropene	6.68	9.11	0.733	ok	0.733	0.673-0.793
2-Chlorotoluene	22.33	18.80	1.188	ok	1.188	1.128-1.248
Carbon tetrachloride	11.45	9.11	1.257	ok	1.257	1.197-1.317
Cyclohexane	11.63	11.76	0.989	ok	0.989	0.929-1.049
1,1-Dichloroethane	7.86	9.11	0.863	ok	0.863	0.803-0.923
1,1-Dichloroethylene	6.42	9.11	0.705	ok	0.705	0.645-0.765
1,2-Dibromoethane	16.85	18.80	0.896	ok	0.896	0.836-0.956
1,2-Dichloroethane	10.26	9.11	1.126	ok	1.126	1.066-1.186
1,2-Dichloropropane	12.43	11.76	1.057	ok	1.058	0.998-1.118
1,3-Dichloropropane	15.77	11.76	1.341	ok	1.341	1.281-1.401
1,4-Dioxane	12.82	11.76	1.090	ok	1.092	1.032-1.152
Dichlorodifluoromethane	3.99	9.11	0.438	ok	0.438	0.378-0.498
Dibromochloromethane	16.43	18.80	0.874	ok	0.874	0.814-0.934
trans-1,2-Dichloroethylene	7.62	9.11	0.836	ok	0.837	0.777-0.897
cis-1,2-Dichloroethylene	8.90	9.11	0.977	ok	0.976	0.916-1.036
cis-1,3-Dichloropropene	14.13	11.76	1.202	ok	1.202	1.142-1.262
m-Dichlorobenzene	23.67	18.80	1.259	ok	1.259	1.199-1.319
o-Dichlorobenzene	24.34	18.80	1.295	ok	1.294	1.234-1.354
p-Dichlorobenzene	23.78	18.80	1.265	ok	1.265	1.205-1.325
trans-1,3-Dichloropropene	14.98	11.76	1.274	ok	1.274	1.214-1.334
Ethanol	5.06	9.11	0.555	ok	0.556	0.496-0.616
Ethylbenzene	19.54	18.80	1.039	ok	1.039	0.979-1.099
Ethyl Acetate	9.20	9.11	1.010	ok	1.012	0.952-1.072

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1367-IC1367	Q31458.D	09/09/15 12:07	AA	2	GCMSQ	TO-15	
MSQ1367-IC1367	Q31459.D	09/09/15 13:00	AA	20	GCMSQ	TO-15	Reporting this level
MSQ1367-IC1367	Q31460.D	09/09/15 15:23	AA	40	GCMSQ	TO-15	
MSQ1367-IC1367	Q31463.D	09/09/15 18:26	AA	0.2	GCMSQ	TO-15	
MSQ1367-IC1367	Q31464.D	09/09/15 19:19	AA	0.5	GCMSQ	TO-15	
MSQ1367-ICC1367	Q31465.D	09/09/15 20:12	AA	10	GCMSQ	TO-15	
MSQ1367-IC1367	Q31466.D	09/09/15 21:05	AA	5	GCMSQ	TO-15	
MSQ1367-IC1367	Q31467.D	09/09/15 21:57	AA	30	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
4-Ethyltoluene	22.65	18.80	1.205	ok	1.205	1.145-1.265
Freon 113	6.84	9.11	0.751	ok	0.751	0.691-0.811
Freon 114	4.25	9.11	0.467	ok	0.466	0.406-0.526
Heptane	13.26	11.76	1.128	ok	1.128	1.068-1.188
Hexachlorobutadiene	27.67	18.80	1.472	ok	1.472	1.412-1.532
Hexane	9.16	9.11	1.005	ok	1.006	0.946-1.066
2-Hexanone	16.22	18.80	0.863	ok	0.864	0.804-0.924
Isopropylbenzene	21.58	18.80	1.148	ok	1.148	1.088-1.208
Isopropyl Alcohol	5.81	9.11	0.638	ok	0.639	0.579-0.699
p-Isopropyltoluene	24.16	18.80	1.285	ok	1.285	1.225-1.345
Methylene chloride	6.54	9.11	0.718	ok	0.719	0.659-0.779
Methyl ethyl ketone	8.36	9.11	0.918	ok	0.919	0.859-0.979
Methyl Isobutyl Ketone	14.22	11.76	1.209	ok	1.211	1.151-1.271
Methyl Tert Butyl Ether	7.95	9.11	0.873	ok	0.875	0.815-0.935
Methylmethacrylate	13.13	11.76	1.116	ok	1.117	1.057-1.177
Naphthalene	27.22	18.80	1.448	ok	1.448	1.388-1.508
Nonane	21.04	18.80	1.119	ok	1.119	1.059-1.179
Pentane	6.10	9.11	0.670	ok	0.670	0.610-0.730
Propylene	3.92	9.11	0.430	ok	0.430	0.370-0.490
Styrene	20.44	18.80	1.087	ok	1.087	1.027-1.147
1,1,1-Trichloroethane	10.60	9.11	1.164	ok	1.163	1.103-1.223
1,1,1,2-Tetrachloroethane	18.86	18.80	1.003	ok	1.003	0.943-1.063
1,1,2,2-Tetrachloroethane	20.61	18.80	1.096	ok	1.096	1.036-1.156
1,1,2-Trichloroethane	15.26	11.76	1.298	ok	1.298	1.238-1.358
1,2,4-Trichlorobenzene	27.08	18.80	1.440	ok	1.440	1.380-1.500
1,2,4-Trimethylbenzene	23.44	18.80	1.247	ok	1.247	1.187-1.307
1,3,5-Trimethylbenzene	22.78	18.80	1.212	ok	1.212	1.152-1.272
2,2,4-Trimethylpentane	12.84	11.76	1.092	ok	1.092	1.032-1.152
Tertiary Butyl Alcohol	6.47	9.11	0.710	ok	0.713	0.653-0.773
tert-Butylbenzene	23.43	18.80	1.246	ok	1.246	1.186-1.306
Tetrachloroethylene	17.68	18.80	0.940	ok	0.940	0.880-1.000
Tetrahydrofuran	9.83	9.11	1.079	ok	1.082	1.022-1.142
Toluene	15.72	11.76	1.337	ok	1.337	1.277-1.397
Trichloroethylene	12.79	11.76	1.088	ok	1.088	1.028-1.148
Trichlorofluoromethane	5.73	9.11	0.629	ok	0.630	0.570-0.690
Vinyl chloride	4.37	9.11	0.480	ok	0.480	0.420-0.540
Vinyl Acetate	8.04	9.11	0.883	ok	0.883	0.823-0.943
m,p-Xylene	19.86	18.80	1.056	ok	1.057	0.997-1.117
o-Xylene	20.61	18.80	1.096	ok	1.096	1.036-1.156

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1367-IC1367	Q31458.D	09/09/15 12:07	AA	2	GCMSQ	TO-15	
MSQ1367-IC1367	Q31459.D	09/09/15 13:00	AA	20	GCMSQ	TO-15	Reporting this level
MSQ1367-IC1367	Q31460.D	09/09/15 15:23	AA	40	GCMSQ	TO-15	
MSQ1367-IC1367	Q31463.D	09/09/15 18:26	AA	0.2	GCMSQ	TO-15	
MSQ1367-IC1367	Q31464.D	09/09/15 19:19	AA	0.5	GCMSQ	TO-15	
MSQ1367-ICC1367	Q31465.D	09/09/15 20:12	AA	10	GCMSQ	TO-15	
MSQ1367-IC1367	Q31466.D	09/09/15 21:05	AA	5	GCMSQ	TO-15	
MSQ1367-IC1367	Q31467.D	09/09/15 21:57	AA	30	GCMSQ	TO-15	

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	9.11	ok	9.11	8.78-9.44	456201	ok	474110	284466-663754
1,4-Difluorobenzene	11.76	ok	11.75	11.42-12.08	2096154	ok	2184854	1310912-3058796
Chlorobenzene-D5	18.80	ok	18.80	18.47-19.13	997581	ok	995369	597221-1393517

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1367-IC1367	Q31458.D	09/09/15 12:07	AA	2	GCMSQ	TO-15	
MSQ1367-IC1367	Q31459.D	09/09/15 13:00	AA	20	GCMSQ	TO-15	
MSQ1367-IC1367	Q31460.D	09/09/15 15:23	AA	40	GCMSQ	TO-15	Reporting this level
MSQ1367-IC1367	Q31463.D	09/09/15 18:26	AA	0.2	GCMSQ	TO-15	
MSQ1367-IC1367	Q31464.D	09/09/15 19:19	AA	0.5	GCMSQ	TO-15	
MSQ1367-ICC1367	Q31465.D	09/09/15 20:12	AA	10	GCMSQ	TO-15	
MSQ1367-IC1367	Q31466.D	09/09/15 21:05	AA	5	GCMSQ	TO-15	
MSQ1367-IC1367	Q31467.D	09/09/15 21:57	AA	30	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.56	9.12	0.610	ok	0.611	0.551-0.671
Acrolein	5.42	9.12	0.594	ok	0.595	0.535-0.655
Acrylonitrile	6.05	9.12	0.663	ok	0.663	0.603-0.723
1,3-Butadiene	4.50	9.12	0.493	ok	0.494	0.434-0.554
Benzene	11.25	11.76	0.957	ok	0.956	0.896-1.016
Bromodichloromethane	12.73	11.76	1.082	ok	1.082	1.022-1.142
Bromoform	19.94	18.81	1.060	ok	1.060	1.000-1.120
Bromomethane	4.78	9.12	0.524	ok	0.525	0.465-0.585
Bromoethene	5.31	9.12	0.582	ok	0.583	0.523-0.643
n-Butylbenzene	24.86	18.81	1.322	ok	1.322	1.262-1.382
sec-Butylbenzene	23.89	18.81	1.270	ok	1.270	1.210-1.330
Benzyl Chloride	23.66	18.81	1.258	ok	1.258	1.198-1.318
Carbon disulfide	6.89	9.12	0.755	ok	0.756	0.696-0.816
Chlorobenzene	18.89	18.81	1.004	ok	1.004	0.944-1.064
Chloroethane	4.95	9.12	0.543	ok	0.543	0.483-0.603
Chloroform	9.29	9.12	1.019	ok	1.018	0.958-1.078
Chloromethane	4.15	9.12	0.455	ok	0.456	0.396-0.516
3-Chloropropene	6.68	9.12	0.732	ok	0.733	0.673-0.793
2-Chlorotoluene	22.33	18.81	1.187	ok	1.188	1.128-1.248
Carbon tetrachloride	11.46	9.12	1.257	ok	1.257	1.197-1.317
Cyclohexane	11.63	11.76	0.989	ok	0.989	0.929-1.049
1,1-Dichloroethane	7.87	9.12	0.863	ok	0.863	0.803-0.923
1,1-Dichloroethylene	6.42	9.12	0.704	ok	0.705	0.645-0.765
1,2-Dibromoethane	16.86	18.81	0.896	ok	0.896	0.836-0.956
1,2-Dichloroethane	10.26	9.12	1.125	ok	1.126	1.066-1.186
1,2-Dichloropropane	12.44	11.76	1.058	ok	1.058	0.998-1.118
1,3-Dichloropropane	15.78	11.76	1.342	ok	1.341	1.281-1.401
1,4-Dioxane	12.82	11.76	1.090	ok	1.092	1.032-1.152
Dichlorodifluoromethane	3.99	9.12	0.438	ok	0.438	0.378-0.498
Dibromochloromethane	16.44	18.81	0.874	ok	0.874	0.814-0.934
trans-1,2-Dichloroethylene	7.62	9.12	0.836	ok	0.837	0.777-0.897
cis-1,2-Dichloroethylene	8.90	9.12	0.976	ok	0.976	0.916-1.036
cis-1,3-Dichloropropene	14.14	11.76	1.202	ok	1.202	1.142-1.262
m-Dichlorobenzene	23.67	18.81	1.258	ok	1.259	1.199-1.319
o-Dichlorobenzene	24.34	18.81	1.294	ok	1.294	1.234-1.354
p-Dichlorobenzene	23.79	18.81	1.265	ok	1.265	1.205-1.325
trans-1,3-Dichloropropene	14.99	11.76	1.275	ok	1.274	1.214-1.334
Ethanol	5.07	9.12	0.556	ok	0.556	0.496-0.616
Ethylbenzene	19.55	18.81	1.039	ok	1.039	0.979-1.099
Ethyl Acetate	9.21	9.12	1.010	ok	1.012	0.952-1.072

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1367-IC1367	Q31458.D	09/09/15 12:07	AA	2	GCMSQ	TO-15	
MSQ1367-IC1367	Q31459.D	09/09/15 13:00	AA	20	GCMSQ	TO-15	
MSQ1367-IC1367	Q31460.D	09/09/15 15:23	AA	40	GCMSQ	TO-15	Reporting this level
MSQ1367-IC1367	Q31463.D	09/09/15 18:26	AA	0.2	GCMSQ	TO-15	
MSQ1367-IC1367	Q31464.D	09/09/15 19:19	AA	0.5	GCMSQ	TO-15	
MSQ1367-ICC1367	Q31465.D	09/09/15 20:12	AA	10	GCMSQ	TO-15	
MSQ1367-IC1367	Q31466.D	09/09/15 21:05	AA	5	GCMSQ	TO-15	
MSQ1367-IC1367	Q31467.D	09/09/15 21:57	AA	30	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
4-Ethyltoluene	22.66	18.81	1.205	ok	1.205	1.145-1.265
Freon 113	6.84	9.12	0.750	ok	0.751	0.691-0.811
Freon 114	4.25	9.12	0.466	ok	0.466	0.406-0.526
Heptane	13.26	11.76	1.128	ok	1.128	1.068-1.188
Hexachlorobutadiene	27.67	18.81	1.471	ok	1.472	1.412-1.532
Hexane	9.16	9.12	1.004	ok	1.006	0.946-1.066
2-Hexanone	16.24	18.81	0.863	ok	0.864	0.804-0.924
Isopropylbenzene	21.59	18.81	1.148	ok	1.148	1.088-1.208
Isopropyl Alcohol	5.84	9.12	0.640	ok	0.639	0.579-0.699
p-Isopropyltoluene	24.16	18.81	1.284	ok	1.285	1.225-1.345
Methylene chloride	6.55	9.12	0.718	ok	0.719	0.659-0.779
Methyl ethyl ketone	8.37	9.12	0.918	ok	0.919	0.859-0.979
Methyl Isobutyl Ketone	14.24	11.76	1.211	ok	1.211	1.151-1.271
Methyl Tert Butyl Ether	7.96	9.12	0.873	ok	0.875	0.815-0.935
Methylmethacrylate	13.14	11.76	1.117	ok	1.117	1.057-1.177
Naphthalene	27.22	18.81	1.447	ok	1.448	1.388-1.508
Nonane	21.05	18.81	1.119	ok	1.119	1.059-1.179
Pentane	6.11	9.12	0.670	ok	0.670	0.610-0.730
Propylene	3.92	9.12	0.430	ok	0.430	0.370-0.490
Styrene	20.45	18.81	1.087	ok	1.087	1.027-1.147
1,1,1-Trichloroethane	10.60	9.12	1.162	ok	1.163	1.103-1.223
1,1,1,2-Tetrachloroethane	18.86	18.81	1.003	ok	1.003	0.943-1.063
1,1,2,2-Tetrachloroethane	20.62	18.81	1.096	ok	1.096	1.036-1.156
1,1,2-Trichloroethane	15.27	11.76	1.298	ok	1.298	1.238-1.358
1,2,4-Trichlorobenzene	27.08	18.81	1.440	ok	1.440	1.380-1.500
1,2,4-Trimethylbenzene	23.45	18.81	1.247	ok	1.247	1.187-1.307
1,3,5-Trimethylbenzene	22.79	18.81	1.212	ok	1.212	1.152-1.272
2,2,4-Trimethylpentane	12.85	11.76	1.093	ok	1.092	1.032-1.152
Tertiary Butyl Alcohol	6.49	9.12	0.712	ok	0.713	0.653-0.773
tert-Butylbenzene	23.44	18.81	1.246	ok	1.246	1.186-1.306
Tetrachloroethylene	17.68	18.81	0.940	ok	0.940	0.880-1.000
Tetrahydrofuran	9.84	9.12	1.079	ok	1.082	1.022-1.142
Toluene	15.72	11.76	1.337	ok	1.337	1.277-1.397
Trichloroethylene	12.79	11.76	1.088	ok	1.088	1.028-1.148
Trichlorofluoromethane	5.73	9.12	0.628	ok	0.630	0.570-0.690
Vinyl chloride	4.37	9.12	0.479	ok	0.480	0.420-0.540
Vinyl Acetate	8.06	9.12	0.884	ok	0.883	0.823-0.943
m,p-Xylene	19.88	18.81	1.057	ok	1.057	0.997-1.117
o-Xylene	20.63	18.81	1.097	ok	1.096	1.036-1.156

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1367-IC1367	Q31458.D	09/09/15 12:07	AA	2	GCMSQ	TO-15	
MSQ1367-IC1367	Q31459.D	09/09/15 13:00	AA	20	GCMSQ	TO-15	
MSQ1367-IC1367	Q31460.D	09/09/15 15:23	AA	40	GCMSQ	TO-15	Reporting this level
MSQ1367-IC1367	Q31463.D	09/09/15 18:26	AA	0.2	GCMSQ	TO-15	
MSQ1367-IC1367	Q31464.D	09/09/15 19:19	AA	0.5	GCMSQ	TO-15	
MSQ1367-ICC1367	Q31465.D	09/09/15 20:12	AA	10	GCMSQ	TO-15	
MSQ1367-IC1367	Q31466.D	09/09/15 21:05	AA	5	GCMSQ	TO-15	
MSQ1367-IC1367	Q31467.D	09/09/15 21:57	AA	30	GCMSQ	TO-15	

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	9.12	ok	9.11	8.78-9.44	485873	ok	474110	284466-663754
1,4-Difluorobenzene	11.76	ok	11.75	11.42-12.08	2298568	ok	2184854	1310912-3058796
Chlorobenzene-D5	18.81	ok	18.80	18.47-19.13	1039308	ok	995369	597221-1393517

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1367-IC1367	Q31458.D	09/09/15 12:07	AA	2	GCMSQ	TO-15	
MSQ1367-IC1367	Q31459.D	09/09/15 13:00	AA	20	GCMSQ	TO-15	
MSQ1367-IC1367	Q31460.D	09/09/15 15:23	AA	40	GCMSQ	TO-15	
MSQ1367-IC1367	Q31463.D	09/09/15 18:26	AA	0.2	GCMSQ	TO-15	Reporting this level
MSQ1367-IC1367	Q31464.D	09/09/15 19:19	AA	0.5	GCMSQ	TO-15	
MSQ1367-ICC1367	Q31465.D	09/09/15 20:12	AA	10	GCMSQ	TO-15	
MSQ1367-IC1367	Q31466.D	09/09/15 21:05	AA	5	GCMSQ	TO-15	
MSQ1367-IC1367	Q31467.D	09/09/15 21:57	AA	30	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.58	9.10	0.613	ok	0.611	0.551-0.671
Acrolein	5.42	9.10	0.596	ok	0.595	0.535-0.655
Acrylonitrile	6.04	9.10	0.664	ok	0.663	0.603-0.723
1,3-Butadiene	4.49	9.10	0.493	ok	0.494	0.434-0.554
Benzene	11.23	11.74	0.957	ok	0.956	0.896-1.016
Bromodichloromethane	12.71	11.74	1.083	ok	1.082	1.022-1.142
Bromoform	19.92	18.80	1.060	ok	1.060	1.000-1.120
Bromomethane	4.78	9.10	0.525	ok	0.525	0.465-0.585
Bromoethene	5.30	9.10	0.582	ok	0.583	0.523-0.643
n-Butylbenzene	24.85	18.80	1.322	ok	1.322	1.262-1.382
sec-Butylbenzene	23.88	18.80	1.270	ok	1.270	1.210-1.330
Benzyl Chloride	23.65	18.80	1.258	ok	1.258	1.198-1.318
Carbon disulfide	6.88	9.10	0.756	ok	0.756	0.696-0.816
Chlorobenzene	18.87	18.80	1.004	ok	1.004	0.944-1.064
Chloroethane	4.95	9.10	0.544	ok	0.543	0.483-0.603
Chloroform	9.27	9.10	1.019	ok	1.018	0.958-1.078
Chloromethane	4.15	9.10	0.456	ok	0.456	0.396-0.516
3-Chloropropene	6.68	9.10	0.734	ok	0.733	0.673-0.793
2-Chlorotoluene	22.32	18.80	1.187	ok	1.188	1.128-1.248
Carbon tetrachloride	11.44	9.10	1.257	ok	1.257	1.197-1.317
Cyclohexane	11.62	11.74	0.990	ok	0.989	0.929-1.049
1,1-Dichloroethane	7.85	9.10	0.863	ok	0.863	0.803-0.923
1,1-Dichloroethylene	6.42	9.10	0.705	ok	0.705	0.645-0.765
1,2-Dibromoethane	16.83	18.80	0.895	ok	0.896	0.836-0.956
1,2-Dichloroethane	10.25	9.10	1.126	ok	1.126	1.066-1.186
1,2-Dichloropropane	12.42	11.74	1.058	ok	1.058	0.998-1.118
1,3-Dichloropropane	15.76	11.74	1.342	ok	1.341	1.281-1.401
1,4-Dioxane	12.90	11.74	1.099	ok	1.092	1.032-1.152
Dichlorodifluoromethane	3.99	9.10	0.438	ok	0.438	0.378-0.498
Dibromochloromethane	16.41	18.80	0.873	ok	0.874	0.814-0.934
trans-1,2-Dichloroethylene	7.62	9.10	0.837	ok	0.837	0.777-0.897
cis-1,2-Dichloroethylene	8.88	9.10	0.976	ok	0.976	0.916-1.036
cis-1,3-Dichloropropene	14.12	11.74	1.203	ok	1.202	1.142-1.262
m-Dichlorobenzene	23.66	18.80	1.259	ok	1.259	1.199-1.319
o-Dichlorobenzene	24.33	18.80	1.294	ok	1.294	1.234-1.354
p-Dichlorobenzene	23.78	18.80	1.265	ok	1.265	1.205-1.325
trans-1,3-Dichloropropene	14.97	11.74	1.275	ok	1.274	1.214-1.334
Ethylbenzene	19.53	18.80	1.039	ok	1.039	0.979-1.099
Ethyl Acetate	9.24	9.10	1.015	ok	1.012	0.952-1.072
4-Ethyltoluene	22.64	18.80	1.204	ok	1.205	1.145-1.265

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1367-IC1367	Q31458.D	09/09/15 12:07	AA	2	GCMSQ	TO-15	
MSQ1367-IC1367	Q31459.D	09/09/15 13:00	AA	20	GCMSQ	TO-15	
MSQ1367-IC1367	Q31460.D	09/09/15 15:23	AA	40	GCMSQ	TO-15	
MSQ1367-IC1367	Q31463.D	09/09/15 18:26	AA	0.2	GCMSQ	TO-15	Reporting this level
MSQ1367-IC1367	Q31464.D	09/09/15 19:19	AA	0.5	GCMSQ	TO-15	
MSQ1367-ICC1367	Q31465.D	09/09/15 20:12	AA	10	GCMSQ	TO-15	
MSQ1367-IC1367	Q31466.D	09/09/15 21:05	AA	5	GCMSQ	TO-15	
MSQ1367-IC1367	Q31467.D	09/09/15 21:57	AA	30	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Freon 113	6.84	9.10	0.752	ok	0.751	0.691-0.811
Freon 114	4.24	9.10	0.466	ok	0.466	0.406-0.526
Heptane	13.25	11.74	1.129	ok	1.128	1.068-1.188
Hexachlorobutadiene	27.67	18.80	1.472	ok	1.472	1.412-1.532
Hexane	9.16	9.10	1.007	ok	1.006	0.946-1.066
2-Hexanone	16.27	18.80	0.865	ok	0.864	0.804-0.924
Isopropylbenzene	21.58	18.80	1.148	ok	1.148	1.088-1.208
p-Isopropyltoluene	24.15	18.80	1.285	ok	1.285	1.225-1.345
Methylene chloride	6.54	9.10	0.719	ok	0.719	0.659-0.779
Methyl ethyl ketone	8.40	9.10	0.923	ok	0.919	0.859-0.979
Methyl Isobutyl Ketone	14.27	11.74	1.216	ok	1.211	1.151-1.271
Methyl Tert Butyl Ether	8.01	9.10	0.880	ok	0.875	0.815-0.935
Methylmethacrylate	13.14	11.74	1.119	ok	1.117	1.057-1.177
Naphthalene	27.22	18.80	1.448	ok	1.448	1.388-1.508
Nonane	21.03	18.80	1.119	ok	1.119	1.059-1.179
Pentane	6.10	9.10	0.670	ok	0.670	0.610-0.730
Propylene	3.92	9.10	0.431	ok	0.430	0.370-0.490
Styrene	20.44	18.80	1.087	ok	1.087	1.027-1.147
1,1,1-Trichloroethane	10.59	9.10	1.164	ok	1.163	1.103-1.223
1,1,2,2-Tetrachloroethane	20.60	18.80	1.096	ok	1.096	1.036-1.156
1,1,2-Trichloroethane	15.24	11.74	1.298	ok	1.298	1.238-1.358
1,2,4-Trichlorobenzene	27.08	18.80	1.440	ok	1.440	1.380-1.500
1,2,4-Trimethylbenzene	23.44	18.80	1.247	ok	1.247	1.187-1.307
1,3,5-Trimethylbenzene	22.78	18.80	1.212	ok	1.212	1.152-1.272
2,2,4-Trimethylpentane	12.83	11.74	1.093	ok	1.092	1.032-1.152
tert-Butylbenzene	23.42	18.80	1.246	ok	1.246	1.186-1.306
Tetrachloroethylene	17.67	18.80	0.940	ok	0.940	0.880-1.000
Tetrahydrofuran	9.90	9.10	1.088	ok	1.082	1.022-1.142
Toluene	15.71	11.74	1.338	ok	1.337	1.277-1.397
Trichloroethylene	12.78	11.74	1.089	ok	1.088	1.028-1.148
Trichlorofluoromethane	5.73	9.10	0.630	ok	0.630	0.570-0.690
Vinyl chloride	4.37	9.10	0.480	ok	0.480	0.420-0.540
Vinyl Acetate	8.04	9.10	0.884	ok	0.883	0.823-0.943
m,p-Xylene	19.85	18.80	1.056	ok	1.057	0.997-1.117
o-Xylene	20.61	18.80	1.096	ok	1.096	1.036-1.156

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	9.10	ok	9.11	8.78-9.44	489742	ok	474110	284466-663754

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1367-IC1367	Q31458.D	09/09/15 12:07	AA	2	GCMSQ	TO-15	
MSQ1367-IC1367	Q31459.D	09/09/15 13:00	AA	20	GCMSQ	TO-15	
MSQ1367-IC1367	Q31460.D	09/09/15 15:23	AA	40	GCMSQ	TO-15	
MSQ1367-IC1367	Q31463.D	09/09/15 18:26	AA	0.2	GCMSQ	TO-15	Reporting this level
MSQ1367-IC1367	Q31464.D	09/09/15 19:19	AA	0.5	GCMSQ	TO-15	
MSQ1367-ICC1367	Q31465.D	09/09/15 20:12	AA	10	GCMSQ	TO-15	
MSQ1367-IC1367	Q31466.D	09/09/15 21:05	AA	5	GCMSQ	TO-15	
MSQ1367-IC1367	Q31467.D	09/09/15 21:57	AA	30	GCMSQ	TO-15	

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
1,4-Difluorobenzene	11.74	ok	11.75	11.42-12.08	2273395	ok	2184854	1310912-3058796
Chlorobenzene-D5	18.80	ok	18.80	18.47-19.13	1024453	ok	995369	597221-1393517

6.5.3

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Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1367-IC1367	Q31458.D	09/09/15 12:07	AA	2	GCMSQ	TO-15	
MSQ1367-IC1367	Q31459.D	09/09/15 13:00	AA	20	GCMSQ	TO-15	
MSQ1367-IC1367	Q31460.D	09/09/15 15:23	AA	40	GCMSQ	TO-15	
MSQ1367-IC1367	Q31463.D	09/09/15 18:26	AA	0.2	GCMSQ	TO-15	
MSQ1367-IC1367	Q31464.D	09/09/15 19:19	AA	0.5	GCMSQ	TO-15	Reporting this level
MSQ1367-ICC1367	Q31465.D	09/09/15 20:12	AA	10	GCMSQ	TO-15	
MSQ1367-IC1367	Q31466.D	09/09/15 21:05	AA	5	GCMSQ	TO-15	
MSQ1367-IC1367	Q31467.D	09/09/15 21:57	AA	30	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.58	9.10	0.613	ok	0.611	0.551-0.671
Acrolein	5.42	9.10	0.596	ok	0.595	0.535-0.655
Acrylonitrile	6.04	9.10	0.664	ok	0.663	0.603-0.723
1,3-Butadiene	4.50	9.10	0.495	ok	0.494	0.434-0.554
Benzene	11.24	11.75	0.957	ok	0.956	0.896-1.016
Bromodichloromethane	12.71	11.75	1.082	ok	1.082	1.022-1.142
Bromoform	19.92	18.80	1.060	ok	1.060	1.000-1.120
Bromomethane	4.78	9.10	0.525	ok	0.525	0.465-0.585
Bromoethene	5.31	9.10	0.584	ok	0.583	0.523-0.643
n-Butylbenzene	24.85	18.80	1.322	ok	1.322	1.262-1.382
sec-Butylbenzene	23.88	18.80	1.270	ok	1.270	1.210-1.330
Benzyl Chloride	23.65	18.80	1.258	ok	1.258	1.198-1.318
Carbon disulfide	6.89	9.10	0.757	ok	0.756	0.696-0.816
Chlorobenzene	18.87	18.80	1.004	ok	1.004	0.944-1.064
Chloroethane	4.95	9.10	0.544	ok	0.543	0.483-0.603
Chloroform	9.27	9.10	1.019	ok	1.018	0.958-1.078
Chloromethane	4.15	9.10	0.456	ok	0.456	0.396-0.516
3-Chloropropene	6.68	9.10	0.734	ok	0.733	0.673-0.793
2-Chlorotoluene	22.32	18.80	1.187	ok	1.188	1.128-1.248
Carbon tetrachloride	11.44	9.10	1.257	ok	1.257	1.197-1.317
Cyclohexane	11.62	11.75	0.989	ok	0.989	0.929-1.049
1,1-Dichloroethane	7.86	9.10	0.864	ok	0.863	0.803-0.923
1,1-Dichloroethylene	6.42	9.10	0.705	ok	0.705	0.645-0.765
1,2-Dibromoethane	16.83	18.80	0.895	ok	0.896	0.836-0.956
1,2-Dichloroethane	10.25	9.10	1.126	ok	1.126	1.066-1.186
1,2-Dichloropropane	12.43	11.75	1.058	ok	1.058	0.998-1.118
1,3-Dichloropropane	15.76	11.75	1.341	ok	1.341	1.281-1.401
1,4-Dioxane	12.87	11.75	1.095	ok	1.092	1.032-1.152
Dichlorodifluoromethane	3.99	9.10	0.438	ok	0.438	0.378-0.498
Dibromochloromethane	16.42	18.80	0.873	ok	0.874	0.814-0.934
trans-1,2-Dichloroethylene	7.62	9.10	0.837	ok	0.837	0.777-0.897
cis-1,2-Dichloroethylene	8.89	9.10	0.977	ok	0.976	0.916-1.036
cis-1,3-Dichloropropene	14.12	11.75	1.202	ok	1.202	1.142-1.262
m-Dichlorobenzene	23.66	18.80	1.259	ok	1.259	1.199-1.319
o-Dichlorobenzene	24.33	18.80	1.294	ok	1.294	1.234-1.354
p-Dichlorobenzene	23.78	18.80	1.265	ok	1.265	1.205-1.325
trans-1,3-Dichloropropene	14.97	11.75	1.274	ok	1.274	1.214-1.334
Ethanol	5.07	9.10	0.557	ok	0.556	0.496-0.616
Ethylbenzene	19.53	18.80	1.039	ok	1.039	0.979-1.099
Ethyl Acetate	9.23	9.10	1.014	ok	1.012	0.952-1.072

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1367-IC1367	Q31458.D	09/09/15 12:07	AA	2	GCMSQ	TO-15	
MSQ1367-IC1367	Q31459.D	09/09/15 13:00	AA	20	GCMSQ	TO-15	
MSQ1367-IC1367	Q31460.D	09/09/15 15:23	AA	40	GCMSQ	TO-15	
MSQ1367-IC1367	Q31463.D	09/09/15 18:26	AA	0.2	GCMSQ	TO-15	
MSQ1367-IC1367	Q31464.D	09/09/15 19:19	AA	0.5	GCMSQ	TO-15	Reporting this level
MSQ1367-ICC1367	Q31465.D	09/09/15 20:12	AA	10	GCMSQ	TO-15	
MSQ1367-IC1367	Q31466.D	09/09/15 21:05	AA	5	GCMSQ	TO-15	
MSQ1367-IC1367	Q31467.D	09/09/15 21:57	AA	30	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
4-Ethyltoluene	22.64	18.80	1.204	ok	1.205	1.145-1.265
Freon 113	6.84	9.10	0.752	ok	0.751	0.691-0.811
Freon 114	4.25	9.10	0.467	ok	0.466	0.406-0.526
Heptane	13.25	11.75	1.128	ok	1.128	1.068-1.188
Hexachlorobutadiene	27.67	18.80	1.472	ok	1.472	1.412-1.532
Hexane	9.16	9.10	1.007	ok	1.006	0.946-1.066
2-Hexanone	16.26	18.80	0.865	ok	0.864	0.804-0.924
Isopropylbenzene	21.58	18.80	1.148	ok	1.148	1.088-1.208
Isopropyl Alcohol	5.86	9.10	0.644	ok	0.639	0.579-0.699
p-Isopropyltoluene	24.15	18.80	1.285	ok	1.285	1.225-1.345
Methylene chloride	6.54	9.10	0.719	ok	0.719	0.659-0.779
Methyl ethyl ketone	8.39	9.10	0.922	ok	0.919	0.859-0.979
Methyl Isobutyl Ketone	14.26	11.75	1.214	ok	1.211	1.151-1.271
Methyl Tert Butyl Ether	7.99	9.10	0.878	ok	0.875	0.815-0.935
Methylmethacrylate	13.14	11.75	1.118	ok	1.117	1.057-1.177
Naphthalene	27.22	18.80	1.448	ok	1.448	1.388-1.508
Nonane	21.03	18.80	1.119	ok	1.119	1.059-1.179
Pentane	6.10	9.10	0.670	ok	0.670	0.610-0.730
Propylene	3.92	9.10	0.431	ok	0.430	0.370-0.490
Styrene	20.43	18.80	1.087	ok	1.087	1.027-1.147
1,1,1-Trichloroethane	10.59	9.10	1.164	ok	1.163	1.103-1.223
1,1,1,2-Tetrachloroethane	18.85	18.80	1.003	ok	1.003	0.943-1.063
1,1,2,2-Tetrachloroethane	20.60	18.80	1.096	ok	1.096	1.036-1.156
1,1,2-Trichloroethane	15.25	11.75	1.298	ok	1.298	1.238-1.358
1,2,4-Trichlorobenzene	27.08	18.80	1.440	ok	1.440	1.380-1.500
1,2,4-Trimethylbenzene	23.44	18.80	1.247	ok	1.247	1.187-1.307
1,3,5-Trimethylbenzene	22.78	18.80	1.212	ok	1.212	1.152-1.272
2,2,4-Trimethylpentane	12.83	11.75	1.092	ok	1.092	1.032-1.152
Tertiary Butyl Alcohol	6.55	9.10	0.720	ok	0.713	0.653-0.773
tert-Butylbenzene	23.42	18.80	1.246	ok	1.246	1.186-1.306
Tetrachloroethylene	17.67	18.80	0.940	ok	0.940	0.880-1.000
Tetrahydrofuran	9.88	9.10	1.086	ok	1.082	1.022-1.142
Toluene	15.71	11.75	1.337	ok	1.337	1.277-1.397
Trichloroethylene	12.78	11.75	1.088	ok	1.088	1.028-1.148
Trichlorofluoromethane	5.73	9.10	0.630	ok	0.630	0.570-0.690
Vinyl chloride	4.37	9.10	0.480	ok	0.480	0.420-0.540
Vinyl Acetate	8.04	9.10	0.884	ok	0.883	0.823-0.943
m,p-Xylene	19.86	18.80	1.056	ok	1.057	0.997-1.117
o-Xylene	20.61	18.80	1.096	ok	1.096	1.036-1.156

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1367-IC1367	Q31458.D	09/09/15 12:07	AA	2	GCMSQ	TO-15	
MSQ1367-IC1367	Q31459.D	09/09/15 13:00	AA	20	GCMSQ	TO-15	
MSQ1367-IC1367	Q31460.D	09/09/15 15:23	AA	40	GCMSQ	TO-15	
MSQ1367-IC1367	Q31463.D	09/09/15 18:26	AA	0.2	GCMSQ	TO-15	
MSQ1367-IC1367	Q31464.D	09/09/15 19:19	AA	0.5	GCMSQ	TO-15	Reporting this level
MSQ1367-ICC1367	Q31465.D	09/09/15 20:12	AA	10	GCMSQ	TO-15	
MSQ1367-IC1367	Q31466.D	09/09/15 21:05	AA	5	GCMSQ	TO-15	
MSQ1367-IC1367	Q31467.D	09/09/15 21:57	AA	30	GCMSQ	TO-15	

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	9.10	ok	9.11	8.78-9.44	496190	ok	474110	284466-663754
1,4-Difluorobenzene	11.75	ok	11.75	11.42-12.08	2296930	ok	2184854	1310912-3058796
Chlorobenzene-D5	18.80	ok	18.80	18.47-19.13	1028058	ok	995369	597221-1393517

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1367-IC1367	Q31458.D	09/09/15 12:07	AA	2	GCMSQ	TO-15	
MSQ1367-IC1367	Q31459.D	09/09/15 13:00	AA	20	GCMSQ	TO-15	
MSQ1367-IC1367	Q31460.D	09/09/15 15:23	AA	40	GCMSQ	TO-15	
MSQ1367-IC1367	Q31463.D	09/09/15 18:26	AA	0.2	GCMSQ	TO-15	
MSQ1367-IC1367	Q31464.D	09/09/15 19:19	AA	0.5	GCMSQ	TO-15	
MSQ1367-ICC1367	Q31465.D	09/09/15 20:12	AA	10	GCMSQ	TO-15	Reporting this level
MSQ1367-IC1367	Q31466.D	09/09/15 21:05	AA	5	GCMSQ	TO-15	
MSQ1367-IC1367	Q31467.D	09/09/15 21:57	AA	30	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.56	9.11	0.610	ok	0.611	0.551-0.671
Acrolein	5.42	9.11	0.595	ok	0.595	0.535-0.655
Acrylonitrile	6.04	9.11	0.663	ok	0.663	0.603-0.723
1,3-Butadiene	4.51	9.11	0.495	ok	0.494	0.434-0.554
Benzene	11.24	11.76	0.956	ok	0.956	0.896-1.016
Bromodichloromethane	12.72	11.76	1.082	ok	1.082	1.022-1.142
Bromoform	19.93	18.80	1.060	ok	1.060	1.000-1.120
Bromomethane	4.78	9.11	0.525	ok	0.525	0.465-0.585
Bromoethene	5.31	9.11	0.583	ok	0.583	0.523-0.643
n-Butylbenzene	24.85	18.80	1.322	ok	1.322	1.262-1.382
sec-Butylbenzene	23.88	18.80	1.270	ok	1.270	1.210-1.330
Benzyl Chloride	23.65	18.80	1.258	ok	1.258	1.198-1.318
Carbon disulfide	6.90	9.11	0.757	ok	0.756	0.696-0.816
Chlorobenzene	18.88	18.80	1.004	ok	1.004	0.944-1.064
Chloroethane	4.95	9.11	0.543	ok	0.543	0.483-0.603
Chloroform	9.27	9.11	1.018	ok	1.018	0.958-1.078
Chloromethane	4.15	9.11	0.456	ok	0.456	0.396-0.516
3-Chloropropene	6.68	9.11	0.733	ok	0.733	0.673-0.793
2-Chlorotoluene	22.33	18.80	1.188	ok	1.188	1.128-1.248
Carbon tetrachloride	11.44	9.11	1.256	ok	1.257	1.197-1.317
Cyclohexane	11.63	11.76	0.989	ok	0.989	0.929-1.049
1,1-Dichloroethane	7.86	9.11	0.863	ok	0.863	0.803-0.923
1,1-Dichloroethylene	6.42	9.11	0.705	ok	0.705	0.645-0.765
1,2-Dibromoethane	16.84	18.80	0.896	ok	0.896	0.836-0.956
1,2-Dichloroethane	10.25	9.11	1.125	ok	1.126	1.066-1.186
1,2-Dichloropropane	12.43	11.76	1.057	ok	1.058	0.998-1.118
1,3-Dichloropropane	15.77	11.76	1.341	ok	1.341	1.281-1.401
1,4-Dioxane	12.82	11.76	1.090	ok	1.092	1.032-1.152
Dichlorodifluoromethane	4.00	9.11	0.439	ok	0.438	0.378-0.498
Dibromochloromethane	16.42	18.80	0.873	ok	0.874	0.814-0.934
trans-1,2-Dichloroethylene	7.62	9.11	0.836	ok	0.837	0.777-0.897
cis-1,2-Dichloroethylene	8.90	9.11	0.977	ok	0.976	0.916-1.036
cis-1,3-Dichloropropene	14.13	11.76	1.202	ok	1.202	1.142-1.262
m-Dichlorobenzene	23.66	18.80	1.259	ok	1.259	1.199-1.319
o-Dichlorobenzene	24.34	18.80	1.295	ok	1.294	1.234-1.354
p-Dichlorobenzene	23.78	18.80	1.265	ok	1.265	1.205-1.325
trans-1,3-Dichloropropene	14.98	11.76	1.274	ok	1.274	1.214-1.334
Ethanol	5.06	9.11	0.555	ok	0.556	0.496-0.616
Ethylbenzene	19.54	18.80	1.039	ok	1.039	0.979-1.099
Ethyl Acetate	9.20	9.11	1.010	ok	1.012	0.952-1.072

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1367-IC1367	Q31458.D	09/09/15 12:07	AA	2	GCMSQ	TO-15	
MSQ1367-IC1367	Q31459.D	09/09/15 13:00	AA	20	GCMSQ	TO-15	
MSQ1367-IC1367	Q31460.D	09/09/15 15:23	AA	40	GCMSQ	TO-15	
MSQ1367-IC1367	Q31463.D	09/09/15 18:26	AA	0.2	GCMSQ	TO-15	
MSQ1367-IC1367	Q31464.D	09/09/15 19:19	AA	0.5	GCMSQ	TO-15	
MSQ1367-ICC1367	Q31465.D	09/09/15 20:12	AA	10	GCMSQ	TO-15	Reporting this level
MSQ1367-IC1367	Q31466.D	09/09/15 21:05	AA	5	GCMSQ	TO-15	
MSQ1367-IC1367	Q31467.D	09/09/15 21:57	AA	30	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
4-Ethyltoluene	22.65	18.80	1.205	ok	1.205	1.145-1.265
Freon 113	6.84	9.11	0.751	ok	0.751	0.691-0.811
Freon 114	4.25	9.11	0.467	ok	0.466	0.406-0.526
Heptane	13.26	11.76	1.128	ok	1.128	1.068-1.188
Hexachlorobutadiene	27.67	18.80	1.472	ok	1.472	1.412-1.532
Hexane	9.16	9.11	1.005	ok	1.006	0.946-1.066
2-Hexanone	16.22	18.80	0.863	ok	0.864	0.804-0.924
Isopropylbenzene	21.58	18.80	1.148	ok	1.148	1.088-1.208
Isopropyl Alcohol	5.81	9.11	0.638	ok	0.639	0.579-0.699
p-Isopropyltoluene	24.15	18.80	1.285	ok	1.285	1.225-1.345
Methylene chloride	6.55	9.11	0.719	ok	0.719	0.659-0.779
Methyl ethyl ketone	8.35	9.11	0.917	ok	0.919	0.859-0.979
Methyl Isobutyl Ketone	14.22	11.76	1.209	ok	1.211	1.151-1.271
Methyl Tert Butyl Ether	7.95	9.11	0.873	ok	0.875	0.815-0.935
Methylmethacrylate	13.13	11.76	1.116	ok	1.117	1.057-1.177
Naphthalene	27.22	18.80	1.448	ok	1.448	1.388-1.508
Nonane	21.03	18.80	1.119	ok	1.119	1.059-1.179
Pentane	6.11	9.11	0.671	ok	0.670	0.610-0.730
Propylene	3.92	9.11	0.430	ok	0.430	0.370-0.490
Styrene	20.44	18.80	1.087	ok	1.087	1.027-1.147
1,1,1-Trichloroethane	10.60	9.11	1.164	ok	1.163	1.103-1.223
1,1,1,2-Tetrachloroethane	18.85	18.80	1.003	ok	1.003	0.943-1.063
1,1,2,2-Tetrachloroethane	20.60	18.80	1.096	ok	1.096	1.036-1.156
1,1,2-Trichloroethane	15.26	11.76	1.298	ok	1.298	1.238-1.358
1,2,4-Trichlorobenzene	27.08	18.80	1.440	ok	1.440	1.380-1.500
1,2,4-Trimethylbenzene	23.44	18.80	1.247	ok	1.247	1.187-1.307
1,3,5-Trimethylbenzene	22.78	18.80	1.212	ok	1.212	1.152-1.272
2,2,4-Trimethylpentane	12.84	11.76	1.092	ok	1.092	1.032-1.152
Tertiary Butyl Alcohol	6.47	9.11	0.710	ok	0.713	0.653-0.773
tert-Butylbenzene	23.43	18.80	1.246	ok	1.246	1.186-1.306
Tetrachloroethylene	17.67	18.80	0.940	ok	0.940	0.880-1.000
Tetrahydrofuran	9.83	9.11	1.079	ok	1.082	1.022-1.142
Toluene	15.71	11.76	1.336	ok	1.337	1.277-1.397
Trichloroethylene	12.79	11.76	1.088	ok	1.088	1.028-1.148
Trichlorofluoromethane	5.74	9.11	0.630	ok	0.630	0.570-0.690
Vinyl chloride	4.37	9.11	0.480	ok	0.480	0.420-0.540
Vinyl Acetate	8.04	9.11	0.883	ok	0.883	0.823-0.943
m,p-Xylene	19.86	18.80	1.056	ok	1.057	0.997-1.117
o-Xylene	20.61	18.80	1.096	ok	1.096	1.036-1.156

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1367-IC1367	Q31458.D	09/09/15 12:07	AA	2	GCMSQ	TO-15	
MSQ1367-IC1367	Q31459.D	09/09/15 13:00	AA	20	GCMSQ	TO-15	
MSQ1367-IC1367	Q31460.D	09/09/15 15:23	AA	40	GCMSQ	TO-15	
MSQ1367-IC1367	Q31463.D	09/09/15 18:26	AA	0.2	GCMSQ	TO-15	
MSQ1367-IC1367	Q31464.D	09/09/15 19:19	AA	0.5	GCMSQ	TO-15	
MSQ1367-ICC1367	Q31465.D	09/09/15 20:12	AA	10	GCMSQ	TO-15	Reporting this level
MSQ1367-IC1367	Q31466.D	09/09/15 21:05	AA	5	GCMSQ	TO-15	
MSQ1367-IC1367	Q31467.D	09/09/15 21:57	AA	30	GCMSQ	TO-15	

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	9.11	ok	9.11	8.78-9.44	480481	ok	474110	284466-663754
1,4-Difluorobenzene	11.76	ok	11.75	11.42-12.08	2241343	ok	2184854	1310912-3058796
Chlorobenzene-D5	18.80	ok	18.80	18.47-19.13	1040414	ok	995369	597221-1393517

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1367-IC1367	Q31458.D	09/09/15 12:07	AA	2	GCMSQ	TO-15	
MSQ1367-IC1367	Q31459.D	09/09/15 13:00	AA	20	GCMSQ	TO-15	
MSQ1367-IC1367	Q31460.D	09/09/15 15:23	AA	40	GCMSQ	TO-15	
MSQ1367-IC1367	Q31463.D	09/09/15 18:26	AA	0.2	GCMSQ	TO-15	
MSQ1367-IC1367	Q31464.D	09/09/15 19:19	AA	0.5	GCMSQ	TO-15	
MSQ1367-ICC1367	Q31465.D	09/09/15 20:12	AA	10	GCMSQ	TO-15	
MSQ1367-IC1367	Q31466.D	09/09/15 21:05	AA	5	GCMSQ	TO-15	Reporting this level
MSQ1367-IC1367	Q31467.D	09/09/15 21:57	AA	30	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.56	9.10	0.611	ok	0.611	0.551-0.671
Acrolein	5.42	9.10	0.596	ok	0.595	0.535-0.655
Acrylonitrile	6.04	9.10	0.664	ok	0.663	0.603-0.723
1,3-Butadiene	4.51	9.10	0.496	ok	0.494	0.434-0.554
Benzene	11.24	11.75	0.957	ok	0.956	0.896-1.016
Bromodichloromethane	12.72	11.75	1.083	ok	1.082	1.022-1.142
Bromoform	19.92	18.80	1.060	ok	1.060	1.000-1.120
Bromomethane	4.78	9.10	0.525	ok	0.525	0.465-0.585
Bromoethene	5.31	9.10	0.584	ok	0.583	0.523-0.643
n-Butylbenzene	24.85	18.80	1.322	ok	1.322	1.262-1.382
sec-Butylbenzene	23.88	18.80	1.270	ok	1.270	1.210-1.330
Benzyl Chloride	23.65	18.80	1.258	ok	1.258	1.198-1.318
Carbon disulfide	6.89	9.10	0.757	ok	0.756	0.696-0.816
Chlorobenzene	18.88	18.80	1.004	ok	1.004	0.944-1.064
Chloroethane	4.95	9.10	0.544	ok	0.543	0.483-0.603
Chloroform	9.27	9.10	1.019	ok	1.018	0.958-1.078
Chloromethane	4.15	9.10	0.456	ok	0.456	0.396-0.516
3-Chloropropene	6.68	9.10	0.734	ok	0.733	0.673-0.793
2-Chlorotoluene	22.33	18.80	1.188	ok	1.188	1.128-1.248
Carbon tetrachloride	11.44	9.10	1.257	ok	1.257	1.197-1.317
Cyclohexane	11.62	11.75	0.989	ok	0.989	0.929-1.049
1,1-Dichloroethane	7.86	9.10	0.864	ok	0.863	0.803-0.923
1,1-Dichloroethylene	6.42	9.10	0.705	ok	0.705	0.645-0.765
1,2-Dibromoethane	16.84	18.80	0.896	ok	0.896	0.836-0.956
1,2-Dichloroethane	10.25	9.10	1.126	ok	1.126	1.066-1.186
1,2-Dichloropropane	12.43	11.75	1.058	ok	1.058	0.998-1.118
1,3-Dichloropropane	15.76	11.75	1.341	ok	1.341	1.281-1.401
1,4-Dioxane	12.82	11.75	1.091	ok	1.092	1.032-1.152
Dichlorodifluoromethane	4.00	9.10	0.440	ok	0.438	0.378-0.498
Dibromochloromethane	16.42	18.80	0.873	ok	0.874	0.814-0.934
trans-1,2-Dichloroethylene	7.62	9.10	0.837	ok	0.837	0.777-0.897
cis-1,2-Dichloroethylene	8.89	9.10	0.977	ok	0.976	0.916-1.036
cis-1,3-Dichloropropene	14.12	11.75	1.202	ok	1.202	1.142-1.262
m-Dichlorobenzene	23.66	18.80	1.259	ok	1.259	1.199-1.319
o-Dichlorobenzene	24.33	18.80	1.294	ok	1.294	1.234-1.354
p-Dichlorobenzene	23.78	18.80	1.265	ok	1.265	1.205-1.325
trans-1,3-Dichloropropene	14.97	11.75	1.274	ok	1.274	1.214-1.334
Ethanol	5.06	9.10	0.556	ok	0.556	0.496-0.616
Ethylbenzene	19.53	18.80	1.039	ok	1.039	0.979-1.099
Ethyl Acetate	9.20	9.10	1.011	ok	1.012	0.952-1.072

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1367-IC1367	Q31458.D	09/09/15 12:07	AA	2	GCMSQ	TO-15	
MSQ1367-IC1367	Q31459.D	09/09/15 13:00	AA	20	GCMSQ	TO-15	
MSQ1367-IC1367	Q31460.D	09/09/15 15:23	AA	40	GCMSQ	TO-15	
MSQ1367-IC1367	Q31463.D	09/09/15 18:26	AA	0.2	GCMSQ	TO-15	
MSQ1367-IC1367	Q31464.D	09/09/15 19:19	AA	0.5	GCMSQ	TO-15	
MSQ1367-ICC1367	Q31465.D	09/09/15 20:12	AA	10	GCMSQ	TO-15	
MSQ1367-IC1367	Q31466.D	09/09/15 21:05	AA	5	GCMSQ	TO-15	Reporting this level
MSQ1367-IC1367	Q31467.D	09/09/15 21:57	AA	30	GCMSQ	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
4-Ethyltoluene	22.65	18.80	1.205	ok	1.205	1.145-1.265
Freon 113	6.84	9.10	0.752	ok	0.751	0.691-0.811
Freon 114	4.25	9.10	0.467	ok	0.466	0.406-0.526
Heptane	13.25	11.75	1.128	ok	1.128	1.068-1.188
Hexachlorobutadiene	27.67	18.80	1.472	ok	1.472	1.412-1.532
Hexane	9.16	9.10	1.007	ok	1.006	0.946-1.066
2-Hexanone	16.23	18.80	0.863	ok	0.864	0.804-0.924
Isopropylbenzene	21.58	18.80	1.148	ok	1.148	1.088-1.208
Isopropyl Alcohol	5.81	9.10	0.638	ok	0.639	0.579-0.699
p-Isopropyltoluene	24.15	18.80	1.285	ok	1.285	1.225-1.345
Methylene chloride	6.55	9.10	0.720	ok	0.719	0.659-0.779
Methyl ethyl ketone	8.36	9.10	0.919	ok	0.919	0.859-0.979
Methyl Isobutyl Ketone	14.22	11.75	1.210	ok	1.211	1.151-1.271
Methyl Tert Butyl Ether	7.96	9.10	0.875	ok	0.875	0.815-0.935
Methylmethacrylate	13.13	11.75	1.117	ok	1.117	1.057-1.177
Naphthalene	27.22	18.80	1.448	ok	1.448	1.388-1.508
Nonane	21.03	18.80	1.119	ok	1.119	1.059-1.179
Pentane	6.11	9.10	0.671	ok	0.670	0.610-0.730
Propylene	3.92	9.10	0.431	ok	0.430	0.370-0.490
Styrene	20.44	18.80	1.087	ok	1.087	1.027-1.147
1,1,1-Trichloroethane	10.60	9.10	1.165	ok	1.163	1.103-1.223
1,1,1,2-Tetrachloroethane	18.85	18.80	1.003	ok	1.003	0.943-1.063
1,1,2,2-Tetrachloroethane	20.60	18.80	1.096	ok	1.096	1.036-1.156
1,1,2-Trichloroethane	15.26	11.75	1.299	ok	1.298	1.238-1.358
1,2,4-Trichlorobenzene	27.08	18.80	1.440	ok	1.440	1.380-1.500
1,2,4-Trimethylbenzene	23.44	18.80	1.247	ok	1.247	1.187-1.307
1,3,5-Trimethylbenzene	22.78	18.80	1.212	ok	1.212	1.152-1.272
2,2,4-Trimethylpentane	12.83	11.75	1.092	ok	1.092	1.032-1.152
Tertiary Butyl Alcohol	6.48	9.10	0.712	ok	0.713	0.653-0.773
tert-Butylbenzene	23.43	18.80	1.246	ok	1.246	1.186-1.306
Tetrachloroethylene	17.67	18.80	0.940	ok	0.940	0.880-1.000
Tetrahydrofuran	9.84	9.10	1.081	ok	1.082	1.022-1.142
Toluene	15.71	11.75	1.337	ok	1.337	1.277-1.397
Trichloroethylene	12.78	11.75	1.088	ok	1.088	1.028-1.148
Trichlorofluoromethane	5.74	9.10	0.631	ok	0.630	0.570-0.690
Vinyl chloride	4.37	9.10	0.480	ok	0.480	0.420-0.540
Vinyl Acetate	8.04	9.10	0.884	ok	0.883	0.823-0.943
m,p-Xylene	19.86	18.80	1.056	ok	1.057	0.997-1.117
o-Xylene	20.61	18.80	1.096	ok	1.096	1.036-1.156

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1367-IC1367	Q31458.D	09/09/15 12:07	AA	2	GCMSQ	TO-15	
MSQ1367-IC1367	Q31459.D	09/09/15 13:00	AA	20	GCMSQ	TO-15	
MSQ1367-IC1367	Q31460.D	09/09/15 15:23	AA	40	GCMSQ	TO-15	
MSQ1367-IC1367	Q31463.D	09/09/15 18:26	AA	0.2	GCMSQ	TO-15	
MSQ1367-IC1367	Q31464.D	09/09/15 19:19	AA	0.5	GCMSQ	TO-15	
MSQ1367-ICC1367	Q31465.D	09/09/15 20:12	AA	10	GCMSQ	TO-15	
MSQ1367-IC1367	Q31466.D	09/09/15 21:05	AA	5	GCMSQ	TO-15	Reporting this level
MSQ1367-IC1367	Q31467.D	09/09/15 21:57	AA	30	GCMSQ	TO-15	

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	9.10	ok	9.11	8.78-9.44	479691	ok	474110	284466-663754
1,4-Difluorobenzene	11.75	ok	11.75	11.42-12.08	2242528	ok	2184854	1310912-3058796
Chlorobenzene-D5	18.80	ok	18.80	18.47-19.13	1014737	ok	995369	597221-1393517

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1367-IC1367	Q31458.D	09/09/15 12:07	AA	2	GCMSQ	TO-15	
MSQ1367-IC1367	Q31459.D	09/09/15 13:00	AA	20	GCMSQ	TO-15	
MSQ1367-IC1367	Q31460.D	09/09/15 15:23	AA	40	GCMSQ	TO-15	
MSQ1367-IC1367	Q31463.D	09/09/15 18:26	AA	0.2	GCMSQ	TO-15	
MSQ1367-IC1367	Q31464.D	09/09/15 19:19	AA	0.5	GCMSQ	TO-15	
MSQ1367-ICC1367	Q31465.D	09/09/15 20:12	AA	10	GCMSQ	TO-15	
MSQ1367-IC1367	Q31466.D	09/09/15 21:05	AA	5	GCMSQ	TO-15	
MSQ1367-IC1367	Q31467.D	09/09/15 21:57	AA	30	GCMSQ	TO-15	Reporting this level

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.56	9.12	0.610	ok	0.611	0.551-0.671
Acrolein	5.42	9.12	0.594	ok	0.595	0.535-0.655
Acrylonitrile	6.04	9.12	0.662	ok	0.663	0.603-0.723
1,3-Butadiene	4.51	9.12	0.495	ok	0.494	0.434-0.554
Benzene	11.24	11.76	0.956	ok	0.956	0.896-1.016
Bromodichloromethane	12.73	11.76	1.082	ok	1.082	1.022-1.142
Bromoform	19.94	18.80	1.061	ok	1.060	1.000-1.120
Bromomethane	4.78	9.12	0.524	ok	0.525	0.465-0.585
Bromoethene	5.31	9.12	0.582	ok	0.583	0.523-0.643
n-Butylbenzene	24.85	18.80	1.322	ok	1.322	1.262-1.382
sec-Butylbenzene	23.88	18.80	1.270	ok	1.270	1.210-1.330
Benzyl Chloride	23.66	18.80	1.259	ok	1.258	1.198-1.318
Carbon disulfide	6.89	9.12	0.755	ok	0.756	0.696-0.816
Chlorobenzene	18.88	18.80	1.004	ok	1.004	0.944-1.064
Chloroethane	4.95	9.12	0.543	ok	0.543	0.483-0.603
Chloroform	9.28	9.12	1.018	ok	1.018	0.958-1.078
Chloromethane	4.15	9.12	0.455	ok	0.456	0.396-0.516
3-Chloropropene	6.68	9.12	0.732	ok	0.733	0.673-0.793
2-Chlorotoluene	22.33	18.80	1.188	ok	1.188	1.128-1.248
Carbon tetrachloride	11.45	9.12	1.255	ok	1.257	1.197-1.317
Cyclohexane	11.63	11.76	0.989	ok	0.989	0.929-1.049
1,1-Dichloroethane	7.87	9.12	0.863	ok	0.863	0.803-0.923
1,1-Dichloroethylene	6.42	9.12	0.704	ok	0.705	0.645-0.765
1,2-Dibromoethane	16.85	18.80	0.896	ok	0.896	0.836-0.956
1,2-Dichloroethane	10.26	9.12	1.125	ok	1.126	1.066-1.186
1,2-Dichloropropane	12.43	11.76	1.057	ok	1.058	0.998-1.118
1,3-Dichloropropane	15.77	11.76	1.341	ok	1.341	1.281-1.401
1,4-Dioxane	12.82	11.76	1.090	ok	1.092	1.032-1.152
Dichlorodifluoromethane	4.00	9.12	0.439	ok	0.438	0.378-0.498
Dibromochloromethane	16.43	18.80	0.874	ok	0.874	0.814-0.934
trans-1,2-Dichloroethylene	7.62	9.12	0.836	ok	0.837	0.777-0.897
cis-1,2-Dichloroethylene	8.90	9.12	0.976	ok	0.976	0.916-1.036
cis-1,3-Dichloropropene	14.13	11.76	1.202	ok	1.202	1.142-1.262
m-Dichlorobenzene	23.67	18.80	1.259	ok	1.259	1.199-1.319
o-Dichlorobenzene	24.34	18.80	1.295	ok	1.294	1.234-1.354
p-Dichlorobenzene	23.78	18.80	1.265	ok	1.265	1.205-1.325
trans-1,3-Dichloropropene	14.99	11.76	1.275	ok	1.274	1.214-1.334
Ethanol	5.06	9.12	0.555	ok	0.556	0.496-0.616
Ethylbenzene	19.55	18.80	1.040	ok	1.039	0.979-1.099
Ethyl Acetate	9.21	9.12	1.010	ok	1.012	0.952-1.072

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1367-IC1367	Q31458.D	09/09/15 12:07	AA	2	GCMSQ	TO-15	
MSQ1367-IC1367	Q31459.D	09/09/15 13:00	AA	20	GCMSQ	TO-15	
MSQ1367-IC1367	Q31460.D	09/09/15 15:23	AA	40	GCMSQ	TO-15	
MSQ1367-IC1367	Q31463.D	09/09/15 18:26	AA	0.2	GCMSQ	TO-15	
MSQ1367-IC1367	Q31464.D	09/09/15 19:19	AA	0.5	GCMSQ	TO-15	
MSQ1367-ICC1367	Q31465.D	09/09/15 20:12	AA	10	GCMSQ	TO-15	
MSQ1367-IC1367	Q31466.D	09/09/15 21:05	AA	5	GCMSQ	TO-15	
MSQ1367-IC1367	Q31467.D	09/09/15 21:57	AA	30	GCMSQ	TO-15	Reporting this level

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
4-Ethyltoluene	22.65	18.80	1.205	ok	1.205	1.145-1.265
Freon 113	6.84	9.12	0.750	ok	0.751	0.691-0.811
Freon 114	4.25	9.12	0.466	ok	0.466	0.406-0.526
Heptane	13.26	11.76	1.128	ok	1.128	1.068-1.188
Hexachlorobutadiene	27.67	18.80	1.472	ok	1.472	1.412-1.532
Hexane	9.16	9.12	1.004	ok	1.006	0.946-1.066
2-Hexanone	16.22	18.80	0.863	ok	0.864	0.804-0.924
Isopropylbenzene	21.58	18.80	1.148	ok	1.148	1.088-1.208
Isopropyl Alcohol	5.82	9.12	0.638	ok	0.639	0.579-0.699
p-Isopropyltoluene	24.16	18.80	1.285	ok	1.285	1.225-1.345
Methylene chloride	6.55	9.12	0.718	ok	0.719	0.659-0.779
Methyl ethyl ketone	8.36	9.12	0.917	ok	0.919	0.859-0.979
Methyl Isobutyl Ketone	14.22	11.76	1.209	ok	1.211	1.151-1.271
Methyl Tert Butyl Ether	7.95	9.12	0.872	ok	0.875	0.815-0.935
Methylmethacrylate	13.13	11.76	1.116	ok	1.117	1.057-1.177
Naphthalene	27.22	18.80	1.448	ok	1.448	1.388-1.508
Nonane	21.04	18.80	1.119	ok	1.119	1.059-1.179
Pentane	6.11	9.12	0.670	ok	0.670	0.610-0.730
Propylene	3.92	9.12	0.430	ok	0.430	0.370-0.490
Styrene	20.44	18.80	1.087	ok	1.087	1.027-1.147
1,1,1-Trichloroethane	10.60	9.12	1.162	ok	1.163	1.103-1.223
1,1,1,2-Tetrachloroethane	18.86	18.80	1.003	ok	1.003	0.943-1.063
1,1,2,2-Tetrachloroethane	20.61	18.80	1.096	ok	1.096	1.036-1.156
1,1,2-Trichloroethane	15.26	11.76	1.298	ok	1.298	1.238-1.358
1,2,4-Trichlorobenzene	27.08	18.80	1.440	ok	1.440	1.380-1.500
1,2,4-Trimethylbenzene	23.45	18.80	1.247	ok	1.247	1.187-1.307
1,3,5-Trimethylbenzene	22.78	18.80	1.212	ok	1.212	1.152-1.272
2,2,4-Trimethylpentane	12.85	11.76	1.093	ok	1.092	1.032-1.152
Tertiary Butyl Alcohol	6.48	9.12	0.711	ok	0.713	0.653-0.773
tert-Butylbenzene	23.44	18.80	1.247	ok	1.246	1.186-1.306
Tetrachloroethylene	17.68	18.80	0.940	ok	0.940	0.880-1.000
Tetrahydrofuran	9.83	9.12	1.078	ok	1.082	1.022-1.142
Toluene	15.72	11.76	1.337	ok	1.337	1.277-1.397
Trichloroethylene	12.79	11.76	1.088	ok	1.088	1.028-1.148
Trichlorofluoromethane	5.74	9.12	0.629	ok	0.630	0.570-0.690
Vinyl chloride	4.37	9.12	0.479	ok	0.480	0.420-0.540
Vinyl Acetate	8.05	9.12	0.883	ok	0.883	0.823-0.943
m,p-Xylene	19.87	18.80	1.057	ok	1.057	0.997-1.117
o-Xylene	20.62	18.80	1.097	ok	1.096	1.036-1.156

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
MSQ1367-IC1367	Q31458.D	09/09/15 12:07	AA	2	GCMSQ	TO-15	
MSQ1367-IC1367	Q31459.D	09/09/15 13:00	AA	20	GCMSQ	TO-15	
MSQ1367-IC1367	Q31460.D	09/09/15 15:23	AA	40	GCMSQ	TO-15	
MSQ1367-IC1367	Q31463.D	09/09/15 18:26	AA	0.2	GCMSQ	TO-15	
MSQ1367-IC1367	Q31464.D	09/09/15 19:19	AA	0.5	GCMSQ	TO-15	
MSQ1367-ICC1367	Q31465.D	09/09/15 20:12	AA	10	GCMSQ	TO-15	
MSQ1367-IC1367	Q31466.D	09/09/15 21:05	AA	5	GCMSQ	TO-15	
MSQ1367-IC1367	Q31467.D	09/09/15 21:57	AA	30	GCMSQ	TO-15	Reporting this level

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	9.12	ok	9.11	8.78-9.44	491226	ok	474110	284466-663754
1,4-Difluorobenzene	11.76	ok	11.75	11.42-12.08	2262671	ok	2184854	1310912-3058796
Chlorobenzene-D5	18.80	ok	18.80	18.47-19.13	961424	ok	995369	597221-1393517

Volatile Surrogate Recovery Summary

Job Number: MC40930
Account: FDG CB&I
Project: Varian Beverly, 150 Sohier Road, Beverly, MA

Method: TO-15 **Matrix:** AIR

Samples and QC shown here apply to the above method

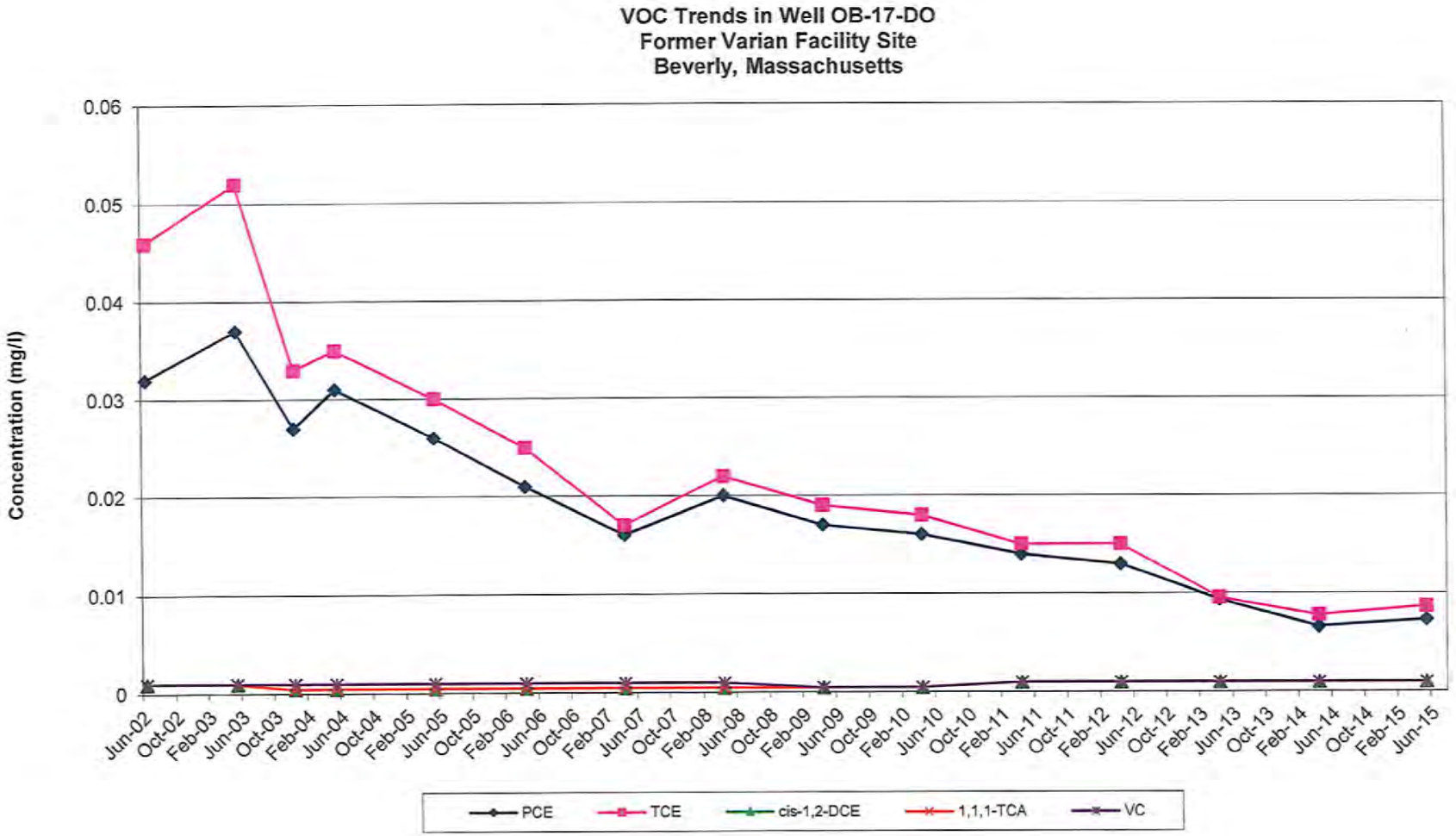
Lab Sample ID	Lab File ID	S1
MC40930-1	Q31480.D	85
MC40930-1	Q31451.D	117
MC40930-2	Q31481.D	85
MC40930-3	Q31482.D	86
MC40930-4	Q31497.D	87
MC40930-4	Q31478.D	89
MSQ1345-SCC	Q30956.D	99
MSQ1348-SCC	Q31036.D	104
MSQ1348-SCC	Q31038.D	106
MSQ1365-BS	Q31428.D	112
MSQ1365-MB	Q31433.D	106
MSQ1367-BS	Q31473A.D	95
MSQ1367-MB	Q31474.D	93
MSQ1368-BS	Q31492A.D	91
MSQ1368-MB	Q31494.D	83
MSQ1345-BS	Q30938B.D	107
MSQ1345-MB	Q30939.D	100
MSQ1348-BS	Q31035A.D	104
MSQ1348-MB	Q31037.D	99

Surrogate Compounds	Recovery Limits
S1 = 4-Bromofluorobenzene	50-129%

APPENDIX E

GROUNDWATER VOC CONCENTRATION TREND GRAPHS

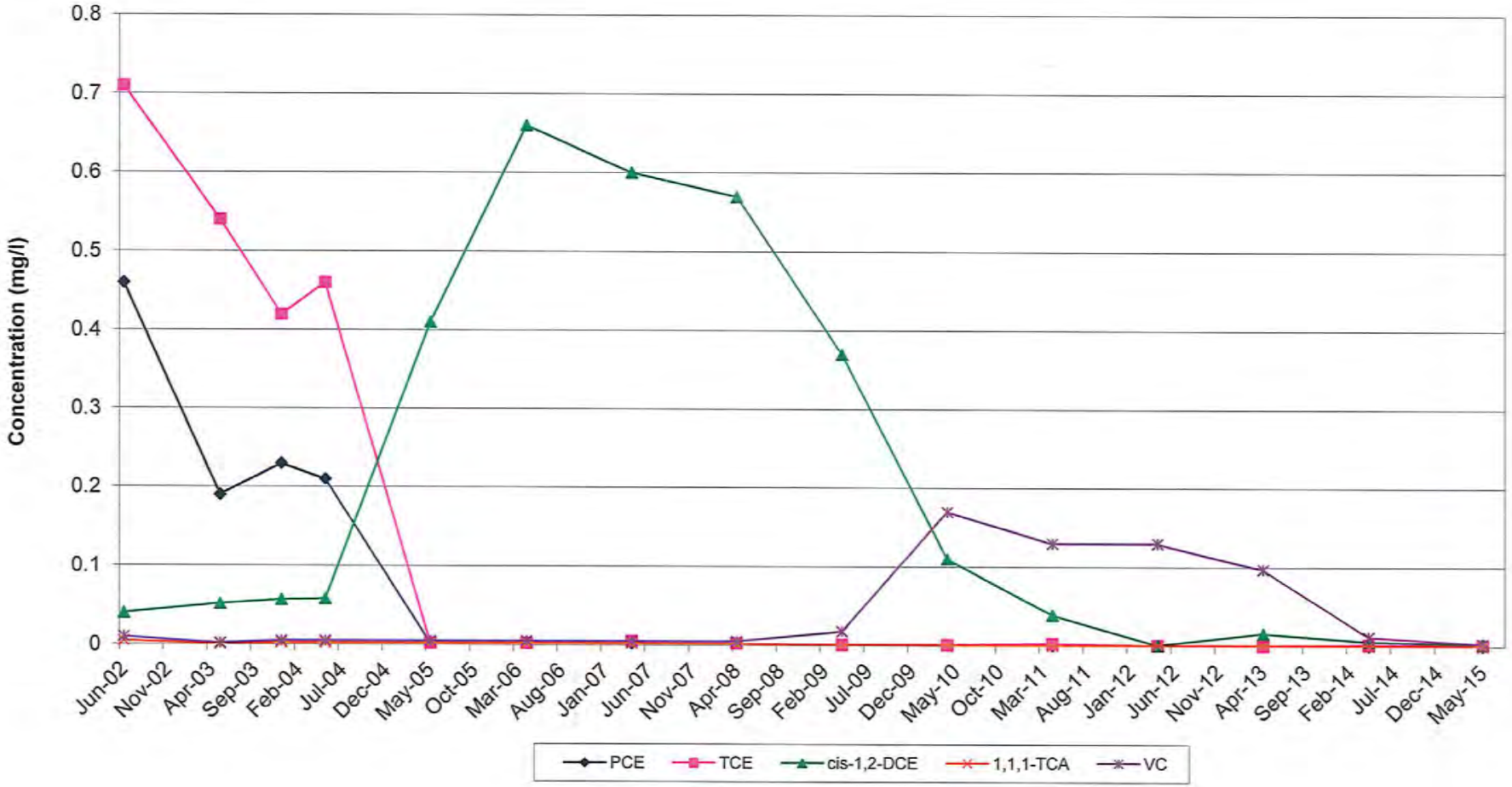
TOZER ROAD NORTH OF ROUTE 128



Note: OB-17-DO is a deep overburden well on Commons Drive.
See end of appendix for additional notes.

P:\Varian\Draft\Reports\Status\October 2015 ROS\Graphs - VOC_OB Aug 2015.xlsx

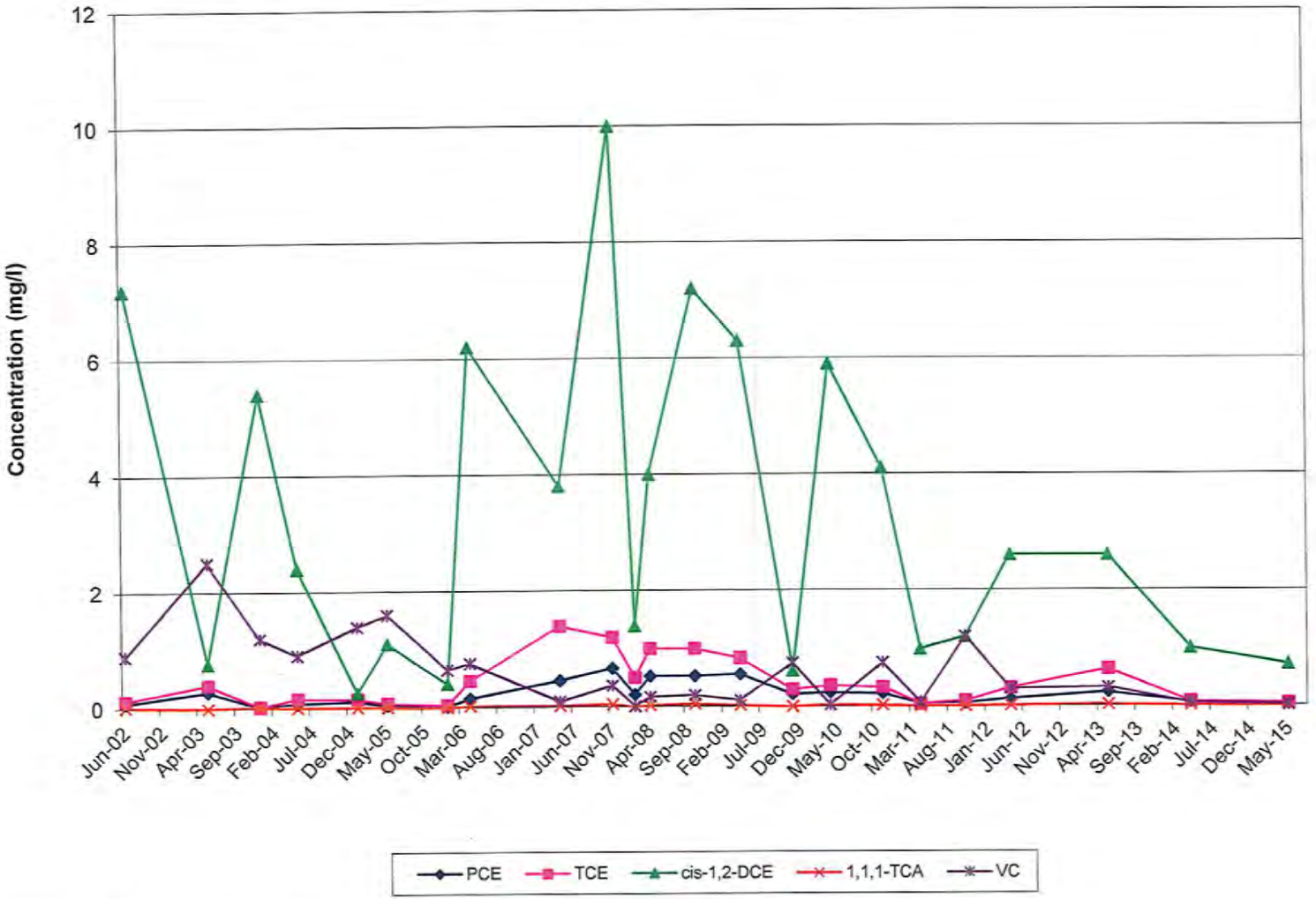
VOC Trends in Well OB-17-BR
Former Varian Facility Site
Beverly, Massachusetts



Notes: OB17-BR is a bedrock well north of Route 128 on Commons Drive.
See end of appendix for additional notes.

P:\Varian\Draft\Reports\Status\October 2015 ROS\Graphs - VOC_OB Aug 2015.xlsx

VOC Trends in Well CL09-BR_ZONE3
Former Varian Facility Site
Beverly, Massachusetts



Notes: Notes: CL09-BR ZONE3 is the shallowest zone of a bedrock well north of Route 128, west of Tozer Road.
See end of appendix for additional notes.

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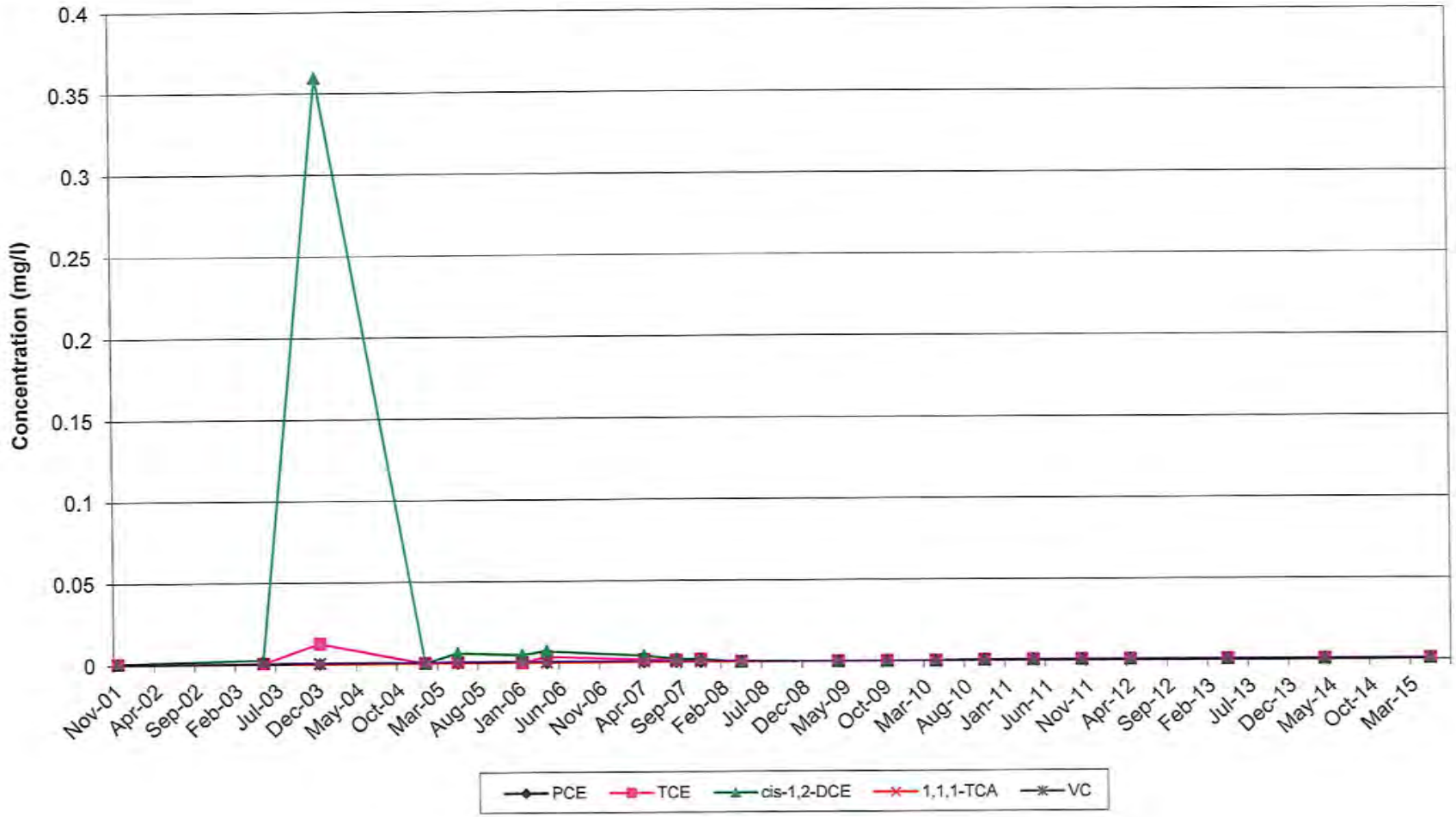
VOC Trends in Well BR-1_ZONE3
Former Varian Facility Site
Beverly, Massachusetts



Notes: BR-1 ZONE3 is the shallowest zone of a bedrock well on Walden Street.
See end of appendix for additional notes.

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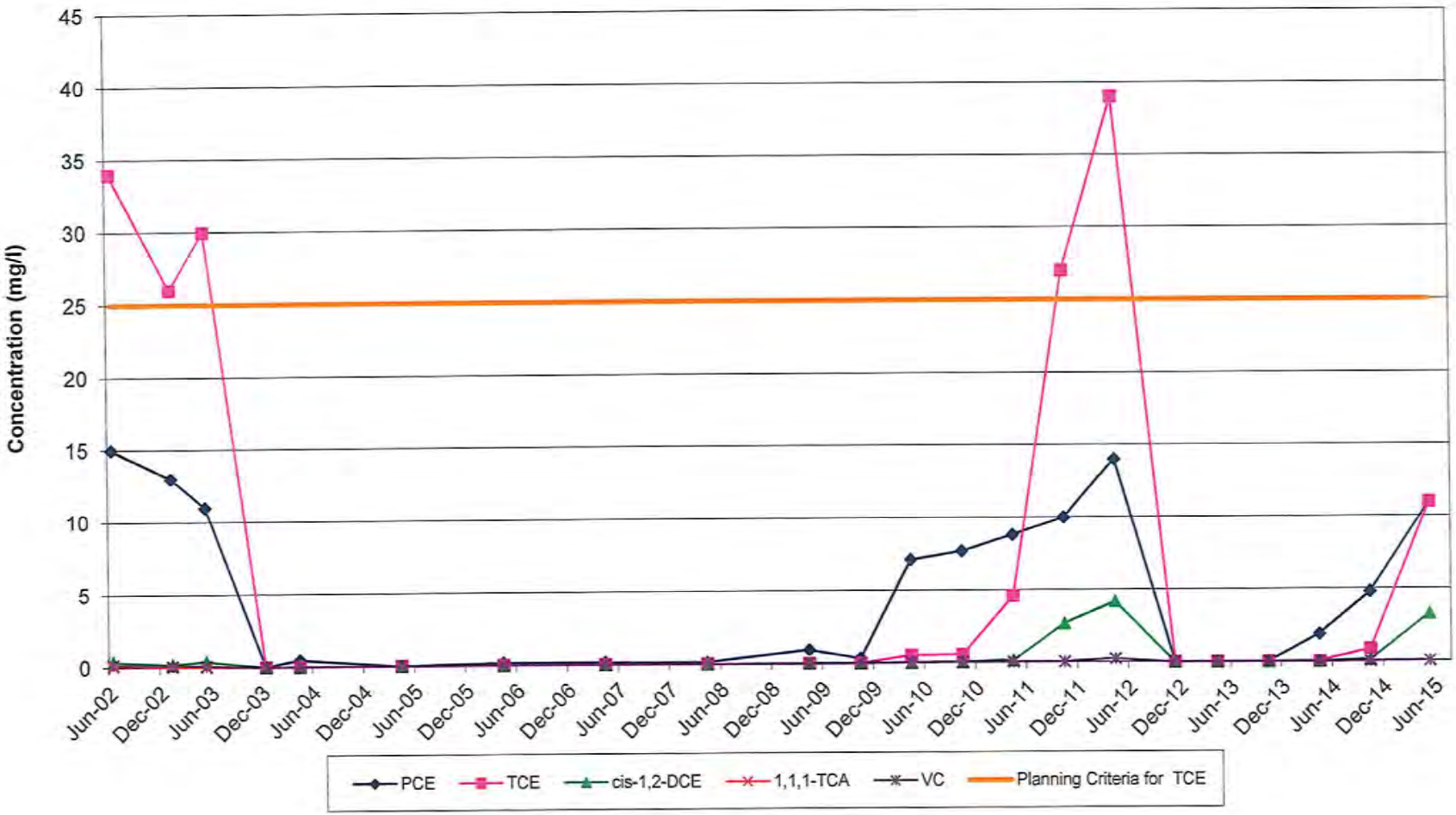
BUILDING 3/6 TREATMENT AREA

VOC Trends in Well AP-12-DO
Former Varian Facility Site
Beverly, Massachusetts



Notes: AP-12-DO is a deep overburden well adjacent to Building 6 where permanganate injection was conducted in 2002, 2003, 2004, and 2012.
See end of appendix for additional notes.

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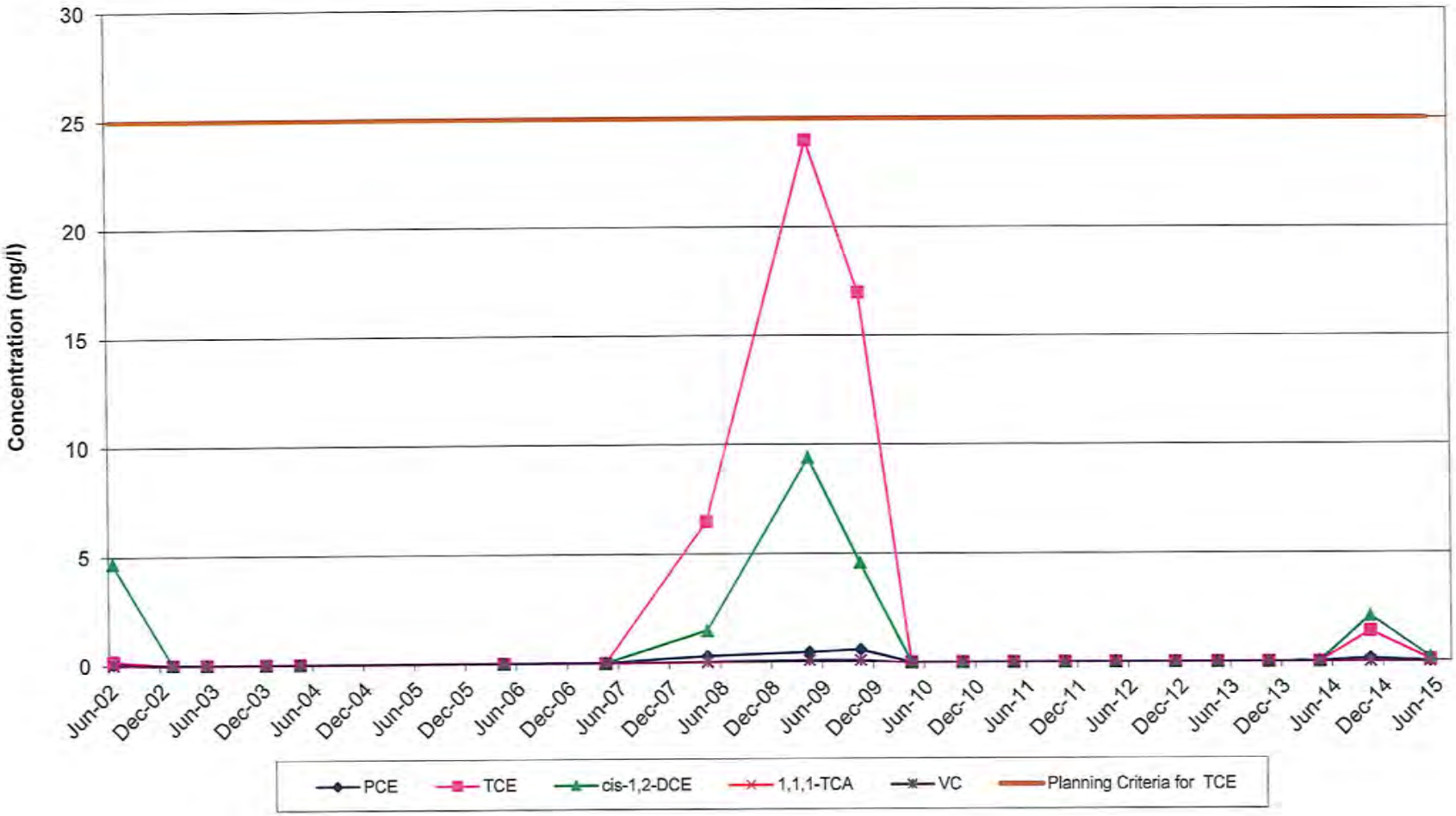
VOC Trends in Well AP-12-BR
Former Varian Facility Site
Beverly, Massachusetts



Notes: AP-12-DO is a deep overburden well adjacent to Building 6
where permanganate injection was conducted in 2002, 2003, 2004 and 2010.
See end of appendix for additional notes.

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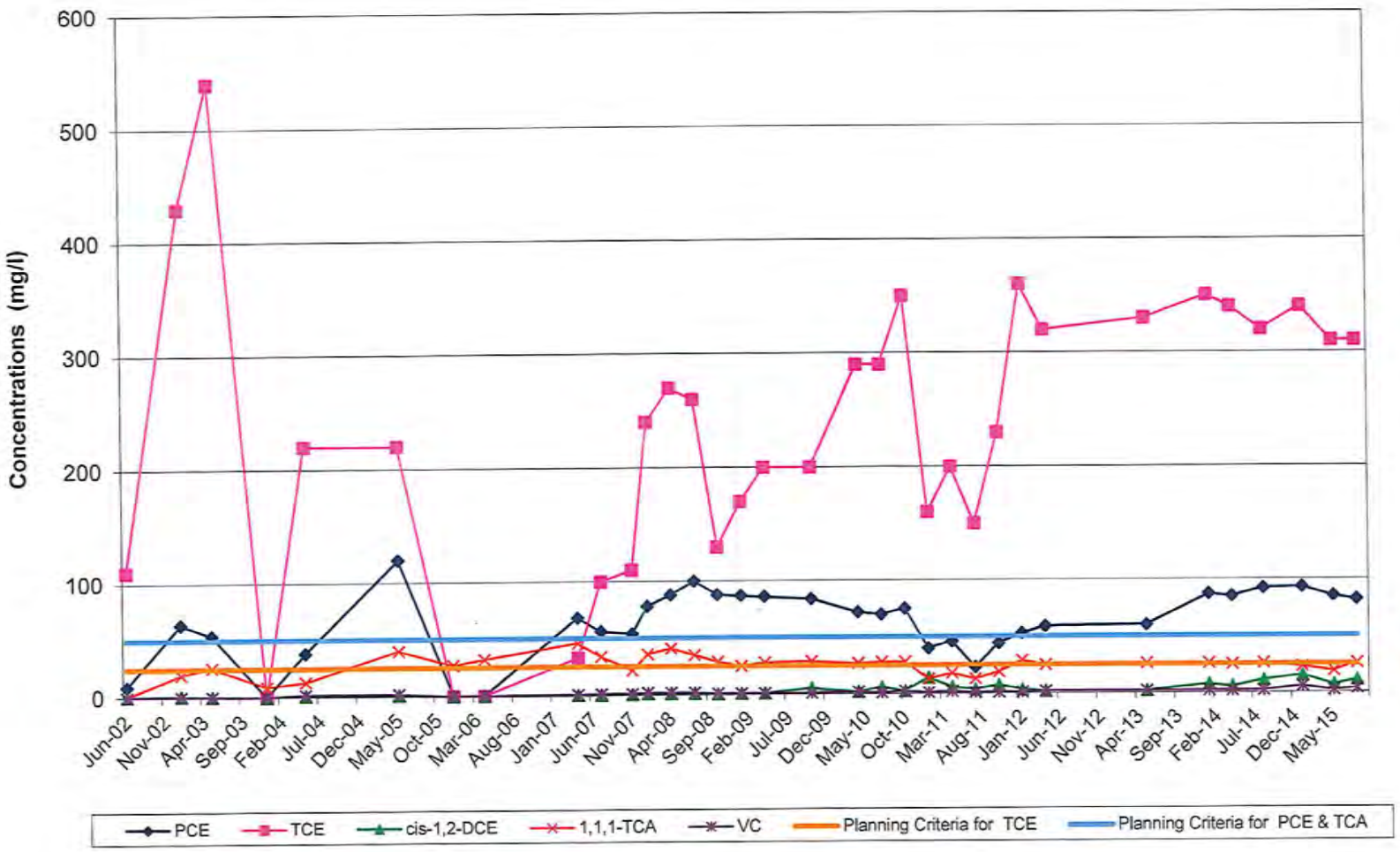
VOC Trends in Well AP-13-DO
Former Varian Facility Site
Beverly, Massachusetts



Notes: AP-13-DO is a deep overburden well adjacent to Building 3 where permanganate injection was conducted in 2002-2005 and bio-injection occurred in 2007, 2008, 2010, 2011 and 2014. See end of appendix for additional notes.

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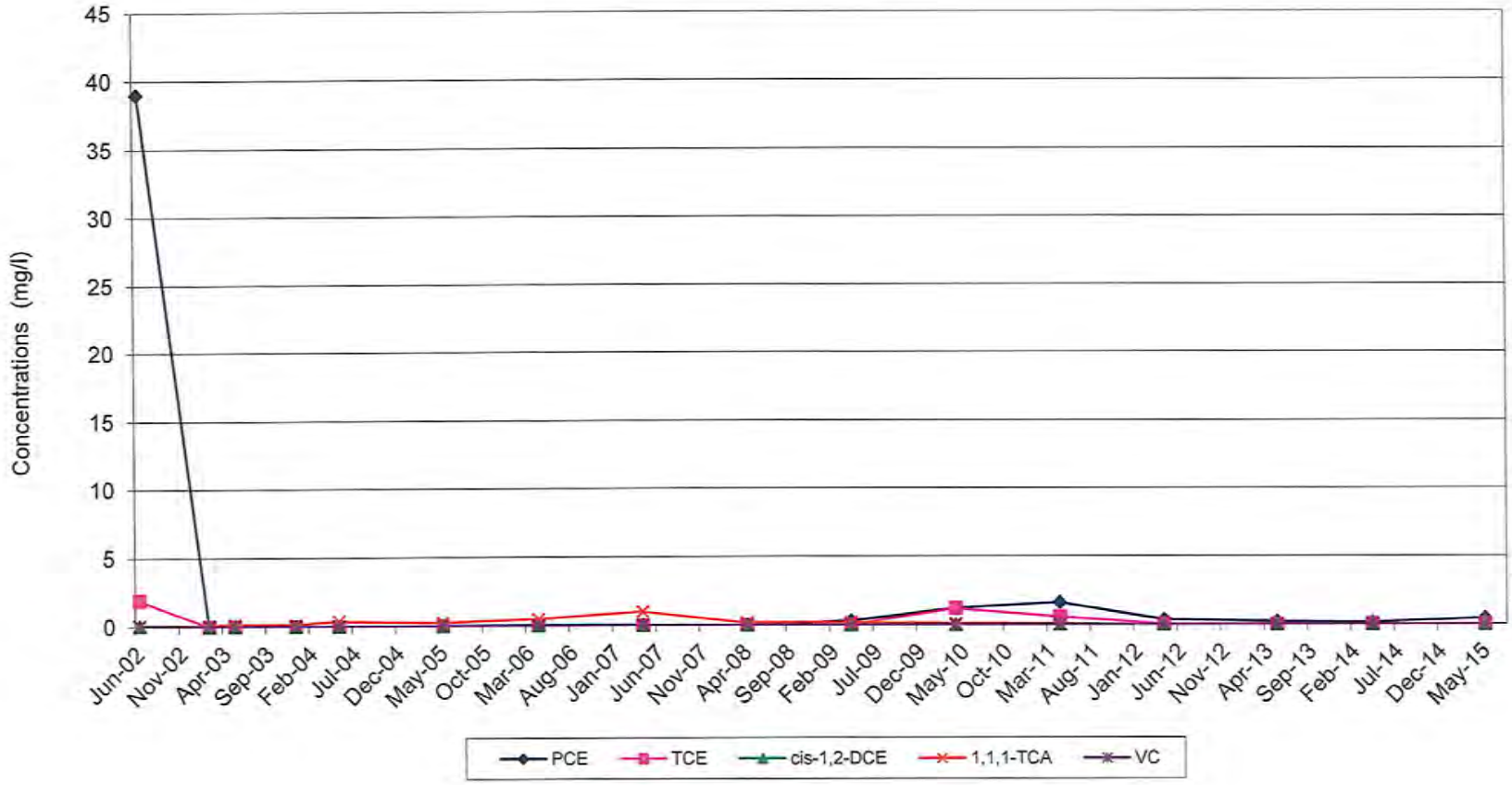
VOC Trends in Well AP-14S
Former Varian Facility Site
Beverly, Massachusetts



Notes: AP-14S is a shallow overburden well adjacent to (north of) Building 3 where permanganate injection was conducted in 2002.
See end of appendix for additonal notes.

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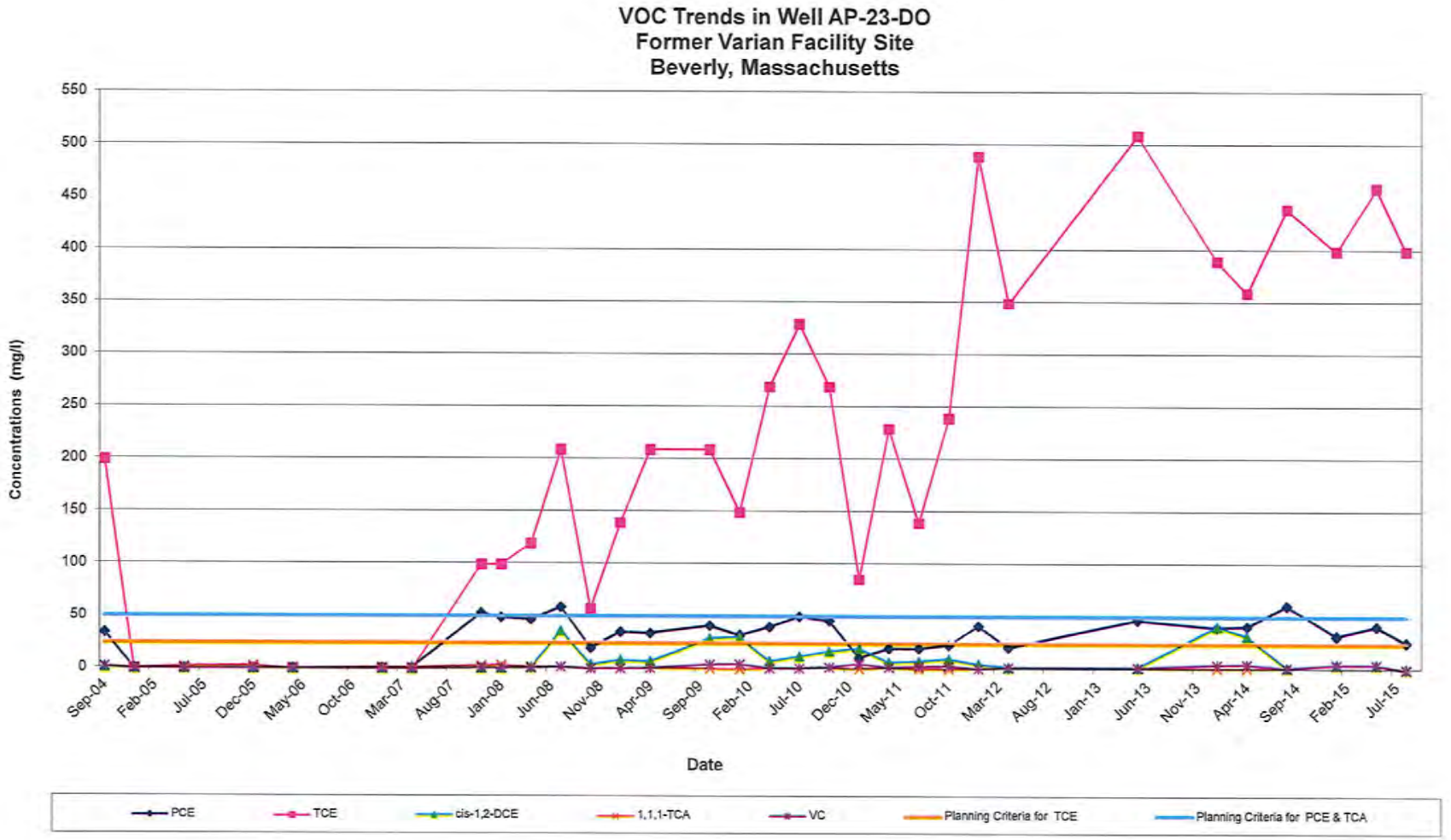

Notes: AP23-DO is a deep overburden well northeast of Building 3 where permanganate injection was conducted in 2003 and 2004 and bio-injection occurred in 2007, 2008, 2010, 2011, 2013 and 2014.
See end of appendix for additional notes.

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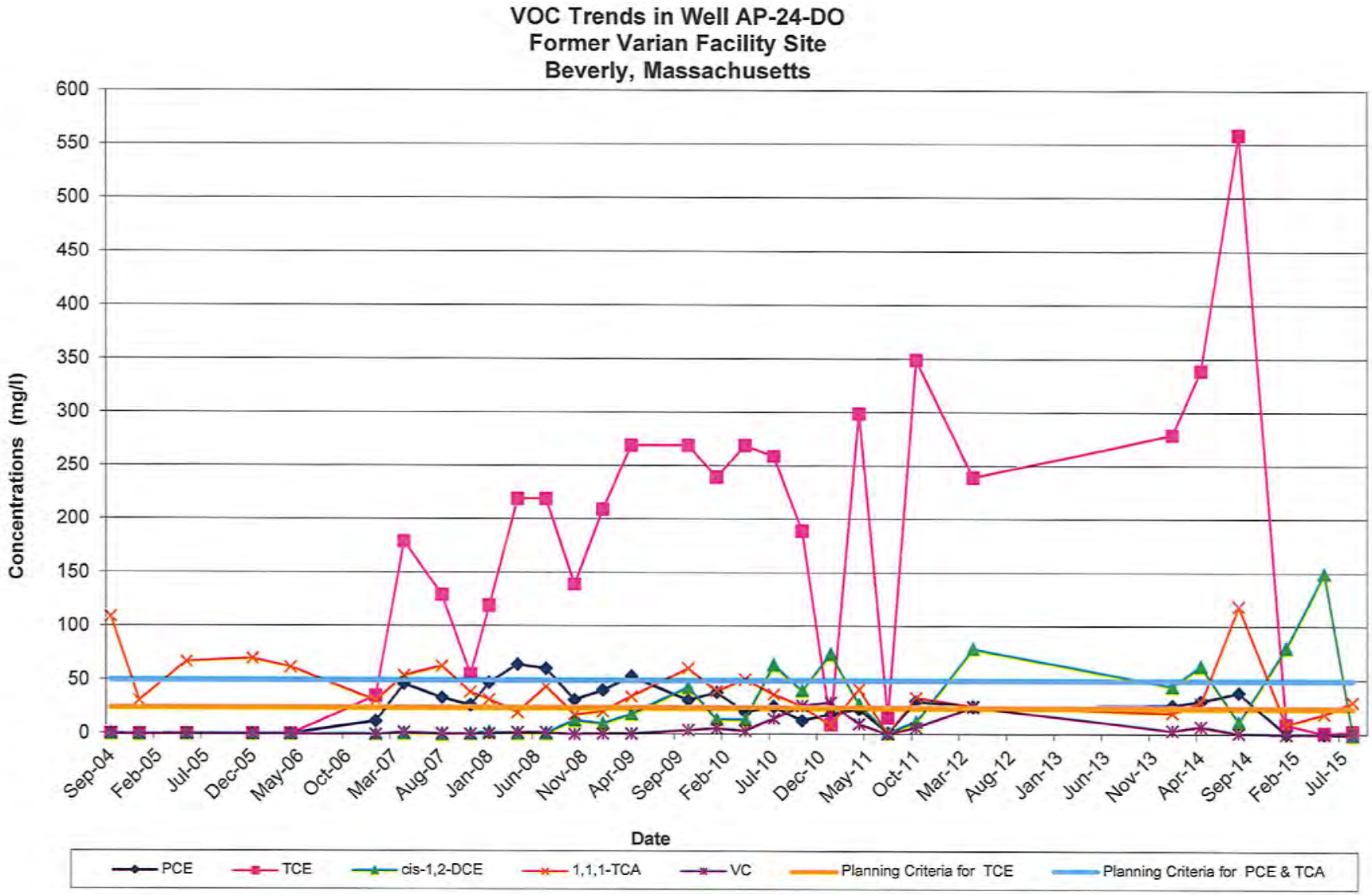
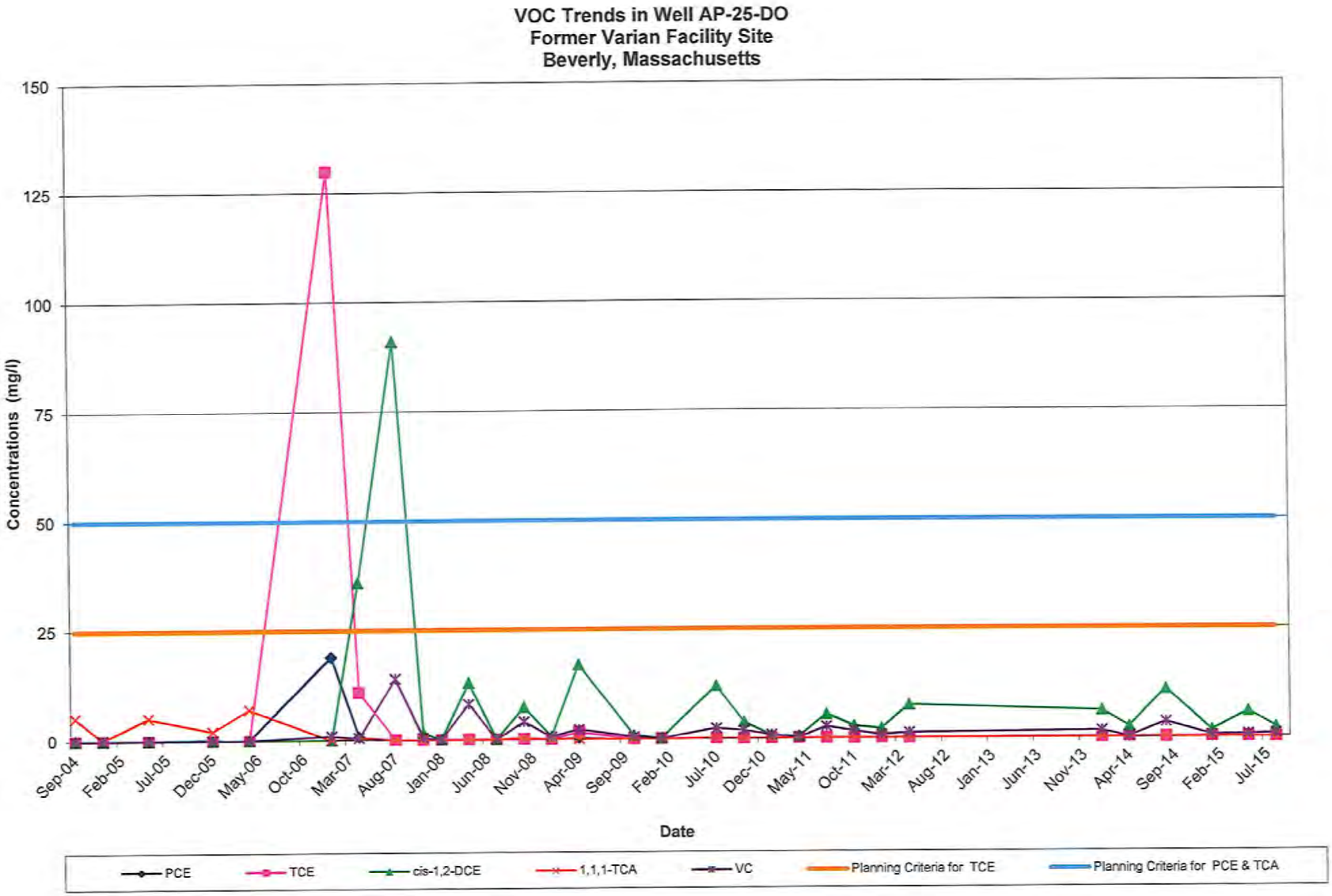


Notes: AP24-DO is a deep overburden well northeast of Building 3 where permangante injection was conducted in 2003-2004 and bio-injection occurred in 2006-2008, 2010-2011, 2013 and 2014. See end of appendix for additional notes.

P:\Varian\Draft\Reports\Status\October 2015 ROS\Appendix D - Graphs\Graphs - VOC_MW-Aug 2015.xlsx



Notes: AP25-DO is a deep overburden well east of Building 3 where permanganate injection was conducted in 2004 and bio-injection in 2007. See end of appendix for additional notes.

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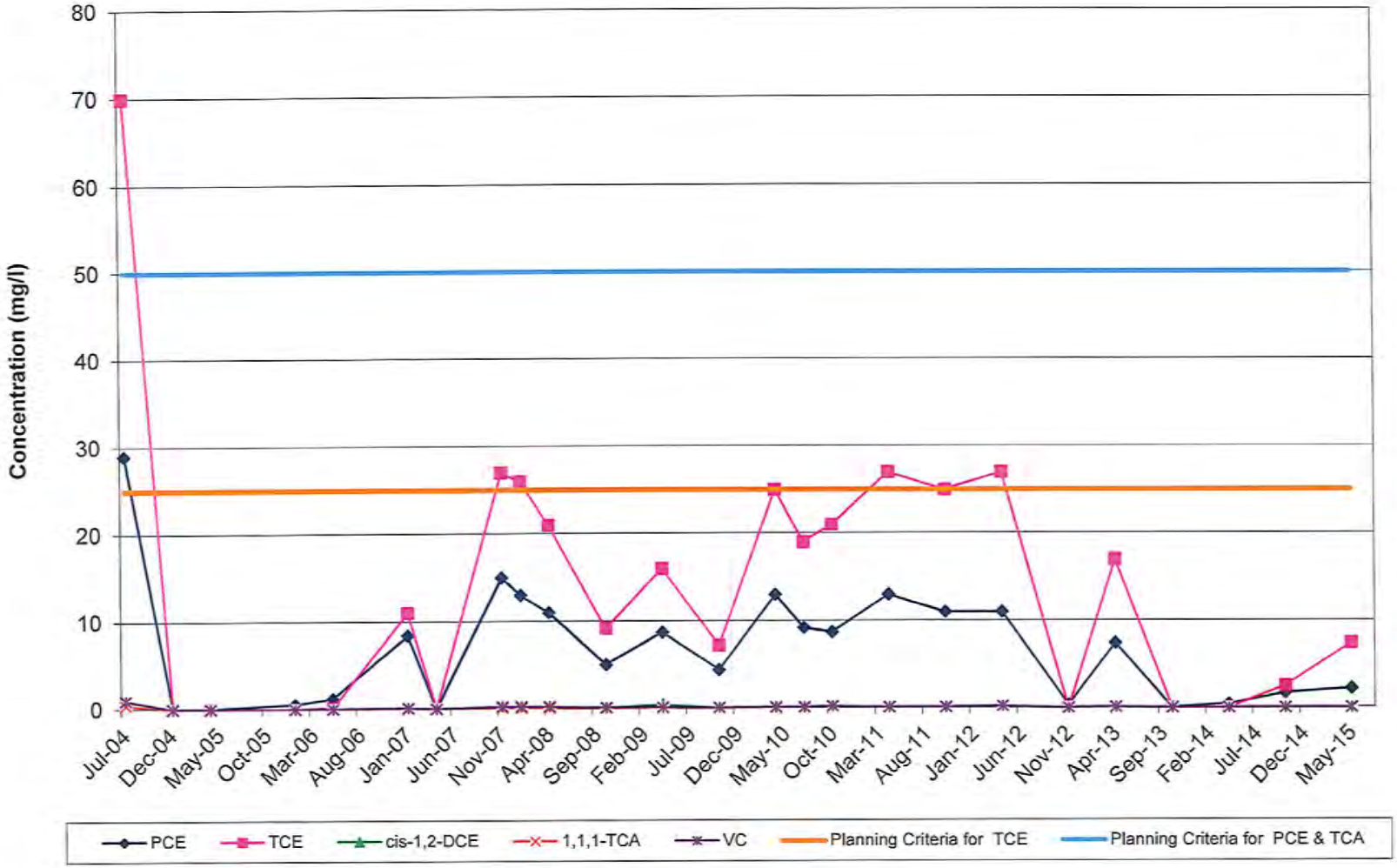
VOC Trends in Well AP-26-DO
Former Varian Facility Site
Beverly, Massachusetts



Notes: AP-26-DO is a deep overburden well just west of Building 1
where permanganate injection was conducted in 2004, 2012 and 2013.
See end of appendix for additional notes.

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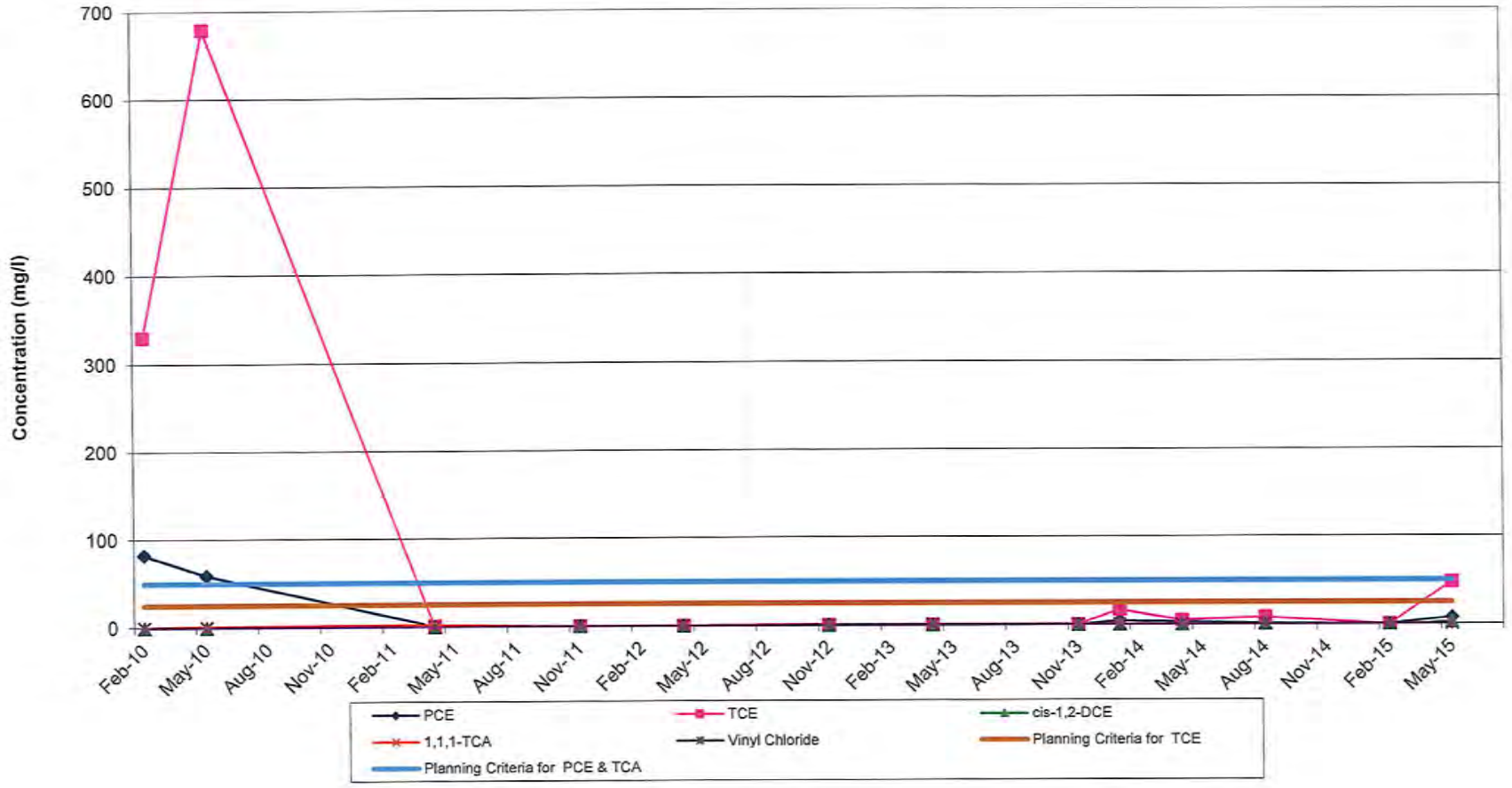
VOC Trends in Well AP30R-DO
Former Varian Facility Site
Beverly, Massachusetts



Notes: AP30R-DO is an angled well beneath Building 3.
Permanagante injections were conducted 2010-2011.
See end of appendix for additional notes.

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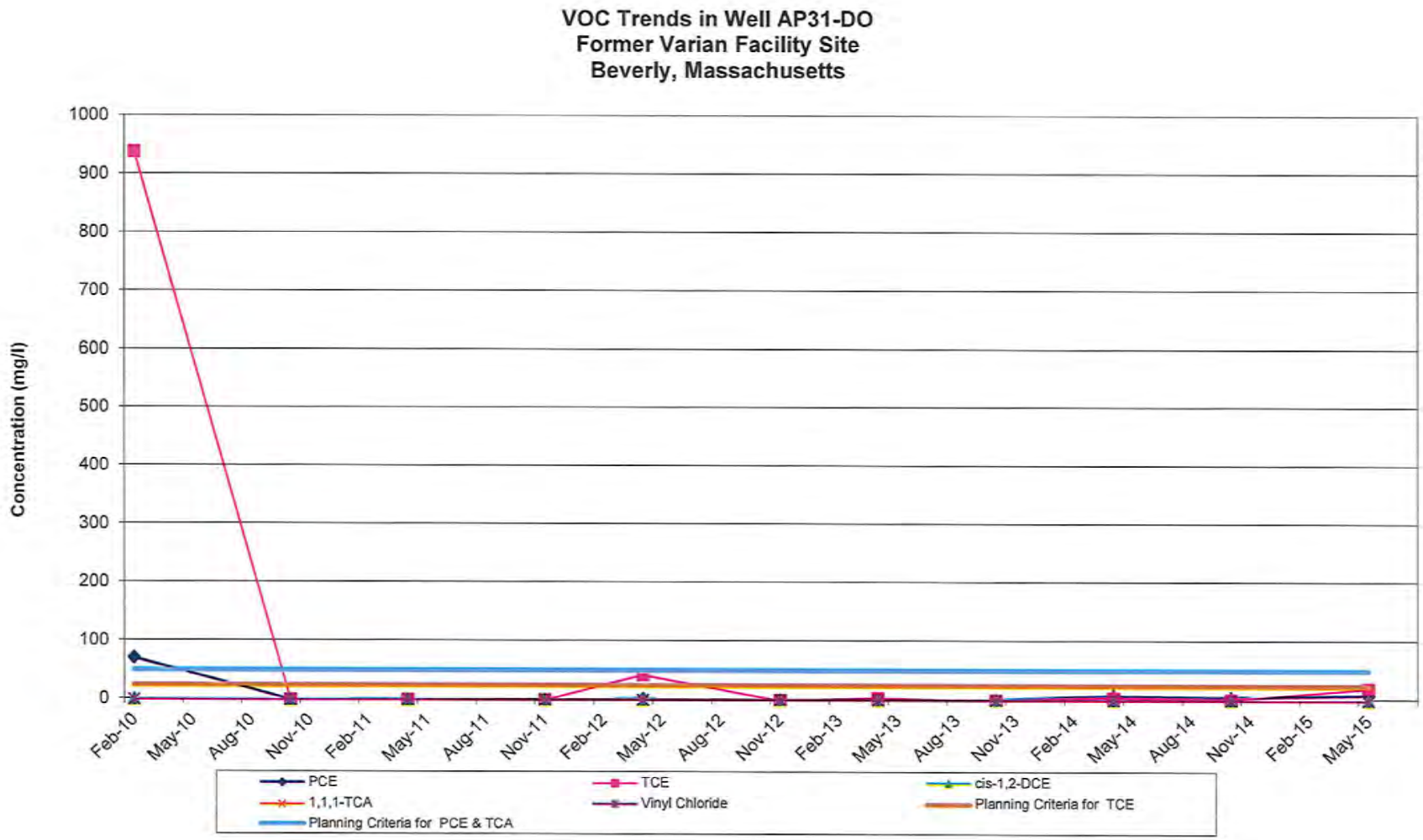

Notes: AP31-DO is an angled well beneath Building 3.
Permanganate injection was conducted in 2010-2011 and 2013.
See end of appendix for additional notes.

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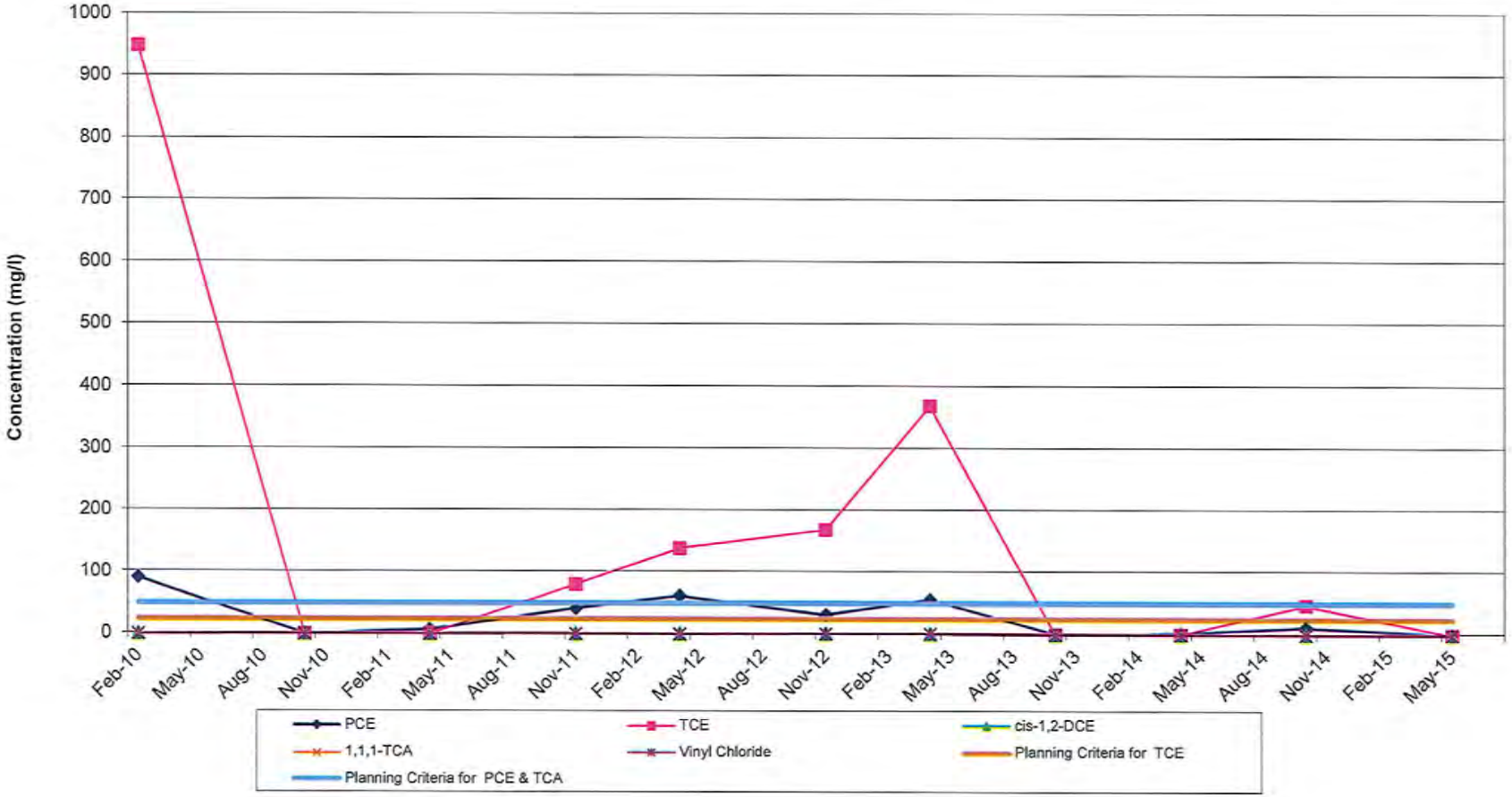
VOC Trends in Well AP32-DO
Former Varian Facility Site
Beverly, Massachusetts



Notes: AP32-DO is an angled well located beneath Building 3.
Permananganate injections were conducted 2010-2011, 2013 and 2015.
See end of appendix for additional notes.

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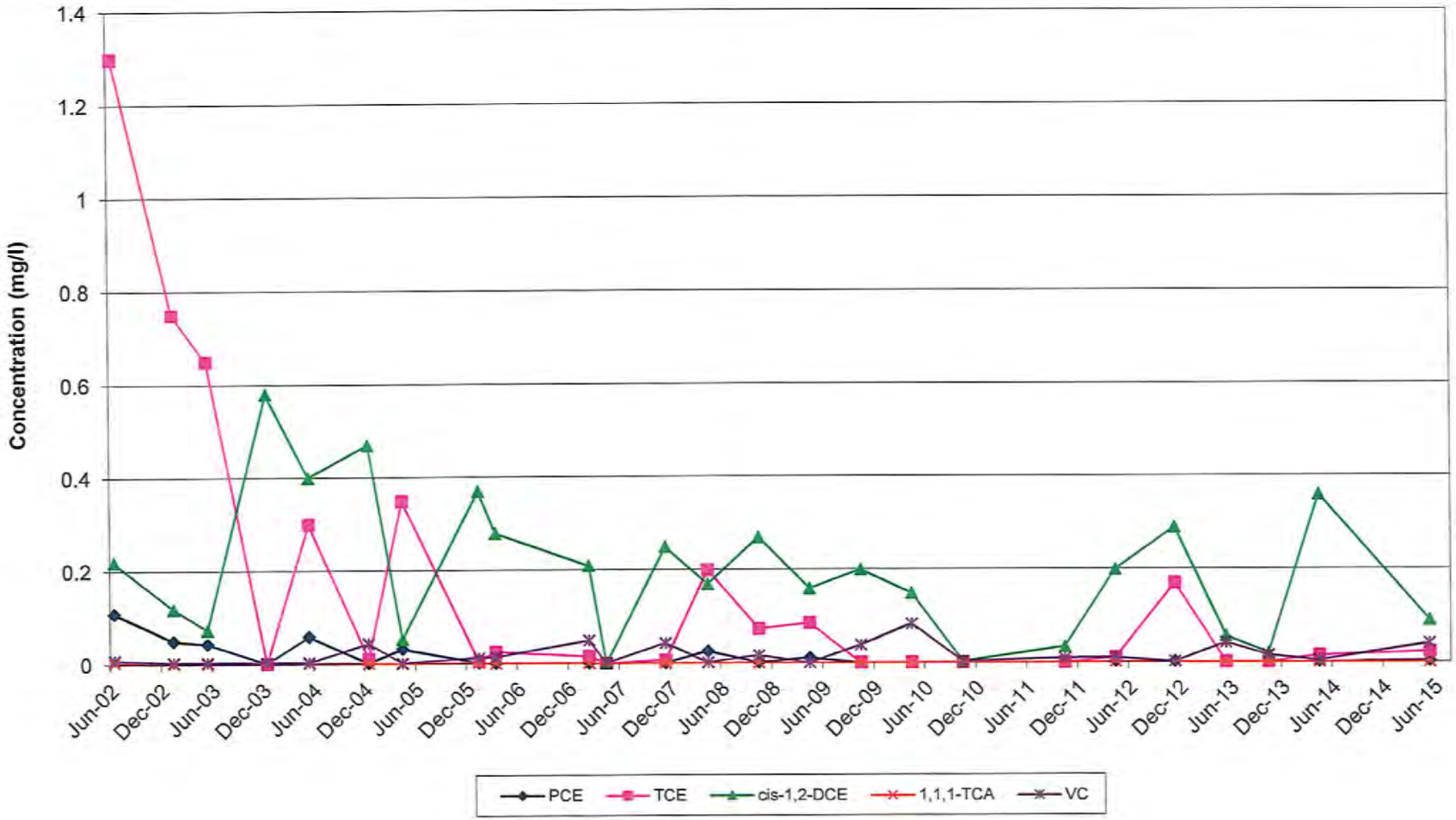
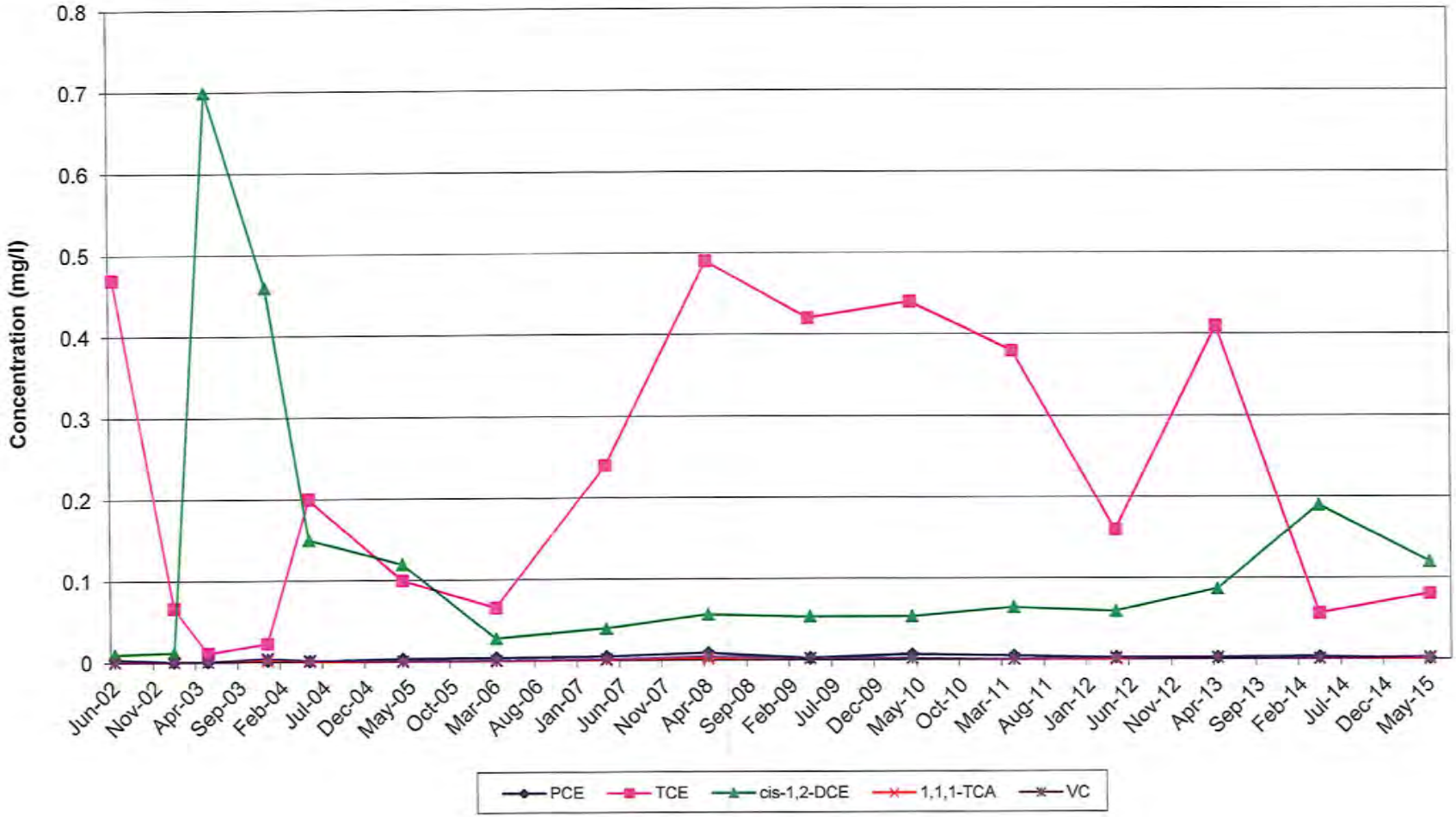
VOC Trends in Well CL02-BR
Former Varian Facility Site
Beverly, Massachusetts



Notes: CL02-BR is a bedrock well north of Route 128 at 16 Tozer Road.
See end of appendix for additional notes.

VOC Trends in Well MW-014A
Former Varian Facility Site
Beverly, Massachusetts



Notes: MW-14A is a deep overburden well north of Building 1.
See end of appendix for additional notes.

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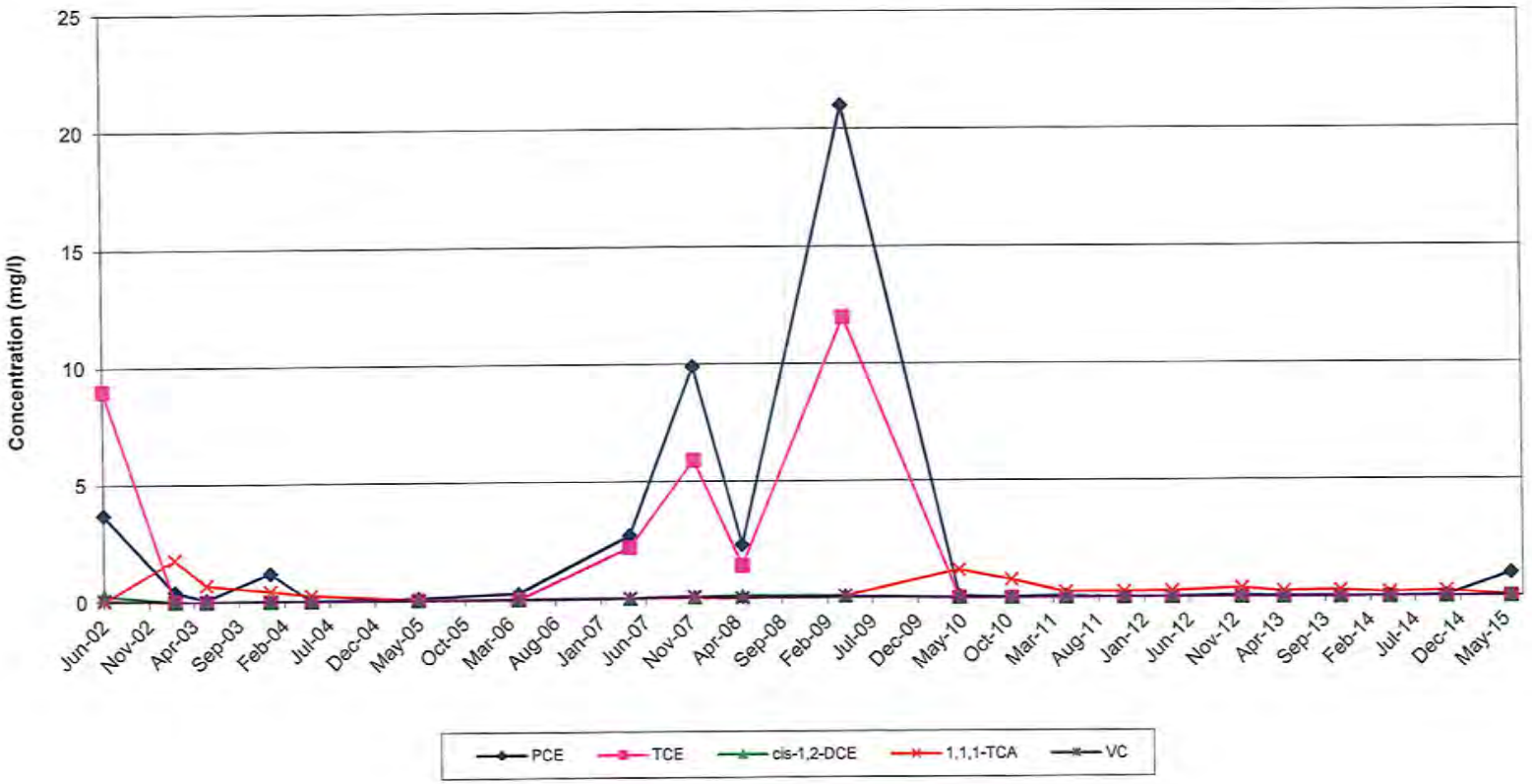
VOC Trends in Well MW-013
Former Varian Facility Site
Beverly, Massachusetts



Note: MW-13 is a deep overburden well located to the northeast of Building 3 where permanganate injection was conducted in 2002 and 2010-2011.
See end of appendix for additional notes.

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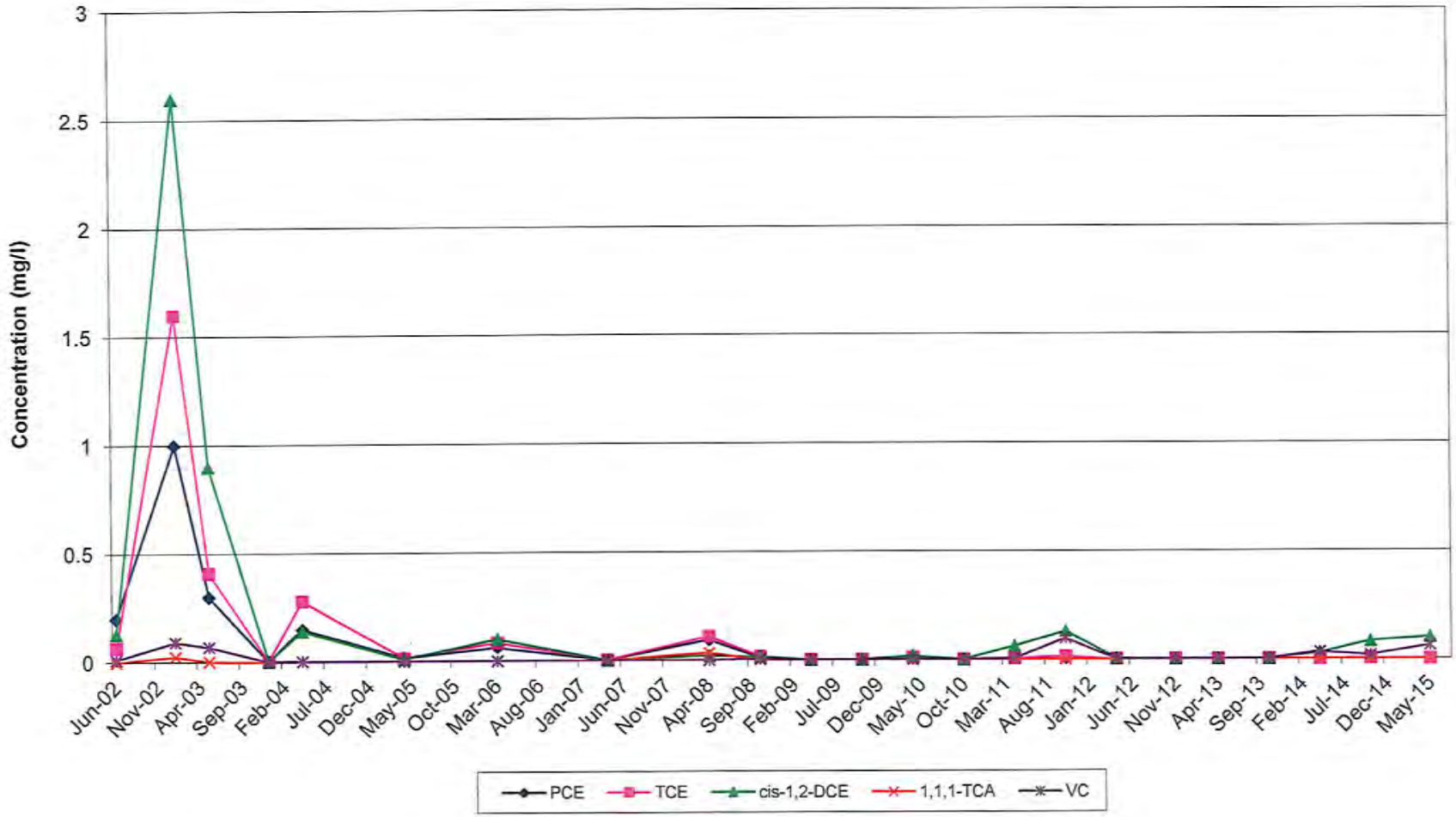
VOC Trends in Well MW-009A
Former Varian Facility Site
Beverly, Massachusetts



Notes: MW-9A is a shallow overburden well adjacent to Building 9.
See end of appendix for additional notes.

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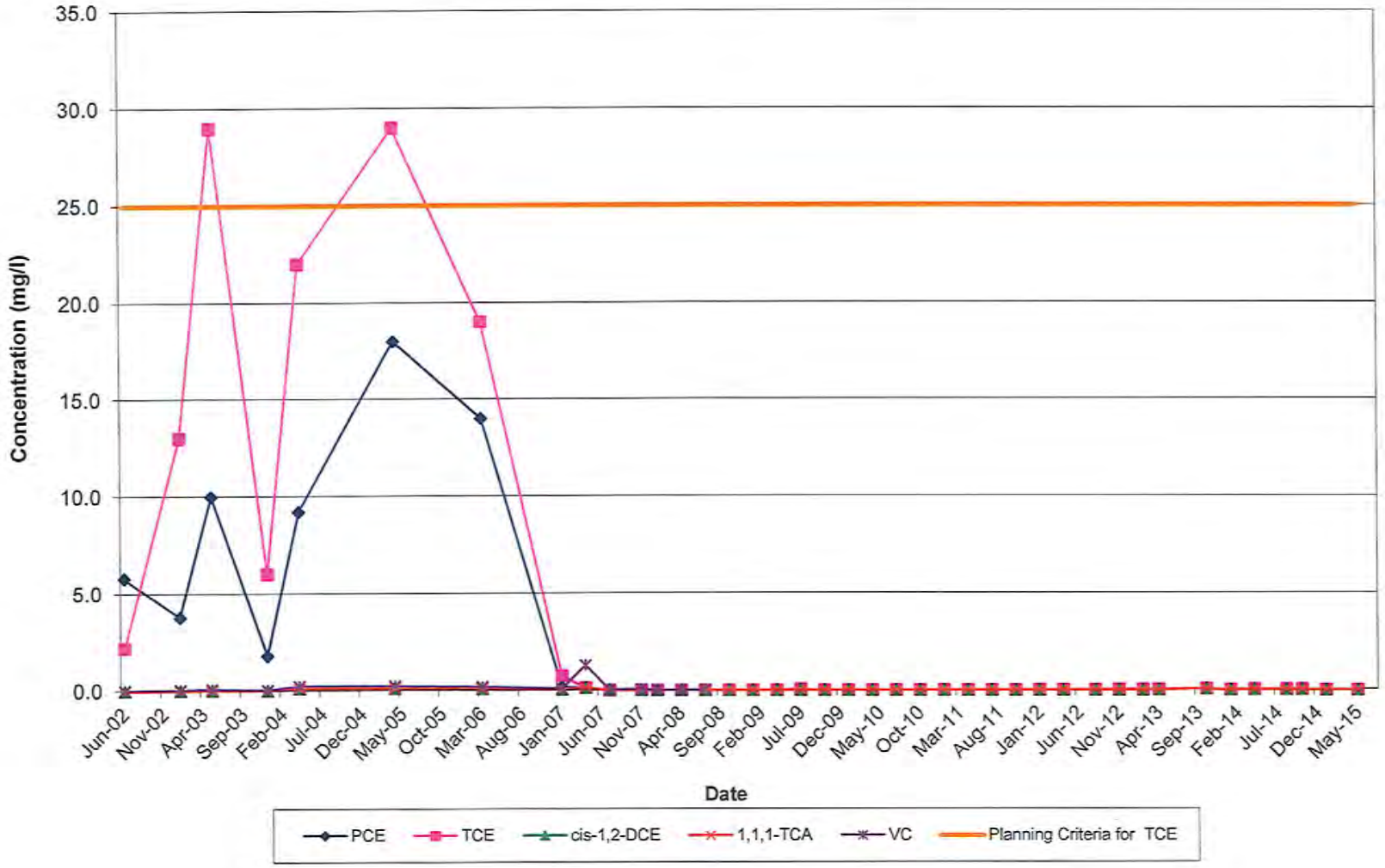
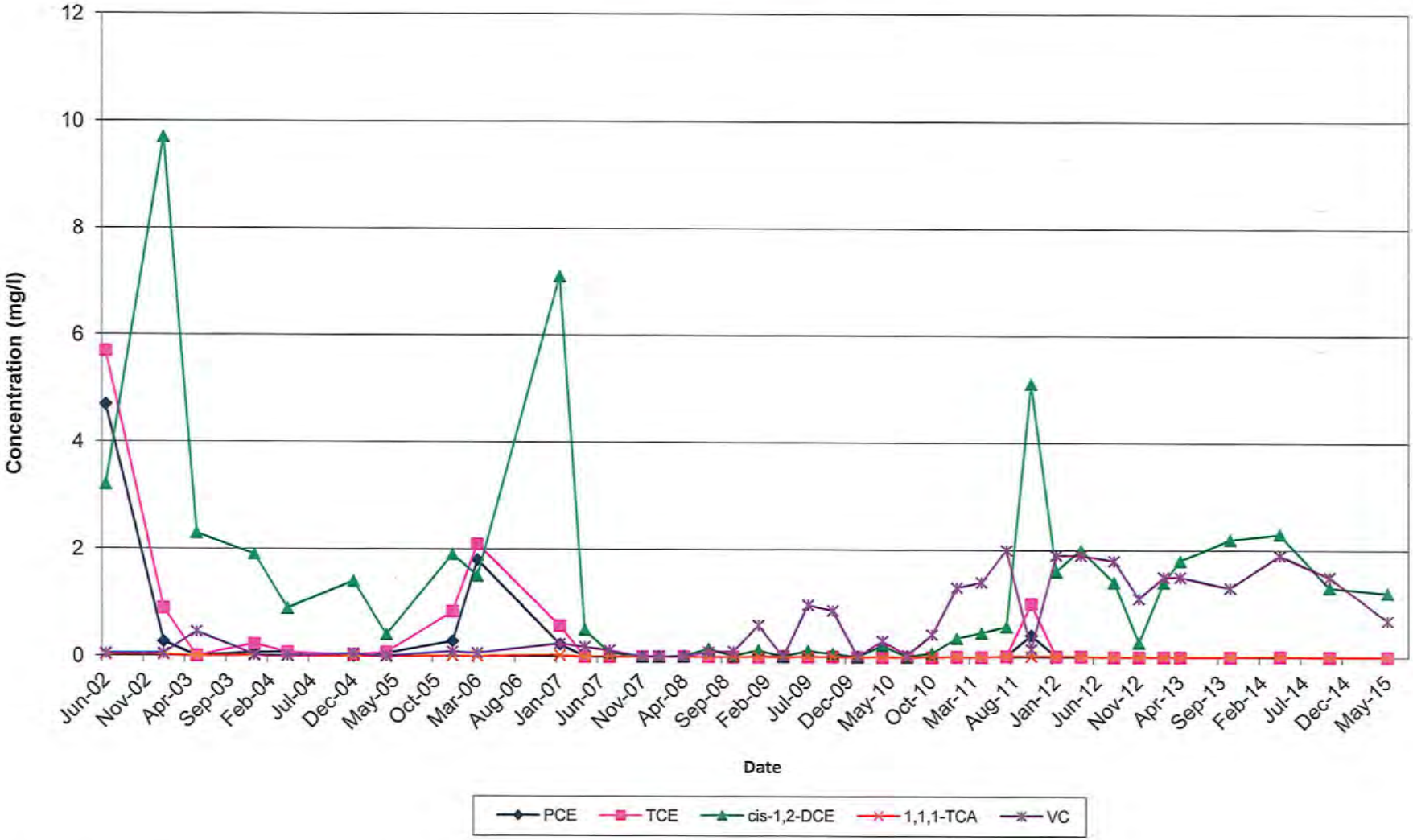
VOC Trends in Well MW-009
Former Varian Facility Site
Beverly, Massachusetts



Notes: MW-9 is a shallow overburden well adjacent to Building 9 where bio-injection was conducted in 2006, 2007, 2009, and 2012. See end of appendix for additional notes.

VOC Trends in Well OB-09-DO
Former Varian Facility Site
Beverly, Massachusetts



Note: OB-9-DO is a deep overburden well east of Building 9.
See end of appendix for additional notes.

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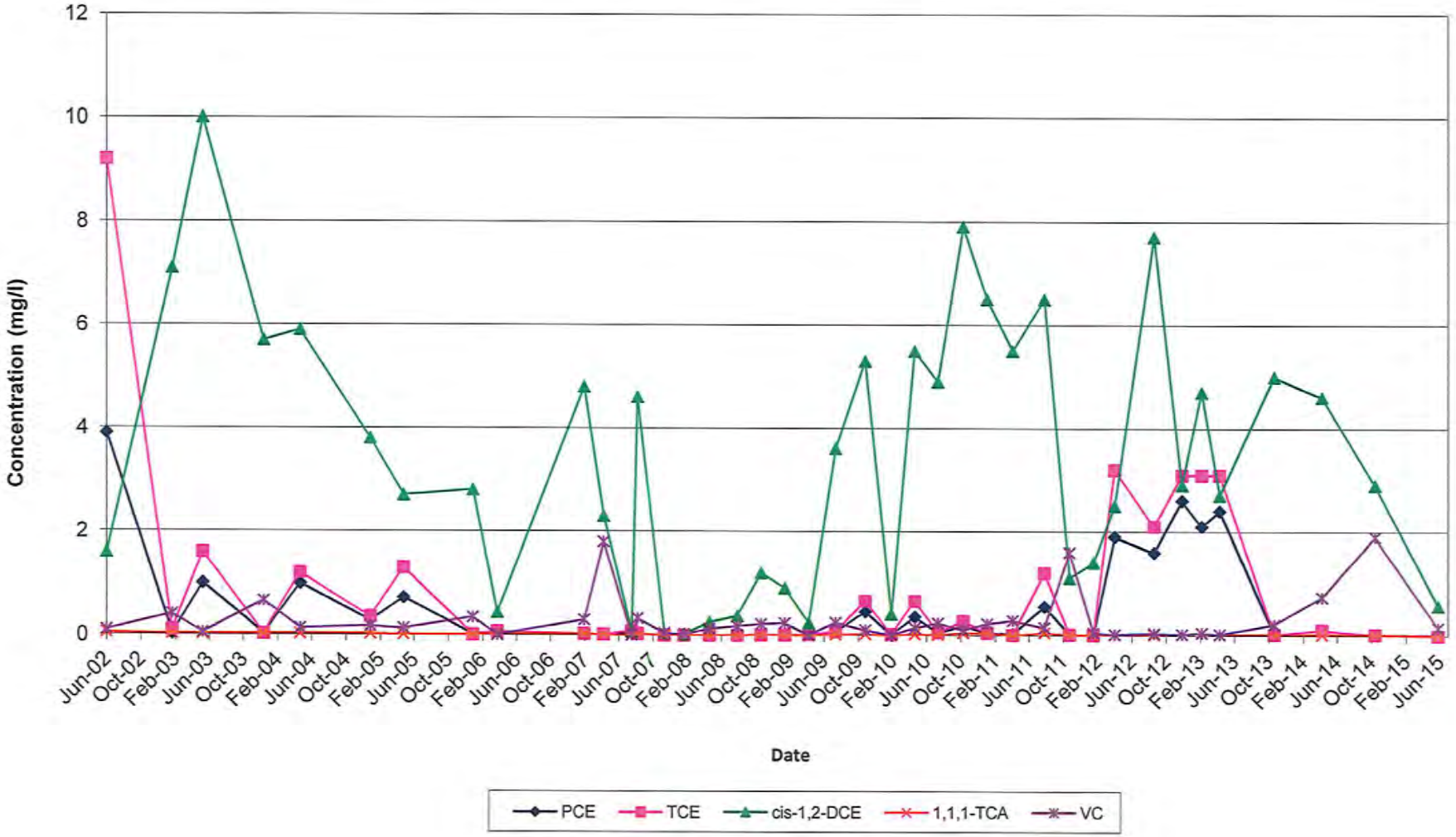
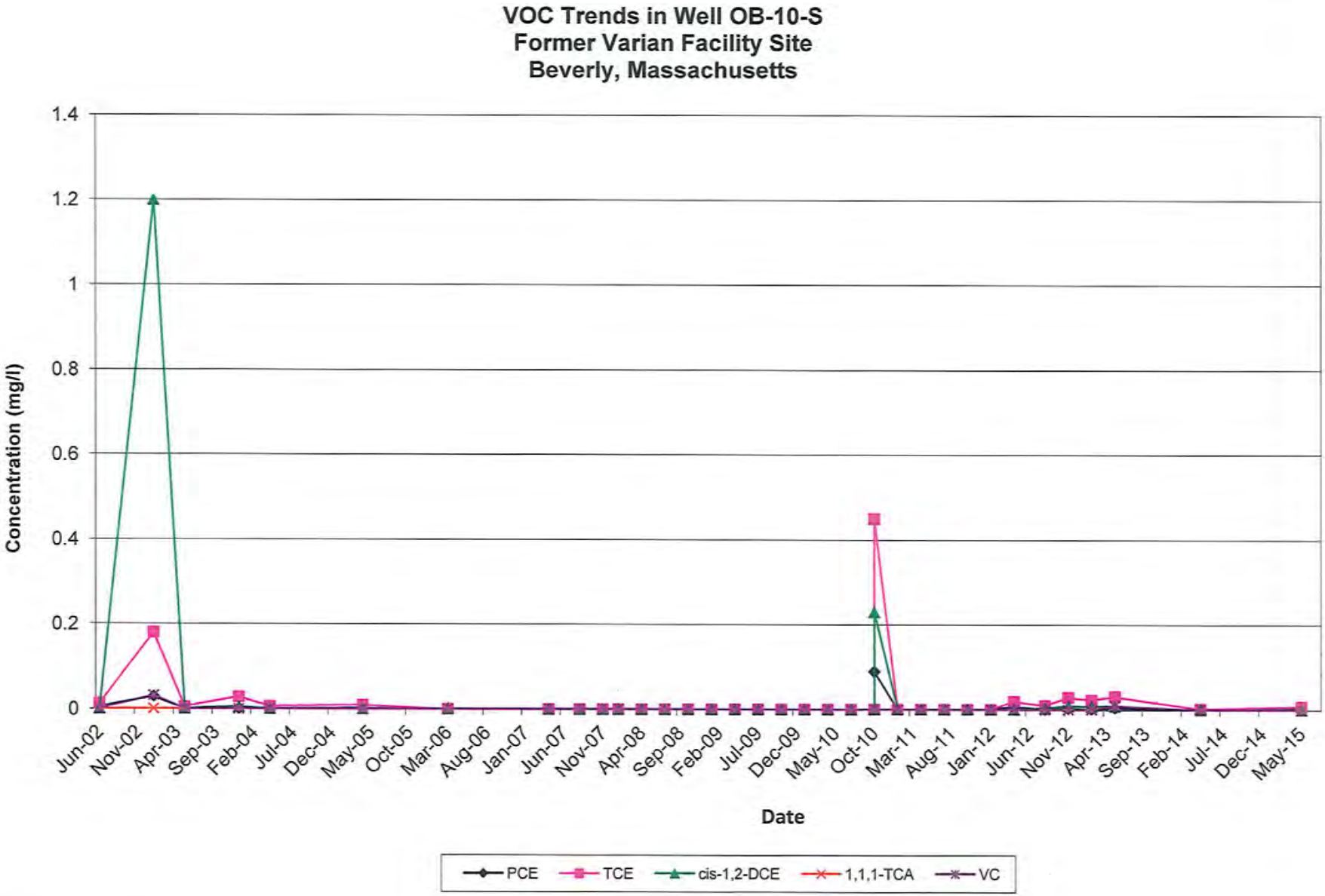
VOC Trends in Well OB-09-BR
Former Varian Facility Site
Beverly, Massachusetts



Note: OB-9-BR is a bedrock well east of Building 9.
See end of appendix for additional notes.

P:\Varian\Draft\Reports\Status\October 2015 ROS\Graphs - VOC_OB Aug 2015.xlsx



Note: OB-10-S is a shallow well adjacent to Building 4.
See end of appendix for additional notes.

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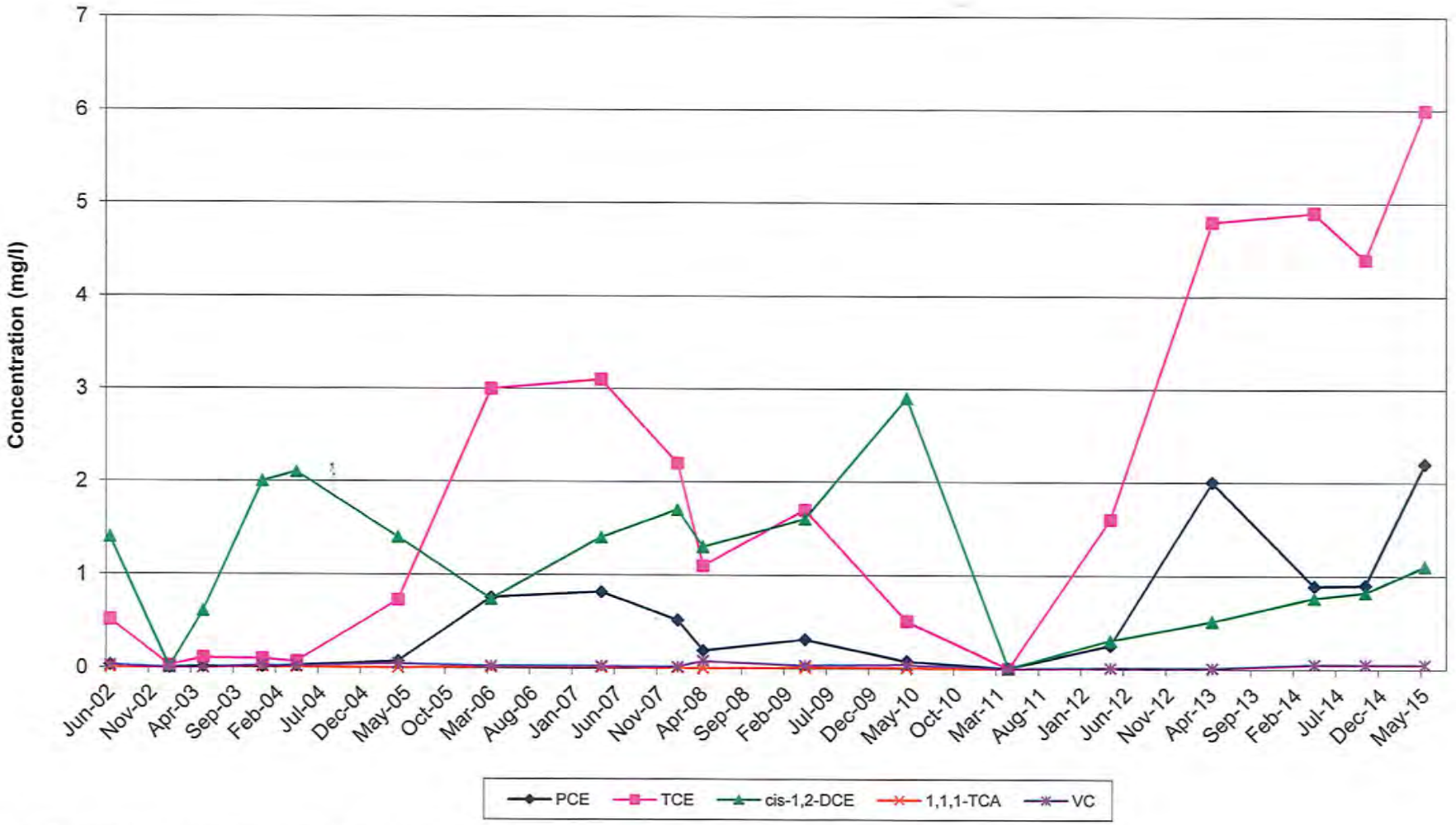
VOC Trends in Well OB-10-BR
Former Varian Facility Site
Beverly, Massachusetts



Note: OB-10-BR is a bedrock well adjacent to Building 4 where permanganate injection was completed in 2010. See end of appendix for additional notes.

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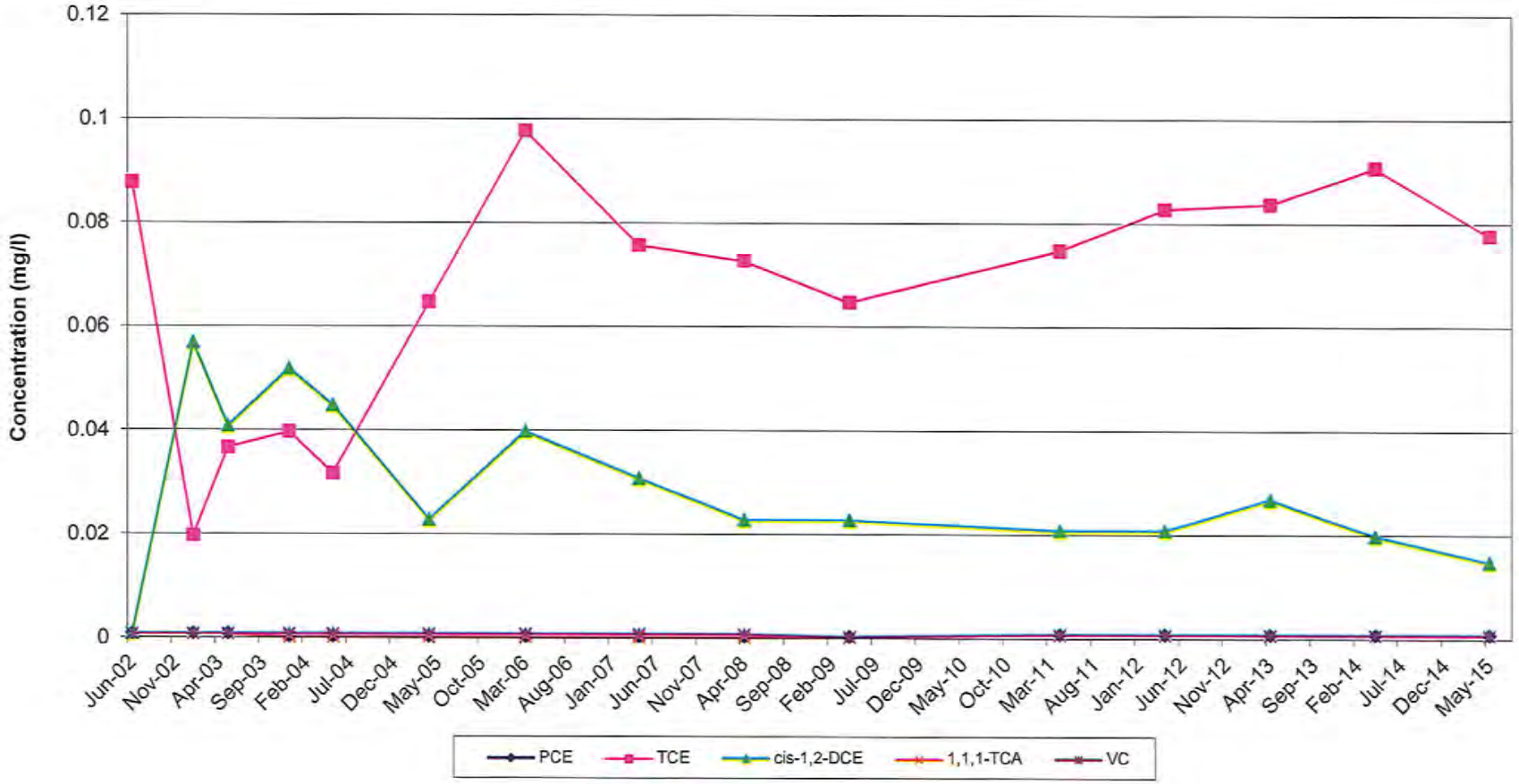
VOC Trends in Well OB-11-DO
Former Varian Facility Site
Beverly, Massachusetts



Note: OB-11-DO is a deep overburden well north of Building 1.
See end of appendix for additional notes.

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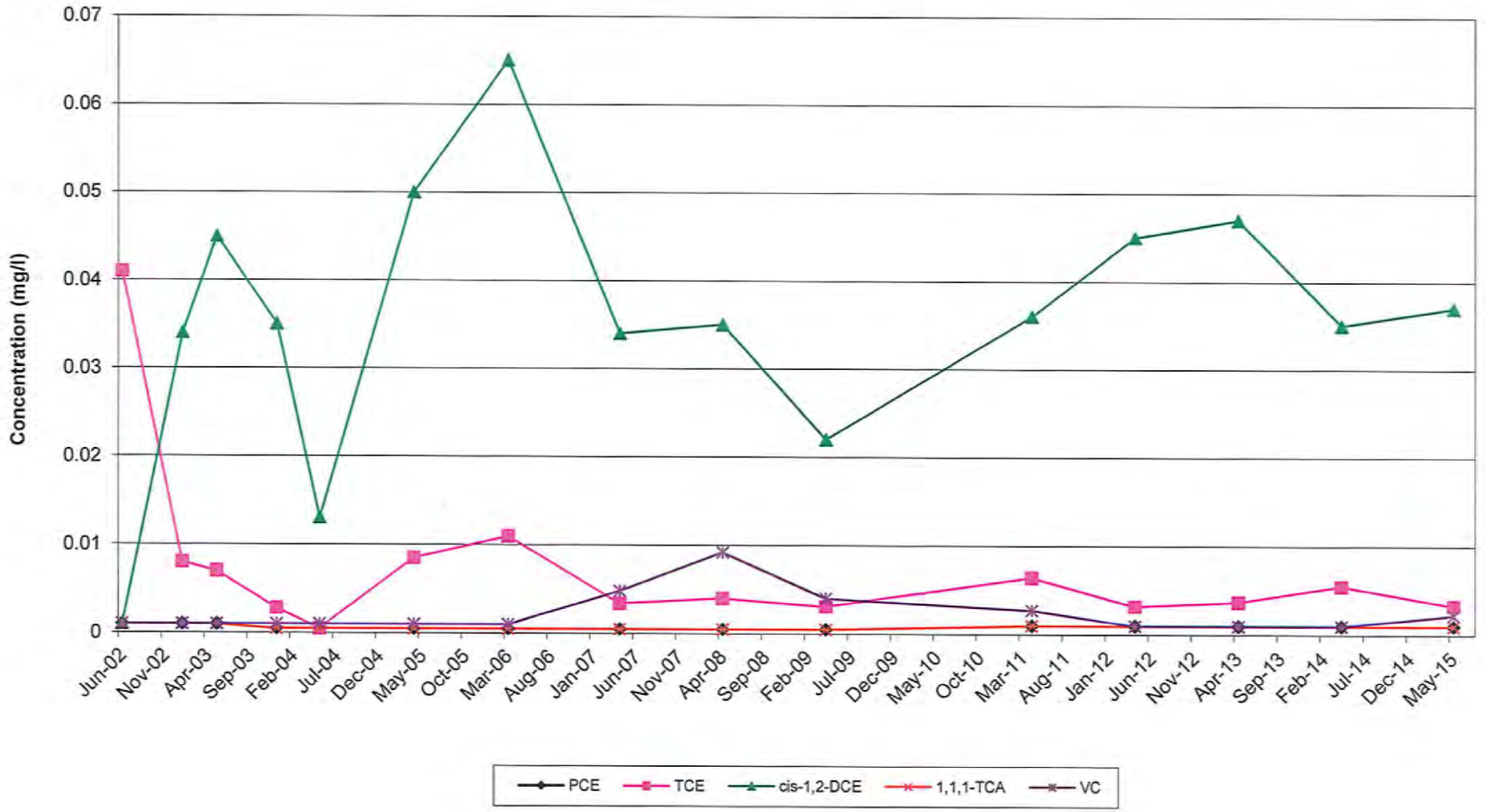
VOC Trends in Well OB-11-BR
Former Varian Facility Site
Beverly, Massachusetts



Note: OB-11-BR is a bedrock well north of Building 1.
See end of appendix for additional notes.

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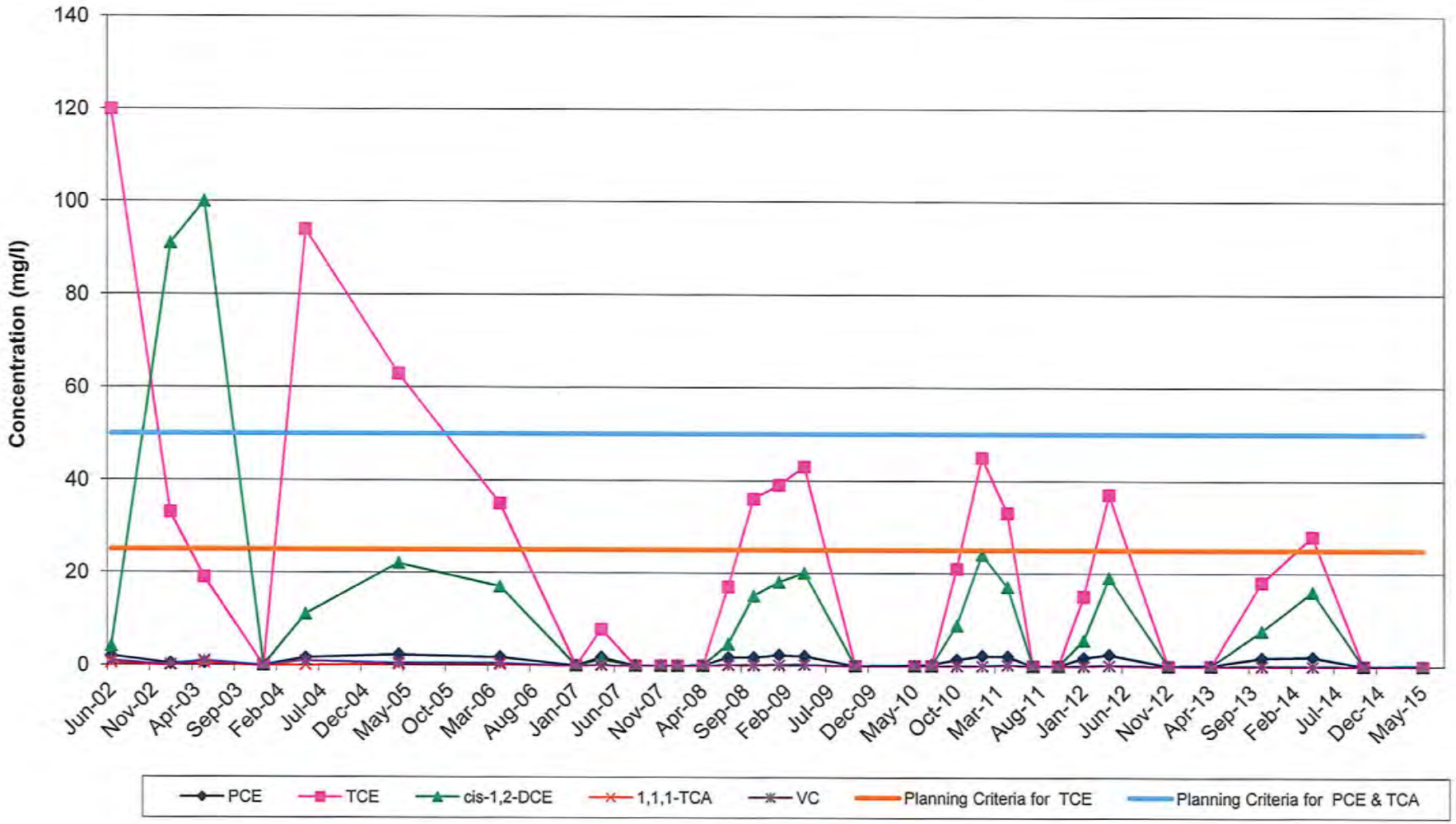
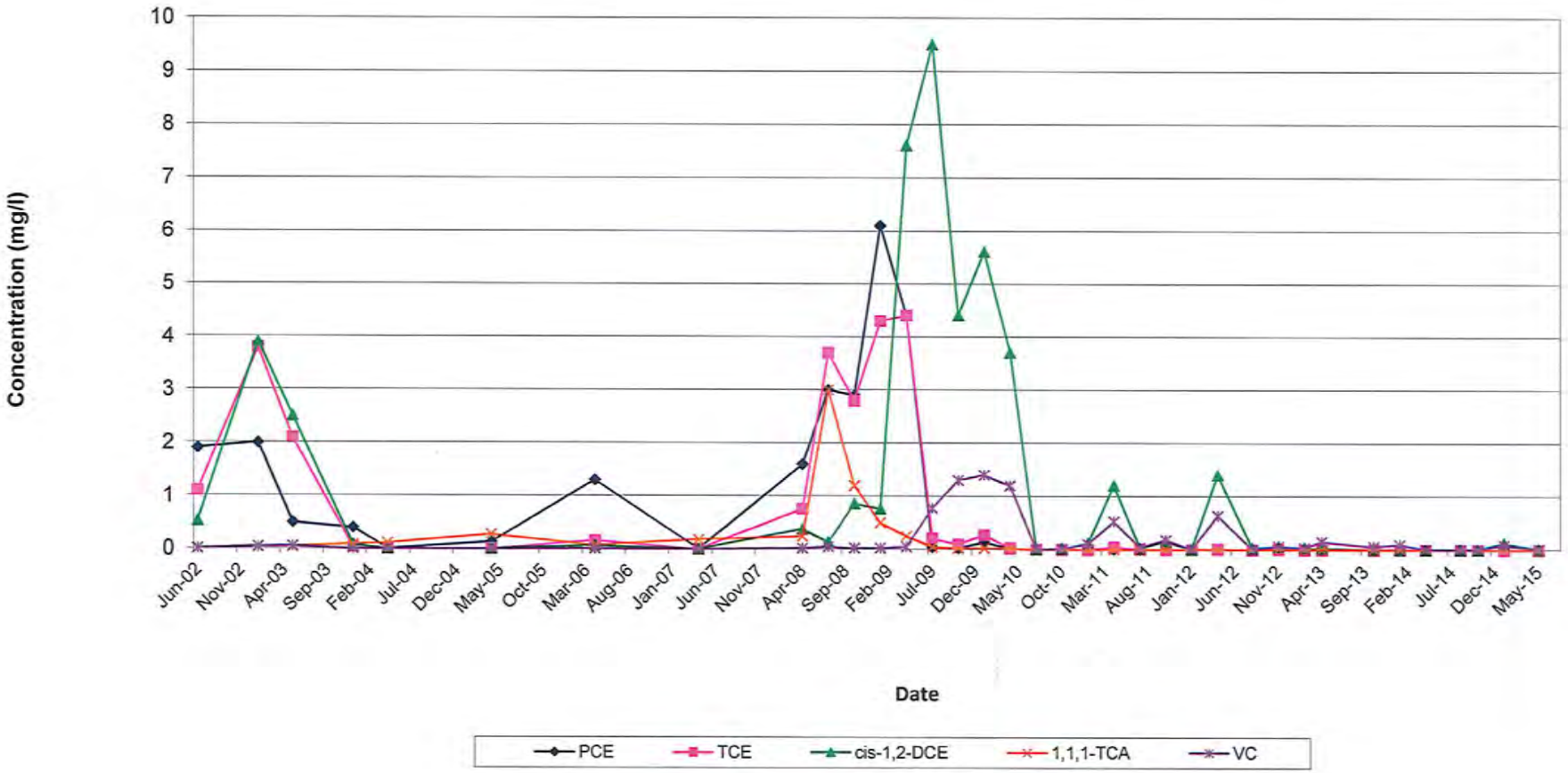
VOC Trends in Well OB-12-DO
Former Varian Facility Site
Beverly, Massachusetts



Note: OB-12-DO is a deep overburden well north of Building 3 where permanganate injection was completed 2003-2007, 2009, 2011, 2012, and 2014. See end of appendix for additional notes.

VOC Trends in Well OB-15-S
Former Varian Facility Site
Beverly, Massachusetts



Notes: OB15-S is a shallow well northeast of Building 9 where bio-injection was conducted in 2009 through 2012.
See end of appendix for additional notes.

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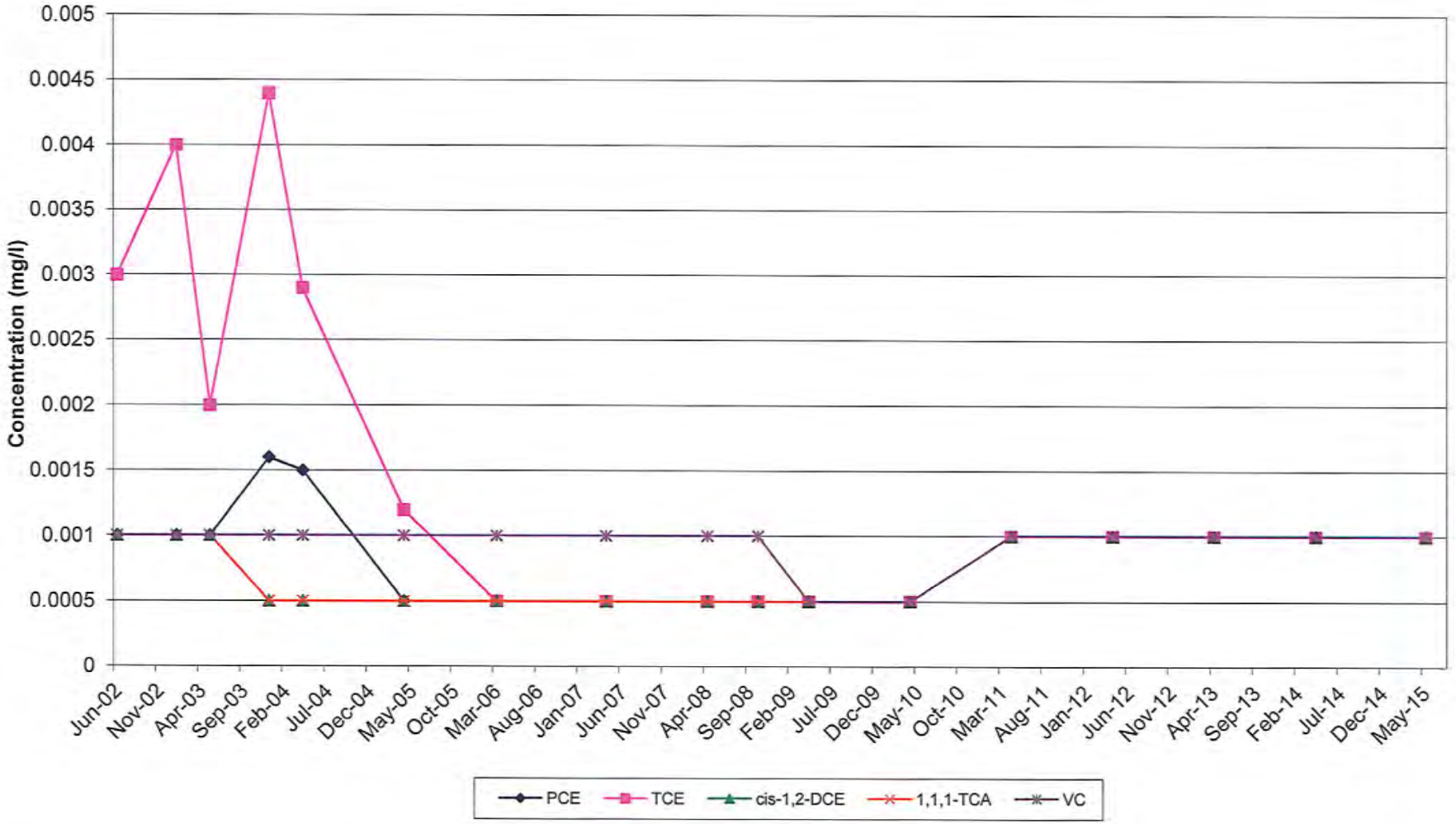
VOC Trends in Well OB-19-S
Former Varian Facility Site
Beverly, Massachusetts



Note: OB-19-S is a shallow well west of Building 2.
See end of appendix for additional notes.

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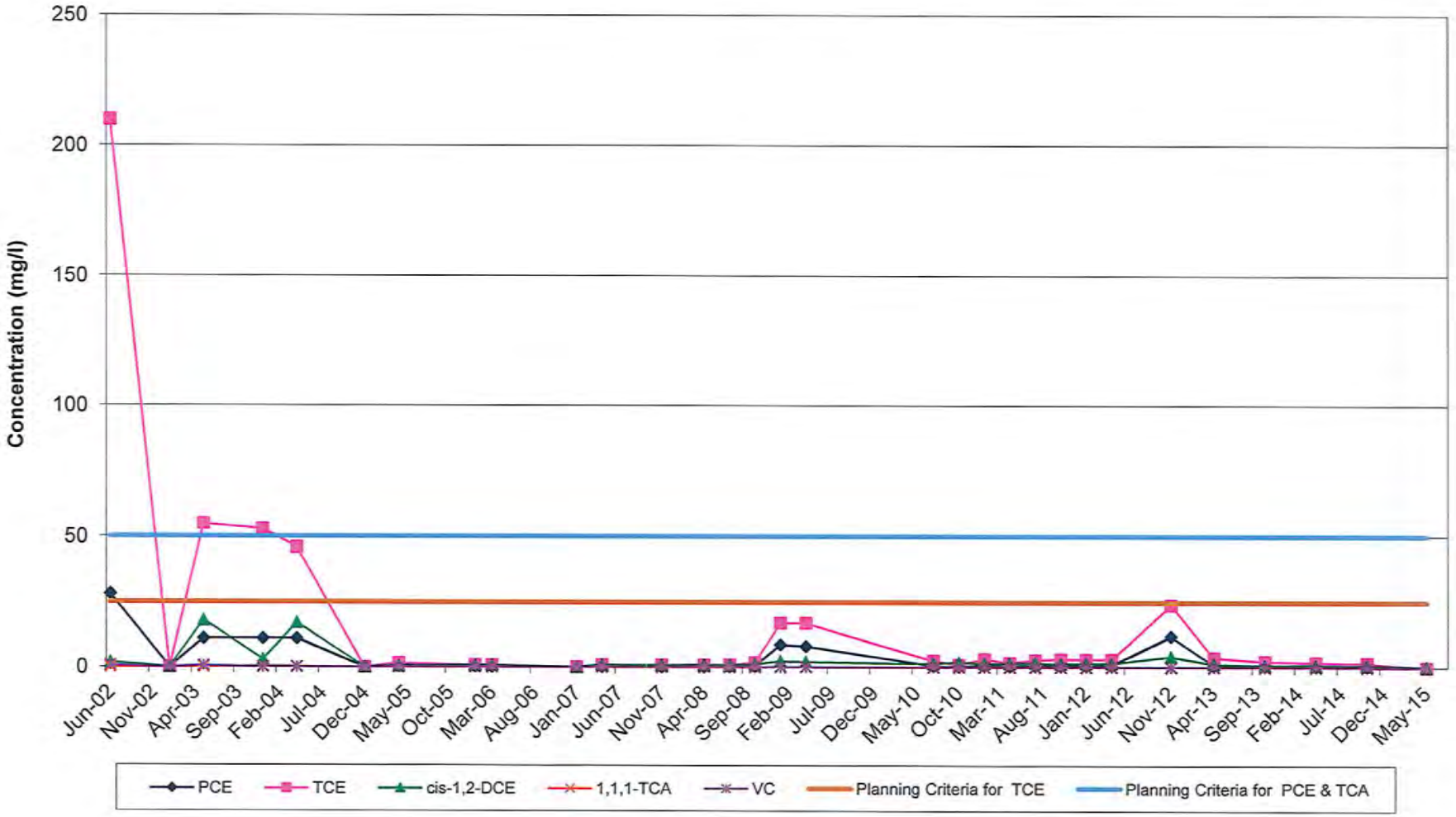
VOC Trends in Well OB-19-DO
Former Varian Facility Site
Beverly, Massachusetts



Note: OB-19-DO is a deep overburden well west of Building 2 where permanganate injection was conducted from 2002-2005. See end of appendix for additional notes.

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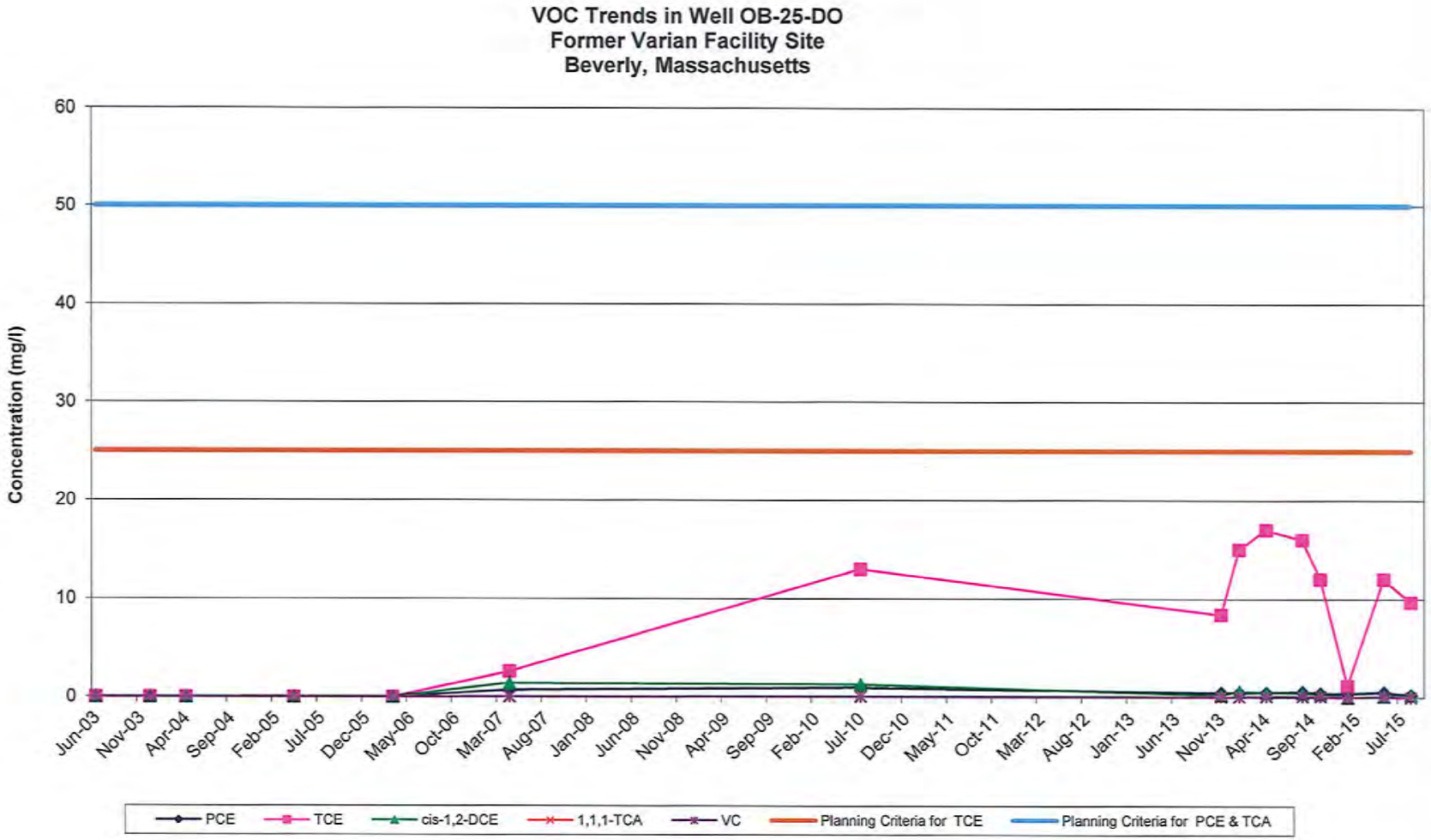
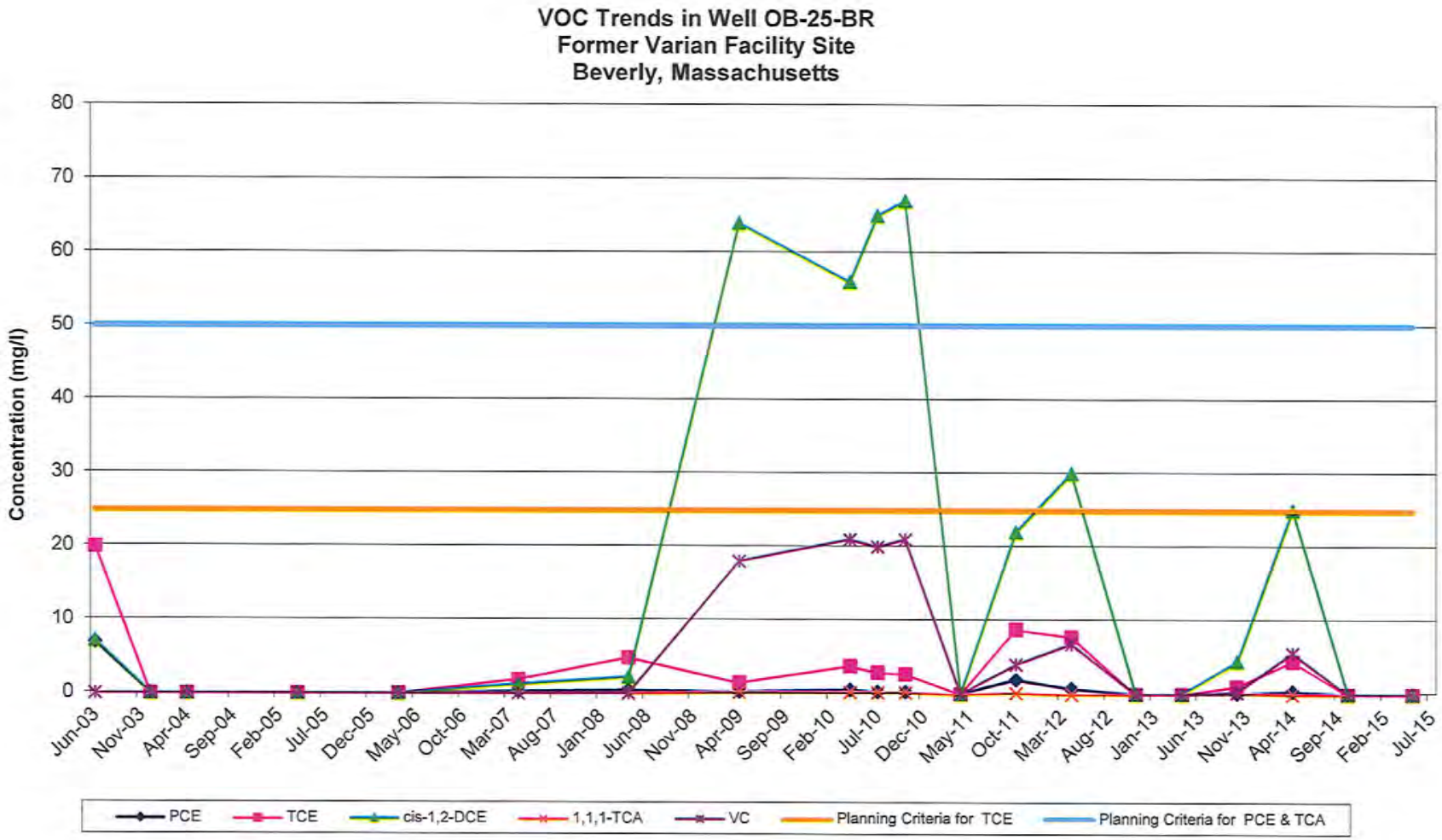


Notes: OB-25-DO is a deep overburden well located just west of Building 1.
See appendix for additional notes.



Notes: OB-25-BR is a bedrock well located just west of Building 1 where permanganate injection was conducted in 2003, 2010, 2012 and 2014.
See end of appendix for additional notes.

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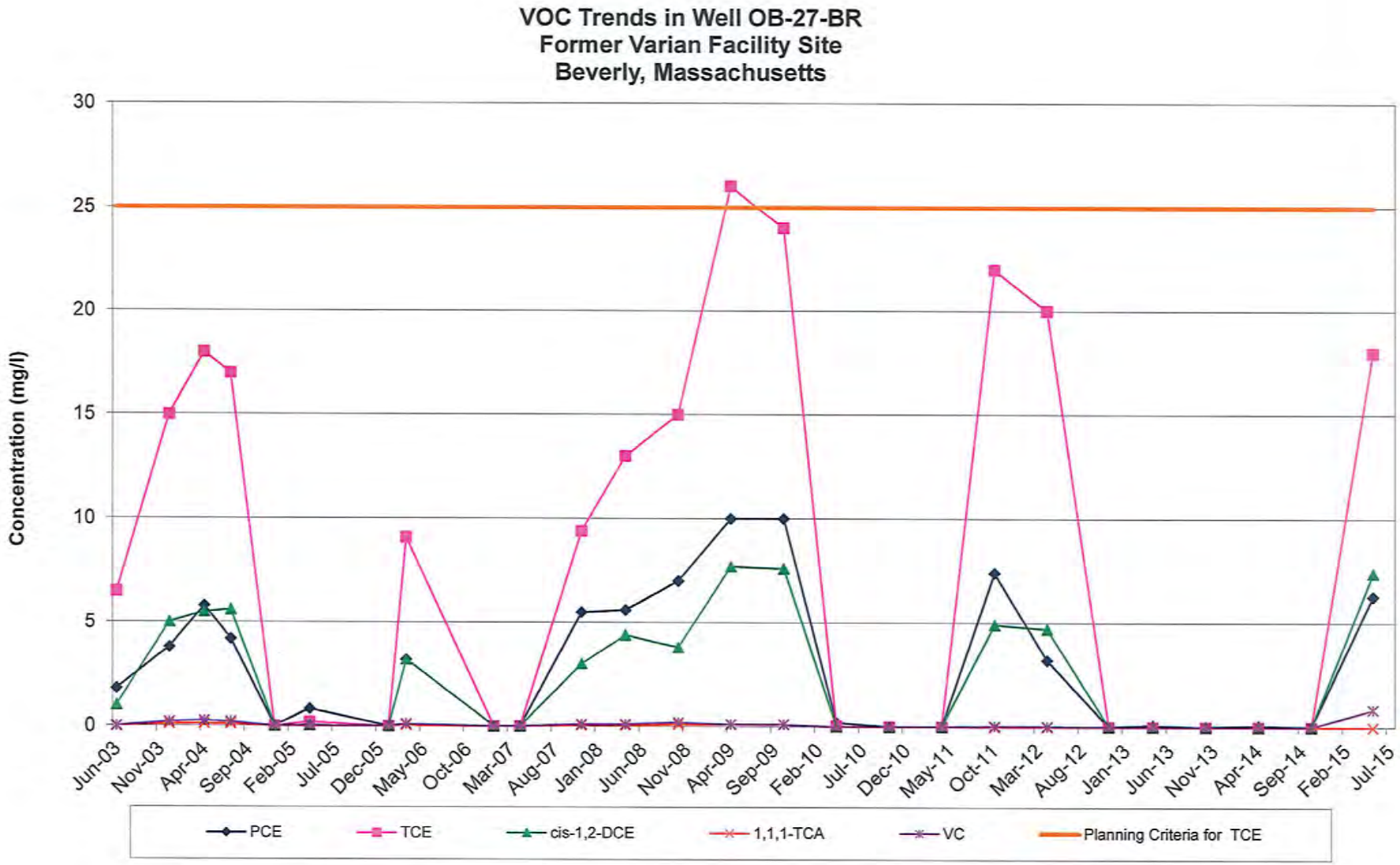

Notes: OB-27-BR is a bedrock well located west of Building 7.
Permanganate injection conducted in 2004-2007 and in 2010-2011.
See end of appendix for additional notes.

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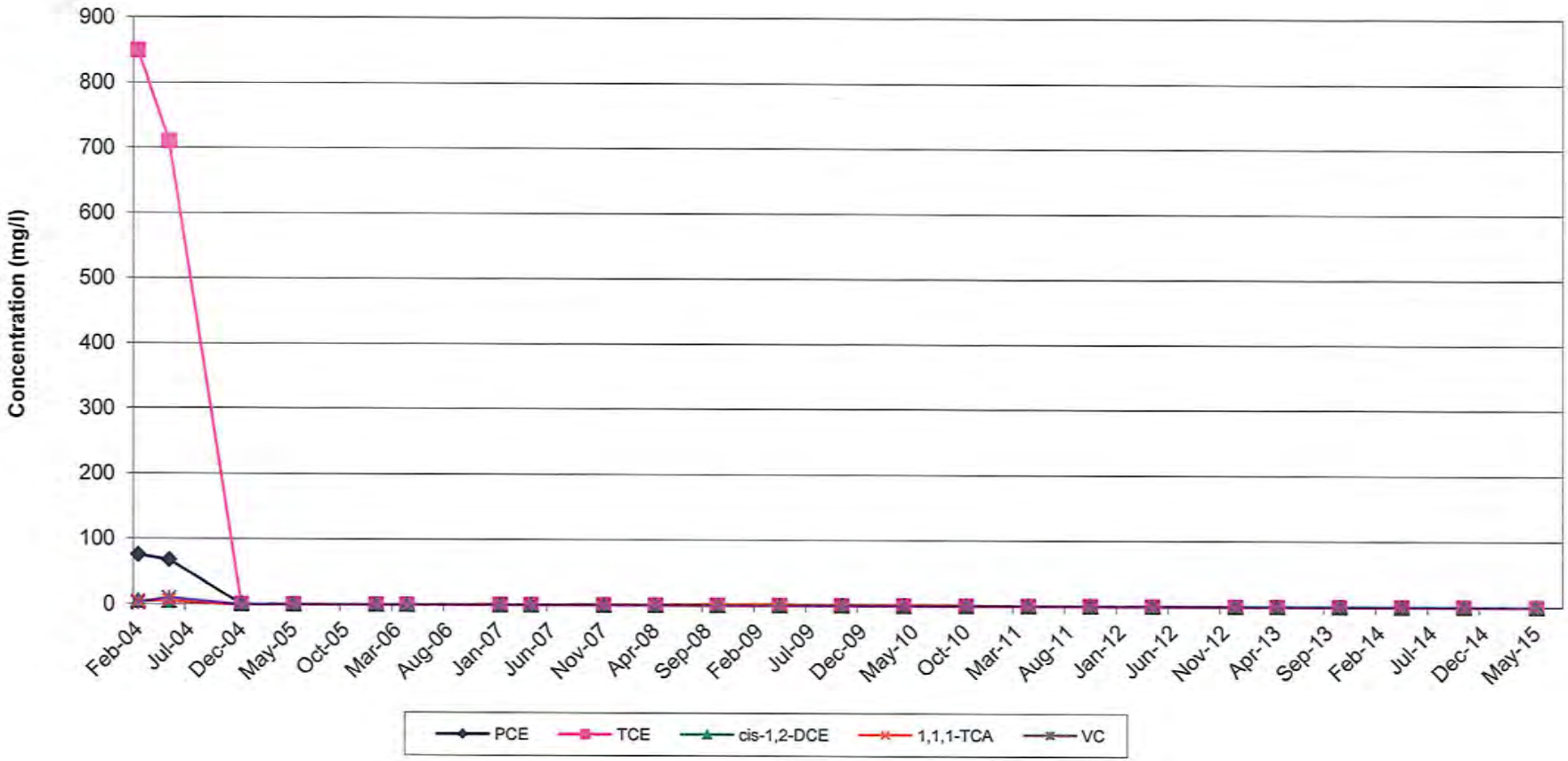
VOC Trends in Well OB-32-DO
Former Varian Facility Site
Beverly, Massachusetts



Note: OB-32-DO is a deep overburden well north of Building 3 where permanganate injection was conducted in 2004.
See end of appendix for additional notes.

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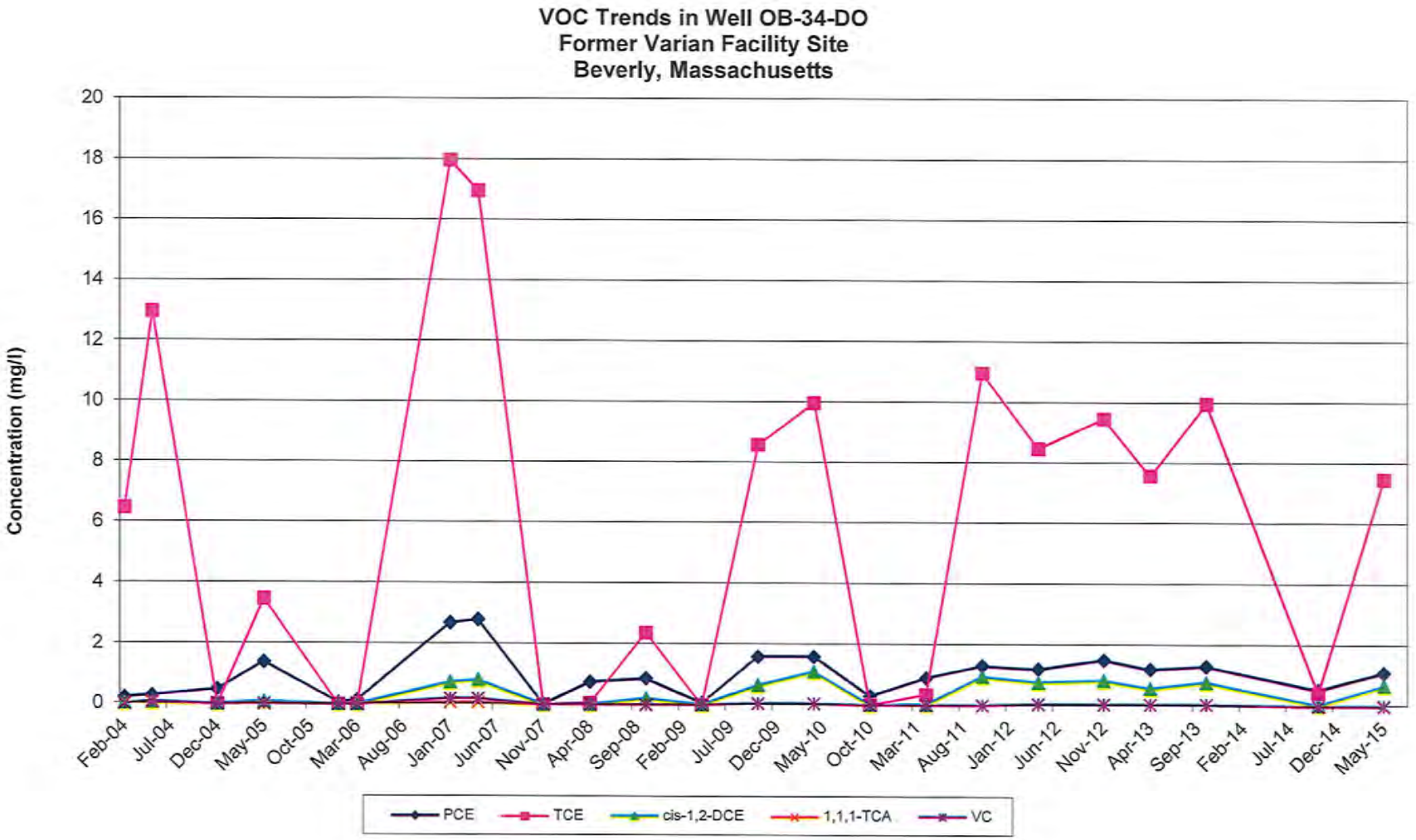

Notes: OB34-DO is a deep overburden well north of Building 3.
Permanganate injection was conducted in 2004, 2005, 2007 and 2009.
See end of appendix for additional notes.

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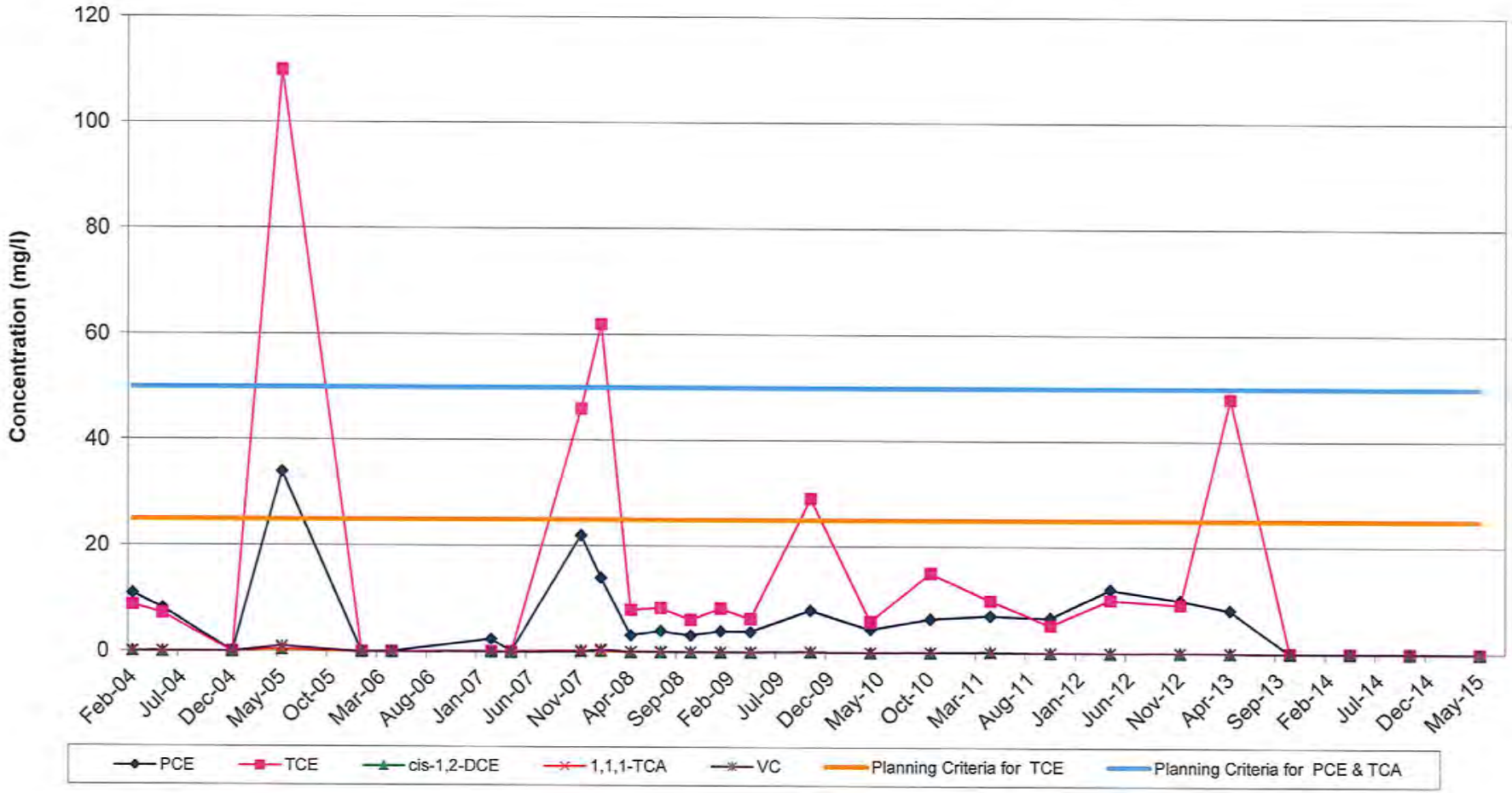
VOC Trends in Well OB-36-DO
Former Varian Facility Site
Beverly, Massachusetts



Note: OB-36-DO is a deep overburden well inside the Building 6 loading dock where permanganate injection was conducted in 2004-2005 and 2013. See end of appendix for additional notes.

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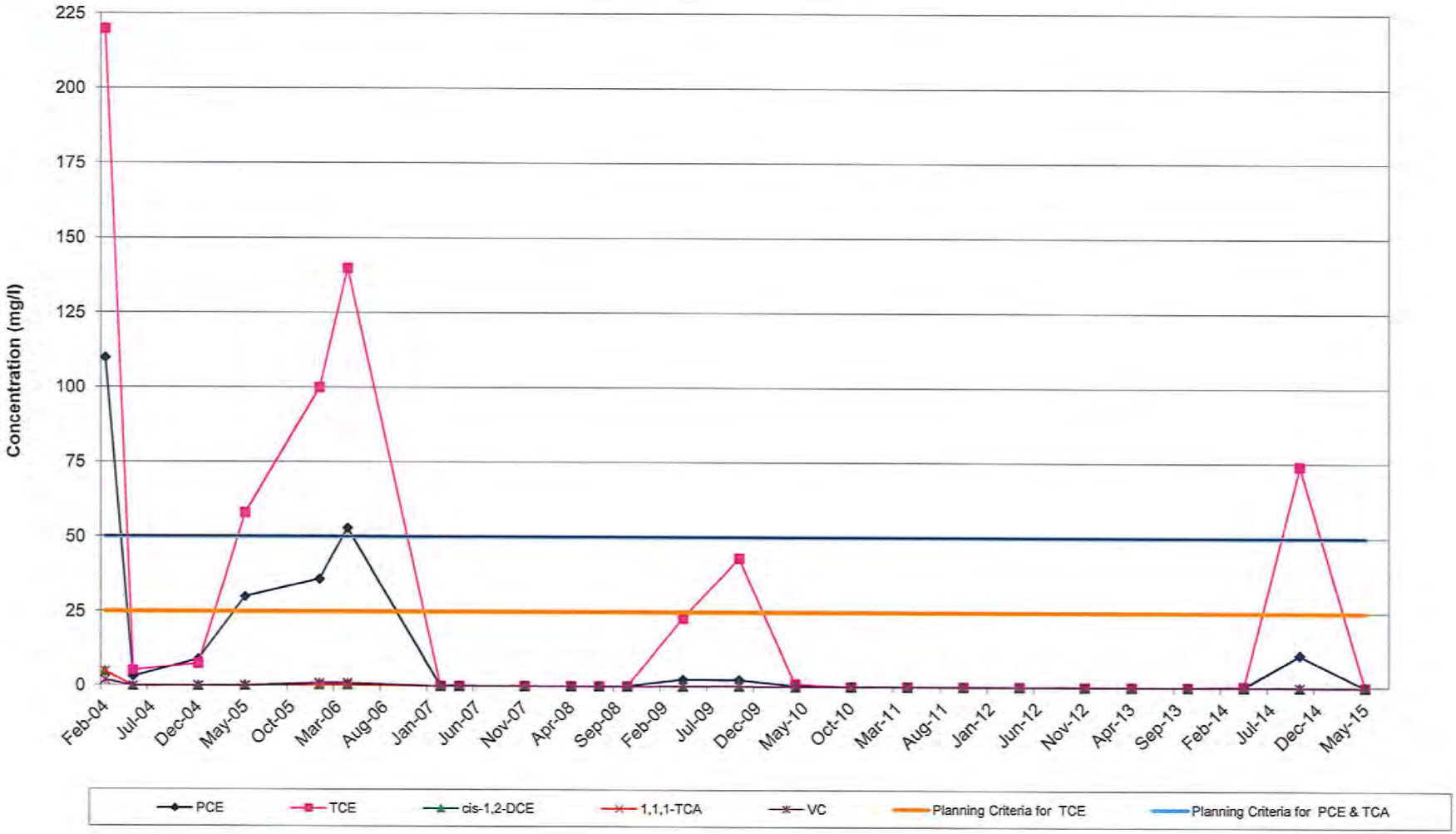
VOC Trends in Well OB-37-DO
Former Varian Facility Site
Beverly, Massachusetts



Notes: OB37-DO is a deep overburden well inside Building 6.
Permanganate injection conducted in 2006, 2007, 2010-2011 and 2015.
See end of appendix for additional notes.

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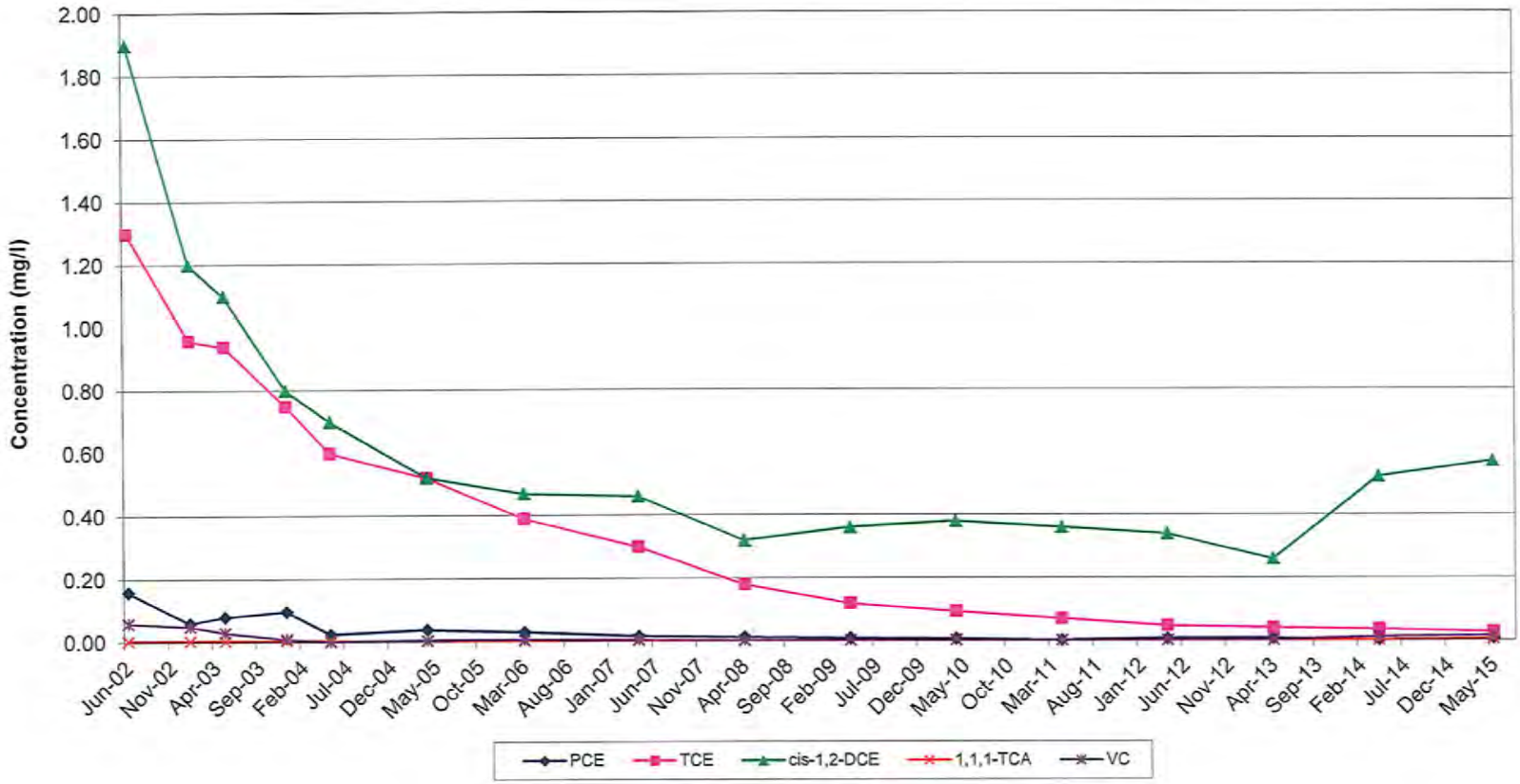
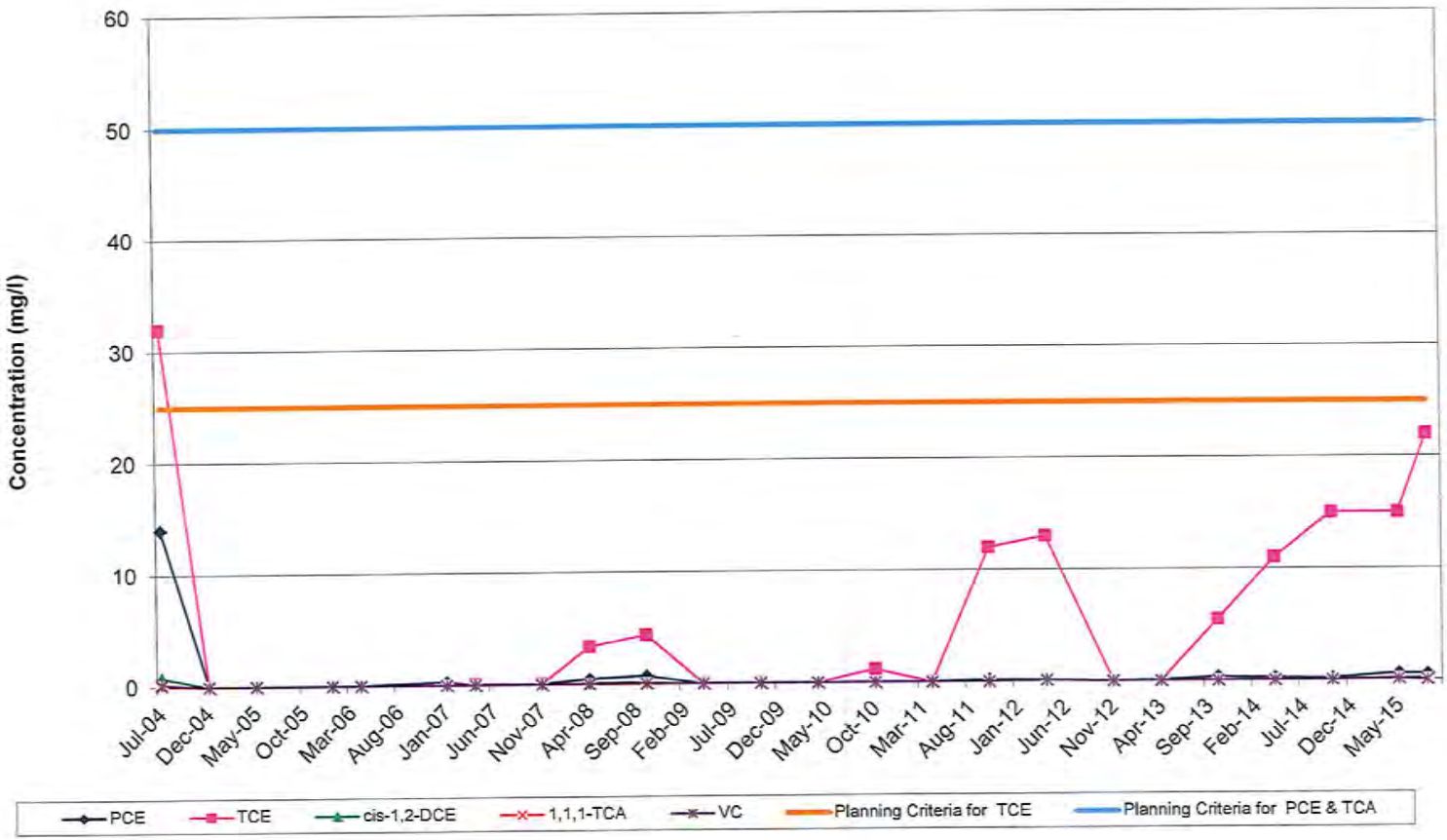
VOC Trends in Well RW-22
Former Varian Facility Site
Beverly, Massachusetts



Notes: RW-22 is a bedrock well located north of Building 1.
See end of appendix for additional notes.

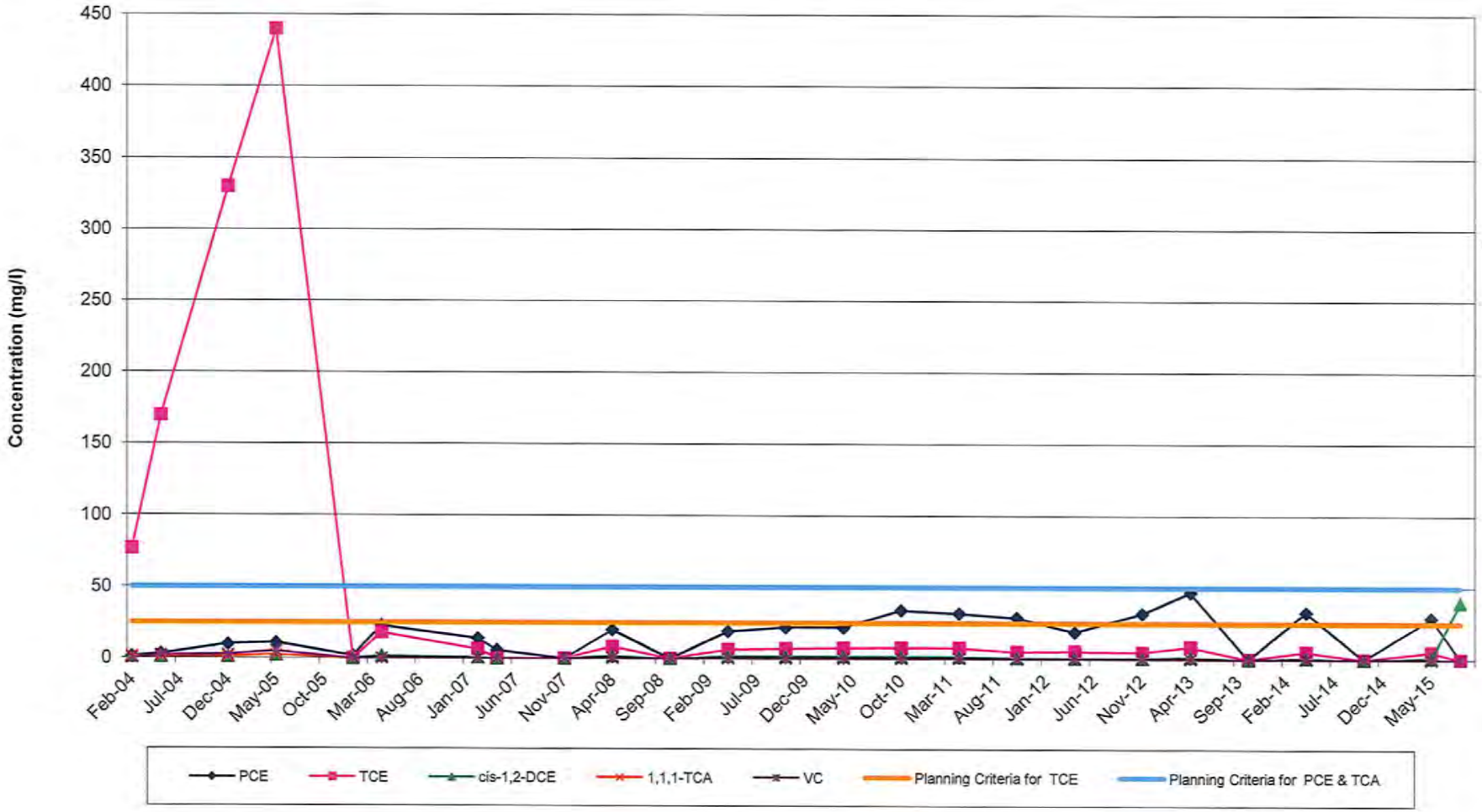
BUILDING 5 TREATMENT AREA

VOC Trends in Well AP-27-DO
Former Varian Facility Site
Beverly, Massachusetts



Notes: AP-27-DO is a deep overburden well adjacent to Building 5 where permanganate injection was conducted in 2004, 2005 and 2012. See end of appendix for additional notes.

VOC Trends in Well OB-35-DO
Former Varian Facility Site
Beverly, Massachusetts



Note: OB-35-DO is a deep overburden well inside Building 5,
where permanganate injection was conducted from 2005-2008 and 2011-2015.
See end of appendix for additional notes.

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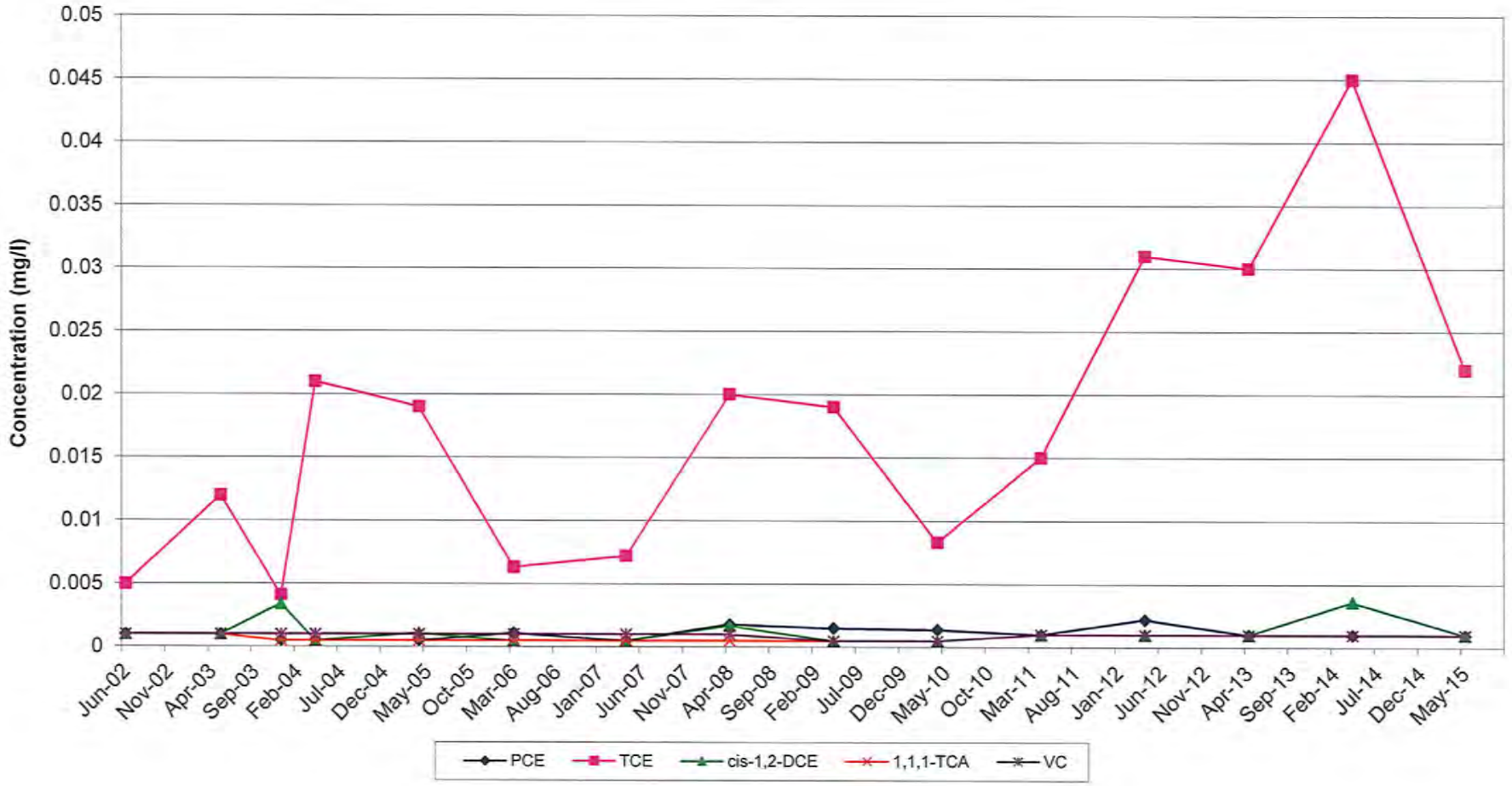
PSL 10 TREATMENT AREA

VOC Trends in Well CL04-DO
Former Varian Facility Site
Beverly, Massachusetts



Notes: CL4-DO is a deep overburden well located just east of the 31 Tozer Road Treatment Area.
See end of appendix for additional notes.

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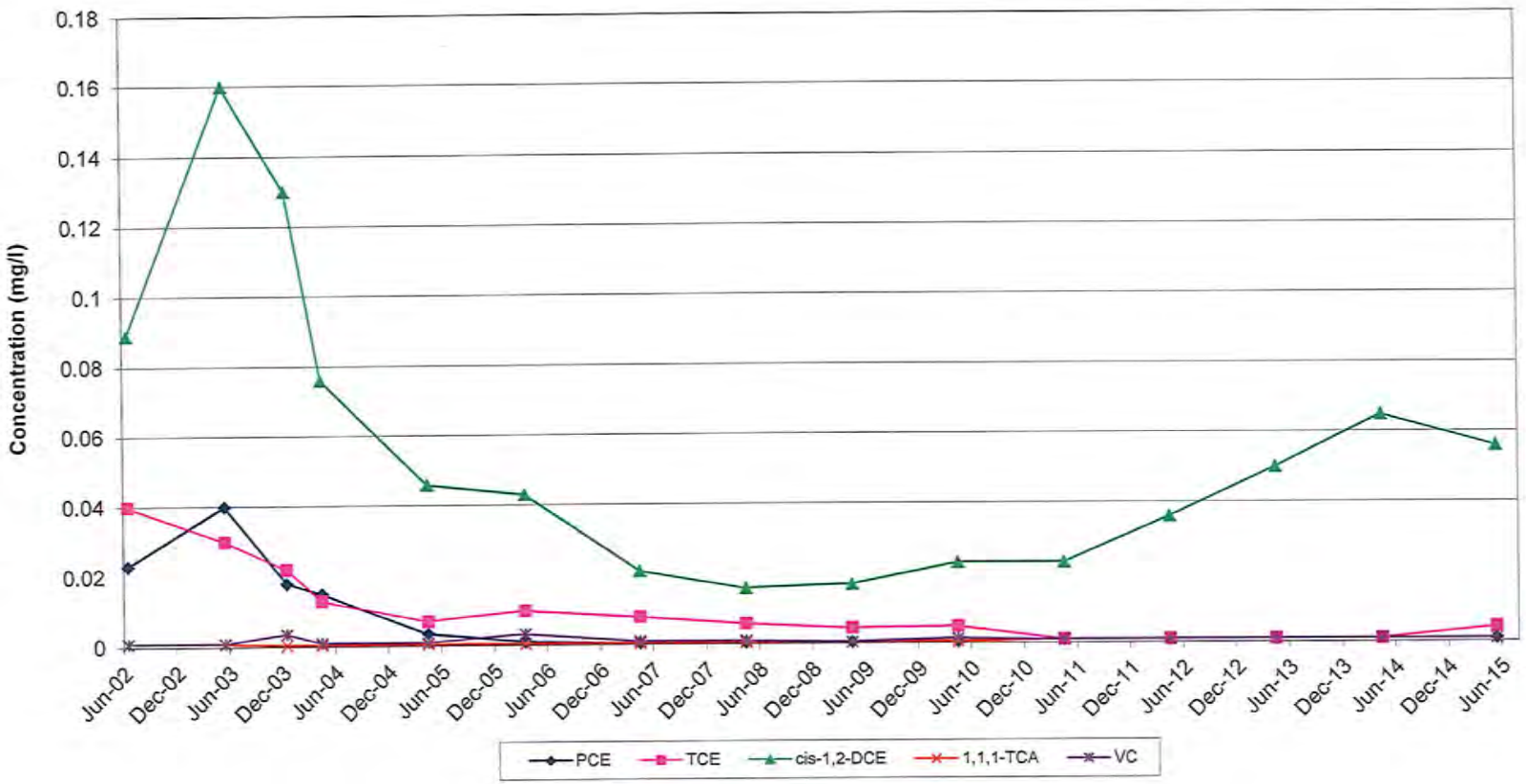
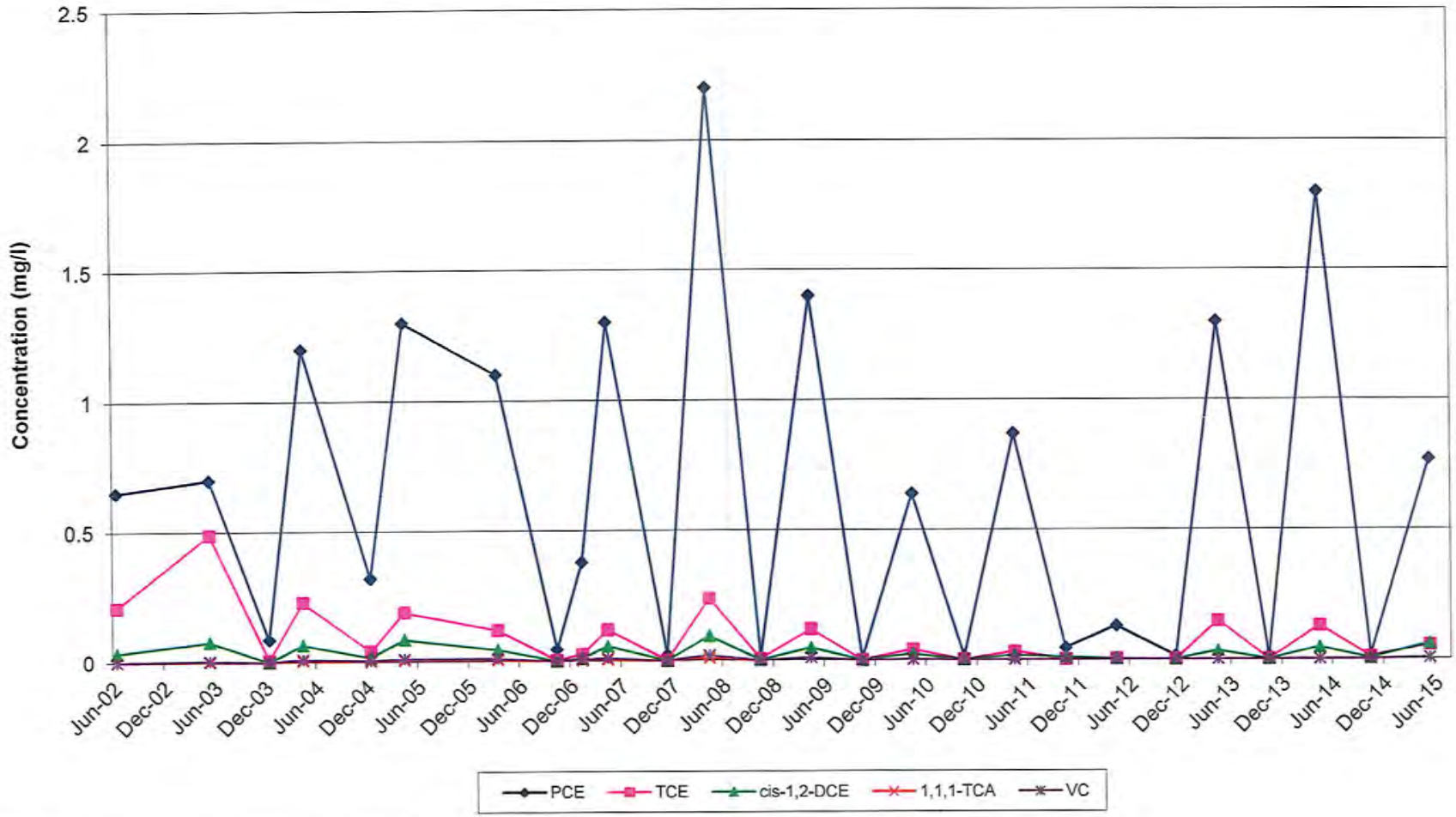
VOC Trends in Well CL04-BR
Former Varian Facility Site
Beverly, Massachusetts



Notes: CL4-BR is a bedrock well located located just east of the 31 Tozer Road Treatment Area.
See end of appendix for additional notes.

VOC Trends in Well CL10-S
Former Varian Facility Site
Beverly, Massachusetts



Notes: CL10-S is a shallow overburden well located in the PSL10 treatment area, south of the facility.
See end of appendix for additional notes.

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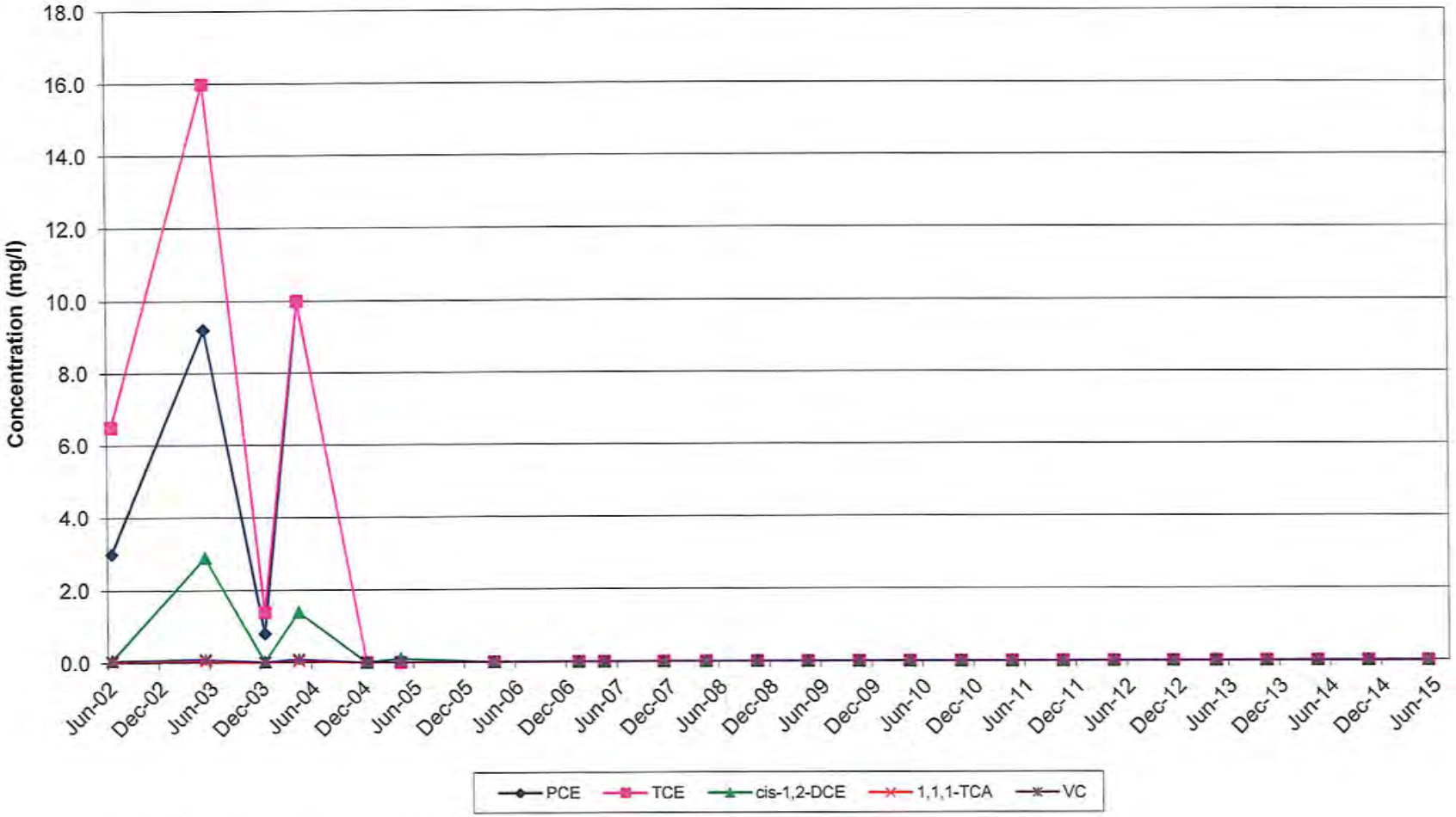
VOC Trends in Well CL10-DO
Former Varian Facility Site
Beverly, Massachusetts



Notes: CL10-DO is a deep overburden well located in the PSL10 treatment area, south of the facility.
See end of appendix for additional notes.

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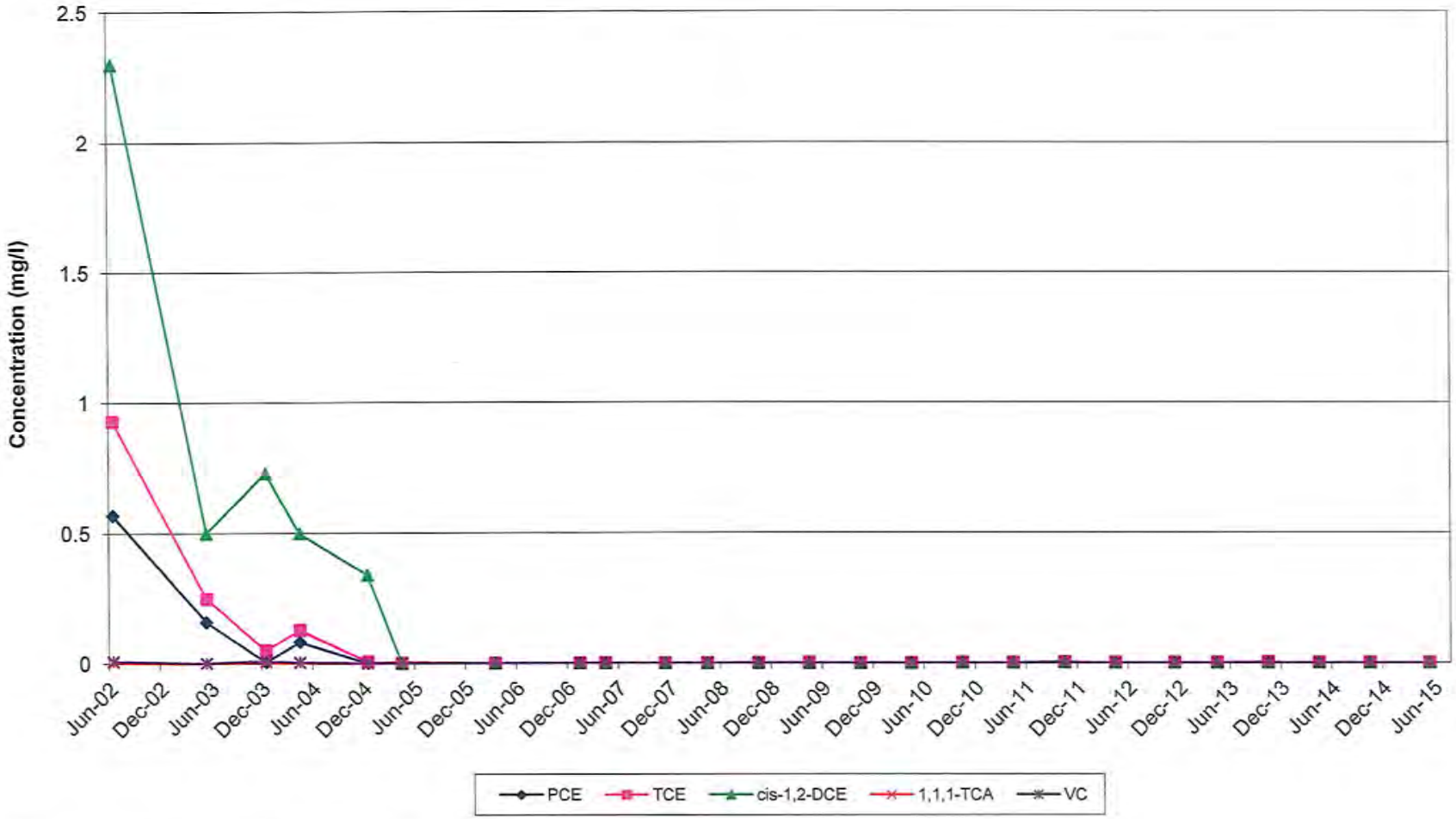
VOC Trends in Well CL10-BR
Former Varian Facility Site
Beverly, Massachusetts



Notes: CL10-BR is a bedrock well located in the PSL10 treatment area, south of the facility. See end of appendix for additional notes.

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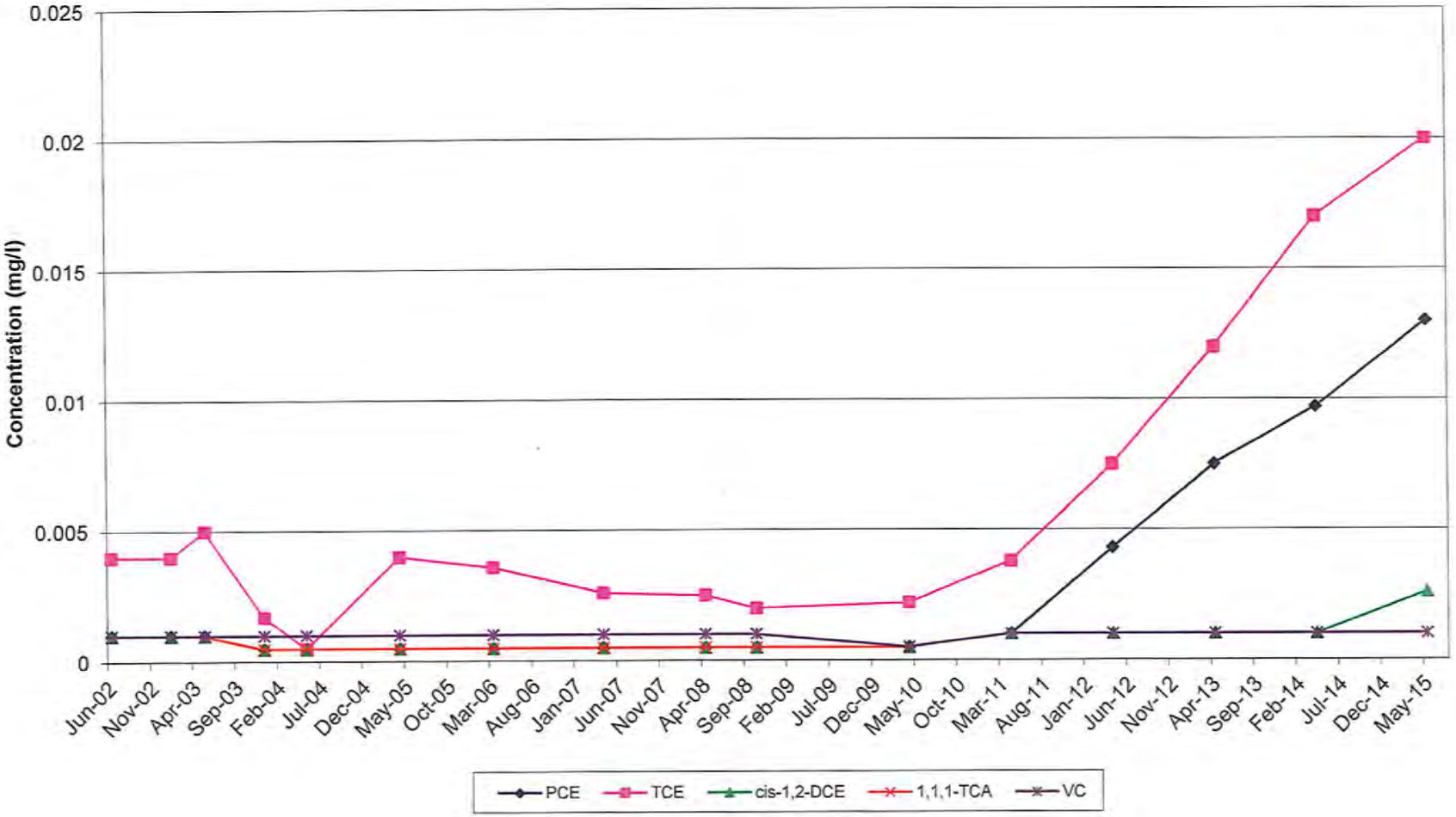
VOC Trends in Well CL03-S
Former Varian Facility Site
Beverly, Massachusetts



Notes: CL3-S is a shallow overburden well located at 28 Tozer Road.
See end of appendix for additional notes.

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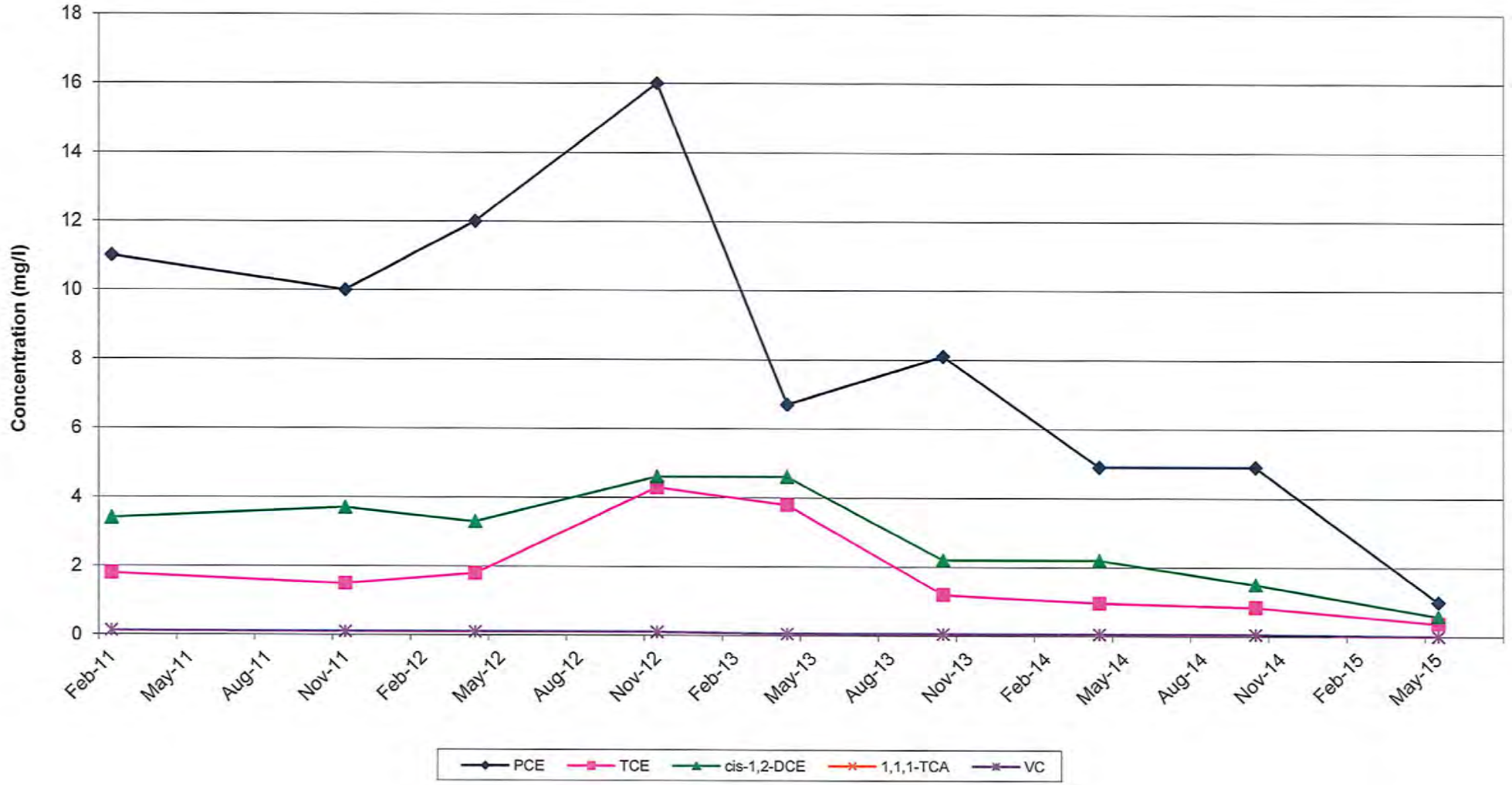
VOC Trends in Well MW-2 32 Tozer
Former Varian Facility Site
Beverly, Massachusetts



Note: MW-2 32 Tozer is a deep overburden well located east of the 32 Tozer Road building.
See end of appendix for additional notes.

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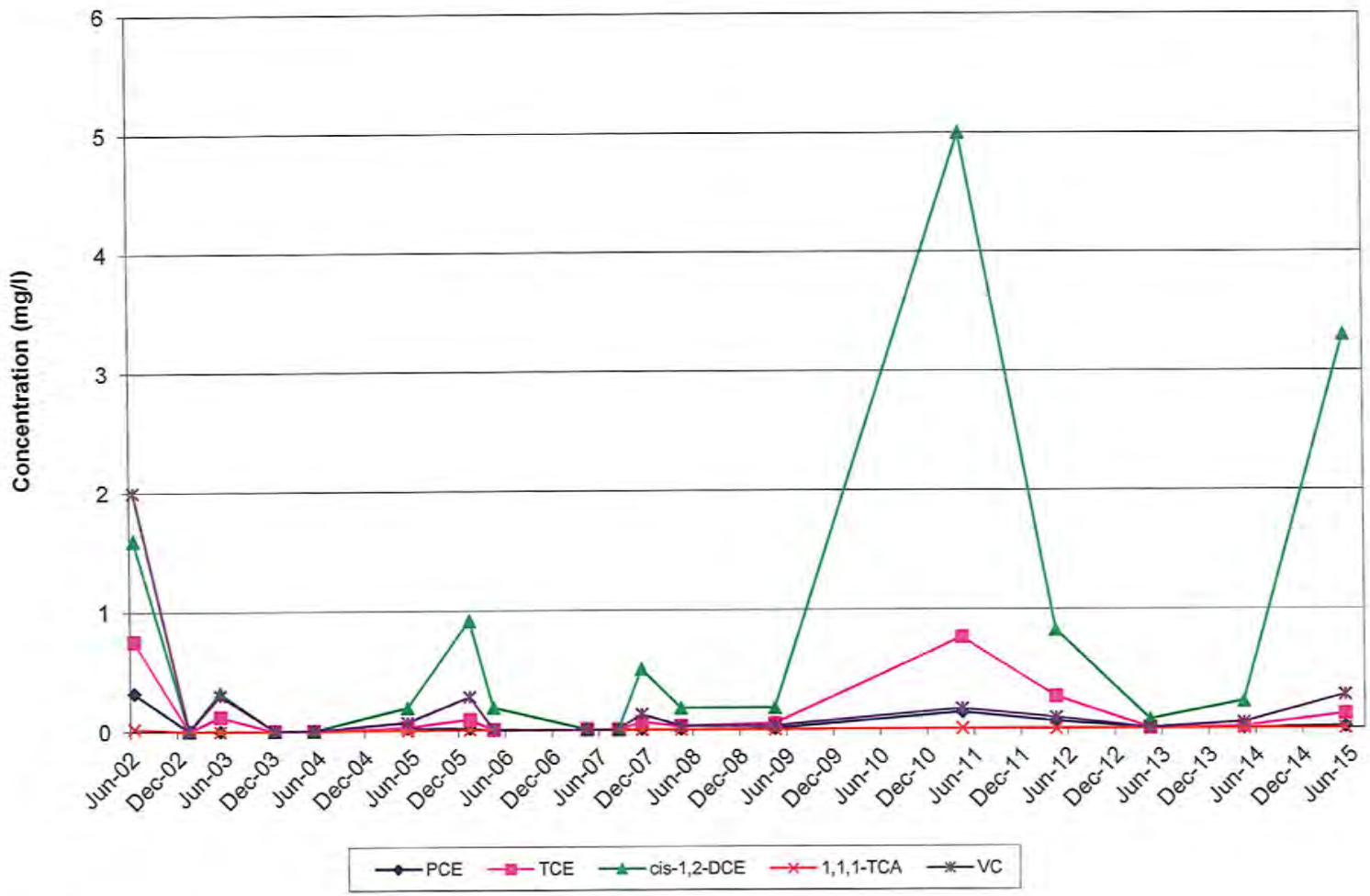
TOZER ROAD TREATMENT AREA SOUTH OF ROUTE 128

VOC Trends in Well BR-5_ZONE3
Former Varian Facility Site
Beverly, Massachusetts



Notes: BR-5 ZONE3 is a bedrock well at 28 Tozer Road;
zone 3 is the shallowest sampling zone.
See end of appendix for additional notes.

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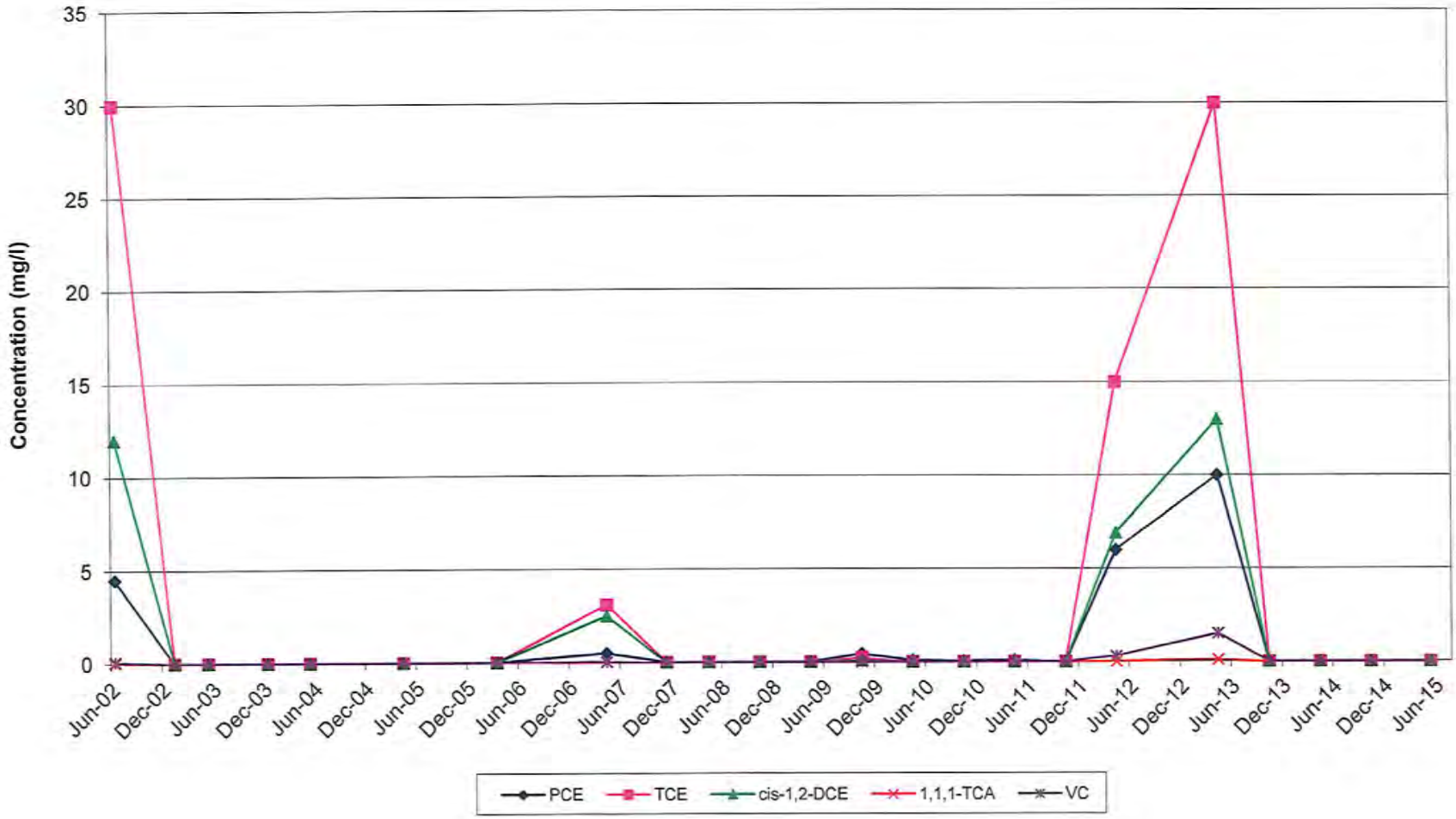
VOC Trends in Well CL03-DO
Former Varian Facility Site
Beverly, Massachusetts



Notes: CL3-DO is a deep overburden well located at 28 Tozer Road.
Where permanagante injections were conducted in 2002 and 2013.
See end of appendix for additional notes.

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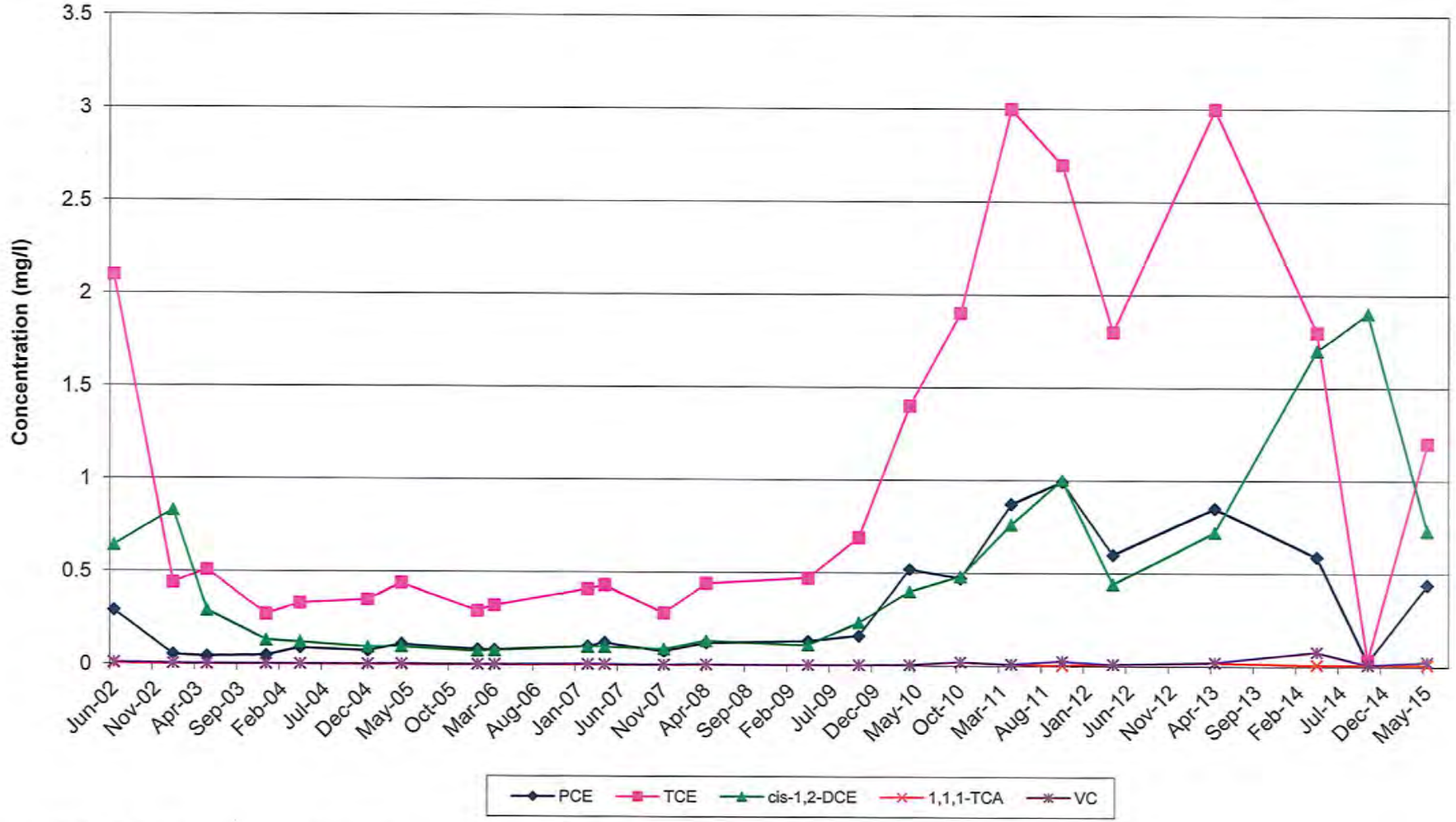
VOC Trends in Well OB-05-DO
Former Varian Facility Site
Beverly, Massachusetts



Note: OB-5-DO is a deep overburden well south of the 28 Tozer Road treatment area.
See end of appendix for additional notes.

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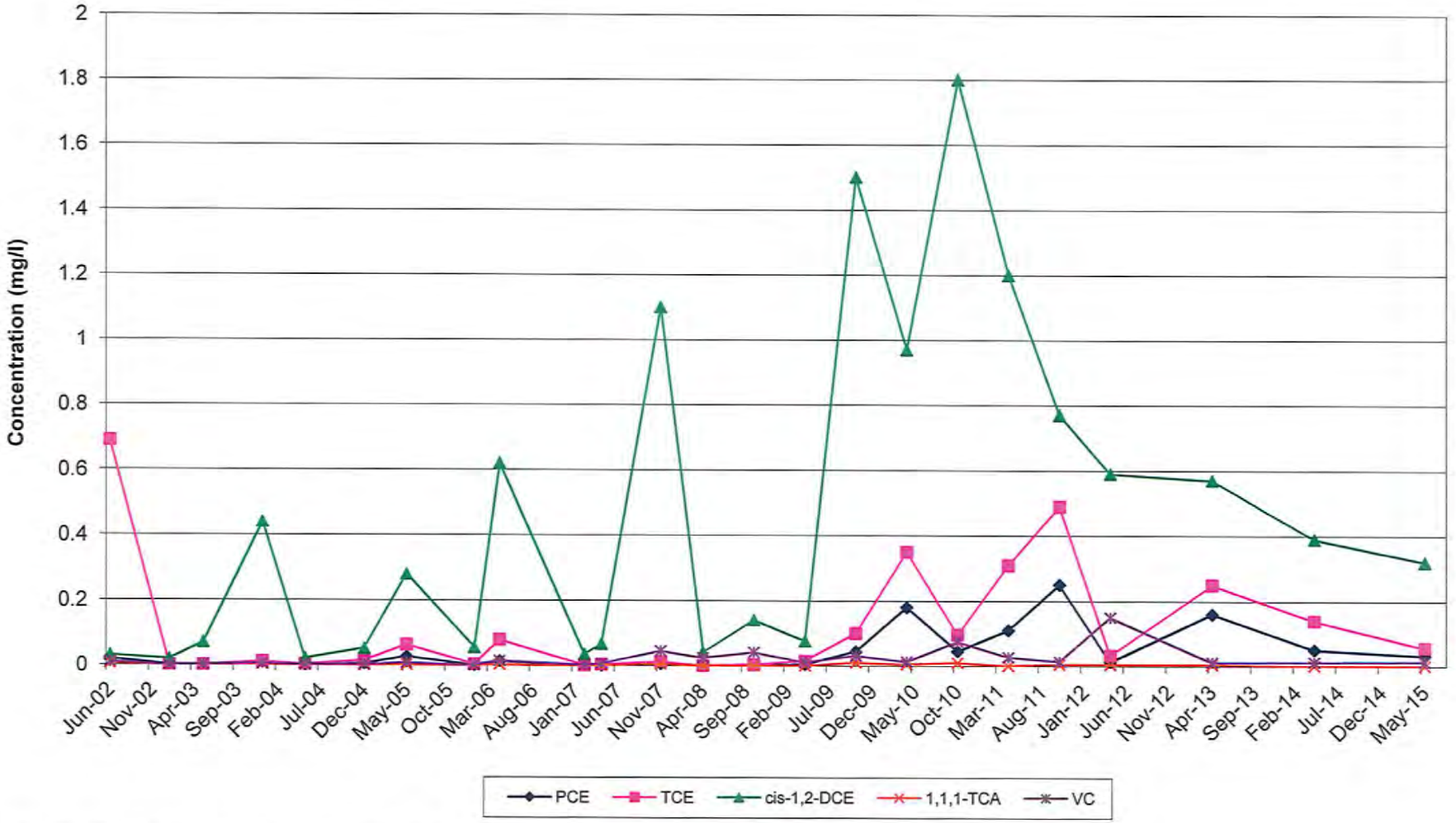
VOC Trends in Well OB-06-DO
Former Varian Facility Site
Beverly, Massachusetts



Note: OB-6-DO is a deep overburden well west of the 28 Tozer Road treatment area on Sonning Road.
See end of appendix for additional notes.

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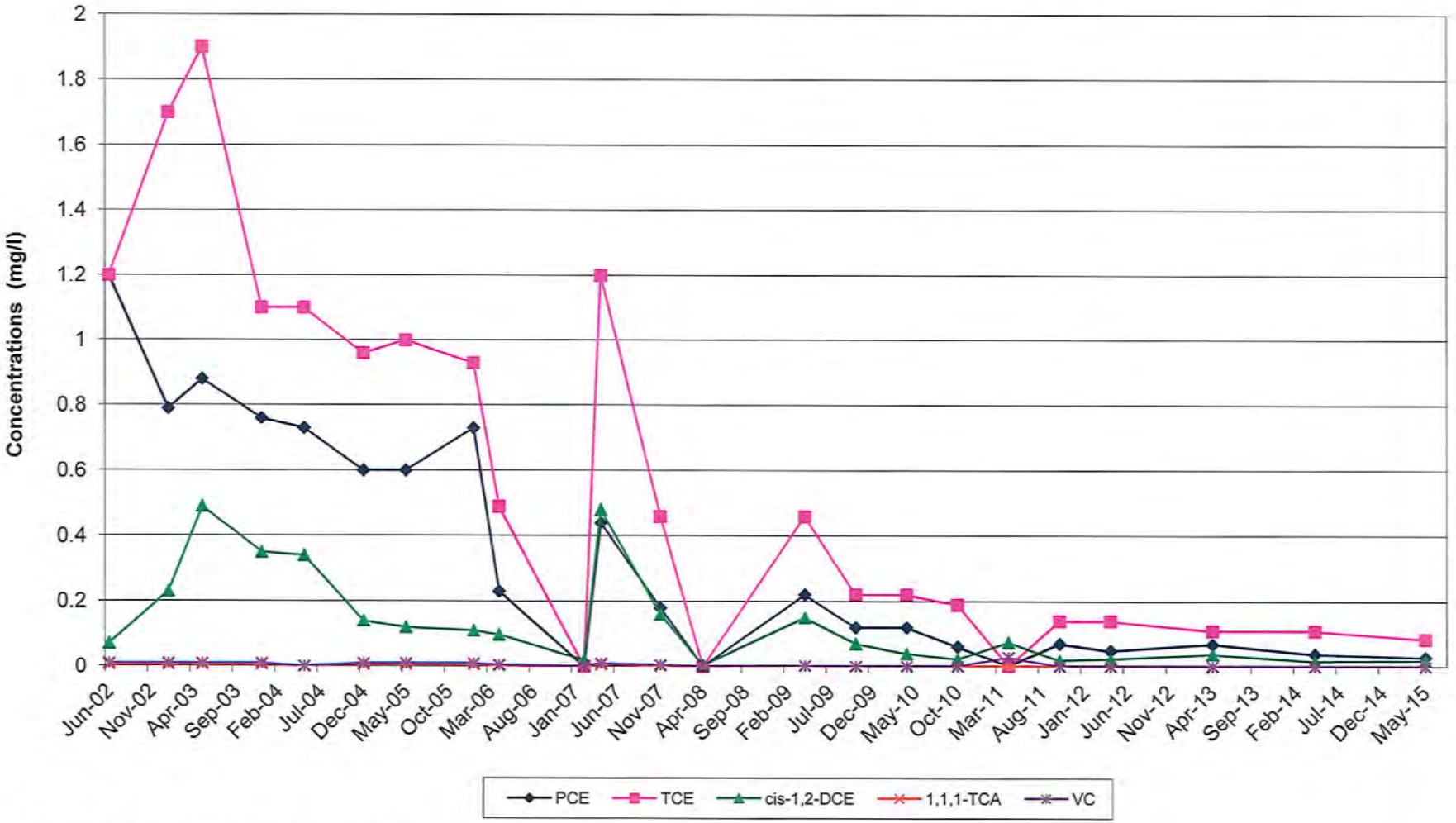
VOC Trends in Well OB-06-BR
Former Varian Facility Site
Beverly, Massachusetts



Note: OB-6-BR is a bedrock well west of the 28 Tozer Road treatment area on Sonning Road.
See end of appendix for additional notes.

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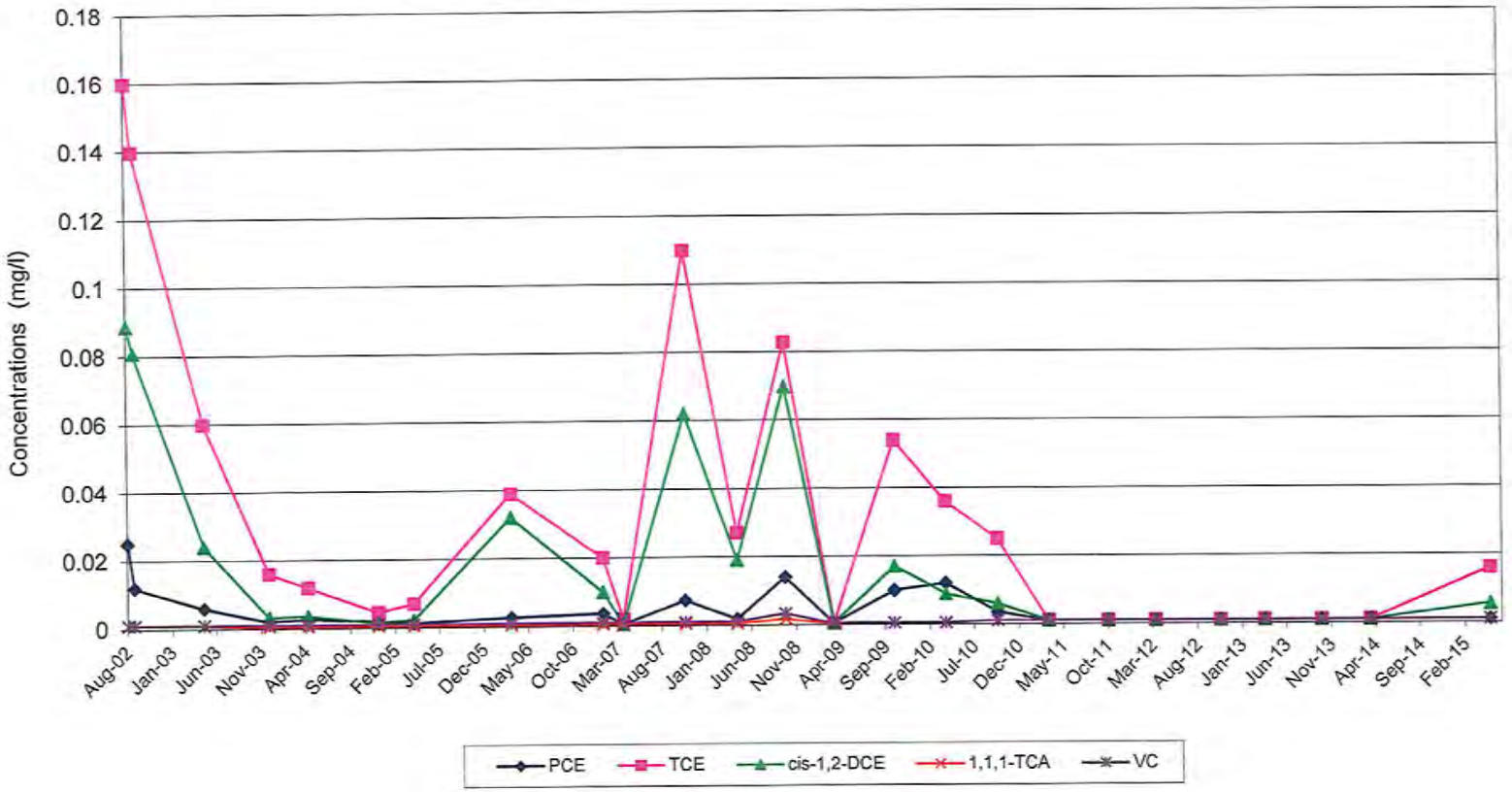
31 TOZER ROAD TREATMENT AREA

VOC Trends in Well AP-15S
Former Varian Facility Site
Beverly, Massachusetts



Notes: AP15-S is a shallow well at 31 Tozer Road.
See end of appendix for additional notes.

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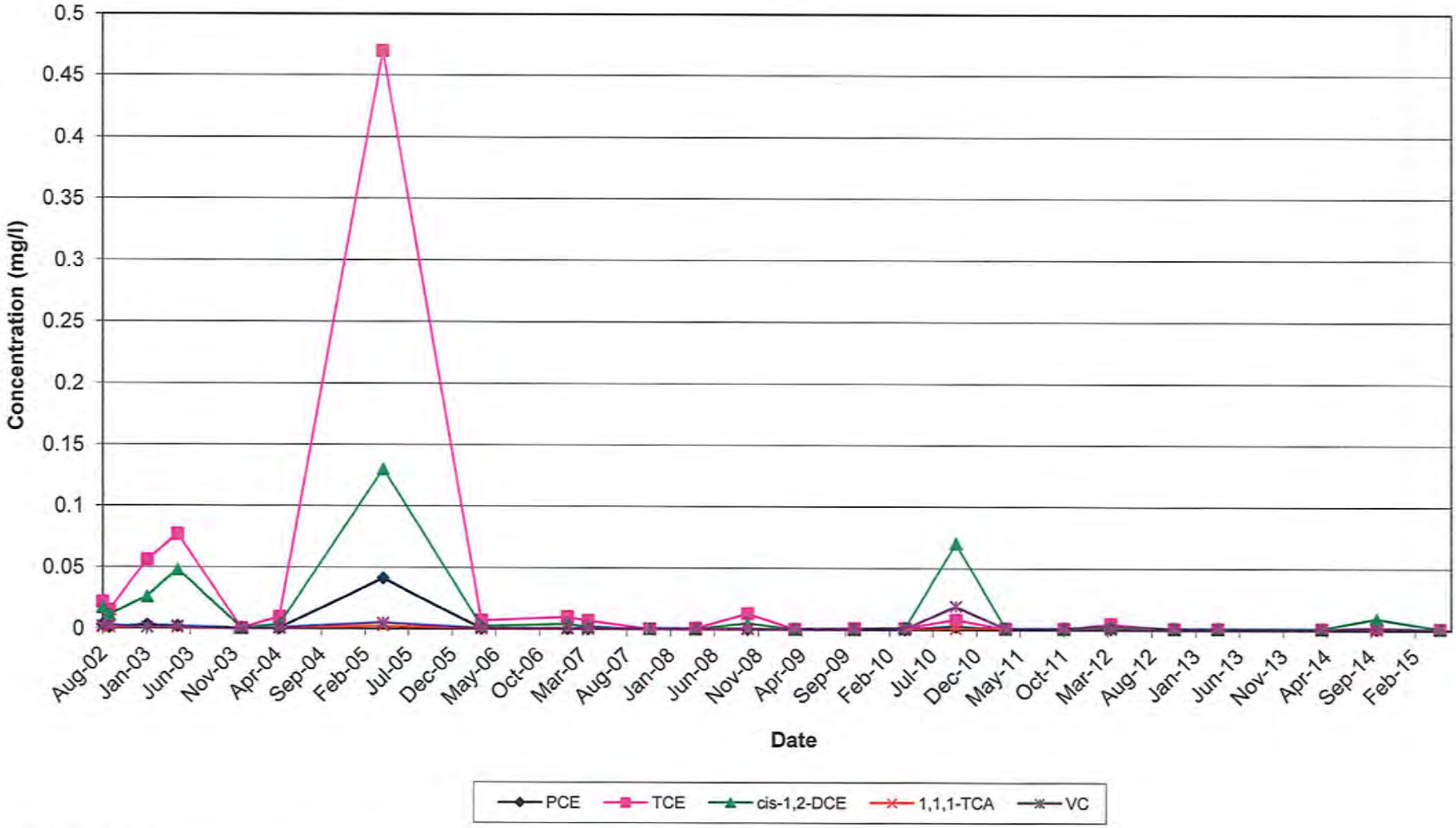
VOC Trends in Well OB-18-S
Former Varian Facility Site
Beverly, Massachusetts



Note: OB-18-S is a shallow overburden well located at 31 Tozer Road.
See end of appendix for additional notes.

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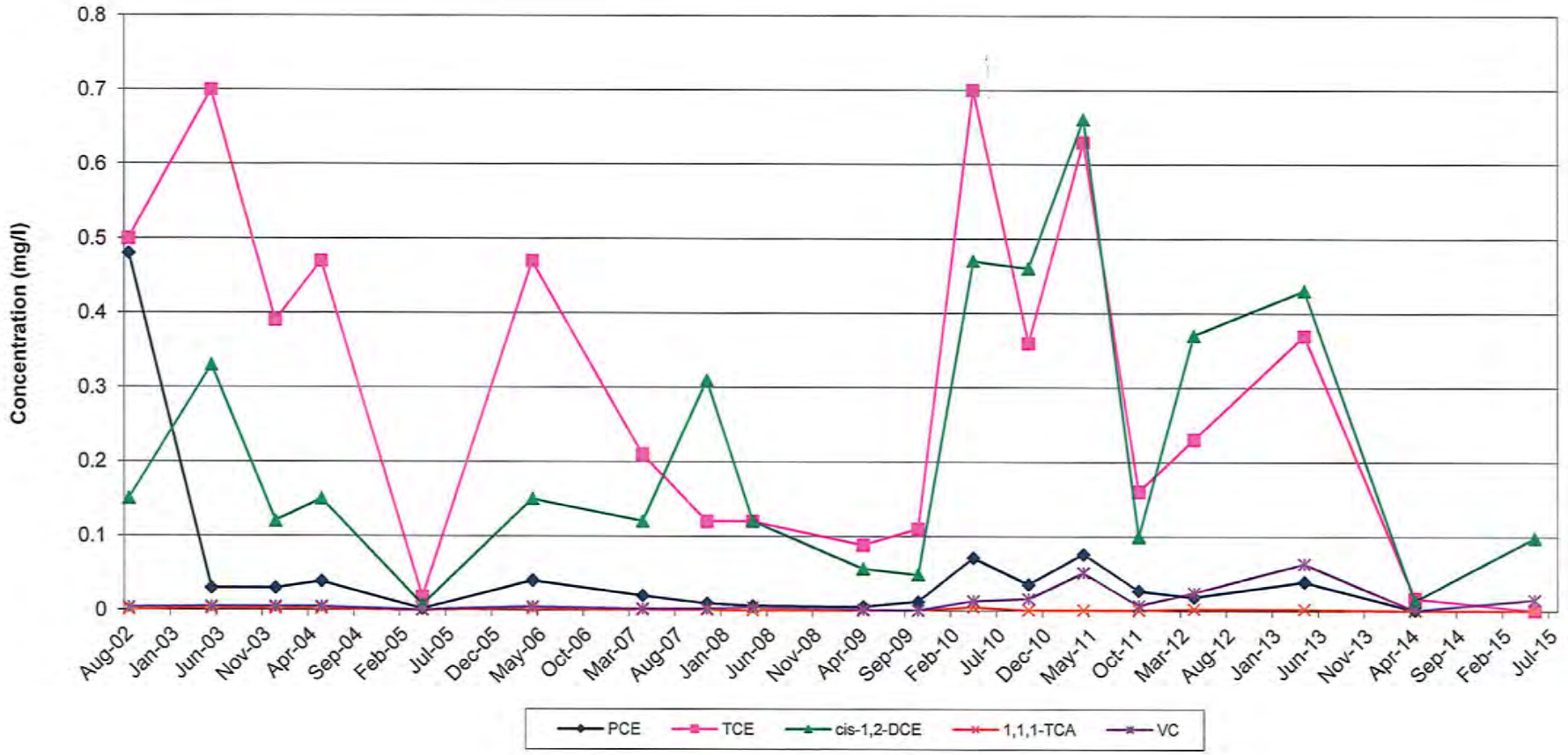
VOC Trends in Well OB-18-DO
Former Varian Facility Site
Beverly, Massachusetts



Notes: OB-18-DO is a deep overburden well located at 31 Tozer Road.
See end of appendix for additional notes.

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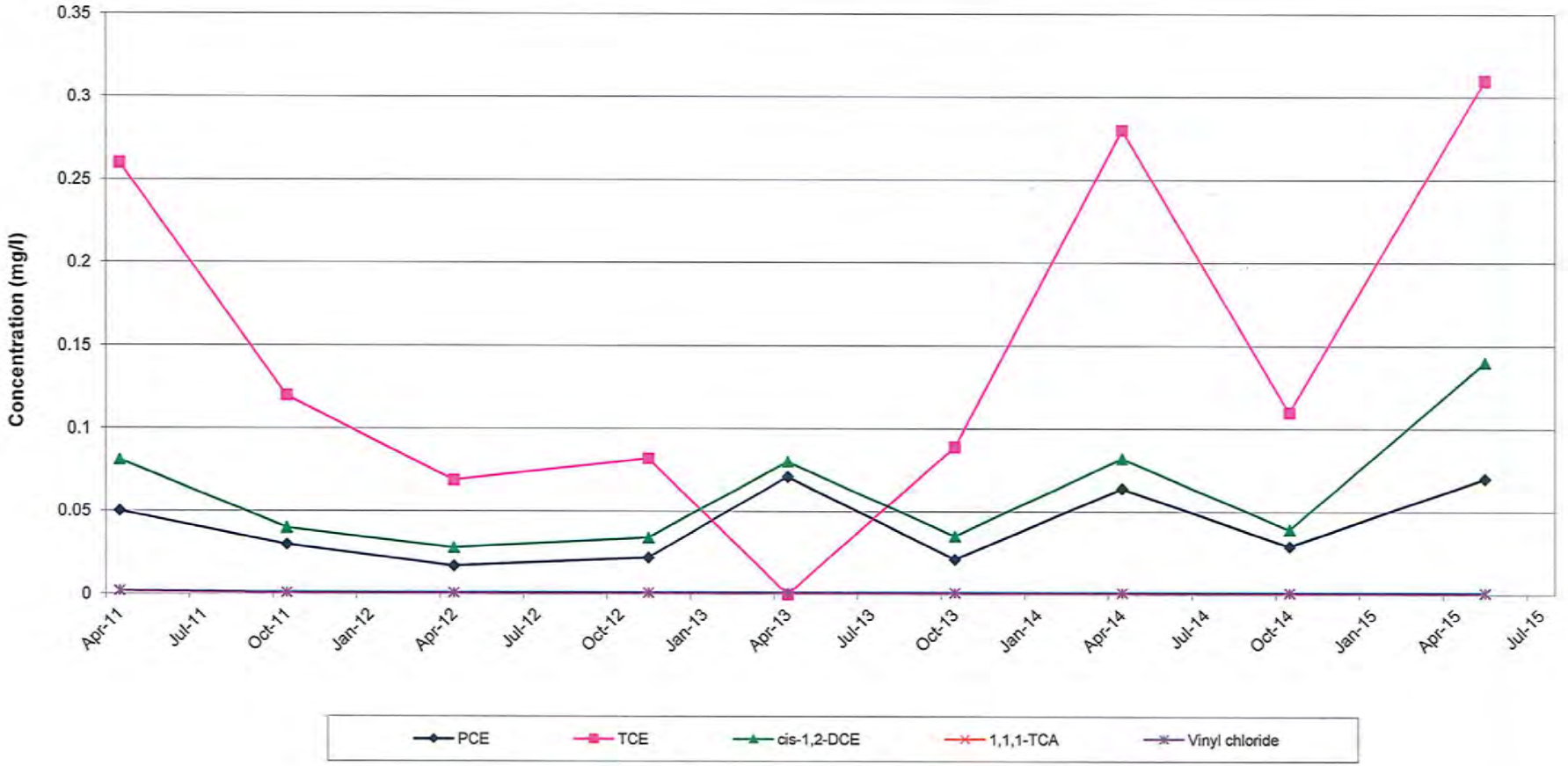
VOC Trends in Well OB-41-S
Former Varian Facility Site
Beverly, Massachusetts



Notes: OB-41-S is a shallow well located at 39 Tozer Road.
See end of appendix for additional notes.

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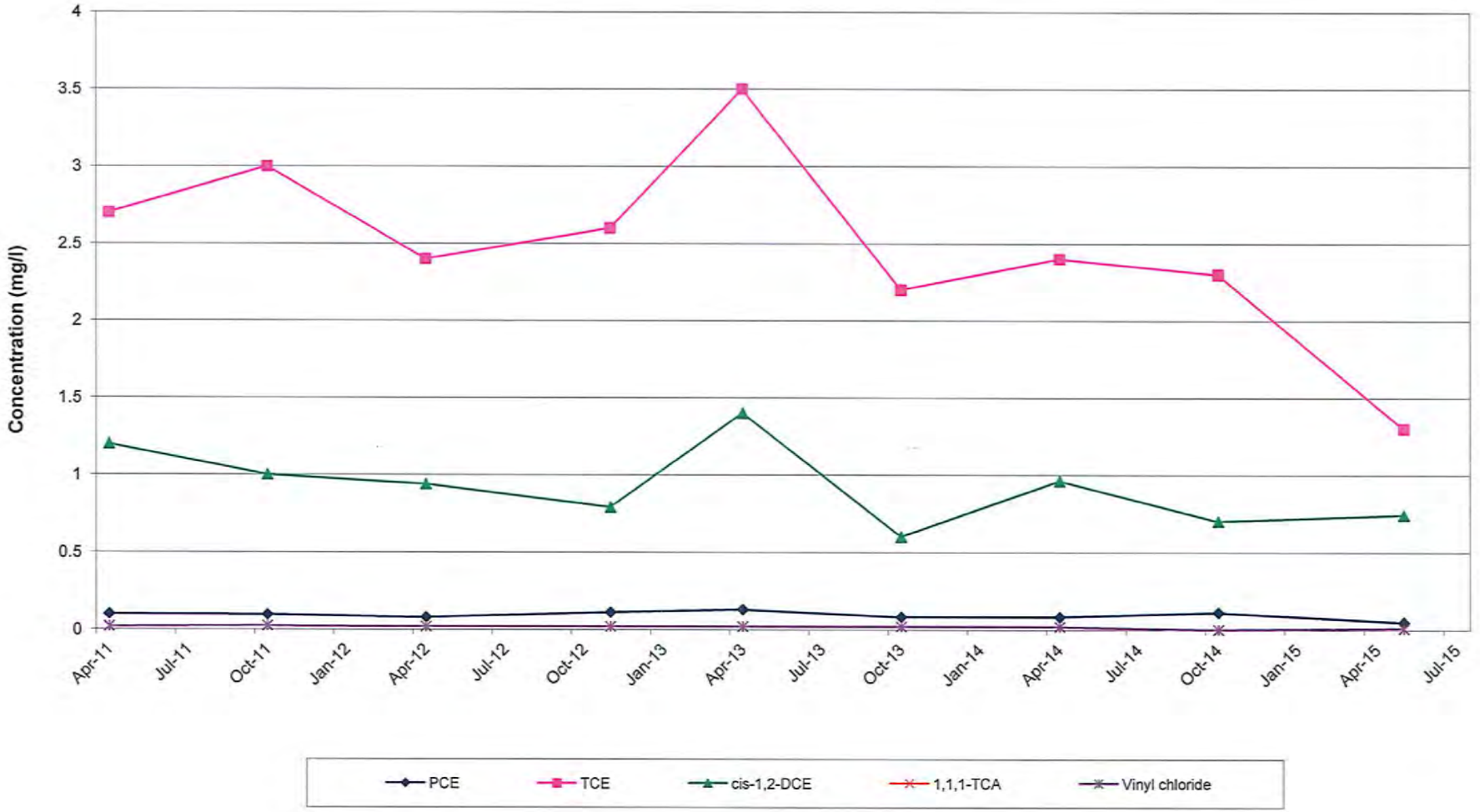
VOC Trends in Well OB-42-S
Former Varian Facility Site
Beverly, Massachusetts



Notes: OB-42-S is a shallow well located at 30 Tozer Road.
See end of appendix for additional notes.

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VOC Trends in Well OB-43-S
Former Varian Facility Site
Beverly, Massachusetts

Notes: OB-43-S is a shallow well located at 27 Tozer Road.
See end of appendix for additional notes.

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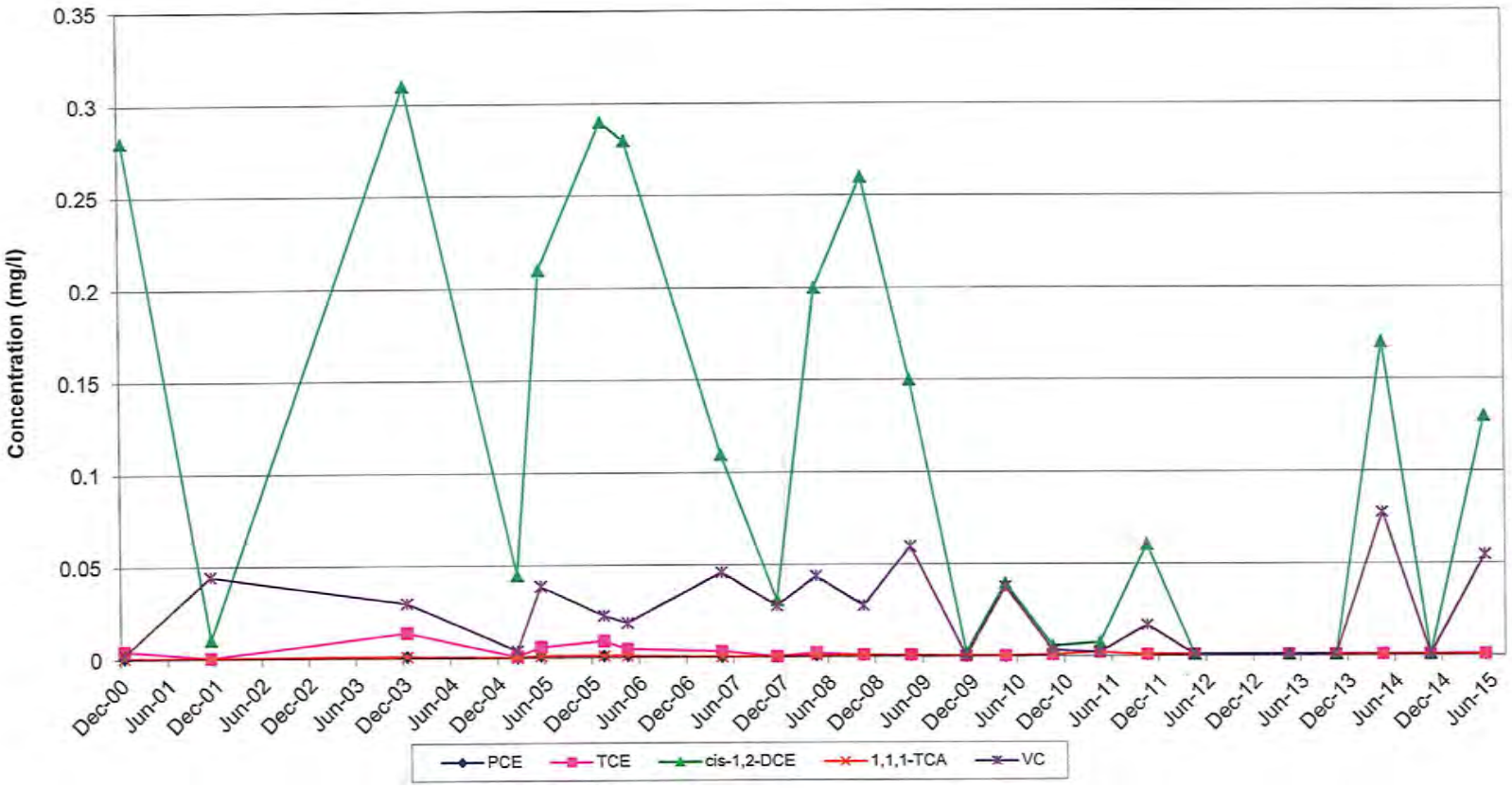
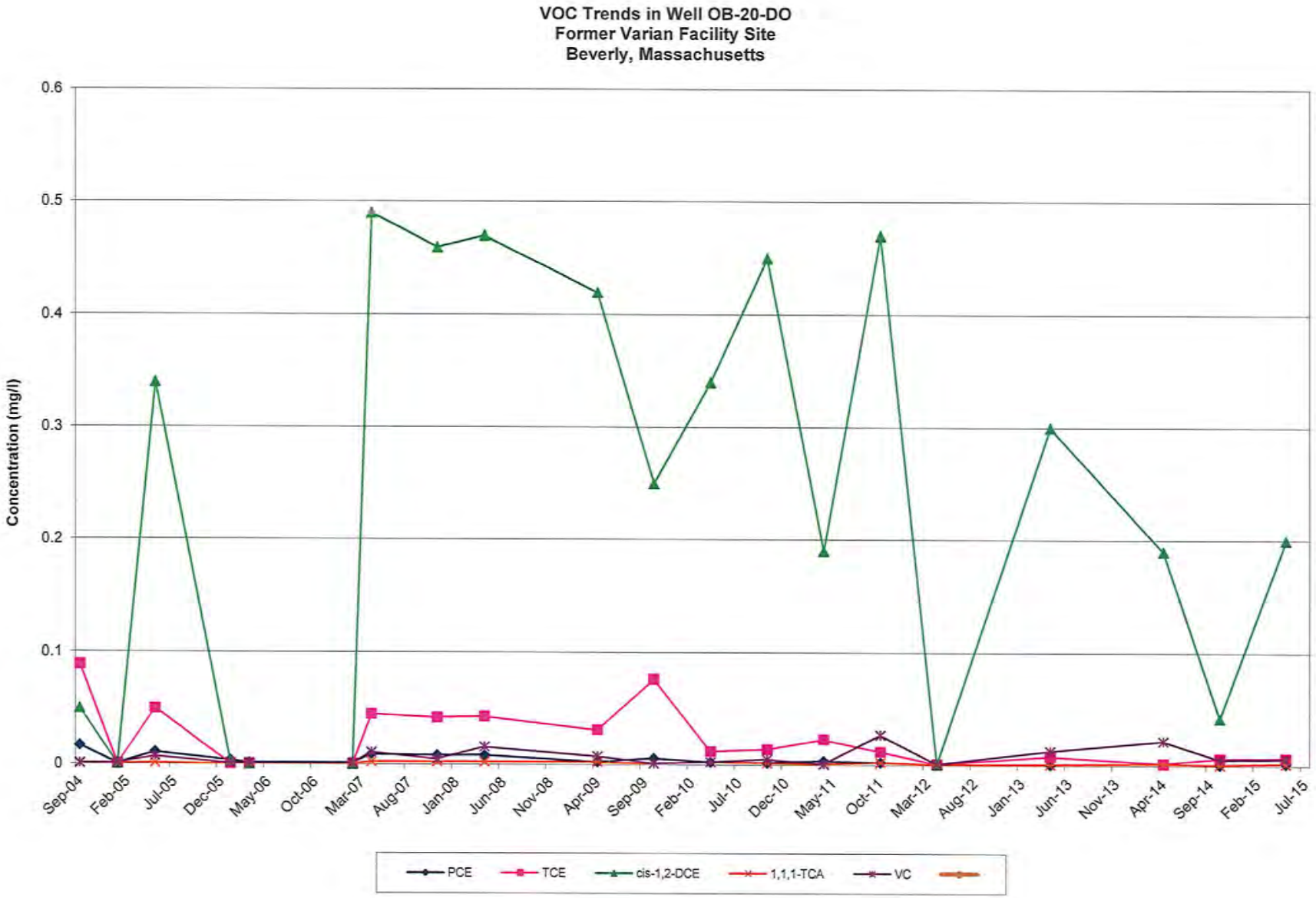
LONGVIEW/HILL STREET TREATMENT AREA

VOC Trends in Well BR-6_ZONE3
Former Varian Facility Site
Beverly, Massachusetts



Notes: BR-6 Zone 3 is the shallowest zone of a bedrock well on Hill Street.
See end of appendix for additional notes.



Notes: OB-20-DO is a deep overburden well south of Sonning Road in the Longview/HIll Street treatment area.
See end of appendix for additional notes.

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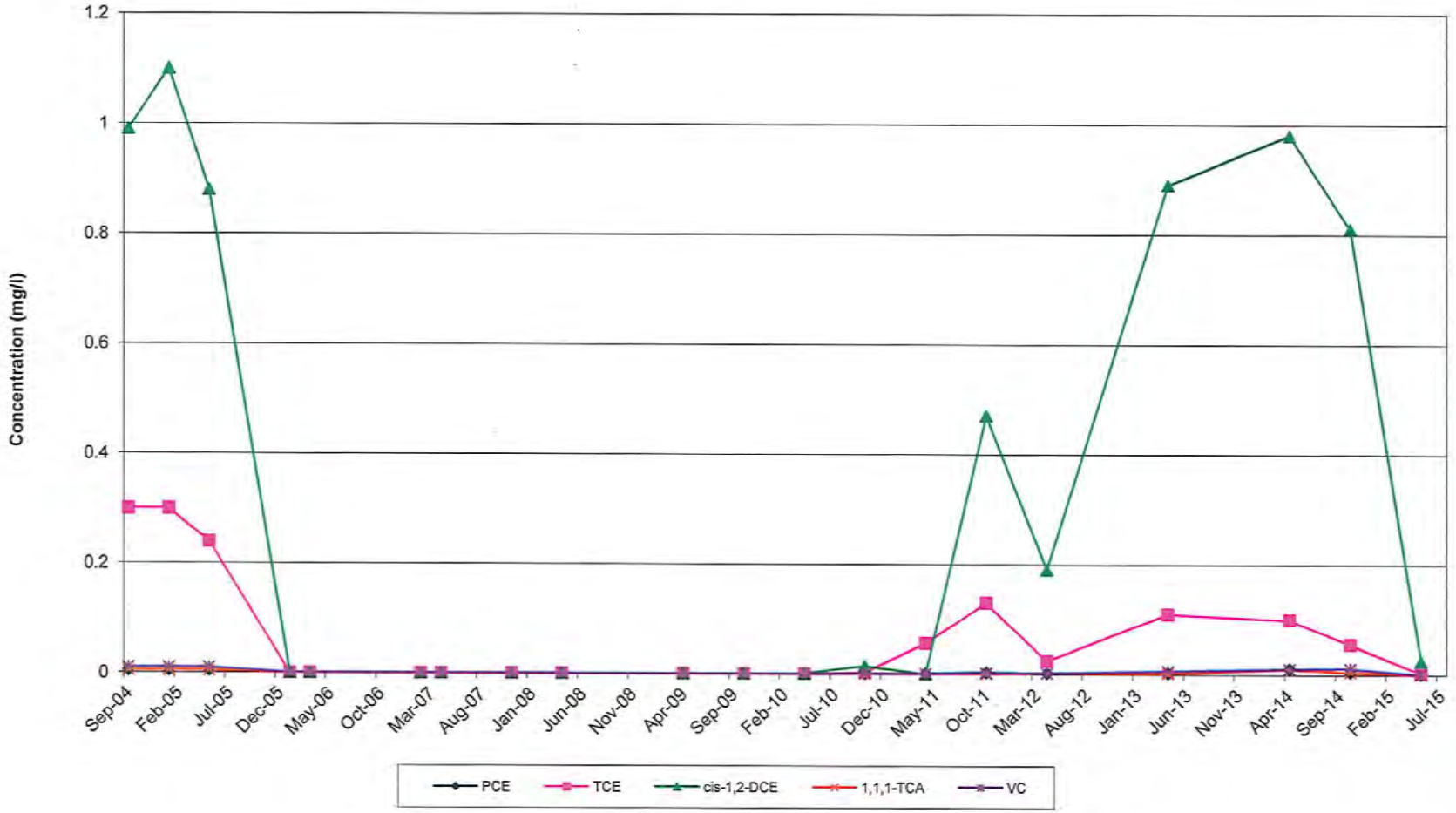
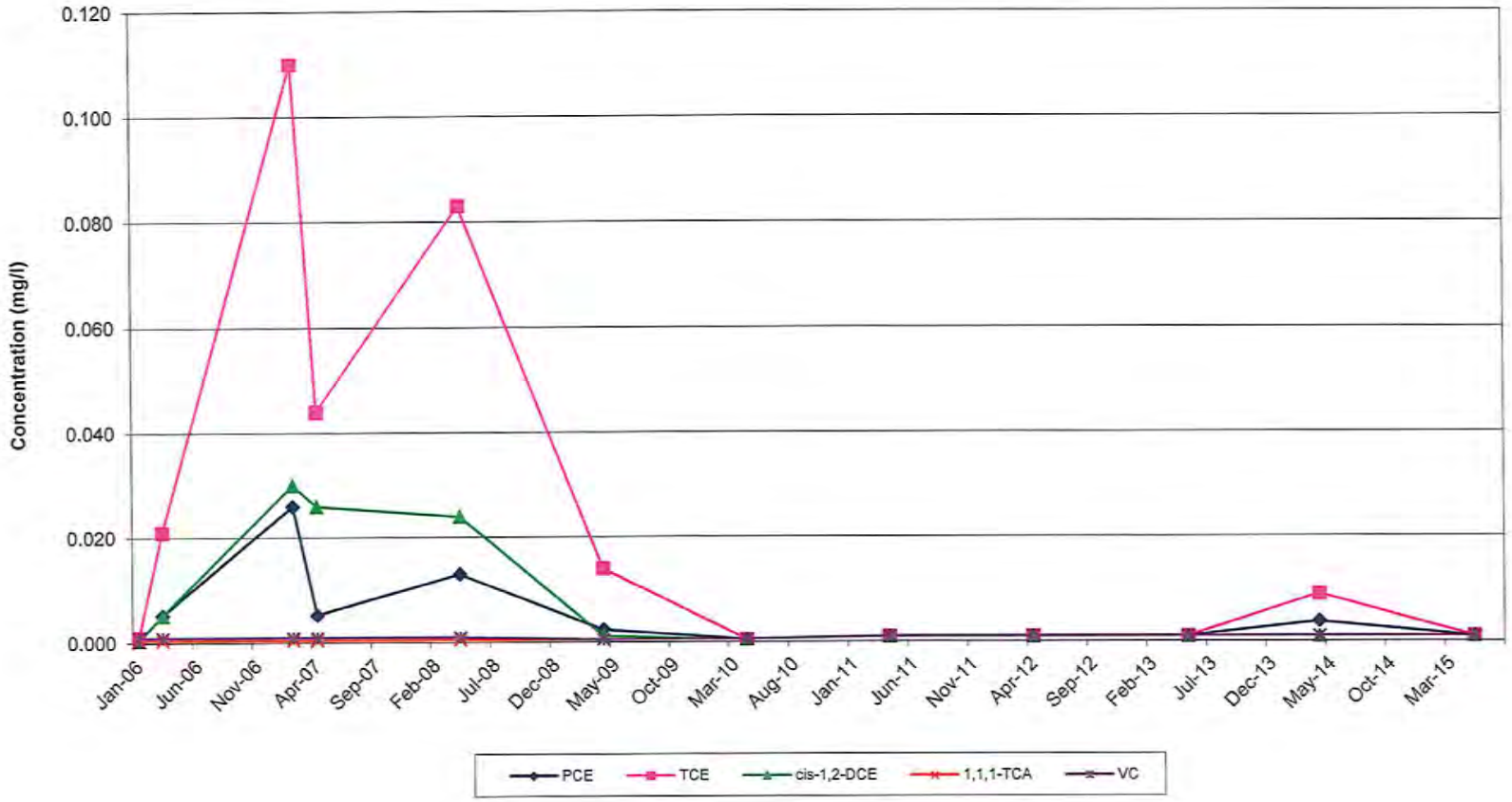
VOC Trends in Well OB-20-BR
Former Varian Facility Site
Beverly, Massachusetts



Notes: OB20-BR is a bedrock well south of
Sonning Road in the Longview/Hill Street treatment area.
See end of appendix for additional notes.

VOC Trends in Well P-20R
Former Varian Facility Site
Beverly, Massachusetts



Notes: P-20R is a shallow overburden well located east of of Longview Terrance in the Longview/Hill Street area.
See end of appendix for additional notes.

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