April 30, 2012 Project #: 143267/06

Ms. Karen Stromberg
Massachusetts Department of Environmental Protection
205B Lowell Street
Wilmington, Massachusetts 01887

Subject: Phase V Remedy Operation Status - Inspection & Monitoring Report
October 2011 through March 2012
Former Varian Facility Site
Beverly, Massachusetts
MADEP # 3-0485

Dear Ms. Stromberg:

On behalf of Varian Medical Systems, Inc., Shaw Environmental & Infrastructure, Inc. has prepared a Phase V Remedy Operation Status - Inspection & Monitoring Report summarizing the activities conducted from October 2011 through March 2012 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,
Shaw Environmental & Infrastructure, Inc.

Raymond J. Cadorette
Project Manager

Enclosure: BWSC-125
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PHASE V REMEDY OPERATION STATUS
INSPECTION & MONITORING REPORT
October 2011 through March 2012

FORMER VARIAN FACILITY SITE
150 SOHIER ROAD
BEVERLY, MASSACHUSETTS 01915

MADEP Site # 3-0485

April 30, 2011

Shaw Environmental & Infrastructure, Inc.
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1.0 INTRODUCTION AND BACKGROUND

1.1 Introduction

On behalf of Varian Medical Systems, Inc. (Varian), Shaw Environmental & Infrastructure, Inc. (Shaw) has prepared this semi-annual Remedy Operation Status-Inspection and Monitoring Report for the former Varian facility located at 150 Sohier Road and other properties located in the vicinity (the Site) in Beverly, Massachusetts (Release Tracking Number (RTN) 3-0485). 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 of October 1, 2011 through March 31, 2012. As required, the Massachusetts Department of Environmental Protection (MADEP) Comprehensive Response Action Transmittal Form (BWSC108) and Remedial Monitoring Report (RMR) associated with this submittal were submitted electronically to MADEP. Complete copies of BWSC108 and the RMR are included in **Appendix A**. This Phase V Remedy Operation Status - Inspection and Monitoring Report has been formatted to reference the requirements outlined in Section 310 CMR 40.0892(2) of the Massachusetts Contingency Plan (MCP).

Results of remedial activities and monitoring conducted during this reporting period are presented in this report.

1.2 Background

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 area were above applicable Massachusetts Drinking Water Standards. As a result, one of the stated remedial action goals in the December 2001 Phase IV Remedy Implementation Plan (Phase IV Plan) submitted to MADEP for the above-referenced 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 GW-1 area are listed below:

- PSL 5 – Potential former septic tank near Building 3
- PSL 6 – Building 6 - Potential former septic tank/leach field
- PSL 9 – Inspection pit near Building 3
- PSL 11 – Building 3 laboratory
- 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 Lab, PSL 10--open field at south end of 150 Sohier Road, downgradient treatment areas at 31 Tozer Road, and in the Longview/Hill Street area.

Implementation of the Comprehensive Response Action, 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 comprehensive 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 Remedy Operation Status (ROS), as specified in 310 CMR 40.0893(2), have been achieved and will be maintained at the Site. A Response Action Outcome (RAO) 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 status reports. As detailed in the October 2006 status report, bioremediation was proposed as a supplemental remedial approach to address two small areas at the Site (Shaw, 2006). These areas shown on **Figure 2** include shallow groundwater with residual trichloroethene (TCE) impacts located close to the Unnamed Stream at the northeast corner of the Site. Bioremediation was used to address the shallow groundwater by the Unnamed Stream because permanganate treatment may affect the stream. The second area is at the northeast corner of Building 3 where deep overburden groundwater is impacted with residual 1,1,1-trichloroethane (TCA).

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 status report (Shaw, 2010), the following updated remedial action goals will be used for ongoing response actions being conducted under Phase V ROS at the Site:

1. Maintain compliance with Upper Concentration Limit (UCLs)
2. Achieve a condition of No Significant Risk for site workers in Building 3 (RTN 3-28531), as well as other site buildings, by remediating, where present, elevated VOC concentrations in soil, soil vapor, and groundwater beneath the building.
3. Limit rebound in source areas such that potential impacts to indoor air in downgradient areas continue to pose No Significant Risk,
4. Demonstrate that VOC concentrations in groundwater at the Site do not represent an uncontrolled source for impacts to surface water, and

5. 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. The goals 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 goals are consistent with MADEP guidance (Policy #WSC-04-160) which suggests that the reduction of risk to 50% of a level where No Significant Risk is achieved can be considered appropriate site closure criteria with Presumptive Certainty.

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

The following sections summarize Remedy Operation Status activities that were conducted during the reporting period of October 1, 2011 through March 31, 2012.

2.1 Subsurface Investigation at 32 Tozer Road

As discussed in the previous status report, assessment activities were conducted at 32 Tozer Road by the property owner (Cell Signaling Technology, Inc.) during February and March 2011. The assessment activities were conducted as a pre-construction assessment prior to potentially expanding and/or renovating the existing building at 32 Tozer Road. The subsurface investigation was conducted by Irwin Engineering, Inc. (Irwin) on behalf of Cell Signaling Technology, Inc. and included soil sampling, monitoring well installation, groundwater sampling, sub-slab soil vapor sampling, and indoor air sampling (Irwin, 2011).

During the current reporting period, Irwin has conducted additional assessment activities including soil sampling during the advancement of soil borings and test pits, installation of new monitoring wells, groundwater sampling of onsite monitoring wells and test pits, and concrete sampling. Results of the additional assessment activities are summarized in the January 31, 2012 Irwin letter report included in **Appendix B** (Irwin, 2012).

Soil samples were collected from 4 test pits, one catch basin, three soil borings, and during the installation of two new monitoring wells at the 32 Tozer Road property. See **Appendix B** for details. Soil analytical results from 32 Tozer Road are presented in the letter report and revealed:

- tetrachloroethene (PCE) was detected in five of twenty soil samples at concentrations of 5.7 micrograms per kilogram (ug/kg) to 25.9 ug/kg,
- TCE was detected in four of twenty soil samples at concentrations of 6.7 ug/kg to 37.2 ug/kg, and

- cis-1,2-Dichloroethene (DCE) was detected in eight of twenty soil samples at concentrations of 7.6 ug/kg to 75.3 ug/kg.

No VOCs were detected in concrete samples collected at 32 Tozer Road. Groundwater analytical results are discussed in Section 2.9. In addition, the Irwin report included evaluation of potential risk to facility workers using data collected. Further discussion of these data and Irwin's evaluation is provided in Section 4 of this report.

2.2 Subsurface Investigation at 27 Tozer Road

On October 3, 2011 a shallow groundwater monitoring well (OB43-S) was installed by Geosearch, Inc of Fitchburg, Massachusetts under the direct supervision of Shaw personnel near the northeast corner of the building located at 27 Tozer Road (see **Figure 3)**. The groundwater monitoring well was installed within thirty feet on the hydraulically upgradient side of the existing building to assess compliance with the MCP Method 1 GW-2 standards established by MADEP to protect against potential vapor intrusion. The well was installed to a depth of 17 feet below grade using a hollow stem auger rig. The well was constructed with twelve feet of two-inch diameter PVC well screen set in a sand pack and approximately five feet of two-inch diameter PVC riser that was sealed with bentonite. The well was finished at grade with a flush-mounted roadbox. A boring log and well construction diagram are provided in **Appendix C**. Upon completion, the well was developed by surging and pumping to remove silt from the sand pack and ensure good communication with the surrounding aquifer. Soil cuttings from drilling and water generated during development were drummed, characterized and transported off-site for appropriate disposal. The non-hazardous waste manifest is included in **Appendix C**. Groundwater sampling was conducted at this well as described in Section 2.8 and groundwater analytical results are further discussed in Section 4.

2.3 Evaluation of Potential Indoor Air Exposure in Building 5 and 6

As detailed in the previous status report, Varian conducted additional evaluation of the potential indoor air exposure pathway at select site buildings. The focus of this assessment is to confirm that the condition of No Significant Risk documented in the Phase II Report for RTN 3-0485 (IT, 2000) continues to exist for site workers at buildings located over known source areas. To accomplish this, sub-slab vapor sampling points were installed at three locations beneath Building 5 and three locations beneath Building 6 to determine current VOC concentrations under the building slabs. Soil vapor samples were collected in October 2011 and January 2012 during the current reporting period. Indoor air sampling was conducted concurrently in Buildings 5 and 6 in October 2011 and January 2012. Sampling of the sub-slab soil vapor points and indoor air sampling in Buildings 5 and 6 are discussed below.

October 2011 Soil Vapor and Indoor Air Sampling

Six sub-slab vapor points are present beneath Buildings 5 and 6 (**Figures 4** and **5**). Each soil vapor point was installed to a depth of approximately 18 inches below the floor in close proximity to the three soil

vapor sample locations from 1995 that exhibited the highest sub-slab VOC results (i.e. data evaluated in the Phase II report).

On October 7, 2011, sub-slab soil vapor samples were collected from the three vapor points beneath Building 5 (BLD5-SV1, BLD5-SV2 and BLD5-SV3) and three vapor points beneath Building 6 (BLD6-SV1, BLD6-SV2 and BLD6-SV3). Each sample was collected using evacuated Summa® canisters over a two-hour sampling interval. The soil vapor samples collected were submitted for laboratory analysis of select VOCs referencing EPA Method TO-15 (MassDEP Method WSC-CAM-IXB) at Columbia Analytical Services, Inc. (Columbia Analytical) of Rochester, New York. Analytical results of the soil vapor samples are summarized on **Table 1**. A complete copy of the laboratory analytical report is provided in **Appendix D**.

Analytical results of the October 2011 sub-slab soil vapor samples collected beneath Building 5 indicated:

- TCE was detected at concentrations ranging from 410 micrograms per meter cubed (ug/m^3) at BLD5-SV2 to 20,000 ug/m^3 at BLD5-SV3,
- PCE was detected at concentrations ranging from 25 ug/m^3 at BLD5-SV2 to 1,400 ug/m^3 at BLD5-SV3, and
- cis-1,2-dichloroethene (DCE) was detected at concentrations of 5.1 ug/m^3 at BLD5-SV2 and 130 ug/m^3 at BLD5-SV1.

Additional VOCs detected in sub-slab soil vapor samples collected from beneath Building 5 in October 2011 include acetone (up to 840 ug/m^3), carbontetrachloride (0.64 ug/m^3), ethylbenzene (8.1 ug/m^3), xylenes (39 ug/m^3), and vinyl chloride (1.2 ug/m^3).

Analytical results of the October 2011 sub-slab soil vapor samples collected beneath Building 6 indicated:

- TCE was detected at concentrations ranging from 8,800 ug/m^3 at BLD6-SV3 to 14,000 ug/m^3 at BLD6-SV1, and
- PCE was detected at concentrations ranging from 20,000 ug/m^3 at BLD6-SV3 to 64,000 ug/m^3 at BLD6-SV2.

In conjunction with the October 7, 2011 sub-slab vapor sampling, indoor air samples were collected from Building 5 and 6. Four indoor air samples were collected from inside Building 5 (BLD5-1, BLD5-2, BLD5-3, and BLD5-4) and two indoor air samples were collected from inside Building 6 (BLD6-1 and BLD6-2) using evacuated Summa® canisters over a four-hour sampling interval. The indoor air sampling locations are also illustrated on **Figures 4** and **5**. The indoor air samples were submitted for laboratory analysis of select VOCs referencing EPA Method TO-15 (MADEP Method WSC-CAM-IXB) at Columbia Analytical. Analytical results of the indoor air samples are summarized on **Table 2**. A complete copy of the laboratory analytical report is provided in **Appendix D**.

Analytical results of the October 2011 indoor air samples collected from Building 5 indicated:

- TCE was detected at concentrations ranging from 2.1 ug/m^3 at BLD5-4 to 17 ug/m^3 at BLD5-3,
- PCE was detected at concentrations ranging from 1 ug/m^3 at BLD5-4 to 7.5 ug/m^3 at BLD5-2,
- cis-1,2-DCE was present at concentrations ranging from non-detect at BLD5-1, BLD5-3, and BLD 5-4 to 1.3 ug/m^3 at BLD5-2,
- carbontetrachloride was detected at concentrations ranging from non-detect at BLD5-1, to 0.63 ug/m^3 at BLD5-2 and BLD5-4,
- trichloroflouromethane was present at concentrations ranging from non-detect at BLD5-1 and BLD5-4 to 4 ug/m^3 at BLD5-2,
- xylenes were present at a concentration of 8 ug/m^3 at BLD5-2, and
- acetone was detected at concentrations ranging from 1,000 ug/m^3 in BLD5-4 to 9,700 ug/m^3 in BLD5-1.

Analytical results of the October 2011 indoor air samples from Building 6 indicated:

- TCE was detected at concentrations of 1.1 ug/m^3 at BLD6-1 and 1.8 ug/m^3 at BLD6-2,
- PCE was detected at a concentration of 2 ug/m^3 at BLD6-1 and 1.9 ug/m^3 BLD6-2,
- cis-1,2-DCE was detected at a concentration of 1.9 ug/m^3 in BLD6-2,
- carbon tetrachloride was detected at a concentration of 0.65 ug/m^3 at BLD6-1 and 0.62 ug/m^3 at BLD6-2,
- trichloroflouromethane was detected at concentrations of 1.7 ug/m^3 at BLD6-2, and
- acetone was detected at a concentration of 660 ug/m^3 at BLD6-1 and 690 ug/m^3 at BLD6-2.

The October 2011 indoor air results are further evaluated in Section 4.0 of this report.

January 2012 Soil Vapor and Indoor air Sampling

On January 9, 2012, sub-slab soil vapor samples were collected from the three vapor points beneath Building 5 (BLD5-SV1, BLD5-SV2 and BLD5-SV3) and the three vapor points beneath Building 6 (BLD6-SV1, BLD6-SV2 and BLD6-SV3). Soil vapor samples were collected using evacuated Summa® canisters over a two-hour sampling interval. The soil vapor samples collected were submitted for laboratory analysis of VOCs referencing EPA Method TO-15 (MassDEP Method WSC-CAM-IXB) at Columbia Analytical. Analytical results of the soil vapor samples are summarized on **Table 1**. A complete copy of the laboratory analytical report is provided in **Appendix D**.

Analytical results of the January 2012 sub-slab soil vapor samples collected beneath Building 5 indicated:

- TCE was detected at concentrations ranging from 1,300 ug/m^3 at BLD5-SV2 to 22,000 ug/m^3 at BLD5-SV3,
- PCE was detected at concentrations ranging from 140 ug/m^3 at BLD5-SV2 to 2,700 ug/m^3 at BLD5-SV1, and
- cis-1,2,DCE was detected at 96 ug/m^3 at BLD5-SV1.

Additional VOCs detected in sub-slab soil vapor samples collected beneath Building 5 in January 2012 included 2-butanone (300 ug/m^3), 2-hexanon (110 ug/m^3), 4-methyl-2-pentanon (24 ug/m^3), acetone (320 ug/m^3), and toluene (24 ug/m^3).

Analytical results of the January 2012 sub-slab soil vapor samples collected beneath Building 6 indicated:

- TCE was detected at concentrations ranging from 7,600 ug/m^3 at BLD6-SV3 to 41,000 ug/m^3 at BLD6-SV1, and
- PCE was detected at concentrations ranging from 14,000 ug/m^3 at BLD6-SV3 to 100,000 ug/m^3 at BLD6-SV1.

In addition the VOC 2-butanone was detected at a concentration of 510 ug/m^3.

In conjunction with the January 2012 sub-slab vapor sampling, indoor air samples were collected from Building 5 and 6. Four indoor air samples were collected from inside Building 5 (BLD5-1, BLD5-2, BLD5-3, and BLD5-4) and two indoor air samples were collected from inside Building 6 (BLD6-1 and BLD6-2) using evacuated Summa® canisters over a four-hour sampling interval. The indoor air sampling locations are also illustrated on **Figures 4** and **5**. The indoor air samples were submitted for laboratory analysis of select VOCs referencing EPA Method TO-15 (MassDEP Method WSC-CAM-IXB) at Columbia Analytical. Analytical results of the indoor air samples are summarized on **Table 2**. A complete copy of the laboratory analytical report is provided in **Appendix D**.

Analytical results of the January 2012 indoor air samples from Building 5 indicated:

- TCE was detected at concentrations ranging from non-detect at BLD 5-4 to 33 ug/m^3 at BLD5-3,
- PCE was detected at concentrations ranging from non-detect at BLD 5-4 to 14 ug/m^3 at BLD5-2, and
- acetone was detected at concentrations ranging from 670 ug/m^3 at BLD5-4 to 10,000 at BLD5-1,

Analytical results of the January 2012 indoor air samples from Building 6 indicated:

- TCE was detected at a concentration of 9.8 ug/m^3 at BLD6-1 and 13 ug/m^3 at BLD6-2,
- PCE was detected at a concentration of 16 ug/m^3 at BLD6-1 and 23 ug/m^3 at BLD6-2, and
- acetone was detected at a concentration of 1,300 ug/m^3 at BLD6-1 and 1,800 ug/m^3 at BLD6-2.

The January 2012 and indoor air results are further evaluated in Section 4.0 of this report.

2.4 Soil Vapor Sampling at 30 Tozer

To further evaluate the concentrations of VOCs in groundwater that exceeded GW-2 Standards at 30 Tozer Road in April 2011, a soil vapor monitoring point was proposed to the owner of the property. However, access was granted in October 2011 only to install a point outside the building. On January 9,

2012, Shaw installed one soil vapor monitoring point (SV-3 30 Tozer) at the 30 Tozer Road Property in an effort to further assess VOCs in soil vapor that could potentially impact indoor air in the existing building. The soil vapor monitoring point was installed in a paved area adjacent to well OB42-S (**Figure 3**). Installation of soil vapor point SV-3 30 Tozer consisted of coring a hole through the pavement and driving a three quarter inch diameter metal probe using hand tools to a depth of approximately 1.5 feet below the pavement. The annular space around the soil vapor point was sealed to prevent short circuiting and was finished with a flush mount road box. One sub-surface soil vapor sample was collected on January 10, 2012 using an evacuated Summa® canister over a period of approximately two hours. This sample was submitted to Columbia Analytical for analysis of VOCs by EPA Method TO-15. A complete copy of the laboratory analytical report is provided in **Appendix D**. Analytical results from SV-3 30 Tozer revealed the presence of the following VOCs:

- PCE at 73 ug/m^3,
- TCE at 250 ug/m^3,
- 2-butanone at 7.2 ug/m^3,
- acetone at 55 ug/m^3,
- benzene at 5.2 ug/m^3,
- cis-1,2-DCE at 6.7 ug/m^3,
- ethylbenzene at 4.7 ug/m^3,
- xylenes at 21 ug/m^3, and
- toluene at 15 ug/m^3.

Analytical results of the sub-surface vapor sampling conducted at 30 Tozer were compared to Commercial/Industrial Sub-Slab Soil Gas Screening Values from the Massachusetts Department of Environmental Protection (MADEP) Interim Final Vapor Intrusion Guidance (WSC#-11-435), December 2011. It should be noted that these are screening criteria intended for sub-slab soil vapor samples collected from beneath a building. Analytical results of the soil vapor sample collected outside the 30 Tozer Road building exceed the screening criteria for TCE. The December 2011 MADEP guidance document recommends additional assessment such as indoor air sampling if sub-slab soil vapor sampling results exceed these values. Shaw is currently working with the property owner to collect a sub-slab soil vapor sample from beneath the building located at 30 Tozer Road. Analytical results from the proposed sub-slab soil vapor point will be compared to the MADEP's December 2011 screening values and discussed in the next status report.

2.5 Permanganate Injection and Monitoring Activities

Permanganate injections were not conducted during this reporting period. The most recent permanganate injections were conducted during the summer of 2011 at angled wells AP30R-DO, AP31-DO and AP32-DO below Building 3; wells AP-19 and AP-22 in the PSL 10 area east of 32 Tozer Road; well OB12-DO north of Building 3; and deep overburden well OB35-DO beneath Building 5. These injections were described in the October 2011 ROS Status Report.

2.6 Bioremediation Injection and Monitoring Activities

The original bioremediation program proposed for a portion of the Site was detailed in the October 2006 ROS status report and included treatment at eight wells in the Building 9 area near the Unnamed Stream as shown on **Figure 2**. As discussed in previous status reports, the bioremediation program has been periodically modified based upon site conditions and monitoring results. No lactate injections were performed during this reporting period. The most recent bioremediation activities were conducted in the summer of 2011 and were described in the previous ROS Status Report. During the summer 2011 injection program, lactate application was performed in June 2011 to foster complete reductive dechlorination of TCE and tetrachloroethene (PCE) at deep overburden wells AP13-DO, AP23-DO and AP24-DO. Lactate application was also conducted in June 2011 at shallow overburden monitoring wells BW-5, BW-6, BW-8, BW-9, and OB-15S to enhance continued complete reductive dechlorination of residual VOC daughter products in the area.

2.7 Monitoring of Groundwater Physical Parameters

The Phase IV Plan 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 biweekly during permanganate injection in select monitoring wells in active treatment areas. Monitoring activities typically completed for 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).

Groundwater monitoring completed as part of the bioremediation program was conducted concurrently with sampling events and included measurement of ORP, dissolved oxygen (DO), pH, and conductivity.

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

2.8 Groundwater and Surface Water Sampling

2.8.1 Sample Collection and Analysis

Groundwater sampling to monitor the progress of both the permanganate and bioremediation programs was conducted in October 2011 and January 2012 during this reporting period. The October 2011 sampling event monitored VOC trends and groundwater conditions at select wells across the Site. The January 2012 sampling was a more limited scope focused on monitoring bioremediation activities. A summary of samples collected during these monitoring events and sampling rationale is provided on **Tables 4A** and **4B**. These sampling events 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 **Figure 2**.

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.

Depth-to-groundwater, total-well-depth measurements, and gauging for potential dense non-aqueous phase liquid (DNAPL) at selected wells were performed 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 October 2011 and January 2012 sampling events are summarized in **Appendix E**.

Monitoring wells BR-1, BR-6 and CL9-BR are bedrock wells utilizing a packer system in order to provide discrete groundwater sampling from 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) 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 analysis consistent with MADEP policy.

Groundwater and surface water samples were submitted to Columbia Analytical for analysis of VOCs (by EPA Method 8260B), dissolved iron and manganese, methane, ethane, ethene, metabolic acids, and chloride as outlined on **Tables 4A** and **4B.** Additionally, groundwater samples collected from the bioremediation wells were submitted for analysis of *Dehalococcoides sp.* bacteria (DHC) at Shaw's Technology Development Laboratory in Knoxville, Tennessee.

During the October 2011 sampling event, groundwater samples from select 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 were analyzed by Shaw using a Hach DR/890 colorimeter. The colorimeter utilizes a spectrophotometric method to determine the permanganate concentration based on a permanganate color calibration standard.

VOC analytical results from the October 2011 and January 2012 sampling events are summarized on **Table 3.** Results of chloride, iron, and manganese samples collected during the sampling events are summarized on **Table 5**. Results of bioremediation parameter analysis (i.e., methane, ethane, ethene, metabolic acids, and DHC bacteria) are summarized on **Table 6**. Complete laboratory analytical reports for samples collected in October 2011 and January 2012 are provided in **Appendix D**. Results of bench-

top colorimetric analysis of residual permanganate are included in **Table 7**. Sampling results are discussed below.

2.8.2 Quality Assurance/Quality Control (QA/QC)

In general, the environmental data collected by Shaw during these remedial monitoring activities meets the "presumptive certainty" criteria described in MADEP guidance (MADEP, 2004). Based on a data usability assessment of the laboratory analytical reports, the data are appropriate for use in this ROS Status Report. The laboratory reports were reviewed by Shaw to determine if samples were analyzed within holding times and to ensure that surrogate recoveries and internal laboratory standards were within QA/QC limits. 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" (estimated) qualifier in the laboratory analytical report and associated data tables in this 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.

In laboratory report R1106033, the secondary dilution sample for sample AP24-DO was run one day out of the 14-day holding time. Therefore, positive results from this dilution were flagged with a "J" indicating an estimated concentration.

In two laboratory reports, R1106037 and R1106271, the relative percent difference (RPD) for select compounds was reported outside of the control limits for a laboratory control sample. Analytical results for the compounds with RPDs outside of control limits were non-detect, and therefore no qualification was required.

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

2.8.3 VOC Monitoring Results

In general, the analytical results of groundwater samples collected during the October 2011 and January 2012 sampling events (**Table 3**) show decreasing or consistent concentrations of TCE and PCE monitoring wells across the Site. However, concentrations of cis-1,2-DCE have been more 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 or bioremediation.

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.

Graphs illustrating concentration trends over time for TCE, PCE, cis-1,2-DCE, TCA, and vinyl chloride for numerous injection and monitoring wells are provided in **Appendix F**. Graphs for shallow overburden, deep overburden, and bedrock monitoring wells that are located in proximity to each other are grouped together for comparative purposes.

A more detailed discussion of VOC results for the various treatment areas at the Site is presented below.

North of Route 128

Historically, VOC concentrations in the area north of Route 128 have been low or non-detect 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 south of Route 128 was conducted to address downgradient impacts in bedrock north of the former Varian facility. The groundwater sampling results for the area north of Route 128 demonstrate that:

- At bedrock monitoring well BR-1, a multi-zone bedrock well on Walden Street, VOC concentrations in the shallowest zone (Zone 3) continued to remain non-detect in October 2011. Low concentrations of TCE were present in the deepest sampling zone (Zone 1) and the middle sampling zone (Zone 2) in October 2011 (0.035 mg/L and 0.005 mg/L, respectively). The concentration of cis-1,2-DCE detected in Zones 1 and 2 have fluctuated over recent sampling events.

- At bedrock well CL2-BR, located on 16 Tozer Road, TCE and PCE have been non-detect since October 2009. Concentrations of vinyl chloride and cis-1,2-DCE remain relatively low, with levels of 0.0097 mg/L and 0.035 mg/L, respectively observed in October 2011. At deep overburden well MW4R, also located at 16 Tozer Road, VOC concentrations have remained relatively consistent over the last five sampling events. In October 2011 TCE was detected at 0.048 mg/L, PCE was non-detect, and cis-1,2-DCE was present at 0.0065 mg/L.

- At the bedrock well CL9-BR, a multi-zone bedrock well located just north of Route 128 and west of Tozer Road, TCE and PCE concentrations have remained generally consistent, but levels of cis-1,2-DCE continue to fluctuate. The significant fluctuations in cis-1,2-DCE concentrations, a TCE breakdown compound, suggest that some biological breakdown of TCE and/or PCE may be occurring in bedrock in this area.

Building 3/6 Treatment Areas

Permanganate injection was conducted during the previous reporting period at wells AP30R-DO, AP31-DO, AP32-DO, and OB12-DO in the Building 3/6 treatment area as presented in the October 2011 status report. Significant target VOC reductions had been maintained at a number of monitoring wells, including AP25-DO, MW-9, MW-9A, OB9-S, OB9-DO and OB32-DO. TCE concentrations at these wells have been reduced by as much as 99 percent from historical levels. Groundwater sampling results for this area are summarized below:

- At shallow well OB9-S, located adjacent to the Unnamed Stream, TCE and PCE have decreased from pre-treatment concentrations over 50 mg/L to non-detect. A low concentration of the breakdown product cis-1,2-DCE was detected in October 2011 at 0.0037

mg/L. A healthy population of DHC was noted at wells OB9-S in October 2011 and January 2012. At deep overburden well OB9-DO, TCE and PCE concentrations decreased to non-detect in January 2012 following an increase in October 2011. At bedrock well OB9-BR, TCE and PCE levels show an overall decrease since the start of treatment and were non-detect in October 2011 and January 2012. At both OB9-DO and OB9-BR, concentrations of breakdown products vinyl chloride and cis-1,2-DCE exhibit fluctuating levels over recent sampling events which are likely the result of bioremediation.

- In shallow overburden wells BW-4, BW-5 and BW-8, adjacent to the Unnamed Stream east of Building 3, TCE and PCE concentrations reduced to non-detect in January 2012 after a slight increase in October 2011. Daughter products cis-1,2-DCE and vinyl chloride also decreased to non-detect in January 2012 at these wells. At well BW-5 the concentration of 1,1,1-TCA decreased from 1.5 mg/L in October 2011 to non-detect in January 2012, while the level of 1,1-dichloroethane decreased from 4.3 mg/L in October 2011 to 0.021 mg/L in January 2012. Elevated levels of methane, ethane and ethene, together with a healthy DHC population, continue to demonstrate that complete reductive dechlorination of TCE and 1,1,1-TCA is occurring in the shallow overburden in the area of these wells.

- At well OB12-DO, located north of Building 3, significant VOC concentration reductions were observed following the 2009 permanganate injections (e.g. 99 percent reduction in TCE). However, concentrations of TCE indicated an increase in October 2010 and again in January 2011, when the level was above the remedial planning criteria (45 mg/L vs. 25 mg/L). Levels of TCE remained above the remedial criteria at 33 mg/L in April 2011. Therefore, additional treatment was determined to be warranted. Concentrations of TCE and PCE decreased to non-detect in July 2011 after initial permanganate injections conducted summer of 2011. TCE and PCE concentrations remained relatively low in October 2011, but TCE increased to 15 mg/L in January 2012. This concentration remains below the remedial planning criteria.

- At shallow well OB15-S, adjacent to the Unnamed Stream east of Building 3, PCE and TCE concentrations have decreased significantly since January 2009, when they were 6.1 mg/L and 4.3 mg/L, respectively. In October 2011 and January 2012 TCE remained non-detect and PCE concentrations decreased to non-detect. Breakdown products cis-1,2-DCE and vinyl chloride are present, but active reductive dechlorination continued to treat these daughter products. For example, the concentration of cis-1,2-DCE has decreased from 1.2 mg/L in April 2011 to 0.0045 mg/L in January 2012. Active bioremediation in the area is evident based on concentrations of ethene and ethane at OB15-S and adjacent well MW-9.

- At deep overburden well OB19-DO, located just west of Building 1, concentrations have been relatively consistent since the order of magnitude decrease in TCE and PCE was observed in July 2010. Concentrations of TCE and PCE were 3.1 mg/L and 0.82 mg/L, respectively at this well in January 2012.

- At bedrock well OB25-BR, located west of Building 1, the concentrations of cis-1,2-DCE and vinyl chloride detected in April 2009 increased and remained elevated in July and October

2010. Because the detected concentration of cis-1,2-DCE at this well was above the remedial planning criterion (67 mg/L in October 2010), permanganate treatment was conducted at OB25-BR in January and February 2011. In response to this treatment, concentrations of VOC reduced to non-detect in April 2011. VOC concentrations increased at OB25-BR in October 2011, with PCE present at 1.9 mg/L, TCE at 8.8 mg/L and cis-1,2-DCE at 22 mg/L. These concentrations remain below the remedial planning criteria.

- Bedrock well OB27-BR, located near the south west corner of Building 7, received permanganate injection in 2010 and early 2011 to address increased concentrations of TCE observed in 2009. As a result of this treatment, TCE, PCE, and cis-1,2-DCE concentrations were reduced significantly in April 2010, were non-detect in October 2010 and only indicated a low concentration of PCE in April 2011 (0.0026 mg/L). In October 2012 VOC concentrations show an increase with PCE detected at 7.4 mg/L and TCE at 22 mg/L. Although the concentration of TCE is below the remedial planning criteria of 25 mg/L, it is approaching the criteria. Data from the April 2012 sampling event will be evaluated to determine if further treatment may be warranted.

- Deep overburden well OB34-DO, located just north of Building 3, last received permanganate treatment in August 2009. Although permanganate addition was not conducted in 2010, the TCE concentrations decreased at this well in October 2010 and remained relatively low in April 2011, suggesting that benefits of permanganate injections at nearby wells AP30R-DO, AP31-DO and AP32-DO were being observed in the area of OB34-DO. In October 2011 the TCE concentration increased to 11 mg/L and the PCE level increased to 1.3 mg/L. This increase may be the result of permanganate consumption in the upgradient treatment area.

- Deep overburden well OB36-DO, located beneath the Building 6 loading dock, last received permanganate treatment in 2005. VOC concentrations at this well had been relatively consistent over recent sampling events with TCE detected at 5.2 mg/L in October 2011. From April 2008, with the exception of October 2009, VOC levels at OB36-DO have remained below the remedial planning criteria and it appears that additional treatment at this well is not warranted at this time.

- Deep overburden well OB37-DO, beneath Building 6, received permanganate injections in 2010 and early 2011. Significant reductions in PCE and TCE were observed in response to the permanganate treatment and the levels have been non-detect over the last three sampling events (October 2010, April 2011, and October 2011).

- At bedrock well AP12-BR, located near the south east corner of Building 6, permanganate treatment was initiated in 2010 following higher concentrations of TCE observed in April and October 2009. Significant reductions in VOC concentrations were observed in April 2010 in response to the permanganate treatment (e.g. PCE and TCE were non-detect). Concentrations of PCE and TCE have remained non-detect over the last four sampling events (April 2010 through October 2011). The adjacent deep overburden well AP12-DO last received permanganate treatment in 2004 and TCE concentrations remained non-detect until

residual permanganate from treatment in the Building 6 area was consumed and an increase was observed in April 2010. Although the concentrations of TCE and PCE at AP12-DO were higher they remained below the remedial planning criteria until October 2011 when the TCE concentration increased to 27 mg/L. This TCE level suggests that further treatment may be warranted.

- At deep overburden well AP13-DO, located at the northeast corner of Building 3, the April 2011 sampling showed an increase in TCE and PCE concentrations and lactate applications were conducted in June 2011 to reduce target VOC concentrations. In July 2011, detected concentrations appeared to respond to the additional treatment with TCE, decreasing from 200 mg/L to 150 mg/L and PCE decreasing from 46 mg/L to 23 mg/L. As has been observed at this location previously, TCE and PCE concentrations increased in October 2011 and in January 2012 as the lactate was consumed by biologic activity. By January 2012 the TCE concentration at AP13-DO had increased to 360 mg/L and PCE increased to 53 mg/L. These levels are well above the remedial planning criteria indicating that further treatment is warranted.

- At deep overburden well AP23-DO, located adjacent to Building 3, data from October 2010 and January 2011 indicate significantly decreased concentrations of TCE and PCE. Although the TCE concentration remained above the remedial planning criterion, an approximate 74 percent reduction was observed between July 2010 (330 mg/L) and January 2011 (86 mg/L). The presence of breakdown compounds cis-1,2-DCE and vinyl chloride, and a significant increase in ethene in January 2011 demonstrate that reductive dechlorination was occurring in the area of this well. April 2011 data showed an increase in TCE concentration to 230 mg/L and PCE to 20 mg/L. Additional lactate applications were conducted in June and early July 2011 and analytical results from late July show a decrease of TCE to 140 mg/L. As has been observed at this location previously, TCE and PCE concentrations increased in October 2011 and in January 2012 as the lactate was consumed by biologic activity. The continued presence of ethene at this well demonstrates that reductive dechlorination is occurring. By January 2012 the TCE concentration at AP23-DO had increased to 490 mg/L and PCE increased to 41 mg/L. These levels are well above the remedial planning criteria indicating that further treatment is warranted.

- At deep overburden well AP24-DO, located adjacent to Building 3, data from October 2010 and January 2011 indicate that reductive dechlorination of VOCs was occurring in the area of this well. For example, the concentration of TCE at this well has decreased approximately 96 percent between April 2010 (270 mg/L) and January 2011 (9.8 mg/L). An increase of TCE was observed in April 2011 to 300 mg/L; however, concentrations were greatly decreased to 16 mg/L in July 2011 after additional lactate injection. As the lactate at this well was consumed, TCE concentrations showed an increase to 350 mg/L in October 2011; however, the continued presence of ethene at this well demonstrates that reductive dechlorination is continuing. Concentrations of TCE and PCE remain above the remedial planning criteria, indicating that further treatment is warranted. Concentrations of 1,1,1-TCA also exhibited a significant decrease in response to the bioremediation, decreasing from 43 mg/L in April 2011

to 1.2 mg/L in July 2011. However, similar to the TCE and PCE, once the lactate at in the area was consumed, the 1,1,1-TCA concentration increased to 35 mg/L in October 2011.

- Deep overburden well AP26-DO, located west of Building 2, last received permanganate treatment in 2004. Concentrations of VOCs have fluctuated over recent sampling events with the level of TCE around the remedial planning criteria. In October 2011 the concentration of TCE was 25 mg/L and the level of PCE was 11 mg/L. It was expected that the permanganate injections conducted in summer 2011 in the upgradient Building 3 source area (e.g. AP30R-DO) would reduce VOC levels in the area of AP26-DO. This benefit has not been observed and therefore additional treatment at AP26-DO may be warranted.

- Deep overburden wells AP30R-DO, AP31-DO and AP 32-DO, located just north of Building 3, responded well to the permanganate treatment conducted in 2010 and 2011. Concentrations of TCE and PCE at AP30R-DO have decreased from 680 mg/L and 59 mg/L, respectively to non-detect in November 2011. Concentrations of TCE in AP31-DO decreased from a pretreatment concentration of 940 mg/L to non-detect in November 2011 and PCE decreased from 71 mg/L in February 2010 to 0.043 mg/L in November 2011. Concentrations of VOCs had shown a significant decrease after treatment in AP32-DO, for example TCE decreased from 950 mg/L pre-treatment concentration to non-detect in October 2010. However TCE increased up to 81 mg/L by November 2011. This concentration of TCE is above the remedial planning criteria, indicating that further treatment is warranted in AP32-DO.

- Deep overburden well MW-13, located north of Building 3 adjacent to Route 128, received permanganate injections in 2010 and early 2011. Significant reductions in PCE and TCE were observed in April 2010 in response to the permanganate treatment. These reductions were maintained in April 2011 when TCE was 0.0075 mg/L and PCE was present at 0.062 mg/L. October 2011 show a continued decrease in VOC concentrations with TCE now non-detect. TCE and PCE concentrations reflect a greater than 99 percent reduction from the levels detected in April 2009.

- In the stream adjacent to Building 9, the Unnamed Stream sample location indicated fluctuating concentrations of VOCs. This is expected due to the continuing bioremediation being conducted in the adjacent shallow groundwater aquifer. Just downstream at the STR-3 stream sample location, TCE and PCE were below detection limits for the six sampling events (from July 2010 to October 2011). Low concentrations of PCE and TCE were detected at STR-3 in January 2012 (0.011 and 0.02 mg/L, respectively). The non-detect and low levels of VOCs detected at this location indicate that fluctuations in surface water VOC concentrations are limited to the area immediately adjacent to the active bioremediation treatment zone. The continued presence of ethene in adjacent shallow well samples indicates that complete VOC degradation is occurring.

Building 5 Treatment Area

Permanganate application in the Building 5 treatment area was conducted at well AP27-DO in 2004 and 2005, and at OB-35DO from 2005 to 2008 and in 2011. The most recent groundwater sampling results for this area demonstrate that:

- At deep overburden well AP27-DO, located to the east of Building 5, the TCE concentrations increased from 0.027 mg/L to 12 mg/L in October 2011. Although the levels are much lower than TCE, concentrations of other VOC also increased at AP27-DO in October 2011. VOC concentrations remain below prior concentrations and the remedial planning criteria, suggesting additional treatment may not be warranted. Results of the April 2012 sampling event will be evaluated to assess if future treatment is warranted.

- Deep overburden well OB35-DO, located beneath Building 5, received limited permanganate treatment in 2011. Results of the October 2011 groundwater sampling event have shown a slight decrease in VOC concentrations with PCE present at 29 mg/L, which is above the baseline concentration. This indicates that further the permanganate treatment may be warranted.

- TCE and PCE concentrations at deep overburden well OB38-DO, located on the east side of Building 5, have been relatively consistent over recent sampling events. In October 2011, TCE was detected at 0.39 mg/L and PCE was present at 0.52 mg/L. The detected VOCs at this well are below prior concentrations and the remedial planning criteria.

- At shallow overburden well B-2, located just to the east of Building 5, the concentration of TCE decreased in October 2011 to 0.017 mg/L. In October 2011 the concentration of breakdown products vinyl chloride increase to 0.19 mg/L and the level of cis-1,2-DCE remained relatively consistent at 0.18 mg/L.

PSL 10 Treatment Area

This area is located to the south of the main buildings, adjacent to the 32 Tozer Road property. Permanganate injection was conducted in this area from 2002 to 2004 and 2006 through 2008. Additional permanganate injections were conducted in this area at AP-19 and AP-22 during the summer 2011 treatment period. The most recent groundwater sampling results for this area demonstrates that:

- VOC concentrations at shallow overburden well CL10-S, located just downgradient of PSL 10 on the 32 Tozer Road property, continued to exhibit seasonal fluctuations. For example, in April 2011 the PCE level increased to 0.87 mg/L from 0.013 mg/L in October 2010. Then in October 2011 the concentration decreased to 0.045mg/L.

- In October 2011, the PCE concentrations remained non-detect at deep overburden well CL10-DO, with low levels of TCE and cis-1,2-DCE (0.0036 and 0.0027 mg/L) observed. VOC levels continue to be non-detect in October 2011 at bedrock well CL10-BR.

- Concentrations of VOCs at wells AP-19, AP-20, AP-21, and AP-22 responded well to the permanganate treatment completed through 2008. Based on increased VOC concentrations to above baseline levels in April 2011 and to provide additional benefits to the downgradient areas at 32 Tozer Road, additional treatment was conducted in this area during the summer of 2011. In October 2011 concentrations of TCE and PCE in groundwater decreased to non-detect at AP-22 and remained non-detect at AP-21. Concentrations of PCE and TCE in AP-19 and AP-20 showed a decrease in October 2011, approaching baseline levels.

- Select groundwater samples were collected by the property owner at 32 Tozer Road in November 2011 (Irwin, 2012). Concentrations of VOCs at deep overburden monitoring well MW2-32Tozer, located west of AP-21 and AP-22, were generally consistent with levels observed in February 2011. PCE was detected at the highest concentrations at MW2-32Tozer (10.1 mg/L) and was lower than the remedial planning criteria.

- Two new wells located on the downgradient west side of the 32 Tozer Road building were installed by the property owner and first sampled in November 2011. These new wells, MW4-32Tozer and MW5-32Tozer, are screened from 10 to 15 feet below grade and provide data from the lower portion of the shallow overburden aquifer. Concentrations of VOCs in groundwater samples collected from MW4-32Tozer and MW5-32Tozer in November 2011 are significantly lower than the upgradient well MW2-32Tozer. For example PCE was detected at 0.0044 mg/L in MW4-32Tozer in November 2011 compared to 10.1 at MW2-32Tozer.

- Two test pits were also installed inside the 32 Tozer Road building by the property owner (Irwin, 2012). Groundwater samples collected from these test pits indicated TCE and PCE concentrations of up to 0.23 mg/L and 0.26 mg/L, respectively. Concentrations of cis-1,2-DCE were also present in water samples collected from the test pits at up to 1.1 mg/L.

Tozer Road Treatment Area South of 128

No permanganate injections have been performed at 28 Tozer Road since 2006. The most recent groundwater sampling results for this area demonstrate that:

- Newly installed shallow overburden well OB43-S, located within 30 feet of the building at 27 Tozer Road, was sampled for the first time in October 2011. Results of groundwater samples from this well indicate low levels of TCE (0.007 mg/L) and PCE (0.0052 mg/L) were present.

- VOCs concentrations at wells OB5-S (27 Tozer Road) have exhibited a decreasing trend since April 2007 and only indicated low concentrations of TCE and PCE in October 2011 (0.0053 mg/L and 0.0034 mg/L, respectively). At the adjacent deep overburden well OB5-DO, VOC concentrations have increased over recent sampling events. Most notably, the concentration of TCE increased from 0.69 mg/L in October 2009 to a level of 2.7 mg/L in October 2011. At bedrock well OB5-BR, TCE and PCE concentrations remain low (0.0042 mg/L and non-detect, respectively), while the concentration of cis-1,2-DCE have decreased from 1.2 mg/L in April 2010 to 0.013 mg/L in October 2011.

- At deep overburden monitoring well OB6-DO, located 300 feet west of Tozer Road at Sonning Road, the TCE, PCE and cis-1,2-DCE concentrations have fluctuated over recent events. The frequency of the variations in VOC concentrations at this well suggest seasonal fluctuations or may be reflecting natural attenuation. The last two sampling events at OB6-DO indicate decreased concentrations of cis-1,2-DCE (0.77 mg/L in October 2011), but overall an increasing trend is observed in this well. VOC concentrations at OB6-BR have been generally consistent over the last three sampling events and overall exhibit a decreasing trend. The concentration of TCE at OB6-BR was 0.14 mg/L in October 2011.

- At shallow monitoring well W-1 (30 Tozer Road), VOCs remained relatively stable at low concentrations through April 2011. Detected VOC concentrations decreased in October 2011 with TCE present at 0.0066 mg/L, and both PCE and cis-1,2-DCE non-detect. Well OB42-S was installed at 30 Tozer just down gradient of W-1 to assess compliance with GW-2 standards at this property. VOC results from this well in October 2011 indicate the presence of TCE, PCE and cis-1,2-DCE at concentrations of 3 mg/L, 0.096 mg/L and 1 mg/L, respectively, which are similar to April 2011 concentrations.

- At deep overburden well CL3-DO, located at 28 Tozer Road, VOCs except TCE (0.0089 mg/L) and cis-1,2-DCE (0.0034 mg/L) were below detection limits in October 2011.

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. The most recent groundwater sampling results for this area demonstrates that:

- Several wells are monitored at 31 Tozer Road and sampled to assess shallow overburden impacts. VOC concentrations in AP15-S and OB18-S have decreased and were non-detect in April 2011 and again in October 2011. At shallow well GZ-4, an increase in the TCE and PCE concentrations had been observed in April 2011; however, in October 2011 concentrations decreased to 0.003 mg/L and 0.0037 mg/L, respectively.

- In deep overburden well OB18-DO, located at 31 Tozer Road, the TCE and cis-1,2-DCE concentrations had exhibited slightly increased concentrations over the previous three sampling events (April 2010, October 2010 and April 2011). However, in October 2011 concentrations of TCE (0.16 mg/L) and cis-1,2-DCE (0.027 mg/L) at OB18-DO decreased to levels more consistent to those observed in 2009. At deep overburden well OB8-DO, located downgradient at 39 Tozer Road, levels of VOC have remained relatively consistent in October 2011 with TCE and PCE detected at concentrations of 2.2 mg/L and 0.34 mg/L, respectively.

- Shallow well OB8-S, located at 39 Tozer Road, was also sampled to assess shallow overburden impacts. VOC concentrations at this well have been relatively consistent over recent sampling events. The October 2011 results indicating a slight decrease with TCE present at 0.15 mg/L and cis-1,2-DCE present at 0.042 mg/L. Well OB41-S was installed at 39 Tozer just down gradient of OB8-S and was first sampled in April 2011. In October 2011 concentrations of TCE (0.12 mg/L) and PCE (0.03 mg/L) were detected at OB41-S, indicating a slight decrease since April 2011.

- Stream points STRHA-7A (Stream A on the 39 Tozer Road property) and STRHA-7B (Unnamed Stream on the 39 Tozer Road property) are sampled to monitor VOC impacts to surface water. Detected VOC concentrations at these sample points have been generally consistent and remain relatively low. For example, TCE was detected at a concentration of 0.011 mg/L at STRHA-7A and 0.025 mg/L at STRHA-7B in October 2011.

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. The most recent groundwater sampling results for this area demonstrates that:

- Several monitoring wells in this area of the site are sampled to assess shallow overburden impacts. These include well P-9R at the east end of Hill Street, P-19A on Hill Street just south of Longview Road, and OB20-S by Stream A, south of Sonning Road. VOCs were non-detect at shallow well OB20-S in April 2011 and remained non-detect in October 2011. VOCs returned to non-detect at shallow wells P-9R October 2011. At well P-19A, concentrations of PCE, TCE and cis-1,2-DCE have remained relatively consistent with a slight increase observed in October 2011 (e.g. TCE increased from 0.012 mg/L to 0.021 mg/L).

- Concentrations of VOCs in deep overburden wells OB20-DO and OB21-DO have been generally consistent over the last few years. Along the western edge of the plume at OB20-DO the concentration of cis-1,2-DCE has typically been higher (0.47 mg/L in October 2011), while at OB21-DO the level of TCE detected is generally higher (1.4 mg/L in October 2011).

- Concentrations of VOCs detected in bedrock well OB20-BR had typically been below detection limits except 1,1-dichloroethane. However, since October 2010 the concentration of 1,1-dichloroethane has been non–detect and low concentrations of other VOCs have been present. For example, the concentration of TCE detected was 0.13 mg/L and cis-1,2-DCE was 0.47 mg/L in October 2011. VOC concentrations detected at bedrock well OB21-BR have been generally consistent over recent sampling events with cis-1,2-DCE typically detected at the highest concentrations (1.5 mg/L in October 2011).

- Over the last five sampling events at bedrock monitoring well BR-6, located at the east end of Hill Street, concentrations of TCE and PCE have been non-detect in the three sampling zones. As indicated by the VOC graph for each zone, the detected concentrations of cis-1,2-DCE have fluctuated in each zone at BR-6, but generally indicate a decreasing overall trend. Concentrations of vinyl chloride in October 2011 ranged from 0.024 mg/L in the deepest zone (Zone 1) to 0.017 mg/L in shallowest zone (Zone 3).

- At stream monitoring point STRM-A-SCDS (located east of Longview Terrace), the PCE concentration remained non-detect in October 2011 and the level of cis-1,2-DCE was non-detect for the first time. The concentration of TCE (0.0025 mg/L) remained low following the increase that was observed in October 2010.

2.8.4 Permanganate Parameter Monitoring Results

Permanganate applications were not conducted during this period. The most recent permanganate injections were conducted during the summer of 2011 at angled wells AP30R-DO, AP31-DO and AP32-DO below Building 3; wells AP-19 and AP-22 in the PSL 10 area east of 32 Tozer Road; well OB12-DO north of Building 3; and deep overburden well OB35-DO beneath Building 5. These injections were described in the October 2011 ROS status report. Sampling for analytical parameters associated with permanganate treatment during this monitoring period was completed in October 2011. This included groundwater samples collected from select wells in October 2011 for bench-top colorimetric permanganate concentration analysis. The permanganate analysis results are provided in **Table 7**. As would be expected, samples from wells where permanganate injection was conducted in summer of 2011 indicated residual permanganate was present. For example, at application wells AP-22 and AP-30R the permanganate concentration was 3,200 mg/L and 84,000 mg/L, respectively.

Typically, the dissolved iron concentrations (**Table 5**) are expected to decrease in treatment areas due to the oxidizing nature of permanganate and associated iron precipitation from the groundwater. Results of monitoring in areas where permanganate treatment has occurred generally demonstrate low or non-detect dissolved iron concentrations. For example, wells AP-19 and AP32-DO where dissolved iron concentrations were non-detect.

Generally, elevated dissolved manganese concentrations (**Table 5**) are noted where unreacted permanganate was observed. For example, at well AP30R-DO, where dissolved manganese was detected at 20,000 mg/L in November 2011. Outside of the permanganate treatment areas, dissolved manganese concentrations are generally low or non-detect. At deep overburden well OB19-DO, located

adjacent to Building 1 and 2 and downgradient of the permanganate injection area at Building 3, the dissolved manganese concentration was 3.2 mg/L in October 2011.

Baseline chloride concentrations at the site were highly variable (**Table 5**). As a result of permanganate treatment, chloride levels in groundwater are typically increased from the destruction of the chlorinated VOCs. For example, at application well AP31-DO, where permanganate treatment was conducted in 2011 and significant reductions in TCE and PCE were observed, the chloride concentration in November 2011 was 3,240 mg/L.

2.8.5 Bioremediation Parameter Monitoring Results

VOCs and bioremediation parameters in groundwater samples are analyzed quarterly to monitor reductive dechlorination processes. During this reporting period, sampling was conducted in October 2011 and January 2012 in the bioremediation area near the Unnamed Stream and Building 3. Parameters monitored and analysis completed included ORP, DO, DHC bacteria, methane, ethane, ethene and metabolic acids. These results are provided on **Table 6**.

The previously observed reductions in TCE and PCE concentrations in the shallow overburden groundwater near OB9-S and MW-9 located by the Unnamed Stream are the result of reductive dechlorination. The remaining breakdown products present (i.e., cis-1,2-DCE and vinyl chloride) are continuing to degrade further. Monitoring results that continue to support this conclusion include the following:

- Favorable conditions for reductive dechlorination were established and maintained in the subsurface (dissolved oxygen levels <1.0 mg/L and negative ORP readings).

- Laboratory analyses demonstrated the presence of DHC bacteria in the area, although DHC populations appear low in January 2012 at wells MW-9 and OB15-S.

- Increased or continuing elevated ethene concentrations were observed in well MW-9, and other shallow wells in the area. Ethene is the non-toxic end product of complete dechlorination of TCE, including the daughter product vinyl chloride. In addition, increased or continued elevated concentrations of ethane are observed at BW-6 and other shallow wells in the area. Ethane is the non-toxic end product of complete dechlorination of 1,1,1-TCA including the daughter products 1,1-dichloroethane and chloroethane.

- Methane concentrations have increased or remained elevated in OB9-S, MW-9, and other shallow wells. The presence of methane is indicative of methanogenic conditions that favor the biodegradation of target VOCs via reductive dechlorination.

The previously observed reductions in TCE and PCE concentrations noted in the deep overburden groundwater at AP25-DO located adjacent to Building 3 are the result of reductive dechlorination. This conclusion is supported by the presence of breakdown compounds cis-1,2-DCE, vinyl chloride and ethene in the area. However, recent increases in TCE concentrations at deep overburden wells AP13-DO, AP23-DO, AP24-DO, along with lower concentrations of metabolic acids such as lactic acid, indicate

that the lactate has been consumed. Further treatment is necessary to provide a carbon source to continue the reductive dechlorination process.

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

The Phase IV Plan (IT, 2001) detailed monitoring activities for the various permanganate treatment areas of the Site. No major modifications to the Monitoring Plan were made during this reporting period. Minor adjustments to the remedial monitoring plan continue to be made as site conditions warrant and as described in the Phase IV Plan (IT, 2001).

Details of the bioremediation monitoring activities have been presented in previous status reports. No major modifications to the bioremediation monitoring plan were made during this reporting period. Minor adjustments to the remedial monitoring plan continue to be made as site conditions warrant.

4.0 EVALUATION OF THE PERFORMANCE OF THE REMEDIAL ACTION (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). Consistently lower VOC levels and decreasing VOC concentration trends have been observed at monitoring wells across the Site as a result of the permanganate addition program. In addition, a limited bioremediation program began at the Site in 2006 and has resulted in significant decreases in VOC levels in the targeted shallow overburden wells near the Unnamed Stream and limited reductions in VOC concentration in the deep overburden near Building 3. Site data continues to show that the remedial program is treating Site groundwater consistent with remedial objectives.

The following section presents recommendations for additional treatment at the Site, and provides an evaluation of the indoor air data collected at Buildings 5 and 6 during this reporting period and additional new data from downgradient properties on Tozer Road.

4.1 Permanganate Treatment

No permanganate treatment was conducted during this reporting period. Significantly decreased VOC concentrations were noted in April 2011 at wells targeted by injections in 2010 and early 2011 (e.g. AP12-BR, OB37-DO, OB27-BR, MW-13, AP30R-DO, AP31-DO and AP32-DO). Based on groundwater analytical results from October 2011 and January 2012 some additional permanganate treatment appears warranted in the deep overburden in the area of Building 3 and Building 5. Below is a summary of the areas recommended for further treatment in the summer of 2012. These recommendations will be adjusted as needed following review of groundwater data from the April 2012 sampling event.

Building 3 Area

- Concentrations of VOCs at AP32-DO had shown a significant decrease after treatment in 2010 and early 2011; however, once the permanganate in the area of this well was consumed the detected VOC levels increased. Additional permanganate injections are recommended to address an elevated concentration of TCE in November 2011 (81 mg/L) that was above the remedial planning criteria.

- At well AP26-DO, PCE and TCE levels continued to fluctuate, but the concentration of TCE increased in April 2011 to 27 mg/L, which is just above the remedial planning criteria and remained similar at 25 mg/L in October 2011. Additional permanganate injections are recommended to address concentration of VOCs that were above the remedial planning criteria.

- Concentrations of TCE and PCE at OB12-DO decreased to non-detect in July 2011 after initial permanganate injections conducted summer of 2011. Although TCE and PCE remained non-detect in October 2011, the level of TCE increased to 15 mg/L in January 2012. This concentration is below the remedial planning criteria. Results of groundwater samples collected from OB12-DO in April 2012 will be evaluated to determine if further treatment may be warranted.

- In October 2011 TCE concentrations at deep overburden well AP12-DO increased to 27 mg/L which is above the remedial planning criteria. Additional permanganate injections are recommended to address concentration of VOCs that were above the remedial planning criteria.

- At well OB25-BR, located just west of Building 1, VOC concentrations indicated an increase, with cis-1,2-DCE present at 22 mg/L, which is approaching the remedial planning criteria. Results of groundwater samples collected from this well in April 2012 will be evaluated to determine if further treatment may be warranted.

- At well OB27-BR, located near the south west corner of Building 7, VOC concentrations indicated an increase, with TCE present at 22 mg/L, which is approaching the remedial planning criteria. Results of groundwater samples collected from this well in April 2012 will be evaluated to determine if further treatment may be warranted.

Building 5 Area

- At OB35-DO, located beneath Building 5, results of the October 2011 groundwater sampling event have shown PCE was present at 29 mg/L, a concentration above the pre-treatment level. Further the permanganate treatment is recommended to reduce the concentration of PCE to below the baseline level.

4.2 Bioremediation

No bioremediation was conducted during this reporting period. Most recent bioremediation activities were conducted in the summer of 2011 and were described in the previous ROS Status Report. The bioremediation program appears to have addressed the shallow overburden impact of TCE and PCE in the area of the Unnamed Stream. Based on an evaluation of data through January 2012, active reductive dechlorination is continuing to address residual VOC daughter products in the shallow overburden near the Unnamed Stream; however, the lactate carbon source has been consumed in most wells.

In shallow overburden wells BW-5, BW-8 and BW-9, adjacent to the Unnamed Stream east of Building 3, TCE and PCE concentrations remain non-detect in January 2012. Daughter products cis-1,2-DCE and vinyl chloride had decreased to non-detect in January 2012 in these wells. Daughter products of 1,1,1-TCA treatment, 1,1-dichlroethane or chloromethane are present above pre-treatment concentrations. Data indicates that lactate levels at these wells are low and therefore additional treatment is warranted to provide a carbon source for the continued reductive dechlorination of daughter compounds.

The bioremediation program in the deep overburden near Building 3 appears to be resulting in limited reductive dechlorination. Concentrations of VOCs were present at AP13-DO, AP23-DO and AP24-DO above the remedial planning criteria in January 2012. Given the continued rebound of TCE to high levels following treatment, it appears that the current program is not providing a sufficient carbon source in the deep overburden and the lactate being applied is quickly being consumed. Currently the bioremediation program in this area consists of injections of lactate. The use of emulsified vegetable oil (EVO) as a carbon source for reductive dechlorination in the deep overburden is recommended to decrease the frequency of treatment applications, as EVO lasts up to three years. The EVO product also has the added benefit of incorporating some of the target VOCs into the oil droplets (because chlorinated ethenes and ethanes are hydrophobic), which would decrease the elevated dissolved concentrations in the groundwater, making it easier for the microbes to degrade the compounds. As the oil is degraded by other microbial processes (metabolism), the chlorinated solvents will be slowly released back into the dissolved phase and subsequently treated by reductive dechlorination. Use of EVO in the shallow overburden near the Unnamed Stream should also serve to reduce the frequency of potential future treatment applications to treat residual daughter products in that area of the Site.

4.3 Building 3 IRA

In December 2009, a soil vapor extraction (SVE) system was installed and activated by Varian under the Building 3 Immediate Response Action (IRA) Plan for RTN 3-28531. The SVE system is being operated to reduce soil VOC impacts as well as depress ambient pressure under the Building 3 floor to further control potential vapor intrusion into the building. Based on the data presented in the March 2012 IRA Status Report under RTN 3-28531, the operation of this SVE system is effectively removing VOCs from the subsurface beneath Building 3, mitigating potential migration of vapors into the building, and has eliminated the condition that gave rise to the IRA (Shaw, 2012b). It should be noted that, while shallow soil/groundwater impacts are relevant to potential vapor intrusion concerns, the source area permanganate treatment adjacent to Building 3 described in this ROS report has typically focused on

treating elevated residual VOCs in deep overburden groundwater. Therefore, the ROS remedial activities which address groundwater clean-up goals in the Building 3 Area are addressed separately from the Building 3 IRA activities that are designed to achieve No Significant Risk in indoor air.

Varian will continue to assess and evaluate the potential indoor air conditions in the Building 3 Area and conduct appropriate response actions as part of the IRA associated with RTN 3-28531.

Soil samples were collected beneath Building 3 in March 2012 in an effort to assess potential source areas. The results will be discussed in a forthcoming Phase II Comprehensive Site Assessment report for the Building 3 Area (RTN 3-28531).

4.4 Building 5 and 6 Indoor Air Evaluation

This section presents an evaluation of the potential indoor air migration issues at Buildings 5 and 6 at the former Varian Facility Site. In the last status report (Shaw, 2011), an evaluation of indoor air exposure was conducted using the June 2011 sub-slab soil vapor samples. This evaluation concluded that indoor air may pose a concern (greater than MCP cumulative cancer risk limit of 1 in 100,000 or $1x10^{-5}$) in both buildings when evaluated using modeled attenuation factors. As a result, indoor air sampling was conducted in August 2011. The evaluation of this data (Shaw, 2011) concluded that the indoor air sampling results did not indicate the presence of an Imminent Hazard in Building 5 or 6. However, the indoor air sampling data in Building 5 suggested that longer term exposures may result in risk above the MCP limits and recommended additional indoor air sampling. As described in Section 2.3, sub-slab soil vapor and indoor air sampling were conducted at Buildings 5 and 6 in October 2011 and January 2012. Indoor air results show that concentrations were similar in the June 2011 and October 2011 sampling rounds; however, concentrations of PCE and TCE were generally higher in the January 2012 sampling round. This is not unexpected as winter time is generally considered a “worst case” scenario for potential indoor air migration. The indoor air data collected in the three rounds (**Table 2**) were used to evaluate Imminent Hazards and longer term exposures in accordance with MADEP risk guidance.

Hazard Identification

Additional indoor air sampling was conducted at the Varian Facility in October 2011 and January 2012 as described above. The results of these sampling rounds, as well as the June 2011 sampling round, are presented in **Table 2**. As shown in this table, a number of VOCs have been detected in indoor air. In particular, TCE and PCE are present in soil vapor and indoor air samples collected from Buildings 5 and 6. Acetone has been consistently detected in indoor air, but the concentration is often higher in indoor air compared to soil vapor samples collected from beneath the building (**Table 1**). This can be seen in the paired soil vapor and indoor air sampling locations BLD5-SV1 (acetone present at 670 ug/m^3 in October 2011) and BLD5-1 (acetone present at 9,700 ug/m^3 in October 2011). In addition, acetone is known to be used within both Building 5 and Building 6 during current manufacturing operations. For the purposes of this evaluation, PCE and TCE were evaluated as they are known to be site-related and have been shown to be the most significant compounds in terms of potential risk.

Exposure Assessment

Current and future users of the site building are potentially exposed to site contaminants via vapor intrusion and inhalation. The indoor air sampling results (**Table 2**) were used to evaluate potential indoor air exposures to workers in each of these buildings.

For Building 5, the highest concentrations were identified at locations BLD5-2 (shipping room) and BLD5-3 (sanding room). As a result, these areas were considered as separate exposure points and potential risks were evaluated for each. The average concentration over the three rounds at each location was used in this evaluation of Building 5 (**Table 8**). For Building 6, the maximum average concentration at sample location BLD6-1 and BLD6-2 was used in the evaluation.

Indoor air exposure point concentrations shown in **Table 8** were used to evaluate potential exposures to current site workers. An average daily exposure (ADE), which is an adjusted air concentration, was developed in order to evaluate the potential for non-cancer effects. This exposure uses the estimated exposure point concentration described above, assumes a 250 day/year exposure and a five year exposure duration as required for Imminent Hazard evaluations (310 CMR 40.0953(1)). For evaluating longer term exposure, a worker exposure period of 27 years is used (MADEP, 2008a). Based on site-specific information from the current facility operator, an exposure time (ET) of 7 hours per day was used for the shipping room, and 4 hours per day for the sanding room. While the actual use of the sanding room may be as low as 0.5 hours/day, a value of 4 hours/day was used in this assessment, as that is the exposure time in the adjacent paint room. An ET of 8 hours per day was used for Building 6. A lifetime average daily exposure (LADE), which is an adjusted air concentration over a lifetime (70 years), was developed in order to evaluate potential carcinogenic risks.

The estimated ADE and LADE values are shown in following tables:

- **Table 9**, Imminent Hazard evaluation for the Building 5 shipping room
- **Table 10**, Risk evaluation for the Building 5 shipping room
- **Table 11**, Imminent Hazard evaluation for the Building 5 sanding room
- **Table 12**, Risk evaluation for the Building 5 sanding room
- **Table 13**, Imminent Hazard evaluation for Building 6
- **Table 14**, Risk evaluation for Building 6

Dose Response Assessment

Inhalation risks are evaluated through the use of Reference Concentrations (RfC) and Unit Risk Values (UR). The RfC and UR values used for PCE and TCE were taken from EPA's Integrated Risk Information System (IRIS) (USEPA, 2012).

Imminent Hazard Evaluation

Estimated non-cancer and cancer risks for the Imminent Hazard evaluation of Building 5 were calculated as shown in **Tables 9** and **11** and for Building 6 in **Table 13**. Non-cancer hazards are evaluated by comparison of the ADE to the RfC, a ratio known as the Hazard Quotient. Hazard Quotients are summed to derive a cumulative Hazard Index for a receptor, assuming that the chemicals evaluated have similar

toxic endpoints. The cumulative Hazard Indices are all below the MCP cumulative non-cancer risk limit of 10 for Imminent Hazard. Estimated cancer risks were calculated by multiplying the LADE by the UR, resulting in the Estimated Lifetime Cancer Risk (ELCR). The calculated ELCRs were $8x10^{-7}$, $5x10^{-7}$, and $4x10^{-7}$, for the shipping room in Building 5, the sanding room in Building 5, and Building 6, respectively. None of these ELCR exceed the MCP cumulative cancer risk limit of 1 in 100,000 ($1x10^{-5}$) for an Imminent Hazard.

Risk Characterization Evaluation

Estimated non-cancer and cancer risks for the evaluation of longer term exposure in Building 5 shipping and sanding rooms were calculated as shown in **Tables 10**, and **12**, and for Building 6 in **Table 14**. For these scenarios, the estimated Hazard Indexes were 1, 0.9, and 0.6, respectively. None of these estimated Hazard Indices exceed the MCP cumulative non-cancer risk limit of 1 for Significant Risk. Estimated cancer risks were calculated by multiplying the LADE by the UR, resulting in the ELCR. For Building 5, the calculated ELCRs for longer term exposure were $4x10^{-6}$ and $3x10^{-6}$ for the shipping and sanding rooms, respectively. The calculated ELCR for Building 6 was $3x10^{-6}$. Each of these estimated cancer risks are below the MCP cumulative cancer risk limit of 1 in 100,000 or $1x10^{-5}$.

The indoor air sampling results do not indicate the presence of an Imminent Hazard or Significant Risk in Building 5 or 6. The current indoor air sampling data in Building 5 suggest that indoor air concentrations are variable and the estimated hazards are at but do not exceed the MCP limit. However, additional indoor air sampling will be conducted to further evaluate seasonal and spacial variability within both Buildings 5 and 6. In addition, it is likely that a Permanent Solution for the Site may not be achieved without some source remediation at Building 5 to reduce potential risk to site workers. If remediation is to be conducted at Building 5, a supplemental Phase III and Phase IV report will be prepared to implement a remedial alternative in the Building 5 area the selected technology (e.g. soil vapor extraction) was not evaluated in the existing Phase III and Phase IV documents completed for RTN 3-0485. Based upon discussions with the MADEP, it is acceptable to implement an additional remedial approach (e.g. soil vapor extraction) after submitting a supplemental Phase III and IV, and continue with current permanganate and bioremediation groundwater remediation program under this ROS (Shaw, 2012a).

4.5 32 Tozer Road Indoor Air Evaluation

In the last status report, an evaluation of potential worker exposure was conducted for 32 Tozer Road based on the March 2011 indoor air data collected by Irwin. This evaluation concluded that conditions at 32 Tozer Road do not pose an Imminent Hazard or Significant Risk to workers in the building. The Irwin letter report dated January 31, 2012 (included in **Appendix B**), included a screening-level characterization of Worker Health Risk. The screening-level characterization also concluded a level of "No Significant Risk" of harm to worker health at 32 Tozer Road.

Currently, building renovations are underway and the majority of the building is unoccupied. According to the property owner, renovations to the 32 Tozer Road building will include significant changes to the floor plan and installation of a seal on the concrete floor. The property owner has indicated the floor plan is still in the design phase. Once a final floor plan has been provided by the owner, a plan for future indoor air

sampling will be proposed. Varian and Shaw understand that, during building renovations, appropriate measures will be taken by the property owner to monitor potential exposure to construction workers. When construction is complete, Varian plans to conduct additional indoor air and soil vapor sampling within the building to evaluate longer term potential worker exposure. Results of that monitoring will be used to confirm a Condition of No Significant Risk continues to exist at the property and will be reported to MADEP in future ROS Status Reports.

4.6 Tozer Road Indoor Air Evaluations

This section presents the steps taken to evaluate potential indoor air impacts at three downgradient properties located at 27, 30, and 39 Tozer Road. As described in the last status report (Shaw, 2011), groundwater monitoring wells were installed within thirty feet of the existing buildings to a depth of 15 feet below grade near the northeast corner of each building located at 30 Tozer Road (OB42-S) and the building at 39 Tozer Road (OB41-S). Groundwater samples were collected for VOC analysis at OB-41S and OB-42S in April 2011 and again in October 2011. As described previously in this report, a groundwater monitoring well was installed at 27 Tozer Road in October 2011 (OB-43S). A groundwater sample was collected from OB-43S for the first time in October 2011. In accordance with 310 CMR 40.0930, groundwater shall be defined to be in category GW-2 if it is located within 30 feet of an existing or planned building or structure that is or will be occupied, and the average annual depth to ground water in that area is 15 feet or less. Category GW-2 groundwater is considered to be a potential source of vapors of oil and/or hazardous material to indoor air. Groundwater analytical results from the monitoring wells installed at 27, 30, and 39 Tozer Road are compared to GW-2 standards in an effort to assess potential indoor air impacts (**Table 15**).

4.6.1 30 Tozer Road

Groundwater analytical data from monitoring well OB42-S at 30 Tozer Road indicated concentrations of TCE, PCE, and cis-1,2,-DCE above GW-2 standards in October 2011 (**Table 15**). The exceedences of GW-2 standards warrant further assessment.

As discussed in Section 2.4, analytical results of the sub-surface vapor sample collected at 30 Tozer Road adjacent to OB42-S indicated a concentration of TCE that suggests additional assessment is warranted. Shaw is currently working with the property owner to collect a sub-slab soil vapor sample from beneath the building located at 30 Tozer Road. Analytical results from the proposed sub-slab soil vapor point will be compared to the MADEP's December 2011 screening values and discussed in the next status report.

4.6.2 39 Tozer Road

Groundwater analytical results from first two sampling events at OB41-S, located at 39 Tozer Road, indicated concentrations below GW-2 standards for detected VOCs except TCE (**Table 15**). However, TCE was detected at a concentration of 0.120 mg/L in October 2011, which is above the GW-2 standard of 0.030 mg/L. Based on the GW-2 exceedence of TCE in groundwater, Shaw will collect additional groundwater sampling data to assess seasonal fluctuation in an effort to determine if further assessment is warranted at this location.

4.6.3 27 Tozer Road

Groundwater analytical results from monitoring well OB43-S at 27 Tozer Road indicated VOC concentrations below GW-2 standards and therefore indoor air impacts are unlikely (**Table 15**). Shaw will collect additional groundwater sampling data to assess seasonal fluctuation and confirm VOC concentrations in groundwater are below MCP GW-2 Standards. .

5.0 MEASURES PLANNED TO ENHANCE THE PERFORMANCE OF THE REMEDIAL ACTION (310 CMR 40.0892 (2)(d))

Recent sub-slab soil vapor and indoor air sampling data collected for Buildings 5 and 6 do not indicate the presence of an Imminent Hazard or a Significant Risk in either building. However, the indoor air sampling data in Building 5 suggest that indoor air concentrations are variable and the estimated hazards are at, though do not exceed, the MCP limit. Additional indoor air sampling will be conducted to further evaluate seasonal and spacial variability within both Buildings 5 and 6. In addition, it is likely that a Permanent Solution for the Site may not be achieved without some source remediation at Building 5 to reduce potential risk to site workers.

An evaluation of potential risk included in a letter report by Irwin using indoor air sampling results from 32 Tozer Road indicates that conditions do not pose an Imminent Hazard or Significant Risk for workers. This conclusion is consistent with Shaw's previous evaluations of this location using indoor air, soil vapor and groundwater data. After construction activities associated with building renovations are completed by the property owner, additional soil vapor and indoor air samples will be collected to evaluate seasonal variation and confirm that a Condition of No Significant Risk exists at this property.

Groundwater analytical results from 39 Tozer Road indicated concentrations of TCE greater than GW-2 standards. Shaw will continue to monitor the groundwater for seasonal fluctuations and the possible need for further assessment to evaluate the potential for indoor air risk. Groundwater analytical results from 30 Tozer Road indicate VOC concentrations significantly greater than GW-2 Standards. Shaw is working with the property owner at 30 Tozer Road to conduct soil vapor sampling beneath the building to further evaluate the potential of indoor air risk. Groundwater analytical results from 27 Tozer Road indicated concentrations of VOCs less than GW-2 standards. Shaw will continue to monitor VOC concentrations in groundwater at 27 Tozer Road to assess seasonal fluctuations.

Minor modifications to the original Phase IV Remedial Implementation Plan (IT, 2001) continue to be made as needed. No changes to the Phase IV Plan were made during this reporting period. Previous changes to the Phase IV Plan have been documented in earlier status reports.

The permanganate injection program for the summer 2011 treatment period was completed in September 2011. Significantly decreased VOC concentrations were noted at target wells and data from many of the wells monitored continue to show decreasing concentration trends or sustained reductions in VOC concentrations. Recent data has shown VOC concentrations in the Building 3 and 5 areas exceed the remedial planning criteria and as discussed in this report further permanganate injections are proposed

for the summer of 2012. Results of groundwater samples collected in April 2012 will be evaluated to determine if further adjustments to the permanganate treatment program are warranted.

The bioremediation program appears to have successfully addressed the shallow overburden impacts of TCE and PCE in the area of the Unnamed Stream and is progressing in the deep overburden aquifer near Building 3. Monitoring data from the October 2011 and January 2012 bioremediation sampling indicates that additional applications are warranted in specific areas to ensure that complete degradation of VOCs continues. Emulsified vegetable oil may be used as a carbon source in place of lactate in the next injection period to increase the effectiveness of treatment and reduce the frequency of applications. Results of groundwater samples collected in April 2012 will be evaluated to determine if further adjustments to the bioremediation program are warranted.

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 Shaw during the investigation and obtained from the services described, which were performed within time and budgetary restraints.

Shaw makes no representation concerning the legal significance of its findings or of the value of the property investigated. Shaw 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 Shaw from and against any and all liability in connection therewith.

TABLES

TABLE 1
Soil Vapor Analytical Results
Building 5 and 6
Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

	BLD5-SV1	BLD5-SV1	BLD5-SV1	BLD5-SV1	BLD5-SV1	BLD5-SV2	BLD5-SV2	BLD5-SV2	BLD5-SV2	BLD5-SV2	BLD5-SV3	BLD5-SV3	BLD5-SV3	BLD5-SV3	BLD5-SV3
	QA Area					Paint Mixing Storage Rm					Sanding				
CONSTITUENT (ug/m3)	**2/21/2011**	**6/4/2011**	**8/22/2011**	**10/7/2011**	**1/9/2012**	**2/21/2011**	**6/4/2011**	**8/22/2011**	**10/7/2011**	**1/9/2012**	**2/21/2011**	**6/4/2011**	**8/22/2011**	**10/7/2011**	**1/9/2012**
1,1,1-Trichloroethane	<31	<350	<290	<66	<80	<44	<25	<5.0	<3.5	<16	<2600	<8400	<5700	<220	<330
1,1,2,2-Tetrachloroethane	<7.8	<88	<72	<16	<20	<11	<6.2	<1.2	<0.87	<4.0	<640	<2100	<1400	<55	<84
1,1,2-Trichloroethane	<31	<350	<290	<66	<80	<44	<25	<5.0	<3.5	<16	<2600	<8400	<5700	<220	<330
1,1-Dichloroethane	<24	<260	<220	<49	<60	<33	<19	<3.7	<2.6	<12	<1900	<6300	<4300	<170	<250
1,1-Dichloroethene	<23	<260	<210	<48	<59	<32	<18	<3.6	<2.5	<12	<1900	<6200	<4200	<160	<240
1,2-Dibromoethane (EDB)	<8.9	---	---	---	<23	<12	---	---	---	<4.5	<730	---	---	---	<95
1,2-Dichlorobenzene	<69	---	---	---	<180	<97	---	---	---	<35	<5600	---	---	---	<730
1,2-Dichloroethane	<24	<260	<220	<49	<60	<33	<19	<3.7	<2.6	<12	<1900	<6300	<4300	<170	<250
1,2-Dichloropropane	<27	<300	<250	<56	<68	<37	<21	<4.2	<2.9	<14	<2200	<7100	<4900	<190	<280
1,3-Dichlorobenzene	<69	---	---	---	<180	<97	---	---	---	<35	<5600	---	---	---	<730
1,4-Dichlorobenzene	<69	---	---	---	<180	<97	---	---	---	<35	<5600	---	---	---	<730
1,4-Dioxane	---	---	---	---	<670	---	---	---	---	<130	---	---	---	---	<2800
2-Butanone	**60**	---	---	---	<86	<48	---	---	---	**300**	<2800	---	---	---	<360
2-Hexanone	<24	---	---	---	<60	<33	---	---	---	**110**	<1900	---	---	---	<250
4-Methyl-2-pentanone	<47	---	---	---	<120	<66	---	---	---	**24**	<3800	---	---	---	<500
Acetone	<260	<2900	---	**670**	<670	<370	<210	---	**840**	**320**	<21000	<70000	---	<1800	<2800
Benzene	<18	---	---	---	<47	<26	---	---	---	<9.3	<1500	---	---	---	<190
Bromodichloromethane	<7.8	<88	<72	<16	<20	<11	<6.2	<1.2	<0.87	<4.0	<640	<2100	<1400	<55	<84
Bromoform	<60	<670	<550	<120	<150	<84	<47	<9.4	<6.6	<30	<4900	<16000	<11000	<420	<630
Bromomethane	<22	<250	<210	<47	<57	<32	<18	<3.6	<2.5	<11	<1800	<6000	<4100	<160	<240
Carbondisulfide	<18	---	---	---	---	<25	---	---	---	---	<1500	---	---	---	---
Carbontetrachloride	<3.7	<41	<34	<7.7	<9.3	<5.1	<2.9	<0.58	0.64	<1.9	<300	<980	<670	<26	<39
Chlorobenzene	<27	<300	<250	<56	<68	<37	<21	<4.2	<2.9	<14	<2200	<7100	<4900	<190	<280
Chloroethane	<30	<340	<280	<64	---	<43	<24	<4.8	<3.4	---	<2500	<8100	<5500	<210	---
Chloroform	<28	<320	<260	<59	<72	<40	<22	<4.5	<3.1	<14	<2300	<7600	<5100	<200	<300
Chloromethane	<24	<260	<220	<49	---	<33	<19	<3.7	<2.6	---	<1900	<6300	<4300	<170	---
cis-1,2-Dichloroethene	**47**	**420**	**400**	**130**	**96**	<32	<18	6.6	5.1	<12	<1900	<6200	<4200	<160	<240
cis-1,3-Dichloropropene	<52	<580	<480	<110	<130	<74	<41	<8.3	<5.8	<27	<4300	<14000	<9500	<370	<560
Dibromochloromethane	<9.9	<110	<92	<21	<25	<14	<7.8	<1.6	<1.1	<5.1	<810	<2700	<1800	<70	<110
Dichloromethane	<20	<220	<180	<42	<51	<28	<16	<3.1	<2.2	<10	<1600	<5300	<3600	<140	<210
Ethylbenzene	<50	---	<460	<100	<130	<70	---	<7.9	**8.1**	<25	<4100	---	<9100	<350	<530
Freon 113	<8.9	---	---	---	---	<12	---	---	---	---	<730	---	---	---	---
Hexachlorobutadiene	---	---	---	---	<400	---	---	---	---	<80	---	---	---	---	<1700
m/p-xylene	<100	---	<920	<210	<250	<140	---	**17**	**28**	<51	<8100	---	<18000	<700	<1100
Methyltert-butylether	<41	---	---	---	<110	<58	---	---	---	<21	<3400	---	---	---	<440
Naphthalene	---	---	---	---	<270	---	---	---	---	<53	---	---	---	---	<1100
o-Xylene	<50	---	<460	<100	<130	<70	---	<7.9	**11**	<25	<4100	---	<9100	<350	<530
Styrene	<49	---	---	---	<130	<69	---	---	---	<25	<4000	---	---	---	<520
Tetrachloroethene	**390**	**9900**	**5200**	**790**	**2700**	**150**	**230**	**47**	**25**	**140**	**5300**	**33000**	**14000**	**1400**	**2100**
Toluene	**44**	---	---	---	<55	<30	---	---	---	**24**	<1700	---	---	---	<230
trans-1,2-Dichloroethene	<23	<260	<210	<48	<59	<32	<18	<3.6	<2.5	<12	<1900	<6200	<4200	<160	<240
Trans-1,3-Dichloropropene	<26	<290	<240	<55	<67	<37	<21	<4.1	<2.9	<13	<2100	<7000	<4800	<180	<280
Trichloroethene	**2100**	**31000**	**26000**	**5100**	**5800**	**2300**	**2000**	**1200D**	**410D**	**1300D**	**130000**	**470000**	**340000**	**20000**	**22000**
Trichlorofluoromethane	<32	<360	<300	<68	---	<46	<26	<5.1	<3.6	---	<2600	<8700	<5900	<230	---
Vinyl acetate	<260	---	---	---	---	<370	---	---	---	---	<21000	---	---	---	---
Vinyl chloride	<3.1	<35	<29	<6.6	<8.0	<4.4	<2.5	0.51	1.2	<1.6	<260	<840	<570	<22	<33
Xylene (total)	<100	---	<920	<210	<250	<140	---	**17**	**39**	<51	<8100	---	<18000	<700	<1100

Notes:
D = Result reported from a diluted run
--- = Not sampled for
ug/m3 = Micrograms per cubic meter
detected concentrations in bold

TABLE 1
Soil Vapor Analytical Results
Building 5 and 6
Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

	BLD6-SV1	BLD6-SV1	BLD6-SV1	BLD6-SV1	BLD6-SV1	BLD6-SV2	BLD6-SV2	BLD6-SV2	BLD6-SV2	BLD6-SV2	BLD6-SV3	BLD6-SV3	BLD6-SV3	BLD6-SV3	BLD6-SV3
	Bldg 6 Machine Shop					Bldg 6 Machine Shop					Bldg 6 Machine Shop				
CONSTITUENT (ug/m3)	**2/22/2011**	**6/3/2011**	**8/22/2011**	**10/6/2011**	**1/10/2012**	**2/22/2011**	**6/4/2011**	**8/22/2011**	**10/6/2011**	**1/10/2012**	**2/22/2011**	**6/3/2011**	**8/22/2011**	**10/6/2011**	**1/10/2012**
1,1,1-Trichloroethane	<1200	<2300	<1100	<280	<1600	<980	<1100	<1500	<560	<1600	<170	<260	<190	<170	<200
1,1,2,2-Tetrachloroethane	<300	<570	<270	<69	<400	<250	<270	<380	<140	<410	<43	<64	<49	<43	<51
1,1,2-Trichloroethane	<1200	<2300	<1100	<280	<1600	<980	<1100	<1500	<560	<1600	<170	<260	<190	<170	<200
1,1-Dichloroethane	<890	<1700	<820	<210	<1200	<740	<810	<1100	<420	<1200	<130	<190	<150	<130	<150
1,1-Dichloroethene	<870	<1700	<800	<200	<1200	<720	<790	<1100	<410	<1200	<130	<190	<140	<130	<150
1,2-Dibromoethane (EDB)	<340	---	---	---	<450	<280	---	---	---	<460	<49	---	---	---	<58
1,2-Dichlorobenzene	<2600	---	---	---	<3500	<2200	---	---	---	<3600	<380	---	---	---	<450
1,2-Dichloroethane	<890	<1700	<820	<210	<1200	<740	<810	<1100	<420	<1200	<130	<190	<150	<130	<150
1,2-Dichloropropane	<1000	<1900	<930	<230	<1300	<830	<920	<1300	<470	<1400	<150	<220	<170	<150	<170
1,3-Dichlorobenzene	<2600	---	---	---	<3500	<2200	---	---	---	<3600	<380	---	---	---	<450
1,4-Dichlorobenzene	<2600	---	---	---	<3500	<2200	---	---	---	<3600	<380	---	---	---	<450
1,4-Dioxane	---	---	---	---	<13000	---	---	---	---	<14000	---	---	---	---	<1700
2-Butanone	<1300	---	---	---	<1700	<1100	---	---	---	<1800	<190	---	---	---	510
2-Hexanone	<890	---	---	---	<1200	<740	---	---	---	<1200	<130	---	---	---	<150
4-Methyl-2-pentanone	<1800	---	---	---	<2400	<1500	---	---	---	<2500	<260	---	---	---	<310
Acetone	<9900	<19000	---	<2300	<13000	<8200	<9000	---	<4700	<14000	<1400	<2100	---	<1400	<1700
Benzene	<700	---	---	---	<920	<570	---	---	---	<950	<100	---	---	---	<120
Bromodichloromethane	<300	<570	<270	<69	<400	<250	<270	<380	<140	<410	<43	<64	<49	<43	<51
Bromoform	<2300	<4300	<2100	<520	<3000	<1900	<2100	<2900	<1100	<3100	<330	<490	<370	<330	<390
Bromomethane	<850	<1600	<790	<200	<1100	<700	<780	<1100	<400	<1200	<120	<180	<140	<120	<150
Carbondisulfide	<680	---	---	---	---	<560	---	---	---	---	<99	---	---	---	---
Carbontetrachloride	<140	<270	<130	<32	<180	<110	<130	<180	<65	<190	<20	<30	<23	<20	<24
Chlorobenzene	<1000	<1900	<930	<230	<1300	<830	<920	<1300	<470	<1400	<150	<220	<170	<150	<170
Chloroethane	<1200	<2200	<1100	<270	---	<950	<1000	<1500	<540	---	<170	<250	<190	<170	---
Chloroform	<1100	<2000	<990	<250	<1400	<880	<980	<1400	<500	<1500	<160	<230	<180	<160	<180
Chloromethane	<890	<1700	<820	<210	---	<740	<810	<1100	<420	---	<130	<190	<150	<130	---
cis-1,2-Dichloroethene	<870	<1700	<800	<200	<1200	<720	<790	<1100	<410	<1200	<130	<190	<140	<130	<150
cis-1,3-Dichloropropene	<2000	<3800	<1800	<460	<2600	<1600	<1800	<2500	<930	<2700	<290	<430	<320	<290	<340
Dibromochloromethane	<380	<720	<350	<87	<500	<310	<340	<480	<180	<520	<55	<82	<62	<55	<65
Dichloromethane	<750	<1400	<690	<170	<1000	<620	<690	<960	<350	<1000	<110	<160	<120	<110	<130
Ethylbenzene	<1900	---	<1700	<440	<2500	<1600	---	<2400	<880	<2600	<280	---	<310	<270	<320
Freon 113	<340	---	---	---	---	<280	---	---	---	---	<49	---	---	---	---
Hexachlorobutadiene	---	---	---	---	<7900	---	---	---	---	<8200	---	---	---	---	<1000
m/p-xylene	<3800	---	<3500	<880	<5000	<3100	---	<4800	<1800	<5200	<550	---	<620	<550	<650
Methyltert-butylether	<1600	---	---	---	<2100	<1300	---	---	---	<2200	<230	---	---	---	<270
Naphthalene	---	---	---	---	<5300	---	---	---	---	<5400	---	---	---	---	<680
o-Xylene	<1900	---	<1700	<440	<2500	<1600	---	<2400	<880	<2600	<280	---	<310	<270	<320
Styrene	<1900	---	---	---	<2500	<1500	---	---	---	<2600	<270	---	---	---	<320
Tetrachloroethene	**85000**	**130000**	**70000**	**32000**	**100000**	**66000**	**83000**	**120000**	**64000**	**90000**	**13000**	**18000**	**16000**	**20000**	**14000**
Toluene	<810	---	---	---	<1100	<670	---	---	---	<1100	<120	---	---	---	<140
trans-1,2-Dichloroethene	<870	<1700	<800	<200	<1200	<720	<790	<1100	<410	<1200	<130	<190	<140	<130	<150
Trans-1,3-Dichloropropene	<990	<1900	<910	<230	<1300	<820	<900	<1300	<470	<1400	<140	<210	<160	<140	<170
Trichloroethene	**34000**	**45000**	**40000**	**14000**	**41000**	**14000**	**20000**	**34000**	**10000**	**22000**	**6800**	**9300**	**12000**	**8800**	**7600**
Trichlorofluoromethane	<1200	<2400	<1100	<280	---	<1000	<1100	<1600	<580	---	<180	<270	<200	<180	---
Vinyl acetate	<9900	---	---	---	---	<8200	---	---	---	---	<1400	---	---	---	---
Vinyl chloride	<120	<230	<110	<28	<160	<98	<110	<150	<56	<160	<17	<26	<19	<17	<20
Xylene (total)	<3800	---	<3500	<880	<5000	<3100	---	<4800	<1800	<5200	<550	---	<620	<550	---

Notes:
D = Result reported from a dilu --- = Not sampled for
ug/m3 = Micrograms per cubic
detected concentrations in bo

Table 2
Indoor Air Analytical Results
Buildings 5 and 6
Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

CONSTITUENT (ug/m^3)	BLD5-1 8/22/2011	BLD5-1 10/7/2011	BLD5-1 1/9/2012	BLD5-2 8/22/2011	BLD5-2 10/7/2011	BLD5-2 1/9/2012	BLD5-3 8/22/2011	BLD5-3 10/7/2011	BLD5-3 1/9/2012	BLD5-4 8/22/2011	BLD5-4 10/7/2011	BLD5-4 1/9/2012	BLD6-1 8/22/2011	BLD6-1 10/6/2011	BLD6-1 1/10/2012	BLD6-2 8/22/2011	BLD6-2 10/7/2011	BLD6-2 1/10/2012
	QA Area			Shipping			Sanding			Center of Production Area			BLDG 6 Machine Shop			Cold Form		
1,1,1-Trichloroethane	<3.1	<6.6	<310	<1.4	<1.6	<94	<1.7	<1.6	<110	<1.1	<1.8	<26	<0.98	<3.5	<45	<1.3	<1.6	<57
1,1,2,2-Tetrachloroethane	<0.78	<1.7	<78	<0.34	<0.40	<24	<0.44	<0.41	<26	<0.28	<0.44	<6.6	<0.25	<0.87	<11	<0.32	<0.40	<14
1,1,2-Trichloroethane	<3.1	<6.6	<310	<1.4	<1.6	<94	<1.7	<1.6	<110	<1.1	<1.8	<26	<0.98	<3.5	<45	<1.3	<1.6	<57
1,1-Dichloroethane	<2.3	<5.0	<230	<1.0	<1.2	<71	<1.3	<1.2	<79	<0.83	<1.3	<20	<0.74	<2.6	<34	<0.96	<1.2	<43
1,1-Dichloroethene	<2.3	<4.8	<230	<1.0	<1.2	<69	<1.3	<1.2	<77	<0.81	<1.3	<19	<0.72	<2.6	<33	<0.94	<1.2	<42
1,2-Dichloroethene	<2.3	<5.0	<230	<1.0	<1.2	<71	<1.3	<1.2	<79	<0.83	<1.3	<20	<0.74	<2.6	<34	<0.96	<1.2	<43
1,2-Dichloropropane	<2.7	<5.6	<260	<1.2	<1.4	<80	<1.5	<1.4	<90	<0.94	<1.5	<22	<0.84	<3.0	<38	<1.1	<1.3	<48
Acetone	---	**9700**	**10000**	---	**2000**	**3300**	---	**1200**	**3400**	---	**1000**	**670**	---	**660**	**1300**	---	**690**	**1800**
Bromodichloromethane	<0.78	<1.7	<78	<0.34	<0.40	<24	<0.44	<0.41	<26	<0.28	<0.44	<6.6	<0.25	<0.87	<11	<0.32	<0.40	<14
Bromoform	<5.9	<13	<590	<2.6	<3.1	<180	<3.3	<3.1	<200	<2.1	<3.3	<50	<1.9	<6.6	<86	<2.4	<3.0	<110
Bromomethane	<2.2	<4.7	<220	<0.97	<1.2	<68	<1.3	<1.2	<76	<0.79	<1.3	<19	<0.70	<2.5	<32	<0.92	<1.1	<41
Carbontetrachloride	**0.61**	<0.77	<36	**0.59**	**0.63**	<11	**0.55**	**0.58**	<12	**0.59**	**0.63**	<3.1	**0.59**	**0.65**	<5.3	**0.59**	**0.62**	<6.7
Chlorobenzene	<2.7	<5.6	<260	<1.2	<1.4	<80	<1.5	<1.4	<90	<0.94	<1.5	<22	<0.84	<3.0	<38	<1.1	<1.3	<48
Chloroethane	<3.0	<6.4	<300	<1.3	<1.6	<91	<1.7	<1.6	<100	<1.1	<1.7	<25	<0.95	<3.4	<44	<1.2	<1.5	<55
Chloroform	<2.8	<5.9	<280	<1.2	<1.5	<85	<1.6	<1.5	<95	<1.0	<1.6	<24	<0.88	<3.1	<41	<1.2	<1.4	<51
Chloromethane	<2.3	<5.0	<230	<1.0	<1.2	<71	<1.3	<1.2	<79	**1**	<1.3	<20	**1**	<2.6	<34	**1**	<1.2	<43
cis-1,2-Dichloroethene	<2.3	<4.8	<230	**2.4**	**1.3**	<69	**1.5**	<1.2	<77	<0.81	<1.3	<19	<0.72	<2.6	<33	<0.94	**1.9**	<42
cis-1,3-Dichloropropene	<5.2	<11	<520	<2.3	<2.7	<160	<2.9	<2.7	<180	<1.8	<2.9	<44	<1.6	<5.8	<75	<2.1	<2.6	<95
Dibromochloromethane	<0.99	<2.1	<98	<0.43	<0.51	<30	<0.55	<0.52	<33	<0.35	<0.56	<8.3	<0.31	<1.1	<14	<0.41	<0.50	<18
Dichloromethane	<2.0	<4.2	<200	<0.86	<1.0	<60	<1.1	<1.0	<67	<0.70	<1.1	<17	<0.62	<2.2	<29	<0.81	<1.0	<36
Ethylbenzene	<4.9	<10	<490	<2.1	<2.6	<150	<2.8	<2.6	<170	<1.8	<2.8	<42	<1.6	<5.5	<71	<2.0	<2.5	<90
m/p-xylene	<9.9	<21	<990	**5.6**	**8**	<300	**7.1**	<5.2	<340	<3.5	<5.6	<83	<3.1	<11	<140	<4.1	<5.0	<180
o-Xylene	<4.9	<10	<490	<2.1	<2.6	<150	<2.8	<2.6	<170	<1.8	<2.8	<42	<1.6	<5.5	<71	<2.0	<2.5	<90
Tetrachloroethene	**3.1**	**3.7**	**7.4D**	**12**	**7.5**	**14**	**3.8**	**3.1**	**4.2D**	**0.78**	**1**	<3.5	**1.8**	**2**	**16**	**1.8**	**1.9**	**23**
trans-1,2-Dichloroethene	<2.3	<4.8	<230	<1.0	<1.2	<69	<1.3	<1.2	<77	<0.81	<1.3	<19	**1**	<2.6	<33	**1.1**	<1.2	<42
Trans-1,3-Dichloropropene	<2.6	<5.5	<260	<1.1	<1.3	<79	<1.5	<1.4	<88	<0.92	<1.5	<22	<0.82	<2.9	<38	<1.1	<1.3	<48
Trichloroethene	**5.6**	**5.1**	**8.9D**	**14**	**8.4**	**17**	**12**	**17**	**33**	**2.9**	**2.1**	<2.6	**1.2**	**1.1**	**9.8**	**1.1**	**1.8**	**13**
Trichlorofluoromethane	<3.2	<6.8	<320	**8.2**	**4**	<97	**2.9**	**2.1**	<110	**1.7**	<1.8	<27	**1.6**	<3.6	<47	**1.5**	**1.7**	<59
Vinyl chloride	<0.31	<0.66	<31	<0.14	<0.16	<9.4	<0.17	<0.16	<11	<0.11	<0.18	<2.6	<0.098	<0.35	<4.5	<0.13	<0.16	<5.7
Xylene (total)	<9.9	<21	<990	**5.6**	**8**	<300	**7.1**	<5.2	<340	<3.5	<5.6	<83	<3.1	<11	<140	<4.1	<5.0	<180

Notes:
ug/m3 = Micrograms per cubic meter
--- = Not sampled for
Detections are shown in **bold**

Table 3
Water Quality Data - VOC Results
June 2002 - March 2012
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)	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	6/3/2002	40	0.2	0.034	0.007	ND(0.0020)	0.003	ND(0.0020)	0.26	ND(0.010)	ND(0.010)	0.17	0.29	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	6/3/2002	56	0.21	0.042	0.008	ND(0.0020)	0.004	ND(0.0020)	0.27	ND(0.010)	ND(0.010)	0.24	0.41D	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	2/17/2003	56	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.021	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	5/14/2003	56	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.009	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	12/16/2003	56	0.0011	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	5/1/2004	29	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	5/2/2005	56	0.014J	0.0021J	ND(0.0010)J	ND(0.0010)J	0.0031J	ND(0.0020)J	0.0022J	ND(0.0020)J	ND(0.0050)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0010)J
	4/11/2007	56	0.18	0.053	ND(0.0020)	ND(0.0020)	0.017	ND(0.0040)	0.098	ND(0.0040)	ND(0.010)	0.032	ND(0.0020)	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0020)
	4/22/2008	55	0.1	0.035	0.0012	ND(0.0010)	0.0015	ND(0.0020)	0.0049	ND(0.0020)	ND(0.0050)	0.068	0.036	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/3/2009	24	0.16	0.023	ND(0.0020)	ND(0.0020)	0.042	ND(0.0020)	0.028	ND(0.0020)	ND(0.0020)	0.032	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
AP-03-BR	9/21/2005	NA	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.027	0.41	ND(0.010)	ND(0.020)	1.2	ND(0.010)
	1/6/2006	108	ND(0.0010)	0.0013	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	3/30/2006	104	ND(0.0010)	0.0017	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/12/2007	107	ND(0.0010)	0.0018	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0027	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
AP-03-DO	1/3/2005	43	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0012	0.0041	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	5/2/2005	42	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0020)J	ND(0.0050)J	0.0014J	0.0038J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0010)J
	1/6/2006	45	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	3/30/2006	41	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	2/1/2007	45	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0034	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/12/2007	44	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.002	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
AP-04-BR	9/21/2005	NA	ND(0.010)	0.021	0.02	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.15	0.82	ND(0.010)	0.024	1.2	ND(0.010)
	1/6/2006	120	ND(0.0050)	0.01	0.0051	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.0059	0.21	ND(0.0050)	0.011	0.66	ND(0.0050)
	3/30/2006	121	ND(0.0050)	0.013	0.0083	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.019	0.24	ND(0.0050)	0.014	0.64	ND(0.0050)
	4/12/2007	125	ND(0.010)	0.013	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	ND(0.010)	0.12	ND(0.010)	ND(0.020)	0.77	ND(0.010)
AP-04-DO	1/3/2005	42	ND(0.0010)	0.0014	0.0012	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.018	0.07	ND(0.0010)	ND(0.0020)	0.016	ND(0.0010)
	5/2/2005	42	ND(0.0010)J	0.0027J	0.0023J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0020)J	ND(0.0050)J	0.031J	0.11J	ND(0.0010)J	ND(0.0020)J	0.024J	ND(0.0010)J
	2/1/2007	45	ND(0.0050)	0.011	0.0055	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.0054	0.14	ND(0.0050)	0.011	0.61	ND(0.0050)
AP-06-BR	6/3/2002	55	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.005	ND(0.010)	ND(0.010)	0.009	0.034	ND(0.0020)	ND(0.0020)	0.004	ND(0.0020)
	6/3/2002	70	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.007	ND(0.010)	ND(0.010)	0.015	0.063	ND(0.0020)	ND(0.0020)	0.008	ND(0.0020)
	6/3/2002	99	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.006	ND(0.010)	ND(0.010)	0.011	0.059	ND(0.0020)	ND(0.0020)	0.007	ND(0.0020)
	1/24/2003	99	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.005	0.02	ND(0.0020)	ND(0.0020)	0.004	ND(0.0020)
	5/14/2003	99	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.009	ND(0.0020)	ND(0.0020)	0.003	ND(0.0020)
	12/17/2003	99	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.002	0.012	ND(0.0010)	ND(0.0020)	0.0052	ND(0.0010)
	5/1/2004	98	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0048	ND(0.0010)	ND(0.0020)	0.0023	ND(0.0010)
	4/29/2005	96	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.001	ND(0.0010)	ND(0.0020)	0.0011	ND(0.0010)
	3/31/2006	99	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0055	ND(0.0010)	ND(0.0020)	0.0024	ND(0.0010)
	4/11/2007	95	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0022	0.0082
	4/22/2008	75	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	0.01
	4/1/2009	93	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0022	ND(0.0010)	0.024	0.059	ND(0.0010)
AP-06-DO	6/3/2002	30	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	6/3/2002	44	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	1/24/2003	44	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	5/14/2003	44	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	12/17/2003	44	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	5/1/2004	43	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/29/2005	43	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	3/31/2006	42	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/11/2007	43	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/22/2008	43	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
AP-08-DO	8/13/2003	NA	ND(0.0020)	0.003	0.004	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.034	0.12	ND(0.0020)	ND(0.0020)	0.026	ND(0.0020)
	12/23/2003	40	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0037	0.013	ND(0.0010)	ND(0.0020)	0.0017	ND(0.0010)
	5/3/2004	35	0.001	0.0066	0.006	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.19D	0.60D	ND(0.0010)	ND(0.0020)	0.13D	ND(0.0010)
	1/4/2005	39	ND(0.0050)	0.007	0.0079	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.2	0.53	ND(0.0050)	ND(0.010)	0.13	ND(0.0050)

Table 3
Water Quality Data - VOC Results
June 2002 - March 2012
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)	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-08-DO (Cont.)	4/29/2005	34	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0085	ND(0.0010)	ND(0.0020)	0.0039	ND(0.0010)
	3/29/2006	33	ND(0.0050)	0.0054	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.18	0.5	ND(0.0050)	ND(0.010)	0.13	ND(0.0050)
	2/5/2007	40	ND(0.0050)	0.0066	0.0059	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.16	0.48	ND(0.0050)	ND(0.010)	0.13	ND(0.0050)
	4/15/2007	40	ND(0.0050)	0.0056	0.0055	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.18	0.51	ND(0.0050)	ND(0.010)	0.15	ND(0.0050)
AP-09-DO	8/13/2003	NA	0.005	0.013	0.02	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.030)	ND(0.010)	0.21	0.79	ND(0.010)	ND(0.010)	0.2	ND(0.0050)
	12/29/2003	40	ND(0.0050)	0.005	0.0079	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.11	0.45	ND(0.0050)	ND(0.010)	0.1	ND(0.0050)
	5/3/2004	36	ND(0.010)	ND(0.010)	0.015	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.24	0.87	ND(0.010)	ND(0.020)	0.22	ND(0.010)
	12/30/2004	37	0.0064	0.0097	0.013	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.18	0.66	ND(0.0050)	ND(0.010)	0.16	ND(0.0050)
	4/29/2005	36	0.013	0.011	0.017	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.23	0.93	ND(0.010)	ND(0.020)	0.23	ND(0.010)
	3/29/2006	35	0.019	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.29	1.1	ND(0.010)	ND(0.020)	0.28	ND(0.010)
	2/5/2007	40	0.011	0.01	0.014	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.26	0.98	ND(0.010)	ND(0.020)	0.25	ND(0.010)
	4/15/2007	40	0.0068	ND(0.0050)	0.0068	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.17	0.59	ND(0.0050)	ND(0.010)	0.16	ND(0.0050)
AP-12-BR	6/3/2002	70	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(1.0)	ND(0.40)	6.6	31	ND(0.40)	ND(0.40)	22	ND(0.20)
	6/3/2002	83	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.30)	ND(0.10)	0.08	0.2	ND(0.10)	ND(0.10)	4.7	ND(0.050)
	1/24/2003	83	0.022	0.012	ND(0.0010)	ND(0.0020)	0.058	ND(0.0020)	0.046	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	5/13/2003	83	0.011	0.007	ND(0.0010)	ND(0.0020)	0.022	ND(0.0020)	0.025	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	12/17/2003	83	0.0015	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0019	ND(0.0020)	0.02	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/23/2004	80	0.002	0.0011	ND(0.0010)	ND(0.0010)	0.0023	ND(0.0020)	0.0072	ND(0.0020)	ND(0.0050)	0.001	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/3/2006	74	0.0066	0.0052	ND(0.0010)	ND(0.0010)	0.0035	ND(0.0020)	0.035	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/13/2007	82	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0054	ND(0.0020)	ND(0.0050)	0.012	0.0052	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/24/2008	81	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.10)	0.058	ND(0.10)	ND(0.25)	0.3	6.5	ND(0.050)	ND(0.10)	1.5	ND(0.050)
	4/3/2009	84	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	0.47	24	ND(0.20)	ND(0.20)	9.4	ND(0.20)
	10/26/2009	65	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	0.59	17	ND(0.20)	ND(0.20)	4.6	ND(0.20)
	10/26/2009	76	ND(0.13)	ND(0.13)	ND(0.13)	ND(0.13)	ND(0.13)	ND(0.13)	ND(0.13)	ND(0.13)	ND(0.13)	0.48	12	ND(0.13)	ND(0.13)	3.6	ND(0.13)
	4/20/2010	81	0.0011	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0091	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	10/14/2010	81	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0046	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	4/14/2011	78	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0021	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	10/28/2011	74	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0031	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
AP-12-DO	6/3/2002	45	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.20)	19	26	ND(0.20)	ND(0.20)	0.2	ND(0.10)
	6/3/2002	58	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(1.0)	ND(0.40)	15	34	ND(0.40)	ND(0.40)	0.4	ND(0.20)
	1/24/2003	58	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.20)	13	26	ND(0.20)	ND(0.20)	0.2	ND(0.10)
	5/13/2003	58	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.20)	11	30	ND(0.20)	ND(0.20)	0.4	ND(0.10)
	12/17/2003	58	0.0078	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.051	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0067	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/23/2004	57	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.45	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.0050)
	4/29/2005	58	0.0034	0.0013	ND(0.0010)	ND(0.0010)	0.011	ND(0.0020)	0.053	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/3/2006	54	0.0051	0.0015	ND(0.0010)	ND(0.0010)	0.023	ND(0.0020)	0.055	ND(0.0020)	ND(0.0050)	0.15	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/13/2007	58	0.0047	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.026	ND(0.0040)	0.045	ND(0.0040)	ND(0.010)	0.15	ND(0.0020)	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0020)
	4/24/2008	51	0.0063	0.0023	ND(0.0010)	ND(0.0010)	0.024	ND(0.0020)	0.052	ND(0.0020)	ND(0.0050)	0.1	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/3/2009	50	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.033	ND(0.010)	ND(0.010)	0.94	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)
	10/26/2009	50	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.004	ND(0.0025)	0.019	ND(0.0025)	ND(0.0025)	0.33	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)
	4/20/2010	57	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	7.1	0.53	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)
	10/14/2010	37	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	7.7	0.57	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)
	4/14/2011	48	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	8.8	4.6	ND(0.10)	ND(0.10)	0.16	ND(0.10)
	10/28/2011	44	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	10D	27D	ND(0.10)	ND(0.10)	2.7	ND(0.10)
AP-12-S	6/3/2002	30	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.20)	12	7.2	ND(0.20)	ND(0.20)	ND(0.10)	ND(0.10)
	2/20/2003	30	0.011	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.006	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	5/13/2003	30	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.003	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	12/17/2003	30	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0024	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/23/2004	28	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/29/2005	30	0.028	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0046	ND(0.0020)	0.0022	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/3/2006	21	0.015	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0017	ND(0.0020)	0.0016	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/13/2007	30	0.017	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.001	ND(0.0020)	0.0019	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.014	ND(0.0010)
	4/24/2008	29	0.013	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0016	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)

Table 3
Water Quality Data - VOC Results
June 2002 - March 2012
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)	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-12-S (Cont.)	10/22/2008	30	0.011	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0031	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/3/2009	26	0.011	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0032	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	4/20/2010	29	0.0088	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0035	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	4/14/2011	31	0.008	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0044	ND(0.0020)	ND(0.0020)	0.0027	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
AP-13-DO	6/3/2002	50	0.5	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(3.0)	ND(1.0)	5	49	ND(1.0)	ND(1.0)	ND(0.50)	ND(0.50)
	6/3/2002	61	0.8	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(3.0)	ND(1.0)	9.5	110	ND(1.0)	ND(1.0)	0.9	ND(0.50)
	1/29/2003	61	20	1.8	1.5	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(3.0)	ND(1.0)	64	430DD	ND(1.0)	ND(1.0)	1.1	ND(0.50)
	5/13/2003	61	26	2.3	2	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(3.0)	ND(1.0)	54	540D	ND(1.0)	ND(1.0)	0.8	ND(0.50)
	12/16/2003	61	9.1	1.2	ND(0.10)	ND(0.10)	0.75	ND(0.20)	1	ND(0.20)	ND(0.50)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.10)	ND(0.10)
	5/1/2004	52	13	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(4.0)	ND(2.0)	ND(4.0)	ND(10)	38	220	ND(2.0)	ND(4.0)	ND(2.0)	ND(2.0)
	5/2/2005	61	40J	2.4J	ND(2.0)J	ND(2.0)J	ND(2.0)J	ND(4.0)J	ND(2.0)J	ND(4.0)J	ND(10)J	120J	220J	ND(2.0)J	ND(4.0)J	ND(2.0)J	ND(2.0)J
	12/30/2005	61	27	0.89	ND(0.25)	ND(0.25)	0.58	ND(0.50)	1.4	ND(0.50)	ND(1.3)	ND(0.25)	ND(0.25)	ND(0.25)	ND(0.50)	ND(0.25)	ND(0.25)
	4/3/2006	46	32D	1.8	ND(0.20)	ND(0.20)	0.4	ND(0.40)	1.7	ND(0.40)	ND(1.0)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.40)	ND(0.20)	ND(0.20)
	4/11/2007	61	46	2.2	ND(0.50)	ND(0.50)	ND(0.50)	ND(1.0)	3.6	ND(1.0)	ND(2.5)	68	33	ND(0.50)	ND(1.0)	ND(0.50)	ND(0.50)
	7/26/2007	59	34	2	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(2.0)	ND(5.0)	56	100	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)
	11/12/2007	36	22	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(2.0)	ND(5.0)	54	110	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)
	1/23/2008	36	36	2	ND(2.0)	ND(2.0)	ND(2.0)	ND(4.0)	ND(2.0)	ND(4.0)	ND(10)	78	240	ND(2.0)	ND(4.0)	ND(2.0)	ND(2.0)
	4/21/2008	47	41J	2.4J	ND(2.0)J	ND(2.0)J	ND(2.0)J	ND(4.0)J	ND(2.0)J	ND(4.0)J	ND(10)J	88J	270J	ND(2.0)J	ND(4.0)J	ND(2.0)J	ND(2.0)J
	7/28/2008	47	35J	2.1J	ND(2.0)J	ND(2.0)J	ND(2.0)J	ND(4.0)J	ND(2.0)J	ND(4.0)J	ND(10)J	100J	260J	ND(2.0)J	ND(4.0)J	ND(2.0)J	ND(2.0)J
	10/22/2008	51	29	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(2.0)	ND(5.0)	88	130	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)
	1/14/2009	47	25	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	87	170	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)
	4/2/2009	51	28	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	86	200	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)
	10/26/2009	52	29	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	84	200	ND(2.0)	ND(2.0)	5.2	ND(2.0)
	4/22/2010	60	27	ND(4.0	ND(4.0	ND(4.0	ND(4.0	ND(4.0	ND(4.0	ND(4.0	ND(4.0	72	290	ND(4.0	ND(4.0	ND(4.0	ND(4.0
	7/14/2010	60	28J	ND(2.0)J	ND(2.0)J	ND(2.0)J	ND(2.0)J	ND(2.0)J	ND(2.0)J	ND(2.0)J	ND(2.0)J	70J	290J	ND(2.0)J	ND(2.0)J	5.8J	ND(2.0)J
	10/12/2010	51	28	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	75	350	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
	1/4/2011	61	13	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	40	160	ND(2.0)	ND(2.0)	14	ND(2.0)
	4/5/2011	51.2	18	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	46	200	ND(4.0)	ND(4.0)	5.8	ND(4.0)
	7/28/2011	51	13	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	23	150	ND(2.0)	ND(2.0)	3.8	ND(2.0)
	10/25/2011	60	19	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	44	230D	ND(2.0)	ND(2.0)	7.2	ND(2.0)
	1/17/2012	51	29	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	53	360D	ND(2.0)	ND(2.0)	3.7	ND(2.0)
AP-13-S	6/3/2002	18	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.006	0.012	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	1/29/2003	18	0.023	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.36DD	0.004	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	5/13/2003	18	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.018	0.002	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	12/16/2003	18	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.01	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	5/1/2004	18	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	---	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.032	0.0064	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	5/2/2005	18	0.0032J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0020)J	ND(0.0050)J	0.023J	0.014J	ND(0.0010)J	ND(0.0020)J	0.0023J	ND(0.0010)J
	4/3/2006	16	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/11/2007	18	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.011	0.001	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/21/2008	16	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0020)J	ND(0.0050)J	0.010J	0.0035J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0010)J
	10/22/2008	16	0.0013	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.011	0.012	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/3/2009	16	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0019	0.0021	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	4/20/2010	17	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0037	0.0034	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	4/4/2011	16.1	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	10/26/2011	16	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0036	0.002	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	1/17/2012	16	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
AP-14-S	6/3/2002	35	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.20)	39D	1.9	ND(0.20)	ND(0.20)	ND(0.10)	ND(0.10)
	2/17/2003	35	0.081	ND(0.0020)	ND(0.0010)	ND(0.0020)	0.1	ND(0.0020)	0.037	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	5/14/2003	35	0.17	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.43	ND(0.0050)	0.086	ND(0.030)	ND(0.025)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.010)	ND(0.0050)	ND(0.0050)
	12/16/2003	35	0.13	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.49	ND(0.010)	0.079	ND(0.010)	ND(0.025)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.0050)
	5/1/2004	33	0.36	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.63	ND(0.010)	0.089	ND(0.010)	ND(0.025)	0.0092	ND(0.0050)	ND(0.010)	ND(0.010)	ND(0.0050)	ND(0.0050)
	5/2/2005	35	0.24J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	0.26J	ND(0.0040)J	0.046J	ND(0.0040)J	ND(0.010)J	0.022J	ND(0.0020)J	ND(0.0020)J	ND(0.0040)J	ND(0.0020)J	ND(0.0020)J
	4/3/2006	32	0.48	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.39	ND(0.010)	0.025	ND(0.010)	ND(0.025)	0.013	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.0050)
	4/14/2007	35	1	ND(0.010)	ND(0.010)	ND(0.010)	0.67	ND(0.020)	0.092	ND(0.020)	ND(0.050)	0.018	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.010)
	4/25/2008	34	0.18	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.12	ND(0.0040)	0.016	ND(0.0040)	ND(0.010)	0.016	ND(0.0020)	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0020)
	4/3/2009	32	0.19	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.14	ND(0.0025)	0.0091	ND(0.0025)	ND(0.0025)	0.28	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)
	4/21/2010	34	0.12	ND(0.010)	ND(0.010)	ND(0.010)	0.1	ND(0.010)	0.055	ND(0.010)	ND(0.010)	1.2	1.2	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)
	4/6/2011	29.1	0.08J	ND(0.020)J	ND(0.020)J	ND(0.020)J	0.047J	ND(0.020)J	ND(0.020)J	ND(0.020)J	ND(0.020)J	1.6J	0.58J	ND(0.020)J	ND(0.020)J	ND(0.020)J	ND(0.020)J

Table 3
Water Quality Data - VOC Results
June 2002 - March 2012
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)	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-15-S	8/26/2002	NA	ND(0.0020)	ND(0.0020)	0.001	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.025	0.16	ND(0.0020)	ND(0.0020)	0.089	ND(0.0020)
	9/18/2002	NA	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.012	0.14	ND(0.0020)	ND(0.0020)	0.081	ND(0.0020)
	5/14/2003	15	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.006	0.06	ND(0.0020)	ND(0.0020)	0.024	ND(0.0020)
	12/22/2003	15	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.002	0.016	ND(0.0010)	ND(0.0020)	0.0032	ND(0.0010)
	5/3/2004	15	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0027	0.012	ND(0.0010)	ND(0.0020)	0.0036	ND(0.0010)
	12/30/2004	14	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.002	0.0046	ND(0.0010)	ND(0.0020)	0.0015	ND(0.0010)
	4/29/2005	14	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0013	0.007	ND(0.0010)	ND(0.0020)	0.0022	ND(0.0010)
	3/29/2006	13	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0027	0.039	ND(0.0010)	ND(0.0020)	0.032	ND(0.0010)
	2/5/2007	15	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0037	0.02	ND(0.0010)	ND(0.0020)	0.01	ND(0.0010)
	4/15/2007	15	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0022	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	11/14/2007	12	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0074	0.11	ND(0.0010)	ND(0.0020)	0.062	ND(0.0010)
	5/8/2008	14	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0019	0.027	ND(0.0010)	ND(0.0020)	0.019	ND(0.0010)
	10/20/2008	12	0.0018	0.0045	0.0013	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.014	0.083	ND(0.0010)	0.0034	0.07	ND(0.0010)
	4/2/2009	16	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	10/27/2009	12	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.01	0.054	ND(0.0010)	ND(0.0010)	0.017	ND(0.0010)
	4/20/2010	14	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.012	0.036	ND(0.0010)	ND(0.0010)	0.0089	ND(0.0010)
	10/14/2010	12	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0036	0.025	ND(0.0020)	ND(0.0020)	0.0061	ND(0.0020)
	4/5/2011	12	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	10/25/2011	12	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
AP-19	6/25/2002	30	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.095	0.03	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	5/14/2003	30	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.23	0.048	ND(0.0020)	ND(0.0020)	0.002	ND(0.0020)
	12/15/2003	30	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.015	0.0055	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/26/2004	30	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	1.7	0.2	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.020)
	4/28/2005	30	0.0013	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	3/31/2006	29	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	1.4	0.17	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.010)
	4/12/2007	29	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.050)	ND(0.025)	ND(0.050)	ND(0.13)	2.8	0.83	ND(0.025)	ND(0.050)	1.1	ND(0.025)
	4/24/2008	29	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.92	0.15	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.010)
	10/23/2008	29	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0036	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/6/2009	27	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.4	0.06	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)
	10/27/2009	27	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.32	0.054	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)
	4/21/2010	29	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	1.1	0.13	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)
	10/14/2010	28	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	0.22	0.024	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)
	4/6/2011	27.5	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.71	0.071	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)
	10/27/2011	29	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	0.26	0.036	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)
AP-20	6/25/2002	20	0.002	0.004	0.006	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	1.7	1.6	ND(0.0020)	0.005	0.62	0.004
	5/14/2003	20	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.20)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.20)	ND(0.10)	ND(0.10)
	12/15/2003	20	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.001	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/26/2004	20	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/28/2005	17	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	3/31/2006	16	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.12	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/12/2007	19	ND(0.0050)	0.013	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.12	0.17	ND(0.0050)	ND(0.010)	0.53	ND(0.0050)
	4/24/2008	19	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.89	0.092	ND(0.010)	ND(0.020)	0.044	ND(0.010)
	10/23/2008	19	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.016	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/6/2009	18	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	10/27/2009	16	0.0021	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	4/21/2010	19	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.45	0.012	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)
	10/14/2010	15	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	1	0.14	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)
	4/6/2011	15.1	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	0.25	0.017	ND(0.0040)	ND(0.0040)	0.01	ND(0.0040)
	10/27/2011	19	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.007	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
AP-21	6/25/2002	30	ND(0.0020)	0.5	ND(0.0010)	0.003	ND(0.0020)	0.003	ND(0.0020)	ND(0.010)	ND(0.010)	4	56	ND(0.0020)	0.1	32	0.13
	5/14/2003	30	ND(0.0020)	0.012	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	12/15/2003	30	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/26/2004	29	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/28/2005	28	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	3/31/2006	26	ND(0.0020)	0.25	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0040)	ND(0.010)	0.0074	ND(0.0020)	0.089	ND(0.0040)	ND(0.0020)	ND(0.0020)

Table 3
Water Quality Data - VOC Results
June 2002 - March 2012
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)	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-21 (Cont.)	4/12/2007	29	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.96	0.095	ND(0.010)	ND(0.020)	0.044	ND(0.010)
	4/24/2008	29	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.40)	ND(0.20)	ND(0.40)	ND(1.0)	3.2	3.6	ND(0.20)	ND(0.40)	19	ND(0.20)
	10/23/2008	29	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.026	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/6/2009	28	ND(0.0010)	0.002	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0081	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0029	ND(0.0010)	ND(0.0010)	ND(0.0010)
	11/23/2009	28	ND(0.0010)	0.075	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0043	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.058	ND(0.0010)	ND(0.0010)	ND(0.0010)
	4/21/2010	29	ND(0.0010)	0.13	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0014	0.002	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.068	ND(0.0010)	ND(0.0010)	ND(0.0010)
	10/14/2010	29	ND(0.0020)	0.17	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	4/14/2011	24	ND(0.0040)	0.19	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)
	10/27/2011	29	ND(0.0020)	0.19	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
AP-22	6/25/2002	20	ND(0.010)	0.06	0.05	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	0.16	0.61	ND(0.020)	ND(0.020)	5.8	0.01
	5/14/2003	20	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	12/15/2003	20	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/26/2004	20	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/28/2005	18	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	1.6	0.19	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.020)
	3/31/2006	19	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.45	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.0050)
	4/12/2007	19	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.42	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.0050)
	4/24/2008	19	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.050)	ND(0.025)	ND(0.050)	ND(0.13)	2.9	0.85	ND(0.025)	ND(0.050)	1.5	ND(0.025)
	10/23/2008	19	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.02	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/6/2009	13	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.001	0.0023	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.001	ND(0.0010)	ND(0.0010)	ND(0.0010)
	10/27/2009	17	ND(0.0010)	0.015	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0031	0.0011	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0099	ND(0.0010)	ND(0.0010)	ND(0.0010)
	4/21/2010	19	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0035	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0013	ND(0.0010)	0.0019	ND(0.0010)	ND(0.0010)	ND(0.0010)
	10/14/2010	19	ND(0.0020)	0.017	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0055	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	4/14/2011	19	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0063	ND(0.0020)	ND(0.0020)	ND(0.0020)	1.4D	0.15	ND(0.0020)	ND(0.0020)	0.33D	ND(0.0020)
	10/27/2011	19	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0028	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
AP-23-DO	9/23/2004	NA	2.1	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(4.0)	ND(2.0)	ND(4.0)	ND(10)	34	200	ND(2.0)	ND(4.0)	ND(2.0)	ND(2.0)
	12/29/2004	51	0.85	ND(0.010)	ND(0.010)	ND(0.010)	0.84	ND(0.020)	0.12	ND(0.020)	ND(0.050)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.010)
	5/2/2005	52	2.4J	ND(0.020)J	ND(0.020)J	ND(0.020)J	1.5JN	ND(0.040)J	0.28J	ND(0.040)J	ND(0.10)J	0.071J	0.030J	ND(0.020)J	ND(0.040)J	ND(0.020)J	ND(0.020)J
	12/30/2005	52	3.3	ND(0.025)	ND(0.025)	ND(0.025)	1.9	ND(0.050)	0.72	ND(0.050)	ND(0.13)	0.25	0.063	ND(0.025)	ND(0.050)	ND(0.025)	ND(0.025)
	4/3/2006	29	0.27	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.056	ND(0.0050)	0.049	ND(0.0050)	ND(0.013)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0025)
	1/31/2007	52	1.6	ND(0.020)	ND(0.020)	ND(0.020)	2.1	ND(0.040)	2.1	ND(0.040)	ND(0.10)	0.13	0.26	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.020)
	4/11/2007	52	1.5	ND(0.020)	ND(0.020)	0.039	2.2	ND(0.040)	2.4	ND(0.040)	ND(0.10)	0.98	0.028	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.020)
	11/12/2007	48	3.4	ND(1.0)	ND(1.0)	ND(1.0)	1.9	ND(2.0)	ND(1.0)	ND(2.0)	ND(5.0)	53	100	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)
	1/23/2008	48	3.8	ND(1.0)	ND(1.0)	ND(1.0)	1.2	ND(2.0)	ND(1.0)	ND(2.0)	ND(5.0)	49	100	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)
	4/21/2008	48	2.4J	ND(1.0)J	ND(1.0)J	ND(1.0)J	ND(1.0)J	ND(2.0)J	ND(1.0)J	ND(2.0)J	ND(5.0)J	47J	120J	ND(1.0)J	ND(2.0)J	1.4J	ND(1.0)J
	7/28/2008	51	2.0J	ND(2.0)J	ND(2.0)J	ND(2.0)J	ND(2.0)J	ND(4.0)J	ND(2.0)J	ND(4.0)J	ND(10)J	59J	210J	ND(2.0)J	ND(4.0)J	36J	ND(2.0)J
	10/22/2008	48	0.63	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(1.0)	ND(0.50)	ND(1.0)	ND(2.5)	20	58	ND(0.50)	ND(1.0)	3.8	ND(0.50)
	1/14/2009	51	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	35	140	ND(1.0)	ND(1.0)	8.2	ND(1.0)
	4/2/2009	47	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	34	210	ND(2.0)	ND(2.0)	7	ND(2.0)
	10/26/2009	48	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	41	210	ND(2.0)	4.2	29	ND(2.0)
	1/28/2010	51	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	1	ND(1.0)	ND(1.0)	32	150	ND(1.0)	4.8	30	ND(1.0)
	4/22/2010	51	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	40	270	ND(2.0)	ND(2.0)	7.1	ND(2.0)
	7/14/2010	14	ND(2.0)J	ND(2.0)J	ND(2.0)J	ND(2.0)J	ND(2.0)J	ND(2.0)J	ND(2.0)J	ND(2.0)J	ND(2.0)J	50J	330J	ND(2.0)J	ND(2.0)J	12J	ND(2.0)J
	10/12/2010	47	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	46	270	ND(4.0)	ND(4.0)	17	ND(4.0)
	1/4/2011	51	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	11	86	ND(1.0)	5.2	20	ND(1.0)
	4/5/2011	47.4	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	20	230	ND(4.0)	ND(4.0)	6.2	ND(4.0)
	7/28/2011	47	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	2	ND(2.0)	ND(2.0)	20	140	ND(2.0)	2.7	7.4	ND(2.0)
	10/25/2011	51	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	23	240D	ND(2.0)	3.3	9.6	ND(2.0)
	1/17/2012	47.5	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	41	490D	ND(2.0)	ND(2.0)	4.7	ND(2.0)
AP-24-DO	9/23/2004	NA	110	ND(1.0)	ND(1.0)	ND(1.0)	1.9	ND(2.0)	ND(1.0)	ND(2.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)
	12/29/2004	52	32	ND(0.25)	ND(0.25)	ND(0.25)	1	ND(0.50)	0.49	ND(0.50)	ND(1.3)	ND(0.25)	ND(0.25)	ND(0.25)	ND(0.50)	ND(0.25)	ND(0.25)
	5/2/2005	53	68J	ND(0.50)J	ND(0.50)J	ND(0.50)J	2.2J	ND(1.0)J	0.58J	ND(1.0)J	ND(2.5)J	ND(0.50)J	ND(0.50)J	ND(0.50)J	ND(1.0)J	ND(0.50)J	ND(0.50)J
	12/30/2005	52	71	ND(0.50)	ND(0.50)	ND(0.50)	1.8	ND(1.0)	0.82	ND(1.0)	ND(2.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(1.0)	ND(0.50)	ND(0.50)
	4/3/2006	49	63	ND(0.50)	ND(0.50)	ND(0.50)	2	ND(1.0)	1.3	ND(1.0)	ND(2.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(1.0)	ND(0.50)	ND(0.50)
	1/30/2007	53	32	ND(0.50)	ND(0.50)	ND(0.50)	0.5	ND(1.0)	0.96	ND(1.0)	ND(2.5)	12	36	ND(0.50)	ND(1.0)	ND(0.50)	ND(0.50)
	4/10/2007	53	55	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(4.0)	2.3	ND(4.0)	ND(10)	47	180	ND(2.0)	ND(4.0)	ND(2.0)	ND(2.0)
	8/9/2007	50	64	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(2.0)	ND(5.0)	34	130N	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)

Table 3
Water Quality Data - VOC Results
June 2002 - March 2012
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)	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-24-DO (Cont.)	11/12/2007	49	40	ND(0.50)	0.91	ND(0.50)	ND(0.50)	ND(1.0)	0.75	ND(1.0)	ND(2.5)	27	56	ND(0.50)	ND(1.0)	0.64	ND(0.50)
	1/23/2008	47	33	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	1.1	ND(2.0)	ND(5.0)	48	120	ND(1.0)	ND(2.0)	2.1	ND(1.0)
	4/21/2008	47	21J	ND(2.0)J	ND(2.0)J	ND(2.0)J	ND(2.0)J	ND(4.0)J	ND(2.0)J	ND(4.0)J	ND(10)J	65J	220J	ND(2.0)J	ND(4.0)J	ND(2.0)J	ND(2.0)J
	7/28/2008	52	45J	ND(2.0)J	ND(2.0)J	ND(2.0)J	ND(2.0)J	ND(4.0)J	ND(2.0)J	ND(4.0)J	ND(10)J	61J	220J	ND(2.0)J	ND(4.0)J	ND(2.0)J	ND(2.0)J
	10/22/2008	47	19	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(2.0)	ND(5.0)	32	140	ND(1.0)	ND(2.0)	13	ND(1.0)
	1/14/2009	52	22	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	41	210	ND(2.0)	ND(2.0)	10	ND(2.0)
	4/2/2009	47	36	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	54	270	ND(2.0)	ND(2.0)	19	ND(2.0)
	10/26/2009	48	62	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	32	270	ND(2.0)	4.2	44	ND(2.0)
	1/28/2010	52	41	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	39	240	ND(2.0)	6	14	ND(2.0)
	4/22/2010	52	52	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	21	270	ND(2.0)	3.7	14	ND(2.0)
	7/14/2010	15.5	38J	ND(2.0)J	ND(2.0)J	ND(2.0)J	ND(2.0)J	ND(2.0)J	ND(2.0)J	ND(2.0)J	ND(2.0)J	26J	260J	ND(2.0)J	15J	65J	ND(2.0)J
	10/12/2010	47	27	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	13	190	ND(4.0)	27	41	ND(4.0)
	1/4/2011	52	9.5	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	19	9.8D	ND(1.0)	30	75	ND(1.0)
	4/5/2011	47.3	43	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	24	300	ND(4.0)	10	28	ND(4.0)
	7/28/2011	47	1.2	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	0.22	ND(0.20)	ND(0.20)	1.7	16	ND(0.20)	0.94	1.7	ND(0.20)
	10/25/2011	52	35D	ND(0.20)	1.2	ND(0.20)	ND(0.20)	ND(0.20)	0.74	ND(0.20)	ND(0.20)	31DJ	350DJ	ND(0.20)	6.9	12	ND(0.20)
AP-25-DO	9/23/2004	NA	5.3	ND(0.050)	ND(0.050)	ND(0.050)	0.84	ND(0.10)	0.44	ND(0.10)	ND(0.25)	0.054	ND(0.050)	ND(0.050)	ND(0.10)	ND(0.050)	ND(0.050)
	12/29/2004	51	0.27	0.012	ND(0.0025)	0.0039	0.0051	ND(0.0050)	0.0068	ND(0.0050)	ND(0.013)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0025)
	5/2/2005	52	5.2J	ND(0.050)J	ND(0.050)J	ND(0.050)J	0.065J	ND(0.10)J	0.066J	ND(0.10)J	ND(0.25)J	ND(0.050)J	ND(0.050)J	ND(0.050)J	ND(0.10)J	ND(0.050)J	ND(0.050)J
	12/30/2005	52	2.2	0.036	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	0.074	ND(0.040)	ND(0.10)	0.13	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.020)
	4/3/2006	47	7.1	0.14	ND(0.050)	ND(0.050)	0.16	ND(0.10)	0.32	ND(0.10)	ND(0.25)	0.058	ND(0.050)	ND(0.050)	ND(0.10)	ND(0.050)	ND(0.050)
	1/30/2007	52	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(2.0)	ND(5.0)	19	130	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)
	4/10/2007	52	0.64	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(1.0)	ND(0.50)	ND(1.0)	ND(2.5)	0.72	11	ND(0.50)	ND(1.0)	36	ND(0.50)
	8/9/2007	36	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(2.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	14	91	ND(1.0)
	11/12/2007	47	0.029	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	ND(0.020)	ND(0.020)	ND(0.020)	0.54	1.6	0.023
	1/23/2008	47	0.016	0.0049	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0026	0.012	ND(0.0010)	0.032	0.072	0.0047
	4/21/2008	47	ND(0.10)J	ND(0.10)J	ND(0.10)J	ND(0.10)J	ND(0.10)J	ND(0.20)J	ND(0.10)J	ND(0.20)J	ND(0.50)J	ND(0.10)J	ND(0.10)J	ND(0.10)J	8.1J	13J	ND(0.10)J
	7/28/2008	51	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0020)J	ND(0.0050)J	0.0025J	0.010J	ND(0.0010)J	0.0038J	0.014J	ND(0.0010)J
	10/22/2008	47	0.37	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.10)	ND(0.20)	ND(0.50)	ND(0.10)	ND(0.10)	ND(0.10)	4	7.3	ND(0.10)
	1/14/2009	51	0.021	0.006	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.0059	ND(0.0050)	0.56	0.62	ND(0.0050)
	4/2/2009	47	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	0.24	1.6	ND(0.20)	2.2	17	ND(0.20)
	10/26/2009	48	0.029	0.025	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.0056	ND(0.0050)	ND(0.0050)	0.48	0.74	0.0073
	1/28/2010	51	0.005	0.0054	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0025	0.01	ND(0.0010)	0.047	0.13	ND(0.0010)
	7/14/2010	51	0.14J	ND(0.10)J	ND(0.10)J	ND(0.10)J	ND(0.10)J	ND(0.10)J	ND(0.10)J	ND(0.10)J	ND(0.10)J	ND(0.10)J	ND(0.10)J	ND(0.10)J	2.3J	12J	ND(0.10)J
	10/12/2010	47	0.054	0.052	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	1.8	3.7	ND(0.040)
	1/4/2011	51	0.029	0.065	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.8	0.66	ND(0.010)
	4/5/2011	46.7	0.011	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.012	0.062	ND(0.010)	0.13	0.45	ND(0.010)
	7/28/2011	46	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	2.6	5.4	ND(0.10)
	10/25/2011	51	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	1.6	2.7	ND(0.040)
	1/17/2012	46	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	0.049	ND(0.040)	0.73	2.1	ND(0.040)
AP-26-DO	7/27/2004	NA	ND(1.0)J	ND(1.0)J	ND(1.0)J	ND(1.0)J	ND(1.0)J	ND(2.0)J	ND(1.0)J	ND(2.0)J	ND(5.0)J	29J	70J	ND(1.0)J	ND(2.0)J	ND(1.0)J	ND(1.0)J
	12/28/2004	64	0.0014	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/28/2005	65	0.0073	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0013	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	1/3/2006	65	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.54	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.0050)
	5/17/2006	NA	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	1.2	0.15	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.010)
	1/31/2007	65	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.10)	ND(0.20)	ND(0.50)	8.4	11	ND(0.10)	ND(0.20)	ND(0.10)	ND(0.10)
	4/14/2007	65	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.001	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	11/16/2007	58	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.40)	ND(0.20)	ND(0.40)	ND(1.0)	15	27	ND(0.20)	ND(0.40)	ND(0.20)	ND(0.20)
	1/25/2008	68	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.40)	ND(0.20)	ND(0.40)	ND(1.0)	13	26	ND(0.20)	ND(0.40)	ND(0.20)	ND(0.20)
	4/28/2008	64	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.40)	ND(0.20)	ND(0.40)	ND(1.0)	11	21	ND(0.20)	ND(0.40)	ND(0.20)	ND(0.20)
	10/23/2008	64	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.10)	ND(0.20)	ND(0.50)	5	9.2	ND(0.10)	ND(0.20)	ND(0.10)	ND(0.10)
	4/3/2009	61	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	8.7	16	ND(0.20)	ND(0.20)	0.42	ND(0.20)
	10/26/2009	62	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	4.4	7.2	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)
	4/22/2010	64	ND(0.20	ND(0.20	ND(0.20	ND(0.20	ND(0.20	ND(0.20	ND(0.20	ND(0.20	ND(0.20	13	25	ND(0.20	ND(0.20	ND(0.20	ND(0.20
	7/14/2010	64	ND(0.20)J	ND(0.20)J	ND(0.20)J	ND(0.20)J	ND(0.20)J	ND(0.20)J	ND(0.20)J	ND(0.20)J	ND(0.20)J	9.2J	19J	ND(0.20)J	ND(0.20)J	ND(0.20)J	ND(0.20)J
	10/13/2010	61	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	8.7	21	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)

Table 3
Water Quality Data - VOC Results
June 2002 - March 2012
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)	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 (Cont.)	4/5/2011	61.1	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	13	27D	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)
	10/26/2011	64	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	11	25D	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)
AP-27-DO	7/22/2004	NA	ND(0.25)J	ND(0.25)J	ND(0.25)J	ND(0.25)J	ND(0.25)J	ND(0.50)J	ND(0.25)J	ND(0.50)J	ND(1.3)J	14J	32J	ND(0.25)J	ND(0.50)J	0.82J	ND(0.25)J
	12/28/2004	61	ND(0.0010)	0.0033	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	5/3/2005	62	ND(0.0010)	0.0015	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0032	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	1/3/2006	62	ND(0.0010)	0.0042	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0011	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/7/2006	59	ND(0.0010)	0.0029	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.002	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	1/31/2007	62	ND(0.0025)	0.0055	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0050)	ND(0.013)	0.26	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.010)	ND(0.0025)
	4/13/2007	62	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.022	0.073	ND(0.0010)	ND(0.0020)	0.0018	ND(0.0010)
	11/15/2007	60	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.021	0.042	ND(0.0010)	ND(0.0020)	0.0084	ND(0.0010)
	4/25/2008	61	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.050)	ND(0.025)	ND(0.050)	ND(0.13)	0.46	3.4	ND(0.025)	ND(0.050)	0.071	ND(0.025)
	10/22/2008	61	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.10)	ND(0.050)	ND(0.10)	ND(0.25)	0.72	4.4	ND(0.050)	ND(0.10)	0.093	ND(0.050)
	4/9/2009	60	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.003	0.019	ND(0.0010)	ND(0.0010)	0.0023	ND(0.0010)
	10/28/2009	57	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0017	0.022	ND(0.0010)	ND(0.0010)	0.001	ND(0.0010)
	4/21/2010	61	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0036	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	10/14/2010	57.5	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.009	1.2D	ND(0.0020)	ND(0.0020)	0.01	0.0049
	4/7/2011	57.2	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	0.0027	0.027	ND(0.0020)J	ND(0.0020)J	0.01	ND(0.0020)J
	10/26/2011	61	ND(0.0020)	ND(0.0020)	0.0027	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.17	12D	ND(0.0020)	0.0031	0.08	0.037
AP-28-DO	12/30/2004	44	0.0058	0.01	0.016	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.18	0.65	ND(0.0050)	ND(0.010)	0.16	ND(0.0050)
	4/29/2005	41	0.0088	0.011	0.016	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.18	0.66	ND(0.0050)	ND(0.010)	0.17	ND(0.0050)
	3/29/2006	41	0.016	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.22	0.84	ND(0.010)	ND(0.020)	0.2	ND(0.010)
	2/5/2007	45	ND(0.010)	ND(0.010)	0.013	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.24	0.91	ND(0.010)	ND(0.020)	0.21	ND(0.010)
	4/15/2007	45	0.012	ND(0.010)	0.013	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.28	0.98	ND(0.010)	ND(0.020)	0.26	ND(0.010)
	12/30/2004	44	ND(0.010)	ND(0.010)	0.014	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.22	0.85	ND(0.010)	ND(0.020)	0.21	ND(0.010)
	4/29/2005	44	0.013	0.011	0.017	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.25	0.94	ND(0.010)	ND(0.020)	0.24	ND(0.010)
	3/29/2006	43	0.02	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.29	1.1	ND(0.010)	ND(0.020)	0.29	ND(0.010)
	2/5/2007	45	0.012	0.013	0.016	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.31	1.2	ND(0.010)	ND(0.020)	0.33	ND(0.010)
	4/15/2007	45	0.014	ND(0.010)	0.013	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.37	1.2	ND(0.010)	ND(0.020)	0.34	ND(0.010)
	11/13/2007	43	0.018	0.011	0.015	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.43	1.5	ND(0.010)	ND(0.020)	0.47	ND(0.010)
	4/25/2008	44	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	0.49	1.8	ND(0.020)	ND(0.040)	0.48	ND(0.020)
	4/2/2009	42	ND(0.010)	ND(0.010)	0.011	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.36	1.2	ND(0.010)	ND(0.010)	0.31	ND(0.010)
AP-30-DO	2/12/2010	NA	ND(1.2)	ND(1.6)	ND(1.5)	ND(1.1)	ND(0.90)	ND(1.1)	ND(0.45)	ND(0.88)	ND(2.4)	82	330	---	ND(1.3)	ND(1.2)	ND(1.2)
	5/24/2010	NA	ND(2.5)	ND(2.5)	ND(2.5)	ND(2.5)	ND(2.5)	ND(2.5)	ND(2.5)	ND(2.5)	ND(2.5)	59	680D	ND(2.5)	ND(2.5)	ND(2.5)	ND(2.5)
AP-30R-DO	4/7/2011	67	2.4J	ND(0.050)J	ND(0.050)J	ND(0.050)J	6.4DJ	ND(0.050)J	5.5DJ	ND(0.050)J	ND(0.050)J	0.47J	0.082J	ND(0.050)J	ND(0.050)J	ND(0.050)J	ND(0.050)J
	11/7/2011	27	0.085	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.19D	ND(0.0020)	0.18	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
AP-31-DO	2/11/2010	NA	ND(1.2)	ND(1.6)	ND(1.5)	ND(1.1)	ND(0.90)	ND(1.1)	ND(0.45)	ND(0.88)	ND(2.4)	71	940D	---	ND(1.3)	ND(1.2)	ND(1.2)
	10/18/2010	89	1.3D	0.011	ND(0.0040)	ND(0.0040)	0.97D	ND(0.0040)	1.6D	ND(0.0040)	0.0062	0.053	0.015	0.0049	ND(0.0040)	ND(0.0040)	ND(0.0040)
	4/6/2011	30	1.6J	0.034J	ND(0.0020)J	ND(0.0020)J	0.68DJ	0.0028J	2.1DJ	ND(0.0020)J	0.007J	0.082J	0.0099J	0.009J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J
	11/7/2011	38	1.8	0.041	ND(0.020)	ND(0.020)	0.52	ND(0.020)	1.9	ND(0.020)	ND(0.020)	0.043	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)
AP-32-DO	2/11/2010	NA	ND(1.2)	ND(1.6)	ND(1.5)	ND(1.1)	ND(0.90)	ND(1.1)	ND(0.45)	ND(0.88)	ND(2.4)	91	950D	---	ND(1.3)	ND(1.2)	ND(1.2)
	10/18/2010	89	2.3	ND(0.10)	ND(0.10)	ND(0.10)	1.2	ND(0.10)	6.8	ND(0.10)	ND(0.10)	0.2	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)
	4/7/2011	60	2.1J	ND(0.10)J	ND(0.10)J	ND(0.10)J	0.87J	ND(0.10)J	5.7J	ND(0.10)J	ND(0.10)J	6.2J	0.15J	ND(0.10)J	ND(0.10)J	ND(0.10)J	ND(0.10)J
	11/7/2011	34	1.8	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	3.3	ND(1.0)	ND(1.0)	41	81D	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
APBIO-01	8/2/2005	NA	ND(0.0010)	0.0013	0.001	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.019	0.066	ND(0.0010)	ND(0.0020)	0.054	ND(0.0010)
	1/6/2006	79	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	ND(0.010)	0.024	ND(0.010)	ND(0.020)	0.91	ND(0.010)
	4/7/2006	79	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.011	0.077	ND(0.010)	ND(0.020)	0.85	ND(0.010)
	4/12/2007	78	ND(0.0050)	0.0086	0.0085	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.068	0.39	ND(0.0050)	0.033	0.53	ND(0.0050)
	4/23/2008	77	ND(0.0020)	0.009	0.002	ND(0.0020)	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0040)	ND(0.010)	ND(0.0020)	0.0071	ND(0.0020)	0.093	0.16	0.0044
	4/6/2009	78	ND(0.0020)	0.007	0.003	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.027	ND(0.0020)	0.092	0.29	0.0022
	4/23/2010	78	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.045	ND(0.010)	0.12	0.77	ND(0.010)
	4/6/2011	77	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.023	ND(0.010)	0.16	0.8	ND(0.010)
B-2	4/27/2005	14	0.013	0.013	0.0026	ND(0.0020)	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0040)	ND(0.010)	0.031	0.2	ND(0.0020)	0.0072	0.091	ND(0.0020)
	3/28/2006	12	ND(0.0050)	0.0079	0.006	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.014	0.42	ND(0.0050)	ND(0.010)	0.33	0.0057
	1/31/2007	17	ND(0.0050)	0.0054	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.013	0.43	ND(0.0050)	ND(0.010)	0.37	ND(0.0050)
	4/14/2007	13	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.050)	ND(0.025)	ND(0.050)	ND(0.13)	2.4	1.2	ND(0.025)	ND(0.050)	0.18	ND(0.025)

Table 3
Water Quality Data - VOC Results
June 2002 - March 2012
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)	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.)	11/16/2007	11	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.019	ND(0.0010)	0.012	0.065	0.0016
	4/25/2008	12	ND(0.0025)	0.0051	0.0048	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0050)	ND(0.013)	0.0078	0.24	ND(0.0025)	ND(0.0050)	0.3	0.0064
	10/22/2008	12	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	ND(0.0050)	0.16	ND(0.0050)	ND(0.010)	0.49	0.0054
	4/9/2009	11	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	0.019J	ND(0.0010)J	ND(0.0010)J	0.022J	ND(0.0010)J
	10/26/2009	11	ND(0.0025)	ND(0.0025)	0.0026	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.091	ND(0.0025)	ND(0.0025)	0.32	0.0049
	4/21/2010	12	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.29	ND(0.0050)	0.022	0.46	0.0056
	10/14/2010	12	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.011	ND(0.010)	0.03	1.2D	0.016
	4/6/2011	15.7	ND(0.0040)	0.0044	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	0.092	ND(0.0040)	ND(0.0040)	0.23	0.007
	10/27/2011	11.5	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.017	ND(0.0020)	0.19	0.18	0.0053
B-3	6/3/2002	15	0.42D	0.002	0.016	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.055	0.017	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	1/29/2003	15	0.088	ND(0.0020)	0.002	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.041	0.008	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	5/13/2003	15	0.14	0.002	0.003	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.02	0.015	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	12/16/2003	15	0.05	0.001	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.008	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	5/2/2004	15	0.16	ND(0.0020)	0.0044	ND(0.0020)	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0040)	ND(0.010)	0.04	0.017	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0020)
	4/27/2005	14	0.22	0.0021	0.0078	ND(0.0020)	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0040)	ND(0.010)	0.034	0.016	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0020)
	3/31/2006	13	0.24	ND(0.0020)	0.012	ND(0.0020)	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0040)	ND(0.010)	0.063	0.02	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0020)
	4/10/2007	15	0.11	0.0014	0.0036	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.027	0.021	ND(0.0010)	ND(0.0020)	0.001	ND(0.0010)
	4/21/2008	13	0.083J	0.0016J	0.0041J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0020)J	ND(0.0050)J	0.022J	0.014J	ND(0.0010)J	ND(0.0020)J	0.0020J	ND(0.0010)J
	10/22/2008	13	0.072	0.0017	0.0031	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.016	0.014	ND(0.0010)	ND(0.0020)	0.001	ND(0.0010)
	4/3/2009	12.5	0.09	0.0017	0.0023	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.02	0.015	ND(0.0010)	ND(0.0010)	0.0011	ND(0.0010)
	10/26/2009	12.5	0.044	0.0016	0.0014	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.013	0.0095	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	4/21/2010	14	0.056	0.001	0.0014	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0062	0.01	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	10/12/2010	12.5	0.049	0.0021	0.0028	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.016	0.011	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	4/4/2011	12.5	0.042	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.015	0.0068	ND(0.0020)	ND(0.0020)J	ND(0.0020)	ND(0.0020)
	10/26/2011	12	0.069	ND(0.0020)	0.0028	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.016	0.013	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
BR-1_ZONE1	5/16/2003	205	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.002	ND(0.010)	ND(0.010)	0.011	0.018	ND(0.0020)	ND(0.0020)	0.1	ND(0.0020)
	12/29/2003	205	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.057	0.092	ND(0.0010)	0.005	0.16DD	0.0011
	1/5/2005	205	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.001	ND(0.0020)	ND(0.0050)	0.032	0.046	ND(0.0010)	0.03	0.053	ND(0.0010)
	5/3/2005	205	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0014	ND(0.0020)	ND(0.0050)	0.0025	0.0036	ND(0.0010)	0.028	0.063	ND(0.0010)
	1/5/2006	205	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0013	ND(0.0010)	0.018	0.026	ND(0.0010)
	4/3/2006	205	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.001	ND(0.0010)	0.0037	0.014	ND(0.0010)
	4/12/2007	205	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0013	ND(0.0010)	ND(0.0020)	0.0026	ND(0.0010)
	8/9/2007	205	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0029	ND(0.0010)
	11/15/2007	205	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0012	ND(0.0010)	ND(0.0020)	0.0011	ND(0.0010)
	4/24/2008	205	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0012	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/6/2009	205	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0016	0.0016	ND(0.0010)
	10/29/2009	205	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.028	0.067	ND(0.0010)	0.083	0.20D	0.009
	4/22/2010	205	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	10/18/2010	205	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.013	0.042	ND(0.0020)	0.036	0.11	0.0033
	4/14/2011	205	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	0.056	ND(0.020)	0.43	1.5	0.027
	10/24/2011	205	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.01	0.035	ND(0.0020)	0.041	0.19	0.0031
BR-1_ZONE2	5/16/2003	152	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.04	0.30D	ND(0.0020)	ND(0.0020)	0.21	0.006
	12/29/2003	152	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0050)	ND(0.013)	ND(0.0025)	0.012	ND(0.0025)	ND(0.0050)	0.36	0.0053
	1/5/2005	152	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0012	ND(0.0010)	ND(0.0020)	0.022	ND(0.0010)
	5/3/2005	152	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0032	0.027	ND(0.0010)
	1/5/2006	152	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0024	ND(0.0010)	0.0033	0.013D	0.0033
	4/3/2006	152	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0012	ND(0.0010)	0.0055	0.021	ND(0.0010)
	4/12/2007	152	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0013	ND(0.0010)	ND(0.0020)	0.004	ND(0.0010)
	8/9/2007	152	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0016	ND(0.0010)	ND(0.0020)	0.0069	ND(0.0010)
	11/15/2007	152	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.002	ND(0.0010)	ND(0.0020)	0.0033	ND(0.0010)
	4/24/2008	152	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0011	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/6/2009	152	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	10/29/2009	152	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0013	ND(0.0010)	0.0024	0.042	ND(0.0010)
	4/22/2010	152	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	10/18/2010	152	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.002	ND(0.0020)	0.013	0.23D	0.0065

Table 3
Water Quality Data - VOC Results
June 2002 - March 2012
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)	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-1_ZONE2 (Cont.)	4/14/2011	152	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0046	ND(0.0020)	0.012	0.095	ND(0.0020)
	10/24/2011	152	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.005	ND(0.0020)	0.016	0.2	0.0031
BR-1_ZONE3	5/16/2003	105	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.003	ND(0.0020)
	12/29/2003	105	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.013	ND(0.0010)	ND(0.0020)	0.36DD	0.0094
	1/5/2005	105	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	5/3/2005	105	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0012	ND(0.0010)	ND(0.0020)	0.0065	ND(0.0010)
	1/5/2006	105	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0053	ND(0.0010)
	4/3/2006	105	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.004	ND(0.0010)	ND(0.0020)	0.0074	ND(0.0010)
	4/12/2007	105	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.002	ND(0.0010)	ND(0.0020)	0.0044	ND(0.0010)
	8/9/2007	105	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0015	ND(0.0010)	ND(0.0020)	0.0024	ND(0.0010)
	11/15/2007	105	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.002	ND(0.0010)	ND(0.0020)	0.0021	ND(0.0010)
	4/24/2008	105	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	10/29/2009	105	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	4/22/2010	105	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	10/18/2010	105	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	4/14/2011	105	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	10/24/2011	105	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
BR-2_ZONE1	5/4/2004	146	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.029	0.088	ND(0.010)	0.23	1.3	ND(0.010)
BR-2_ZONE2	5/4/2004	117	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.0053	0.013	ND(0.0050)	ND(0.010)	0.55	ND(0.0050)
BR-2_ZONE3	5/4/2004	74	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.042	0.11	ND(0.0050)	ND(0.010)	0.47	ND(0.0050)
BR-3_ZONE1	12/22/2003	226	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	1/4/2005	226	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	1/4/2006	226	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/16/2007	226	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/24/2008	226	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/6/2009	226	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	4/28/2010	226	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	4/14/2011	226	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
BR-3_ZONE2	12/22/2003	200	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	1/4/2005	200	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	1/4/2006	200	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/16/2007	200	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/24/2008	200	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/3/2009	200	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	4/28/2010	200	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	4/14/2011	200	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
BR-3_ZONE3	12/22/2003	167	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	1/4/2005	167	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	1/6/2006	167	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/16/2007	167	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/24/2008	167	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/3/2009	167	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	4/28/2010	167	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	4/14/2011	167	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
BR-5_ZONE1	6/3/2002	209	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	ND(0.010)	0.01	ND(0.020)	0.72	0.1	ND(0.010)
	1/31/2003	209	ND(0.0020)	ND(0.0020)	0.014	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.083	ND(0.0040)	0.55	0.5	ND(0.0020)
	5/16/2003	209	ND(0.0020)J	0.010J	ND(0.0010)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.010)J	ND(0.010)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J
	12/19/2003	209	ND(0.0050)	ND(0.0050)	0.0082	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	ND(0.0050)	0.2	ND(0.0050)	0.11	0.45	ND(0.0050)
	5/4/2004	209	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	ND(0.010)	0.19	ND(0.010)	0.38	1.1	ND(0.010)
	1/5/2005	209	ND(0.0010)	ND(0.0010)	0.0052	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0012	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.05	ND(0.0010)	0.035	0.058	ND(0.0010)
	5/3/2005	209	ND(0.0025)	ND(0.0025)	0.01	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0050)	ND(0.013)	ND(0.0025)	0.17	ND(0.0025)	0.13	0.33	ND(0.0025)
	1/5/2006	209	ND(0.0010)	ND(0.0010)	0.004	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.05	ND(0.0010)	0.041	0.092	ND(0.0010)
	4/3/2006	209	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.005	ND(0.0010)	0.0076	0.0088	ND(0.0010)
	4/16/2007	209	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0027	ND(0.0010)	ND(0.0020)	0.0062	ND(0.0010)
	11/14/2007	209	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0033	ND(0.0010)	ND(0.0020)	0.0051	ND(0.0010)

Table 3
Water Quality Data - VOC Results
June 2002 - March 2012
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)	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-5_ZONE1 (Cont.)	4/24/2008	209	ND(0.0010)	0.0015	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0014	ND(0.0010)	ND(0.0020)	0.0015	ND(0.0010)
	4/7/2009	209	ND(0.0025)	ND(0.0025)	0.0069	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.055	ND(0.0025)	0.062	0.077	ND(0.0025)
	4/28/2010	209	ND(0.0010)	0.0012	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0014	ND(0.0010)
	4/14/2011	209	ND(0.0020)	ND(0.0020)	0.0055	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.047	ND(0.0020)	0.039	0.094	ND(0.0020)
BR-5_ZONE2	6/3/2002	172	ND(0.010)	0.01	0.02	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	0.05	0.34	ND(0.020)	2.2	2.1	0.01
	1/31/2003	172	ND(0.0020)	0.003	0.032	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.12	0.22	ND(0.0020)	0.60DD	0.80DD	0.004
	5/16/2003	172	ND(0.0050)	ND(0.0050)	0.016	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.030)	ND(0.010)	0.032	0.051	ND(0.010)	0.80D	1.1	ND(0.0050)
	12/19/2003	172	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	ND(0.010)	0.08	ND(0.010)	0.5	1	ND(0.010)
	5/4/2004	172	ND(0.010)	ND(0.010)	0.012	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.011	0.24	ND(0.010)	0.35	1.2	ND(0.010)
	1/5/2005	172	ND(0.0025)	ND(0.0025)	0.011	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0050)	ND(0.013)	0.037	0.15	ND(0.0025)	0.16	0.33	0.0025
	5/3/2005	172	ND(0.010)	ND(0.010)	0.014	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.023	0.3	ND(0.010)	0.26	0.72	ND(0.010)
	1/5/2006	172	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.014	0.13	ND(0.0050)	0.13	0.35	ND(0.0050)
	4/3/2006	172	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.011	ND(0.0010)	0.018	0.048	ND(0.0010)
	4/16/2007	172	ND(0.0010)	0.0012	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0026	ND(0.0010)	ND(0.0020)	0.0054	ND(0.0010)
	11/14/2007	172	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0032	ND(0.0010)	ND(0.0020)	0.0043	ND(0.0010)
	4/24/2008	172	ND(0.0010)	0.0022	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.003	ND(0.0010)	0.0097	0.032	ND(0.0010)
	4/7/2009	172	ND(0.0050)	ND(0.0050)	0.0095	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.17	ND(0.0050)	0.18	0.43	ND(0.0050)
	4/28/2010	172	ND(0.0010)	0.0021	0.0045	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0013	0.078	ND(0.0010)	0.089	0.064D	0.0013
	4/14/2011	172	ND(0.0020)	0.0025	0.015	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0047	0.21D	ND(0.0020)	0.21D	0.34D	0.002
BR-5_ZONE3	6/3/2002	133	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.30)	ND(0.10)	0.32	0.76	ND(0.10)	2	1.6	ND(0.050)
	1/31/2003	133	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.004	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	5/16/2003	133	ND(0.0020)	ND(0.0020)	0.016	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.002	0.12	ND(0.0040)	0.30D	0.32	0.002
	12/19/2003	133	ND(0.0010)	0.0044	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0012	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	5/4/2004	133	ND(0.0010)	0.0036	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	5/3/2005	133	ND(0.0025)	0.0025	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0050)	ND(0.013)	0.018	0.026	ND(0.0025)	0.066	0.19	ND(0.0025)
	1/5/2006	133	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.014	0.088	ND(0.010)	0.28	0.92	ND(0.010)
	4/3/2006	133	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0050)	ND(0.013)	ND(0.0025)	0.0045	ND(0.0025)	0.007	0.19	ND(0.0025)
	4/16/2007	133	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0022	ND(0.0010)	ND(0.0020)	0.005	ND(0.0010)
	11/14/2007	133	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0050)	ND(0.013)	0.0052	0.065	ND(0.0025)	0.13	0.51D	ND(0.0025)
	4/24/2008	133	ND(0.0020)	0.0024	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0040)	ND(0.010)	0.0024	0.029	ND(0.0020)	0.03	0.18	ND(0.0020)
	4/7/2009	133	ND(0.0025)	0.0028	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.0063	0.048	ND(0.0025)	0.029	0.18	ND(0.0025)
	4/14/2011	133	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.14	0.77	ND(0.010)	0.17	5.0D	0.013
BR-6_ZONE1	12/19/2003	94	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0040)	ND(0.010)	ND(0.0020)	0.003	ND(0.0020)	0.14	0.13	ND(0.0020)
	1/5/2005	94	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0050)	ND(0.013)	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.026	0.19	ND(0.0025)
	5/3/2005	94	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	ND(0.0050)	0.0079	ND(0.0050)	0.017	0.36	ND(0.0050)
	1/5/2006	94	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0050)	ND(0.013)	ND(0.0025)	0.0073	ND(0.0025)	0.024	0.29	ND(0.0025)
	4/3/2006	94	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0050)	ND(0.013)	ND(0.0025)	0.0053	ND(0.0025)	0.035	0.28	ND(0.0025)
	4/13/2007	94	ND(0.0020)	0.0036	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0040)	ND(0.010)	ND(0.0020)	0.0044	ND(0.0020)	0.079	0.27	0.0021
	11/14/2007	94	ND(0.0010)	0.0036	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/25/2008	94	ND(0.0020)	0.0026	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0040)	ND(0.010)	ND(0.0020)	0.0048	ND(0.0020)	0.054	0.15	ND(0.0020)
	10/23/2008	94	ND(0.0010)	0.0031	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0056	0.011	0.0015
	4/7/2009	94	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.058	0.22	ND(0.0025)
	11/2/2009	94	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.047	0.22	ND(0.0025)
	4/28/2010	94	ND(0.0010)	0.002	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0084	0.0075	0.0014
	10/18/2010	94	ND(0.0020)	0.0021	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.015	0.17	ND(0.0020)
	4/19/2011	94	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.024	0.26D	ND(0.0050)
	10/27/2011	94	ND(0.0020)	0.0023	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.024	0.20D	ND(0.0020)
BR-6_ZONE2	12/19/2003	62	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	ND(0.0050)	0.012	ND(0.0050)	0.021	0.39	ND(0.0050)
	1/5/2005	62	ND(0.0025)	0.0026	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0050)	ND(0.013)	ND(0.0025)	0.0077	ND(0.0025)	0.016	0.3	ND(0.0025)
	5/3/2005	62	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0050)	ND(0.013)	ND(0.0025)	0.0062	ND(0.0025)	0.055	0.24	ND(0.0025)
	1/5/2006	62	ND(0.0025)	0.0026	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0050)	ND(0.013)	ND(0.0025)	0.012	ND(0.0025)	0.016	0.33	ND(0.0025)
	4/3/2006	62	ND(0.0025)	0.004	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0050)	ND(0.013)	ND(0.0025)	0.0095	ND(0.0025)	0.038	0.37	ND(0.0025)
	4/13/2007	62	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	ND(0.0050)	0.017	ND(0.0050)	0.018	0.46	ND(0.0050)
	11/14/2007	62	ND(0.0010)	0.004	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	0.0011
	4/25/2008	62	ND(0.0025)	0.003	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0050)	ND(0.013)	ND(0.0025)	0.009	ND(0.0025)	0.013	0.31	ND(0.0025)

Table 3
Water Quality Data - VOC Results
June 2002 - March 2012
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)	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 (Cont.)	10/23/2008	62	ND(0.0010)	0.0032	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0046	0.011	0.0014
	4/7/2009	62	ND(0.0025)	0.0025	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.0052	ND(0.0025)	0.013	0.31	ND(0.0025)
	11/2/2009	62	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.04	0.21	ND(0.0025)
	4/28/2010	62	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.014	0.3	ND(0.0025)
	10/18/2010	62	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.046	0.31	ND(0.0050)
	4/19/2011	62	ND(0.013)	ND(0.013)	ND(0.013)	ND(0.013)	ND(0.013)	ND(0.013)	ND(0.013)	ND(0.013)	ND(0.013)	ND(0.013)	ND(0.013)	ND(0.013)	0.023	0.37	ND(0.013)
	10/27/2011	62	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.021	0.4	ND(0.0050)
BR-6_ZONE3	12/22/2003	42	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0050)	ND(0.013)	ND(0.0025)	0.014	ND(0.0025)	0.03	0.31	ND(0.0025)
	2/17/2005	42	ND(0.0010)	0.0025	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0011	ND(0.0010)	0.0042	0.045	ND(0.0010)
	5/3/2005	42	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0050)	ND(0.013)	ND(0.0025)	0.0061	ND(0.0025)	0.039	0.21	ND(0.0025)
	1/5/2006	42	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0050)	ND(0.013)	ND(0.0025)	0.0092	ND(0.0025)	0.023	0.29	ND(0.0025)
	4/3/2006	42	ND(0.0025)	0.003	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0050)	ND(0.013)	ND(0.0025)	0.0049	ND(0.0025)	0.019	0.28	ND(0.0025)
	4/13/2007	42	ND(0.0010)	0.0026	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0036	ND(0.0010)	0.046	0.11	ND(0.0010)
	11/14/2007	42	ND(0.0010)	0.0031	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.028	0.031	0.001
	4/25/2008	42	ND(0.0020)	0.0024	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0040)	ND(0.010)	ND(0.0020)	0.0025	ND(0.0020)	0.044	0.2	0.0022
	10/23/2008	42	ND(0.0025)	0.0029	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0050)	ND(0.013)	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.028	0.26	0.0038
	4/7/2009	42	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.06	0.15	0.0026
	11/2/2009	42	ND(0.0010)	0.001	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0024	ND(0.0010)
	4/28/2010	42	ND(0.0010)	0.002	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.038	0.04	0.0012
	10/18/2010	42	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0035	0.0057	ND(0.0020)
	4/19/2011	42	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.0076	ND(0.0050)
	10/27/2011	42	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.017	0.061	ND(0.0020)
BR-7_ZONE1	12/22/2003	152	ND(0.0050)	0.016	0.01	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	ND(0.0050)	0.0054	ND(0.0050)	0.22	0.59	ND(0.0050)
	1/14/2005	152	ND(0.0020)	0.0066	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0040)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.005	0.22	ND(0.0020)
	1/4/2006	152	ND(0.0010)	0.0055	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0011	ND(0.0010)	0.074	0.1	ND(0.0010)
	4/20/2007	152	ND(0.0010)	0.0067	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.014	0.076	0.0012
	5/8/2008	152	ND(0.0010)	0.0073	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.036	0.12	0.0013
	4/7/2009	152	ND(0.0010)	0.0069	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.11	0.085	ND(0.0010)
	4/28/2010	152	ND(0.0020)	0.0072	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.18	0.13	ND(0.0020)
	4/14/2011	152	ND(0.0020)	0.0034	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.051	0.012	ND(0.0020)
BR-7_ZONE2	12/22/2003	112	ND(0.0050)	0.013	0.0094	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.16	0.67	ND(0.0050)
	1/14/2005	112	ND(0.010)	0.01	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	ND(0.010)	ND(0.010)	ND(0.010)	0.028	0.91	ND(0.010)
	1/4/2006	112	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	0.72	ND(0.010)
	4/20/2007	112	ND(0.0010)	0.013	0.0044	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.10DD	0.23DD	0.0012
	5/8/2008	112	ND(0.0010)	0.012	0.0036	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.28	0.26	ND(0.0010)
	4/7/2009	112	ND(0.0050)	0.0055	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.048	0.47	ND(0.0050)
	4/28/2010	112	ND(0.0050)	0.0054	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.039	0.5	ND(0.0050)
	4/14/2011	112	ND(0.0040)	0.0064	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	0.15	0.2	ND(0.0040)
BR-7_ZONE3	12/22/2003	69	ND(0.0020)	0.0098	0.0024	ND(0.0020)	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0040)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.096	0.14	0.0032
	1/14/2005	69	ND(0.010)	0.015	0.02	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	ND(0.010)	0.017	ND(0.010)	0.027	1.1	ND(0.010)
	1/4/2006	69	ND(0.010)	0.011	0.011	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	ND(0.010)	ND(0.010)	ND(0.010)	0.032	0.95	ND(0.010)
	4/20/2007	69	ND(0.0025)	0.011	0.0037	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0050)	ND(0.013)	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.13	0.3	0.0037
	5/8/2008	69	ND(0.0010)	0.016	0.021	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.011	ND(0.0010)	0.039	1.2D	0.019
	4/7/2009	69	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.029	0.84	ND(0.010)
	4/28/2010	69	ND(0.010)	ND(0.010)	0.012	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.021	1	ND(0.010)
	4/14/2011	69	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	0.036	1.1	ND(0.020)
BR-8_ZONE1	12/29/2003	222	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
BR-8_ZONE2	12/29/2003	205	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
BR-8_ZONE3	12/29/2003	183	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
BW-01	4/10/2007	15	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0034	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0012	ND(0.0010)
	7/19/2007	13.45	0.011	0.0056	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	0.0026	ND(0.0050)	0.002	0.0077	ND(0.0010)	0.014	0.037	ND(0.0010)
	11/12/2007	12	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0062	0.0056	ND(0.0010)	ND(0.0020)	0.011	ND(0.0010)
	1/24/2008	12	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0047	0.0017	ND(0.0010)	ND(0.0020)	0.0016	ND(0.0010)
	4/21/2008	12	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0020)J	ND(0.0050)J	0.0047J	0.0010J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0010)J
	7/28/2008	14	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0020)J	ND(0.0050)J	0.0061J	0.0027J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0010)J

Table 3
Water Quality Data - VOC Results
June 2002 - March 2012
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)	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-01 (Cont.)	10/21/2008	12	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0023	0.0017	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	1/13/2009	14	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0019	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	4/2/2009	12	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0016	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	7/14/2009	14	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0025	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	10/27/2009	12	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0036	0.002	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	1/28/2010	12	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.001	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	4/22/2010	14	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.013	0.0073	ND(0.0050)	0.13	0.44	ND(0.0050)
BW-02	1/30/2007	15	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.006	0.011	ND(0.0010)	ND(0.0020)	0.0052	ND(0.0010)
	4/10/2007	15	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0021	0.0014	ND(0.0010)	ND(0.0020)	0.0026	ND(0.0010)
	7/19/2007	14.5	0.013	0.012	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0040)	ND(0.010)	ND(0.0020)	0.0074	ND(0.0020)	0.055	0.14	ND(0.0020)
	11/12/2007	13.3	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0077	0.01	ND(0.0010)	ND(0.0020)	0.0096	ND(0.0010)
	1/24/2008	13	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0048	0.0014	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/21/2008	13	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0020)J	ND(0.0050)J	0.0018J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)J	0.0018J	ND(0.0010)J
	7/28/2008	14	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0020)J	ND(0.0050)J	0.0058J	0.0016J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0010)J
	10/21/2008	13	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0028	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	1/13/2009	14	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.001	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	4/2/2009	13	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	7/14/2009	14	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0037	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	10/27/2009	13	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0028	0.0014	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	1/28/2010	13	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0017	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	4/22/2010	14	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.12	0.4	ND(0.0050)
BW-03	1/30/2007	16.5	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0044	0.0021	ND(0.0010)	ND(0.0020)	0.0087	ND(0.0010)
	4/10/2007	16.5	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0022	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0029	ND(0.0010)
	7/19/2007	14.5	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	ND(0.020)	ND(0.020)	ND(0.020)	1.6	1.1	ND(0.020)
	11/12/2007	13.4	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.011	0.014	ND(0.0010)	0.0022	0.021	ND(0.0010)
	1/24/2008	13	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.006	0.0028	ND(0.0010)	ND(0.0020)	0.002	ND(0.0010)
	4/21/2008	13	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0020)J	ND(0.0050)J	ND(0.0010)J	0.0012J	ND(0.0010)J	ND(0.0020)J	0.0040J	ND(0.0010)J
	7/28/2008	15.5	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0020)J	ND(0.0050)J	0.0066J	0.0019J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0010)J
	10/21/2008	13	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0019	0.0019	ND(0.0010)	ND(0.0020)	0.0012	ND(0.0010)
	1/13/2009	15.5	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0017	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	4/2/2009	13	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	7/14/2009	15.5	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0026	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0011	ND(0.0010)
	10/27/2009	13	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.003	0.0018	ND(0.0010)	0.0037	0.0029	ND(0.0010)
	1/28/2010	13	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.002	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	4/22/2010	15.5	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0012	ND(0.0010)	0.04	0.11	ND(0.0010)
BW-04	1/30/2007	14	0.046	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	ND(0.020)	ND(0.020)	ND(0.020)	1.7	1.3	ND(0.020)
	4/10/2007	14	0.23	0.006	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	0.0053	ND(0.0050)	ND(0.013)	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.1	0.052	ND(0.0025)
	7/19/2007	13.2	0.088	0.01	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0018	ND(0.0020)	ND(0.0050)	0.0023	0.0038	0.001	0.0043	0.0037	ND(0.0010)
	11/12/2007	12.5	0.0038	0.0081	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0015	0.003	0.003	0.072	0.025	ND(0.0010)
	1/22/2008	12	0.077	0.0074	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0013	ND(0.0020)	ND(0.0050)	0.003	0.0012	ND(0.0010)	0.0043	0.014	ND(0.0010)
	4/21/2008	12	0.47J	0.044J	0.0097J	ND(0.0050)J	ND(0.0050)J	ND(0.010)J	ND(0.0050)J	ND(0.010)J	ND(0.025)J	ND(0.0050)J	ND(0.0050)J	ND(0.0050)J	0.24J	0.34J	ND(0.0050)J
	7/28/2008	18	0.015J	0.0029J	0.0011J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0020)J	ND(0.0050)J	0.024J	0.0074J	ND(0.0010)J	0.036J	0.11J	0.0010J
	10/21/2008	12	0.038	0.02	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0011	ND(0.0010)	0.0032	0.0041	ND(0.0010)
	1/13/2009	13	0.0011	0.0028	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0013	ND(0.0010)	0.095	0.065	ND(0.0010)
	4/2/2009	12	0.0054	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.54	0.48	ND(0.0050)
	7/14/2009	13	0.0051	0.005	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.59	0.15	ND(0.0050)
	10/27/2009	12	0.05	0.035	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.3	0.02	ND(0.0025)
	1/28/2010	12	ND(0.0010)	0.0019	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0013	ND(0.0010)	ND(0.0010)	0.012	0.016	ND(0.0010)
	4/22/2010	13	0.022	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.74	0.51	ND(0.010)
	7/14/2010	13	ND(0.0010)J	0.0016J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	0.0014J	ND(0.0010)J	0.013J	0.0075J	ND(0.0010)J
	10/12/2010	13	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0027	0.0044	ND(0.0020)
	1/4/2011	13	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0024	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.016	0.0081	ND(0.0020)
	4/5/2011	12.5	ND(0.0020)	0.002	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.16	0.069	ND(0.0020)
	7/28/2011	13	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	0.21	0.066	ND(0.0040)
	10/25/2011	12	0.095	0.032	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0023	ND(0.0020)	ND(0.0020)	0.098	0.0031	ND(0.0020)
	1/18/2012	12.5	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)

Table 3
Water Quality Data - VOC Results
June 2002 - March 2012
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)	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	1/30/2007	16	0.14	0.035	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	ND(0.0050)	0.013	ND(0.0050)	0.65	0.18	ND(0.0050)
	4/10/2007	16	0.56	0.017	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	0.0076	ND(0.010)	ND(0.025)	0.005	ND(0.0050)	ND(0.0050)	0.073	0.059	ND(0.0050)
	7/19/2007	13.3	0.24	0.034	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0040)	ND(0.010)	ND(0.0020)	0.0026	ND(0.0020)	0.018	0.013	0.0026
	11/12/2007	12.5	0.0028	0.0039	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0012	0.0019	0.0015	ND(0.0020)	0.0015	ND(0.0010)
	1/22/2008	10	4.2	0.26	0.16	ND(0.050)	ND(0.050)	ND(0.10)	ND(0.050)	ND(0.10)	ND(0.25)	ND(0.050)	ND(0.050)	ND(0.050)	1.2	2.6	ND(0.050)
	4/21/2008	10	3.9J	0.58J	0.15J	ND(0.050)J	ND(0.050)J	ND(0.10)J	ND(0.050)J	ND(0.10)J	ND(0.25)J	ND(0.050)J	ND(0.050)J	ND(0.050)J	2.4J	6.9J	ND(0.050)J
	7/28/2008	15	0.68J	ND(0.050)J	0.12J	ND(0.050)J	ND(0.050)J	ND(0.10)J	ND(0.050)J	ND(0.10)J	ND(0.25)J	0.38J	0.32J	ND(0.050)J	2.9J	6.6J	ND(0.050)J
	10/21/2008	9	0.042	0.25	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0040)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0040)	0.0021	0.0034
	1/13/2009	15	0.16	0.099	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	5.3	2.8	ND(0.050)
	4/2/2009	9	0.019	0.018	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.004	ND(0.0010)	ND(0.0010)	0.0013	ND(0.0010)	0.0045	0.021	0.015	ND(0.0010)
	7/14/2009	15	0.018	0.011	ND(0.0010)	0.0011	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0064	0.002	0.002	0.0013	ND(0.0010)	ND(0.0010)
	10/27/2009	9	0.0043	0.17	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0021	0.0025	ND(0.0020)	ND(0.0020)
	1/28/2010	9	ND(0.0010)	0.02	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0013	ND(0.0010)	0.0047	0.074	0.011	ND(0.0010)
	4/22/2010	15	0.33	0.02	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.014	ND(0.010)	ND(0.010)	0.73	0.67	ND(0.010)
	7/14/2010	15	ND(0.0010)J	0.0059J	ND(0.0010)J	0.0023J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	0.0010J	0.0050J	ND(0.0010)J	0.052J	0.066J	ND(0.0010)J
	10/12/2010	10	ND(0.0020)	0.0041	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	1/4/2011	15	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0047	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	4/5/2011	9.5	0.022	0.013	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.86	0.22	ND(0.010)
	7/28/2011	9	ND(0.0020)	0.0049	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	10/25/2011	9	1.5D	4.3D	0.02	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0047	ND(0.0020)	0.003	ND(0.0020)	ND(0.0020)	0.97D	0.064	ND(0.0020)
	1/18/2012	9.5	ND(0.0020)	0.021	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.024	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
BW-06	7/28/2011	13	0.024	0.038	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.005	ND(0.0020)	ND(0.0020)	0.0028	ND(0.0020)	ND(0.0020)	0.0059	ND(0.0020)	ND(0.0020)
	10/25/2011	13	3.5D	1.1D	0.06	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.017	ND(0.0020)	0.027	0.019	ND(0.0020)	0.92D	0.1	ND(0.0020)
	1/18/2012	13	0.0027	0.14	ND(0.0020)	0.0028	ND(0.0020)	ND(0.0020)	ND(0.0020)	1.1D	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.002	ND(0.0020)	ND(0.0020)
BW-08	4/10/2007	16	0.014	0.61	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.015	ND(0.0050)	ND(0.0050)
	7/19/2007	13.2	1.1	0.45	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.013	0.052	ND(0.010)	0.4	0.2	ND(0.010)
	11/12/2007	13.7	0.0059	0.076	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	0.0046	ND(0.0050)	ND(0.0010)	ND(0.0010)	0.0021	ND(0.0020)	0.0012	ND(0.0010)
	1/22/2008	14	ND(0.0010)	0.022	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/21/2008	14	3.2J	0.87J	0.14J	ND(0.025)J	ND(0.025)J	ND(0.050)J	ND(0.025)J	0.055J	ND(0.13)J	ND(0.025)J	0.034J	ND(0.025)J	0.80J	0.95J	ND(0.025)J
	7/28/2008	15	0.13J	2.0J	ND(0.025)J	ND(0.025)J	ND(0.025)J	ND(0.050)J	ND(0.025)J	0.14J	ND(0.13)J	ND(0.025)J	ND(0.025)J	ND(0.025)J	2.2J	0.90J	0.025J
	10/21/2008	14	ND(0.020)	1.8	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	1.4	ND(0.10)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.020)
	1/13/2009	15	0.39	0.42	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.096	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.78	0.072	ND(0.010)
	4/2/2009	13	ND(0.0020)	0.02	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.25	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.005	ND(0.0020)	ND(0.0020)	ND(0.0020)
	7/14/2009	15	0.023	0.031	ND(0.0010)	0.0026	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.13J	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0088	ND(0.0010)	ND(0.0010)	ND(0.0010)
	10/27/2009	13	ND(0.010)	0.046	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	1	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)
	1/28/2010	13	0.0053	0.05	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.41	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.0058	ND(0.0050)	ND(0.0050)
	4/22/2010	15	2.4	0.12	0.13	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	0.047	ND(0.020)	0.075	0.098	ND(0.020)	1.8	2.2	ND(0.020)
	7/14/2010	15	0.59J	0.56J	ND(0.0050)J	ND(0.0050)J	ND(0.0050)J	ND(0.0050)J	ND(0.0050)J	0.090J	ND(0.0050)J	ND(0.0050)J	ND(0.0050)J	ND(0.0050)J	0.045J	0.024J	ND(0.0050)J
	10/12/2010	14	ND(0.0020)	0.013	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.045	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	1/5/2011	15	ND(0.0020)	0.031	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.051	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	4/5/2011	13.7	0.09	0.037	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.053	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.72	0.19	ND(0.010)
	7/28/2011	13	ND(0.0020)	0.13	ND(0.0020)	0.0031	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.14	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0023
	10/25/2011	13.5	0.12	0.73D	0.0031	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.24D	ND(0.0020)	0.0096	0.017	ND(0.0020)	0.30D	0.012	ND(0.0020)
	1/18/2012	13.5	ND(0.0020)	3.5D	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.95D	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
BW-09	4/10/2007	16	0.0036	0.18	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0040)	ND(0.0020)	0.0064	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0020)
	8/9/2007	12	0.24	0.46	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	0.42	ND(0.025)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.056	0.049	ND(0.0050)
	11/12/2007	11.8	0.014	0.22	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	0.065	ND(0.013)	ND(0.0025)	ND(0.0025)	0.0025	0.0053	0.0029	ND(0.0025)
	1/22/2008	12	0.0033	0.019	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/21/2008	12	2.2J	0.51J	0.086J	ND(0.020)J	ND(0.020)J	ND(0.040)J	ND(0.020)J	0.093J	ND(0.10)J	0.027J	0.054J	ND(0.020)J	0.52J	0.58J	ND(0.020)J
	7/28/2008	15	0.27J	1.4J	ND(0.010)J	ND(0.010)J	ND(0.010)J	ND(0.020)J	ND(0.010)J	0.094J	ND(0.050)J	ND(0.010)J	0.031J	ND(0.010)J	0.77J	0.46J	ND(0.010)J
	10/21/2008	12	ND(0.020)	0.31	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	2	ND(0.10)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.020)
	1/13/2009	15	0.17	0.22	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.25	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.16	0.019	ND(0.0025)
	4/2/2009	11	0.0022	0.015	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.19	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0024	ND(0.0020)	ND(0.0020)	ND(0.0020)
	7/14/2009	15	0.0051	0.017	ND(0.0010)	0.0024	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.14J	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0087	ND(0.0010)	ND(0.0010)	0.0013
	10/27/2009	11	ND(0.0050)	0.017	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.62	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.0072	ND(0.0050)	ND(0.0050)	ND(0.0050)
	1/28/2010	11	0.0062	0.07	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.46	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.018	ND(0.0050)	ND(0.0050)
	4/22/2010	15	0.33	0.16	0.026	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.059	ND(0.010)	ND(0.010)	0.022	ND(0.010)	1.2	1	ND(0.010)
	7/28/2011	12.5	ND(0.0040)	0.13	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	0.22	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)

Table 3
Water Quality Data - VOC Results
June 2002 - March 2012
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)	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.)	10/25/2011	12	0.0094	0.062	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.092	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	1/18/2012	12	0.012	1.1D	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	3.6D	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)
CL02-BR	6/3/2002	60	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	0.08	1.3	ND(0.020)	ND(0.020)	0.04	ND(0.010)
	6/3/2002	83	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.050)	ND(0.020)	0.11	1.3	ND(0.020)	ND(0.020)	0.22	ND(0.010)
	1/23/2003	83	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.030)	ND(0.010)	0.051	0.75	ND(0.010)	ND(0.010)	0.12	ND(0.0050)
	5/14/2003	83	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.030)	ND(0.010)	0.045	0.65	ND(0.010)	ND(0.010)	0.075	ND(0.0050)
	12/18/2003	83	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	0.58	ND(0.0050)
	5/2/2004	82	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.06	0.3	ND(0.0050)	ND(0.010)	0.4	ND(0.0050)
	12/29/2004	81	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	ND(0.0050)	0.012	ND(0.0050)	0.045	0.47	ND(0.0050)
	4/29/2005	81	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0050)	ND(0.013)	0.033	0.35	ND(0.0025)	ND(0.0050)	0.054	ND(0.0025)
	1/4/2006	83	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	ND(0.0050)	0.0058	ND(0.0050)	0.013	0.37	ND(0.0050)
	3/31/2006	84	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0050)	ND(0.013)	ND(0.0025)	0.026	ND(0.0025)	0.015	0.28	ND(0.0025)
	2/1/2007	82	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0050)	ND(0.013)	ND(0.0025)	0.016	ND(0.0025)	0.05	0.21	ND(0.0025)
	4/11/2007	42	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	11/14/2007	54	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0040)	ND(0.010)	ND(0.0020)	0.0073	ND(0.0020)	0.044	0.25	0.0024
	4/24/2008	43	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0040)	ND(0.010)	0.026	0.2	ND(0.0020)	ND(0.0040)	0.17	ND(0.0020)
	10/23/2008	42	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0050)	ND(0.013)	ND(0.0025)	0.074	ND(0.0025)	0.017	0.27	ND(0.0025)
	4/27/2009	42	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	0.011J	0.086J	ND(0.0020)J	ND(0.0020)J	0.16J	ND(0.0020)J
	10/26/2009	75	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.039	0.2	ND(0.0020)
	4/21/2010	42	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.084	0.15	ND(0.0020)
	10/18/2010	42	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0038	0.0033	ND(0.0020)
	10/24/2011	42	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0097	0.035	ND(0.0020)
CL03-BR	6/3/2002	95	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.20)	2.5	21	ND(0.20)	ND(0.20)	8.8	ND(0.10)
	6/3/2002	111	ND(0.10)	ND(0.10)	0.1	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.20)	3.3	32E	ND(0.20)	ND(0.20)	14	ND(0.10)
	1/29/2003	111	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.006	0.003	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	5/14/2003	111	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	12/18/2003	111	ND(0.0010)	0.0055	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/29/2005	111	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0059	0.0026	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	3/29/2006	111	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0054	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/14/2007	111	ND(0.0010)	0.004	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.034	0.014	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/24/2008	109	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.015	0.01	ND(0.0010)	ND(0.0020)	ND(0.0010)	0.0031
CL03-DO	6/3/2002	80	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.20)	4.5	30	ND(0.20)	ND(0.20)	12	ND(0.10)
	1/29/2003	80	ND(0.0020)	0.016	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	5/14/2003	80	ND(0.0020)	0.026	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	12/18/2003	80	ND(0.0010)	0.02	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	5/1/2004	78	ND(0.0010)	0.034	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/29/2005	77	ND(0.0010)	0.029	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	3/29/2006	80	ND(0.0010)	0.036	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/14/2007	80	ND(0.025)	0.032	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.050)	ND(0.025)	ND(0.025)	ND(0.050)	ND(0.13)	0.49	3.1	ND(0.025)	ND(0.050)	2.5	0.19
	11/14/2007	77	ND(0.0010)	0.036	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.008	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/24/2008	78	ND(0.0010)	0.037	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	10/20/2008	79	ND(0.0010)	0.035	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/2/2009	75	ND(0.0010)	0.033	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	10/27/2009	75	ND(0.010)	0.057	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.43	0.23	ND(0.010)	ND(0.010)	0.072	ND(0.010)
	4/20/2010	79	ND(0.0010)	0.035	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.083	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	10/14/2010	76	ND(0.0020)	0.036	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.028	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	4/4/2011	75	ND(0.0020)	0.03	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.069	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	10/27/2011	79	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0089	ND(0.0020)	ND(0.0020)	0.0034	ND(0.0020)
CL03-S	6/3/2002	20	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.004	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	1/29/2003	20	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.004	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	5/14/2003	20	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.005	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	12/17/2003	20	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0017	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	5/1/2004	20	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/29/2005	19	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.004	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	3/29/2006	18	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0036	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/14/2007	20	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0026	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)

Table 3
Water Quality Data - VOC Results
June 2002 - March 2012
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)	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)
CL03-S (Cont.)	4/24/2008	18	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0025	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	10/20/2008	18	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.002	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/20/2010	19	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0022	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	4/4/2011	18	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0038	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
CL04-BR	6/3/2002	40	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.055	0.065	ND(0.0020)	ND(0.0020)	0.094	ND(0.0020)
	6/3/2002	55	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.023	0.04	ND(0.0020)	ND(0.0020)	0.089	ND(0.0020)
	5/14/2003	55	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.04	0.03	ND(0.0020)	ND(0.0020)	0.16	ND(0.0020)
	12/16/2003	55	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.018	0.022	ND(0.0010)	0.0036	0.13	ND(0.0010)
	4/26/2004	55	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.015	0.013	ND(0.0010)	ND(0.0020)	0.076	ND(0.0010)
	4/28/2005	55	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0035	0.0071	ND(0.0010)	ND(0.0020)	0.046	ND(0.0010)
	3/28/2006	57.8	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0011	0.01	ND(0.0010)	0.0032	0.043	ND(0.0010)
	4/11/2007	55	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.008	ND(0.0010)	ND(0.0020)	0.021	ND(0.0010)
	4/21/2008	54	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0020)J	ND(0.0050)J	ND(0.0010)J	0.0059J	ND(0.0010)J	ND(0.0020)J	0.016J	ND(0.0010)J
	4/3/2009	54	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0045	ND(0.0010)	ND(0.0010)	0.017	ND(0.0010)
	4/21/2010	54	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0048	ND(0.0010)	0.0014	0.023	ND(0.0010)
	4/6/2011	54	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.023	ND(0.0020)
CL04-DO	6/3/2002	28	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.005	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	5/14/2003	28	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.012	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	12/16/2003	28	ND(0.0010)	0.0019	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0041	ND(0.0010)	ND(0.0020)	0.0034	ND(0.0010)
	4/26/2004	28	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.021	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/28/2005	28	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.019	ND(0.0010)	ND(0.0020)	0.0011	ND(0.0010)
	3/28/2006	27.8	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0011	0.0063	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/11/2007	29	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0072	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/21/2008	28	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0020)J	ND(0.0050)J	0.0018J	0.020J	ND(0.0010)J	ND(0.0020)J	0.0017J	ND(0.0010)J
	4/3/2009	27	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0015	0.019	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	4/21/2010	28	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0014	0.0083	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	4/6/2011	27	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.015	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
CL05-DOA	6/3/2002	40	3.4	0.7	0.5	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.20)	64D	140D	ND(0.20)	ND(0.20)	3.7	ND(0.10)
	6/3/2002	55	4	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(2.0)	75	200	ND(2.0)	ND(2.0)	5	ND(1.0)
	1/29/2003	55	10	0.1	ND(0.10)	ND(0.10)	0.6	ND(0.10)	0.2	ND(0.50)	ND(0.20)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.20)	ND(0.10)	ND(0.10)
	5/13/2003	55	4.3	0.1	ND(0.020)	ND(0.020)	0.31	ND(0.020)	0.09	ND(0.10)	ND(0.040)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.040)	ND(0.020)	ND(0.020)
	12/15/2003	55	7.3	ND(0.050)	ND(0.050)	ND(0.050)	0.64	ND(0.10)	ND(0.050)	ND(0.10)	ND(0.25)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.10)	ND(0.050)	ND(0.050)
	5/2/2004	51	1.5	ND(0.020)	ND(0.020)	ND(0.020)	0.14	ND(0.040)	0.036	ND(0.040)	ND(0.10)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.020)
	4/27/2005	51	0.068	0.011	ND(0.0010)	ND(0.0010)	0.0052	ND(0.0020)	0.0041	ND(0.0020)	ND(0.0050)	0.018	0.028	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	3/31/2006	52	0.018	0.006	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0021	ND(0.0020)	ND(0.0050)	0.053	0.087	ND(0.0010)	ND(0.0020)	0.015	ND(0.0010)
	4/13/2007	43	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/23/2008	42	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/3/2009	49	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	4/20/2010	42	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
CL06-BR	5/15/2003	60	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	12/29/2003	70	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/25/2008	69	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/2/2009	69	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	4/22/2010	69	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	4/4/2011	68	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
CL06-DO	5/15/2003	34	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	12/29/2003	44	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/25/2008	43	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/2/2009	43	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	4/22/2010	43	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	4/4/2011	41	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)

Table 3
Water Quality Data - VOC Results
June 2002 - March 2012
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)	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)
CL08-BR_ZONE1	1/5/2005	159	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0011	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	1/4/2006	159	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/16/2007	159	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/25/2008	159	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/7/2009	159	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	4/28/2010	159	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0028	0.0038	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	4/14/2011	159	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
CL08-BR_ZONE2	1/5/2005	102	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	1/4/2006	102	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/16/2007	102	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/25/2008	102	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/7/2009	102	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	4/28/2010	102	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	4/14/2011	102	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
CL08-BR_ZONE3	1/5/2005	70	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	1/4/2006	70	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/16/2007	70	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/25/2008	70	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0012	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/7/2009	70	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0011	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	4/28/2010	70	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.001	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	4/14/2011	70	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
CL08-DO	12/23/2003	76	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0047	ND(0.0010)	ND(0.0020)	0.0022	ND(0.0010)
	1/4/2005	53	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0016	ND(0.0010)	ND(0.0020)	0.0014	ND(0.0010)
	1/4/2006	53	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0017	ND(0.0010)	ND(0.0020)	0.0016	ND(0.0010)
	4/15/2007	53	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0015	ND(0.0010)	ND(0.0020)	0.0014	ND(0.0010)
	4/25/2008	58	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0016	ND(0.0010)	ND(0.0020)	0.0019	ND(0.0010)
	4/6/2009	51	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0012	ND(0.0010)	ND(0.0010)	0.0013	ND(0.0010)
	4/22/2010	52	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0013	ND(0.0010)	ND(0.0010)	0.0011	ND(0.0010)
	4/6/2011	51	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
CL09-BR_ZONE1	5/16/2003	160	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.30)	ND(0.10)	2.8	5.2	ND(0.10)	ND(0.10)	1.7	ND(0.050)
	12/19/2003	160	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	0.76	1.6	ND(0.020)	0.1	1.3	ND(0.020)
	5/3/2004	160	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.050)	ND(0.025)	ND(0.050)	ND(0.13)	1	1.8	ND(0.025)	0.21	1.6	ND(0.025)
	1/4/2005	160	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	0.86	1.1	ND(0.020)	0.17	2.2	ND(0.020)
	5/3/2005	160	ND(0.020)	ND(0.020)	0.022	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	0.56	1	ND(0.020)	0.57	2.6	ND(0.020)
	1/5/2006	160	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	1.9	2.8	ND(0.020)	0.14	1.2	ND(0.020)
	4/3/2006	160	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.050)	ND(0.025)	ND(0.050)	ND(0.13)	0.38	0.86	ND(0.025)	0.38	3.2	ND(0.025)
	4/12/2007	160	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.10)	ND(0.050)	ND(0.10)	ND(0.25)	0.69	1.8	ND(0.050)	0.18	4.6	ND(0.050)
	11/15/2007	160	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.10)	ND(0.20)	ND(0.50)	0.69	1.2	ND(0.10)	0.33	10	ND(0.10)
	2/6/2008	160	ND(0.025)J	ND(0.025)J	ND(0.025)J	ND(0.025)J	ND(0.025)J	ND(0.050)J	ND(0.025)J	ND(0.050)J	ND(0.13)J	0.59J	0.73J	ND(0.025)J	ND(0.050)J	2.4J	ND(0.025)J
	4/23/2008	160	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	1.8	2.6	ND(0.020)	ND(0.040)	0.51	ND(0.020)
	10/23/2008	160	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.10)	ND(0.050)	ND(0.10)	ND(0.25)	0.66	1.3	ND(0.050)	0.18	5.7	ND(0.050)
	4/6/2009	160	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	1.3	2.2	ND(0.025)	ND(0.025)	0.4	ND(0.025)
	11/2/2009	160	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.58	1.1	ND(0.010)	0.069	1	ND(0.010)
	4/21/2010	160	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	0.7	1.7	ND(0.050)	ND(0.050)	5.7	ND(0.050)
	11/15/2010	160	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	0.62	1.1	ND(0.10)	0.13	11D	ND(0.10)
	4/14/2011	160	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	0.97	1.8	ND(0.020)	0.086	1.8	ND(0.020)
	10/24/2011	160	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	0.83	2.0D	ND(0.020)	ND(0.020)	1	ND(0.020)
CL09-BR_ZONE2	6/3/2002	119	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.30)	ND(0.10)	0.24	0.5	ND(0.10)	0.2	4.4	ND(0.050)
	5/16/2003	119	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.30)	ND(0.10)	0.34	0.86	ND(0.10)	0.8	6.4	ND(0.050)
	12/19/2003	119	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.050)	ND(0.025)	ND(0.050)	ND(0.13)	0.49	0.85	ND(0.025)	0.58	2.4	ND(0.025)
	5/3/2004	119	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.10)	ND(0.050)	ND(0.10)	ND(0.25)	0.36	0.63	ND(0.050)	0.76	3.7	ND(0.050)
	1/4/2005	119	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	0.011	ND(0.020)	ND(0.050)	0.049	0.063	ND(0.010)	0.099	0.77	ND(0.010)
	5/3/2005	119	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.10)	ND(0.050)	ND(0.10)	ND(0.25)	0.34	0.62	ND(0.050)	0.68	3.6	ND(0.050)
	1/5/2006	119	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.050)	ND(0.025)	ND(0.050)	ND(0.13)	0.38	0.86	ND(0.025)	0.4	2.7	ND(0.025)

Table 3
Water Quality Data - VOC Results
June 2002 - March 2012
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)	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_ZONE2 (Cont.)	4/3/2006	119	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.050)	ND(0.025)	ND(0.050)	ND(0.13)	0.34	1	ND(0.025)	0.31	2.9	ND(0.025)
	4/12/2007	119	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	1	2	ND(0.020)	0.29	2.6	ND(0.020)
	11/15/2007	119	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.10)	ND(0.20)	ND(0.50)	0.62	1.2	ND(0.10)	0.34	11	ND(0.10)
	2/6/2008	119	ND(0.020)J	ND(0.020)J	ND(0.020)J	ND(0.020)J	ND(0.020)J	ND(0.040)J	ND(0.020)J	ND(0.040)J	ND(0.10)J	0.45J	0.76J	ND(0.020)J	0.19J	2.0J	ND(0.020)J
	4/23/2008	119	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.10)	ND(0.050)	ND(0.10)	ND(0.25)	0.59	1.2	ND(0.050)	0.28	3.5	ND(0.050)
	10/23/2008	119	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.10)	ND(0.050)	ND(0.10)	ND(0.25)	0.61	1.4	ND(0.050)	0.19	5.8	ND(0.050)
	4/6/2009	119	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	0.81	1.5	ND(0.050)	0.12	5.9	ND(0.050)
	11/2/2009	119	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	0.43	0.94	ND(0.025)	0.078	2.9	ND(0.025)
	4/21/2010	119	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	0.68	1.3	ND(0.050)	0.084	5.2	ND(0.050)
	11/15/2010	119	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	0.42	0.75	ND(0.10)	0.12	7.7	ND(0.10)
	4/14/2011	119	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	0.42	0.76	ND(0.10)	0.14	9.8	ND(0.10)
	10/24/2011	119	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	0.33	1	ND(0.050)	0.067	2.7	ND(0.050)
CL09-BR_ZONE3	6/3/2002	81	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.30)	ND(0.10)	0.09	0.13	ND(0.10)	0.9	7.2	ND(0.050)
	5/16/2003	81	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	0.28	0.4	ND(0.020)	2.5D	0.77	ND(0.010)
	12/19/2003	81	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.10)	ND(0.050)	ND(0.10)	ND(0.25)	ND(0.050)	ND(0.050)	ND(0.050)	1.2	5.4	ND(0.050)
	5/3/2004	81	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	0.079	0.16	ND(0.020)	0.91	2.4	ND(0.020)
	1/4/2005	81	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	0.11	0.15	ND(0.020)	1.4	0.26	ND(0.020)
	5/3/2005	81	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	0.039	0.076	ND(0.020)	1.6	1.1	ND(0.020)
	1/5/2006	81	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.015	0.04	ND(0.0050)	0.65	0.41	ND(0.0050)
	4/3/2006	81	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.10)	ND(0.050)	ND(0.10)	ND(0.25)	0.15	0.46	ND(0.050)	0.76	6.2	ND(0.050)
	4/12/2007	81	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.10)	ND(0.050)	ND(0.10)	ND(0.25)	0.46	1.4	ND(0.050)	0.1	3.8	ND(0.050)
	11/15/2007	81	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.10)	ND(0.20)	ND(0.50)	0.67	1.2	ND(0.10)	0.37	10	ND(0.10)
	2/6/2008	81	ND(0.013)J	ND(0.013)J	ND(0.013)J	ND(0.013)J	ND(0.013)J	ND(0.025)J	ND(0.013)J	ND(0.025)J	ND(0.063)J	0.21J	0.51J	ND(0.013)J	ND(0.025)J	1.4DJ	0.014J
	4/23/2008	81	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.10)	ND(0.050)	ND(0.10)	ND(0.25)	0.53	1	ND(0.050)	0.17	4	ND(0.050)
	10/23/2008	81	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.10)	ND(0.20)	ND(0.50)	0.53	1	ND(0.10)	0.2	7.2	ND(0.10)
	4/6/2009	81	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	0.56	0.84	ND(0.050)	0.11	6.3	ND(0.050)
	11/2/2009	81	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.21	0.29	ND(0.0050)	0.75	0.62	ND(0.0050)
	4/21/2010	81	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	0.24	0.36	ND(0.050)	ND(0.050)	5.9	ND(0.050)
	11/15/2010	81	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	0.22	0.33	ND(0.040)	0.75	4.1D	ND(0.040)
	4/14/2011	81	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.048	0.036	ND(0.010)	0.063	0.98	0.016
	10/24/2011	81	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.05	0.09	ND(0.010)	1.2D	1.2D	0.014
CL09-DO	6/3/2002	36	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	1/28/2003	36	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	5/15/2003	36	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	12/17/2003	36	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.007	0.0079	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	5/1/2004	33	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0037	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	5/2/2005	33	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0020)J	ND(0.0050)J	0.0072J	0.016J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0010)J
	4/7/2006	31	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0015	0.0044	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/12/2007	36	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0017	0.0057	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/24/2008	34	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.021	0.029	ND(0.0010)	ND(0.0020)	0.0057	ND(0.0010)
	4/2/2009	35	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.015	0.037	ND(0.0010)	ND(0.0010)	0.0012	ND(0.0010)
	4/21/2010	35	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.024	0.061	ND(0.0010)	ND(0.0010)	0.0024	ND(0.0010)
	4/4/2011	32	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)J	ND(0.0020)	ND(0.0020)
CL09-S	6/3/2002	15	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.002	ND(0.0020)	ND(0.0020)	0.006	ND(0.0020)
	5/1/2004	15	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0013	ND(0.0010)
	9/24/2009	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
CL10-BR	6/3/2002	47	ND(0.010)	ND(0.010)	0.01	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	0.57	0.93	ND(0.020)	ND(0.020)	2.3	ND(0.010)
	5/14/2003	47	ND(0.0020)	ND(0.0020)	0.003	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.16	0.25	ND(0.0040)	ND(0.0040)	0.50D	0.004
	12/16/2003	47	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	ND(0.010)	0.051	ND(0.010)	ND(0.020)	0.73	ND(0.010)
	4/26/2004	47	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.083	0.13	ND(0.0050)	ND(0.010)	0.5	ND(0.0050)
	12/30/2004	46	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0050)	ND(0.013)	ND(0.0025)	0.0064	ND(0.0025)	ND(0.0050)	0.34	ND(0.0025)
	4/28/2005	46	0.0058	0.0055	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	0.0013	ND(0.0020)	ND(0.0010)	ND(0.0010)
	3/28/2006	44.5	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	1/31/2007	47	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/10/2007	47	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0016	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)

Table 3
Water Quality Data - VOC Results
June 2002 - March 2012
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)	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-BR (Cont.)	11/13/2007	46	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/21/2008	46	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0020)J	ND(0.0050)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0010)J
	10/21/2008	46	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0014	0.0016	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/6/2009	44	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0011	0.0023	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	10/27/2009	44	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	4/20/2010	46	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	10/14/2010	45	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	4/5/2011	44	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	10/25/2011	46	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0036	ND(0.0020)	ND(0.0020)	0.0027	ND(0.0020)
CL10-BR2	4/27/2004	98	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0092	ND(0.0010)
	4/27/2004	115	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0028	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0084	ND(0.0010)
CL10-DO	6/3/2002	37	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.30)	ND(0.10)	3	6.5	ND(0.10)	ND(0.10)	0.07	ND(0.050)
	5/14/2003	37	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.20)	9.2	16	ND(0.20)	ND(0.20)	2.9	ND(0.10)
	12/16/2003	37	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	0.8	1.4	ND(0.020)	ND(0.040)	0.03	ND(0.020)
	4/26/2004	32	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.10)	ND(0.20)	ND(0.50)	10	10	ND(0.10)	ND(0.20)	1.4	ND(0.10)
	12/30/2004	33	0.0033	0.0019	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/28/2005	31	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0026	0.0039	ND(0.0010)	ND(0.0020)	0.098	ND(0.0010)
	3/28/2006	32.2	0.0059	0.0055	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	0.0012	ND(0.0020)	ND(0.0010)	ND(0.0010)
	1/31/2007	37	0.0034	0.0021	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/10/2007	37	0.004	0.004	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	0.0012	ND(0.0020)	ND(0.0010)	ND(0.0010)
	11/13/2007	36	0.0031	0.0018	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/25/2008	36	0.0054	0.0056	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	0.0022	ND(0.0020)	ND(0.0010)	ND(0.0010)
	10/21/2008	36	0.0024	0.002	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/6/2009	30	0.0026	0.0022	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	10/27/2009	30	0.0021	0.0019	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	4/20/2010	36	0.0045	0.0041	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0016	ND(0.0010)	ND(0.0010)	ND(0.0010)
	10/14/2010	31	ND(0.0020)	0.0021	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	4/5/2011	30	ND(0.0020)	0.0027	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	10/27/2011	36	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
CL10-S	6/25/2002	16	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.65	0.21	ND(0.0020)	ND(0.0020)	0.034	ND(0.0020)
	5/14/2003	16	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.030)	ND(0.025)	0.70D	0.49	ND(0.010)	ND(0.010)	0.078	ND(0.0050)
	12/16/2003	16	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.086	0.0081	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/26/2004	16	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	1.2	0.23	ND(0.010)	ND(0.020)	0.065	ND(0.010)
	12/30/2004	14	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.32	0.041	ND(0.0050)	ND(0.010)	0.017	ND(0.0050)
	4/28/2005	15	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	1.3	0.19	ND(0.010)	ND(0.020)	0.085	ND(0.010)
	3/28/2006	13.9	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	1.1	0.12	ND(0.010)	ND(0.020)	0.044	ND(0.010)
	10/19/2006	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.044	0.003	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	1/31/2007	16	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.38	0.027	ND(0.0050)	ND(0.010)	0.0095	ND(0.0050)
	4/10/2007	16	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	1.3	0.12	ND(0.010)	ND(0.020)	0.056	ND(0.010)
	11/13/2007	13	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.023	0.0019	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/21/2008	15	ND(0.020)J	ND(0.020)J	ND(0.020)J	ND(0.020)J	ND(0.020)J	ND(0.040)J	ND(0.020)J	ND(0.040)J	ND(0.10)J	2.2J	0.24J	ND(0.020)J	ND(0.040)J	0.095J	ND(0.020)J
	10/21/2008	15	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.014	0.0066	ND(0.0010)	ND(0.0020)	0.0019	ND(0.0010)
	4/6/2009	13	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	1.4	0.12	ND(0.020)	ND(0.020)	0.048	ND(0.020)
	10/27/2009	13	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0064	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	4/21/2010	15	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.64	0.041	ND(0.0050)	ND(0.0050)	0.024	ND(0.0050)
	10/14/2010	13	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.013	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	4/5/2011	13	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.87	0.032	ND(0.010)	ND(0.010)	0.017	ND(0.010)
	10/25/2011	15	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.045	0.0027	ND(0.0020)	ND(0.0020)	0.0096	ND(0.0020)
CL11-DO	4/11/2007	49	0.051	0.086	0.042	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.012	0.095	ND(0.0010)	ND(0.0020)	0.0028	ND(0.0010)
	4/23/2008	50	0.029	0.053	0.03	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.01	0.079	ND(0.0010)	ND(0.0020)	0.0025	ND(0.0010)
	4/3/2009	49	0.019	0.034	0.021	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0096	0.07	ND(0.0010)	ND(0.0010)	0.0016	ND(0.0010)
	4/20/2010	50	0.011	0.024	0.017	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0096	0.067	ND(0.0010)	ND(0.0010)	0.0013	ND(0.0010)
	4/6/2011	49.5	0.0087J	0.021J	0.019J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	0.0076J	0.067J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J

Table 3
Water Quality Data - VOC Results
June 2002 - March 2012
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)	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)
CL11-S	4/11/2007	23	0.014	0.0063	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0056	0.0046	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/23/2008	24	0.016	0.0071	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.013	0.0064	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/3/2009	24	0.011	0.0029	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.011	0.005	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	4/20/2010	24	0.01	0.0026	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.014	0.0061	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	4/6/2011	23.4	0.0057J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	0.0086J	0.0037J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J
CL12-S1	6/3/2002	25	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.003	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	2/26/2003	25	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.004	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	5/15/2003	25	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.003	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	12/17/2003	25	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	5/1/2004	24	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0046	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/29/2005	23	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0049	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	3/28/2006	22	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0035	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/14/2007	25	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0037	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/24/2008	23	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0013	0.0041	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/2/2009	22	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0031	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
CL13-BR	12/22/2003	80	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	12/22/2003	105	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	12/30/2004	80	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	12/30/2004	101	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
CULVERT_OUTFALL	5/15/2003	NA	ND(0.0020)	0.002	0.003	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.019	0.096	ND(0.0020)	ND(0.0020)	0.071	ND(0.0020)
	12/22/2003	NA	ND(0.0010)	0.0019	0.0019	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.02	0.091	ND(0.0010)	ND(0.0020)	0.063	ND(0.0010)
	1/4/2005	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0013	ND(0.0010)	ND(0.0020)	0.0018	ND(0.0010)
	1/4/2006	NA	ND(0.0010)	0.0013	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.019	0.082	ND(0.0010)	ND(0.0020)	0.059	ND(0.0010)
	4/15/2007	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0046	0.024	ND(0.0010)	ND(0.0020)	0.018	ND(0.0010)
	4/25/2008	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0088	0.04	ND(0.0010)	ND(0.0020)	0.034	ND(0.0010)
	4/3/2009	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.016	0.077	ND(0.0010)	ND(0.0010)	0.064	ND(0.0010)
	4/28/2010	NA	ND(0.0010)	0.0011	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.016	0.075	ND(0.0010)	ND(0.0010)	0.074	ND(0.0010)
GZ-1	8/26/2002	NA	ND(0.0020)	0.002	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.004	0.024	ND(0.0020)	ND(0.0020)	0.014	ND(0.0020)
	9/18/2002	NA	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.003	0.016	ND(0.0020)	ND(0.0020)	0.01	ND(0.0020)
	1/28/2003	15	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.003	0.017	ND(0.0020)	ND(0.0020)	0.004	ND(0.0020)
	5/14/2003	15	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.003	0.019	ND(0.0020)	ND(0.0020)	0.006	ND(0.0020)
	12/23/2003	15	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0056	ND(0.0010)	ND(0.0020)	0.0031	ND(0.0010)
	5/3/2004	13	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.002	0.014	ND(0.0010)	ND(0.0020)	0.0031	ND(0.0010)
	4/29/2005	13	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0016	0.013	ND(0.0010)	ND(0.0020)	0.004	ND(0.0010)
	4/7/2006	12	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0046	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/13/2007	45	0.0011	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.001	0.016	ND(0.0010)	ND(0.0020)	0.008	ND(0.0010)
	4/25/2008	14	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0064	ND(0.0010)	ND(0.0020)	0.0029	ND(0.0010)
	4/3/2009	12	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.001	0.016	ND(0.0010)	ND(0.0010)	0.0024	ND(0.0010)
	4/20/2010	14	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.002	0.022	ND(0.0010)	ND(0.0010)	0.0062	ND(0.0010)
	4/5/2011	12	0.0031	0.0044	0.0074	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.17	1.6D	ND(0.0020)	0.0029	0.62D	0.0036
GZ-2R	8/26/2002	NA	ND(0.0020)	ND(0.0020)	0.002	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.036	0.30D	ND(0.0020)	ND(0.0020)	0.27	0.003
	9/18/2002	NA	ND(0.0020)	0.002	0.003	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.04	0.18	ND(0.0020)	ND(0.0020)	0.29	0.003
	1/29/2003	14	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.006	0.04	ND(0.0020)	ND(0.0020)	0.037	ND(0.0020)
	5/14/2003	15	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.015	0.091	ND(0.0020)	ND(0.0020)	0.044	ND(0.0020)
	12/22/2003	15	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.026	0.12	ND(0.0010)	ND(0.0020)	0.057	0.0014
	5/3/2004	14	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.026	0.1	ND(0.0010)	ND(0.0020)	0.037	ND(0.0010)
	4/29/2005	11	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0071	0.08	ND(0.0010)	ND(0.0020)	0.044	ND(0.0010)
	4/7/2006	11	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.015	0.37	ND(0.0050)	ND(0.010)	0.29	ND(0.0050)
	4/13/2007	15	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0042	0.1	ND(0.0010)	ND(0.0020)	0.07	ND(0.0010)
	4/25/2008	14	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0040)	ND(0.010)	0.012	0.26	ND(0.0020)	ND(0.0040)	0.17	ND(0.0020)
	4/3/2009	10	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.0083	0.23	ND(0.0025)	ND(0.0025)	0.17	ND(0.0025)

Table 3
Water Quality Data - VOC Results
June 2002 - March 2012
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)	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)
GZ-4	8/26/2002	NA	0.002	0.006	0.006	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.075	0.30D	ND(0.0020)	0.008	0.13	ND(0.0020)
	5/3/2004	15	0.0012	0.0022	0.001	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.016	0.08	ND(0.0010)	0.0035	0.052	ND(0.0010)
	10/19/2006	NA	0.0037	0.0054	0.0016	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.016	0.094	ND(0.0010)	0.0038	0.087	ND(0.0010)
	4/13/2007	15	0.0021	0.0031	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0086	0.065	ND(0.0010)	ND(0.0020)	0.056	ND(0.0010)
	10/20/2008	14	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0013	0.019	ND(0.0010)	ND(0.0020)	0.012	ND(0.0010)
	10/26/2009	14	ND(0.0010)	0.003	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0039	0.029	ND(0.0010)	0.0016	0.045	ND(0.0010)
	4/20/2010	14	ND(0.0010)	0.0015	0.0015	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0028	0.044	ND(0.0010)	0.0037	0.069	ND(0.0010)
	10/14/2010	14	ND(0.0020)	0.0046	0.0045	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.047	0.24D	ND(0.0020)	0.0028	0.43D	0.0028
	4/5/2011	14	ND(0.0050)	0.0056	0.0072	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.097	0.78D	ND(0.0050)	0.006	0.55D	ND(0.0050)
	10/25/2011	14	ND(0.0020)	0.0027	0.002	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0037	0.003	ND(0.0020)	0.11	0.36D	0.0021
MW-001	1/31/2007	18	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/11/2007	18	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	11/13/2007	17	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/22/2008	17	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	10/23/2008	17	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/3/2009	17	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
MW-001DO	5/5/2004	56	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	1/31/2007	56	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/11/2007	56	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	11/13/2007	55	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/22/2008	55	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	10/23/2008	55	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/3/2009	55	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
MW-002	5/2/2004	35	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
MW-002R	6/3/2002	14	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.006	0.009	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	1/23/2003	14	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.003	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	5/14/2003	14	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.003	0.004	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	12/18/2003	14	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	5/2/2004	11	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/29/2005	11	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0014	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	3/31/2006	10	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/11/2007	13	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0034	0.016	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/24/2008	12	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/27/2009	13	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	0.0020J	0.0070J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J
	4/21/2010	13	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	10/12/2010	10	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	10/24/2011	9	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
MW-003R	3/5/2003	NA	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	2/1/2007	34	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0013	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/11/2007	33	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	11/13/2007	25	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/22/2008	33	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	10/20/2008	30	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0068	ND(0.0010)	0.0061	0.019	ND(0.0010)
	4/1/2009	30	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0041	ND(0.0010)
	10/26/2009	30	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0021	ND(0.0010)	0.014	0.0078	ND(0.0010)
	4/21/2010	33	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	4/4/2011	30	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)J	ND(0.0020)	ND(0.0020)
MW-004R	6/3/2002	38	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.002	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	5/14/2003	38	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.004	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	12/18/2003	38	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0045	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	5/2/2004	38	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.002	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/29/2005	37	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0045	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	3/31/2006	36	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.01	ND(0.0010)	ND(0.0020)	0.0013	ND(0.0010)
	4/11/2007	37	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0036	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/24/2008	37	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.025	ND(0.0010)	ND(0.0020)	0.0038	ND(0.0010)

Table 3
Water Quality Data - VOC Results
June 2002 - March 2012
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)	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 (Cont.)	4/27/2009	38	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	0.019J	ND(0.0010)J	ND(0.0010)J	0.0025J	ND(0.0010)J
	4/21/2010	38	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.021	ND(0.0010)	ND(0.0010)	0.0023	ND(0.0010)
	10/12/2010	35.5	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.066	ND(0.0020)	ND(0.0020)	0.0087	ND(0.0020)
	10/24/2011	35.5	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.048	ND(0.0020)	ND(0.0020)	0.0065	ND(0.0020)
MW-005R	5/2/2004	20	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.002	0.0071	ND(0.0010)	ND(0.0020)	0.0018	ND(0.0010)
	2/1/2007	16	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.004	0.011	ND(0.0010)	ND(0.0020)	0.011	ND(0.0010)
	4/11/2007	19	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0036	0.011	ND(0.0010)	ND(0.0020)	0.0073	ND(0.0010)
	11/13/2007	17	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.023	0.042	ND(0.0010)	ND(0.0020)	0.02	ND(0.0010)
	4/22/2008	21	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0055	0.017	ND(0.0010)	ND(0.0020)	0.0063	ND(0.0010)
	10/20/2008	17	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0093	0.026	ND(0.0010)	ND(0.0020)	0.011	ND(0.0010)
	4/1/2009	17	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0033	0.0086	ND(0.0010)	ND(0.0010)	0.0023	ND(0.0010)
	10/26/2009	17	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.008	0.019	ND(0.0010)	ND(0.0010)	0.011	ND(0.0010)
	4/21/2010	21	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0042	0.011	ND(0.0010)	ND(0.0010)	0.0037	ND(0.0010)
	4/4/2011	16	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.006	0.02	ND(0.0020)	ND(0.0020)J	0.0071	ND(0.0020)
MW-006R	5/2/2004	30	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0015	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
MW-007R	6/3/2002	30	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.006	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	1/23/2003	30	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	5/14/2003	30	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	12/17/2003	30	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	5/2/2004	29	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/29/2005	29	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	3/31/2006	28	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/11/2007	29	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/24/2008	28	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/2/2009	24	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	4/28/2010	29	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
MW-008	6/3/2002	20	0.11	0.01	0.02	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	0.42	1.2	ND(0.020)	0.2	2	0.04
	1/29/2003	20	2.8	0.04	0.08	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.10)	ND(0.040)	0.98	0.72	ND(0.040)	0.14	2.7	ND(0.020)
	5/12/2003	20	1.9	0.03	0.05	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.10)	ND(0.040)	1.1	3.3	ND(0.040)	0.06	4.3	ND(0.020)
	12/17/2003	20	0.092	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	ND(0.020)	ND(0.020)	ND(0.020)	0.31	2.2	ND(0.020)
	4/23/2004	17	2.5	0.082	0.046	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	0.4	1.2	ND(0.020)	0.13	2.4	0.039
	4/27/2005	18	6.1	0.089	0.051	ND(0.050)	ND(0.050)	ND(0.10)	ND(0.050)	ND(0.10)	ND(0.25)	0.098	0.26	ND(0.050)	ND(0.10)	0.92	ND(0.050)
	3/27/2006	17.1	1.7	0.055	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	0.039	0.086	ND(0.020)	0.076	1.1	ND(0.020)
	4/23/2008	19	2.8	0.18	0.096	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	ND(0.020)	0.05	ND(0.020)	0.18	0.24	ND(0.020)
	4/3/2009	17	1.3	1.3	0.066	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	0.18	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	5.1	1.5	ND(0.050)
	4/20/2010	19	3	0.38	0.15	ND(0.025	ND(0.025	ND(0.025	ND(0.025	ND(0.025	ND(0.025	0.07	0.087	ND(0.025	2.1	2.5	ND(0.025
	4/6/2011	16.9	0.92J	0.21J	0.055J	ND(0.020)J	ND(0.020)J	ND(0.020)J	ND(0.020)J	0.023J	ND(0.020)J	ND(0.020)J	ND(0.020)J	ND(0.020)J	1.3J	0.5J	ND(0.020)J
MW-009	6/13/2002	20	ND(0.010)	ND(0.010)	0.01	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	5.8D	2.2	ND(0.020)	0.03	0.62	ND(0.010)
	1/23/2003	20	0.02	0.01	0.03	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	3.8D	13D	ND(0.020)	0.06	1.3	ND(0.010)
	5/12/2003	20	0.04	0.03	0.05	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	10D	29D	ND(0.020)	0.1	2.3	ND(0.010)
	12/15/2003	20	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.10)	ND(0.050)	ND(0.10)	ND(0.25)	1.8	6	ND(0.050)	ND(0.10)	1.9	ND(0.050)
	4/23/2004	18	ND(0.25)	ND(0.25)	ND(0.25)	ND(0.25)	ND(0.25)	ND(0.50)	ND(0.25)	ND(0.50)	ND(1.3)	9.2	22N	ND(0.25)	ND(0.50)	1.9	ND(0.25)
	4/27/2005	20	ND(0.25)	ND(0.25)	ND(0.25)	ND(0.25)	ND(0.25)	ND(0.50)	ND(0.25)	ND(0.50)	ND(1.3)	18	29	ND(0.25)	ND(0.50)	1.9	ND(0.25)
	3/27/2006	20.3	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.40)	ND(0.20)	ND(0.40)	ND(1.0)	14	19	ND(0.20)	ND(0.40)	1.7	ND(0.20)
	1/30/2007	20	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.10)	ND(0.20)	ND(0.50)	0.16	0.76	ND(0.10)	ND(0.20)	9.6	0.1
	4/10/2007	20	ND(0.25)	ND(0.25)	ND(0.25)	ND(0.25)	ND(0.25)	ND(0.50)	ND(0.25)	ND(0.50)	ND(1.3)	ND(0.25)	ND(0.25)	ND(0.25)	1.3	26	0.27
	7/19/2007	21.2	0.03	0.01	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.001	0.0016	0.0016	0.016	0.021	0.019
	11/12/2007	20	0.0035	0.0018	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.017	ND(0.0020)	ND(0.0050)	0.0028	0.0078	ND(0.0010)	0.057	0.11	0.0024
	1/23/2008	20	0.001	0.0051	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.01	0.011	0.0087
	4/21/2008	20	0.0068J	0.011J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0020)J	ND(0.0050)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	0.0077J	0.014J	0.0061J
	7/28/2008	19	ND(0.0010)J	0.070J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0020)J	ND(0.0050)J	ND(0.0010)J	ND(0.0010)J	0.0026J	0.0087J	0.0091J	0.0023J
	10/21/2008	20	0.0018	0.041	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	0.0092	ND(0.0050)	ND(0.0010)	ND(0.0010)	0.0016	0.022	0.0072	ND(0.0010)
	1/14/2009	19	ND(0.0010)	0.0025	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.014	ND(0.0010)	ND(0.0010)	0.0015	ND(0.0010)	0.007	0.0061	ND(0.0010)
	4/2/2009	20	ND(0.0010)	0.003	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0099	ND(0.0010)	ND(0.0010)	0.0015	ND(0.0010)	0.0036	0.0053	ND(0.0010)

Table 3
Water Quality Data - VOC Results
June 2002 - March 2012
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)	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.)	7/14/2009	19	0.0018	0.011	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0065	0.047	0.0018	0.026	0.043	0.0018
	10/27/2009	20	ND(0.0010)	0.0028	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0056	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.005	0.0059	0.0014
	1/28/2010	20	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0023	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0035	0.0058	ND(0.0010)
	4/22/2010	19	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0044	ND(0.0010)	ND(0.0010)	0.0013	ND(0.0010)	0.0086	0.0036	ND(0.0010)
	7/14/2010	19	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	0.0025J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	0.0026J	0.0039J	ND(0.0010)J
	10/12/2010	20	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.002	0.0024	ND(0.0020)
	1/4/2011	19	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0023	ND(0.0020)	0.013	0.011	ND(0.0020)
	4/5/2011	19.8	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0028	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.003	0.0028	ND(0.0020)
	7/28/2011	19	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0056	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.03	0.023	ND(0.0020)
	10/25/2011	20	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0096	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.016	0.02	ND(0.0020)
	1/17/2012	20	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.006	ND(0.0020)	ND(0.0020)	0.0034	ND(0.0020)	0.0093	0.039	ND(0.0020)
MW-009A	6/13/2002	10	ND(0.0020)	ND(0.0020)	0.002	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.2	0.067	ND(0.0020)	0.011	0.13	ND(0.0020)
	1/23/2003	10	0.026	0.008	0.032	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.003	ND(0.010)	ND(0.010)	1.0D	1.6D	ND(0.0020)	0.093	2.6D	0.01
	5/12/2003	10	0.004	ND(0.0020)	0.014	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.3	0.41D	ND(0.0020)	0.070D	0.90D	0.006
	12/15/2003	10	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0024	0.003	ND(0.0010)	ND(0.0020)	0.003	ND(0.0010)
	4/23/2004	9	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0050)	ND(0.013)	0.15	0.28	ND(0.0025)	ND(0.0050)	0.14	ND(0.0025)
	4/27/2005	13	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.016	0.014	ND(0.0010)	ND(0.0020)	0.01	ND(0.0010)
	3/27/2006	13.5	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.062	0.084	ND(0.0010)	ND(0.0020)	0.1	ND(0.0010)
	4/10/2007	10	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0018	0.0021	ND(0.0010)	ND(0.0020)	0.0021	ND(0.0010)
	4/21/2008	13	0.034J	0.0011J	0.0022J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0020)J	ND(0.0050)J	0.094J	0.11J	ND(0.0010)J	ND(0.0020)J	0.020J	ND(0.0010)J
	10/22/2008	13	0.0013	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.011	0.015	ND(0.0010)	0.0046	0.014	ND(0.0010)
	4/3/2009	13	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	10/26/2009	13	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	4/20/2010	9	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.01	0.0084	ND(0.0010)	ND(0.0010)	0.016	ND(0.0010)
	10/12/2010	9	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	4/4/2011	13.4	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0041	0.0049	ND(0.0020)	0.0033	0.062	ND(0.0020)
	10/26/2011	13	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0049	0.012	ND(0.0020)	0.097	0.13	ND(0.0020)
MW-010	5/13/2003	40	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	5/13/2003	50	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	12/23/2003	40	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	12/23/2003	50	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
MW-013	6/3/2002	20	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.20)	3.7	9	ND(0.20)	ND(0.20)	0.3	ND(0.10)
	6/3/2002	35	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	1.8	1.1	ND(0.020)	ND(0.020)	0.18	ND(0.010)
	6/3/2002	55	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.10)	ND(0.040)	3.7	3.4	ND(0.040)	ND(0.040)	0.6	ND(0.020)
	1/27/2003	55	1.8	0.02	ND(0.020)	ND(0.020)	4.7	0.02	3.5	ND(0.10)	0.14	0.42	ND(0.020)	ND(0.040)	ND(0.040)	ND(0.020)	ND(0.020)
	5/13/2003	55	0.71	0.02	ND(0.010)	ND(0.010)	2.2	0.01	1.6	ND(0.050)	0.05	0.07	ND(0.010)	ND(0.020)	ND(0.020)	ND(0.010)	ND(0.010)
	12/16/2003	55	0.44	ND(0.010)	ND(0.010)	ND(0.010)	0.76	ND(0.020)	0.7	ND(0.020)	ND(0.050)	1.2	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.010)
	5/1/2004	40	0.26	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.47	ND(0.010)	0.26	ND(0.010)	ND(0.025)	0.022	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.0050)
	4/28/2005	55	0.03	0.0014	ND(0.0010)	ND(0.0010)	0.043	ND(0.0020)	0.042	ND(0.0020)	ND(0.0050)	0.072	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	3/31/2006	39	0.025	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.047	ND(0.0050)	0.025	ND(0.0050)	ND(0.013)	0.26	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0025)
	4/10/2007	55	0.026	ND(0.025)	ND(0.025)	ND(0.025)	0.033	ND(0.050)	0.036	ND(0.050)	ND(0.13)	2.7	2.2	ND(0.025)	ND(0.050)	ND(0.025)	ND(0.025)
	11/13/2007	39	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.10)	ND(0.20)	ND(0.50)	9.9	5.9	ND(0.10)	ND(0.20)	ND(0.10)	ND(0.10)
	4/22/2008	54	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	0.026	ND(0.040)	ND(0.10)	2.3	1.4	ND(0.020)	ND(0.040)	0.12	ND(0.020)
	4/3/2009	42	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	21	12	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)
	4/21/2010	54	1.2	ND(0.020)	ND(0.020)	ND(0.020)	2.2	ND(0.020)	0.24	ND(0.020)	ND(0.020)	0.074	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)
	10/14/2010	54	0.77D	0.0072	ND(0.0020)	ND(0.0020)	2.7D	0.014	0.30D	ND(0.0020)	0.0061	0.0037	ND(0.0020)	0.003	ND(0.0020)	ND(0.0020)	ND(0.0020)
	4/14/2011	44	0.25D	0.0041	ND(0.0020)	ND(0.0020)	0.73D	0.0076	0.17	ND(0.0020)	0.0022	0.062	0.0075	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	10/27/2011	41	0.25	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.42	0.0053	0.24	ND(0.0050)	ND(0.0050)	0.0066	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)
MW-014A	6/3/2002	61	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.004	0.47D	ND(0.0020)	ND(0.0020)	0.01	ND(0.0020)
	1/23/2003	61	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.067	ND(0.0020)	ND(0.0020)	0.012	ND(0.0020)
	5/13/2003	61	ND(0.0020)	ND(0.0020)	0.002	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.011	ND(0.0020)	ND(0.0020)	0.70D	0.002
	12/17/2003	61	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	ND(0.0050)	0.023	ND(0.0050)	ND(0.010)	0.46	ND(0.0050)
	5/1/2004	60	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0050)	ND(0.013)	ND(0.0025)	0.2	ND(0.0025)	ND(0.0050)	0.15	ND(0.0025)
	4/28/2005	60	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0034	0.1	ND(0.0010)	ND(0.0020)	0.12	ND(0.0010)
	3/31/2006	59	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0039	0.066	ND(0.0010)	ND(0.0020)	0.028	ND(0.0010)
	4/11/2007	61	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0040)	ND(0.010)	0.005	0.24	ND(0.0020)	ND(0.0040)	0.04	ND(0.0020)

Table 3
Water Quality Data - VOC Results
June 2002 - March 2012
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)	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-014A (Cont.)	4/22/2008	60	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.009	0.49	ND(0.0050)	ND(0.010)	0.057	ND(0.0050)
	4/3/2009	60	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.42	ND(0.0050)	ND(0.0050)	0.054	ND(0.0050)
	4/20/2010	60	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.007	0.44	ND(0.0050)	ND(0.0050)	0.054	ND(0.0010)
	4/4/2011	59	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.005	0.38D	ND(0.0020)	ND(0.0020)J	0.065	ND(0.0020)
MW-030	5/2/2004	19	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	1/4/2005	20	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/27/2005	20	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	12/29/2005	21	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/7/2006	19	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	2/1/2007	21	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0012	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/14/2007	21	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	11/16/2007	19	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/25/2008	20	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	10/22/2008	20	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/9/2009	20	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)
MW-032	6/25/2002	30	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.005	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	5/14/2003	30	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0010)
	12/15/2003	30	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.019	0.0025	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/26/2004	23	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.015	0.0014	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/28/2005	24	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.015	0.0014	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	3/31/2006	24	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.013	0.0012	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/11/2007	30	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.005	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)
MW-033B	6/13/2002	25	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	5/14/2003	25	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0010)
	12/17/2003	25	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/27/2004	25	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/28/2005	26	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	3/31/2006	25	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/11/2007	25	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/23/2008	24	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/9/2009	24	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	4/21/2010	24	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.019
	4/5/2011	24.8	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
MW-034	1/14/2005	NA	ND(0.010)	0.014	0.017	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	ND(0.010)	ND(0.010)	ND(0.010)	0.092	1.2	ND(0.010)
	1/4/2006	65	ND(0.010)	0.011	0.016	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.012	0.27	ND(0.010)	ND(0.020)	1.1	ND(0.010)
	4/20/2007	65	ND(0.010)	0.01	0.017	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.01	0.19	ND(0.010)	ND(0.020)	1.1	ND(0.010)
	4/24/2008	64	ND(0.010)	0.013	0.02	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.015	0.22	ND(0.010)	0.024	1	ND(0.010)
	4/9/2009	NA	ND(0.010)	ND(0.010)	0.014	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.013	0.21	ND(0.010)	0.013	1.1	ND(0.010)
	4/28/2010	64	ND(0.010)	ND(0.010)	0.013	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.11	ND(0.010)	0.014	1.1	ND(0.0010)
	4/7/2011	64	ND(0.020)J	ND(0.020)J	ND(0.020)J	ND(0.020)J	ND(0.020)J	ND(0.020)J	ND(0.020)J	ND(0.020)J	ND(0.020)J	ND(0.020)J	0.14J	ND(0.020)J	0.02J	1.2J	ND(0.020)J
MW-035	12/22/2003	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	1/4/2005	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	1/4/2006	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/15/2007	57.6	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/24/2008	56.6	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/1/2009	24	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)
MW-036	6/3/2002	30	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	6/3/2002	56	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.006	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	1/24/2003	56	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.007	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	5/15/2003	56	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.005	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0010)
	12/17/2003	56	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.001	0.0051	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	5/1/2004	53	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0014	0.0063	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/29/2005	53	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0013	0.0048	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	3/28/2006	53	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.001	0.0036	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)

Table 3
Water Quality Data - VOC Results
June 2002 - March 2012
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)	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-036 (Cont.)	4/14/2007	56	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.001	0.0053	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/22/2008	55	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0042	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/2/2009	51	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0039	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0050)
	4/20/2010	55	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.25	0.59	ND(0.0050)	ND(0.0050)	0.22	ND(0.0020)
	4/4/2011	51	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.54	1.2D	ND(0.010)	0.017	0.42	ND(0.010)
MW-104R	6/3/2002	10	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.006	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	6/3/2002	27	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.003	0.01	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
OB-04-BR	6/3/2002	80	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.004	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	6/3/2002	95	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.003	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	1/24/2003	95	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	5/14/2003	95	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0010)
	12/16/2003	95	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/27/2004	79	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/29/2005	78	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	3/28/2006	79	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/12/2007	90	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/22/2008	89	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/1/2009	89	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	4/20/2010	89	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)
	4/4/2011	77	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
OB-04-DO	6/3/2002	55	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.005	0.016	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	6/3/2002	70	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.002	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	1/24/2003	70	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.007	ND(0.0020)	ND(0.0020)	0.016	ND(0.0020)L
	5/14/2003	55	ND(0.0020)L	ND(0.0020)L	ND(0.0010)L	ND(0.0020)L	ND(0.0020)L	ND(0.0020)L	ND(0.0020)L	ND(0.010)L	ND(0.010)L	ND(0.0020)L	0.0070L	ND(0.0020)L	ND(0.0020)L	0.0040L	ND(0.0020)L
	5/14/2003	70	ND(0.0020)L	ND(0.0020)L	ND(0.0010)L	ND(0.0020)L	ND(0.0020)L	ND(0.0020)L	ND(0.0020)L	ND(0.010)L	ND(0.010)L	0.0040L	0.0090L	ND(0.0020)L	ND(0.0020)L	0.031L	ND(0.0010)
	12/16/2003	55	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0023	0.0074	ND(0.0010)	ND(0.0020)	0.012	ND(0.0010)
	12/16/2003	70	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0043	0.011	ND(0.0010)	ND(0.0020)	0.016	ND(0.0010)
	4/27/2004	68	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.016	0.033	ND(0.0010)	ND(0.0020)	0.0086	ND(0.0010)
	4/29/2005	68	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.025	0.05	ND(0.0010)	ND(0.0020)	0.007	ND(0.0010)
	3/28/2006	68	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.024	0.057	ND(0.0010)	ND(0.0020)	0.0074	ND(0.0010)
	4/12/2007	70	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.032	0.062	ND(0.0010)	ND(0.0020)	0.014	ND(0.0010)
	4/22/2008	69	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0014	0.0044	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/1/2009	69	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.035	0.07	ND(0.0010)	ND(0.0010)	0.038	ND(0.0010)
	4/20/2010	69	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.054	0.1	ND(0.0010)	ND(0.0010)	0.027	ND(0.0020)
	4/4/2011	67	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.04	0.094	ND(0.0020)	ND(0.0020)	0.043	ND(0.0020)
OB-04-S	6/3/2002	25	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.003	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	1/24/2003	25	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.004	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	5/14/2003	25	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0010)
	12/16/2003	25	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.006	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/27/2004	24	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0042	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/29/2005	24	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	3/28/2006	23	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0011	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/22/2008	24	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/1/2009	23	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0016	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	9/24/2009	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0022	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	4/20/2010	24	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.10)
	4/4/2011	23	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
OB-05-BR	6/3/2002	95	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.20)	0.3	3.3	ND(0.20)	ND(0.20)	9	ND(0.10)
	6/3/2002	110	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.20)	0.3	3.2	ND(0.20)	ND(0.20)	9.1	ND(0.050)
	1/24/2003	110	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.30)	ND(0.10)	0.08	0.14	ND(0.10)	ND(0.10)	5.2	ND(0.020)
	5/14/2003	110	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.10)	ND(0.040)	ND(0.020)	0.05	ND(0.040)	ND(0.040)	4.3	ND(0.025)
	12/16/2003	110	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.050)	ND(0.025)	ND(0.050)	ND(0.13)	ND(0.025)	ND(0.025)	ND(0.025)	0.11	2.5	ND(0.020)
	4/27/2004	105	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	0.029	0.19	ND(0.020)	0.23	2.4	ND(0.0050)

Table 3
Water Quality Data - VOC Results
June 2002 - March 2012
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)	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-05-BR (Cont.)	12/30/2004	95	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.49	0.48	ND(0.010)
	4/29/2005	105	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	ND(0.010)	ND(0.010)	ND(0.010)	1.3	0.049	ND(0.010)
	1/4/2006	110	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	ND(0.010)	ND(0.010)	ND(0.010)	0.77	0.079	ND(0.0050)
	3/29/2006	107	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.43	0.059	ND(0.020)
	2/1/2007	105	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	ND(0.020)	ND(0.020)	ND(0.020)	1.3	1	ND(0.0050)
	4/12/2007	110	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.72	0.39	ND(0.0050)
	11/14/2007	100	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.43	0.12	ND(0.0010)
	4/22/2008	109	ND(0.0010)	0.0012	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.12	0.064	ND(0.0010)
	4/1/2009	106	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.084	0.036	ND(0.0010)
	10/26/2009	104	ND(0.0010)	0.0013	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.067	0.026	ND(0.010)
	4/20/2010	109	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.24	1.2	ND(0.0050)
	10/12/2010	109	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.41	0.48	ND(0.010)
	4/4/2011	104	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	0.004	ND(0.0040)	0.22	0.032	ND(0.0040)
	10/24/2011	109	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0042	ND(0.0020)	0.086	0.013	ND(0.0020)
OB-05-DO	6/3/2002	75	ND(0.010)	0.01	0.01	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	0.13	1.9	ND(0.020)	ND(0.020)	0.88	ND(0.010)
	6/3/2002	86	ND(0.010)	0.01	0.01	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	0.29	2.1	ND(0.020)	ND(0.020)	0.64	ND(0.0050)
	1/24/2003	86	ND(0.0050)	ND(0.0050)	0.006	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.030)	ND(0.010)	0.052	0.44	ND(0.010)	ND(0.010)	0.83	ND(0.0020)
	5/14/2003	86	ND(0.0020)	0.007	0.007	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.043	0.51	ND(0.0040)	ND(0.0040)	0.29	ND(0.0025)
	12/16/2003	86	ND(0.0025)	0.0046	0.0039	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0050)	ND(0.013)	0.047	0.27	ND(0.0025)	ND(0.0050)	0.13	ND(0.0025)
	4/27/2004	83	ND(0.0025)	0.0047	0.004	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0050)	ND(0.013)	0.089	0.33	ND(0.0025)	ND(0.0050)	0.12	ND(0.0025)
	12/30/2004	70	ND(0.0025)	0.0048	0.0045	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0050)	ND(0.013)	0.074	0.35	ND(0.0025)	ND(0.0050)	0.094	ND(0.0050)
	4/29/2005	85	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.11	0.44	ND(0.0050)	ND(0.010)	0.096	ND(0.0025)
	1/4/2006	86	ND(0.0025)	0.0032	0.0029	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0050)	ND(0.013)	0.083	0.29	ND(0.0025)	ND(0.0050)	0.073	ND(0.0025)
	3/29/2006	83	ND(0.0025)	0.0042	0.0031	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0050)	ND(0.013)	0.08	0.32	ND(0.0025)	ND(0.0050)	0.077	ND(0.0050)
	2/1/2007	82	ND(0.0050)	0.01	0.011	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.1	0.41	ND(0.0050)	ND(0.010)	0.098	ND(0.0050)
	4/12/2007	86	ND(0.0050)	0.012	0.014	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.12	0.43	ND(0.0050)	ND(0.010)	0.098	ND(0.0025)
	11/14/2007	82	ND(0.0025)	0.008	0.0087	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0050)	ND(0.013)	0.074	0.28	ND(0.0025)	ND(0.0050)	0.086	ND(0.0050)
	4/22/2008	85	ND(0.0050)	0.014	0.016	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.12	0.44	ND(0.0050)	ND(0.010)	0.13	ND(0.0050)
	4/1/2009	81	ND(0.0050)	0.014	0.014	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.13	0.47	ND(0.0050)	ND(0.0050)	0.11	ND(0.0050)
	10/26/2009	81	ND(0.0050)	0.011	0.0096	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.16	0.69	ND(0.0050)	ND(0.0050)	0.23	ND(0.010)
	4/20/2010	85	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.52	1.4	ND(0.010)	ND(0.010)	0.4	ND(0.040)
	10/12/2010	81.5	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	0.47	1.9	ND(0.040)	ND(0.040)	0.48	ND(0.0020)
	4/4/2011	81	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	0.87	3.0D	ND(0.020)	ND(0.020)J	0.76	ND(0.020)
	10/24/2011	81	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.99	2.7D	ND(0.010)	0.026	1.0D	ND(0.010)
OB-05-S	6/3/2002	30	ND(0.0020)	0.004	0.003	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.005	0.031	ND(0.0020)	ND(0.0020)	0.007	ND(0.0020)
	9/18/2002	NA	ND(0.0020)	0.005	0.004	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.003	0.011	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	2/20/2003	30	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.005	0.023	ND(0.0020)	ND(0.0020)	0.004	ND(0.0020)
	5/14/2003	30	ND(0.0020)	ND(0.0020)	0.002	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.01	0.056	ND(0.0020)	ND(0.0020)	0.01	ND(0.0010)
	12/16/2003	30	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0016	0.0056	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/27/2004	27	ND(0.0010)	0.002	0.0019	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.011	0.043	ND(0.0010)	ND(0.0020)	0.0063	ND(0.0010)
	4/29/2005	26	ND(0.0010)	0.0037	0.0033	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.018	0.073	ND(0.0010)	ND(0.0020)	0.011	ND(0.0010)
	3/29/2006	25	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.006	0.025	ND(0.0010)	ND(0.0020)	0.0033	ND(0.0020)
	4/11/2007	15	ND(0.0020)	0.0024	0.003	ND(0.0020)	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0040)	ND(0.010)	0.07	0.26	ND(0.0020)	ND(0.0040)	0.088	ND(0.0010)
	4/12/2007	30	ND(0.0010)	0.0012	0.001	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0023	ND(0.0020)	ND(0.0050)	0.0053	0.02	ND(0.0010)	ND(0.0020)	0.0033	ND(0.0010)
	4/22/2008	29	ND(0.0010)	0.0012	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0068	ND(0.0020)	ND(0.0050)	0.015	0.051	ND(0.0010)	ND(0.0020)	0.011	ND(0.0010)
	10/20/2008	25	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0011	0.0028	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/1/2009	25	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.002	0.0068	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	10/26/2009	25	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0019	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	4/20/2010	29	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0043	0.014	ND(0.0010)	ND(0.0010)	0.0028	ND(0.0020)
	10/12/2010	25	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0043	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)
	4/4/2011	25	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0022	0.0036	ND(0.0020)	ND(0.0020)J	ND(0.0020)	ND(0.0020)
	10/24/2011	27	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0034	0.0053	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
OB-06-BR	6/3/2002	95	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	1.4	1.8	ND(0.020)	ND(0.020)	0.1	ND(0.010)
	6/3/2002	102	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	1.2	1.2	ND(0.020)	ND(0.020)	0.07	ND(0.010)
	1/29/2003	102	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	0.79	1.7	ND(0.020)	ND(0.020)	0.23	ND(0.010)

Table 3
Water Quality Data - VOC Results
June 2002 - March 2012
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)	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-BR (Cont.)	5/15/2003	102	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	0.88	1.9	ND(0.020)	ND(0.020)	0.49	ND(0.010)
	12/17/2003	102	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.76	1.1	ND(0.010)	ND(0.020)	0.35	ND(0.010)
	5/1/2004	100	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.73	1.1	ND(0.010)	ND(0.020)	0.34	ND(0.010)
	12/30/2004	100	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.6	0.96	ND(0.010)	ND(0.020)	0.14	ND(0.010)J
	5/2/2005	101	ND(0.010)J	ND(0.010)J	ND(0.010)J	ND(0.010)J	ND(0.010)J	ND(0.020)J	ND(0.010)J	ND(0.020)J	ND(0.050)J	0.60J	1.0J	ND(0.010)J	ND(0.020)J	0.12J	ND(0.010)
	1/4/2006	102	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.73	0.93	ND(0.010)	ND(0.020)	0.11	ND(0.0050)
	4/7/2006	102	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.23	0.49	ND(0.0050)	ND(0.010)	0.097	ND(0.0010)
	2/1/2007	102	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.02	ND(0.010)
	4/13/2007	102	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.44	1.2	ND(0.010)	ND(0.020)	0.48	0.0062
	11/14/2007	100	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.18	0.46	ND(0.0050)	ND(0.010)	0.16	ND(0.0010)
	4/23/2008	99	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0038	ND(0.0050)
	4/2/2009	99	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.22	0.46	ND(0.0050)	ND(0.0050)	0.15	ND(0.0025)
	10/26/2009	99	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.12	0.22	ND(0.0025)	ND(0.0025)	0.07	ND(0.0025)
	4/22/2010	101	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.12	0.22	ND(0.0025)	ND(0.0025)	0.04	ND(0.0020)
	10/12/2010	101	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.061	0.19	ND(0.0020)	ND(0.0020)	0.023	ND(0.0020)
	4/5/2011	99	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0028	0.0025	ND(0.0020)	0.029	0.074	ND(0.0020)
	10/24/2011	101	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.07	0.14	ND(0.0020)	ND(0.0020)	0.019	ND(0.0020)
OB-06-DO	6/3/2002	65	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.023	ND(0.010)	ND(0.010)	0.036	0.15	ND(0.0020)	ND(0.0020)	0.012	ND(0.010)
	6/3/2002	76	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.01	ND(0.050)	ND(0.020)	0.02	0.69	ND(0.020)	ND(0.020)	0.03	ND(0.0020)
	1/29/2003	76	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.019	ND(0.0020)
	5/15/2003	76	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.07	ND(0.0050)
	12/17/2003	76	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.011	0.011	ND(0.0050)	ND(0.010)	0.44	ND(0.0010)
	5/1/2004	66	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0033	ND(0.0010)	ND(0.0020)	0.021	ND(0.0010)
	12/30/2004	74	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0043	0.014	ND(0.0010)	0.0023	0.051	ND(0.0025)J
	5/2/2005	66	ND(0.0025)J	ND(0.0025)J	ND(0.0025)J	ND(0.0025)J	ND(0.0025)J	ND(0.0050)J	ND(0.0025)J	ND(0.0050)J	ND(0.013)J	0.026J	0.063J	ND(0.0025)J	0.0073J	0.28J	ND(0.0010)
	1/4/2006	76	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0034	ND(0.0010)	ND(0.0020)	0.055	ND(0.0050)
	4/7/2006	65	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.013	0.079	ND(0.0050)	0.014	0.62	ND(0.0010)
	2/1/2007	76	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0011	ND(0.0010)	0.0022	0.034	ND(0.0010)
	4/13/2007	76	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0037	ND(0.0010)	0.005	0.066	ND(0.010)
	11/14/2007	65	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	ND(0.010)	0.012	ND(0.010)	0.045	1.1	ND(0.0010)
	4/23/2008	65	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.024	0.041	ND(0.0010)
	10/20/2008	65	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0021	0.0037	ND(0.0010)	0.041	0.14	ND(0.0010)
	4/2/2009	65	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0039	0.015	ND(0.0010)	0.0099	0.076	ND(0.020)
	10/26/2009	65	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	0.044	0.1	ND(0.020)	0.031	1.5	ND(0.010)
	4/22/2010	75	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.18	0.35	ND(0.010)	0.013	0.97	ND(0.020)
	10/12/2010	65.5	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	0.045	0.096	ND(0.020)	0.075	1.8	ND(0.0020)
	4/5/2011	65	ND(0.0020)	ND(0.0020)	0.0034	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.11D	0.31D	ND(0.0020)	0.027	1.2D	0.0044
	10/24/2011	75	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.25	0.49	ND(0.010)	0.014	0.77	ND(0.010)
OB-07-DO	8/26/2002	NA	0.002	0.012	0.013	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.14	0.40D	ND(0.0020)	ND(0.0020)	0.13	ND(0.0050)
	5/14/2003	40	ND(0.0050)	0.009	0.012	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.030)	ND(0.010)	0.2	0.77	ND(0.010)	ND(0.010)	0.16	ND(0.0050)
	12/19/2003	40	ND(0.0050)	0.0054	0.0063	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.16	0.43	ND(0.0050)	ND(0.010)	0.1	ND(0.0050)
	5/3/2004	38	ND(0.0050)	0.0074	0.0089	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.22	0.61	ND(0.0050)	ND(0.010)	0.15	ND(0.0050)
	12/30/2004	38	ND(0.0050)	0.0077	0.0093	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.16	0.5	ND(0.0050)	ND(0.010)	0.13	ND(0.0050)
	4/29/2005	38	ND(0.0050)	0.0087	0.0093	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.18	0.53	ND(0.0050)	ND(0.010)	0.15	ND(0.0050)
	3/29/2006	37	ND(0.0050)	0.0063	0.0057	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.14	0.45	ND(0.0050)	ND(0.010)	0.16	ND(0.0050)
	2/1/2007	40	ND(0.0050)	0.0093	0.0088	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.13	0.48	ND(0.0050)	ND(0.010)	0.18	ND(0.0050)
	4/11/2007	40	ND(0.0050)	0.01	0.012	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.17	0.54	ND(0.0050)	ND(0.010)	0.17	ND(0.0050)
	11/13/2007	36	0.0052	0.011	0.013	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.18	0.61	ND(0.0050)	ND(0.010)	0.21	ND(0.0050)
	4/22/2008	39	ND(0.0050)	0.0095	0.013	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.17	0.54	ND(0.0050)	ND(0.010)	0.2	ND(0.0050)
	4/2/2009	36	ND(0.0050)	0.0075	0.0092	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.16	0.54	ND(0.0050)	ND(0.0050)	0.2	0.004
OB-08-DO	8/26/2002	NA	ND(0.0020)	0.038	0.036	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.50D	2.1D	ND(0.0020)	0.018	0.60D	ND(0.010)
	5/15/2003	80	ND(0.010)	0.05	0.08	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	0.44	3.1	ND(0.020)	0.03	0.96	ND(0.025)
	12/18/2003	80	ND(0.025)	ND(0.025)	0.029	ND(0.025)	ND(0.025)	ND(0.050)	ND(0.025)	ND(0.050)	ND(0.13)	0.41	2.1	ND(0.025)	ND(0.050)	0.84	ND(0.020)
	5/3/2004	79	ND(0.020)	ND(0.020)	0.031	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	0.28	1.9	ND(0.020)	ND(0.040)	0.91	ND(0.025)
	1/4/2005	79	ND(0.025)	ND(0.025)	0.027	ND(0.025)	ND(0.025)	ND(0.050)	ND(0.025)	ND(0.050)	ND(0.13)	0.57	2.7	ND(0.025)	ND(0.050)	0.95	ND(0.020)

Table 3
Water Quality Data - VOC Results
June 2002 - March 2012
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)	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-08-DO (Cont.)	4/29/2005	79	ND(0.020)	0.02	0.029	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	0.41	2	ND(0.020)	ND(0.040)	0.79	ND(0.020)
	1/4/2006	80	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	0.49	2.2N	ND(0.020)	ND(0.040)	0.92	ND(0.020)
	4/7/2006	79	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	0.41	2	ND(0.020)	ND(0.040)	1	ND(0.025)
	2/1/2007	80	ND(0.025)	ND(0.025)	0.028	ND(0.025)	ND(0.025)	ND(0.050)	ND(0.025)	ND(0.050)	ND(0.13)	0.41	2.3	ND(0.025)	ND(0.050)	1.2	ND(0.025)
	4/11/2007	80	ND(0.025)	ND(0.025)	0.033	ND(0.025)	ND(0.025)	ND(0.050)	ND(0.025)	ND(0.050)	ND(0.13)	0.39	2.2	ND(0.025)	ND(0.050)	1.2	ND(0.025)
	11/13/2007	78	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.050)	ND(0.025)	ND(0.050)	ND(0.13)	0.5	2.4	ND(0.025)	ND(0.050)	1.2	ND(0.020)J
	4/21/2008	79	ND(0.020)J	ND(0.020)J	0.027J	ND(0.020)J	ND(0.020)J	ND(0.040)J	ND(0.020)J	ND(0.040)J	ND(0.10)J	0.57J	2.6J	ND(0.020)J	ND(0.040)J	1.1J	ND(0.020)
	4/3/2009	79	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	0.51	2.6	ND(0.020)	ND(0.020)	1.4	ND(0.020)
	10/27/2009	78	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	0.46	2.2	ND(0.020)	ND(0.020)	1.5	ND(0.020)
	4/28/2010	79	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	0.46	2.3	ND(0.020)	ND(0.020)	1.1	ND(0.040)
	11/15/2010	77	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	0.38	2.4	ND(0.040)	ND(0.040)	1.1	ND(0.040)
	11/15/2010	77	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	0.38	2.4	ND(0.040)	ND(0.040)	1.1	0.002
	4/5/2011	77	ND(0.0020)	0.013	0.02	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.26D	1.9D	ND(0.0020)	0.0084	2.2D	0.0089
	10/25/2011	79	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	0.34	2.2	ND(0.040)	ND(0.040)	1.1	ND(0.040)
OB-08-S	8/26/2002	NA	ND(0.0020)	0.002	0.002	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.045	0.20D	ND(0.0020)	ND(0.0020)	0.086	ND(0.0020)
	5/3/2004	14	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0040)	ND(0.010)	0.041	0.16	ND(0.0020)	ND(0.0040)	0.048	ND(0.0025)
	10/19/2006	NA	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0050)	ND(0.013)	0.054	0.26	ND(0.0025)	ND(0.0050)	0.1	ND(0.0020)
	11/13/2007	12	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0040)	ND(0.010)	0.028	0.14	ND(0.0020)	ND(0.0040)	0.063	ND(0.0025)J
	4/21/2008	14	ND(0.0025)J	0.0026J	0.0034J	ND(0.0025)J	ND(0.0025)J	ND(0.0050)J	ND(0.0025)J	ND(0.0050)J	ND(0.013)J	0.079J	0.28J	ND(0.0025)J	ND(0.0050)J	0.10J	ND(0.0020)
	10/20/2008	12	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0040)	ND(0.010)	0.056	0.26	ND(0.0020)	ND(0.0040)	0.092	ND(0.0025)
	4/3/2009	12	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.075	0.31	ND(0.0025)	ND(0.0025)	0.11	ND(0.0020)
	10/27/2009	12	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.029	0.15	ND(0.0020)	ND(0.0020)	0.062	ND(0.0025)
	4/28/2010	14	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.044	0.21	ND(0.0025)	ND(0.0025)	0.066	ND(0.0050)
	11/15/2010	12	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.069	0.38	ND(0.0050)	ND(0.0050)	0.16	ND(0.0050)
	11/15/2010	12	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.069	0.38	ND(0.0050)	ND(0.0050)	0.16	ND(0.10)
	4/5/2011	12	ND(0.0020)	0.0022	0.0028	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.081	0.39D	ND(0.0020)	ND(0.0020)	0.12	ND(0.0020)
	10/25/2011	12	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.038	0.15	ND(0.0020)	ND(0.0020)	0.042	ND(0.0020)
OB-09-BR	6/3/2002	110	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.20)	4.6	9.6	ND(0.20)	ND(0.20)	0.7	ND(0.10)
	6/3/2002	122	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.20)	3.9	9.2	ND(0.20)	ND(0.20)	1.6	ND(0.050)
	1/23/2003	122	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.30)	ND(0.10)	ND(0.050)	0.1	ND(0.10)	0.4	7.1	ND(0.050)
	5/12/2003	122	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.30)	ND(0.10)	1	1.6	ND(0.10)	ND(0.10)	10	ND(0.050)
	12/15/2003	122	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.10)	ND(0.050)	ND(0.10)	ND(0.25)	ND(0.050)	ND(0.050)	ND(0.050)	0.66	5.7	ND(0.050)
	4/23/2004	120	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.10)	ND(0.050)	ND(0.10)	ND(0.25)	0.99	1.2	ND(0.050)	0.13	5.9	ND(0.050)
	12/29/2004	119	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.10)	ND(0.050)	ND(0.10)	ND(0.25)	0.27	0.35	ND(0.050)	0.17	3.8	ND(0.025)
	4/27/2005	120	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.050)	ND(0.025)	ND(0.050)	ND(0.13)	0.72	1.3	ND(0.025)	0.13	2.7	ND(0.020)
	12/30/2005	122	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	ND(0.020)	ND(0.020)	ND(0.020)	0.34	2.8	0.0066
	3/27/2006	104.7	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.054	0.073	ND(0.0050)	ND(0.010)	0.43	ND(0.050)
	1/31/2007	122	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.10)	ND(0.050)	ND(0.10)	ND(0.25)	ND(0.050)	ND(0.050)	ND(0.050)	0.29	4.8	ND(0.025)
	4/10/2007	122	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.050)	ND(0.025)	ND(0.050)	ND(0.13)	ND(0.025)	ND(0.025)	ND(0.025)	1.8	2.3	0.014
	7/19/2007	116	0.0013	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.048	0.082	ND(0.0010)	0.0028	0.06	ND(0.050)
	8/9/2007	116	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.10)	ND(0.050)	ND(0.10)	ND(0.25)	ND(0.050)	ND(0.050)	ND(0.050)	0.32	4.6	ND(0.0010)
	11/12/2007	105.6	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.001	ND(0.0010)	0.038	0.032	ND(0.0010)
	1/22/2008	119	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.018	0.015	ND(0.0020)J
	4/21/2008	118	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0040)J	ND(0.0020)J	ND(0.0040)J	ND(0.010)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	0.12J	0.24J	ND(0.0025)J
	7/29/2008	121	ND(0.0025)J	ND(0.0025)J	ND(0.0025)J	ND(0.0025)J	ND(0.0025)J	ND(0.0050)J	ND(0.0025)J	ND(0.0050)J	ND(0.013)J	ND(0.0025)J	ND(0.0025)J	ND(0.0025)J	0.17J	0.36J	ND(0.010)
	10/22/2008	118	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	ND(0.010)	ND(0.010)	ND(0.010)	0.21	1.2	ND(0.010)
	1/14/2009	121	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.23	0.91	0.01
	4/9/2009	118	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.013	0.016	ND(0.0020)	ND(0.0020)	0.23	ND(0.025)
	7/14/2009	121	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	0.068	0.069	ND(0.025)	0.24	3.6	ND(0.050)
	10/28/2009	121	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	0.45	0.66	ND(0.050)	0.1	5.3	0.015
	1/28/2010	118	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.011	0.018	ND(0.0050)	0.0081	0.4	ND(0.050)
	4/22/2010	121	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	0.35	0.66	ND(0.050)	0.14	5.5	0.031J
	7/14/2010	121	ND(0.025)J	ND(0.025)J	0.031J	ND(0.025)J	ND(0.025)J	ND(0.025)J	ND(0.025)J	ND(0.025)J	ND(0.025)J	0.049J	0.054J	ND(0.025)J	0.23J	4.9J	ND(0.10)
	10/12/2010	117	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	0.18	0.27	ND(0.10)	0.1	7.9	ND(0.10)
	1/5/2011	121	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	0.22	6.5	ND(0.050)

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June 2002 - March 2012
Former Varian Facility Site
150 Sohier Road
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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)	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.)	4/6/2011	117.7	ND(0.010)	ND(0.010)	0.021	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.025	0.01	ND(0.010)	0.28	5.5D	ND(0.010)
	7/28/2011	117	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	0.55	1.2	ND(0.10)	0.15	6.5	ND(0.10)
	10/25/2011	121	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	1.6	1.1	ND(0.040)
	1/18/2012	121	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	0.046	1.4	0.033
OB-09-DO	6/3/2002	85	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.30)	ND(0.10)	4.1	4.7	ND(0.10)	ND(0.10)	3.3	ND(0.050)
	6/3/2002	96	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.30)	ND(0.10)	4.7	5.7	ND(0.10)	ND(0.10)	3.2	ND(0.050)
	1/23/2003	96	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.30)	ND(0.10)	0.27	0.9	ND(0.10)	ND(0.10)	9.7	ND(0.010)
	5/12/2003	96	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	ND(0.010)	ND(0.010)	ND(0.020)	0.46	2.3	ND(0.025)
	12/15/2003	96	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.050)	ND(0.025)	ND(0.050)	ND(0.13)	0.064	0.23	ND(0.025)	ND(0.050)	1.9	ND(0.010)
	4/23/2004	94	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.072	0.074	ND(0.010)	ND(0.020)	0.89	ND(0.010)
	12/29/2004	94	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	ND(0.010)	0.029	ND(0.010)	0.043	1.4	ND(0.0050)
	4/27/2005	64	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	0.0051	ND(0.010)	ND(0.025	0.051	0.073	ND(0.0050)	ND(0.010)	0.4	ND(0.020)
	12/30/2005	96	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	0.28	0.84	ND(0.020)	0.089	1.9	ND(0.020)
	3/27/2006	94.25	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	1.8	2.1	ND(0.020)	0.062	1.5	ND(0.050)
	1/31/2007	96	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.10)	ND(0.050)	ND(0.10)	ND(0.25)	0.23	0.58	ND(0.050)	0.24	7.1	ND(0.0050)
	4/10/2007	96	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.18JJ	0.50JJ	ND(0.0010)
	7/19/2007	95	0.0047	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0026	ND(0.0010)	0.12	0.068	ND(0.0010)
	11/12/2007	93.9	ND(0.0010)	0.0014	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0025	0.0027	ND(0.0010)
	1/22/2008	93	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0027	ND(0.0010)	0.01	0.0049	ND(0.0010)J
	4/21/2008	93	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0020)J	ND(0.0050)J	ND(0.0010)J	0.0034J	ND(0.0010)J	ND(0.0020)J	0.0059J	ND(0.0010)J
	7/29/2008	95	ND(0.0010)J	ND(0.0010)J	0.0017J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0020)J	ND(0.0050)J	ND(0.0010)J	0.0042J	ND(0.0010)J	0.089J	0.14J	ND(0.0010)
	10/22/2008	93	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.1	0.017	ND(0.0050)
	1/13/2009	95	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.59	0.12	ND(0.0010)
	4/9/2009	92	ND(0.0010)	0.0016	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0025	0.014	ND(0.0010)	ND(0.0010)	0.007	ND(0.010)
	7/14/2009	95	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.97	0.11	ND(0.010)
	10/28/2009	95	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.87	0.06	ND(0.0010)
	1/28/2010	92	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0022	0.0043	ND(0.0025)
	4/22/2010	95	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.3	0.21	ND(0.0010)J
	7/14/2010	95	ND(0.0010)J	0.0033J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	0.033J	0.0059J	ND(0.0050)
	10/12/2010	93	ND(0.0050)	0.0071	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.42	0.064	ND(0.020)
	1/5/2011	95	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	1.3	0.35	ND(0.10)
	4/6/2011	92.3	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	1.4D	0.45	ND(0.010)
	7/28/2011	92	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	2	0.57	ND(0.040)
	10/25/2011	92	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	0.41	1	ND(0.040)	0.15	5.1D	ND(0.040)
	1/18/2012	92	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	1.9	1.6	ND(0.040)
OB-09-S	6/3/2002	30	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.20)	4.9	41D	ND(0.20)	ND(0.20)	3	ND(0.10)
	1/23/2003	30	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.20)	5.3	44D	ND(0.20)	0.3	4.5	ND(0.10)
	5/12/2003	30	ND(0.10)	ND(0.10)	0.1	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.20)	8.4	46D	ND(0.20)	0.4	7	ND(0.0010)
	12/15/2003	30	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.072	0.1	ND(0.0010)	ND(0.0020)	0.0073	ND(0.50)
	4/23/2004	30	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(1.0)	ND(0.50)	ND(1.0)	ND(2.5)	21	46	ND(0.50)	ND(1.0)	4.1	ND(0.50)
	12/29/2004	30	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(1.0)	ND(0.50)	ND(1.0)	ND(2.5)	18	45	ND(0.50)	ND(1.0)	4.4	ND(0.50)
	4/27/2005	30	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(1.0)	ND(0.50)	ND(1.0)	ND(2.5)	25	48	ND(0.50)	ND(1.0)	4	ND(0.50)
	12/30/2005	30	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(1.0)	ND(0.50)	ND(1.0)	ND(2.5)	30	53	ND(0.50)	ND(1.0)	4.2	ND(0.50)
	3/27/2006	28.5	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(1.0)	ND(0.50)	ND(1.0)	ND(2.5)	28	50	ND(0.50)	ND(1.0)	4.6	ND(0.0020)
	1/30/2007	30	0.041	0.013	0.0021	ND(0.0020)	ND(0.0020)	ND(0.0040)	ND(0.0020)	0.019	ND(0.010)	0.002	0.0074	ND(0.0020)	0.071	0.17	ND(0.020)
	4/10/2007	30	0.027	0.07	0.025	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	0.18	2.8	ND(0.020)	0.48	1	ND(0.020)
	7/19/2007	29.1	0.48	0.67	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	ND(0.020)	ND(0.020)	ND(0.020)	2.4	0.64	0.0021
	11/12/2007	27.9	0.0019	0.031	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.017	ND(0.0020)	ND(0.0050)	0.019	0.064	ND(0.0010)	0.062	0.059	0.021
	1/24/2008	29	ND(0.0050)	0.053	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.016	0.068	ND(0.0050)	0.55	0.54	0.068J
	4/21/2008	28	ND(0.050)J	0.087J	ND(0.050)J	ND(0.050)J	ND(0.050)J	ND(0.10)J	ND(0.050)J	ND(0.10)J	ND(0.25)J	ND(0.050)J	ND(0.050)J	ND(0.050)J	5.4J	7.0J	0.043J
	7/29/2008	29	0.030J	0.36J	ND(0.010)J	ND(0.010)J	ND(0.010)J	ND(0.020)J	ND(0.010)J	0.035J	ND(0.050)J	ND(0.010)J	ND(0.010)J	ND(0.010)J	1.2J	0.28J	0.017
	10/22/2008	28	0.36	0.59	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	0.2	ND(0.025)	0.014	0.071	ND(0.0050)	0.13	0.063	0.02
	1/13/2009	29	0.039	0.38	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.13	ND(0.010)	0.012	0.062	ND(0.010)	1.2	0.43	ND(0.020)
	4/9/2009	27.5	0.055	0.023	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	0.024J	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	1.9	1.4	0.0037
	7/14/2009	29	0.002	0.049	ND(0.0010)	0.0011	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.046J	ND(0.0010)	0.0045	0.035	0.0049	0.073	0.025	0.0056
	10/28/2009	29	ND(0.0050)	0.078	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.046	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.63	0.24	0.0098
	1/28/2010	27.5	ND(0.0050)	0.097	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.042	ND(0.0050)	ND(0.0050)	0.009	ND(0.0050)	0.49	0.15	0.0047

Table 3
Water Quality Data - VOC Results
June 2002 - March 2012
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)	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.)	4/22/2010	29	0.014	0.046	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0036	0.029	ND(0.0010)	0.0019	0.029	ND(0.0010)	0.14	0.048	0.0024J
	7/14/2010	29	0.019J	0.25DJ	ND(0.0010)J	0.0024J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	0.087J	ND(0.0010)J	0.0018J	0.0035J	ND(0.0010)J	0.020J	0.020J	0.0021
	10/12/2010	27	0.0045	0.053	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.12	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.061	ND(0.0020)
	1/5/2011	29	ND(0.0020)	0.0089	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.04	ND(0.0020)	ND(0.0020)	0.0074	ND(0.0020)	0.0054	0.0065	ND(0.010)
	4/5/2011	26.5	0.018	0.039	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.047	ND(0.0020)	ND(0.0020)	0.003	ND(0.0020)	0.076	0.081	0.0028
	7/28/2011	26	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0025	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.044	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0031	0.0063	ND(0.0020)
	10/25/2011	23	0.14	0.89D	0.0042	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.45D	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.095	0.018	ND(0.0020)
	1/18/2012	23.5	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.56D	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0037	ND(0.0020)
OB-10-BR	6/3/2002	65	ND(0.010)	0.03	0.03	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	0.03	0.57	ND(0.020)	ND(0.020)	1	ND(0.010)
	6/3/2002	76	ND(0.010)	0.04	0.04	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	0.03	0.52	ND(0.020)	0.03	1.4	ND(0.0020)
	1/23/2003	76	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.027	ND(0.0020)	ND(0.0020)	0.006	ND(0.0020)
	5/13/2003	76	ND(0.0020)	ND(0.0020)	0.002	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.011	0.11	ND(0.0020)	0.002	0.61D	ND(0.025)
	12/15/2003	76	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.050)	ND(0.025)	ND(0.050)	ND(0.13)	ND(0.025)	0.1	ND(0.025)	ND(0.050)	2	ND(0.020)
	4/23/2004	76	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	0.024	0.069	ND(0.020)	ND(0.040)	2.1	ND(0.010)
	4/27/2005	75	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.072	0.73	ND(0.010)	0.048	1.4	ND(0.025)
	3/27/2006	77	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.050)	ND(0.025)	ND(0.050)	ND(0.13)	0.76	3	ND(0.025)	ND(0.050)	0.74	ND(0.025)
	4/14/2007	76	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.050)	ND(0.025)	ND(0.050)	ND(0.13)	0.82	3.1	ND(0.025)	ND(0.050)	1.4	ND(0.020)
	1/24/2008	74	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	0.52	2.2	ND(0.020)	ND(0.040)	1.7	ND(0.010)
	4/23/2008	75	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.19	1.1	ND(0.010)	0.082	1.3	ND(0.020)
	4/3/2009	74	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	0.31	1.7	ND(0.020)	0.034	1.6	ND(0.020)
	4/21/2010	75	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	0.079	0.51	ND(0.020)	0.04	2.9	ND(0.0020)
	4/5/2011	73.4	ND(0.0020)	0.0032	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0043	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
OB-10-DO	6/3/2002	35	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.029	0.71D	ND(0.0020)	ND(0.0020)	0.014	ND(0.0020)
	6/3/2002	50	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.015	0.63D	ND(0.0020)	ND(0.0020)	0.015	ND(0.0020)
	1/23/2003	50	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.006	0.54D	ND(0.0020)	ND(0.0020)	0.018	ND(0.0020)
	5/13/2003	50	ND(0.0020)	ND(0.0020)	0.001	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.004	0.55D	ND(0.0020)	ND(0.0020)	0.079	ND(0.0050)
	12/15/2003	50	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	ND(0.0050)	0.38	ND(0.0050)	ND(0.010)	0.28	ND(0.0050)
	4/23/2004	48	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.0069	0.61	ND(0.0050)	ND(0.010)	0.021	ND(0.0050)
	4/27/2005	48	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.018	0.64	ND(0.0050)	ND(0.010)	0.03	ND(0.0050)
	3/27/2006	47	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.026	0.66	ND(0.0050)	ND(0.010)	0.029	ND(0.010)
	4/16/2007	49	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.028	0.8	ND(0.010)	ND(0.020)	0.047	ND(0.010)
	8/9/2007	48	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.026	0.78	ND(0.010)	ND(0.020)	0.062	ND(0.0050)
	11/13/2007	47	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.024	0.38	ND(0.0050)	ND(0.010)	0.55	ND(0.010)
	1/24/2008	46	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.034	0.9	ND(0.010)	ND(0.020)	0.092	ND(0.010)
	4/23/2008	49	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.024	0.81	ND(0.010)	ND(0.020)	0.11	ND(0.010)J
	7/29/2008	49	ND(0.010)J	ND(0.010)J	ND(0.010)J	ND(0.010)J	ND(0.010)J	ND(0.020)J	ND(0.010)J	ND(0.020)J	ND(0.050)J	0.030J	0.91J	ND(0.010)J	ND(0.020)J	0.12J	ND(0.0050)
	10/22/2008	48	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.01	0.35	ND(0.0050)	ND(0.010)	0.48	ND(0.0050)
	1/13/2009	49	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.017	0.39	ND(0.0050)	ND(0.0050)	0.4	ND(0.010)
	4/1/2009	46	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.034	1.1	ND(0.010)	ND(0.010)	0.66	0.014J
	7/14/2010	48.5	ND(0.010)J	ND(0.010)J	ND(0.010)J	ND(0.010)J	ND(0.010)J	ND(0.010)J	ND(0.010)J	ND(0.010)J	ND(0.010)J	0.020J	1.2J	ND(0.010)J	ND(0.010)J	0.16J	0.014
	10/13/2010	46	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	1.1D	ND(0.020)
	10/18/2010	78	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	0.42	2.5D	ND(0.020)	ND(0.020)	1.2	0.014
	1/5/2011	48.5	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.37	ND(0.010)	ND(0.010)	0.69	ND(0.0020)
	4/6/2011	46	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.17	ND(0.010)	ND(0.010)	0.76	0.013
	7/28/2011	46	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.013	0.87	ND(0.010)	ND(0.010)	0.4	0.017
	10/26/2011	48.5	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.25	ND(0.010)	ND(0.010)	0.81	0.019
	1/18/2012	46	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.013	0.92	ND(0.010)	ND(0.010)	0.38	0.023
OB-10-S	6/3/2002	30	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.005	0.013	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	1/23/2003	30	ND(0.0020)	0.007	0.008	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.03	0.18	ND(0.0020)	0.032	1.2D	ND(0.0020)
	5/13/2003	30	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.006	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0010)
	12/15/2003	30	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0014	0.029	ND(0.0010)	ND(0.0020)	0.0054	ND(0.0010)
	4/23/2004	30	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0014	0.0069	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/27/2005	30	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0025	0.0098	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	3/27/2006	29	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0016	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/16/2007	29	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	8/9/2007	29	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	11/13/2007	27	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)

Table 3
Water Quality Data - VOC Results
June 2002 - March 2012
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)	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-10-S (Cont.)	1/25/2008	31	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/25/2008	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)J
	7/29/2008	29	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0020)J	ND(0.0050)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0010)
	10/22/2008	27	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	1/13/2009	29	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	4/1/2009	29	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	7/14/2009	29	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	10/27/2009	29	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	1/28/2010	29	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	4/22/2010	29	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)J
	7/14/2010	29	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)
	10/13/2010	29	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	10/18/2010	12	ND(0.0020)	0.0028	0.0028	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.09	0.45D	ND(0.0020)	ND(0.0020)	0.23D	ND(0.0020)
	1/5/2011	29	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	4/6/2011	31	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	7/28/2011	29	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	10/26/2011	29	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	1/18/2012	29	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
OB-11-BR	6/3/2002	70	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.038	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	6/3/2002	87	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.041	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	1/27/2003	87	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.008	ND(0.0020)	ND(0.0020)	0.034	ND(0.0020)
	5/12/2003	87	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.007	ND(0.0020)	ND(0.0020)	0.045	ND(0.0010)
	12/16/2003	87	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0028	ND(0.0010)	ND(0.0020)	0.035	ND(0.0010)
	5/1/2004	87	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.013	ND(0.0010)
	4/28/2005	86	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0085	ND(0.0010)	ND(0.0020)	0.05	ND(0.0010)
	3/27/2006	87	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.011	ND(0.0010)	ND(0.0020)	0.065	ND(0.0010)
	4/11/2007	86	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0034	ND(0.0010)	0.0048	0.034	0.002
	4/22/2008	85	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.004	ND(0.0010)	0.0092	0.035	0.0021
	4/3/2009	85	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0031	ND(0.0010)	0.004	0.022	ND(0.0020)
	4/6/2011	86.1	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	0.0064J	ND(0.0020)J	0.0027J	0.036J	0.0045J
OB-11-DO	6/3/2002	50	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.12	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	6/3/2002	62	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.088	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	1/27/2003	62	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.02	ND(0.0020)	ND(0.0020)	0.057	ND(0.0020)
	5/12/2003	62	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.037	ND(0.0020)	ND(0.0020)	0.041	ND(0.0010)
	12/16/2003	62	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.04	ND(0.0010)	ND(0.0020)	0.052	ND(0.0010)
	5/1/2004	61	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.032	ND(0.0010)	ND(0.0020)	0.045	ND(0.0010)
	4/28/2005	61	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.065	ND(0.0010)	ND(0.0020)	0.023	ND(0.0010)
	3/27/2006	61	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.098	ND(0.0010)	ND(0.0020)	0.04	ND(0.0010)
	4/11/2007	61	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.076	ND(0.0010)	ND(0.0020)	0.031	ND(0.0010)
	4/22/2008	61	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.073	ND(0.0010)	ND(0.0020)	0.023	ND(0.0010)
	4/3/2009	61	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.065	ND(0.0010)	ND(0.0010)	0.023	ND(0.0020)
	4/6/2011	59.8	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	0.075J	ND(0.0020)J	ND(0.0020)J	0.021J	ND(0.0020)J
OB-11-S	6/3/2002	30	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.002	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	1/27/2003	30	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.002	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	5/12/2003	30	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0010)
	12/16/2003	30	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0013	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	5/1/2004	30	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0011	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/28/2005	30	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	3/27/2006	28	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/11/2007	29	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/22/2008	29	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/3/2009	29	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.004
OB-12-BR	6/3/2002	75	ND(0.0020)	ND(0.0020)	0.004	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.003	0.007	ND(0.0020)	0.029	1.6D	0.004
	6/3/2002	88	ND(0.0020)	ND(0.0020)	0.004	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.002	0.004	ND(0.0020)	0.028	1.5D	ND(0.010)
	1/27/2003	88	ND(0.010)	ND(0.010)	0.01	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	ND(0.010)	ND(0.010)	ND(0.020)	0.02	8.7D	0.094
	5/13/2003	88	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.033	20D	ND(0.0010)

Table 3
Water Quality Data - VOC Results
June 2002 - March 2012
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)	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-BR (Cont.)	12/16/2003	88	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0084	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0050)
	5/13/2004	86	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.0010)
	4/3/2006	87	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0022	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	1/31/2007	88	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0012	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/16/2007	87	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	8/9/2007	82	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	11/13/2007	89	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	1/24/2008	84	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/22/2008	87	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0026	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)J
	7/29/2008	87	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0020)J	ND(0.0050)J	ND(0.0010)J	0.0011J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0010)
	10/22/2008	87	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0011	0.0022	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	1/13/2009	87	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0016	0.023	ND(0.0010)	0.0013	0.037	ND(0.0010)
	4/1/2009	84	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0021	0.051	ND(0.0010)	0.002	0.084	ND(1.0)
OB-12-DO	6/3/2002	45	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(2.0)	3	140	ND(2.0)	ND(2.0)	3	ND(1.0)
	6/3/2002	59	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(2.0)	2	120	ND(2.0)	ND(2.0)	4	ND(0.10)
	1/27/2003	59	ND(0.10)	ND(0.10)	0.2	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.20)	0.4	33D	ND(0.20)	ND(0.20)	91D	ND(1.0)
	5/13/2003	59	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(2.0)	ND(1.0)	19	ND(2.0)	ND(2.0)	100	ND(0.0010)
	12/16/2003	59	ND(0.0010)	0.0062	ND(0.0010)	0.0033	ND(0.0010)	ND(0.0020)	0.0014	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(1.0)
	5/1/2004	55	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(2.0)	ND(5.0)	1.6	94	ND(1.0)	ND(2.0)	11	ND(0.50)
	4/28/2005	60	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(1.0)	ND(0.50)	ND(1.0)	ND(2.5)	2.3	63	ND(0.50)	ND(1.0)	22	ND(0.50)
	4/3/2006	53	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(1.0)	ND(0.50)	ND(1.0)	ND(2.5)	1.8	35	ND(0.50)	ND(1.0)	17	ND(0.0010)
	1/31/2007	60	ND(0.0010)	0.0094	ND(0.0010)	0.004	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.10)
	4/16/2007	59	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.10)	ND(0.20)	ND(0.50)	1.8	7.8	ND(0.10)	ND(0.20)	1.3	ND(0.0010)
	8/9/2007	48	ND(0.0010)	0.0068	ND(0.0010)	0.0025	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	11/13/2007	59	ND(0.0010)	0.0074	ND(0.0010)	0.003	ND(0.0010)	ND(0.0020)	0.0032	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	1/25/2008	49	ND(0.0010)	0.0084	ND(0.0010)	0.0035	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/25/2008	59	ND(0.0010)	0.0081	ND(0.0010)	0.0034	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.013	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.20)J
	7/29/2008	59	ND(0.20)J	ND(0.20)J	ND(0.20)J	ND(0.20)J	ND(0.20)J	ND(0.40)J	ND(0.20)J	ND(0.40)J	ND(1.0)J	1.8J	17J	ND(0.20)J	ND(0.40)J	4.6J	ND(0.50)
	10/22/2008	59	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(1.0)	ND(0.50)	ND(1.0)	ND(2.5)	1.8	36	ND(0.50)	ND(1.0)	15	ND(0.40)
	1/13/2009	59	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	2.3	39	ND(0.40)	ND(0.40)	18	ND(0.50)
	4/1/2009	50	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	2.1	43	ND(0.50)	ND(0.50)	20	ND(0.0010)
	10/27/2009	50	ND(0.0010)	0.0078	ND(0.0010)	0.0027	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	5/7/2010	57	ND(0.0010)	0.0075	ND(0.0010)	0.0026	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.088	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)J
	7/14/2010	59	ND(0.0010)J	0.0084J	ND(0.0010)J	0.0034J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	0.27DJ	0.0038J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	0.014
	10/13/2010	46	ND(0.0020)	0.0076	0.024	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	1.4D	21D	ND(0.0020)	ND(0.0020)	8.7D	0.018
	1/5/2011	59	ND(0.0050)	0.0075	0.053	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	2.2D	45D	ND(0.0050)	0.0066	24D	ND(0.010)
	4/6/2011	49.1	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	2.1	33	ND(0.50)	ND(0.50)	17	ND(0.50)
	7/28/2011	59	ND(0.0020)	0.0068	ND(0.0020)	0.0022	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	10/26/2011	48	ND(0.0020)	0.0069	ND(0.0020)	0.0022	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0034	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	1/17/2012	48.5	ND(0.0020)	0.008	0.018	0.0021	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	1.8D	15D	ND(0.0020)	ND(0.0020)	5.5D	0.013
OB-12-S	6/3/2002	30	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	0.72	1.4	ND(0.020)	ND(0.020)	0.01	ND(0.010)
	1/27/2003	30	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	0.69	1.7	ND(0.020)	ND(0.020)	0.02	ND(0.010)
	5/13/2003	30	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	0.61	1.3	ND(0.020)	ND(0.020)	0.01	ND(0.0010)
	12/16/2003	30	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0064	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0050)
	5/13/2004	30	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.0010)
	4/28/2005	30	0.0039	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0016	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0050)
	4/3/2006	28	0.0067	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.45	0.45	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.0025)
	1/31/2007	30	0.0052	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.0032	ND(0.0050)	ND(0.0025)	ND(0.0050)	ND(0.013)	0.28	0.28	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0050)
	4/16/2007	26	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.36	0.33	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.0025)
	8/9/2007	26	0.0041	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0050)	ND(0.013)	0.26	0.19	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0050)
	11/13/2007	26	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.0065	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.41	0.4	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.0020)
	1/25/2008	27	0.0036	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0032	ND(0.0040)	ND(0.0020)	ND(0.0040)	ND(0.010)	0.23	0.18	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0025)
	4/22/2008	29	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0050)	ND(0.013)	0.16	0.12	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0025)J
	7/29/2008	29	0.0028J	ND(0.0025)J	ND(0.0025)J	ND(0.0025)J	0.0033J	ND(0.0050)J	ND(0.0025)J	ND(0.0050)J	ND(0.013)J	0.28J	0.15J	ND(0.0025)J	ND(0.0050)J	ND(0.0025)J	ND(0.0020)
	10/22/2008	29	0.004	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0039	ND(0.0040)	ND(0.0020)	ND(0.0040)	ND(0.010)	0.28	0.19	ND(0.0020)	ND(0.0040)	0.0022	ND(0.0025)

Table 3
Water Quality Data - VOC Results
June 2002 - March 2012
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)	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.)	1/13/2009	29	0.0041	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.0051	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.25	0.18	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0020)
	4/1/2009	26	0.0021	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.17	0.11	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0025)
	7/14/2009	29	0.0048	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.0061	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.26	0.19	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0010)
	10/27/2009	26	0.0012	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0017	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.088	0.022	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	1/28/2010	26	0.0022	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.002	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.072	0.015	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	4/22/2010	29	0.0023	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0017	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.089	0.055	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)J
	7/14/2010	29	0.0043J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	0.0039J	ND(0.0010)J	0.0025J	ND(0.0010)J	ND(0.0010)J	0.22DJ	0.14J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0040)
	10/13/2010	26	0.005	ND(0.0040)	ND(0.0040)	ND(0.0040)	0.0052	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	0.22	0.15	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0020)
	1/5/2011	29	0.0038	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0034	ND(0.0020)	0.0026	ND(0.0020)	ND(0.0020)	0.17	0.098	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)
	4/6/2011	27.7	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.002	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.15	0.071	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	7/28/2011	26	0.0033	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0025	ND(0.0020)	0.0023	ND(0.0020)	ND(0.0020)	0.19	0.12	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	10/26/2011	26	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.058	0.021	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	1/17/2012	26.5	0.0041	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0037	ND(0.0020)	0.0033	ND(0.0020)	ND(0.0020)	0.19	0.14	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
OB-14-DO	6/3/2002	45	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	0.1	1.4	ND(0.020)	ND(0.020)	0.3	ND(0.010)
	6/3/2002	60	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	0.07	1.4	ND(0.020)	ND(0.020)	0.35	ND(0.010)
	1/23/2003	60	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	ND(0.010)	1	ND(0.020)	ND(0.020)	0.05	ND(0.010)
	5/13/2003	60	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	0.06	0.76	ND(0.020)	ND(0.020)	0.98	ND(0.010)
	12/17/2003	60	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.23	1.2	ND(0.010)	ND(0.020)	0.41	ND(0.010)
	5/1/2004	58	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.14	1.1	ND(0.010)	ND(0.020)	0.25	ND(0.010)
	4/28/2005	58	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.11	0.97	ND(0.010)	ND(0.020)	0.28	ND(0.010)
	3/27/2006	56	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.091	0.83	ND(0.010)	ND(0.020)	0.23	ND(0.010)
	4/11/2007	55	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.12	1.1	ND(0.010)	ND(0.020)	0.31	ND(0.010)
	4/22/2008	59	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.096	0.81	ND(0.010)	ND(0.020)	0.24	ND(0.010)
	4/3/2009	55	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.086	0.84	ND(0.010)	ND(0.010)	0.21	ND(0.010)
	4/6/2011	55.4	ND(0.020)J	ND(0.020)J	ND(0.020)J	ND(0.020)J	ND(0.020)J	ND(0.020)J	ND(0.020)J	ND(0.020)J	ND(0.020)J	0.096J	1J	ND(0.020)J	ND(0.020)J	0.17J	ND(0.020)J
OB-15-S	6/3/2002	20	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	1.9	1.1	ND(0.020)	ND(0.020)	0.53	0.09
	1/23/2003	20	0.05	ND(0.010)	0.02	ND(0.010)	ND(0.010)	ND(0.010)	0.04	ND(0.050)	ND(0.020)	2	3.8D	ND(0.020)	0.04	3.9D	0.011
	5/12/2003	20	0.043	0.005	0.015	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.004	ND(0.010)	ND(0.010)	0.50D	2.1D	ND(0.0020)	0.052	2.5D	ND(0.0050)
	12/16/2003	20	0.086	0.014	ND(0.0050)	ND(0.0050)	0.0088	ND(0.010)	0.0058	ND(0.010)	ND(0.025)	0.4	0.041	ND(0.0050)	ND(0.010)	0.078	ND(0.0010)
	4/23/2004	20	0.11	0.0045	ND(0.0010)	ND(0.0010)	0.075	ND(0.0020)	0.024	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	0.0022	ND(0.0020)	ND(0.0010)	ND(0.0025)
	4/27/2005	20	0.28	0.0047	ND(0.0025)	ND(0.0025)	0.065	ND(0.0050)	0.034	ND(0.0050)	ND(0.013)	0.13	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.010)
	4/3/2006	19	0.071	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	1.3	0.16	ND(0.010)	ND(0.020)	0.064	ND(0.0020)
	4/10/2007	20	0.18	0.0022	ND(0.0020)	ND(0.0020)	0.033	ND(0.0040)	0.016	ND(0.0040)	ND(0.010)	0.0047	ND(0.0020)	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.020)
	4/25/2008	NA	0.24	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	1.6	0.76	ND(0.020)	ND(0.040)	0.38	ND(0.050)J
	7/29/2008	19	3.0J	ND(0.050)J	0.11J	ND(0.050)J	ND(0.050)J	ND(0.10)J	ND(0.050)J	ND(0.10)J	ND(0.10)J	3.0J	3.7J	ND(0.050)J	ND(0.10)J	0.13J	ND(0.025)
	10/21/2008	19	1.2	ND(0.025)	0.042	ND(0.025)	ND(0.025)	ND(0.050)	ND(0.025)	ND(0.050)	ND(0.13)	2.9	2.8	ND(0.025)	ND(0.050)	0.86	ND(0.050)
	1/13/2009	19	0.5	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	6.1	4.3	ND(0.050)	ND(0.050)	0.76	ND(0.10)
	4/1/2009	18	0.25	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	4.4	4.4	ND(0.10)	ND(0.10)	7.6	ND(0.10)
	7/14/2009	19	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	0.21	ND(0.10)	0.78	9.5	ND(0.050)
	10/27/2009	18	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	0.092	ND(0.050)	1.3	4.4	ND(0.050)
	1/28/2010	18	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	0.13	0.27	ND(0.050)	1.4	5.6	ND(0.050)
	4/22/2010	19	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	1.2	3.7	0.0021J
	7/14/2010	19	0.0044J	0.0054J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	0.0011J	ND(0.0010)J	0.0060J	0.0044J	ND(0.0020)
	10/12/2010	19	0.0026	0.0085	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.013	0.014	0.0022
	1/4/2011	19	ND(0.0020)	0.0022	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0065	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.1	0.11	ND(0.0020)
	4/6/2011	18.7	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.05	ND(0.010)	0.53	1.2D	ND(0.010)
	7/28/2011	19	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0028	ND(0.0020)	ND(0.0020)	0.012	ND(0.0020)	0.04	0.026	ND(0.0020)
	10/25/2011	18.5	ND(0.0020)	0.0051	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0054	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.18	0.15	ND(0.0020)
	1/17/2012	18.5	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0043	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0052	0.0045	ND(0.0020)
OB-16-BR	6/3/2002	33	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.013	0.041	ND(0.0020)	ND(0.0020)	0.006	ND(0.0020)
	5/14/2003	33	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.003	0.011	ND(0.0020)	ND(0.0020)	0.003	ND(0.0010)
	12/16/2003	33	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0031	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/27/2004	33	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0017	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/28/2005	33	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	3/28/2006	32.1	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/10/2007	33	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0014	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)J
	4/21/2008	32	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0020)J	ND(0.0050)J	ND(0.0010)J	0.0024J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0010)

Table 3
Water Quality Data - VOC Results
June 2002 - March 2012
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)	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-16-BR (Cont.)	4/3/2009	32	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0055	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	4/20/2010	32	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)
	4/5/2011	32	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
OB-16-S	6/25/2002	17.5	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.021	0.015	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	5/14/2003	17.5	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.006	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0010)
	12/16/2003	17.5	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/27/2004	17.5	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0015	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/28/2005	17	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0015	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	3/28/2006	15.7	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.002	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/10/2007	18	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)J
	4/21/2008	17	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0020)J	ND(0.0050)J	ND(0.0010)J	0.0021J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0010)
	4/3/2009	15	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0013	0.0016	ND(0.0010)	ND(0.0010)	ND(0.0010)
	4/20/2010	17	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0017	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.010)
	4/6/2011	15	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
OB-17-BR	6/3/2002	55	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	0.32	0.71	ND(0.020)	ND(0.020)	0.03	ND(0.010)
	6/3/2002	70	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	0.41	0.71	ND(0.020)	ND(0.020)	0.04	ND(0.010)
	6/3/2002	98	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	0.46	0.71	ND(0.020)	ND(0.020)	0.04	ND(0.0020)
	5/15/2003	98	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.19	0.54	ND(0.0040)	ND(0.0040)	0.052	ND(0.0050)
	12/18/2003	98	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.23	0.42	ND(0.0050)	ND(0.010)	0.057	ND(0.0050)
	5/2/2004	98	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.21	0.46	ND(0.0050)	ND(0.010)	0.058	ND(0.0050)
	5/19/2005	87	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	0.41	ND(0.0050)
	4/7/2006	98	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	0.66	ND(0.0050)
	4/12/2007	98	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	ND(0.0050)	0.0054	ND(0.0050)	ND(0.010)	0.6	ND(0.0050)
	4/22/2008	97	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	0.57	ND(0.0025)
	4/1/2009	95	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.018	0.37	ND(0.0025)
	4/21/2010	97	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.17	0.11	ND(0.0020)
	4/4/2011	96	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0029	ND(0.0020)	0.13	0.039	ND(0.0020)
OB-17-DO	6/3/2002	30	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.027	0.038	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	6/3/2002	43	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.032	0.046	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	5/15/2003	43	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.037	0.052	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0010)
	12/18/2003	43	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.005	ND(0.0020)	ND(0.0050)	0.027	0.033	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	5/2/2004	43	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0016	ND(0.0020)	ND(0.0050)	0.031	0.035	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)J
	5/2/2005	42	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0020)J	ND(0.0050)J	0.026J	0.030J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0010)
	4/7/2006	41	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.021	0.025	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/12/2007	43	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.016	0.017	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/22/2008	42	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.02	0.022	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/1/2009	41	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.017	0.019	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	4/21/2010	42	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.016	0.018	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)
	4/4/2011	41	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.014	0.015	ND(0.0020)	ND(0.0020)J	ND(0.0020)	ND(0.0020)
OB-18-DO	8/26/2002	NA	ND(0.0020)	0.003	0.004	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.048	0.50D	ND(0.0020)	0.004	0.15	ND(0.0050)
	5/14/2003	30	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.030)	ND(0.010)	0.03	0.7	ND(0.010)	ND(0.010)	0.33	ND(0.0050)
	12/23/2003	30	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.03	0.39	ND(0.0050)	ND(0.010)	0.12	ND(0.0050)
	5/3/2004	25	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.039	0.47	ND(0.0050)	ND(0.010)	0.15	ND(0.0010)
	4/29/2005	25	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.002	0.018	ND(0.0010)	ND(0.0020)	0.0073	ND(0.0050)
	4/7/2006	24	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.04	0.47	ND(0.0050)	ND(0.010)	0.15	ND(0.0025)
	4/13/2007	30	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0050)	ND(0.013)	0.02	0.21	ND(0.0025)	ND(0.0050)	0.12	0.0026
	11/14/2007	23	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0050)	ND(0.013)	0.0096	0.12	ND(0.0025)	ND(0.0050)	0.31	ND(0.0010)
	4/22/2008	29	ND(0.0010)	ND(0.0010)	0.001	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0064	0.12	ND(0.0010)	0.0045	0.12	ND(0.0010)
	4/2/2009	23	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0051	0.088	ND(0.0010)	0.0016	0.056	ND(0.0010)
	10/26/2009	23	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0019	ND(0.0010)	ND(0.0010)	0.012	0.11	ND(0.0010)	ND(0.0010)	0.048	ND(0.010)
	4/20/2010	25	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.071	0.7	ND(0.010)	0.013	0.47	0.0032
	10/14/2010	24	ND(0.0020)	0.0023	0.0038	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.035	0.36D	ND(0.0020)	0.016	0.46D	ND(0.0020)
	4/5/2011	23	ND(0.0020)	0.0027	0.0048	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.076	0.63D	ND(0.0020)	0.051	0.66D	ND(0.0020)
	10/25/2011	23	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.027	0.16	ND(0.0020)	0.007	0.099	ND(0.0020)

Table 3
Water Quality Data - VOC Results
June 2002 - March 2012
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)	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-18-S	8/26/2002	NA	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.003	0.022	ND(0.0020)	0.002	0.017	ND(0.0020)
	9/18/2002	NA	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.015	ND(0.0020)	0.003	0.011	ND(0.0020)
	1/28/2003	15	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.003	0.056	ND(0.0020)	ND(0.0020)	0.026	ND(0.0020)
	5/14/2003	15	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.002	0.077	ND(0.0020)	0.002	0.048	ND(0.0010)
	12/23/2003	15	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	5/3/2004	13	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0098	ND(0.0010)	ND(0.0020)	0.0032	ND(0.0050)
	4/29/2005	12	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.041	0.47	ND(0.0050)	ND(0.010)	0.13	ND(0.0010)
	4/7/2006	12	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.007	ND(0.0010)	ND(0.0020)	0.0022	ND(0.0010)
	2/1/2007	15	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.01	ND(0.0010)	ND(0.0020)	0.004	ND(0.0010)
	4/13/2007	15	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0071	ND(0.0010)	ND(0.0020)	0.002	ND(0.0010)
	11/14/2007	11	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/22/2008	14	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.001	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	10/20/2008	11	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.013	ND(0.0010)	ND(0.0020)	0.0048	ND(0.0010)
	4/2/2009	11	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	10/26/2009	11	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0011	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	4/20/2010	14	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0013	ND(0.0010)	ND(0.0010)	0.0011	0.0082
	10/14/2010	11	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0026	0.0082	ND(0.0020)	0.019	0.07	ND(0.10)
	4/5/2011	11	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	10/25/2011	11	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
OB-19-BR	6/3/2002	80	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.20)	7.3	29	ND(0.20)	ND(0.20)	7.4	ND(0.10)
	6/3/2002	92	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.20)	11	44D	ND(0.20)	ND(0.20)	9.6	0.1
	1/28/2003	92	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.20)	12	70D	ND(0.20)	0.3	3.2	ND(0.0020)
	5/13/2003	92	ND(0.0020)	0.018	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0010)
	12/17/2003	92	ND(0.0010)	0.0047	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0044	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/26/2004	92	ND(0.0010)	0.0073	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0016	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	12/28/2004	91	ND(0.0010)	0.011	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0092	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/28/2005	92	ND(0.0010)	0.015	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0044	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	1/3/2006	92	ND(0.0010)	0.015	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0019	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	3/31/2006	82	ND(0.0010)	0.013	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0014	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.020)
	1/31/2007	92	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	0.83	2.8	ND(0.020)	ND(0.040)	1.2	ND(0.0050)
	4/16/2007	82	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.0067	0.0082	ND(0.0050)	ND(0.010)	0.59	ND(0.020)
	8/9/2007	80	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	0.027	0.17	ND(0.020)	ND(0.040)	2.3	ND(0.025)
	11/15/2007	82	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.050)	ND(0.025)	ND(0.050)	ND(0.13)	0.27	2	ND(0.025)	ND(0.050)	2.9	0.02
	1/24/2008	83	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	0.17	2.2	ND(0.020)	ND(0.040)	2.9	0.024
	4/22/2008	91	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	0.16	2.3	ND(0.020)	ND(0.040)	2.9	ND(0.050)J
	7/29/2008	91	ND(0.050)J	ND(0.050)J	ND(0.050)J	ND(0.050)J	ND(0.050)J	ND(0.10)J	ND(0.050)J	ND(0.10)J	ND(0.25)J	0.61J	3.2J	ND(0.050)J	ND(0.10)J	3.6J	ND(0.050)
	10/21/2008	91	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.10)	ND(0.050)	ND(0.10)	ND(0.25)	0.34	4.3	ND(0.050)	ND(0.10)	3.2	ND(0.10)
	1/13/2009	91	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	0.85	9.4	ND(0.10)	ND(0.10)	4.7	ND(0.10)
	4/9/2009	82	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	1	12	ND(0.10)	ND(0.10)	6	0.053J
	7/14/2010	91	ND(0.050)J	ND(0.050)J	ND(0.050)J	ND(0.050)J	ND(0.050)J	ND(0.050)J	ND(0.050)J	ND(0.050)J	ND(0.050)J	0.39J	6.3J	ND(0.050)J	0.13J	5.8J	ND(1.0)
OB-19-DO	6/3/2002	50	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(2.0)	47	160	ND(2.0)	ND(2.0)	2	0.2
	6/3/2002	65	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.20)	28	210D	ND(0.20)	0.7	1.8	ND(0.0020)
	1/28/2003	65	ND(0.0020)	0.005	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.004	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.1
	5/13/2003	65	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.20)	11	55	ND(0.20)	0.6	18	ND(0.50)
	12/17/2003	65	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(1.0)	ND(0.50)	ND(1.0)	ND(2.5)	11	53	ND(0.50)	ND(1.0)	2.9	ND(0.50)
	4/26/2004	59	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(1.0)	ND(0.50)	ND(1.0)	ND(2.5)	11	46	ND(0.50)	ND(1.0)	17	ND(0.0010)
	12/28/2004	65	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0029	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.020)
	4/28/2005	65	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	1.1	1.6	ND(0.020)	ND(0.040)	0.45	ND(0.010)
	1/19/2006	65	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.2	0.9	ND(0.010)	ND(0.020)	0.6	0.03
	3/31/2006	55	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.14	0.87	ND(0.010)	0.09	0.71	0.012
	1/31/2007	65	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0088	0.11	ND(0.0010)	0.013	0.052	0.076
	4/11/2007	65	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.13	0.97	ND(0.010)	0.14	0.83	0.072
	11/15/2007	54	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.11	0.8	ND(0.010)	0.09	0.69	0.07
	4/22/2008	64	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.14	0.85	ND(0.010)	0.12	0.78	0.065J

Table 3
Water Quality Data - VOC Results
June 2002 - March 2012
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)	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.)	7/29/2008	64	ND(0.010)J	ND(0.010)J	ND(0.010)J	ND(0.010)J	ND(0.010)J	ND(0.020)J	ND(0.010)J	ND(0.020)J	ND(0.050)J	0.17J	0.92J	ND(0.010)J	0.11J	0.71J	0.054
	10/21/2008	64	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	0.33	1.8	ND(0.020)	0.092	1.1	ND(0.20)
	1/13/2009	64	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	8.7	17	ND(0.20)	ND(0.20)	2.3	ND(0.20)
	4/9/2009	57	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	8.1	17	ND(0.20)	ND(0.20)	2.1	0.075J
	7/14/2010	64	ND(0.020)J	ND(0.020)J	ND(0.020)J	ND(0.020)J	ND(0.020)J	ND(0.020)J	ND(0.020)J	ND(0.020)J	ND(0.020)J	0.52J	2.6J	ND(0.020)J	0.10J	1.4J	0.058
	10/13/2010	57	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	0.25	0.94	ND(0.020)	0.085	1.9D	0.064
	1/5/2011	64	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	0.87	3.2	ND(0.040)	0.1	1.5	ND(0.0020)
	4/4/2011	57	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	0.46	1.8	ND(0.020)	0.066J	1.4	0.051
	7/28/2011	57	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	0.74	2.8	ND(0.040)	0.11	1.7	0.061
	10/26/2011	64	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	0.72	3.2D	ND(0.020)	0.079	1.3	0.053
	1/17/2012	56.5	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	0.82	3.1	ND(0.040)	0.094	1.5	0.066
OB-19-S	6/3/2002	35	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.003	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	1/28/2003	35	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.004	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	5/13/2003	35	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.002	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0010)
	12/17/2003	35	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0016	0.0044	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/26/2004	34	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0015	0.0029	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/28/2005	34	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0012	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	3/28/2006	33	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/11/2007	33	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/22/2008	34	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	10/21/2008	34	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/3/2009	34	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	4/20/2010	34	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.013
	4/20/2010	34	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.013
	4/5/2011	32.7	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
OB-20-BR	9/3/2004	NA	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	ND(0.010)	0.3	ND(0.010)	ND(0.020)	0.99	ND(0.010)
	1/3/2005	98	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	ND(0.010)	0.3	ND(0.010)	ND(0.020)	1.1	ND(0.010)J
	5/2/2005	97	ND(0.010)J	ND(0.010)J	ND(0.010)J	ND(0.010)J	ND(0.010)J	ND(0.020)J	ND(0.010)J	ND(0.020)J	ND(0.050)J	ND(0.010)J	0.24J	ND(0.010)J	ND(0.020)J	0.88J	ND(0.0010)
	1/6/2006	101	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	3/30/2006	96	ND(0.0010)	0.0012	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	2/1/2007	101	ND(0.0010)	0.0013	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/12/2007	100	ND(0.0010)	0.0013	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	11/14/2007	99	ND(0.0010)	0.0014	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/23/2008	96	ND(0.0010)	0.0014	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/6/2009	95	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	10/27/2009	95	ND(0.0010)	0.0014	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	4/28/2010	100	ND(0.0010)	0.0014	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)
	10/13/2010	96	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0027	ND(0.0020)	ND(0.0020)	0.014	0.0019
	4/6/2011	95	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.056	ND(0.0020)	ND(0.0020)	0.29D	ND(0.0020)
	10/26/2011	97	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0031	0.13	ND(0.0020)	0.0024	0.47D	0.002
OB-20-DO	9/3/2004	NA	ND(0.0010)	0.0011	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0041	ND(0.0020)	ND(0.0050)	0.017	0.089	ND(0.0010)	ND(0.0020)	0.05	ND(0.0010)
	1/3/2005	78	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	0.0031J
	5/2/2005	78	ND(0.0025)J	ND(0.0025)J	0.0035J	ND(0.0025)J	ND(0.0025)J	ND(0.0050)J	ND(0.0025)J	ND(0.0050)J	ND(0.013)J	0.011J	0.050J	ND(0.0025)J	0.0071J	0.34J	ND(0.0010)
	1/6/2006	78	ND(0.0010)	0.0016	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0013	ND(0.0020)	ND(0.0050)	0.0036	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0034	ND(0.0010)
	3/30/2006	77	ND(0.0010)	0.0019	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.001	ND(0.0020)	ND(0.0050)	0.0014	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	2/1/2007	78	ND(0.0010)	0.0022	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0015	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0050)
	4/12/2007	76	ND(0.0050)	ND(0.0050)	0.0051	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.0092	0.045	ND(0.0050)	0.011	0.49	ND(0.0050)
	11/14/2007	75	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.0084	0.042	ND(0.0050)	ND(0.010)	0.46	ND(0.0050)
	4/23/2008	77	ND(0.0050)	ND(0.0050)	0.0058	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.0086	0.043	ND(0.0050)	0.016	0.47	ND(0.0050)
	4/6/2009	75	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.031	ND(0.0050)	0.0075	0.42	ND(0.0025)
	10/27/2009	75	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.0058	0.076	ND(0.0025)	ND(0.0025)	0.25	ND(0.0050)
	4/23/2010	77	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.012	ND(0.0050)	ND(0.0050)	0.34	ND(0.0040)
	10/13/2010	75	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	0.014	ND(0.0040)	0.005	0.45D	ND(0.0010)
	4/6/2011	75	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0036	0.023	ND(0.0020)	ND(0.0020)	0.19	ND(0.0020)
	10/26/2011	75	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.012	ND(0.0050)	0.027	0.47	ND(0.0050)
OB-20-S	9/2/2004	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0033	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0012	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)

Table 3
Water Quality Data - VOC Results
June 2002 - March 2012
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)	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-20-S (Cont.)	1/3/2005	13	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0013	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)J
	5/2/2005	12	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)J	0.0018J	ND(0.0020)J	ND(0.0050)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0010)
	1/6/2006	13	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0016	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	3/30/2006	11	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0042	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	2/1/2007	13	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0019	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/12/2007	11	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0015	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	11/14/2007	11.1	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/23/2008	16	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	10/23/2008	12	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0018	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/6/2009	11	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	10/27/2009	11	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	4/23/2010	12	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)
	10/13/2010	11	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0061
	4/6/2011	11	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	10/26/2011	12	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
OB-21-BR	9/2/2004	NA	ND(0.0050)	0.012	0.013	ND(0.0050)	ND(0.0050)	ND(0.010)	0.0092	ND(0.010)	ND(0.025)	0.11	0.52	ND(0.0050)	0.013	0.47	ND(0.010)
	1/3/2005	97	ND(0.010)	0.018	0.022	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.11	0.79	ND(0.010)	0.021	0.74	ND(0.010)J
	5/2/2005	100	ND(0.010)J	0.018J	0.024J	ND(0.010)J	ND(0.010)J	ND(0.020)J	ND(0.010)J	ND(0.020)J	ND(0.050)J	0.096J	0.79J	ND(0.010)J	0.023J	0.80J	ND(0.020)
	1/6/2006	104	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	0.033	0.28	ND(0.020)	ND(0.040)	1.4	0.01
	3/30/2006	101	ND(0.010)	0.021	0.03	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.04	0.44	ND(0.010)	0.033	1.4	0.0071
	2/1/2007	98	ND(0.0050)	0.015	0.019	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.042	0.16	ND(0.0050)	0.019	0.68D	ND(0.020)
	4/12/2007	102	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	ND(0.020)	0.036	ND(0.020)	ND(0.040)	1.6	ND(0.010)
	11/14/2007	99	ND(0.010)	0.012	0.013	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.031	0.19	ND(0.010)	ND(0.020)	1	ND(0.010)
	4/23/2008	98	ND(0.010)	0.014	0.02	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.018	0.15	ND(0.010)	0.026	1.2	ND(0.0050)
	4/6/2009	97	ND(0.0050)	0.008	0.0087	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.037	0.16	ND(0.0050)	0.012	0.74	ND(0.010)
	10/27/2009	97	ND(0.010)	ND(0.010)	0.012	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.043	0.12	ND(0.010)	0.014	1	ND(0.010)
	4/28/2010	97	ND(0.010)	ND(0.010)	0.013	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.063	0.45	ND(0.010)	0.014	1.1	ND(0.020)
	10/13/2010	97	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	0.13	ND(0.020)	0.03	1.6	ND(0.0010)
	4/6/2011	98.2	ND(0.0040)	0.0092	0.011	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	0.013	0.14	ND(0.0040)	0.017	1.5D	0.0043
	10/26/2011	97	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	0.033	0.061	ND(0.020)	0.022	1.5	ND(0.020)
OB-21-DO	9/2/2004	NA	ND(0.0010)	0.0014	0.0011	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0011	ND(0.0020)	ND(0.0050)	0.025	0.081	ND(0.0010)	ND(0.0020)	0.031	ND(0.0050)
	1/3/2005	82	ND(0.0050)	0.0088	0.011	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.099	0.28	ND(0.0050)	ND(0.010)	0.55	ND(0.0050)J
	5/2/2005	82	ND(0.0050)J	0.0087J	0.011J	ND(0.0050)J	ND(0.0050)J	ND(0.010)J	ND(0.0050)J	ND(0.010)J	ND(0.025)J	0.18J	0.50J	ND(0.0050)J	ND(0.010)J	0.34J	ND(0.0050)
	1/6/2006	86	ND(0.0050)	0.0068	0.0083	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.22	0.66	ND(0.0050)	ND(0.010)	0.22	ND(0.0050)
	3/30/2006	81	ND(0.0050)	0.01	0.012	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.23	0.64	ND(0.0050)	ND(0.010)	0.21	ND(0.010)
	2/1/2007	NA	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.23	0.76	ND(0.010)	ND(0.020)	0.25	ND(0.010)
	4/12/2007	81	ND(0.010)	0.013	0.016	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.35	1.1	ND(0.010)	ND(0.020)	0.32	ND(0.010)
	11/14/2007	79	ND(0.010)	ND(0.010)	0.011	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.29	0.91	ND(0.010)	ND(0.020)	0.35	ND(0.010)
	4/23/2008	79	ND(0.010)	0.01	0.012	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.26	0.81	ND(0.010)	ND(0.020)	0.28	ND(0.0050)
	4/6/2009	79	ND(0.0050)	0.0069	0.0074	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.21	0.71	ND(0.0050)	ND(0.0050)	0.27	ND(0.0050)
	10/27/2009	79	ND(0.0050)	0.0097	0.01	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.17	0.61	ND(0.0050)	ND(0.0050)	0.42	ND(0.010)
	4/28/2010	79	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.32	1.1	ND(0.010)	ND(0.010)	0.49	ND(0.020)
	10/13/2010	79	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	0.32	1.4	ND(0.020)	ND(0.020)	0.47	ND(0.0010)
	4/6/2011	79	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	0.34	1.3	ND(0.020)	ND(0.020)	0.41	ND(0.020)
	10/26/2011	79	ND(0.010)	ND(0.010)	0.011	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.28	1.4D	ND(0.010)	ND(0.010)	0.51	ND(0.010)
OB-22-DO	9/3/2004	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.015	ND(0.0020)	ND(0.0050)	0.011	0.025	ND(0.0010)	ND(0.0020)	0.014	ND(0.0050)
	1/4/2005	59	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	0.0053	ND(0.010)	ND(0.025)	0.0072	0.005	ND(0.0050)	ND(0.010)	0.4	ND(0.0050)J
	5/2/2005	58	ND(0.0050)J	ND(0.0050)J	ND(0.0050)J	ND(0.0050)J	ND(0.0050)J	ND(0.010)J	ND(0.0050)J	ND(0.010)J	ND(0.025)J	0.039J	0.040J	ND(0.0050)J	ND(0.010)J	0.70J	ND(0.0050)
	1/4/2006	59	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.15	0.23	ND(0.0050)	ND(0.010)	0.62	ND(0.0050)
	4/7/2006	57	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.064	0.13	ND(0.0050)	ND(0.010)	0.63	ND(0.0050)
	2/1/2007	59	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.35	0.57	ND(0.0050)	ND(0.010)	0.38	ND(0.0050)
	4/15/2007	59	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.22	0.35	ND(0.0050)	ND(0.010)	0.41	ND(0.0050)
	11/16/2007	58	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.22	0.39	ND(0.0050)	ND(0.010)	0.24	ND(0.0010)
	4/23/2008	56	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.055	0.054	ND(0.0010)	ND(0.0020)	0.013	ND(0.0050)
	4/6/2009	56	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.38	0.58	ND(0.0050)	ND(0.0050)	0.15	ND(0.0025)

Table 3
Water Quality Data - VOC Results
June 2002 - March 2012
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)	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-22-DO (Cont.)	10/27/2009	57	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.066	0.25	ND(0.0025)	0.0039	0.28	ND(0.0040)
	10/12/2010	56	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	0.023	0.054	ND(0.0040)	0.032	0.40D	ND(0.0020)
	10/25/2011	55	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0069	ND(0.0020)	ND(0.0020)	0.031	ND(0.0020)
OB-23-BR	6/13/2002	55	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.014	0.023	ND(0.0020)	ND(0.0020)	0.006	ND(0.0020)
	6/13/2002	70	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.019	0.063	ND(0.0020)	ND(0.0020)	0.009	ND(0.0020)
	6/13/2002	98	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.016	0.069	ND(0.0020)	ND(0.0020)	0.01	ND(0.0010)
	5/1/2004	85	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.1	ND(0.0010)
	4/7/2006	83	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0027	ND(0.0010)	ND(0.0020)	0.052	0.01
	4/1/2009	95	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	4/21/2010	97	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.001	ND(0.0010)	0.071	0.065	ND(0.0020)
	4/4/2011	83	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.062J	0.013	ND(0.0020)
OB-24-S	6/3/2002	3	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	5/14/2003	3	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0010)
	12/18/2003	3	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/27/2004	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/28/2005	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0038	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	3/31/2006	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/11/2007	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/3/2009	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0018	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	4/21/2010	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.10)
	4/5/2011	2	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
OB-25-BR	6/18/2003	NA	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.20)	6.9	20	ND(0.20)	ND(0.20)	7.1	ND(0.0010)
	12/17/2003	100	ND(0.0010)	0.011	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/26/2004	98	ND(0.0010)	0.023	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/28/2005	97	ND(0.0010)	0.024	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0021	ND(0.0020)	ND(0.0050)	0.0019	0.022	ND(0.0010)	ND(0.0020)	0.0056	ND(0.0010)
	3/31/2006	97	ND(0.0010)	0.019	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0052	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.020)
	4/11/2007	96	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	0.22	1.9	ND(0.020)	ND(0.040)	1.2	ND(0.050)
	4/22/2008	99	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.10)	ND(0.050)	ND(0.10)	ND(0.25)	0.4	4.9	ND(0.050)	ND(0.10)	2.2	ND(0.50)
	4/3/2009	95	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	1.5	ND(0.50)	18	64	ND(0.50
	4/20/2010	99	ND(0.50	ND(0.50	ND(0.50	ND(0.50	ND(0.50	ND(0.50	ND(0.50	ND(0.50	ND(0.50	0.51	3.8	ND(0.50	21	56	ND(0.50)J
	7/14/2010	99.5	ND(0.50)J	ND(0.50)J	ND(0.50)J	ND(0.50)J	ND(0.50)J	ND(0.50)J	ND(0.50)J	ND(0.50)J	ND(0.50)J	ND(0.50)J	2.9J	ND(0.50)J	20J	65J	ND(0.50)
	10/13/2010	97	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	2.7	ND(0.50)	21	67D	ND(0.0020)
	4/14/2011	101	ND(0.0020)	0.023	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	10/26/2011	99.5	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	1.9	8.8	ND(0.40)	4	22	ND(0.40)
OB-25-DO	6/26/2003	NA	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.002	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0010)
	12/17/2003	70	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/26/2004	69	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/28/2005	69	0.01	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	3/31/2006	70	0.0035	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.025)
	4/14/2007	70	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.050)	ND(0.025)	ND(0.050)	ND(0.13)	0.7	2.6	ND(0.025)	ND(0.050)	1.4	ND(0.10)J
	7/14/2010	69	ND(0.10)J	ND(0.10)J	ND(0.10)J	ND(0.10)J	ND(0.10)J	ND(0.10)J	ND(0.10)J	ND(0.10)J	ND(0.10)J	1.0J	13J	ND(0.10)J	ND(0.10)J	1.3J	ND(0.10)
OB-26-BR	6/19/2003	NA	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.20)	5.9	27	ND(0.20)	ND(0.20)	2.8	ND(0.0010)
	12/17/2003	96	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.021	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/26/2004	95	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/28/2005	95	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.050)
	3/31/2006	94	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.10)	ND(0.050)	ND(0.10)	ND(0.25)	0.086	3.4	ND(0.050)	ND(0.10)	0.71	ND(0.025)
	4/11/2007	93	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.050)	ND(0.025)	ND(0.050)	ND(0.13)	0.06	2.2	ND(0.025)	ND(0.050)	0.86	ND(0.0010)
	4/22/2008	95	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0052	0.11	ND(0.0010)	ND(0.0020)	0.045	ND(0.0050)
	4/3/2009	93	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.019	0.48	ND(0.0050)	ND(0.0050)	0.19	ND(0.0010)
	4/20/2010	95	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0016	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(1.0)
	4/4/2011	93.1	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)J	ND(0.0020)	ND(0.0020)
OB-26-DO	7/2/2003	NA	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(2.0)	24	210	ND(2.0)	ND(2.0)	ND(1.0)	ND(0.0010)
	12/17/2003	66	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/26/2004	61	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/28/2005	66	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0014	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)

Table 3
Water Quality Data - VOC Results
June 2002 - March 2012
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)	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-26-DO (Cont.)	3/31/2006	63	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.10)
	4/14/2007	66	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.10)	ND(0.20)	ND(0.50)	1.8	8.1	ND(0.10)	ND(0.20)	0.4	ND(0.0050)
OB-27-BR	6/27/2003	NA	ND(0.0050)	0.008	0.009	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.027	ND(0.030)	ND(0.010)	1.8D	6.5D	ND(0.010)	ND(0.010)	1	ND(0.20)Z
	12/18/2003	87	ND(0.20)Z	ND(0.20)Z	ND(0.20)Z	ND(0.20)Z	ND(0.20)Z	ND(0.40)Z	ND(0.20)Z	ND(0.40)Z	ND(1.0)Z	3.8	15	ND(0.20)Z	ND(0.40)Z	5	ND(0.25)
	4/27/2004	86	ND(0.25)	ND(0.25)	ND(0.25)	ND(0.25)	ND(0.25)	ND(0.50)	ND(0.25)	ND(0.50)	ND(1.3)	5.8	18	ND(0.25)	ND(0.50)	5.5	ND(0.20
	7/12/2004	85.5	ND(0.20	ND(0.20	ND(0.20	ND(0.20	ND(0.20	ND(0.40	0.3	ND(0.40	ND(1.0	4.2	17	ND(0.20	ND(0.40	5.6	ND(0.0010)
	12/28/2004	87	0.0082	0.043	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0011	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.010)
	4/28/2005	87	ND(0.010)	0.094	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.82	0.19	ND(0.010)	ND(0.020)	0.029	ND(0.0010)
	1/3/2006	87	ND(0.0010)	0.041	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.10)
	3/28/2006	86	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.10)	ND(0.20)	ND(0.50)	3.2	9.1N	ND(0.10)	ND(0.20)	3.2	ND(0.0010)
	1/31/2007	87	ND(0.0010)	0.028	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/14/2007	87	ND(0.0010)	0.034	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.10)
	11/15/2007	86	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.10)	ND(0.20)	ND(0.50)	5.5	9.4	ND(0.10)	ND(0.20)	3	ND(0.10)
	4/28/2008	86	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.10)	ND(0.20)	ND(0.50)	5.6	13	ND(0.10)	ND(0.20)	4.4	ND(0.20)
	10/22/2008	86	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.40)	ND(0.20)	ND(0.40)	ND(1.0)	7	15	ND(0.20)	ND(0.40)	3.8	ND(0.20)
	4/3/2009	86	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	10	26	ND(0.20)	ND(0.20)	7.7	ND(0.20)
	10/27/2009	78.5	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	10	24	ND(0.20)	ND(0.20)	7.6	ND(0.0025)
	4/22/2010	86	ND(0.0025)	0.028	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.19	0.048	ND(0.0025)	ND(0.0025)	0.005	ND(0.0020)
	10/14/2010	86	ND(0.0020)	0.045	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	4/14/2011	81	ND(0.0020)	0.017	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0056	ND(0.0020)	ND(0.0020)	0.0026	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	10/28/2011	86	ND(0.0050)	0.036	0.05	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	7.4D	22D	ND(0.0050)	0.03	4.9D	0.012
OB-27-DO	6/30/2003	NA	ND(0.0020)	0.004	0.006	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.012	ND(0.010)	ND(0.010)	ND(0.0020)	0.007	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0010)Z
	12/18/2003	63	ND(0.0010)Z	0.0044	0.0085	ND(0.0010)Z	ND(0.0010)Z	ND(0.0020)Z	ND(0.0010)Z	ND(0.0020)Z	ND(0.0050)Z	ND(0.0010)Z	0.0041	ND(0.0010)Z	ND(0.0020)Z	ND(0.0010)Z	ND(0.0010)
	4/27/2004	61	ND(0.0010)	0.005	0.01	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0047	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	7/12/2004	61	ND(0.0010)	0.0038	0.0075	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0048	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	12/28/2004	61	ND(0.0010)	0.0031	0.0065	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0035	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/28/2005	61	ND(0.0010)	0.0036	0.0072	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0042	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	1/3/2006	63	ND(0.0010)	0.0021	0.0042	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0043	ND(0.0010)	ND(0.0020)	0.001	ND(0.0010)
	3/28/2006	61	ND(0.0010)	0.0018	0.0035	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0033	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	1/31/2007	63	ND(0.0010)	0.0018	0.0039	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0033	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/10/2007	63	ND(0.0010)	0.0017	0.0034	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0026	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	11/15/2007	60	ND(0.0010)	0.0015	0.0033	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0033	ND(0.0010)	ND(0.0020)	0.0015	ND(0.0010)
	4/23/2008	61	ND(0.0010)	0.0018	0.0038	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0032	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	10/22/2008	61	ND(0.0010)	0.0013	0.0029	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0034	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/3/2009	61	ND(0.0010)	0.0013	0.0029	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0028	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.10)
OB-28-BR	6/18/2003	NA	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.20)	0.8	24	ND(0.20)	ND(0.20)	0.4	ND(0.0010)
	12/17/2003	92	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/26/2004	92	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/28/2005	94	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0045	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	3/31/2006	93	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.025)
	4/11/2007	90	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.050)	ND(0.025)	ND(0.050)	ND(0.13)	ND(0.025)	2.2	ND(0.025)	ND(0.050)	0.2	ND(0.0010)
	4/6/2009	93	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.024	ND(0.0010)	ND(0.0010)	0.0011	ND(0.0010)
	4/20/2010	93	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(1.0)
	5/27/2011	122	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
OB-28-DO	7/2/2003	NA	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(2.0)	4	51	ND(2.0)	ND(2.0)	ND(1.0)	ND(0.0010)
	12/17/2003	65	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0018	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/26/2004	61	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/28/2005	65	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	3/31/2006	61	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	0.028
	4/14/2007	65	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.081	ND(0.0010)	0.0076	0.029	ND(0.0020)
OB-29-DO	8/13/2003	NA	0.004	0.011	0.015	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.12	0.48	ND(0.0040)	ND(0.0040)	0.11	ND(0.010)
	12/29/2003	40	ND(0.010)	ND(0.010)	0.013	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.24	0.72	ND(0.010)	ND(0.020)	0.15	ND(0.0050)
	5/3/2004	35	ND(0.0050)	0.0081	0.011	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.2	0.64	ND(0.0050)	ND(0.010)	0.16	ND(0.0050)
	12/30/2004	37	ND(0.0050)	0.0066	0.0078	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.16	0.5	ND(0.0050)	ND(0.010)	0.13	ND(0.0050)
	4/29/2005	35	ND(0.0050)	0.007	0.0064	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.19	0.54N	ND(0.0050)	ND(0.010)	0.16	ND(0.0050)

Table 3
Water Quality Data - VOC Results
June 2002 - March 2012
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)	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-29-DO (Cont.)	3/29/2006	30	ND(0.0050)	0.0054	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.074	0.28	ND(0.0050)	ND(0.010)	0.36	0.18
OB-30-DO	2/2/2004	69	ND(0.0050)	0.16	0.18	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.0054	0.19	ND(0.0050)	ND(0.0020)	0.034	ND(0.0020)
	5/5/2004	69	0.0058	0.24	0.28	0.0037	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0040)	ND(0.010)	0.0038	0.21	ND(0.0020)	ND(0.0040)	0.0071	ND(0.0020)
	12/29/2004	68	0.003	0.14	0.14	0.0022	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0040)	ND(0.010)	0.0031	0.14	ND(0.0020)	ND(0.0040)	0.0036	ND(0.0020)
	4/28/2005	69	0.012	0.21	0.23	0.0034	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0040)	ND(0.010)	0.0046	0.21	ND(0.0020)	ND(0.0040)	0.007	ND(0.0020)
	1/3/2006	69	0.0026	0.13	0.16	0.002	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0040)	ND(0.010)	0.004	0.16	ND(0.0020)	ND(0.0040)	0.0057	ND(0.0020)
	3/28/2006	69	0.004	0.12	0.14	ND(0.0020)	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0040)	ND(0.010)	0.0026	0.15	ND(0.0020)	ND(0.0040)	0.005	ND(0.0020)
	1/31/2007	69	ND(0.0020)	0.11	0.14	0.002	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0040)	ND(0.010)	0.0032	0.14	ND(0.0020)	ND(0.0040)	0.0062	ND(0.0020)
	4/11/2007	69	ND(0.0020)	0.15	0.19	0.0025	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0040)	ND(0.010)	0.0035	0.16	ND(0.0020)	ND(0.0040)	0.0072	ND(0.0010)
	11/15/2007	67	ND(0.0010)	0.1	0.14	0.002	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0033	0.13	ND(0.0010)	ND(0.0020)	0.0088	ND(0.0020)
	4/23/2008	68	ND(0.0020)	0.16	0.18	ND(0.0020)	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0040)	ND(0.010)	0.0032	0.16	ND(0.0020)	ND(0.0040)	0.0093	ND(0.0020)
	10/21/2008	68	0.0032	0.16	0.19	0.0024	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0040)	ND(0.010)	0.0046	0.16	ND(0.0020)	ND(0.0040)	0.0088	ND(0.0020)
	4/6/2009	68	ND(0.0020)	0.18	0.18	0.0025	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0025	0.18	ND(0.0020)	ND(0.0020)	0.0089	ND(0.0050)
OB-31-DO	2/2/2004	64	ND(0.0050)	0.005	ND(0.0010)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0020)	ND(0.0050)	ND(0.0010)
	5/2/2004	64	ND(0.0010)	0.0053	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0053	ND(0.0010)	ND(0.0020)	0.0019	ND(10)
OB-32-DO	2/2/2004	61	ND(10)	ND(10)	ND(2.0)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	76	850D	ND(10)	ND(4.0)	ND(10)	ND(10)
	5/5/2004	58	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(20)	ND(10)	ND(20)	ND(50)	68	710	ND(10)	ND(20)	ND(10)	ND(0.010)
	12/29/2004	58	0.059	ND(0.010)	ND(0.010)	0.019	0.056	ND(0.020)	0.81	ND(0.020)	ND(0.050)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.0050)J
	5/2/2005	61	0.34J	ND(0.0050)J	ND(0.0050)J	0.0084J	0.24J	ND(0.010)J	0.63J	ND(0.010)J	ND(0.025)J	0.0058J	ND(0.0050)J	ND(0.0050)J	ND(0.010)J	ND(0.0050)J	ND(0.0050)
	1/3/2006	61	0.45	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.32	ND(0.010)	0.38	ND(0.010)	ND(0.025)	0.016	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.0025)
	4/3/2006	54	0.29	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.17	ND(0.0050)	0.29	ND(0.0050)	ND(0.013)	0.0048	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.010)
	1/31/2007	61	1.2	ND(0.010)	ND(0.010)	ND(0.010)	0.91	ND(0.020)	1.3	ND(0.020)	ND(0.050)	0.03	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.0050)
	4/11/2007	61	0.6	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.55	ND(0.010)	0.35	ND(0.010)	ND(0.025)	0.005	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)
	11/15/2007	60	1.3	ND(0.010)	ND(0.010)	ND(0.010)	1.3	ND(0.020)	1	ND(0.020)	ND(0.050)	0.011	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.010)
	4/25/2008	60	1	ND(0.010)	ND(0.010)	ND(0.010)	0.88	ND(0.020)	0.57	ND(0.020)	ND(0.050)	0.014	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.0020)
	10/22/2008	60	2.1D	0.0026	ND(0.0020)	ND(0.0020)	1.7D	ND(0.0040)	0.87D	ND(0.0040)	ND(0.010)	0.093	0.0075	0.002	ND(0.0040)	ND(0.0020)	ND(0.020)
	4/3/2009	60	2.4	ND(0.020)	ND(0.020)	ND(0.020)	2	ND(0.020)	0.85	ND(0.020)	ND(0.020)	0.16	0.03	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.010)
	10/27/2009	60	1.5	ND(0.010)	ND(0.010)	ND(0.010)	1.4	ND(0.010)	0.53	ND(0.010)	ND(0.010)	0.059	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)
	11/23/2009	60	2	ND(0.020)	ND(0.020)	ND(0.020)	1.7	ND(0.020)	0.51	ND(0.020)	ND(0.020)	0.3	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.010)
	4/20/2010	60	1.5	ND(0.010)	ND(0.010)	ND(0.010)	1.3	ND(0.010)	0.36	ND(0.010)	ND(0.010)	0.046	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.0020)
	10/14/2010	60	1.4D	ND(0.0020)	ND(0.0020)	ND(0.0020)	1.2D	ND(0.0020)	0.28D	ND(0.0020)	0.0025	0.0021	ND(0.0020)	0.004	ND(0.0020)	ND(0.0020)	ND(10)
	4/14/2011	52	0.57D	ND(0.0040)	ND(0.0040)	ND(0.0040)	0.50D	ND(0.0040)	0.1	ND(0.0040)	ND(0.0040)	0.079	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)
	10/28/2011	60	0.43	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.45	ND(0.0050)	0.079	ND(0.0050)	ND(0.0050)	0.0068	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)
OB-32-DO(PURGE)	2/2/2004	NA	ND(10)	ND(10)	ND(2.0)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	36	580D	ND(10)	ND(4.0)	ND(10)	ND(0.0050)
OB-33-DO	2/2/2004	56	ND(0.0050)	ND(0.0050)	ND(0.0010)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.0064	ND(0.0050)	ND(0.0050)	0.054	0.99D	ND(0.0050)	ND(0.0020)	ND(0.0050)	ND(0.0010)
	5/5/2004	56	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.022	0.072	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	12/29/2004	55	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/28/2005	55	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0012	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	12/29/2005	56	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	3/28/2006	54	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	1/31/2007	56	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0015	ND(0.0010)
	4/14/2007	56	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	11/13/2007	54	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.001	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)J
	4/21/2008	55	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0020)J	ND(0.0050)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0010)
	10/21/2008	55	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/6/2009	55	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.050)
OB-34-DO	2/2/2004	64	ND(0.050)	ND(0.050)	ND(0.010)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	0.22	6.5D	ND(0.050)	ND(0.020)	ND(0.050)	ND(0.10)
	5/5/2004	64	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.10)	ND(0.20)	ND(0.50)	0.29	13N	ND(0.10)	ND(0.20)	ND(0.10)	ND(0.0050)
	12/29/2004	63	0.0069	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.03	ND(0.010)	0.043	ND(0.010)	ND(0.025)	0.49	0.013	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.025)J
	5/2/2005	64	ND(0.025)J	ND(0.025)J	ND(0.025)J	ND(0.025)J	ND(0.025)J	ND(0.050)J	ND(0.025)J	ND(0.050)J	ND(0.13)J	1.4J	3.5J	ND(0.025)J	ND(0.050)J	0.093J	ND(0.0010)
	1/3/2006	64	0.017	0.0038	ND(0.0010)	ND(0.0010)	0.12	ND(0.0020)	0.1	ND(0.0020)	ND(0.0050)	0.058	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)
	3/28/2006	62	0.0098	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.045	ND(0.0040)	0.069	ND(0.0040)	ND(0.010)	0.14	ND(0.0020)	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.20)
	1/31/2007	64	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.40)	ND(0.20)	ND(0.40)	ND(1.0)	2.7	18	ND(0.20)	ND(0.40)	0.74	ND(0.20)
	4/14/2007	64	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.40)	ND(0.20)	ND(0.40)	ND(1.0)	2.8	17	ND(0.20)	ND(0.40)	0.81	ND(0.0010)
	11/15/2007	63	0.0048	0.0031	ND(0.0010)	ND(0.0010)	0.017	ND(0.0020)	0.047	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.010)

Table 3
Water Quality Data - VOC Results
June 2002 - March 2012
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)	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-34-DO (Cont.)	4/25/2008	63	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	0.025	ND(0.020)	ND(0.050)	0.75	0.062	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.0020)
	10/22/2008	63	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0040)	0.023	ND(0.0040)	ND(0.010)	0.86D	2.4D	ND(0.0020)	ND(0.0040)	0.2	ND(0.0010)
	4/6/2009	63	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0027	ND(0.0010)	ND(0.0010)	0.059	0.0022	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.10)
	10/27/2009	62	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	1.6	8.6	ND(0.10)	ND(0.10)	0.65	ND(0.10
	4/20/2010	63	ND(0.10	ND(0.10	ND(0.10	ND(0.10	ND(0.10	ND(0.10	ND(0.10	ND(0.10	ND(0.10	1.6	10	ND(0.10	ND(0.10	1.1	ND(0.0050)
	10/14/2010	63	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.0093	ND(0.0050)	ND(0.0050)	0.3	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(2.5)
	4/14/2011	61	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.9	0.37	ND(0.010)	ND(0.010)	0.011	ND(0.010)
	10/28/2011	63	ND(0.0050)	ND(0.0050)	0.006	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.0058	ND(0.0050)	ND(0.0050)	1.3D	11D	ND(0.0050)	ND(0.0050)	0.95D	ND(0.0050)
OB-35-DO	2/2/2004	62	ND(2.5)	ND(2.5)	ND(0.50)	ND(2.5)	ND(2.5)	ND(2.5)	ND(2.5)	ND(2.5)	ND(2.5)	ND(2.5)	77	ND(2.5)	ND(1.0)	ND(2.5)	ND(2.0)
	5/4/2004	62	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(4.0)	ND(2.0)	ND(4.0)	ND(10)	3	170	ND(2.0)	ND(4.0)	ND(2.0)	ND(2.5)
	12/28/2004	61	ND(2.5)	ND(2.5)	ND(2.5)	ND(2.5)	ND(2.5)	ND(5.0)	ND(2.5)	ND(5.0)	ND(13)	9.8	330	ND(2.5)	ND(5.0)	ND(2.5)	ND(5.0)
	5/3/2005	61	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(10)	ND(5.0)	ND(10)	ND(25)	11	440	ND(5.0)	ND(10)	ND(5.0)	ND(0.020)
	1/3/2006	63	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	1.8	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.20)
	4/7/2006	59	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.40)	ND(0.20)	ND(0.40)	ND(1.0)	23	18	ND(0.20)	ND(0.40)	1.9	ND(0.20)
	2/5/2007	63	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.40)	ND(0.20)	ND(0.40)	ND(1.0)	14	6.4	ND(0.20)	ND(0.40)	0.77	ND(0.050)
	4/13/2007	63	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.10)	ND(0.050)	ND(0.10)	ND(0.25)	5.7	0.088	ND(0.050)	ND(0.10)	ND(0.050)	ND(0.0010)
	11/15/2007	62	ND(0.0010)	0.025	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.01	ND(0.0010)	0.0021	ND(0.0020)	ND(0.0010)	ND(0.25)
	4/25/2008	62	ND(0.25)	ND(0.25)	ND(0.25)	ND(0.25)	ND(0.25)	ND(0.50)	ND(0.25)	ND(0.50)	ND(1.3)	20	8.2	ND(0.25)	ND(0.50)	1.9	ND(0.0010)
	10/23/2008	62	ND(0.0010)	0.021	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	0.0022	ND(0.0020)	ND(0.0010)	ND(0.20)
	4/9/2009	57	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	19	6.2	ND(0.20)	ND(0.20)	1.7	ND(0.20)
	10/28/2009	57	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	22	6.9	ND(0.20)	ND(0.20)	1.6	ND(0.20
	4/22/2010	62	ND(0.20	ND(0.20	ND(0.20	ND(0.20	ND(0.20	ND(0.20	ND(0.20	ND(0.20	ND(0.20	22	7.5	ND(0.20	ND(0.20	1.6	ND(0.40)
	10/14/2010	49	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	34	7.7	ND(0.40)	ND(0.40)	1.6	ND(1.0)
	4/7/2011	48.7	ND(0.50)J	ND(0.50)J	ND(0.50)J	ND(0.50)J	ND(0.50)J	ND(0.50)J	ND(0.50)J	ND(0.50)J	ND(0.50)J	32J	7.7J	ND(0.50)J	ND(0.50)J	1.6J	ND(0.50)J
	10/27/2011	62	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	29	5	ND(0.40)	ND(0.40)	0.95	ND(0.40)
OB-35-DO(PURGE)	2/2/2004	NA	ND(1.0)	ND(1.0)	ND(0.20)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	1.9	68D	ND(1.0)	ND(0.40)	ND(1.0)	ND(0.25)
OB-36-DO	2/2/2004	62	ND(0.25)	ND(0.25)	ND(0.050)	ND(0.25)	ND(0.25)	ND(0.25)	ND(0.25)	ND(0.25)	ND(0.25)	11D	8.8	ND(0.25)	ND(0.10)	ND(0.25)	ND(0.10)
	5/4/2004	59	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.10)	ND(0.20)	ND(0.50)	8.2	7.2	ND(0.10)	ND(0.20)	ND(0.10)	ND(0.020)
	12/28/2004	60	0.048	ND(0.020)	ND(0.020)	0.037	1.4	ND(0.040)	1.4	ND(0.040)	ND(0.10)	0.022	0.028	ND(0.020)	ND(0.040)	ND(0.020)	ND(1.0)
	5/3/2005	59	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(2.0)	ND(5.0)	34	110	ND(1.0)	ND(2.0)	ND(1.0)	ND(0.0010)
	1/3/2006	62	0.0027	ND(0.0010)	ND(0.0010)	0.0026	0.01	ND(0.0020)	0.014	ND(0.0020)	ND(0.0050)	0.0023	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/7/2006	59	0.0095	0.0051	ND(0.0010)	0.012	0.058	ND(0.0020)	0.13	ND(0.0020)	ND(0.0050)	0.0057	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.025)
	2/5/2007	62	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	0.032	ND(0.050)	0.14	ND(0.050)	ND(0.13)	2.4	0.038	ND(0.025)	ND(0.050)	ND(0.025)	ND(0.0025)
	4/13/2007	62	0.017	0.017	ND(0.0025)	0.025	0.079	ND(0.0050)	0.3	ND(0.0050)	ND(0.013)	0.1	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.50)
	11/15/2007	57	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(1.0)	ND(0.50)	ND(1.0)	ND(2.5)	22	46	ND(0.50)	ND(1.0)	ND(0.50)	ND(0.50)
	1/25/2008	64	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(1.0)	ND(0.50)	ND(1.0)	ND(2.5)	14	62	ND(0.50)	ND(1.0)	ND(0.50)	ND(0.10)
	4/25/2008	61	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.10)	ND(0.20)	ND(0.50)	3.2	7.9	ND(0.10)	ND(0.20)	ND(0.10)	ND(0.10)J
	7/29/2008	62	ND(0.10)J	ND(0.10)J	ND(0.10)J	ND(0.10)J	ND(0.10)J	ND(0.20)J	ND(0.10)J	ND(0.20)J	ND(0.50)J	4.0J	8.3J	ND(0.10)J	ND(0.20)J	ND(0.10)J	ND(0.050)
	10/22/2008	61	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.10)	ND(0.050)	ND(0.10)	ND(0.25)	3.2	6.1	ND(0.050)	ND(0.10)	ND(0.050)	ND(0.10)
	1/14/2009	62	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	4	8.2	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.050)
	4/9/2009	54	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	3.9	6.3	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.25)
	10/26/2009	55	ND(0.25)	ND(0.25)	ND(0.25)	ND(0.25)	ND(0.25)	ND(0.25)	ND(0.25)	ND(0.25)	ND(0.25)	7.9	29	ND(0.25)	ND(0.25)	ND(0.25)	ND(0.050)
	4/22/2010	61	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	4.4	5.8	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.20)
	10/13/2010	54	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	6.4	15	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.25)
	4/7/2011	53.9	ND(0.20)J	ND(0.20)J	ND(0.20)J	ND(0.20)J	ND(0.20)J	ND(0.20)J	ND(0.20)J	ND(0.20)J	ND(0.20)J	7J	9.8J	ND(0.20)J	ND(0.20)J	0.24J	ND(0.20)J
	10/28/2011	61	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	6.6	5.2	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)
OB-36-DO(PURGE)	2/2/2004	NA	ND(0.25)	ND(0.25)	ND(0.050)	ND(0.25)	ND(0.25)	ND(0.25)	ND(0.25)	ND(0.25)	ND(0.25)	9.6	9.3	ND(0.25)	ND(0.10)	ND(0.25)	ND(10)
OB-37-DO	2/2/2004	60	ND(10)	ND(10)	ND(2.0)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	110	220	ND(10)	ND(4.0)	ND(10)	ND(0.050)
	5/4/2004	60	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.10)	ND(0.050)	ND(0.10)	ND(0.25)	3.2	5.3	ND(0.050)	ND(0.10)	ND(0.050)	ND(0.10)
	12/28/2004	59	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.10)	ND(0.20)	ND(0.50)	9	7.6	ND(0.10)	ND(0.20)	ND(0.10)	ND(0.50)
	5/3/2005	58	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(1.0)	ND(0.50)	ND(1.0)	ND(2.5)	30	58	ND(0.50)	ND(1.0)	ND(0.50)	ND(1.0)
	1/3/2006	62	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(2.0)	ND(5.0)	36	100	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)
	4/7/2006	59	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(2.0)	ND(5.0)	53	140	ND(1.0)	ND(2.0)	ND(1.0)	ND(0.0010)
	2/5/2007	62	0.0041	0.0019	ND(0.0010)	ND(0.0010)	0.077	ND(0.0020)	0.046	ND(0.0020)	ND(0.0050)	0.1	0.0015	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/13/2007	62	0.0021	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.066	ND(0.0020)	0.03	ND(0.0020)	ND(0.0050)	0.13	0.0072	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0050)

Table 3
Water Quality Data - VOC Results
June 2002 - March 2012
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)	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-37-DO (Cont.)	11/15/2007	61	0.15	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.39	ND(0.010)	0.21	ND(0.010)	ND(0.025)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.0025)
	4/25/2008	61	0.011	0.0031	ND(0.0025)	ND(0.0025)	0.35	ND(0.0050)	0.32D	ND(0.0050)	ND(0.013)	0.0027	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0050)J
	7/29/2008	61	0.0058J	ND(0.0050)J	ND(0.0050)J	ND(0.0050)J	0.32J	ND(0.010)J	0.43J	ND(0.010)J	ND(0.025)J	ND(0.0050)J	ND(0.0050)J	ND(0.0050)J	ND(0.010)J	ND(0.0050)J	ND(0.0010)
	10/22/2008	61	0.0056	0.0018	ND(0.0010)	ND(0.0010)	0.12	ND(0.0020)	0.11	ND(0.0020)	ND(0.0050)	0.041D	0.037D	ND(0.0010)	ND(0.0020)	0.0021	ND(0.20
	1/30/2009	61	ND(0.20	ND(0.20	ND(0.20	ND(0.20	ND(0.20	ND(0.20	ND(0.20	ND(0.20	ND(0.20	0.79	17	ND(0.20	ND(0.20	ND(0.20	ND(0.20)
	4/9/2009	61	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	2.4	23	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.40)
	10/26/2009	49	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	2.3	43	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.010)
	4/22/2010	61	ND(0.010)J	ND(0.010)J	ND(0.010)J	ND(0.010)J	ND(0.010)J	ND(0.010)J	ND(0.010)J	ND(0.010)J	ND(0.010)J	0.36J	0.98J	ND(0.010)J	ND(0.010)J	ND(0.010)J	ND(0.0050)J
	10/13/2010	61	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.007	ND(0.0050)	0.019	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0010)J
	4/7/2011	35	0.0031	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0093	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	10/28/2011	61	0.0084	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0033	ND(0.0020)	0.007	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
OB-38-DO	7/23/2004	NA	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0020)J	ND(0.0050)J	0.0048J	0.061J	ND(0.0010)J	ND(0.0020)J	0.0036J	ND(0.0010)
	12/28/2004	55	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0037	0.003	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.020)
	4/27/2005	50	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	1.9	0.85	ND(0.020)	ND(0.040)	0.11	ND(0.020)
	1/3/2006	55	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	2.3	1.1	ND(0.020)	ND(0.040)	0.16	ND(0.020)
	3/28/2006	50	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	2.3	1.1	ND(0.020)	ND(0.040)	0.17	ND(0.020)
	1/31/2007	49	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	2	1.1	ND(0.020)	ND(0.040)	0.18	ND(0.0010)
	4/10/2007	55	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.014	ND(0.0010)	ND(0.0020)	0.0058	ND(0.020)
	11/16/2007	47	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	1.8	0.79	ND(0.020)	ND(0.040)	0.17	ND(0.020)
	4/25/2008	54	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	1.7	0.95	ND(0.020)	ND(0.040)	0.2	ND(0.025)
	10/22/2008	54	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.050)	ND(0.025)	ND(0.050)	ND(0.13)	2.1	1.3	ND(0.025)	ND(0.050)	0.18	ND(0.010)
	4/9/2009	47	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.74	0.55	ND(0.010)	ND(0.010)	0.13	ND(0.010)
	10/28/2009	47	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.25	0.36	ND(0.010)	ND(0.010)	1.1	ND(0.0025)
	4/21/2010	54	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.25	0.27	ND(0.0025)	ND(0.0025)	0.056	ND(0.0050)
	10/14/2010	45.5	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.43	0.32	ND(0.0050)	0.0064	0.34	ND(0.0010)J
	4/5/2011	45	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	0.27	0.22	ND(0.0040)	ND(0.0040)	0.037	ND(0.0040)
	10/26/2011	45	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.52D	0.39	ND(0.0050)	0.0052	0.28	0.0057
OB-39-DO	7/26/2004	NA	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0020)J	ND(0.0050)J	ND(0.0010)J	0.0046J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0010)
	12/28/2004	54	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0018	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/27/2005	54	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0073	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	1/6/2006	55	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.012	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	3/28/2006	54	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.013	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	1/31/2007	55	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.011	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/10/2007	55	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.008	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	11/14/2007	53	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.011	ND(0.0010)	ND(0.0020)	0.0012	ND(0.0010)
	4/25/2008	54	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0083	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	10/22/2008	54	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0091	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/9/2009	53	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0076	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)J
OB-40-DO	7/23/2004	NA	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0020)J	ND(0.0050)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0010)
	12/28/2004	69	ND(0.0010)	0.0015	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0019	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/27/2005	69	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	12/29/2005	69	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	3/28/2006	68	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	1/31/2007	69	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/10/2007	69	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	11/14/2007	66	ND(0.0010)	0.0045	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0014	0.0038	ND(0.0010)	ND(0.0020)	0.0027	ND(0.0010)
	4/25/2008	68	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	10/22/2008	68	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/9/2009	68	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)J
OB-41-S	4/5/2011	13	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	0.05	0.26	ND(0.0040)	ND(0.0040)	0.081	ND(0.0040)
	10/25/2011	13	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.03	0.12	ND(0.0020)	ND(0.0020)	0.04	ND(0.0020)
OB-42-S	4/5/2011	13	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	0.1	2.7	ND(0.040)	ND(0.040)	1.2	ND(0.040)
	10/24/2011	13	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	0.096	3	ND(0.050)	ND(0.050)	1	ND(0.050)

Table 3
Water Quality Data - VOC Results
June 2002 - March 2012
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)	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-43-S	10/24/2011	16	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0052	0.007	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
P-05R	4/27/2009	NA	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)
P-09R	1/6/2006	5.5	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0048	ND(0.0020)
	3/30/2006	5.5	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0040)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.035	0.16	ND(0.0010)
	2/1/2007	5.5	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.028	0.065	ND(0.0010)
	4/12/2007	4.5	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.003	0.05	0.0068
	11/14/2007	NA	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0050)	ND(0.013)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.074	0.35	ND(0.0010)
	2/11/2008	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.014	ND(0.0010)
	4/23/2008	4	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.015	0.047	ND(0.0010)
	10/23/2008	4.5	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.017	0.071	ND(0.0010)
	4/6/2009	4.5	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.016	ND(0.0010)
	10/27/2009	4.5	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	4/23/2010	4.5	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0036	ND(0.0020)
	10/13/2010	4.5	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0010)J
	4/6/2011	3.5	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0021	ND(0.0020)
	10/24/2011	4.5	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
P-11R	4/27/2009	NA	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)
	4/22/2010	9	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)
	4/5/2011	8	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
P-14	6/3/2002	12	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	1/29/2003	12	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0010)
	5/3/2004	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)
P-19A	1/3/2005	10	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0040)	0.02	ND(0.0040)	ND(0.010)	0.004	0.02	ND(0.0020)	ND(0.0040)	0.25	ND(0.0020)J
	5/2/2005	10	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0040)J	0.016J	ND(0.0040)J	ND(0.010)J	0.0023J	0.013J	ND(0.0020)J	ND(0.0040)J	0.18J	ND(0.0010)
	1/6/2006	10	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0098	ND(0.0020)	ND(0.0050)	0.0013	0.007	ND(0.0010)	ND(0.0020)	0.082	0.001
	3/30/2006	9	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.01	ND(0.0020)	ND(0.0050)	0.0021	0.0096	ND(0.0010)	ND(0.0020)	0.14	ND(0.0020)
	2/1/2007	11	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0040)	0.0038	ND(0.0040)	ND(0.010)	ND(0.0020)	0.0095	ND(0.0020)	ND(0.0040)	0.16	ND(0.0020)
	4/12/2007	10	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0040)	0.0053	ND(0.0040)	ND(0.010)	0.0022	0.014	ND(0.0020)	ND(0.0040)	0.22	ND(0.0050)
	11/14/2007	NA	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.0071	0.038	ND(0.0050)	ND(0.010)	0.44	ND(0.0020)
	4/23/2008	10	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0040)	ND(0.010)	0.0024	0.016	ND(0.0020)	ND(0.0040)	0.23	ND(0.0050)
	10/23/2008	10	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	ND(0.0050)	0.03	ND(0.0050)	ND(0.010)	0.41	ND(0.0020)
	4/6/2009	10	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0037	0.025	ND(0.0020)	ND(0.0020)	0.28	ND(0.0020)
	10/27/2009	10	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0067	0.031	ND(0.0020)	ND(0.0020)	0.28	ND(0.0010)
	4/22/2010	10	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0019	ND(0.0010)	ND(0.0010)	0.033	ND(0.0020)
	10/13/2010	10	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0065	0.037	ND(0.0020)	0.47D	ND(0.0010)
	4/6/2011	9	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0031	0.012	ND(0.0020)	ND(0.0020)	0.12	ND(0.0020)
	10/24/2011	10	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	0.0047	0.021	ND(0.0040)	ND(0.0040)	0.2	ND(0.0040)
P-20R	1/6/2006	12	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0011	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	3/30/2006	11	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0053	0.021	ND(0.0010)	ND(0.0020)	0.0053	ND(0.0010)
	2/1/2007	12	ND(0.0010)	ND(0.0010)	0.0012	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.026	0.11	ND(0.0010)	ND(0.0020)	0.03	ND(0.0010)
	4/12/2007	10	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0053	0.044	ND(0.0010)	ND(0.0020)	0.026	ND(0.0010)
	4/23/2008	10	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.013	0.083N	ND(0.0010)	ND(0.0020)	0.024	ND(0.0010)
	4/6/2009	10	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0024	0.014	ND(0.0010)	ND(0.0010)	0.0012	ND(0.0010)
	4/22/2010	11	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	4/6/2011	10	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
P-21	1/3/2005	10	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0019	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0025	ND(0.0010)	ND(0.0020)	0.01	ND(0.0010)J
	5/2/2005	10	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0020)J	ND(0.0050)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0010)
	1/4/2006	12	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0013	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/7/2006	12	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0024	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0036	ND(0.0010)	ND(0.0020)	0.012	ND(0.0010)
	2/1/2007	12	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.004	ND(0.0010)	ND(0.0020)	0.0059	ND(0.0010)
	4/12/2007	11	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
P-24	1/3/2005	5	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0043	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)J
	5/2/2005	4	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)J	0.0020J	ND(0.0020)J	ND(0.0050)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0010)
	1/6/2006	8	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	3/30/2006	2.5	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	2/5/2007	8	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/12/2007	3.5	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)

Table 3
Water Quality Data - VOC Results
June 2002 - March 2012
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)	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-24 (Cont.)	4/23/2008	3	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.012	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.10)
RW-01_MW-18	6/3/2002	10	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.20)	37D	25	ND(0.20)	ND(0.20)	1.1	ND(0.10)
	6/3/2002	45	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.20)	39D	27	ND(0.20)	ND(0.20)	1.1	ND(0.0020)
	2/17/2003	45	0.026	ND(0.0020)	ND(0.0010)	ND(0.0020)	0.11	ND(0.0020)	0.003	ND(0.010)	ND(0.010)	0.32D	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)
	5/13/2003	45	0.23	ND(0.010)	ND(0.010)	ND(0.010)	3.2D	ND(0.010)	0.13	ND(0.050)	ND(0.020)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.020)	ND(0.010)	ND(0.010)
	12/16/2003	45	0.16	ND(0.010)	ND(0.010)	ND(0.010)	1.1	ND(0.020)	0.056	ND(0.020)	ND(0.050)	0.014	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.0050)
	5/13/2004	41	0.022	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.013	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.0020)J
	5/2/2005	45	0.14J	0.0035J	ND(0.0020)J	0.0033J	0.24J	ND(0.0040)J	0.061J	ND(0.0040)J	ND(0.010)J	0.010J	ND(0.0020)J	ND(0.0020)J	ND(0.0040)J	ND(0.0020)J	ND(0.0020)
	4/3/2006	37	0.26	0.0077	ND(0.0020)	0.0053	0.14	ND(0.0040)	0.097	ND(0.0040)	ND(0.010)	0.0058	ND(0.0020)	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0025)
	4/12/2007	45	0.3	0.0077	ND(0.0025)	0.0046	0.089	ND(0.0050)	0.1	ND(0.0050)	ND(0.013)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.010)
	4/12/2007	70	1.3	ND(0.010)	ND(0.010)	ND(0.010)	0.96	ND(0.020)	0.25	ND(0.020)	ND(0.050)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.0020)
	4/25/2008	44	0.19	0.011	ND(0.0020)	ND(0.0020)	0.045	ND(0.0040)	0.15	ND(0.0040)	ND(0.010)	0.0071	0.014	ND(0.0020)	ND(0.0040)	0.0053	ND(0.0025)
	4/9/2009	39	0.32	0.017	ND(0.0025)	ND(0.0025)	0.027	ND(0.0025)	0.21	ND(0.0025)	ND(0.0025)	0.051	0.1	ND(0.0025)	ND(0.0025)	0.12	ND(0.10)
RW-02	6/3/2002	40	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.20)	25	8.1	ND(0.20)	ND(0.20)	ND(0.10)	ND(0.20)
	6/3/2002	70	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	0.3	ND(1.0)	ND(0.40)	9.1	36	ND(0.40)	ND(0.40)	ND(0.20)	ND(0.0020)
	2/17/2003	70	0.15	ND(0.0020)	ND(0.0010)	ND(0.0020)	0.80D	ND(0.0020)	0.14	ND(0.010)	ND(0.010)	0.052	0.006	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0050)
	5/14/2003	70	0.088	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.83	ND(0.0050)	0.091	ND(0.030)	ND(0.010)	0.01	ND(0.0050)	ND(0.010)	ND(0.010)	ND(0.0050)	ND(0.0050)
	12/16/2003	70	0.16	ND(0.0050)	ND(0.0050)N	ND(0.0050)	0.32	ND(0.010)	0.099	ND(0.010)	ND(0.025)	0.013	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.0050)
	5/2/2004	64	0.3	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.54	ND(0.010)	0.17	ND(0.010)	ND(0.025)	0.014	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.0050)
	3/31/2006	66	0.63	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.48	ND(0.010)	0.23	ND(0.010)	ND(0.025)	0.036	0.0059	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)
RW-03	6/3/2002	20	0.04	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	1.7	5.0D	ND(0.020)	ND(0.020)	0.15	ND(0.010)
	6/3/2002	40	0.04	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	1.7	5.0D	ND(0.020)	ND(0.020)	0.15	ND(0.010)
	6/3/2002	70	0.05	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	3.0D	5.0D	ND(0.020)	ND(0.020)	0.29	ND(0.010)
	2/20/2003	70	3.1D	ND(0.010)	ND(0.010)	ND(0.010)	0.04	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.020)	ND(0.010)	ND(0.010)
	5/13/2003	70	2.6	ND(0.010)	ND(0.010)	ND(0.010)	0.19	ND(0.010)	0.06	ND(0.050)	ND(0.020)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.020)	ND(0.010)	ND(0.0050)
	12/16/2003	70	0.52	0.0054	ND(0.0050)	ND(0.0050)	0.024	ND(0.010)	0.0074	ND(0.010)	ND(0.025)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.0025)
	5/2/2004	62	0.2	0.0055	ND(0.0025)	ND(0.0025)	0.036	ND(0.0050)	0.0089	ND(0.0050)	ND(0.013)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.020)J
	5/2/2005	70	1.7J	0.047J	ND(0.020)J	ND(0.020)J	0.11J	ND(0.040)J	0.033J	ND(0.040)J	ND(0.10)J	ND(0.020)J	ND(0.020)J	ND(0.020)J	ND(0.040)J	ND(0.020)J	ND(0.020)
	4/3/2006	56	1.9	0.08	ND(0.020)	ND(0.020)	0.095	ND(0.040)	0.024	ND(0.040)	ND(0.10)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.0010)
	4/12/2007	70	0.033	0.0011	ND(0.0010)	ND(0.0010)	0.0015	ND(0.0020)	0.0015	ND(0.0020)	ND(0.0050)	0.021	0.012	ND(0.0010)	ND(0.0020)	0.0053	ND(0.025)
	7/14/2009	70	0.047	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	0.32	0.34	ND(0.025)	2.6	2.4	ND(0.010)
	7/14/2009	15	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.26	0.14	ND(0.010)	0.56	0.85	ND(0.0050)
	10/26/2009	15	0.068	0.0071	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.052	0.025	ND(0.0050)	0.67D	0.058	ND(0.0050)
	10/26/2009	56	0.036	0.0069	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.055	0.093	ND(0.0050)	0.62	0.14	ND(0.0020)
	1/28/2010	55	0.014	0.0028	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.028	0.035	ND(0.0020)	0.14	0.2	ND(0.0020)
	1/28/2010	15	0.01	0.0026	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.02	0.016	ND(0.0020)	0.14	0.19	ND(0.020)
	4/22/2010	55	0.022	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	0.46	0.6	ND(0.020)	0.36	2.2	ND(0.025
	4/28/2010	15	ND(0.025	ND(0.025	ND(0.025	ND(0.025	ND(0.025	ND(0.025	ND(0.025	ND(0.025	ND(0.025	0.92	0.84	ND(0.025	0.56	3.5	ND(0.025)J
	7/14/2010	69	0.032J	ND(0.025)J	ND(0.025)J	ND(0.025)J	ND(0.025)J	ND(0.025)J	ND(0.025)J	ND(0.025)J	ND(0.025)J	0.62J	1.1J	ND(0.025)J	3.2J	3.7J	ND(0.10)
	10/12/2010	55	0.78	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	0.59	1.1	ND(0.10)	5.2	5.4	ND(0.020)
	1/4/2011	55	0.29	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	0.098	0.2	ND(0.020)	0.51	1.1	ND(0.010)
	4/5/2011	54.7	0.01	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.079	0.15	ND(0.0020)	0.0022	0.11	ND(0.0020)
RW-04	6/3/2002	20	0.57	0.04	0.03	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	0.46	0.98	ND(0.020)	ND(0.020)	0.14	ND(0.10)
	6/3/2002	40	3.8	0.3	0.3	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.20)	1.9	8.6	ND(0.20)	ND(0.20)	1.1	ND(0.10)
	6/3/2002	70	5.7	0.4	0.4	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.20)	3.2	22	ND(0.20)	ND(0.20)	2.1	ND(0.0020)
	1/29/2003	70	0.027	ND(0.0020)	ND(0.0010)	ND(0.0020)	0.022	ND(0.0020)	0.005	ND(0.010)	ND(0.010)	0.12	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	5/13/2003	70	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	0.002	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.015	0.004	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0010)
	12/15/2003	70	0.011	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.02	ND(0.0020)	0.0019	ND(0.0020)	ND(0.0050)	0.0019	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/27/2004	63	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.001	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.007	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/29/2005	70	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	3/31/2006	57	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0053	0.0012	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/12/2007	70	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)
RW-05	6/3/2002	15	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.003	0.004	ND(0.0020)	ND(0.0020)	0.0060D	0.05
	6/3/2002	35	0.11	0.6	0.28	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	0.27	2.0D	ND(0.020)	0.48	6.3D	ND(0.0020)
	1/29/2003	35	0.039	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)

Table 3
Water Quality Data - VOC Results
June 2002 - March 2012
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)	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)
RW-05 (Cont.)	5/13/2003	35	2.9D	0.02	0.028	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.021	0.11	ND(0.0020)	0.004	0.3	ND(0.020)
	12/15/2003	35	2.2	0.029	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.0010)
	5/2/2004	34	0.0044	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0042	0.0028	ND(0.0010)	ND(0.0020)	0.0021	ND(0.0020)
	4/27/2005	33	0.24	0.0082	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0040)	ND(0.010)	ND(0.0020)	0.0028	ND(0.0020)	ND(0.0040)	0.0025	ND(0.0050)
	4/3/2006	33	0.55	0.016	0.005	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.033	0.069	ND(0.0050)	ND(0.010)	0.06	ND(0.0050)
	4/12/2007	33	0.48	0.016	0.014	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.0084	0.038	ND(0.0050)	ND(0.010)	0.046	ND(0.10)
RW-17_MW-17	6/3/2002	110	ND(0.10)	ND(0.10)	0.1	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.20)	3.7	22D	ND(0.20)	0.3	7.9	ND(0.10)
	6/3/2002	125	ND(0.10)	ND(0.10)	0.1	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.20)	5.1	22D	ND(0.20)	0.3	7.7	ND(0.10)
	6/3/2002	160	ND(0.10)	ND(0.10)	0.1	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.20)	4.9	24D	ND(0.20)	0.3	7.4	ND(0.0020)
	2/20/2003	160	0.013	ND(0.0020)	ND(0.0010)	ND(0.0020)	0.017	ND(0.0020)	0.004	ND(0.010)	ND(0.010)	0.036	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	5/13/2003	160	0.002	0.002	ND(0.0010)	ND(0.0020)	0.012	ND(0.0020)	0.036	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0050)
	2/2/2004	160	ND(0.0050)	ND(0.0050)	ND(0.0010)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.016	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0020)	ND(0.0050)	ND(0.0010)
	4/27/2004	160	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.027	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/29/2005	160	ND(0.0010)	0.0012	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.014	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	3/31/2006	56	0.0061	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0013	ND(0.0020)	0.012	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/12/2007	160	0.0028	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0089	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	0.3
RW-19	6/3/2002	80	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(1.0)	ND(0.40)	8.5	37	ND(0.40)	ND(0.40)	12	0.3
	6/3/2002	115	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(1.0)	ND(0.40)	9.3	42	ND(0.40)	ND(0.40)	13	0.7
	6/3/2002	150	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(1.0)	ND(0.40)	6.5	37	ND(0.40)	ND(0.40)	25	ND(0.0020)
	1/29/2003	150	ND(0.0020)	0.007	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.002	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	5/15/2003	150	ND(0.0020)	0.014	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0010)
	12/18/2003	150	0.001	0.0069	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0077	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	5/1/2004	148	ND(0.0010)	0.003	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0027	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0050)
	5/13/2004	148	ND(0.0050)	0.01	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.0010)
	4/29/2005	148	ND(0.0010)	0.0072	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0025	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	3/28/2006	153	0.0012	0.0068	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0017	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/14/2007	150	ND(0.0010)	0.0062	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0013	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/24/2008	148	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)
RW-20	6/3/2002	40	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.007	0.02	ND(0.0020)	ND(0.0020)	0.017	0.004
	6/3/2002	72	ND(0.0020)	ND(0.0020)	0.001	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.028	0.094	ND(0.0020)	ND(0.0020)	0.11	ND(0.0020)
	1/29/2003	72	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	5/15/2003	72	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.002	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0010)
	12/18/2003	72	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	5/1/2004	66	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/29/2005	66	ND(0.0010)	0.0014	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0069	0.064	ND(0.0010)	ND(0.0020)	0.052	0.0064
	3/29/2006	71	ND(0.0020)	0.0081	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0040)	ND(0.010)	0.028	0.098N	ND(0.0020)	ND(0.0040)	0.16	0.0012
	4/14/2007	72	ND(0.0010)	0.0082	0.0014	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0044	0.038	ND(0.0010)	ND(0.0020)	0.11	ND(0.0010)
	4/24/2008	70	ND(0.0010)	0.0058	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0021	0.023	ND(0.0010)	ND(0.0020)	0.054	ND(0.0020)
RW-21	6/3/2002	90	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.009	0.02	ND(0.0020)	ND(0.0020)	0.053	ND(0.050)
	6/3/2002	120	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.30)	ND(0.10)	ND(0.050)	ND(0.050)	ND(0.10)	0.9	7.6	ND(0.050)
	6/3/2002	150	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.30)	ND(0.10)	ND(0.050)	ND(0.050)	ND(0.10)	1.2	6	ND(0.0020)
	1/29/2003	150	ND(0.0020)	0.009	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	5/15/2003	150	ND(0.0020)	0.007	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0010)
	12/18/2003	150	ND(0.0010)	0.0072	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0091	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	5/1/2004	145	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/29/2005	146	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	3/29/2006	149	ND(0.0010)	0.012	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/14/2007	150	ND(0.0010)	0.0069	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/24/2008	148	ND(0.0010)	0.0055	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.010)
RW-22	6/3/2002	80	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	0.21	1.3	ND(0.020)	0.06	1.9	ND(0.010)
	6/3/2002	105	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	0.17	1.3	ND(0.020)	0.06	1.9	ND(0.010)
	6/3/2002	145	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	0.16	1.3	ND(0.020)	0.06	1.9	ND(0.010)
	1/23/2003	145	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	0.06	0.96	ND(0.020)	0.05	1.2	ND(0.010)
	5/13/2003	145	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	0.08	0.94	ND(0.020)	0.03	1.1	ND(0.010)
	12/17/2003	145	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.097	0.75	ND(0.010)	ND(0.020)	0.8	ND(0.010)

Table 3
Water Quality Data - VOC Results
June 2002 - March 2012
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)	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)
RW-22 (Cont.)	5/1/2004	NA	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.024	0.6	ND(0.010)	ND(0.020)	0.7	ND(0.0050)
	4/28/2005	106	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.038	0.52	ND(0.0050)	ND(0.010)	0.52	ND(0.0050)
	3/27/2006	108	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.029	0.39	ND(0.0050)	ND(0.010)	0.47	ND(0.0050)
	4/11/2007	145	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.016	0.3	ND(0.0050)	ND(0.010)	0.46	ND(0.0025)
	4/22/2008	144	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0050)	ND(0.013)	0.012	0.18	ND(0.0025)	ND(0.0050)	0.32	ND(0.0025)
	4/3/2009	144	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.0086	0.12	ND(0.0025)	ND(0.0025)	0.36	ND(0.0050)
	4/20/2010	144	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.0063	0.094	ND(0.0050)	ND(0.0050)	0.38	ND(0.0020)
	4/4/2011	105	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	0.07	ND(0.0040)	ND(0.0040)J	0.36	ND(0.0040)
STR-03	5/15/2003	NA	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0050)
	12/22/2003	NA	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.54	0.37	ND(0.0050)	0.05	0.43	ND(0.0010)
	5/4/2004	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0011	0.005
	12/29/2004	NA	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.3	0.17	ND(0.0050)	0.027	0.4	ND(0.0010)J
	5/2/2005	NA	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0020)J	ND(0.0050)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0010)
	1/3/2006	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/3/2006	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	0.0013
	2/1/2007	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.001	0.0028	ND(0.0010)	0.0045	0.053	ND(0.0010)
	4/16/2007	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0022	0.002	ND(0.0010)	ND(0.0020)	0.0053	ND(0.0010)
	11/16/2007	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.002	0.0011	ND(0.0010)	ND(0.0020)	0.0025	0.01
	1/23/2008	NA	0.021	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.18	0.24	ND(0.0050)	0.049	0.6	ND(0.0010)J
	4/21/2008	NA	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0020)J	ND(0.0050)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0050)J
	7/29/2008	NA	ND(0.0050)J	ND(0.0050)J	ND(0.0050)J	ND(0.0050)J	ND(0.0050)J	ND(0.010)J	ND(0.0050)J	ND(0.010)J	ND(0.025)J	0.036J	0.041J	ND(0.0050)J	0.15J	0.45J	ND(0.0025)
	10/22/2008	NA	0.0073	0.0037	ND(0.0025)	ND(0.0025)	0.0032	ND(0.0050)	ND(0.0025)	ND(0.0050)	ND(0.013)	ND(0.0025)	0.0028	ND(0.0025)	0.095	0.34	ND(0.0010)
	1/13/2009	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0012	ND(0.0010)	0.0013	0.011	0.0024
	4/9/2009	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0083	0.0072	ND(0.0010)	0.012	0.085	ND(0.0010)
	7/14/2009	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0013	ND(0.0010)	0.0079	0.015	ND(0.0010)
	10/27/2009	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	1/28/2010	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0067	0.0084	ND(0.0010)	0.0053	0.047	ND(0.0010)
	4/22/2010	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0014	0.003	ND(0.0010)J
	7/14/2010	NA	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)
	10/12/2010	NA	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	1/5/2011	NA	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0010)
	4/5/2011	NA	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	7/28/2011	NA	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	10/25/2011	NA	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0067	0.027	ND(0.0020)
	1/18/2012	NA	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	0.011	0.02	ND(0.0040)	0.041	0.21	ND(0.0040)
STRHA-07A	10/20/2008	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.003	ND(0.0010)	ND(0.0020)	0.005	ND(0.0010)
	4/7/2009	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0015	ND(0.0010)	ND(0.0010)	0.0017	ND(0.0010)
	10/27/2009	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.013	0.058	ND(0.0010)	ND(0.0010)	0.051	ND(0.0010)
	4/28/2010	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0035	0.02	ND(0.0010)	ND(0.0010)	0.02	ND(0.0020)
	10/14/2010	NA	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0061	0.036	ND(0.0020)	ND(0.0020)	0.035	ND(0.0010)
	4/6/2011	NA	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0026	0.013	ND(0.0020)	ND(0.0020)	0.012	ND(0.0020)
	10/25/2011	NA	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0021	0.011	ND(0.0020)	ND(0.0020)	0.011	ND(0.0020)
STRHA-07B	10/20/2008	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.011	0.051	ND(0.0010)	ND(0.0020)	0.046	ND(0.0010)
	4/7/2009	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	10/27/2009	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0044	0.025	ND(0.0010)	ND(0.0010)	0.0091	ND(0.0010)
	4/28/2010	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0058	0.031	ND(0.0010)	ND(0.0010)	0.0098	ND(0.0020)
	10/14/2010	NA	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.012	ND(0.0020)	ND(0.0020)	0.0052	ND(0.0010)
	4/6/2011	NA	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0062	0.028	ND(0.0020)	ND(0.0020)	0.0089	ND(0.0020)
	10/25/2011	NA	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0055	0.025	ND(0.0020)	ND(0.0020)	0.0076	ND(0.0020)
STRM-A-SCDS	9/15/2004	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0026	ND(0.0010)
	1/3/2005	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0012	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	5/19/2005	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0041	ND(0.0010)	ND(0.0020)	0.0016	ND(0.0010)
	1/6/2006	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0013	0.0061	ND(0.0010)	ND(0.0020)	0.007	ND(0.0010)
	3/30/2006	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0036	0.015	ND(0.0010)	ND(0.0020)	0.016	ND(0.0010)
	4/12/2007	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0015	0.0065	ND(0.0010)	ND(0.0020)	0.0066	ND(0.0010)
	4/23/2008	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0019	0.0066	ND(0.0010)	ND(0.0020)	0.0024	ND(0.0010)

Table 3
Water Quality Data - VOC Results
June 2002 - March 2012
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)	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 (Cont.)	10/21/2008	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0041	0.015	ND(0.0010)	ND(0.0020)	0.0052	ND(0.0010)
	10/23/2008	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0034	0.014	ND(0.0010)	ND(0.0020)	0.016	ND(0.0010)
	4/6/2009	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0035	ND(0.0010)	ND(0.0010)	0.0012	ND(0.0010)
	10/27/2009	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.002	0.0079	ND(0.0010)	ND(0.0010)	0.0034	ND(0.0010)
	4/22/2010	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0016	0.0059	ND(0.0010)	ND(0.0010)	0.0044	ND(0.0020)
	10/13/2010	NA	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0051	0.02	ND(0.0020)	ND(0.0020)	0.057	ND(0.0010)
	4/6/2011	NA	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0033	ND(0.0020)	ND(0.0020)	0.0022	ND(0.0020)
	10/26/2011	NA	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0025	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
UNNAMED_STREAM	3/1/2007	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	0.0039
	4/16/2007	NA	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0050)	ND(0.013)	0.18	0.16	ND(0.0025)	0.018	0.3	ND(0.0010)
	11/16/2007	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0093	0.0052	ND(0.0010)	ND(0.0020)	0.016	ND(0.020)
	1/23/2008	NA	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	0.54	0.64	ND(0.020)	ND(0.040)	1.5	ND(0.020)J
	4/21/2008	NA	ND(0.020)J	ND(0.020)J	ND(0.020)J	ND(0.020)J	ND(0.020)J	ND(0.040)J	ND(0.020)J	ND(0.040)J	ND(0.10)J	0.022J	0.053J	ND(0.020)J	0.14J	3.0J	ND(0.010)J
	7/29/2008	NA	ND(0.010)J	ND(0.010)J	ND(0.010)J	ND(0.010)J	ND(0.010)J	ND(0.020)J	ND(0.010)J	ND(0.020)J	ND(0.050)J	0.020J	0.034J	ND(0.010)J	0.58J	1.1J	ND(0.0020)
	10/21/2008	NA	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0040)	ND(0.010)	ND(0.0020)	0.002	ND(0.0020)	0.087	0.2	ND(0.010)
	1/14/2009	NA	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.016	0.031	ND(0.010)	0.18	1	ND(0.010)
	4/9/2009	NA	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.9	0.43	ND(0.010)	0.081	0.82	ND(0.025)
	7/14/2009	NA	ND(0.025)	ND(0.025)	0.033	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	1.7	0.95	ND(0.025)	0.48	3.4	ND(0.0025)
	10/27/2009	NA	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.0027	0.015	ND(0.0025)	0.1	0.31	ND(0.020)
	1/28/2010	NA	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	1.4	1.2	ND(0.020)	0.22	1.9	ND(0.010)
	4/22/2010	NA	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.29	0.17	ND(0.010)	0.14	1	ND(0.0020)
	10/12/2010	NA	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.005	0.0053	ND(0.0020)	ND(0.0020)	0.016	0.0094
	1/4/2011	NA	ND(0.0020)	ND(0.0020)	0.011	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.51D	0.24D	ND(0.0020)	0.20D	1.4D	ND(0.0010)
	4/5/2011	NA	0.0022	ND(0.0020)	0.015	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	1.1D	0.86D	ND(0.0020)	0.083	2.3D	0.012
	10/25/2011	NA	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	0.91	0.59	ND(0.020)	0.16	1.4	ND(0.020)
	1/17/2012	NA	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.98	0.61	ND(0.010)	0.037	0.48	ND(0.010)
W-1	10/19/2006	NA	0.0053	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0067	0.091	ND(0.0010)	ND(0.0020)	0.016	ND(0.010)
	4/15/2007	10	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.071	1.1	ND(0.010)	ND(0.020)	0.56	ND(0.0010)
	10/20/2008	11.5	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0065	0.15	ND(0.0010)	ND(0.0020)	0.038	ND(0.0025)
	10/26/2009	9	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.013	0.21	ND(0.0025)	ND(0.0025)	0.048	ND(0.0010)
	4/21/2010	9	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0065	0.11	ND(0.0010)	ND(0.0010)	0.055	ND(0.0040)
	10/14/2010	9	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	0.0066	0.23	ND(0.0040)	ND(0.0040)	0.028	ND(0.0040)
	4/5/2011	11	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0072	0.095	ND(0.0020)	ND(0.0020)	0.056	ND(0.0020)
	10/24/2011	9	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0066	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
MW-1_32-TOZER	2/24/2011	NA	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	0.013	0.62D	ND(0.0050)	ND(0.0050)	0.046	ND(0.0050)
MW-2_32-TOZER	2/24/2011	NA	ND(0.25)	ND(0.25)	ND(0.25)	ND(0.25)	ND(0.25)	ND(0.25)	ND(0.25)	ND(0.50)	ND(0.50)	10.6	1.79	ND(0.25)	ND(0.25)	3.42	ND(0.25)
	11/8/2011	NA	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.40)	ND(0.40)	10	1.5	ND(0.20)	ND(0.20)	3.7	ND(0.20)
MW-3_32-TOZER	2/24/2011	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0020)	0.039	0.012	ND(0.0010)	ND(0.0010)	0.013	ND(0.0010)
MW-4_32-TOZER	11/8/2011	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0020)	0.0044	0.0025	ND(0.0010)	ND(0.0010)	0.066	ND(0.0010)
MW-5_32-TOZER	11/8/2011	NA	ND(0.0010)	0.0026	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0020)	0.0051	0.019	ND(0.0010)	ND(0.0010)	0.0038	ND(0.0010)
TP-2_32-TOZER	12/9/2011	NA	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.050)	ND(0.050)	0.16	0.23	ND(0.025)	ND(0.025)	0.9	ND(0.025)
TP-4_32-TOZER	12/2/2011	NA	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.040)	0.26	0.093	ND(0.020)	ND(0.020)	1.1	ND(0.020)

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.

TCA - Trichloroethane
DCE - Dichloroethene
TCE - Trichloroethene
DCA - Dichloroethane
PCE - Tetrachloroethene
ND - None Detected, detection limit provided in parenthese

E - Estimated concentration
L - Sample analyzed outside of holding time.
N - Matrix interference
Z - Sample results switched in May 7, 2004 status report.
D - Indicates that the result is reported from a secondary dilute sample.
J - Estimated concentration

Table 4A
Water Quality Sample Summary
October 2011

Former Varian Facility Site
Beverly, Massachusetts

Sample Location	Rationale for Sampling	Analysis Performed
AP-12-DO	Monitor performance of remedial action	VOCs Permanganate
AP-12-BR	Monitor performance of remedial action	VOCs Fe & Mn Chloride Permanganate
AP-13-DO	Monitor performance of remedial action	VOCs Methane, Ethane, Ethene Metabolic Acids Dehalococcoides sp.
AP-13-S	Monitor performance of remedial action	VOC (Full List)
AP-15-S	Monitor trends and residual permanganate	VOCs
AP-19	Monitor performance of remedial action	VOCs Fe & Mn Chloride Permanganate
AP-20	Monitor performance of remedial action	VOCs Fe & Mn Chloride Permanganate
AP-21	Monitor performance of remedial action	VOCs Fe & Mn Chloride Permanganate
AP-22	Monitor performance of remedial action	VOCs Fe & Mn Chloride Permanganate
AP-23-DO	Monitor performance of remedial action	VOCs Methane, Ethane, Ethene Metabolic Acids Dehalococcoides sp.
AP-24-DO	Monitor performance of remedial action	VOCs Methane, Ethane, Ethene Metabolic Acids Dehalococcoides sp.
AP-25-DO	Monitor performance of remedial action	VOCs Methane, Ethane, Ethene Metabolic Acids Dehalococcoides sp.
AP-26-DO	Monitor trends	VOCs Permanganate
AP-27-DO	Monitor performance of remedial action	VOCs Fe & Mn Chloride Permanganate
AP-30R-DO	Monitor performance of remedial action	VOCs Fe & Mn Chloride Permanganate
AP-31-DO	Monitor performance of remedial action	VOCs Fe & Mn Chloride Permanganate
AP-32-DO	Monitor performance of remedial action	VOCs Fe & Mn Chloride Permanganate
B-2	Monitor performance of remedial action	VOCs
B-3	Monitor performance of remedial action	VOC (Full List)
BR-1 ZONE1	Monitor trends	VOCs
BR-1 ZONE2	Monitor trends	VOCs
BR-1 ZONE3	Monitor trends	VOCs
BR-6 ZONE1	Monitor trends	VOCs
BR-6 ZONE2	Monitor trends	VOCs
BR-6 ZONE3	Monitor trends	VOCs

Table 4A
Water Quality Sample Summary
October 2011

Former Varian Facility Site
Beverly, Massachusetts

Sample Location	Rationale for Sampling	Analysis Performed
BW-04	Monitor performance of remedial action	VOCs Methane, Ethane, Ethene Metabolic Acids Dehalococcoides sp.
BW-05	Monitor performance of remedial action	VOCs Methane, Ethane, Ethene Metabolic Acids Dehalococcoides sp.
BW-06	Monitor performance of remedial action	VOCs Methane, Ethane, Ethene Metabolic Acids Dehalococcoides sp.
BW-08	Monitor performance of remedial action	VOCs Methane, Ethane, Ethene Metabolic Acids Dehalococcoides sp.
BW-09	Monitor performance of remedial action	VOCs Methane, Ethane, Ethene Metabolic Acids Dehalococcoides sp.
CL-2-BR	Monitor trends	VOCs
CL9-BR ZONE1	Monitor trends	VOCs
CL9-BR ZONE2	Monitor trends	VOCs
CL9-BR ZONE3	Monitor trends	VOCs
CL-10-BR	Monitor performance of remedial action	VOCs
CL-10-DO	Monitor performance of remedial action	VOCs Permanganate
CL-10-S	Monitor performance of remedial action	VOCs
GZ-4	Monitor trends	VOCs
MW-002R	Monitor trends	VOCs
MW-004R	Monitor trends	VOCs
MW-009	Monitor performance of remedial action	VOCs Methane, Ethane, Ethene Metabolic Acids Dehalococcoides sp.
MW-009A	Monitor performance of remedial action	VOCs
MW-013	Monitor performance of remedial action	VOCs Fe & Mn Chloride Permanganate
OB-5-BR	Monitor trends	VOCs
OB-5-DO	Monitor trends	VOCs
OB-5-S	Monitor trends	VOCs
OB-6-BR	Monitor trends	VOCs
OB-6-DO	Monitor trends	VOCs
OB-8-DO	Monitor trends	VOCs
OB-8-S	Monitor trends	VOCs
OB-09-BR	Monitor performance of remedial action	VOCs Methane, Ethane, Ethene Metabolic Acids
OB-09-DO	Monitor performance of remedial action	VOCs Methane, Ethane, Ethene Metabolic Acids
OB-09-S	Monitor performance of remedial action	VOCs Methane, Ethane, Ethene Metabolic Acids Dehalococcoides sp.
OB-10-S	Monitor trends	VOCs
OB-10-DO	Monitor trends	VOCs
OB-12-DO	Monitor performance of remedial action	VOCs Fe & Mn Chloride Permanganate
OB-12-S	Monitor performance of remedial action	VOCs

Table 4A
Water Quality Sample Summary
October 2011

Former Varian Facility Site
Beverly, Massachusetts

Sample Location	Rationale for Sampling	Analysis Performed
OB-15-S	Monitor performance of remedial action	VOCs Methane, Ethane, Ethene Metabolic Acids Dehalococcoides sp.
OB-18-DO	Monitor performance of remedial action	VOCs
OB-18-S	Monitor trends	VOCs
OB-19-DO	Monitor performance of remedial action	VOCs Fe & Mn Chloride Permanganate
OB-20-BR	Monitor trends	VOCs
OB-20-DO	Monitor trends	VOCs
OB-20-S	Monitor trends	VOCs
OB-21-BR	Monitor trends	VOCs
OB-21-DO	Monitor trends	VOCs
OB-22-DO	Monitor trends	VOCs
OB-25-BR	Monitor trends	VOCs
OB-27-BR	Monitor performance of remedial action	VOCs Fe & Mn Chloride Permanganate
OB-32-DO	Monitor performance of remedial action	VOCs Fe & Mn Chloride Permanganate
OB-34-DO	Monitor performance of remedial action	VOCs Permanganate
OB-35-DO	Monitor performance of remedial action	VOCs Fe & Mn Chloride Permanganate
OB-36-DO	Monitor performance of remedial action	VOCs
OB-37-DO	Monitor performance of remedial action	VOCs Fe & Mn Chloride Permanganate
OB-38-DO	Monitor performance of remedial action	VOCs
OB-41-S	Monitor VOC trends in shallow aquifer	VOCs
OB-42-S	Monitor VOC trends in shallow aquifer	VOCs
OB-43-S	Monitor VOC trends in shallow aquifer	VOCs
P-9R	Monitor trends	VOCs
P-19A	Monitor trends	VOCs
STR-03	Requested by Conservation Commission	VOCs Methane, Ethane, Ethene Metabolic Acids Dehalococcoides sp.
STRHA-7A	Monitor VOC trends in surface water	VOCs
STRHA-7B	Monitor VOC trends in surface water	VOCs
Stream A SCDS	Monitor VOC trends in surface water	VOCs
UNNAMED STREAM	Requested by Conservation Commission	VOCs Methane, Ethane, Ethene Metabolic Acids Dehalococcoides sp.
W-1	Monitor VOC trends in shallow aquifer	VOCs

Notes:
VOCs = Volatile Organic Compounds, analysis by EPA Method 8260C
Methane, ethane, ethene analysis by RSK-175 Method
Metabolic Acids analysis by HPLC Method
Dehalococcoides sp. analysis by polymerase chain reaction (PCR)

Table 4B
Water Quality Sample Summary
January 2012

Former Varian Facility Site
Beverly, Massachusetts

Sample Location	Rationale for Sampling	Analysis Performed
AP-13-DO	Monitor performance of remedial action	VOCs Methane, Ethane, Ethene Metabolic Acids Dehalococcoides sp.
AP-23-DO	Monitor performance of remedial action	VOCs Methane, Ethane, Ethene Metabolic Acids Dehalococcoides sp.
AP-24-DO	Monitor performance of remedial action	VOCs Methane, Ethane, Ethene Metabolic Acids Dehalococcoides sp.
AP-25-DO	Monitor performance of remedial action	VOCs
BW-04	Monitor performance of remedial action	VOCs Methane, Ethane, Ethene Metabolic Acids Dehalococcoides sp.
BW-05	Monitor performance of remedial action	VOCs Methane, Ethane, Ethene Metabolic Acids Dehalococcoides sp.
BW-06	Monitor performance of remedial action	VOCs Methane, Ethane, Ethene Metabolic Acids Dehalococcoides sp.
BW-08	Monitor performance of remedial action	VOCs Methane, Ethane, Ethene Metabolic Acids Dehalococcoides sp.
BW-09	Monitor performance of remedial action	VOCs Methane, Ethane, Ethene Metabolic Acids Dehalococcoides sp.
MW-009	Monitor performance of remedial action	VOCs Methane, Ethane, Ethene Metabolic Acids Dehalococcoides sp.
OB-09-BR	Monitor performance of remedial action	VOCs Methane, Ethane, Ethene Metabolic Acids
OB-09-DO	Monitor performance of remedial action	VOCs Methane, Ethane, Ethene Metabolic Acids
OB-09-S	Monitor performance of remedial action	VOCs Methane, Ethane, Ethene Metabolic Acids Dehalococcoides sp.
OB-10-S	Monitor trends	VOCs
OB-10-DO	Monitor trends	VOCs
OB-12-DO	Monitor performance of remedial action	VOCs
OB-12-S	Monitor performance of remedial action	VOCs
OB-15-S	Monitor performance of remedial action	VOCs Methane, Ethane, Ethene Metabolic Acids Dehalococcoides sp.
OB-19-DO	Monitor performance of remedial action	VOCs
STR-03	Requested by Conservation Commission	VOCs Methane, Ethane, Ethene Metabolic Acids Dehalococcoides sp.
UNNAMED STREAM	Requested by Conservation Commission	VOCs Methane, Ethane, Ethene Metabolic Acids Dehalococcoides sp.

Notes:
VOCs = Volatile Organic Compounds, analysis by EPA Method 8260C
Methane, ethane, ethene analysis by RSK-175 Method
Metabolic Acids analysis by HPLC Method
Dehalococcoides sp. analysis by polymerase chain reaction (PCR)

TABLE 5
Water Quality Data - Chloride, Dissolved Iron and Dissolved Manganese Results

Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

SITE ID	DATE	Chloride Total (mg/l)	Chloride Field (mg/l)	Iron Dissolved (mg/l)	Manganese Dissolved (mg/l)
AP-02	6/3/2002	---	42.4	---	---
	6/3/2002	---	---	0.17	0.063
	2/17/2003	61	---	ND(0.05)	0.033
	5/14/2003	55	---	ND(0.05)	620
	12/16/2003	152	---	0.126	805
	5/1/2004	125	---	ND(0.100)	635
	5/2/2005	7060	---	---	---
	4/11/2007	2430	---	---	---
	4/22/2008	866	---	---	---
AP-03-BR	1/6/2006	294	---	---	---
	3/30/2006	56.8	---	---	---
	4/12/2007	74.5	---	---	---
AP-03-DO	1/3/2005	113	---	---	---
	5/2/2005	113	---	---	---
	1/6/2006	128	---	---	---
	3/30/2006	128	---	---	---
	2/1/2007	125	---	---	---
	4/12/2007	91.9	---	---	---
AP-04-BR	1/6/2006	954	---	---	---
	3/30/2006	990	---	---	---
	4/12/2007	1080	---	---	---
AP-04-DO	1/3/2005	178	---	---	---
	5/2/2005	49.9	---	---	---
	2/1/2007	1300	---	---	---
AP-06-BR	6/3/2002	---	2.9	---	---
	6/3/2002	---	---	0.14	ND(0.005)
	1/24/2003	320	---	0.38	0.072
	12/17/2003	378	---	3.12	0.3
	5/1/2004	215	---	0.317	0.15
	4/29/2005	1070	---	---	---
	3/31/2006	1220	---	---	---
AP-06-DO	6/3/2002	---	2.3	---	---
	6/3/2002	---	---	0.03	0.75
	1/24/2003	91	---	ND(0.05)	0.72
	5/14/2003	81	---	0.1	0.78
	12/17/2003	127	---	ND(0.100)	0.644
	5/1/2004	92.6	---	ND(0.100)	0.426
	4/29/2005	96.2	---	---	---
	3/31/2006	94.5	---	---	---
AP-08-DO	8/13/2003	---	---	0.18	0.27
	12/23/2003	68.8	---	0.857	1
	5/3/2004	30.2	---	ND(0.100)	0.122
	1/4/2005	80.9	---	---	---
	4/29/2005	21.3	---	---	---
	3/29/2006	193	---	---	---
	2/5/2007	58.5	---	---	---

TABLE 5
Water Quality Data - Chloride, Dissolved Iron and Dissolved Manganese Results

Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

SITE ID	DATE	Chloride Total (mg/l)	Chloride Field (mg/l)	Iron Dissolved (mg/l)	Manganese Dissolved (mg/l)
AP-09-DO	8/13/2003	---	---	2.5	0.71
	12/29/2003	133	---	1.19	1.79
	5/3/2004	146	---	ND(0.100)	2.31
	12/30/2004	241	---	---	---
	4/29/2005	87.4	---	---	---
	3/29/2006	189	---	---	---
	2/5/2007	174	---	---	---
AP-12-BR	6/3/2002	---	70.4	---	---
	6/3/2002	---	---	26	1.4
	1/24/2003	400	---	ND(0.1)	990D
	5/13/2003	120	---	ND(0.05)	0.008
	12/17/2003	6.49	---	0.2	3.71
	4/23/2004	2360	---	ND(0.300)	3030
	4/3/2006	72.4	---	---	---
	4/13/2007	115	---	---	---
	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
AP-12-DO	6/3/2002	---	22	---	---
	6/3/2002	---	---	0.02	0.2
	1/24/2003	18	---	ND(0.05)	0.014
	5/13/2003	16	---	ND(0.05)	0.076
	12/17/2003	7.49	---	ND(0.100)	0.274
	4/23/2004	24.4	---	ND(0.100)	47.6
	4/29/2005	60.9	---	---	---
	8/30/2005	---		---	---
	9/8/2005	---		---	---
	4/3/2006	114	---	---	---
	4/13/2007	16.1	---	---	---
	4/20/2010	34.4	---	0.47	5.4
AP-12-S	6/3/2002	---	11.9	0.07	0.2
	2/20/2003	34	---	ND(0.1)	65
	5/13/2003	47	---	ND(0.05)	9500
	12/17/2003	4.54	---	ND(0.100)	18.1
	4/23/2004	14.4	---	ND(0.100)	214
	4/29/2005	86.2	---	---	---
	4/3/2006	58.1	---	---	---
	4/13/2007	30.5	---	---	---
AP-13-DO	6/3/2002	---	42.4	---	---
	6/3/2002	---	---	ND(0.01)	0.37
	1/29/2003	140	---	ND(0.05)	2.8
	5/13/2003	170	---	ND(0.05)	0.054
	12/16/2003	2780	---	ND(0.100)	1110
	5/1/2004	438	---	ND(0.100)	ND(0.0100)
	5/2/2005	1760	---	---	---
	12/30/2005	3620	---	---	---

TABLE 5
Water Quality Data - Chloride, Dissolved Iron and Dissolved Manganese Results

Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

SITE ID	DATE	Chloride Total (mg/l)	Chloride Field (mg/l)	Iron Dissolved (mg/l)	Manganese Dissolved (mg/l)
AP-13-DO (cont.)	4/3/2006	4420	---	---	---
	4/11/2007	6380	---	---	---
	7/26/2007	4970	---	0.142	1.5
	11/12/2007	790	---	217	291
	1/23/2008	1980	---	9.41	76.3
	4/21/2008	2350	---	1.5	33.6
	7/28/2008	2290	---	11.9	5.91
	10/22/2008	1480	---	0.124	5.98
	1/14/2009	150	---	0.26	9.3
	4/2/2009	273	---	0.2	13
AP-13-S	6/3/2002	---	2.9	0.05	0.18
	1/29/2003	30	---	ND(0.1)	120D
	5/13/2003	18	---	ND(0.05)	0.91
	12/16/2003	14.6	---	2.44	16.5
	5/1/2004	16.4	---	ND(0.100)	0.396
	5/2/2005	34.8	---	---	---
	4/3/2006	26.6	---	---	---
	4/11/2007	11.2	---	---	---
AP-14-S	6/3/2002	---	80.4	0.03	5.3
	2/17/2003	200	---	ND(0.1)	6600
	5/14/2003	170	---	ND(0.05)	8800
	12/16/2003	312	---	ND(0.100)	1240
	5/1/2004	235	---	ND(1.00)	3820
	5/2/2005	162	---	---	---
AP-15-S	8/26/2002	---	25>	0.1	1.9
	5/14/2003	ND(1)	---	ND(0.05)	ND(0.005)
	12/22/2003	280	---	0.221	0.0467
	5/3/2004	234	---	ND(0.100)	0.101
	12/30/2004	923	---	ND(0.100)	0.0368
	4/29/2005	220	---	ND(0.100)	0.0118
	3/29/2006	205	---	ND(0.100)	0.0513
	2/5/2007	59	---	ND(0.100)	0.0198
AP-19	6/3/2002	---	---	ND(0.01)	1.1
	6/11/2002	---	16.5	---	---
	5/14/2003	18	---	ND(0.05)	0.16
	12/15/2003	2.51	---	ND(0.100)	0.0173
	4/26/2004	20.7	---	ND(0.100)	ND(0.0100)
	4/28/2005	19.4	---	---	---
	3/31/2006	23.9	---	---	---
	10/23/2008	77.6	---	ND(0.100)	0.814
	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

TABLE 5
Water Quality Data - Chloride, Dissolved Iron and Dissolved Manganese Results

Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

SITE ID	DATE	Chloride Total (mg/l)	Chloride Field (mg/l)	Iron Dissolved (mg/l)	Manganese Dissolved (mg/l)
AP-20	6/3/2002	---	---	ND(0.01)	0.69
	6/11/2002	---	42.3	---	---
	5/14/2003	4	---	ND(0.05)	9.8
	12/15/2003	3.61	---	ND(0.100)	0.369
	4/26/2004	4	---	ND(0.100)	6.95
	4/28/2005	3.46	---	---	---
	3/31/2006	39.6	---	---	---
	10/23/2008	3730	---	ND(1.00)	20900
	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	2.0	---	ND(0.10)	0.028
AP-21	6/3/2002	---	---	0.01	0.58
	6/11/2002	---	2.0	---	---
	5/14/2003	4	---	ND(0.05)	7.6
	12/15/2003	2.17	---	0.206	0.681
	4/26/2004	7.44	---	ND(0.100)	8.47
	4/28/2005	2.26	---	---	---
	3/31/2006	138	---	---	---
	10/23/2008	3950	---	ND(1.00)	24000
	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
AP-22	6/3/2002	---	---	ND(0.01)	2.2
	6/11/2002	---	9.6	---	---
	5/14/2003	2	---	ND(0.05)	5.2
	12/15/2003	1.78	---	ND(0.100)	0.2
	4/26/2004	7.59	---	ND(0.100)	32.7
	4/28/2005	9.14	---	---	---
	3/31/2006	175	---	---	---
	10/23/2008	5220	---	ND(1.00)	31300
	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
AP-23-DO	12/29/2004	177	---	---	---
	5/2/2005	398	---	---	---
	12/30/2005	127	---	---	---
	4/3/2006	633	---	---	---
	1/31/2007	416	---	---	---
	4/11/2007	450	---	---	---
	11/12/2007	78	---	12.3	30.8
	1/23/2008	56.2	---	14.4	51.8
	4/21/2008	64.7	---	2.01	31.5
	7/28/2008	35.8	---	0.78	23.9
	10/22/2008	63.9	---	136	181
	1/14/2009	43.6	---	1.7	6.4
	4/2/2009	60.7	---	3.2	19

TABLE 5
Water Quality Data - Chloride, Dissolved Iron and Dissolved Manganese Results

Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

SITE ID	DATE	Chloride Total (mg/l)	Chloride Field (mg/l)	Iron Dissolved (mg/l)	Manganese Dissolved (mg/l)
AP-24-DO	12/29/2004	1990	---	---	---
	5/2/2005	4130	---	---	---
	12/30/2005	429	---	---	---
	4/3/2006	1160	---	---	---
	10/11/2006	---	---	4.79	4430
	1/30/2007	778	---	28	104
	4/10/2007	550	---	0.346	3.17
	8/9/2007	267	---	ND(0.100)	16.6
	11/12/2007	93.2	---	10.4	33.7
	1/23/2008	375	---	61.5	143
	4/21/2008	611	---	12.4	48.9
	7/28/2008	411	---	5.52	28.4
	10/22/2008	111	---	26.9	59.5
	1/14/2009	117	---	0.48	7.5
	4/2/2009	283	---	0.25	11
AP-25-DO	12/29/2004	17.2	---	---	---
	5/2/2005	149	---	---	---
	12/30/2005	79.3	---	---	---
	4/3/2006	423	---	---	---
	10/11/2006	---	---	1.98	1300
	1/30/2007	170	---	15.2	42.8
	4/10/2007	15.6	---	ND(0.100)	2.74
	8/9/2007	ND(2.00)	---	ND(0.100)	0.0692
	11/12/2007	3.61	---	ND(0.100)	0.146
	1/23/2008	19.7	---	0.284	0.633
	4/21/2008	96.8	---	0.804	2.12
	7/28/2008	ND(2.00)	---	ND(0.100)	ND(0.0100)
	10/22/2008	150	---	0.589	1.06
	1/14/2009	34.9	---	0.28	0.24
	4/2/2009	61.1	---	ND(0.10)	0.11
AP-26-DO	12/28/2004	23.5	---	---	---
	4/28/2005	22.6	---	---	---
	1/3/2006	20	---	---	---
	1/31/2007	11.1	---	---	---
AP-27-DO	12/28/2004	48.9	---	---	---
	5/3/2005	60.4	---	---	---
	1/3/2006	796	---	---	---
	4/7/2006	115	---	---	---
	1/31/2007	91.8	---	---	---
	4/13/2007	30.3	---	---	---
	11/15/2007	10.2	---	ND(0.100)	1.82
	4/25/2008	114	---	---	---
	10/22/2008	18.4	---	ND(0.100)	3.55
	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
	10/26/2011	140	---	ND(0.10)	2.8

TABLE 5
Water Quality Data - Chloride, Dissolved Iron and Dissolved Manganese Results

Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

SITE ID	DATE	Chloride Total (mg/l)	Chloride Field (mg/l)	Iron Dissolved (mg/l)	Manganese Dissolved (mg/l)
AP-28-DO	12/30/2004	236	---	---	---
	4/29/2005	252	---	---	---
	3/29/2006	286	---	---	---
	2/5/2007	306	---	---	---
AP-29-DO	12/30/2004	226	---	---	---
	4/29/2005	264	---	---	---
	3/29/2006	298	---	---	---
	2/5/2007	313	---	---	---
AP-30R-DO	4/7/2011	1000J	---	6	7900
	11/7/2011	2730	---	ND(50)	20000
AP-31-DO	4/6/2011	3380J	---	2.5	2200
	11/7/2011	3240	---	ND(1.0)	780
AP-32-DO	4/7/2011	1440J	---	ND(1.0)	75
	11/7/2011	979	---	ND(0.10)	0.055
APBIO-01	4/12/2007	246	---	---	---
B-2	4/14/2007	265	---	---	---
	11/16/2007	52.8	---	---	---
	4/25/2008	689	---	---	---
B-3	6/3/2002	---	2.5	0.23	0.027
	1/29/2003	9	---	0.06	0.6
	5/13/2003	10	---	ND(0.05)	0.076
	12/16/2003	20.7	---	ND(0.100)	43.3
	5/2/2004	14.7	---	ND(0.100)	0.0294
	4/27/2005	16.3	---	---	---
	3/31/2006	10.1	---	---	---
	4/10/2007	9.26	---	---	---
	4/21/2008	10.9	---	---	---
BR-1_ZONE1	5/16/2003	47	---	4.1	0.38
BR-1_ZONE2	5/16/2003	8	---	1.3	0.2
BR-1_ZONE3	5/16/2003	190	---	1	0.26
BR-5_ZONE1	6/3/2002	---	---	0.22	0.057
	1/31/2003	26	---	0.05	0.012
	5/16/2003	71	---	ND(0.05)	2300
	12/19/2003	31	---	ND(0.100)	0.025
	5/4/2004	75.5	---	ND(0.100)	0.0136
	1/5/2005	59.1	---	---	---
	5/3/2005	29.9	---	---	---
	1/5/2006	14.7	---	---	---
	4/3/2006	18.1	---	---	---
BR-5_ZONE2	1/31/2003	15	---	0.14	0.039
	5/16/2003	17	---	0.2	2.7
	12/19/2003	36.8	---	ND(0.100)	0.816
	5/4/2004	66.9	---	ND(0.100)	0.216
	1/5/2005	24.9	---	---	---
	5/3/2005	13.4	---	---	---
	1/5/2006	19.8	---	---	---
	4/3/2006	14.4	---	---	---

TABLE 5
Water Quality Data - Chloride, Dissolved Iron and Dissolved Manganese Results

Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

SITE ID	DATE	Chloride Total (mg/l)	Chloride Field (mg/l)	Iron Dissolved (mg/l)	Manganese Dissolved (mg/l)
BR-5_ZONE3	6/3/2002	---	6.5	---	---
	1/31/2003	70	---	ND(0.1)	450D
	5/16/2003	12	---	0.06	0.023
	12/19/2003	62.6	---	0.752	238
	5/4/2004	34.8	---	ND(0.100)	3.14
	5/3/2005	18.5	---	---	---
	1/5/2006	13.4	---	---	---
	4/3/2006	17.1	---	---	---
BR-6_ZONE1	1/5/2005	56	---	---	---
	5/3/2005	54.4	---	---	---
	1/5/2006	60	---	---	---
	4/3/2006	60.5	---	---	---
	4/13/2007	82.2	---	---	---
BR-6_ZONE2	1/5/2005	59.7	---	---	---
	5/3/2005	84.3	---	---	---
	1/5/2006	68.9	---	---	---
	4/3/2006	74.5	---	---	---
	4/13/2007	64.7	---	---	---
BR-6_ZONE3	5/3/2005	65.9	---	---	---
	1/5/2006	60	---	---	---
	4/3/2006	59.8	---	---	---
	4/13/2007	281	---	---	---
BW-01	11/29/2006	---	---	ND(0.100)	0.0282
	4/10/2007	96.1	---	36.5	10.7
	7/19/2007	83.4	---	32	22.4
	11/12/2007	18	---	7.57	5.71
	1/24/2008	97.1	---	24.5	4.47
	4/21/2008	73	---	12.5	2.82
	7/28/2008	48.1	---	ND(0.100)	1.04
	10/21/2008	35.5	---	2.86	3.82
	1/13/2009	86.1	---	2.1	2.3
	4/2/2009	67.3	---	3.8	3.2
BW-02	10/11/2006	---	---	0.123	35.1
	1/30/2007	51.9	---	107	50.8
	4/10/2007	282	---	61.1	17.1
	7/19/2007	77.3	---	14.8	8.14
	11/12/2007	21	---	19	7
	1/24/2008	84.5	---	25	3.49
	4/21/2008	74	---	16.5	4.56
	7/28/2008	45	---	1.28	1.54
	10/21/2008	45.4	---	1.45	3.42
	1/13/2009	87.2	---	8.2	2.3
	4/2/2009	97.8	---	6.4	2.4
BW-03	10/11/2006	---	---	ND(0.100)	1.86
	1/30/2007	67.2	---	74.1	67.4

TABLE 5
Water Quality Data - Chloride, Dissolved Iron and Dissolved Manganese Results

Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

SITE ID	DATE	Chloride Total (mg/l)	Chloride Field (mg/l)	Iron Dissolved (mg/l)	Manganese Dissolved (mg/l)
BW-03 (cont.)	4/10/2007	248	---	64.5	14.8
	7/19/2007	57.3	---	24.5	12.5
	11/12/2007	31.7	---	20.3	9.02
	1/24/2008	106	---	37.4	7.44
	4/21/2008	55.9	---	28.7	6.25
	7/28/2008	37.6	---	1.67	3.84
	10/21/2008	50.1	---	17.9	5.33
	1/13/2009	80.8	---	13	5.6
	4/2/2009	91.3	---	18	8
BW-04	10/11/2006	---	---	ND(0.100)	0.0434
	1/30/2007	88.4	---	25.2	27.9
	4/10/2007	84.8	---	17.2	6.49
	7/19/2007	63	---	26	8.3
	11/12/2007	247	---	49.6	11
	1/22/2008	173	---	11.9	25.3
	4/21/2008	128	---	9.61	2.96
	7/28/2008	38	---	7.42	3.18
	10/21/2008	58.2	---	7.75	2.15
	1/13/2009	96.5	---	9.5	3.8
	4/2/2009	95.1	---	10	3.2
BW-05	10/11/2006	---	---	ND(0.100)	ND(0.0100)
	1/30/2007	82.5	---	39.8	63
	4/10/2007	86.4	---	8	4.78
	7/19/2007	83.4	---	3.21	2.05
	11/12/2007	118	---	9.6	3.61
	1/22/2008	140	---	13.5	3.49
	4/21/2008	115	---	5.68	2.28
	7/28/2008	81.1	---	5.45	2.28
	10/21/2008	77.1	---	10.5	1.75
	1/13/2009	205	---	20	4.7
	4/2/2009	130	---	27	4.9
BW-08	11/29/2006	---	---	ND(0.100)	4.01
	4/10/2007	91.2	---	33.7	36.7
	7/19/2007	87	---	15.2	12
	11/12/2007	252	---	43.5	13.2
	1/22/2008	186	---	43	13.5
	4/21/2008	164	---	26	9.56
	7/28/2008	131	---	21.8	9.42
	10/21/2008	148	---	24.5	1.75
	1/13/2009	124	---	18	5.3
	4/2/2009	104	---	27	7.9
BW-09	11/29/2006	---	---	0.42	24.5
	4/10/2007	74.1	---	27.6	27.6
	8/9/2007	122	---	16.5	7.07
	11/12/2007	472	---	32.2	15.1
	1/22/2008	132	---	25.4	15.1

TABLE 5
Water Quality Data - Chloride, Dissolved Iron and Dissolved Manganese Results

Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

SITE ID	DATE	Chloride Total (mg/l)	Chloride Field (mg/l)	Iron Dissolved (mg/l)	Manganese Dissolved (mg/l)
BW-09 (cont.)	4/21/2008	177	---	31.8	10.4
	7/28/2008	128	---	12.2	4.17
	10/21/2008	141	---	62.4	19.4
	1/13/2009	131	---	20	7.1
	4/2/2009	174	---	41	11
CL02-BR	6/3/2002	---	80	---	---
	6/3/2002	---	---	0.03	0.022
	1/23/2003	100	---	ND(0.05)	ND(0.005)
	5/14/2003	140	---	ND(0.05)	0.016
	12/18/2003	92.8	---	ND(0.100)	0.0693
	5/2/2004	123	---	ND(0.100)	0.0787
Dup.	5/2/2004	124	---	ND(0.100)	0.0745
	12/29/2004	108	---	ND(0.100)	0.0138
	4/29/2005	97.5	---	ND(0.100)	0.0319
	1/4/2006	95.3	---	ND(0.100)	ND(0.0100)
	3/31/2006	177	---	0.964	0.272
	2/1/2007	159	---	ND(0.100)	0.0206
	4/11/2007	197	---	ND(0.100)	0.0178
	11/14/2007	104	---	0.168	0.129
	4/24/2008	129	---	0.527	0.127
CL03-BR	6/3/2002	---	59.2	---	---
	6/3/2002	---	---	0.5	0.32
	1/29/2003	30	---	ND(0.1)	160D
	5/14/2003	14	---	ND(0.05)	950
	12/18/2003	24.2	---	ND(0.100)	157
	5/1/2004	2790	---	ND(3.00)	29100
	4/29/2005	156	---	---	---
	3/29/2006	165	---	---	---
CL03-DO	6/3/2002	---	26	---	---
	6/3/2002	---	---	0.09	ND(0.005)
	1/29/2003	42	---	ND(0.05)	0.34
	5/14/2003	7	---	ND(0.05)	0.15
	12/18/2003	6.97	---	0.118	0.0395
	5/1/2004	54.4	---	ND(0.100)	1.07
	4/29/2005	14.6	---	---	---
	3/29/2006	58.3	---	---	---
CL03-S	6/3/2002	---	26.4	0.01	0.12
	1/29/2003	120	---	ND(0.05)	0.21
	5/14/2003	78	---	ND(0.05)	0.067
	12/17/2003	143	---	ND(0.100)	0.0779
	5/1/2004	63.1	---	ND(0.100)	0.0394
	4/29/2005	172	---	---	---
	3/29/2006	320	---	---	---
CL04-BR	6/3/2002	---	---	1.1	1.1
	5/14/2003	57	---	0.87	0.41

TABLE 5
Water Quality Data - Chloride, Dissolved Iron and Dissolved Manganese Results

Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

SITE ID	DATE	Chloride Total (mg/l)	Chloride Field (mg/l)	Iron Dissolved (mg/l)	Manganese Dissolved (mg/l)
CL04-BR (cont.)	12/16/2003	59.2	---	ND(0.100)	0.122
Dup.	12/16/2003	59.6	---	ND(0.100)	0.121
	4/26/2004	62.8	---	0.717	0.373
	4/28/2005	73.3	---	---	---
	3/28/2006	70.6	---	---	---
	4/11/2007	177	---	---	---
CL04-DO	6/3/2002	---	---	ND(0.01)	ND(0.005)
	6/11/2002	---	72.1	---	---
	5/14/2003	110	---	ND(0.05)	ND(0.005)
	12/16/2003	83.7	---	ND(0.100)	ND(0.0100)
	4/26/2004	97.2	---	ND(0.100)	ND(0.0100)
	4/28/2005	123	---	---	---
	3/28/2006	80.8	---	---	---
	4/11/2007	118	---	---	---
CL05-DOA	6/3/2002	---	70.8	---	---
	6/3/2002	---	---	0.36	0.53
	1/29/2003	330	---	1.1	8.9
	5/13/2003	ND(1)	---	ND(0.05)	0.35
	12/15/2003	ND(1.00)	---	6.53	1140
	5/2/2004	200	---	ND(0.100)	0.554
	4/27/2005	172	---	---	---
	3/31/2006	1360	---	---	---
CL06-BR	5/15/2003	210	---	ND(0.05)	0.01
CL06-DO	5/15/2003	5	---	ND(0.05)	ND(0.005)
CL08-DO	12/23/2003	59.9	---	ND(0.100)	ND(0.0100)
CL09-BR_ZONE1	5/16/2003	8	---	2.7	0.12
	12/19/2003	8.8	---	0.412	0.119
	5/3/2004	9.47	---	1.15	0.446
	1/4/2005	10.8	---	---	---
	5/3/2005	17.1	---	---	---
	1/5/2006	10.6	---	---	---
	4/3/2006	29.8	---	---	---
CL09-BR_ZONE2	6/3/2002	---	---	0.72	0.28
	5/16/2003	16	---	1.3	0.37
	12/19/2003	14.3	---	1.74	0.382
	5/3/2004	19.1	---	1.58	0.49
	1/4/2005	36.4	---	---	---
	5/3/2005	14	---	---	---
	1/5/2006	19.1	---	---	---
	4/3/2006	16.1	---	---	---
CL09-BR_ZONE3	5/16/2003	48	---	2.9	0.35
	12/19/2003	59.2	---	1.6	0.365
	5/3/2004	211	---	4.91	0.488
	1/4/2005	122	---	---	---
	5/3/2005	87.2	---	---	---
	1/5/2006	547	---	---	---
	4/3/2006	368	---	---	---

TABLE 5
Water Quality Data - Chloride, Dissolved Iron and Dissolved Manganese Results

Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

SITE ID	DATE	Chloride Total (mg/l)	Chloride Field (mg/l)	Iron Dissolved (mg/l)	Manganese Dissolved (mg/l)
CL09-DO	6/3/2002	---	---	ND(0.01)	0.021
	1/28/2003	120	---	ND(0.05)	0.011
	5/15/2003	110	---	ND(0.05)	0.006
	12/17/2003	112	---	ND(0.100)	0.24
	5/1/2004	187	---	ND(0.100)	0.015
Dup.	5/1/2004	187	---	ND(0.100)	0.0146
	5/2/2005	174	---	---	---
	4/7/2006	164	---	---	---
CL09-S	6/3/2002	---	---	ND(0.01)	0.006
CL10-BR	6/3/2002	---	---	1.9	0.35
	6/11/2002	---	6.2	---	---
	5/14/2003	86	---	0.4	0.13
	12/16/2003	92.7	---	2.4	0.178
	4/26/2004	29.7	---	1.09	0.172
	12/30/2004	33.8	---	0.247	0.129
	4/28/2005	62.8	---	ND(0.100)	21.5
	3/28/2006	41.2	---	0.249	0.311
	1/31/2007	24.7	---	ND(0.100)	0.203
	4/10/2007	22	---	0.116	0.238
	10/21/2008	24.9	---	1.65	0.784
CL10-BR2	4/27/2004	60.7	---	ND(0.100)	ND(0.0100)
	4/27/2004	74.7	---	ND(0.100)	0.073
CL10-DO	6/3/2002	---	---	ND(0.01)	0.032
	6/11/2002	---	3.3	---	---
	5/14/2003	24	---	ND(0.05)	0.91
	12/16/2003	21	---	ND(0.100)	0.203
	4/26/2004	24.9	---	ND(0.100)	1.15
	12/30/2004	28	---	ND(0.100)	11.1
	4/28/2005	13	---	0.3	0.055
	3/28/2006	43.9	---	ND(0.100)	287
	1/31/2007	45.1	---	ND(0.100)	91.2
	4/10/2007	43.4	---	ND(0.100)	120
	10/21/2008	33.6	---	ND(0.100)	164
CL10-S	6/3/2002	---	---	0.03	0.015
	6/11/2002	---	24.1	---	---
	5/14/2003	31	---	ND(0.05)	0.009
	12/16/2003	60.1	---	ND(0.100)	ND(0.0100)
	4/26/2004	23.4	---	ND(0.100)	0.0216
	12/30/2004	87.3	---	ND(0.100)	ND(0.0100)
	4/28/2005	70.8	---	ND(0.100)	0.0437
	3/28/2006	67.6	---	ND(0.100)	0.0581
	1/31/2007	55.4	---	ND(0.100)	0.0128
	4/10/2007	60	---	ND(0.100)	0.0207
	10/21/2008	12.3	---	0.12	0.0194

TABLE 5
Water Quality Data - Chloride, Dissolved Iron and Dissolved Manganese Results

Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

SITE ID	DATE	Chloride Total (mg/l)	Chloride Field (mg/l)	Iron Dissolved (mg/l)	Manganese Dissolved (mg/l)
CL12-S1	6/3/2002	---	54.8	---	---
	6/3/2002	---	---	0.11	0.55
	2/26/2003	230	---	0.17	0.48
	5/15/2003	230	---	0.48	0.71
	12/17/2003	74.9	---	ND(0.100)	0.117
	5/1/2004	80.7	---	ND(0.100)	0.325
	4/29/2005	56.5	---	---	---
	3/28/2006	332	---	---	---
GZ-1	8/26/2002	---	25>	9.3	0.86
	1/28/2003	190	---	0.62	1.1
	5/14/2003	ND(1)	---	ND(0.05)	ND(0.005)
	12/23/2003	124	---	1.38	0.82
	5/3/2004	243	---	1	0.822
	4/29/2005	373	---	---	---
	4/7/2006	253	---	---	---
GZ-2R	8/26/2002	---	25>	0.13	2.2
	1/29/2003	ND(1)	---	0.07	3.4
	5/14/2003	ND(1)	---	ND(0.05)	ND(0.005)
	12/22/2003	99.9	---	ND(0.100)	0.2
	5/3/2004	328	---	ND(0.100)	0.0157
	4/29/2005	405	---	---	---
	4/7/2006	344	---	---	---
GZ-4	8/26/2002	---	25>	29	3
	5/3/2004	313	---	9.76	2.41
Dup.	5/3/2004	314	---	9.97	2.56
MW-002R	6/3/2002	---	118.6	0.12	1.4
	1/23/2003	150	---	ND(0.05)	0.34
	5/14/2003	97	---	ND(0.05)	0.19
	12/18/2003	215	---	0.209	0.927
	5/2/2004	147	---	ND(0.100)	0.0475
	4/29/2005	383	---	---	---
	3/31/2006	111	---	---	---
MW-004R	6/3/2002	---	58.8	---	---
	6/3/2002	---	---	0.12	0.13
	5/14/2003	93	---	ND(0.05)	1.1
	12/18/2003	100	---	ND(0.100)	0.0231
Dup.	12/18/2003	102	---	ND(0.100)	0.0215
	5/2/2004	8.44	---	ND(0.100)	ND(0.0100)
	4/29/2005	80.9	---	---	---
	3/31/2006	188	---	---	---
MW-007R	6/3/2002	---	56.4	---	---
	6/3/2002	---	---	0.06	0.074
	1/23/2003	260	---	0.18	0.46
	5/14/2003	880	---	ND(0.05)	0.5
	12/17/2003	64.4	---	ND(0.100)	ND(0.0100)
	5/2/2004	127	---	ND(0.100)	ND(0.0100)
	4/29/2005	1020	---	---	---
	3/31/2006	1140	---	---	---

TABLE 5
Water Quality Data - Chloride, Dissolved Iron and Dissolved Manganese Results

Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

SITE ID	DATE	Chloride Total (mg/l)	Chloride Field (mg/l)	Iron Dissolved (mg/l)	Manganese Dissolved (mg/l)
MW-008	6/3/2002	---	104.4	58	5.4
	1/29/2003	100	---	1.4	0.75
	5/12/2003	69	---	1.2	0.66
	12/17/2003	5.46	---	3.05	0.191
	4/23/2004	134	---	34.4	3.51
	4/27/2005	85.1	---	---	---
	3/27/2006	79.3	---	---	---
	4/23/2008	87.4	---	---	---
MW-009	6/13/2002	---	24.8	11	26
	1/23/2003	980	---	0.61	30
	5/12/2003	780	---	0.93	23
	12/15/2003	1120	---	20.3	20.5
	4/23/2004	967	---	ND(0.100)	21.3
Dup.	4/23/2004	980	---	ND(0.100)	20.5
	4/27/2005	773	---	---	---
	3/27/2006	990	---	---	---
	10/11/2006	---	---	21.3	20.9
	1/30/2007	676	---	96.2	5.34
	4/10/2007	774	---	128	13.1
	7/19/2007	659	---	86.6	7.91
	11/12/2007	68	---	1.01	0.16
	1/23/2008	164	---	18.8	1.67
	4/21/2008	330	---	90.7	6.29
	7/28/2008	656	---	80.4	6.74
	10/21/2008	742	---	62.9	7.31
	1/14/2009	822	---	60	7
	4/2/2009	711	---	70	6
MW-009A	6/13/2002	---	25	0.02	0.055
	1/23/2003	260	---	0.1	6.8
	5/12/2003	99	---	0.06	1
	12/15/2003	11	---	ND(0.100)	0.018
	4/23/2004	1.87	---	ND(0.100)	0.0133
	4/27/2005	7.65	---	---	---
	3/27/2006	38.5	---	---	---
	4/12/2007	27.8	---	---	---
	4/21/2008	22.3	---	---	---
MW-010	5/13/2003	ND(1)	---	---	---
	5/13/2003	---	---	0.07	0.035
MW-013	6/3/2002	---	44	---	---
	6/3/2002	---	---	14	11
	1/27/2003	2600	---	ND(0.1)	46
	5/13/2003	1800	---	ND(0.05)	120
	12/16/2003	981	---	ND(0.100)	109
	5/1/2004	619	---	ND(0.100)	0.0122

TABLE 5
Water Quality Data - Chloride, Dissolved Iron and Dissolved Manganese Results

Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

SITE ID	DATE	Chloride Total (mg/l)	Chloride Field (mg/l)	Iron Dissolved (mg/l)	Manganese Dissolved (mg/l)
MW-013 (cont.)	4/28/2005	718	---	---	---
	3/31/2006	2720	---	---	---
	4/10/2007	2430	---	---	---
	4/22/2008	395	---	---	---
	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
MW-014A	6/3/2002	---	20.5	---	---
	6/3/2002	---	---	0.03	0.022
	1/23/2003	10	---	ND(0.05)	0.12
	5/13/2003	38	---	0.08	0.27
	12/17/2003	10.9	---	ND(0.100)	ND(0.0100)
	5/1/2004	16.1	---	ND(0.100)	ND(0.0100)
	4/28/2005	14.4	---	---	---
	3/31/2006	5.6	---	---	---
MW-030	1/4/2005	138	---	---	---
	4/27/2005	106	---	---	---
	12/29/2005	190	---	ND(0.100)	ND(0.0100)
	4/7/2006	263	---	---	---
	2/1/2007	138	---	---	---
	4/14/2007	146	---	---	---
	11/16/2007	628	---	ND(0.100)	0.914
	4/25/2008	171	---	---	---
	10/22/2008	1210	---	ND(0.100)	0.011
	4/9/2009	135	---	0.16	0.012
MW-032	6/3/2002	---	---	0.02	ND(0.005)
	6/11/2002	---	12.8	---	---
	5/14/2003	10	---	ND(0.05)	0.012
	12/15/2003	12.6	---	3.9	0.0755
	4/26/2004	29.4	---	ND(0.100)	0.021
	4/28/2005	6.45	---	---	---
	3/31/2006	38.7	---	---	---
MW-033B	6/3/2002	---	17.6	---	---
	6/13/2002	---	---	0.07	6.2
	5/14/2003	760	---	ND(0.05)	0.62
	12/17/2003	298	---	0.101	0.0399
	4/27/2004	766	---	ND(0.100)	0.492
Dup.	4/27/2004	770	---	ND(0.100)	0.491
	4/28/2005	1000	---	---	---
	3/31/2006	686	---	---	---
MW-036	6/3/2002	---	46.2	---	---
	6/3/2002	---	---	0.04	0.078
	1/24/2003	210	---	ND(0.05)	2.8
	5/15/2003	96	---	0.13	0.21
	12/17/2003	65.6	---	ND(0.100)	0.0704
	5/1/2004	386	---	ND(0.100)	0.0678
	4/29/2005	106	---	---	---
	3/28/2006	693	---	---	---

TABLE 5
Water Quality Data - Chloride, Dissolved Iron and Dissolved Manganese Results

Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

SITE ID	DATE	Chloride Total (mg/l)	Chloride Field (mg/l)	Iron Dissolved (mg/l)	Manganese Dissolved (mg/l)
MW-104R	6/3/2002	---	2.7	---	---
	6/3/2002	---	---	0.17	0.035
OB-04-BR	6/3/2002	---	9.8	---	---
	6/3/2002	---	---	0.02	ND(0.005)
	1/24/2003	18	---	0.6	0.016
	5/14/2003	7	---	0.2	0.01
	12/16/2003	10.8	---	0.646	0.037
Dup.	12/16/2003	10.7	---	0.616	0.0359
	4/27/2004	8.98	---	0.186	0.0182
	4/29/2005	13.3	---	---	---
	3/28/2006	13.5	---	---	---
OB-04-DO	6/3/2002	---	17.4	---	---
	6/3/2002	---	---	ND(0.01)	1.7
	1/24/2003	40	---	0.05	0.5
	5/14/2003	44	---	0.53	0.54
	12/16/2003	7.63	---	0.108	0.0545
	4/27/2004	4.79	---	ND(0.100)	ND(0.0100)
	4/29/2005	13.2	---	---	---
	3/28/2006	78.3	---	---	---
OB-04-S	6/3/2002	---	130.4	1.2	6.5
	1/24/2003	130	---	0.19	1.2
	5/14/2003	97	---	1.2	1.7
	12/16/2003	324	---	0.219	2.71
	4/27/2004	108	---	0.356	0.142
	4/29/2005	186	---	---	---
	3/28/2006	290	---	---	---
OB-05-BR	6/3/2002	---	58.8	---	---
	6/3/2002	---	---	1.7	0.42
	1/24/2003	100	---	0.17	0.04
	5/14/2003	100	---	0.61	0.016
	12/16/2003	107	---	ND(0.100)	0.0137
	4/27/2004	108	---	ND(0.100)	0.0143
	12/30/2004	108	---	---	---
	4/29/2005	107	---	---	---
	1/4/2006	93.8	---	---	---
	3/29/2006	107	---	---	---
	2/1/2007	102	---	---	---
OB-05-DO	6/3/2002	---	19.5	---	---
	6/3/2002	---	---	0.06	0.41
	1/24/2003	96	---	0.57	0.63
	5/14/2003	18	---	0.84	0.076
	12/16/2003	20	---	0.535	0.179
	4/27/2004	21.6	---	ND(0.100)	ND(0.0100)
	12/30/2004	20.8	---	---	---

TABLE 5
Water Quality Data - Chloride, Dissolved Iron and Dissolved Manganese Results

Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

SITE ID	DATE	Chloride Total (mg/l)	Chloride Field (mg/l)	Iron Dissolved (mg/l)	Manganese Dissolved (mg/l)
OB-05-DO (cont.)	4/29/2005	21.8	---	---	---
	1/4/2006	19.6	---	---	---
	3/29/2006	414	---	---	---
	2/1/2007	28.2	---	---	---
OB-05-S	6/3/2002	---	44	0.01	0.31
	2/20/2003	460	---	ND(0.05)	0.18
	5/14/2003	90	---	0.2	0.18
	12/16/2003	215	---	ND(0.100)	0.0548
	4/27/2004	86.8	---	ND(0.100)	ND(0.0100)
	4/29/2005	41.5	---	---	---
	3/29/2006	302	---	---	---
OB-06-BR	6/3/2002	---	---	18	0.73
	1/29/2003	76	---	15	1.8
	5/15/2003	1	---	0.29	0.021
	12/17/2003	26.2	---	1.28	0.176
	5/1/2004	45.6	---	0.663	0.257
	12/30/2004	43.7	---	---	---
	5/2/2005	42.3	---	---	---
	1/4/2006	42	---	---	---
	4/7/2006	46.9	---	---	---
	2/1/2007	42.8	---	---	---
OB-06-DO	6/3/2002	---	1.1	---	---
	6/3/2002	---	---	0.01	0.12
	1/29/2003	86	---	ND(0.05)	0.045
	5/15/2003	ND(1)	---	1.1	0.48
	12/17/2003	114	---	0.287	0.776
	5/1/2004	136	---	6.68	1.28
	12/30/2004	123	---	---	---
	5/2/2005	168	---	---	---
	1/4/2006	140	---	---	---
	4/7/2006	154	---	---	---
	2/1/2007	127	---	---	---
OB-07-DO	8/26/2002	---	25>	8.1	1.7
	5/14/2003	210	---	5.6	0.86
	12/19/2003	2.69	---	ND(0.100)	ND(0.0100)
	5/3/2004	21.4	---	0.828	0.123
	12/30/2004	2.38	---	---	---
	4/29/2005	18	---	---	---
	3/29/2006	183	---	---	---
	2/1/2007	14.5	---	---	---
OB-08-DO	8/26/2002	---	25>	44	2
	5/15/2003	130	---	46	1.6
	12/18/2003	150	---	44.2	1.68
	5/3/2004	139	---	47.9	1.79
	1/4/2005	152	---	---	---
	4/29/2005	153	---	---	---

TABLE 5
Water Quality Data - Chloride, Dissolved Iron and Dissolved Manganese Results

Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

SITE ID	DATE	Chloride Total (mg/l)	Chloride Field (mg/l)	Iron Dissolved (mg/l)	Manganese Dissolved (mg/l)
OB-08-DO (cont.)	1/4/2006	147	---	---	---
	4/7/2006	164	---	---	---
	2/1/2007	162	---	---	---
OB-08-S	8/26/2002	---	25>	9.1	1.7
	5/3/2004	97.9	---	ND(0.100)	0.0112
OB-09-BR	6/3/2002	---	10.4	---	---
	6/3/2002	---	---	7.5	0.37
	1/23/2003	19	---	0.08	0.01
	5/12/2003	10	---	0.23	0.064
	12/15/2003	12.5	---	0.177	0.063
	4/23/2004	20.6	---	ND(0.100)	0.0237
	12/29/2004	15.7	---	0.343	0.0435
Dup.	12/29/2004	15.2	---	0.34	0.0428
	4/27/2005	22.8	---	0.165	0.0326
	12/30/2005	15.6	---	0.266	0.0527
	3/27/2006	23.2	---	0.228	0.0602
	11/29/2006	---	---	6.18	0.262
	1/31/2007	6.77	---	0.715	0.189
	4/10/2007	19.3	---	2.26	0.216
	7/19/2007	12.4	---	0.399	0.0918
	8/9/2007	14	---	0.407	0.0965
	11/12/2007	18.3	---	0.792	0.157
	1/22/2008	17.8	---	1.1	0.157
	4/21/2008	15.2	---	0.394	0.0828
	7/29/2008	3.33	---	1.97	0.0971
	10/22/2008	10.8	---	2.84	0.17
	1/14/2009	16	---	1.5	0.17
	4/9/2009	20	---	1.5	0.24
OB-09-DO	6/3/2002	---	81.3	---	---
	6/3/2002	---	---	2.3	0.36
	1/23/2003	15	---	0.05	0.062
	5/12/2003	2	---	ND(0.05)	ND(0.005)
	12/15/2003	4.48	---	ND(0.100)	0.0319
Dup.	12/15/2003	4.24	---	---	---
	4/23/2004	2.09	---	ND(0.100)	ND(0.0100)
	12/29/2004	4.88	---	ND(0.100)	ND(0.0100)
	4/27/2005	6.58	---	ND(0.100)	ND(0.0100
	12/30/2005	13.3	---	ND(0.100)	ND(0.0100)
	3/27/2006	18.5	---	4.84	0.278
	11/29/2006	---	---	1.01	0.146
	1/31/2007	9.75	---	0.181	0.0364
	4/10/2007	18.3	---	1.12	0.0804
	7/19/2007	9.45	---	0.616	0.138
	11/12/2007	9.39	---	ND(0.100)	0.0444
	1/22/2008	12	---	ND(0.100)	0.0171
	4/21/2008	3.64	---	ND(0.100)	0.0445

TABLE 5
Water Quality Data - Chloride, Dissolved Iron and Dissolved Manganese Results

Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

SITE ID	DATE	Chloride Total (mg/l)	Chloride Field (mg/l)	Iron Dissolved (mg/l)	Manganese Dissolved (mg/l)
OB-09-DO (cont.)	7/29/2008	ND(2.00)	---	ND(0.100)	ND(0.0100)
	10/22/2008	6.3	---	0.255	0.0796
	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	6/3/2002	---	78.5	1.8	1.8
	1/23/2003	190	---	0.08	0.33
	5/12/2003	78	---	ND(0.05)	0.051
	12/15/2003	5.32	---	ND(0.100)	0.0169
	4/23/2004	3.73	---	ND(0.100)	ND(0.0100)
	12/29/2004	43.4	---	ND(0.100)	0.0163
	4/27/2005	16.2	---	0.112	0.0289
	12/30/2005	28.2	---	ND(0.100)	0.0106
	3/27/2006	547	---	0.604	1.1
	10/11/2006	---	---	2.52	1.36
	1/30/2007	72.8	---	40	25.6
	4/10/2007	30.9	---	75.6	21.1
	7/26/2007	42.1	---	4.82	0.887
	11/12/2007	63.2	---	5.08	1.08
	4/21/2008	168	---	8.7	1.88
	7/29/2008	222	---	13.1	3.98
	10/22/2008	116	---	17	1.3
	4/9/2009	122	---	16	2
OB-10-BR	6/3/2002	---	64.4	---	---
	6/3/2002	---	---	0.04	0.19
	1/23/2003	90	---	ND(0.05)	0.042
	5/13/2003	93	---	0.34	0.19
	12/15/2003	82	---	0.403	0.0398
	4/23/2004	87.4	---	ND(0.100)	0.0666
	4/27/2005	69.3	---	---	---
	3/27/2006	55	---	---	---
OB-10-DO	6/3/2002	---	42	---	---
	6/3/2002	---	---	ND(0.01)	0.17
	1/23/2003	37	---	ND(0.05)	0.42
	5/13/2003	29	---	1.2	1.1
	12/15/2003	31.4	---	ND(0.100)	ND(0.0100)
	4/23/2004	32.6	---	ND(0.100)	ND(0.0100)
	4/27/2005	30.6	---	---	---
	3/27/2006	34.1	---	---	---
	11/29/2006	---	---	ND(0.100)	0.351
	4/16/2007	38.1	---	ND(0.100)	ND(0.0100)
OB-10-S	6/3/2002	---	61.6	ND(0.01)	0.022
	1/23/2003	35	---	ND(0.05)	0.007
	5/13/2003	300	---	ND(0.05)	ND(0.005)
	12/15/2003	14.5	---	ND(0.100)	ND(0.0100)
Dup.	12/15/2003	14	---	ND(0.100)	ND(0.0100)
	4/23/2004	71	---	ND(0.100)	ND(0.0100)

TABLE 5
Water Quality Data - Chloride, Dissolved Iron and Dissolved Manganese Results

Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

SITE ID	DATE	Chloride Total (mg/l)	Chloride Field (mg/l)	Iron Dissolved (mg/l)	Manganese Dissolved (mg/l)
OB-10-S (cont.)	4/27/2005	124	---	---	---
	3/27/2006	50.1	---	---	---
	11/29/2006	---	---	ND(0.100)	1.28
	4/16/2007	39.5	---	ND(0.100)	18.5
OB-11-BR	6/3/2002	---	17	---	---
	6/3/2002	---	---	1.5	0.05
	1/27/2003	7	---	0.31	0.18
	5/12/2003	8	---	1.1	0.2
	12/16/2003	8.89	---	1.99	0.221
	5/1/2004	9.13	---	0.34	0.129
	4/28/2005	9.01	---	---	---
	3/27/2006	10.9	---	---	---
OB-11-DO	6/3/2002	---	5.4	---	---
	6/3/2002	---	---	0.08	0.32
	1/27/2003	19	---	ND(0.05)	0.01
	5/12/2003	12	---	ND(0.05)	0.28
	12/16/2003	16.4	---	1.89	0.21
	5/1/2004	13.2	---	ND(0.100)	ND(0.0100)
	4/28/2005	15	---	---	---
	3/27/2006	18.1	---	---	---
OB-11-S	6/3/2002	---	80	0.16	1.7
	1/27/2003	43	---	ND(0.05)	1.3
	5/12/2003	38	---	1.5	1.9
	12/16/2003	42.6	---	ND(0.100)	1.34
	5/1/2004	38.8	---	1.02	1.24
	4/28/2005	38	---	---	---
	3/27/2006	39	---	---	---
OB-12-BR	6/3/2002	---	12.4	---	---
	6/3/2002	---	---	1.9	0.036
	1/27/2003	12	---	ND(0.05)	0.009
	5/13/2003	14	---	1.5	0.045
	12/16/2003	7970	---	ND(0.500)	3190
	5/13/2004	673	---	126	7270
	4/3/2006	687	---	---	---
	11/29/2006	---	---	ND(0.100)	211
	1/31/2007	4.78	---	---	---
	4/16/2007	1220	---	ND(0.100)	1070
OB-12-DO	6/3/2002	---	10.8	---	---
	6/3/2002	---	---	0.33	0.59
	1/27/2003	69	---	ND(0.05)	0.73
	5/13/2003	52	---	1	0.7
	12/16/2003	181	---	ND(0.100)	243
	5/1/2004	33.5	---	ND(0.100)	4.6
	4/28/2005	38.6	---	---	---
	4/3/2006	58.9	---	---	---
	11/29/2006	---	---	ND(0.100)	1.5

TABLE 5
Water Quality Data - Chloride, Dissolved Iron and Dissolved Manganese Results

Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

SITE ID	DATE	Chloride Total (mg/l)	Chloride Field (mg/l)	Iron Dissolved (mg/l)	Manganese Dissolved (mg/l)
OB-12-DO (cont.)	1/31/2007	104	---	---	---
	4/16/2007	84.9	---	ND(0.100)	6.65
	10/27/2009	116	---	ND(0.50)	1100
	10/26/2011	87.6	---	ND(0.50)	54
OB-12-S	6/3/2002	---	62.1	0.52	0.4
	1/27/2003	42	---	ND(0.05)	0.13
	5/13/2003	38	---	ND(0.05)	0.022
	12/16/2003	178	---	ND(0.100)	684
	5/13/2004	385	---	2.29	4170
	4/28/2005	17.7	---	---	---
	4/3/2006	52.6	---	---	---
	11/29/2006	---	---	ND(0.100)	0.14
	1/31/2007	17.8	---	---	---
	4/16/2007	31.7	---	ND(0.100)	0.0656
OB-14-DO	6/3/2002	---	54	---	---
	6/3/2002	---	---	0.04	0.29
	1/23/2003	17	---	0.13	0.5
	5/13/2003	19	---	0.44	0.12
	12/17/2003	15.5	---	0.8	0.32
	5/1/2004	22.2	---	ND(0.100)	0.0573
	4/28/2005	25.3	---	---	---
	3/27/2006	28.1	---	---	---
OB-15-S	6/3/2002	---	78.2	---	---
	6/3/2002	---	---	5.4	26
	1/23/2003	400	---	18	7.1
	5/12/2003	220	---	1.4	2.5
	12/16/2003	47.3	---	ND(0.100)	48.3
	4/23/2004	37	---	ND(0.100)	23.9
	4/27/2005	52.3	---	---	---
	4/3/2006	619	---	---	---
	4/10/2007	92.2	---	---	---
	4/25/2008	564	---	---	---
OB-16-BR	6/3/2002	---	---	0.02	ND(0.005)
	6/11/2002	---	9	---	---
	5/14/2003	85	---	ND(0.05)	ND(0.005)
	12/16/2003	97.7	---	ND(0.100)	ND(0.0100)
	4/27/2004	92.7	---	ND(0.100)	ND(0.0100)
	4/28/2005	90.5	---	---	---
	3/28/2006	93.6	---	---	---
	4/10/2007	51.6	---	---	---
OB-16-S	6/3/2002	---	---	0.03	0.092
	6/11/2002	---	38.7	---	---
	5/14/2003	170	---	0.07	0.11
	12/16/2003	167	---	0.114	ND(0.0100)
	4/27/2004	112	---	ND(0.100)	ND(0.0100)
	4/28/2005	130	---	---	---
	3/28/2006	201	---	---	---
	4/10/2007	166	---	---	---

TABLE 5
Water Quality Data - Chloride, Dissolved Iron and Dissolved Manganese Results

Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

SITE ID	DATE	Chloride Total (mg/l)	Chloride Field (mg/l)	Iron Dissolved (mg/l)	Manganese Dissolved (mg/l)
OB-17-BR	6/3/2002	---	1.9	---	---
	6/3/2002	---	---	1.3	0.011
	5/15/2003	9	---	0.28	0.008
	12/18/2003	10.1	---	0.214	0.0315
	5/2/2004	9.71	---	0.324	0.0358
	5/19/2005	40	---	---	---
	4/7/2006	30.9	---	---	---
OB-17-DO	6/3/2002	---	64.7	---	---
	6/3/2002	---	---	ND(0.01)	0.24
	5/15/2003	ND(1)	---	ND(0.05)	0.069
	12/18/2003	122	---	ND(0.100)	0.255
	5/2/2004	136	---	ND(0.100)	0.105
	5/2/2005	134	---	---	---
	4/7/2006	134	---	---	---
OB-18-DO	8/26/2002	---	25>	5.1	1.4
	5/14/2003	49	---	6.8	1.3
	12/23/2003	23.8	---	ND(0.100)	ND(0.0100)
	5/3/2004	59.1	---	0.911	0.904
	4/29/2005	63.3	---	---	---
	4/7/2006	91.6	---	---	---
OB-18-S	8/26/2002	---	25>	15	1.4
	1/28/2003	180	---	0.38	0.83
	5/14/2003	170	---	0.26	2
	12/23/2003	95.1	---	ND(0.100)	1.24
Dup.	12/23/2003	91.6	---	ND(0.100)	1.27
	5/3/2004	72.6	---	ND(0.100)	2.06
	4/29/2005	46.2	---	---	---
	4/7/2006	163	---	---	---
	2/1/2007	158	---	---	---
OB-19-BR	6/3/2002	---	104	---	---
	6/3/2002	---	---	0.53	0.02
	1/28/2003	25	---	ND(0.05)	0.4
	5/13/2003	9	---	0.62	0.16
	12/17/2003	2620	---	ND(0.100)	34.7
	4/26/2004	545	---	ND(0.300)	3960
	12/28/2004	1130	---	---	---
	4/28/2005	928	---	---	---
	1/3/2006	238	---	---	---
	3/31/2006	191	---	---	---
	11/29/2006	---	---	ND(0.100)	70.1
	1/31/2007	3.45	---	---	---
	4/16/2007	27.1	---	0.753	2.57
OB-19-DO	6/3/2002	---	19.41	---	---
	6/3/2002	---	---	0.66	1.9
	1/28/2003	900	---	ND(0.1)	8700D
	5/13/2003	20	---	ND(0.05)	14
	12/17/2003	22.8	---	ND(0.100)	2.75
	4/26/2004	20.1	---	ND(0.100)	1.95
	12/28/2004	27.7	---	---	---
	4/28/2005	32.2	---	---	---
	3/31/2006	35.5	---	---	---
	1/31/2007	33.6	---	---	---

TABLE 5
Water Quality Data - Chloride, Dissolved Iron and Dissolved Manganese Results

Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

SITE ID	DATE	Chloride Total (mg/l)	Chloride Field (mg/l)	Iron Dissolved (mg/l)	Manganese Dissolved (mg/l)
OB-19-DO (cont.)	4/11/2007	36.6	---	---	---
	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
OB-19-S	6/3/2002	---	62.1	---	---
	1/28/2003	10	---	ND(0.05)	0.023
	5/13/2003	17	---	ND(0.05)	0.009
	12/17/2003	15.7	---	0.104	0.0113
	4/26/2004	36.5	---	ND(0.100)	0.0761
	4/28/2005	16.8	---	---	---
	3/28/2006	17.1	---	---	---
OB-20-BR	9/3/2004	0.063	---	ND(0.100)	ND(0.0100)
	1/3/2005	63.2	---	1.51	0.0191
	5/2/2005	54	---	ND(0.100)	0.0146
	1/6/2006	33.4	---	ND(0.100)	0.27
	3/30/2006	33.9	---	ND(0.100)	1080
	2/1/2007	44	---	ND(0.100)	170
	4/12/2007	31.7	---	ND(0.100)	90.6
OB-20-DO	9/3/2004	0.12	---	2.5	0.178
	1/3/2005	15.4	---	ND(0.100)	0.0129
	5/2/2005	7.92	---	ND(0.100)	0.0611
	1/6/2006	55.4	---	ND(0.100)	ND(0.0100)
	3/30/2006	112	---	ND(0.100)	33
	2/1/2007	107	---	ND(0.100)	6.4
	4/12/2007	10.8	---	ND(0.100)	0.314
OB-20-S	9/2/2004	0.06	---	13.5	1.2
	1/3/2005	35.9	---	1.44	0.2
	5/2/2005	24.1	---	ND(0.100)	0.0503
	1/6/2006	71.6	---	0.101	0.171
	3/30/2006	79.5	---	0.257	0.331
	2/1/2007	69.5	---	0.104	0.14
	4/12/2007	52.9	---	ND(0.100)	0.0857
OB-21-BR	9/2/2004	0.096	---	ND(0.100)	ND(0.0100)
	1/3/2005	102	---	ND(0.100)	2.91
	5/2/2005	97.4	---	ND(0.100)	ND(0.0100)
	1/6/2006	124	---	0.106	ND(0.0100)
	3/30/2006	132	---	ND(0.100)	0.0162
	2/1/2007	202	---	ND(0.100	0.103
	4/12/2007	178	---	0.627	0.176

TABLE 5
Water Quality Data - Chloride, Dissolved Iron and Dissolved Manganese Results

Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

SITE ID	DATE	Chloride Total (mg/l)	Chloride Field (mg/l)	Iron Dissolved (mg/l)	Manganese Dissolved (mg/l)
OB-21-DO	9/2/2004	0.21	---	28.6	3.52
	1/3/2005	177	---	ND(0.100)	2.97
	5/2/2005	227	---	25.5	1.55
	1/6/2006	223	---	ND(0.100)	1.19
	3/30/2006	244	---	4.94	0.764
	2/1/2007	257	---	23.4	1.21
	4/12/2007	254	---	30.6	1.31
OB-22-DO	9/3/2004	0.083	---	1.72	0.558
	1/4/2005	260	---	ND(0.100)	ND(0.0100)
	5/2/2005	4.14	---	0.156	ND(0.0100)
	1/4/2006	365	---	ND(0.100)	ND(0.0100)
	4/7/2006	99.1	---	3.33	0.818
	2/1/2007	11	---	ND(0.100)	ND(0.0100)
	4/15/2007	26.6	---	ND(0.100)	0.0136
OB-23-BR	6/3/2002	---	24.6	---	---
	6/13/2002	---	---	2.8	0.07
OB-24-S	5/14/2003	120	---	3.1	7.2
	12/18/2003	200	---	0.639	0.283
	4/27/2004	94.2	---	1.05	3.87
	4/28/2005	71.8	---	---	---
	3/31/2006	49.3	---	---	---
	4/11/2007	45.6	---	---	---
OB-25-BR	12/17/2003	283	---	ND(0.100)	1110
	4/26/2004	8.62	---	ND(0.100)	0.272
Dup.	4/26/2004	8.74	---	ND(0.100)	0.272
	4/28/2005	11.3	---	---	---
	3/31/2006	81	---	---	---
OB-25-DO	12/17/2003	40	---	ND(0.100)	12.8
	4/26/2004	35.2	---	ND(0.100)	19.5
	4/28/2005	31.7	---	---	---
	3/31/2006	48.1	---	---	---
OB-26-BR	12/17/2003	18	---	16.5	14.9
	4/26/2004	8.49	---	0.136	80.5
	4/28/2005	4.61	---	---	---
	3/31/2006	5.44	---	---	---
OB-26-DO	12/17/2003	19.8	---	ND(0.100)	126
	4/26/2004	24.7	---	ND(0.100)	200
	4/28/2005	23.6	---	---	---
	3/31/2006	95.9	---	---	---
OB-27-BR	12/18/2003	16.1	---	ND(0.100)Z	0.0164
	4/27/2004	21.6	---	ND(0.100)	0.15
	12/28/2004	406	---	ND(0.100)	3570
	4/28/2005	71.5	---	ND(0.100)	214
	1/3/2006	86.3	---	ND(0.100)	606
	3/28/2006	32.6	---	ND(0.100)	0.0214
	1/31/2007	160	---	ND(0.100)	1490

TABLE 5
Water Quality Data - Chloride, Dissolved Iron and Dissolved Manganese Results

Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

SITE ID	DATE	Chloride Total (mg/l)	Chloride Field (mg/l)	Iron Dissolved (mg/l)	Manganese Dissolved (mg/l)
OB-27-BR (cont.)	4/14/2007	136	---	ND(0.100)	806
	11/15/2007	74.5	---	ND(0.100)	7.05
	4/28/2008	57.2	---	ND(0.100)	1.16
	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
OB-27-DO	12/18/2003	78.6	---	ND(0.100)Z	0.163
	4/27/2004	87.9	---	ND(0.100)	ND(0.0100)
	12/28/2004	89.7	---	ND(0.100)	0.0712
	4/28/2005	156	---	ND(0.100)	ND(0.0100)
	1/3/2006	258	---	ND(0.100)	ND(0.0100)
	3/28/2006	275	---	ND(0.100)	ND(0.0100)
	1/31/2007	330	---	ND(0.100)	ND(0.0100)
	4/10/2007	334	---	ND(0.100)	ND(0.0100)
	11/15/2007	199	---	ND(0.100)	0.258
	4/23/2008	448	---	ND(0.100)	ND(0.0100)
OB-28-BR	12/17/2003	1210	---	ND(0.100)	304
	4/26/2004	29.8	---	ND(0.100)	274
	4/28/2005	53.5	---	---	---
	3/31/2006	47.1	---	---	---
OB-28-DO	12/17/2003	844	---	ND(0.100)	718
	4/26/2004	96.8	---	ND(0.300)	2410
	4/28/2005	32.9	---	---	---
	3/31/2006	31	---	---	---
OB-29-DO	8/13/2003	---	---	1.9	1.3
	12/29/2003	148	---	0.746	0.89
	5/3/2004	74.1	---	1.31	1.24
	12/30/2004	86.7	---	ND(0.100)	ND(0.0100)
	4/29/2005	58.2	---	ND(0.100)	0.0192
	3/29/2006	213	---	0.322	1.34
OB-30-DO	5/5/2004	84.8	---	ND(0.100)	ND(0.0100)
	12/29/2004	106	---	---	---
	4/28/2005	125	---	---	---
	1/3/2006	151	---	---	---
	3/28/2006	170	---	---	---
	1/31/2007	160	---	---	---
	4/11/2007	277	---	---	---
	11/15/2007	289	---	---	---
OB-32-DO	5/5/2004	767	---	ND(0.100)	1.09
	12/29/2004	844	---	---	---
	5/2/2005	2900	---	---	---
	1/3/2006	3700	---	---	---
	4/3/2006	1000	---	---	---
	1/31/2007	3920	---	---	---
	4/11/2007	564	---	---	---
	11/15/2007	990	---	---	---

TABLE 5
Water Quality Data - Chloride, Dissolved Iron and Dissolved Manganese Results

Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

SITE ID	DATE	Chloride Total (mg/l)	Chloride Field (mg/l)	Iron Dissolved (mg/l)	Manganese Dissolved (mg/l)
OB-32-DO (cont.)	4/25/2008	1190	---	---	---
	5/8/2008	781	---	---	---
	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
OB-33-DO	5/5/2004	49.7	---	0.138	0.646
	12/29/2004	7.54	---	---	---
	4/28/2005	17.8	---	---	---
	12/29/2005	4.72	---	---	---
	3/28/2006	12.5	---	---	---
	1/31/2007	7.55	---	---	---
	4/14/2007	11.4	---	---	---
	11/13/2007	7.2	---	---	---
	4/23/2008	11.8	---	---	---
OB-34-DO	5/5/2004	16	---	ND(0.100)	ND(0.0100)
Dup.	5/5/2004	16.5	---	ND(0.100)	ND(0.0100)
	12/29/2004	57	---	---	---
	5/2/2005	39.9	---	---	---
	1/3/2006	88	---	---	---
	3/28/2006	68.8	---	---	---
	1/31/2007	35.8	---	---	---
	10/27/2009	38.7	---	ND(0.50)	10
OB-35-DO	12/28/2004	82.6	---	4.6	0.0926
	5/3/2005	72.6	---	ND(0.100)	ND(0.0100)
	1/3/2006	80.1	---	ND(0.100)	39.5
	4/7/2006	276	---	ND(0.100)	ND(0.0100)
	2/5/2007	88.8	---	ND(0.100)	7.11
	4/13/2007	115	---	ND(0.100)	157
	11/15/2007	373	---	ND(0.100)	260
	4/25/2008	79.5	---	ND(0.100)	ND(0.0100)
	10/23/2008	392	---	ND(1.00)	249
	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
OB-36-DO	2/2/2004	7.91	---	---	---
	5/4/2004	7.68	---	ND(0.100)	0.635
Dup.	5/4/2004	7.44	---	ND(0.100)	0.627
	12/28/2004	117	---	---	---
	5/3/2005	445	---	---	---
	1/3/2006	284	---	---	---
	4/7/2006	42.2	---	---	---
	2/5/2007	40.8	---	---	---
	4/13/2007	15.3	---	---	---
	11/15/2007	11.5	---	---	---

TABLE 5
Water Quality Data - Chloride, Dissolved Iron and Dissolved Manganese Results

Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

SITE ID	DATE	Chloride Total (mg/l)	Chloride Field (mg/l)	Iron Dissolved (mg/l)	Manganese Dissolved (mg/l)
OB-36-DO (cont.)	4/25/2008	---	---	18.9	15.3
	5/8/2008	9.54	---	---	---
OB-37-DO	2/2/2004	20.9	---	---	---
	5/4/2004	2.53	---	ND(0.100)	0.18
	12/28/2004	7.18	---	---	---
	5/3/2005	3.15	---	ND(0.100)	0.0939
	1/3/2006	7.64	---	---	---
	4/7/2006	10.4	---	ND(0.100)	0.205
	2/5/2007	29.4	---	0.128	25.2
	4/13/2007	15.6	---	ND(0.100)	18.1
	11/15/2007	ND(1000)	---	ND(1.00)	21500
	4/25/2008	417	---	15.2	74.6
	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
OB-38-DO	12/28/2004	384	---	ND(0.100)	ND(0.0100)
	4/27/2005	24	---	0.129	0.0162
	1/3/2006	3320	---	ND(0.100)	ND(0.0100)
	3/28/2006	677	---	0.138	0.96
	1/31/2007	1080	---	ND(0.100)	0.459
	4/10/2007	146	---	ND(0.100)	ND(0.0100)
	11/16/2007	1.39	---	ND(0.100)	ND(0.0100)
	4/25/2008	771	---	ND(0.100)	0.472
	10/22/2008	12.2	---	ND(0.100)	0.0256
	4/9/2009	459	---	ND(0.10)	0.14
	10/28/2009	31.7	---	ND(0.10)	0.025
OB-39-DO	12/28/2004	15.8	---	ND(0.100)	ND(0.0100)
	4/27/2005	18.1	---	ND(0.100)	ND(0.0100)
	1/6/2006	15.6	---	ND(0.100)	ND(0.0100)
	3/28/2006	16.1	---	ND(0.100)	0.0857
	1/31/2007	9.12	---	ND(0.100)	ND(0.0100)
	4/10/2007	12	---	ND(0.100)	ND(0.0100)
	11/14/2007	15.1	---	ND(0.100)	0.0109
	4/25/2008	12.7	---	ND(0.100)	0.0153
	10/22/2008	12.4	---	ND(0.100)	0.0337
	4/9/2009	15.5	---	ND(0.10)	ND(0.010)
OB-40-DO	12/28/2004	36	---	ND(0.100)	ND(0.0100)
	4/27/2005	27.8	---	ND(0.100)	ND(0.0100)
	12/29/2005	26.6	---	ND(0.100)	ND(0.0100)
	3/28/2006	34.9	---	ND(0.100)	ND(0.0100)
	1/31/2007	41	---	ND(0.100)	ND(0.0100)
	4/10/2007	36.4	---	ND(0.100)	ND(0.0100)
	11/14/2007	63.1	---	ND(0.100)	ND(0.0100)
	4/25/2008	38.4	---	ND(0.100)	0.0303
	10/22/2008	55.1	---	ND(0.100)	ND(0.0100)
	4/9/2009	48.2	---	ND(0.10)	ND(0.010)

TABLE 5
Water Quality Data - Chloride, Dissolved Iron and Dissolved Manganese Results

Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

SITE ID	DATE	Chloride Total (mg/l)	Chloride Field (mg/l)	Iron Dissolved (mg/l)	Manganese Dissolved (mg/l)
P-14	6/3/2002	---	1.9	---	---
	5/3/2004	1400	---	ND(0.100)	0.0614
P-19A	1/3/2005	97.6	---	---	---
	5/2/2005	104	---	---	---
	1/6/2006	159	---	---	---
	3/30/2006	144	---	---	---
	2/1/2007	117	---	---	---
P-20R	1/6/2006	10.7	---	ND(0.100)	0.0807
	3/30/2006	27.5	---	ND(0.100)	0.372
	2/1/2007	84	---	0.15	1.24
P-21	1/3/2005	1000	---	12.6	1.16
	5/2/2005	1580	---	---	---
	1/4/2006	4070	---	---	---
	4/7/2006	257	---	---	---
	2/1/2007	606	---	---	---
P-24	1/3/2005	69.4	---	ND(0.100)	ND(0.0100)
	5/2/2005	21.3	---	ND(0.100)	ND(0.0100)
	1/6/2006	65.4	---	ND(0.100)	ND(0.0100)
	3/30/2006	36.3	---	ND(0.100)	0.0135
	2/5/2007	20.6	---	ND(0.100)	ND(0.0100)
RW-01_MW-18	6/3/2002	---	108.8	---	---
	6/3/2002	---	---	2.2	1.3
	2/17/2003	80	---	ND(0.1)	83
	5/13/2003	600	---	0.1	6000
	12/16/2003	613	---	ND(0.100)	1330
	5/13/2004	240	---	30.9	1430
	5/2/2005	56.9	---	---	---
	4/3/2006	933	---	---	---
RW-02	6/3/2002	---	60.4	---	---
	6/3/2002	---	---	0.21	3
	2/17/2003	500	---	ND(0.1)	29000
	5/14/2003	380	---	ND(0.05)	12000
	12/16/2003	422	---	ND(0.100)N	1380N
Dup.	12/16/2003	426	---	ND(0.100)	1380
	5/2/2004	456	---	ND(1.00)	7670
	3/31/2006	603	---	---	---
RW-03	6/3/2002	---	67.2	---	---
	6/3/2002	---	---	0.11	0.26
	2/20/2003	44	---	ND(0.05)	3.1
	5/13/2003	30	---	ND(0.05)	210
	12/16/2003	22.8	---	6.94	29.2
	5/2/2004	12.6	---	ND(0.100)	0.0905
	5/2/2005	16.8	---	---	---
	4/3/2006	136	---	---	---
RW-04	6/3/2002	---	17.3	---	---
	6/3/2002	---	---	ND(0.01)	0.063

TABLE 5
Water Quality Data - Chloride, Dissolved Iron and Dissolved Manganese Results

Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

SITE ID	DATE	Chloride Total (mg/l)	Chloride Field (mg/l)	Iron Dissolved (mg/l)	Manganese Dissolved (mg/l)
RW-04 (cont.)	1/29/2003	73	---	ND(0.05)	0.24
	5/13/2003	ND(1)	---	ND(0.05)	2.6
	12/15/2003	15.3	---	ND(0.100)	119
	4/27/2004	4.03	---	ND(0.100)	11.5
	4/29/2005	5.83	---	---	---
	3/31/2006	66.5	---	---	---
RW-05	6/3/2002	---	19.6	---	---
	6/3/2002	---	---	0.12	0.23
	1/29/2003	90	---	ND(0.05)	11
	5/13/2003	ND(1)	---	ND(0.05)	0.98
	12/15/2003	14.7	---	ND(0.100)	117
	5/2/2004	101	---	ND(0.100)	0.237
	4/27/2005	106	---	---	---
	4/3/2006	296	---	---	---
RW-17_MW-17	6/3/2002	---	69.1	---	---
	6/3/2002	---	---	0.57	0.11
	2/20/2003	180	---	ND(0.1)	41
	5/13/2003	3	---	ND(0.05)	66
	4/27/2004	20.7	---	ND(0.100)	9.82
	4/29/2005	243	---	---	---
	3/31/2006	30.1	---	---	---
RW-19	6/3/2002	---	9.7	---	---
	6/3/2002	---	---	0.03	0.06
	1/29/2003	140	---	ND(0.1)	720D
	5/15/2003	130	---	ND(0.05)	3600
	12/18/2003	9.9	---	0.304	0.64
	5/1/2004	598	---	ND(0.300)	1550
	5/13/2004	373	---	31	345
	4/29/2005	26.9	---	---	---
	3/28/2006	28.2	---	---	---
RW-20	6/3/2002	---	42.4	---	---
	6/3/2002	---	---	1.1	0.34
	1/29/2003	100	---	0.56	0.24
	5/15/2003	120	---	2.6	0.35
	12/18/2003	9	---	0.144	0.758
	5/1/2004	180	---	0.512	7.14
	4/29/2005	132	---	---	---
	3/29/2006	349	---	---	---
RW-21	6/3/2002	---	8.3	---	---
	6/3/2002	---	---	4.4	0.32
	1/29/2003	280	---	2.4	0.44
	5/15/2003	10	---	1.7	17
	12/18/2003	10.5	---	0.418	0.487
	5/1/2004	49.4	---	0.104	0.66
	4/29/2005	43.3	---	---	---
	3/29/2006	38.6	---	---	---

TABLE 5
Water Quality Data - Chloride, Dissolved Iron and Dissolved Manganese Results

Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

SITE ID	DATE	Chloride Total (mg/l)	Chloride Field (mg/l)	Iron Dissolved (mg/l)	Manganese Dissolved (mg/l)
RW-22	6/3/2002	---	18.6	---	---
	6/3/2002	---	---	1.4	0.038
	1/23/2003	23	---	ND(0.05)	ND(0.005)
	5/13/2003	10	---	ND(0.05)	ND(0.005)
	12/17/2003	12.2	---	ND(0.100)	ND(0.0100)
	5/1/2004	14.8	---	ND(0.100)	0.0277
	4/28/2005	14.9	---	---	---
	3/27/2006	17.1	---	---	---
STR-03	11/29/2006	---	---	1.88	1.23
	3/1/2007	---	---	5.15	1.11
	4/16/2007	461	---	1.82	0.817
	11/16/2007	9.85	---	0.371	0.0596
	1/23/2008	1130	---	8.87	6.07
	4/21/2008	900	---	0.324	0.137
	7/29/2008	1170	---	2.45	0.732
	10/22/2008	1340	---	31.6	13.6
	1/13/2009	1790	---	1.4	0.58
	4/9/2009	1320	---	3.5	2.6
STRHA-02	2/1/2007	---	---	---	1.36
	1/29/2003	---	---	---	1.6
	5/15/2003	---	---	---	3.1
	12/22/2003	---	---	---	2.28
	4/27/2004	---	---	11.4	1.9
	12/30/2004	---	---	---	3.04
	4/29/2005	---	---	18.4	2.98
	1/4/2006	---	---	---	3.31
	4/3/2006	---	---	---	4.8
	2/1/2007	---	---	---	1.26
STRM-A-SCDS	9/15/2004	161	---	2.07	0.924
	1/3/2005	187	---	1.46	0.326
	5/19/2005	124	---	2.14	0.536
	1/6/2006	178	---	1.7	0.516
	3/30/2006	148	---	1.18	0.732
	4/12/2007	124	---	1.48	0.465
STRMH-02	1/29/2003	---	---	---	1.7
	5/15/2003	---	---	---	3.1
	5/4/2004	---	---	10	1.76
	1/4/2005	---	---	---	1.32
	4/29/2005	---	---	17.9	2.9
	1/4/2006	---	---	---	0.0616
	4/3/2006	---	---	---	4.98
	4/15/2007	---	---	---	1.28
STRMH-03	4/15/2007	---	---	---	1.29

TABLE 5

Water Quality Data - Chloride, Dissolved Iron and Dissolved Manganese Results

Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

SITE ID	DATE	Chloride Total (mg/l)	Chloride Field (mg/l)	Iron Dissolved (mg/l)	Manganese Dissolved (mg/l)
UNNAMED_STREAM	7/2/2003	---	---	---	12
	12/23/2003	---	---	48.9	9.48
	5/4/2004	---	---	0.275	0.192
	12/29/2004	---	---	13.6	9.25
	5/3/2005	---	---	---	9.12
	1/3/2006	---	---	---	9.96
	4/3/2006	---	---	---	9.05
	10/11/2006	---	---	0.237	0.0536
	11/29/2006	---	---	46.1	7.31
	2/1/2007	---	---	---	7.48
	3/1/2007	---	---	0.186	---
	4/16/2007	380	---	4.92	1.63
	11/16/2007	21.7	---	1.42	0.197
	1/23/2008	861	---	22.6	5.22
	4/21/2008	1710	---	64.6	10.3
	7/29/2008	1640	---	78.6	8.54
	10/21/2008	175	---	76.4	11
	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 collected

ND(0.05) = non detect (method detection limit)

25> = Result higher than the test kit range

N = matrix interference

Dup. = Duplicate sample

NA = Not Applicable, or sample not collected at a discrete well depth

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

D = Result reported and from a dilute sample

TABLE 6
Water Quality Data
BIOREMEDIATION PARAMETERS

Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

CONSTITUENT	UNITS	AP-13-DO 7/26/2007	AP-13-DO 7/31/2007	AP-13-DO 11/12/2007	AP-13-DO 1/23/2008	AP-13-DO 4/21/2008	AP-13-DO 7/28/2008	AP-13-DO 10/22/2008	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
Dissolved Metals																	
Iron	mg/L	0.142	---	217	9.41	1.5	11.9	0.124	0.26	0.2	---	---	---	---	---	---	---
Manganese	mg/L	1.5	---	291	76.3	33.6	5.91	5.98	9.27	13	---	---	---	---	---	---	---
Metabolic Acids																	
Acetic acid	mg/L	120	---	1500	2400	2500	2400	2200	78	180	460	630J	980	2500	1600	2700	2500
Lactic Acid	mg/L	<10	---	200000D	61000D	36000	15000	17000	<1.0	<1.0	<5.0	<10J	360	16000	930	35000	6300
n-Butanoic acid	mg/L	<20	---	<200	<200	<400	<200	<200	<2.0	6.3	<10	<20J	18	<200	68	<400	<100
Propionic acid	mg/L	170	---	<100	<100	<200	<100	<100	26	48	74	85J	150	220	93	270	210
Pyruvic Acid	mg/L	<5.0	---	470	250	140	75	120	<0.50	<0.50	<2.5	<5.0J	14	<50	7.7	<100	<25
Miscellaneous Analyses																	
Methane	ug/L	<2.0	---	<2.0	11	4.7	5.2	7	<2.0	2.8	83	18J	6.6	5.4	2.7	8.6	3.6
Ethane	ug/L	<1.0	---	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0J	<1.0	<1.0	<1.0	1.5	<1.0
Ethene	ug/L	<1.0	---	<1.0	<1.0	<1.0	1.8	<1.0	<1.0	<1.0	17	5.6J	17	21	5	71	35
Chloride	mg/L	4970	---	790	1980	2350	2290	1480	150	273	---	---	---	---	---	---	---
TOC	mg/L	91.6	---	56300	24400	12500	6500	5890	65.1	106	---	---	----	---	---	---	---
Dehalococcoides sp.	cells/ml	1.0×10^4	---	2.2×10^2	2.4×10^4	---	1.0×10^4	3.8×10^5	7.4×10^3	$<7.7 \times 10^1$	1.2×10^6	4.4×10^4	1.1×10^5	4.0×10^4	1.2×10^4	6.3×10^1J	7.1×10^2
Dehalococcoides sp.	(1)	---	---	---	---	Neg	---	---	---	---	---	---		---	---	---	---
Dehalococcoides sp.	(2)	---	3.56×10^1	---	---	---	---	---	---	---	---	---		---	---	---	---
Mn Degraders	(3)	---	4.3×10^1	---	---	---	---	---	---	---	---	---		---	---	---	---
Field Parameters																	
pH	--	---	---	9.11	7.00	9.21	8.67	8.93	8.15	8.83	---	7.81	7.19	7.28	7.17	---	---
ORP	mV	---	---	-94	109	-36.2	20.8	-82.5	-170	-153.5	---	-32	-71	-181.9	-354	---	---
Dissolved Oxygen	mg/L	---	---	0.17	0.73	0.14	0.32	0.41	0.32	0.44	---	0.39	0.22	0.79	0.43	---	---
Specific Conductivity	ms/cm	---	---	39.66	21.34	17.6	14.61	13	8.547	12.369	---	9.527	9.191	11.269	9.699	---	---

Notes: < = Less than detection limit
--- = Not Sampled
mg/L = Milligrams per liter
ug/L = Micrograms per liter
mV = Millivolt
ms/cm = Millisiemen per centimeter
TOC = total organic carbon
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J - Estimated concentration

TABLE 6
Water Quality Data
BIOREMEDIATION PARAMETERS

Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

CONSTITUENT	UNITS	AP-13-DO 1/17/2012	AP-23-DO 11/12/2007	AP-23-DO 1/23/2008	AP-23-DO 4/21/2008	AP-23-DO 7/28/2008	AP-23-DO 10/22/2008	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
Dissolved Metals																
Iron	mg/L	---	12.3	14.4	2.01	0.78	136	1.73	3.2	---	---	---	---	---	---	---
Manganese	mg/L	---	30.8	51.8	31.5	23.9	181	6.44	19	---	---	---	---	---	---	---
Metabolic Acids																
Acetic acid	mg/L	1300	470	1600D	390	28	560	220	290	28	320	260J	620	2800	2000	920
Lactic Acid	mg/L	740	20000D	340D	22	2.9	1700	6.1	33	5.7	15	<10J	<10	20000	11000	150
n-Butanoic acid	mg/L	<40	<100	390D	110	6.9	50	36	77	3.1	22	41J	240	<400	1200	140
Propionic acid	mg/L	41	890	3100D	750	35	1300	500	670D	41	770	620J	1100	5200	3100	1800
Pyruvic Acid	mg/L	<10	110	19	<5.0	<0.50	<5.0	<2.5	<0.50	<0.50	<2.5	<5.0J	<5.0	430	<50	19
Miscellaneous Analyses																
Methane	ug/L	3	5.4	6.4	2.7	2.4	4.5	3.9	36	27	14	19J	700D	200	240	340
Ethane	ug/L	<1.0	2.1	3.3	4.3	4.9	6.2	2.2	2.1	<2.0	<1.0	<1.0J	2.5	<10	<10	<10U
Ethene	ug/L	7.8	6.3	7	10	14	30	22	36	170	65	65J	310D	2500D	640	500
Chloride	mg/L	---	78	56.2	64.7	35.8	13.9	43.6	60.7	---	---	---	---	---	---	---
TOC	mg/L	---	8840	1.84	546	40	1250	324	417	---	---	---	---	---	---	---
Dehalococcoides sp.	cells/ml	$<2.8 \times 10^{1}$	5.4×10^{2}	1.9×10^{3}	---	6.1×10^{4}	4.6×10^{4}	3.1×10^{6}	4.5×10^{4}	3.5×10^{4}	1.0×10^{5}	3.6×10^{4}	7.1×10^{5}	6.0×10^{4}	3.7×10^{5}	2.1×10^{4}
Dehalococcoides sp.	(1)	---	---	---	Pos	---	---	---	---	---	---	---	---	---	---	---
Dehalococcoides sp.	(2)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Mn Degraders	(3)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Field Parameters																
pH	--	---	6.5	6.04	6.92	6.49	7.91	7.66	8.1	8.31	8.44	7.3	7.28	6.52	7.2	---
ORP	mV	---	-33	155	74.9	28.8	75.6	54.3	-36.3	-231	-390	-156	-200	-348.6	-360	---
Dissolved Oxygen	mg/L	---	0.27	4.70	0.49	0.82	0.21	0.92	0.65	0.2	0.16	0.43	0.21	0.21	0.35	---
Specific Conductivity	ms/cm	---	14.09	25.5	19.75	19.78	29.73	28.13	25.632	20.055	19.235	16.707	17.112	16.25	16.20	---

Notes: < = Less than detection limit
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TABLE 6
Water Quality Data
BIOREMEDIATION PARAMETERS

Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

CONSTITUENT	UNITS	AP-23-DO 10/25/2011	AP-23-DO 1/17/2012	AP-24-DO 10/11/2006	AP-24-DO 1/30/2007	AP-24-DO 4/10/2007	AP-24-DO 7/20/2007	AP-24-DO 7/31/2007	AP-24-DO 8/9/2007	AP-24-DO 11/12/2007	AP-24-DO 1/23/2008	AP-24-DO 4/21/2008	AP-24-DO 7/28/2008	AP-24-DO 10/22/2008	AP-24-DO 1/14/2009	AP-24-DO 4/2/2009	AP-24-DO 1/28/2010
Dissolved Metals																	
Iron	mg/L	---	---	4.79	28	0.346	---	---	<0.100	10.4	61.5	12.4	5.52	26.9	0.48	0.25	---
Manganese	mg/L	---	---	4430	104	3.17	---	---	16.6	33.7	143	48.9	28.4	59.5	7.46	11	---
Metabolic Acids																	
Acetic acid	mg/L	220	26	<5.0	4000	270	---	---	850N	460	2600	1800	2000	130	440	780D	73
Lactic Acid	mg/L	5.5	6	<5.0	49000	1600	---	---	<10	20000D	54000D	23000	17000	850	<10	4600D	4.8
n-Butanoic acid	mg/L	25	<2.0	<10	<800	<100	---	---	110	<100	<200	<500	<200	<10	53	130	11
Propionic acid	mg/L	390	42	<5.0	<400	<50	---	---	340	630	<100	<250	<100	120	930	1200D	48
Pyruvic Acid	mg/L	<1.0	<0.50	<2.5	330	<25	---	---	<5.0	<25	150	<130	<50	2.6	<5.0	2.5	<0.50
Miscellaneous Analyses																	
Methane	ug/L	120	26	<2.0	5.9	5.9	---	---	<2.0	<2.0	9.5	9.5	13	34	59	110	<4.0
Ethane	ug/L	<2.0	<2.0	<1.0	<1.0	<1.0	---	---	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<2.0
Ethene	ug/L	65	230D	<1.0	<1.0	<1.0	---	---	<1.0	<1.0	<1.0	<1.0	1	1	1.6	3.9	160
Chloride	mg/L	---	---	---	778	550	---	---	267	93.2	375	611	411	111	117	283	---
TOC	mg/L	---	---	5.77	17800	2880	---	---	566	5770	15600	7740	6410	302	629	1950	---
Dehalococcoides sp.	cells/ml	2.7×10^{6}	5.5×10^{5}	$<3.3 \times 10^{2}$	1.9×10^{5}	3.4×10^{4}	$<1.0 \times 10^{1}$	---	---	6.4×10^{2}	$<1.0 \times 10^{1}$	---	8.7×10^{3}	3.7×10^{6}	3.2×10^{4}	6.2×10^{3}	5.1×10^{4}
Dehalococcoides sp.	(1)	---	---	---	---	---	---	---	---	---	---	Pos	---	---	---	---	---
Dehalococcoides sp.	(2)	---	---	---	---	---	---	6.26×10^{3}	---	---	---	---	---	---	---	---	---
Mn Degraders	(3)	---	---	---	---	---	---	1.10×10^{6}	---	---	---	---	---	---	---	---	---
Field Parameters																	
pH	--	---	---	---	7.83	8.93	7.9	---	7.85	6.3	6.63	8.05	7.91	7.54	7.83	7.74	8.38
ORP	mV	---	---	---	98.7	-153.3	103	---	-100	-37	130	-72.2	41.6	-218.8	-238.3	-92.7	-223
Dissolved Oxygen	mg/L	---	---	---	0.57	0.84	0.64	---	0.77	0.37	0.46	0.2	0.57	0.22	0.28	0.69	0.32
Specific Conductivity	ms/cm	---	---	---	22.54	13.88	7.518	---	8.662	9.161	18.85	12.68	12.49	19.54	14.33	8.644	3.816

Notes:
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TABLE 6
Water Quality Data
BIOREMEDIATION PARAMETERS

Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

CONSTITUENT	UNITS	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-25-DO 10/11/2006	AP-25-DO 1/30/2007	AP-25-DO 4/10/2007	AP-25-DO 7/20/2007	AP-25-DO 7/31/2007	AP-25-DO 8/9/2007	AP-25-DO 11/12/2007	AP-25-DO 1/23/2008	AP-25-DO 4/21/2008
Dissolved Metals																	
Iron	mg/L	---	---	---	---	---	---	---	1.98	15.2	<0.100	---	---	<0.100	<0.100	0.284	0.804
Manganese	mg/L	---	---	---	---	---	---	---	1300	42.8	2.74	---	---	0.0692	0.146	0.633	2.12
Metabolic Acids																	
Acetic acid	mg/L	260	190J	480	2500	480	280	780	100	<200	100	---	---	<1.0	1.7	75	240
Lactic Acid	mg/L	340	<1.0J	<5.0	11000	33	20000	750	<5.0	27000	34	---	---	<1.0	1	120	<2.0
n-Butanoic acid	mg/L	21	16J	15	250	120	<400U	710	<10	<400	6.3	---	---	<2.0	<2.0	2.4	5.9
Propionic acid	mg/L	330	200J	340	4900	740	<200U	1600	<5.0	<200	170	---	---	<1.0	3.4	67	300
Pyruvic Acid	mg/L	<1.0	<0.50J	<2.5	89	<5.0	<100U	6.5	<2.5	<100	<0.50	---	---	<0.50	<0.50	<0.50	<1.0
Miscellaneous Analyses																	
Methane	ug/L	<20	<20J	<50	<100	<100	<40U	<8.0	<2.0	11	<2.0	---	---	<2.0	<2.0	6	<100
Ethane	ug/L	<10	<10J	<25	<50	<50	<20U	<4.0	<1.0	<1.0	<1.0	---	---	<1.0	<1.0	<2.5	<50
Ethene	ug/L	680	1900DJ	4600D	4500	2600	1400	300	<1.0	4.4	1	---	---	<1.0	2.6	200	2400
Chloride	mg/L	---	---	---	---	---	---	---	---	170	15.6	---	---	<2.00	3.61	19.7	96.8
TOC	mg/L	---	---	---	---	---	---	---	46.5	7470	137	---	---	6.08	5.15	100	105
Dehalococcoides sp.	cells/ml	2.1×10^6	8.8×10^4	1.8×10^5	1.5×10^5	1.8×10^6	8.0×10^3	3.4×10^4	$<3.3 \times 10^2$	8.0×10^5	3.7×10^3	6.0×10^4	---	---	1.5×10^3	1.9×10^3	---
Dehalococcoides sp.	(1)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	Neg
Dehalococcoides sp.	(2)	---	---	---	---	---	---	---	---	---	---	---	6.57×10^6	---	---	---	---
Mn Degraders	(3)	---	---	---	---	---	---	---	---	---	---	---	7.40×10^5	---	---	---	---
Field Parameters																	
pH	--	8.05	7.29	7.1	6.35	7.27	---	---	---	7.7	6.74	6.99	---	7.16	7.47	6.64	7.19
ORP	mV	-195	-33	-191	-133.1	-360	---	---	---	-57.4	-145.4	-140	---	-105	-90	-92	-116.8
Dissolved Oxygen	mg/L	0.49	0.41	0.39	0.39	0.59	---	---	---	0.92	0.78	0.85	---	0.45	0.28	0.24	0.16
Specific Conductivity	ms/cm	3.262	3.473	3.415	12.112	3.542	---	---	---	18.85	1.901	2.218	---	1.984	0.134	0.430	1.185

Notes: < = Less than detection limit
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TABLE 6
Water Quality Data
BIOREMEDIATION PARAMETERS

Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

CONSTITUENT	UNITS	AP-25-DO 7/28/2008	AP-25-DO 10/22/2008	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	BW-01 11/29/2006	BW-01 4/10/2007	BW-01 7/19/2007	BW-01 11/12/2007	BW-01 1/24/2008	BW-01 4/21/2008	BW-01 7/28/2008	BW-01 10/22/2008	BW-01 1/13/2009
Dissolved Metals																	
Iron	mg/L	<0.100	0.589	0.28	<0.10	---	---	---	<0.100	36.5	32	7.57	24.5	12.5	<0.100	2.86	2.1
Manganese	mg/L	<0.0100	1.06	0.243	0.11	---	---	---	0.0282	10.7	22.4	5.71	4.47	2.82	1.04	3.82	2.27
Metabolic Acids																	
Acetic acid	mg/L	2.2	200	24	59	<1.0	8.2	---	<1.0	130	780	6	13	<1.0	<1.0	<1.0	<1.0
Lactic Acid	mg/L	<1.0	19	<1.0	1.9	<1.0	<1.0	---	<1.0	<2.0	<10	<1.0	1.5	<1.0	<1.0	<1.0	<1.0
n-Butanoic acid	mg/L	<2.0	4.5	<2.0	<2.0	<2.0	<2.0	---	<2.0	28	250	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Propionic acid	mg/L	<1.0	160	5.8	15	<1.0	<1.0	---	<1.0	210	530	1.4	3.3	<1.0	<1.0	<1.0	<1.0
Pyruvic Acid	mg/L	<0.50	0.66	<0.50	<0.50	<0.50	<0.50	---	<0.50	<1.0	<5.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Miscellaneous Analyses																	
Methane	ug/L	<100	30	<10	57	16	130D	---	16	590	8100	1600	2300	2400	51	1200D	1700
Ethane	ug/L	<50	<1.0	<5.0	<20	<1.0	<1.0	---	<1.0	<10	<100	<20	<40	<50	<1.0	<1.0	<20U
Ethene	ug/L	4500	6300D	440	1100	18	320D	---	<1.0	<10	<100	<20	<40	<50	<1.0	<1.0	<20U
Chloride	mg/L	<2.00	150	34.9	61.1	---	---	---	---	96.1	83.4	18	97.1	73	48.1	35.5	86.1
TOC	mg/L	4.57	164	19.3	32.2	---	---	---	1.4	205	1210	7.75	11.9	4.99	3.04	3.87	2.4
Dehalococcoides sp.	cells/ml	$<2.5x10^{1}$	$<5.4x10^{1}$	9.5×10^{5}	2.3×10^{4}	2.6×10^{4}	1.1×10^{4}	---	---	$<8.3 \times 10^{1}$	$<3.3 \times 10^{3}$D	1.4×10^{3}	$<1.0 \times 10^{1}$	3.2×10^{3}	$<2.2 \times 10^{1}$	$<2.7x10^{1}$	5.7×10^{2}
Dehalococcoides sp.	(1)	---	---	---	---	---	---	---	---	---	---	---	---	Neg	---	---	---
Dehalococcoides sp.	(2)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Mn Degraders	(3)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Field Parameters																	
pH	--	6.93	7.12	7.03	8.17	8.04	7.62	10.02	5.72	6.89	7.72	6.76	5.92	---	6.11	6.5	6.15
ORP	mV	-88.9	-151.2	-110.3	-133.5	-165	-175.9	-351	179.6	-90.3	-168.2	-110	-90	---	-58.5	-57.9	-45.5
Dissolved Oxygen	mg/L	0.3	0.3	0.2	0.22	0.13	0.38	0.8	2.05	0.92	0.5	0.02	0.80	---	0.21	0.37	0.29
Specific Conductivity	ms/cm	1.052	1.891	0.357	0.495	0.185	0.271	0.116	0.163	0.853	2.347	0.373	0.500	---	0.231	0.324	0.348

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TABLE 6
Water Quality Data
BIOREMEDIATION PARAMETERS

Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

CONSTITUENT	UNITS	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	BW-01 10/28/2011	BW-02 10/11/2006	BW-02 1/30/2007	BW-02 4/10/2007	BW-02 7/19/2007	BW-02 11/12/2007	BW-02 1/24/2008	BW-02 4/21/2008	BW-02 7/28/2008	BW-02 10/22/2008	BW-02 1/13/2009
Dissolved Metals																	
Iron	mg/L	3.8	---	---	---	---	---	0.123	107	61.1	14.8	19	25	16.5	1.28	1.45	8.16
Manganese	mg/L	3.2	---	---	---	---	---	35.1	50.8	17.1	8.14	7	3.49	4.56	1.54	3.42	2.32
Metabolic Acids																	
Acetic acid	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	---	<1.0	570	98	220	61	21	<1.0	<1.0	<1.0	<1.0
Lactic Acid	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	---	<1.0	840	<1.0	<2.0	<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	21	30	<4.0	<2.0	2.3	<2.0	<2.0	<2.0	<2.0
Propionic acid	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	---	<1.0	990	170	24	18	15	<1.0	<1.0	<1.0	<1.0
Pyruvic Acid	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	---	<0.50	7.7	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Miscellaneous Analyses																	
Methane	ug/L	260	170	77	54	1300	---	8.6	1200	780	5000	2300	1600	5100	140	1700D	1900
Ethane	ug/L	<5.0	<2.0	<1.0	<1.0	<25	---	<1.0	<20	<10	<100	<40	<20	<100	<2.0	<1.0	<20
Ethene	ug/L	<5.0	<2.0	<1.0	<1.0	<25	---	<1.0	<20	<10	<100	<40	<20	<100	<2.0	<1.0	<20
Chloride	mg/L	67.3	---	---	---	---	---	---	51.9	282	77.3	21	84.5	74	45	45.4	87.2
TOC	mg/L	1.6	---	---	---	---	---	6.96	876	187	151	36.8	12.8	4.12	3.46	5.04	2.3
Dehalococcoides sp.	cells/ml	1.2×10^4	3.2×10^3	1.1×10^4	7.8×10^3	8.6×10^3	---	$<2.5 \times 10^1$	3.7×10^3	$<6.3 \times 10^1$	---	1.2×10^3	$<1.0 \times 10^1$	---	1.8×10^4	$<3.6 \times 10^1$	1.4×10^3
Dehalococcoides sp.	(1)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Dehalococcoides sp.	(2)	---	---	---	---	---	---	---	---	---	---	---	---	Neg	---	---	---
Mn Degraders	(3)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Field Parameters																	
pH	--	6.46	6.01	6.21	---	---	6.81	7.06	6.69	7.01	7.04	6.97	5.70	6.46	6.14	6.58	6.12
ORP	mV	35.3	59	-0.8	---	---	-107	143.6	-164.9	-139.1	-198.5	-145	-50	11.4	-38.1	-91.8	-49.5
Dissolved Oxygen	mg/L	5.5	0.27	0.17	---	---	0.36	2.6	0.51	0.44	0.62	0.05	0.83	2.53	0.19	0.32	0.35
Specific Conductivity	ms/cm	0.174	0.216	0.253	---	---	0.588	0.786	1.828	0.97	1.405	0.553	0.444	0.219	0.184	0.482	0.361

Notes: < = Less than detection limit
--- = Not Sampled
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
N = Matrix interference
Field parameter results reported are from the closest date to the analytical sampling
Pos = results indicate active Dehalococcoides are present
Neg = results do not indicate active Dehalococcoides are present
(1) = results from RNA analysis
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* = Sample BW-03 collected on 1/28/2010 but was broken in transit, not analyzed.
J - Estimated concentration

TABLE 6
Water Quality Data
BIOREMEDIATION PARAMETERS

Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

CONSTITUENT	UNITS	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-02 10/28/2011	BW-03 10/11/2006	BW-03 1/30/2007	BW-03 4/10/2007	BW-03 7/19/2007	BW-03 11/12/2007	BW-03 1/24/2008	BW-03 4/21/2008	BW-03 7/28/2008	BW-03 10/22/2008	BW-03 1/13/2009
Dissolved Metals																	
Iron	mg/L	6.4	---	---	---	---	---	<0.100	74.1	64.5	24.5	20.3	37.4	28.7	1.67	17.9	12.6
Manganese	mg/L	2.4	---	---	---	---	---	1.86	67.4	14.8	12.5	9.02	7.44	6.25	3.84	5.33	5.64
Metabolic Acids																	
Acetic acid	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	---	<1.0	880	67	3.3	82	37	12	<1.0	<1.0	<1.0
Lactic Acid	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	---	<1.0	2600	<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	<100	29	<2.0	9.6	<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	1100	97	<1.0	74	13	11	<1.0	<1.0	<1.0
Pyruvic Acid	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	---	<0.50	<25	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Miscellaneous Analyses																	
Methane	ug/L	1300	71	100	170	1400	---	29	2600	1000	950	3500	4100	5200	84	2700D	1900
Ethane	ug/L	<25	<1.0	<1.0	<2.0	<25	---	<1.0	<50	<20	<10	<50	<50	<100	<1.0	1.1	<20
Ethene	ug/L	<25	1.9	<1.0	<2.0	<25	---	<1.0	<50	<20	47	<50	<50	<100	<1.0	9.5	<20
Chloride	mg/L	97.8	---	---	---	---	---	---	67.2	248	57.3	31.7	106	55.9	37.6	50.1	80.8
TOC	mg/L	3.8	---	---	---	---	---	4.24	1620	111	8.16	86.2	24.1	14.9	4.77	5.85	3.8
Dehalococcoides sp.	cells/ml	4.6×10^3	9.5×10^3	1.6×10^4	7.6×10^3	$<1.0 \times 10^1$	---	$<3.3 \times 10^1$	8.0×10^3	$<4.0 \times 10^1$	$<2.5 \times 10^1$D	4.0×10^3	1.6×10^2	---	$<2.6 \times 10^1$	$<4.0 \times 10^1$	2.0×10^3
Dehalococcoides sp.	(1)	---	---	---	---	---	---	---	---	---	---	---	---	Neg	---	---	---
Dehalococcoides sp.	(2)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Mn Degraders	(3)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Field Parameters																	
pH	--	6.46	6.11	6.25	---	---	6.12	6.76	6.75	7.04	7.13	6.94	5.77	7.16	6.37	6.7	6.43
ORP	mV	11.4	4	13.9	---	---	6.8	228.1	-122.3	-188.7	-166.9	-150	-109	-131.6	-98.3	-101.6	-102.1
Dissolved Oxygen	mg/L	2.53	0.48	0.22	---	---	0.63	5.65	0.25	0.13	0.58	0.04	0.35	0.18	0.21	0.33	0.62
Specific Conductivity	ms/cm	0.219	0.192	0.213	---	---	0.314	0.411	2.787	0.796	0.598	1.004	0.547	0.27	0.312	0.558	0.398

Notes: < = Less than detection limit
--- = Not Sampled
mg/L = Milligrams per liter
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TOC = total organic carbon
cells/ml = cells per milliliter
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Field parameter results reported are from the closest date to the analytical sampling
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(2) = results from biotraps analysis by Microbial Insights (cells/grams of beads)
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TABLE 6
Water Quality Data
BIOREMEDIATION PARAMETERS

Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

CONSTITUENT	UNITS	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-03 10/28/2011	BW-04 10/11/2006	BW-04 1/30/2007	BW-04 4/10/2007	BW-04 7/19/2007	BW-04 11/12/2007	BW-04 1/22/2008	BW-04 4/21/2008	BW-04 7/28/2008	BW-04 10/22/2008	BW-04 1/13/2009
Dissolved Metals																	
Iron	mg/L	18	---	---	---	---	---	<0.100	25.2	17.2	26	49.6	11.9	9.61	7.42	7.75	9.46
Manganese	mg/L	8	---	---	---	---	---	0.0434	27.9	6.49	8.3	11	25.3	2.96	3.18	2.15	3.82
Metabolic Acids																	
Acetic acid	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	---	<1.0	530	87	1.2	110	86	16	<1.0	7.6	1.9
Lactic Acid	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	---	<1.0	<10	<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	170	35	<2.0	20	5	<2.0	<2.0	<2.0	<2.0
Propionic acid	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	---	<1.0	730	73	<1.0	150	55	<1.0	<1.0	7.3	<1.0
Pyruvic Acid	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	---	<0.50	<5.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Miscellaneous Analyses																	
Methane	ug/L	2300	1300	45	800	2000	---	24	280	300	300	510	1200	5000	710	490D	4800
Ethane	ug/L	<40	<20	<1.0	<10	<20	---	<1.0	<5.0	<5.0	<5.0	<10	<20	<100	<8.0	9.7	<50
Ethene	ug/L	<40	<20	<1.0	<10	<20	---	<1.0	130	220	450	850	<20	110	36	440D	99
Chloride	mg/L	91.3	---	---	---	---	---	---	88.4	84.8	63	247	173	128	38	58.2	96.5
TOC	mg/L	2.8	---	---	---	---	---	2.46	729	107	6.05	118	72.9	19.9	8.59	10.2	22.1
Dehalococcoides sp.	cells/ml	1.5×10^3	1.7×10^4	1.0×10^4	---*	$<2.9 \times 10^1$	---	$<1.2 \times 10^1$	2.6×10^4	1.5×10^4	2.6×10^3	3.7×10^2	3.6×10^2	---	5.8×10^4	7.4×10^4	6.2×10^4
Dehalococcoides sp.	(1)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Dehalococcoides sp.	(2)	---	---	---	---	---	---	---	---	---	---	---	---	Pos	---	---	---
Mn Degraders	(3)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Field Parameters																	
pH	--	6.67	6.19	6.43	---	---	6.19	6.81	7.26	7.69	7.63	6.94	5.65	7.58	6.84	7.21	7.17
ORP	mV	-16.7	-84	-53.7	---	---	8.8	239.2	-161.3	-227.5	-207.5	-128	-123	-138.3	-121.8	-142.9	-154
Dissolved Oxygen	mg/L	1.27	0.25	0.12	---	---	0.39	2.55	0.6	0.14	0.4	0.03	0.27	0.32	0.4	0.35	0.39
Specific Conductivity	ms/cm	0.237	0.29	0.279	---	---	0.268	0.799	1.685	0.589	0.517	1.401	1.283	0.638	0.742	0.817	1.134

Notes: < = Less than detection limit
--- = Not Sampled
mg/L = Milligrams per liter
ug/L = Micrograms per liter
mV = Millivolt
ms/cm = Millisiemen per centimeter
TOC = total organic carbon
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* = Sample BW-03 collected on 1/28/2010 but was broken in transit, not analyzed.
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TABLE 6
Water Quality Data
BIOREMEDIATION PARAMETERS

Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

CONSTITUENT	UNITS	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	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-05 10/11/2006	BW-05 1/30/2007	BW-05 4/10/2007	BW-05 7/19/2007
Dissolved Metals																	
Iron	mg/L	10	---	---	---	---	---	---	---	---	---	---	---	<0.100	39.8	8	3.21
Manganese	mg/L	3.2	---	---	---	---	---	---	---	---	---	---	---	<0.0100	63	4.78	2.05
Metabolic Acids																	
Acetic acid	mg/L	<1.0	86	<1.0	<1.0	2	280J	3.9	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	910	9	9.3
Lactic Acid	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<10J	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<20	<1.0	<1.0
n-Butanoic acid	mg/L	<2.0	---	<2.0	<2.0	<2.0	35J	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	82	<2.0	<2.0
Propionic acid	mg/L	<1.0	110	<1.0	<1.0	<1.0	660J	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1600	5.1	2.3
Pyruvic Acid	mg/L	<0.50	<0.50	<0.50	<0.50	0.58	<5.0J	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<10	<0.50	<0.50
Miscellaneous Analyses																	
Methane	ug/L	9200	2700	2300	37	1800	2200J	3200D	2000	1100	590	240	17	33	180	95	360
Ethane	ug/L	<100	<50	130	<1.0	<25	68J	99	110	40	62	19	<1.0	<1.0	<2.0	<5.0	<10
Ethene	ug/L	1300	1100	550	26	830	950J	66	110	370	330	130	5.1	<1.0	80	410	650
Chloride	mg/L	95.1	---	---	---	---	---	---	---	---	---	---	---	---	82.5	86.4	83.4
TOC	mg/L	15.2	---	---	---	---	---	---	---	---	---	---	---	2.49	1120	12.4	10.2
Dehalococcoides sp.	cells/ml	$<2.2 \times 10^{1}$	2.4×10^{6}	7.6×10^{4}	1.4×10^{4}	$<2.9 \times 10^{1}$	2.5×10^{5}	$<8.0 \times 10^{2}$	2.3×10^{3}	$<6.3 \times 10^{1}$	1.4×10^{2}	5.5×10^{4}	1.8×10^{4}	$<1.2 \times 10^{1}$	1.2×10^{4}	1.5×10^{4}	1.9×10^{4}
Dehalococcoides sp.	(1)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Dehalococcoides sp.	(2)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Mn Degraders	(3)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Field Parameters																	
pH	--	7.38	6.81	6.9	---	---	---	---	---	7.52	7.17	7.1	---	6.59	6.80	8.02	7.56
ORP	mV	-140.4	-138	-116.7	---	---	---	---	---	-367	-179.5	-141	---	250.4	-92.3	-216.8	-181.1
Dissolved Oxygen	mg/L	0.36	0.13	0.2	---	---	---	---	---	0.24	0.24	0.43	---	2.28	0.53	0.16	0.43
Specific Conductivity	ms/cm	0.821	1.186	0.701	---	---	---		---	0.69	0.484	0.567	---	0.802	4.144	0.634	0.580

Notes: < = Less than detection limit
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mV = Millivolt
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N = Matrix interference
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Pos = results indicate active Dehalococcoides are present
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J - Estimated concentration

TABLE 6
Water Quality Data
BIOREMEDIATION PARAMETERS

Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

CONSTITUENT	UNITS	BW-05 11/12/2007	BW-05 1/22/2008	BW-05 4/21/2008	BW-05 7/28/2008	BW-05 10/22/2008	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	BW-05 10/12/2010	BW-05 1/4/2011	BW-05 4/5/2011	BW-05 7/28/2011
Dissolved Metals																	
Iron	mg/L	9.6	13.5	5.68	5.45	10.5	20.1	27	---	---	---	---	---	---	---	---	---
Manganese	mg/L	3.61	3.49	2.28	2.28	1.75	4.7	4.9	---	---	---	---	---	---	---	---	---
Metabolic Acids																	
Acetic acid	mg/L	73	4	31	20	43	81	41	44	1.7	<1.0	43	56J	32	<1.0	20	89
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	<1.0J	<1.0	<1.0	<1.0	<1.0
n-Butanoic acid	mg/L	4.2	<2.0	<2.0	<2.0	<2.0	2.1	<2.0	---	<2.0	<2.0	<2.0	4.8J	<2.0	<2.0	<2.0	6.6
Propionic acid	mg/L	160	<1.0U	5.2	<1.0	40	140	43	34	<1.0	<1.0	43	88J	1.5	<1.0	<1.0	120
Pyruvic Acid	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.5	<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	300D	130	49	290	430D	<100	210	340	260	490	<100	1600J	1400	8900D	200	970
Ethane	ug/L	2	5.4	3.2	4.4	40	<50	<100	<50	23	<40	<50	<25J	130	1000	<50	31
Ethene	ug/L	470D	140	120	210	1800D	4400	5100	3600	1900	2300	4700	1900J	700	59	3700	1500
Chloride	mg/L	118	140	115	81.1	77.1	205	130	---	---	---	---	---	---	---	---	---
TOC	mg/L	103	6.23	26	10.5	44.7	106	42.1	---	---	---	---	---	---	---	---	---
Dehalococcoides sp.	cells/ml	$1.9x10^3$	$1.1x10^3$	---	8.7×10^4	2.8×10^5	3.3×10^4	1.8×10^4	1.2×10^5	4.5×10^4	3.4×10^4	1.1×10^6	2.4×10^4	8.7×10^3	6.5×10^2	5.9×10^4	5.5×10^2
Dehalococcoides sp.	(1)	---	---	Neg	---	---	---	---	---	---	---	---	---	---	---	---	---
Dehalococcoides sp.	(2)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Mn Degraders	(3)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Field Parameters																	
pH	--	7.05	5.84	7.55	6.91	7.34	7.2	7.41	7.18	7.22	---	---	---	---	---	7.67	7.34
ORP	mV	-147	-185	-175.8	-104.1	-170.6	-171.3	-165.6	-185	-138.8	---	---	---	---	---	-366	-170.8
Dissolved Oxygen	mg/L	0.05	0.83	0.35	0.62	0.82	1.11	0.27	0.34	0.43	---	---	---	---	---	0.34	0.43
Specific Conductivity	ms/cm	1.534	0.773	0.534	0.47	0.601	0.952	0.862	0.692	0.571	---	---	---	---	---	0.617	0.816

Notes: < = Less than detection limit
--- = Not Sampled
mg/L = Milligrams per liter
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mV = Millivolt
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TOC = total organic carbon
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* = Sample BW-03 collected on 1/28/2010 but was broken in transit, not analyzed.
J - Estimated concentration

TABLE 6
Water Quality Data
BIOREMEDIATION PARAMETERS

Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

CONSTITUENT	UNITS	BW-05 10/25/2011	BW-05 1/18/2012	BW-06 7/28/2011	BW-06 10/25/2011	BW-06 1/18/2012	BW-08 11/12/2007	BW-08 1/22/2008	BW-08 4/21/2008	BW-08 7/28/2008	BW-08 10/22/2008	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
Dissolved Metals																
Iron	mg/L	---	---	---	---	---	43.5	43	26	21.8	24.5	18.5	27	---	---	---
Manganese	mg/L	---	---	---	---	---	13.2	13.5	9.56	9.42	1.75	5.26	7.9	---	---	---
Metabolic Acids																
Acetic acid	mg/L	53	30	180	1.5	110	50	12	<1.0	20	59	7	39	160	57	<1.0
Lactic Acid	mg/L	<1.0	<1.0	<2.0	<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	8.7	<2.0	2.6	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	---	<2.0	<2.0
Propionic acid	mg/L	20	<1.0	300	<1.0	58	38	<1.0U	<1.0	<1.0	68	2.5	26	140	1.9	<1.0
Pyruvic Acid	mg/L	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Miscellaneous Analyses																
Methane	ug/L	110	710	210D	51	270	240	450	190	120	200D	220	350	520	1000	81
Ethane	ug/L	<25	<25	<1.0	<5.0	<5.0	<5.0	48	3.2	<20	<1.0	<20	<100	<100	<100	12
Ethene	ug/L	1700	4000D	2800D	380	3900D	360	67	120	1200	2600D	1500	7300	6900	5900	280
Chloride	mg/L	---	---	---	---		252	186	164	131	148	124	104	---	---	---
TOC	mg/L	---	---	---	---	---	55.6	12.6	3.46	12.2	63.4	10.1	34.4	---	---	---
Dehalococcoides sp.	cells/ml	1.9×10^5	1.2×10^4	9.9×10^3	2.5×10^4	3.1×10^4	2.8×10^3	1.6×10^3	---	$<2.1 \times 10^1$	2.9×10^6	4.5×10^2	1.3×10^3	1.4×10^5	5.6×10^5	4.8×10^4
Dehalococcoides sp.	(1)	---	---	---	---	---	---	---	Pos	---	---	---	---	---	---	---
Dehalococcoides sp.	(2)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Mn Degraders	(3)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Field Parameters																
pH	--	7.36	---	7.15	7.29	---	7.12	5.51	7.42	6.69	7.37	6.95	7.36	7.1	7.39	---
ORP	mV	-145.5	---	-157	-87.9	---	-141	-115	-113.2	-127.8	-180.1	-160.2	-138.4	-162	-191.5	---
Dissolved Oxygen	mg/L	0.66	---	0.16	0.92	---	0.09	0.24	0.35	0.43	0.29	0.2	0.16	0.14	0.06	---
Specific Conductivity	ms/cm	0.64	---	1.174	0.508	---	1.228	0.953	0.567	0.687	0.906	0.659	0.647	1.122	0.96	---

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J - Estimated concentration

TABLE 6
Water Quality Data
BIOREMEDIATION PARAMETERS

Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

CONSTITUENT	UNITS	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-09 7/20/2007	BW-09 8/9/2007	BW-09 11/12/2007	BW-09 1/22/2008	BW-09 4/21/2008	BW-09 7/28/2008	BW-09 10/22/2008
Dissolved Metals																
Iron	mg/L	---	---	---	---	---	---	---	---	---	16.5	32.2	25.4	31.8	12.2	62.4
Manganese	mg/L	---	---	---	---	---	---	---	---	---	7.07	15.1	15.1	10.4	4.17	19.4
Metabolic Acids																
Acetic acid	mg/L	<1.0	130J	270	290	21	220	1.8	12	---	9.3	2.3	1.7	2.6	12	290
Lactic Acid	mg/L	<1.0	<2.0J	<2.0	<2.0	<1.0	<2.0	<1.0	<1.0	---	<1.0	4.9	<1.0	<1.0	<1.0	<5.0
n-Butanoic acid	mg/L	<2.0	22J	4.8	5.9	<2.0	11	<2.0	<2.0	---	<2.0	<2.0	<2.0	<2.0	<2.0	27
Propionic acid	mg/L	<1.0	260J	110	120	<1.0	250	<1.0	<1.0	---	8.9	<1.0	<1.0	<1.0	<1.0	490
Pyruvic Acid	mg/L	<0.50	<1.0J	<1.0	<1.0	<0.50	<1.0	<0.50	<0.50	---	<0.50	<0.50	<0.50	<0.50	<0.50	<2.5
Miscellaneous Analyses																
Methane	ug/L	210	1500DJ	4900D	16000D	8900	2800	250	1600D	---	150	370	220	280	190	420D
Ethane	ug/L	<10	29J	75	1700	650	<100	17	20	---	<10	<10	11	12	<20	<1.0
Ethene	ug/L	620	3800DJ	1300D	250	1900	4800	1000D	760	---	570	640	73	160	1500	2400D
Chloride	mg/L	---	---	---	---	---	---	---	---	---	122	472	132	177	128	141
TOC	mg/L	---	---	---	---	---	---	---	---	---	13.3	8.14	10.6	6.01	10.2	365
Dehalococcoides sp.	cells/ml	<2.6 X 10^{1}	2.3 X 10^{4}	1.0 x 10^{4}	<1.0 x 10^{1}U	3.7 x 10^{4}	2.1 x 10^{2}	4.6 x 10^{4}	2.9 x 10^{5}	<3.3x10^{3}D	<1.0x10^{1}	1.4x10^{3}	7.7x10^{2}	---	3.2x10^{5}	5.1x10^{5}
Dehalococcoides sp.	(1)	---	---	---	---	---	---	---	---	---	---	---	---	Neg	---	---
Dehalococcoides sp.	(2)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Mn Degraders	(3)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Field Parameters																
pH	--	---	---	---	---	7.5	7.21	7.43	---	7.20	7.11	---	5.81	7.5	6.93	7.17
ORP	mV	---	---	---	---	-373	-167.6	-116.7	---	-165	-138	---	-97	-214.3	-139.8	-176.1
Dissolved Oxygen	mg/L	---	---	---	---	0.22	0.36	0.82	---	0.27	0.09	---	0.34	0.15	0.27	0.25
Specific Conductivity	ms/cm	---	---	---	---	0.608	1.408	0.565	---	0.675	0.865	---	0.826	0.6	0.683	1.601

Notes: < = Less than detection limit
--- = Not Sampled
mg/L = Milligrams per liter
ug/L = Micrograms per liter
mV = Millivolt
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TOC = total organic carbon
cells/ml = cells per milliliter
D = Result reported is from a diluted sample
N = Matrix interference
Field parameter results reported are from the closest date to the analytical sampling
Pos = results indicate active Dehalococcoides are present
Neg = results do not indicate active Dehalococcoides are present
(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.
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TABLE 6
Water Quality Data
BIOREMEDIATION PARAMETERS

Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

CONSTITUENT	UNITS	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	MW-009 10/11/2006	MW-009 1/30/2007	MW-009 4/10/2007	MW-009 7/19/2007	MW-009 7/31/2007	MW-009 11/12/2007	MW-009 1/23/2008
Dissolved Metals																	
Iron	mg/L	19.6	41	---	---	---	---	---	---	---	21.3	96.2	128	86.6	---	1.01	18.8
Manganese	mg/L	7.09	11	---	---	---	---	---	---	---	20.9	5.34	13.1	7.91	---	0.16	1.67
Metabolic Acids																	
Acetic acid	mg/L	5.6	17	260	56	<1.0	<1.0	530	<1.0	32	<1.0	1600	700	220	---	16	290D
Lactic Acid	mg/L	<1.0	<1.0	<2.0	1.5	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	1300	<20	<2.0	---	<1.0	3.7
n-Butanoic acid	mg/L	<2.0	<2.0	---	<2.0	<2.0	<2.0	31	<2.0	<2.0	<2.0	410	540	77	---	<2.0	25
Propionic acid	mg/L	<1.0	2.2	250	<1.0	<1.0	<1.0	680	<1.0	4.1	<1.0	2800	1300	160	---	4.7	390D
Pyruvic Acid	mg/L	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50	<2.5	<0.50	<0.50	<0.50	<25	<10	<1.0	---	<0.50U	<0.50U
Miscellaneous Analyses																	
Methane	ug/L	650	660	2500	2800	370	640	7500D	7400	2200	100	34	160	890	---	31	1300
Ethane	ug/L	42	<20	74	140	57	<10	200	1500	160	2.1	1.1	<2.0	<25	---	<1.0	<20
Ethene	ug/L	1200	2000	4600	4600	830	900	3500D	280	1100	3.4	1.9	6	1500	---	18	160
Chloride	mg/L	131	174	---	---	---	---	---	---	---	---	676	774	659	---	68	164
TOC	mg/L	9.8	13.8	---	---	---	---	---	---	---	2.1	2600	1270	237	---	9.74	319
Dehalococcoides sp.	cells/ml	1.9×10^{3}	6.7×10^{3}	4.0×10^{4}	1.2×10^{5}	8.3×10^{4}	$<2.4 \times 10^{1}$	5.1×10^{1}	1.2×10^{3}	1.5×10^{5}	$<1.0 \times 10^{1}$	---	1.3×10^{4}	1.7×10^{4}	---	6.4×10^{2}	1.2×10^{3}
Dehalococcoides sp.	(1)	---	---	---		---	---	---	---	---	---	---	---	---	---	---	---
Dehalococcoides sp.	(2)	---	---	---		---	---	---	---	---	---	---	---	---	1.28×10^{6}	---	---
Mn Degraders	(3)	---	---	---		---	---	---	---	---	---	---	---	---	1.5×10^{4}	---	---
Field Parameters																	
pH	--	7.06	7.34	7.24	7.51	---	---	6.71	7.17	---	6.27	6.56	6.5	6.59	---	6.57	5.89
ORP	mV	-167.1	-106.5	-174	-197.9	---	---	-163.4	-113.6	---	-15.6	-192.3	-160.6	-145.6	---	-132	-145
Dissolved Oxygen	mg/L	0.22	0.2	0.11	0.14	---	---	0.62	0.55	---	6.34	6.2	0.77	0.85	---	0.18	0.59
Specific Conductivity	ms/cm	0.724	0.699	1.463	1.094	---	---	3.207	0.636	---	3.378	7.305	8.721	1.99	---	3.765	3.845

Notes: < = Less than detection limit
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mg/L = Milligrams per liter
ug/L = Micrograms per liter
mV = Millivolt
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TOC = total organic carbon
cells/ml = cells per milliliter
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TABLE 6
Water Quality Data
BIOREMEDIATION PARAMETERS

Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

CONSTITUENT	UNITS	MW-009 4/21/2008	MW-009 7/28/2008	MW-009 10/22/2008	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
Dissolved Metals																	
Iron	mg/L	90.7	80.4	62.9	59.5	70	---	---	---	---	---	---	---	---	---	---	---
Manganese	mg/L	6.29	6.74	7.31	6.98	6	---	---	---	---	---	---	---	---	---	---	---
Metabolic Acids																	
Acetic acid	mg/L	1200	580	5.9	210E	390	1000	500	250	600	320J	6.1	<1.0	6	<1.0U	<1.0	<1.0
Lactic Acid	mg/L	<10	<5.0	<1.0	<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
n-Butanoic acid	mg/L	77	24	<2.0	4.9	11	---	30	12	63	11J	<2.0	<2.0	<2.0	<2.0U	<2.0	<2.0
Propionic acid	mg/L	1200	440	1.6	7.7	17	2900	810	200	370	74J	<1.0	<1.0	1.6	<1.0U	<1.0	<1.0
Pyruvic Acid	mg/L	<5.0	<2.5	<0.50	<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
Miscellaneous Analyses																	
Methane	ug/L	10000	7100	16000D	15000	17000	9500	14000	16000	15000	15000J	12000	20000D	24000	15000	9500	17000D
Ethane	ug/L	<200	<100	890D	1300	1900	360	330	870	1200	1200J	930	1500	1900	1400	830	1900
Ethene	ug/L	2500	1800	2100D	<250	<250	1600	690	<250	1000	<250J	220	430	910	1400	1100	2000
Chloride	mg/L	330	656	742	822	711	---	---	---	---	---	---	---	---	---	---	---
TOC	mg/L	957	444	7.25	109	183	---	---	---	---	---	---	---	---	---	---	---
Dehalococcoides sp.	cells/ml	---	8.1×10^{3}	$<3.6 \times 10^{1}$	8.8×10^{3}	1.5×10^{4}	2.7×10^{5}	1.2×10^{5}	2.5×10^{4}	5.6×10^{5}	9.0×10^{3}	$<6.4 \times 10^{1}$	3.3×10^{3}	1.5×10^{5}	2.1×10^{2}	---	$<4.0 \times 10^{1}$
Dehalococcoides sp.	(1)	Pos	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Dehalococcoides sp.	(2)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Mn Degraders	(3)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Field Parameters																	
pH	--	6.76	6.46	6.79	6.83	6.87	6.51	6.51	---	---	---	---	---	7.17	7.07	7.05	
ORP	mV	-120.4	-140.5	-158.4	-168.2	-143.3	-116	-105.1	---	---	---	---	---	-368	-169.8	-128.4	
Dissolved Oxygen	mg/L	0.39	0.33	0.31	0.52	0.74	0.74	0.31	---	---	---	---	---	0.59	0.2	0.39	
Specific Conductivity	ms/cm	3.874	3.24	2.963	3.53	3.435	7.494	5.223	---	---	---		---	5.494	4.105	2.545	

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TABLE 6
Water Quality Data
BIOREMEDIATION PARAMETERS

Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

CONSTITUENT	UNITS	MW-030 11/16/2007	MW-030 4/25/2008	OB-09-BR 11/29/2006	OB-09-BR 1/31/2007	OB-09-BR 4/10/2007	OB-09-BR 7/19/2007	OB-09-BR 8/9/2007	OB-09-BR 11/12/2007	OB-09-BR 1/22/2008	OB-09-BR 4/21/2008	OB-09-BR 7/29/2008	OB-09-BR 10/22/2008	OB-09-BR 1/14/2009	OB-09-BR 4/9/2009	OB-09-BR 7/14/2009	OB-09-BR 10/28/2009
Dissolved Metals																	
Iron	mg/L	<0.100	---	6.18	0.715	2.26	0.399	0.407	0.792	1.1	0.394	1.97	2.84	1.5	1.5	---	---
Manganese	mg/L	0.914	---	0.262	0.189	0.216	0.0918	0.0965	0.157	0.157	0.0828	0.0971	0.17	0.166	0.24	---	---
Metabolic Acids																	
Acetic acid	mg/L	---	---	<1.0	---	1.2	<1.0	<1.0	<1.0	<1.0	<1.0	1.8	1	<1.0	<1.0	<1.0	1.1
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
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
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
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
Miscellaneous Analyses																	
Methane	ug/L	---	---	510	---	8.8	860	12	36	44	100	8.4	80	210	12000	170	500
Ethane	ug/L	---	---	<1.0	---	<1.0U	<10	<1.0	1.3	1.1	<2.0	<1.0	<1.0	<2.5	<200	<2.5	<5.0
Ethene	ug/L	---	---	91	---	1.1	640	2	4.9	5.2	8.5	<1.0	3.6	4.5	<200	6.4	8.4
Chloride	mg/L	628	171	---	6.77	19.3	12.4	14	18.3	17.8	15.2	3.33	10.8	16	20	---	---
TOC	mg/L	---	---	1.89	---	6.19	4.84	3.74	4.78	4.41	5.35	5.24	6.23	6.5	4.1	---	---
Dehalococcoides sp.	cells/ml	---	---	---	---	$<3.3x10^{1}$	$<2.0x10^{1}$D	$<1.0x10^{1}$	$3.9x10^{2}$	$<1.0x10^{1}$	---	$<3.3x10^{1}$	1.1×10^{4}	2.7×10^{4}	$<3.2 \times 10^{1}$	8.5×10^{3}	1.8×10^{4}
Dehalococcoides sp.	(1)	---	---	---	---	---	---	---	---	---	Pos	---	---	---	---	---	---
Dehalococcoides sp.	(2)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Mn Degraders	(3)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Field Parameters																	
pH	--	---	---	6.83	---	6.43	8.36	7.46	8.11	5.98	9.15	8.53	9.64	9.18	7.69	7.91	8.83
ORP	mV	---	---	-20.1	---	-300.2	-314.9	-170	-248	-169	-275.8	96.2	-346.1	-335.4	-156	-323	-415.7
Dissolved Oxygen	mg/L	---	---	0.64	---	0.23	0.5	0.26	0.05	0.15	0.76	0.4	0.92	1.2	0.36	0.11	0.86
Specific Conductivity	ms/cm	---	---	0.185	---	0.127	0.094	0.143	0.141	0.229	0.081	0.094	0.129	0.111	0.136	0.139	0.144

Notes: < = Less than detection limit
--- = Not Sampled
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
N = Matrix interference
Field parameter results reported are from the closest date to the analytical sampling
Pos = results indicate active Dehalococcoides are present
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* = Sample BW-03 collected on 1/28/2010 but was broken in transit, not analyzed.
J - Estimated concentration

TABLE 6
Water Quality Data
BIOREMEDIATION PARAMETERS

Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

CONSTITUENT	UNITS	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	OB-09-BR 10/25/2011	OB-09-BR 1/18/2012	OB-09-DO 11/29/2006	OB-09-DO 1/31/2007	OB-09-DO 4/10/2007	OB-09-DO 7/19/2007	OB-09-DO 11/12/2007	OB-09-DO 1/22/2008	OB-09-DO 4/21/2008
Dissolved Metals																	
Iron	mg/L	---	---	---	---	---	---	---	---	---	1.01	0.181	1.12	0.616	<0.100	<0.100	<0.100
Manganese	mg/L	---	---	---	---	---	---	---	---	---	0.146	0.0364	0.0804	0.138	0.0444	0.0171	0.0445
Metabolic Acids																	
Acetic acid	mg/L	<1.0	<1.0	2.7J	2.4	6	2.8	8.6	1.5	110	<1.0	---	35	1.9	<1.0	<1.0	<1.0
Lactic Acid	mg/L	<1.0	<1.0	<1.0J	<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	<2.0J	<2.0	<2.0	<2.0	<2.0	<2.0	2.7	<2.0	---	<2.0	<2.0	<2.0	<2.0	<2.0
Propionic acid	mg/L	<1.0	<1.0	1.3J	<1.0	<1.0	<1.0	<1.0	<1.0	58	<1.0	---	41	<1.0	<1.0	<1.0	<1.0
Pyruvic Acid	mg/L	<0.50	<0.50	<0.50J	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	---	<0.50	<0.50	<0.50	0.83	<0.50
Miscellaneous Analyses																	
Methane	ug/L	170	340	560DJ	490	1300D	720	1600D	1200	660	130	---	7.4	33000	100	230	9.6
Ethane	ug/L	<2.0	<5.0	<5.0J	<10	<10	<10	<10	<20	<10	17	---	<1.0	<500	<2.0	<2.5	<1.0
Ethene	ug/L	3	8.1	16J	13	28	20	34	<20	11	7.6	---	<1.0	700	<2.0	<2.5	<1.0
Chloride	mg/L	---	---	---	---	---	---	---	---	---	---	9.75	18.3	9.45	9.39	12	3.64
TOC	mg/L	---	---	---	---	---	---	---	---	---	4.71	---	5.09	8.87	11.4	3.96	8.15
Dehalococcoides sp.	cells/ml	$<6.7 \times 10^{1}$	$<3.1 \times 10^{4}$	---	---	3.6×10^{3}	---	---	---	1.5×10^{3}	---	---	$<2.6 \times 10^{1}$	$<3.3 \times 10^{3}$D	1.2×10^{3}	$<1.0 \times 10^{1}$	---
Dehalococcoides sp.	(1)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Dehalococcoides sp.	(2)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	Neg
Mn Degraders	(3)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Field Parameters																	
pH	--	7.48	---	8.51	7.65	8.51	8.10	---	---	---	6.41	---	6.64	7.28	7.11	5.36	8.16
ORP	mV	-174	---	-63	-311	-405.5	-363	---	---	---	45.9	---	-41	-91.6	-43	42	-48.3
Dissolved Oxygen	mg/L	0.36	---	0.26	0.31	0.67	0.31	---	---	---	0.64	---	6.81	0.32	0.61	0.45	0.34
Specific Conductivity	ms/cm	0.146	---	0.157	0.17	0.173	0.190	---	---	---	0.084	---	0.041	0.064	0.077	0.163	0.048

Notes: < = Less than detection limit
--- = Not Sampled
mg/L = Milligrams per liter
ug/L = Micrograms per liter
mV = Millivolt
ms/cm = Millisiemen per centimeter
TOC = total organic carbon
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J - Estimated concentration

TABLE 6
Water Quality Data
BIOREMEDIATION PARAMETERS

Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

CONSTITUENT	UNITS	OB-09-DO 7/29/2008	OB-09-DO 10/22/2008	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	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
Dissolved Metals																	
Iron	mg/L	<0.100	0.255	<0.100	<0.10	---	---	---	---	---	---	---	---	---	---	---	---
Manganese	mg/L	<0.0100	0.0796	<0.0100	<0.010	---	---	---	---	---	---	---	---	---	---	---	---
Metabolic Acids																	
Acetic acid	mg/L	1.5	<1.0	<1.0	---	<1.0	<1.0	2.8	<1.0	72	4.0J	3.7	1.5	1.2	2.1	7.8	1.4
Lactic Acid	mg/L	<1.0	<1.0	<1.0	---	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0J	<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	2.5	<2.0J	<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	140	<1.0J	<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	<0.50J	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Miscellaneous Analyses																	
Methane	ug/L	<2.0	36	<2.0	10000	---	2100	610	180	4500	13000DJ	3000	12000D	3000	600	1800D	1200
Ethane	ug/L	<1.0	<1.0	<1.0	320	---	130	16	<2.0	140	240J	80	410	100	<10	<10	<25
Ethene	ug/L	<1.0	1.3	<1.0	370	---	73	31	<2.0	110	210J	57	330	80	11	37	<25
Chloride	mg/L	<2.00	6.3	32.6	44.6	---	---	---	---	---	---	---	---	---	---	---	---
TOC	mg/L	9.51	9.63	5.7	4.4	---	---	---	---	---	---	---	---	---	---	---	---
Dehalococcoides sp.	cells/ml	$<4.8 \times 10^{1}$	$<5.3 \times 10^{1}$	$<2.0 \times 10^{1}$	$<1.0 \times 10^{1}$	---	3.0×10^{5}	3.5×10^{5}	5.1×10^{3}	6.1×10^{5}	---	---	2.4×10^{5}	---	---	---	1.8×10^{5}
Dehalococcoides sp.	(1)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Dehalococcoides sp.	(2)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Mn Degraders	(3)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Field Parameters																	
pH	--	6.48	7.24	6.48	6.22	6.52	6.95	6.69	6.52	---	6.71	6.75	6.82	6.43	---	---	---
ORP	mV	-71.8	-105.3	7.6	-41	37.9	-126	-130.7	-65	---	-34	-135	-171.6	-390	---	---	---
Dissolved Oxygen	mg/L	0.29	0.28	0.77	0.14	0.34	0.12	0.32	0.26	---	0.19	0.27	0.32	0.16	---	---	---
Specific Conductivity	ms/cm	0.067	0.108	0.105	0.233	0.161	0.21	0.226	0.124	---	0.266	0.259	0.225	0.105	---	---	---

Notes: < = Less than detection limit
--- = Not Sampled
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
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(1) = results from RNA analysis
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(3) = results from biotraps analysis by Shaw (cells/grams of beads)
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J - Estimated concentration

TABLE 6
Water Quality Data
BIOREMEDIATION PARAMETERS

Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

CONSTITUENT	UNITS	OB-09-S 10/11/2006	OB-09-S 1/30/2007	OB-09-S 4/10/2007	OB-09-S 7/26/2007	OB-09-S 7/31/2007	OB-09-S 11/12/2007	OB-09-S 4/21/2008	OB-09-S 7/29/2008	OB-09-S 10/22/2008	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
Dissolved Metals																	
Iron	mg/L	2.52	40	75.6	4.82	---	5.08	8.7	13.1	17	16	---	---	---		---	---
Manganese	mg/L	1.36	25.6	21.1	0.887	---	1.08	1.88	3.98	1.3	2	---	---	---		---	---
Metabolic Acids																	
Acetic acid	mg/L	<1.0	790	140	26	---	16	240	20	97	---	150	660	92	53	310	160J
Lactic Acid	mg/L	<1.0	<20	<5.0	<1.0	---	<1.0	<2.0	<1.0	<1.0	---	<1.0	<20	<1.0	<1.0	290	220J
n-Butanoic acid	mg/L	<2.0	240	100	<2.0	---	<2.0	61	2.2	4.3	---	31	---	16	9	100	17J
Propionic acid	mg/L	<1.0	1200	320	12	---	6.4	190	10	140	---	230	1700	110	57	830	210J
Pyruvic Acid	mg/L	<0.50	<10	<2.5	<0.50	---	<0.50	<1.0	<0.50	<0.50	---	<0.50	<10	<0.50	<0.50	<2.5	<1.0J
Miscellaneous Analyses																	
Methane	ug/L	180	30	8.7	48	---	210	1700	1900	1200D	10000	---	10000	3700	12000	12000	13000J
Ethane	ug/L	7.3	1.2	<1.0	<1.0	---	3.4	<20	<20	40	<200	---	<200	<50	320	<200	240J
Ethene	ug/L	80	13	40	81	---	88	400	640	1500D	4300	---	2000	580	820	1300	1700J
Chloride	mg/L	---	72.8	30.9	42.1	---	63.2	168	222	116	122	---	---	---	---	---	---
TOC	mg/L	9.63	1020	132	34.7	---	24.9	331	20.9	101	231	---	---	---	---	---	---
Dehalococcoides sp.	cells/ml	$<2.3 \times 10^{1}$	1.3×10^{5}	7.1×10^{3}	---	---	1.8×10^{3}	---	$<9.1 \times 10^{1}$	5.8×10^{3}	---	1.0×10^{4}	9.6×10^{5}	2.4×10^{6}	1.5×10^{5}	9.6×10^{5}	$<1.0 \times 10^{2}$
Dehalococcoides sp.	(1)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Dehalococcoides sp.	(2)	---	---	---	---	8.79×10^{6}	---	Pos	---	---	---	---	---	---	---	---	---
Mn Degraders	(3)	---	---	---	---	1.5×10^{3}	---	---	---	---	---	---	---	---	---	---	---
Field Parameters																	
pH	--	6.44	6.65	6.39	8.45	---	6.42	6.74	6.0	6.6	6.43	6.43	6.3	---	6.45	---	6.42
ORP	mV	100.8	-169.5	-195.5	-129.5	---	-82	-98.2	-34.7	-103.4	-126	-106.4	-100	-102	-102	---	-43
Dissolved Oxygen	mg/L	5.9	0.44	1.36	1.45	---	0.19	0.58	0.39	0.6	0.53	0.24	0.17	0.31	1.49	---	0.44
Specific Conductivity	ms/cm	1.868	17.9	17.44	0.653	---	2.993	11.66	9.736	9.466	14	11.583	10.859	7.857	12.945	---	6.045

Notes: < = Less than detection limit
--- = Not Sampled
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
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J - Estimated concentration

TABLE 6
Water Quality Data
BIOREMEDIATION PARAMETERS

Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

CONSTITUENT	UNITS	OB-09-S 10/12/2010	OB-09-S 1/5/2011	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-15-S 1/19/2009	OB-15-S 4/9/2009	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
Dissolved Metals																
Iron	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Manganese	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Metabolic Acids																
Acetic acid	mg/L	250	870	390	940	360	<1.0	---	---	180	<1.0	12	12	120	670	230
Lactic Acid	mg/L	<2.0	<10	<5.0	<10	<2.0	<1.0	---	---	420	<1.0	490	<1.0	<1.0	<10	<2.0
n-Butanoic acid	mg/L	8.5	270	100	48	74	<2.0	---	---	---	<2.0	<10	<2.0	4.6	120	37
Propionic acid	mg/L	170	1700	510	1100	300	<1.0	---	---	310	<1.0	24	11	110	1200	310
Pyruvic Acid	mg/L	<1.0	<5.0	<2.5	<5.0	<1.0	<0.50	---	---	<1.3U	<0.50	<2.5	<0.50	<0.50	<5.0	<1.0
Miscellaneous Analyses																
Methane	ug/L	9000	25000D	25000	21000D	18000	18000	---	---	55	92	390	5400D	12000D	8100	11000D
Ethane	ug/L	370	470	<500	330	290	310	---	---	<1.0U	<1.0	<5.0	<5.0	150	<100	210
Ethene	ug/L	290	1000	1000	<200	<250	<250	---	---	90	24	170	540D	210	230	480
Chloride	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
TOC	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Dehalococcoides sp.	cells/ml	7.2×10^3	8.1×10^3	9.4×10^5	1.6×10^3	4.9×10^5	4.8×10^4	---	---	8.5×10^4	5.2×10^3	$<7.7 \times 10^1$	8.8×10^4	1.1×10^5	6.1×10^1	1.8×10^7
Dehalococcoides sp.	(1)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Dehalococcoides sp.	(2)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Mn Degraders	(3)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Field Parameters																
pH	--	6.3	6.16	6.8	---	---	---	7.53	7.49	6.64	---	---	---	---	6.29	6.52
ORP	mV	-98	-144.9	-367	---	---	---	-58	-143.2	-163	---	---	---	---	-145	-94.2
Dissolved Oxygen	mg/L	0.19	0.40	0.54	---	---	---	0.48	0.3	0.37	---	---	---	---	0.24	0.41
Specific Conductivity	ms/cm	6.144	---	11.86	---	---	---	2.381	1.875	9.071	---	---	---	---	14.038	3.543

Notes: < = Less than detection limit
--- = Not Sampled
mg/L = Milligrams per liter
ug/L = Micrograms per liter
mV = Millivolt
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TOC = total organic carbon
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J - Estimated concentration

TABLE 6
Water Quality Data
BIOREMEDIATION PARAMETERS

Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

CONSTITUENT	UNITS	OB-15-S 1/17/2012	STR-03 11/16/2007	STR-03 1/23/2008	STR-03 4/21/2008	STR-03 7/29/2008	STR-03 10/22/2008	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
Dissolved Metals																	
Iron	mg/L	---	0.371	8.87	0.324	2.45	31.6	1.44	3.5	---	---	---	---	---	---	---	---
Manganese	mg/L	---	0.0596	6.07	0.137	0.732	13.6	0.577	2.6	---	---	---	---	---	---	---	---
Metabolic Acids																	
Acetic acid	mg/L	57	<1.0	<1.0	<1.0	2.6	1.6	<1.0	<1.0	<1.0	<1.0	1.8	<1.0	1.5J	<1.0	<1.0	<1.0
Lactic Acid	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	1.2	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0J	<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	<2.0J	<2.0	<2.0	<2.0
Propionic acid	mg/L	31	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0J	<1.0	<1.0	<1.0
Pyruvic Acid	mg/L	<0.50	<0.50	<0.50	0.51	<0.50	0.97	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50J	<0.50	<0.50	<0.50
Miscellaneous Analyses																	
Methane	ug/L	21000D	6.9	180	17	590	800D	20	39	270	4.5	24	46	4.3J	<2.0	5.5	2
Ethane	ug/L	400	<1.0U	7.4	<1.0	34	78	<1.0	1.3	13	<1.0	1.1	1.5	<1.0J	<1.0	<1.0	<1.0
Ethene	ug/L	160	<1.0U	37	<1.0	76	85	<1.0	6.2	13	<1.0	3.6	3.5	<1.0J	<1.0	<1.0	<1.0
Chloride	mg/L	---	9.85	1130	900	1170	1340	1790	1320	---	---	---	---	---	---	---	---
TOC	mg/L	---	7.58	5.21	1.98	12.1	13	1.7	1.6	---	---	---	---	---	---	---	---
Dehalococcoides sp.	cells/ml	$<6.6 \times 10^{1}$	$<6.7 \times 10^{1}$	7.5×10^{2}	---	1.4×10^{5}	$<3.4 \times 10^{1}$	$<1.0 \times 10^{1}$	5.9×10^{2}	$<1.0 \times 10^{1}$	2.0×10^{4}	5.2×10^{3}	$<2.2 \times 10^{1}$	4.2×10^{3}	$<6.4 \times 10^{1}$	1.6×10^{3}	3.1×10^{3}
Dehalococcoides sp.	(1)	---	---	---	Neg	---	---	---	---	---	---	---	---	---	---	---	---
Dehalococcoides sp.	(2)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Mn Degraders	(3)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Field Parameters																	
pH	--	6.52	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
ORP	mV	-94.2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Dissolved Oxygen	mg/L	0.41	---	---	---	---	---	---	---	---	---	---	---	6.05	8.02	---	10.12
Specific Conductivity	ms/cm	3.543	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Notes: < = Less than detection limit
--- = Not Sampled
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
N = Matrix interference
Field parameter results reported are from the closest date to the analytical sampling
Pos = results indicate active Dehalococcoides are present
Neg = results do not indicate active Dehalococcoides are present
(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 6
Water Quality Data
BIOREMEDIATION PARAMETERS

Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

CONSTITUENT	UNITS	STR-03 7/28/2011	STR-03 10/25/2011	STR-03 1/18/2011	UNNAMED STREAM 10/11/2006	UNNAMED STREAM 2/1/2007	UNNAMED STREAM 3/1/2007	UNNAMED STREAM 4/16/2007	UNNAMED STREAM 7/19/2007	UNNAMED STREAM 11/16/2007	UNNAMED STREAM 1/23/2008	UNNAMED STREAM 4/21/2008	UNNAMED STREAM 7/29/2008	UNNAMED STREAM 10/22/2008	UNNAMED STREAM 1/14/2009	UNNAMED STREAM 4/9/2009
Dissolved Metals																
Iron	mg/L	---	---	---	0.237	---	0.186	4.92	---	1.42	22.6	64.6	78.6	76.4	47.8	22
Manganese	mg/L	---	---	---	0.0536	7.48	---	1.63	---	0.197	5.22	10.3	8.54	11	6.89	6.1
Metabolic Acids																
Acetic acid	mg/L	<1.0	<1.0	<1.0	---	---	<1.0	<1.0	---	<1.0	<1.0	<1.0	5.6	3.4	<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
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
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
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
Miscellaneous Analyses																
Methane	ug/L	5	49	170D	---	---	6.2	90	---	28	240	260	1100	1800D	470	240
Ethane	ug/L	<1.0	2.5	10	---	---	<1.0	1.7	---	<1.0	14	14	120	260D	37	15
Ethene	ug/L	<1.0	7.8	36	---	---	<1.0	3.5	---	<1.0	12	18	380	190D	37	24
Chloride	mg/L	---	---	---	---	---	---	380	---	21.7	861	1710	1640	175	1460	1170
TOC	mg/L	---	---	---	---	---	1.6	10.8	---	9.6	5.92	8.98	12.0	15.6	16.7	3.7
Dehalococcoides sp.	cells/ml	$<1.0 \times 10^{1}$	4.8×10^{3}	1.5×10^{4}	3.3×10^{2}	---	---	---	2.8×10^{3}	2.3×10^{3}	2.6×10^{3}	---	$<2.3 \times 10^{1}$	$<4.7 \times 10^{1}$	6.7×10^{3}	3.8×10^{2}
Dehalococcoides sp.	(1)	---	---	---	---	---	---	---	---	---	---	Neg	---	---	---	---
Dehalococcoides sp.	(2)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Mn Degraders	(3)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Field Parameters																
pH	--	---	---	---	7.26	---	---	---	---	---	---	---	---	---	---	---
ORP	mV	---	---	---	173.6	---	---	---	---	---	---	---	---	---	---	---
Dissolved Oxygen	mg/L	2.87	---	---	6.11	---	---	---	---	---	---	---	---	---	---	---
Specific Conductivity	ms/cm	---	---	---	2.78	---	---	---	---	---	---	---	---	---	---	---

Notes: < = Less than detection limit
--- = Not Sampled
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
N = Matrix interference
Field parameter results reported are from the closest date to the analytical sampling
Pos = results indicate active Dehalococcoides are present
Neg = results do not indicate active Dehalococcoides are present
(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 6
Water Quality Data
BIOREMEDIATION PARAMETERS

Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

CONSTITUENT	UNITS	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
Dissolved Metals										
Iron	mg/L	---	---	---	---	---	---	---	---	---
Manganese	mg/L	---	---	---	---	---	---	---	---	---
Metabolic Acids										
Acetic acid	mg/L	<1.0	<1.0	<1.0	<1.0	4.5	<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
n-Butanoic acid	mg/L	---	<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
Pyruvic Acid	mg/L	<0.50	<0.50	<0.50	<0.50	1.4	<0.50	<0.50	<0.50	<0.50
Miscellaneous Analyses										
Methane	ug/L	240	2300	360	260	<2.0	780D	290	620D	200
Ethane	ug/L	14	110	31	11	<1.0	57	19	52	12
Ethene	ug/L	65	61	70	46	<1.0	61	21	32	9.6
Chloride	mg/L	---	---	---	---	---	---	---	---	---
TOC	mg/L	---	---	---	---	---	---	---	---	---
Dehalococcoides sp.	cells/ml	1.2×10^5	2.1×10^4	9.7×10^2	$<2.2 \times 10^1$	1.6×10^3	5.2×10^2	$<1.0 \times 10^1$	1.4×10^5	$<4.0 \times 10^1$
Dehalococcoides sp.	(1)	---	---	---	---	---	---	---	---	---
Dehalococcoides sp.	(2)	---	---	---	---	---	---	---	---	---
Mn Degraders	(3)	---	---	---	---	---	---	---	---	---
Field Parameters				---						
pH	--	---	---	---	---	---	---	---	---	---
ORP	mV	---	---	---	---	---	---	---	---	---
Dissolved Oxygen	mg/L	---	---	---	---	8.48	---	4.39	---	---
Specific Conductivity	ms/cm	---	---	---	---	---	---	---	---	---

Notes: < = Less than detection limit
--- = Not Sampled
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
N = Matrix interference
Field parameter results reported are from the closest date to the analytical sampling
Pos = results indicate active Dehalococcoides are present
Neg = results do not indicate active Dehalococcoides are present
(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 7
PERMANGANATE CONCENTRATIONS IN GROUNDWATER

Former Varian Facility Site
150 Sohier Road, Beverly, Massachusetts

	October 2009		April 2010		September 2010		October 2010		January 2011		April 2011		October-November 2011	
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)**
AP-12-BR	ND(<0.2)	NA	170,000	17	---	---	340,000	34	---	---	110,000	11.0	9,900	0.990
AP-12-DO	ND(<0.2)	NA	180	0.018	---	---	ND(<0.2)	NA	ND(<0.2)	NA	0.3	0.00003	ND(<0.2)	NA
AP-12-S	---	---	1,500	0.15	---	---	---	---	---	---	---	---	---	---
AP-14-S	---	---	---	---	---	---	---	---	1	0.0001	---	---	---	---
AP-19	ND(<0.2)	NA	0.4	0.00004	---	---	ND(<0.2)	NA	---	---	ND(<0.1)	NA	ND(<0.2)	NA
AP-20	22	0.0022	0.2	0.00002	---	---	ND(<0.2)	NA	---	---	0.1	0.00001	ND(<0.2)	NA
AP-21	36,000	3.6	40,000	4	---	---	15,000	1.5	---	---	8,200	0.8	1,000	0.1
AP-22	110,000	11	200	0.02	---	---	430	0.043	---	---	1.0	0.0001	3,200	0.32
AP-26-DO	---	---	0.1	0.00001	---	---	---	---	---	---	---	---	ND(<0.2)	NA
AP-27-DO	ND(<0.2)	NA	0.4	0.00004	---	---	ND(<0.2)	NA	---	---	---	---	0.4	0.00004
AP-30-DO	---	---	---	---	---	---	---	---	---	---	20,000	2.0	---	---
AP-30R-DO	---	---	---	---	---	---	---	---	---	---	---	---	84,000	8.40
AP-31-DO	---	---	---	---	---	---	---	---	---	---	12,000	1.2	2,400	0.24
AP-32-DO	---	---	---	---	---	---	---	---	---	---	3.7	0.00037	ND(<0.2)	NA
CL03-DO	1200	0.12	---	---	---	---	---	---	---	---	---	---	---	---
CL05-DOA	---	---	0.3	0.00003	---	---	---	---	---	---	---	---	---	---
CL10-BR	ND(<0.2)	NA	---	---	---	---	---	---	---	---	0.2	0.00002	---	---
CL10-DO	360	0.036	820	0.082	---	---	350	0.035	---	---	250	0.0	7.1	0.00071
CL10-S	ND(<0.2)	NA	---	---	---	---	---	---	---	---	ND(<0.1)	NA	---	---
GZ-2R	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-005	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-013	---	---	2,900	0.29	---	---	1,400	0.14	---	---	6,900	0.7	1,200	0.12
OB-10-BR	---	---	---	---	4500	0.45	---	---	ND(<0.2)	NA	---	---	---	---
OB-10-S	780	0.078	35	0.0035	240	0.024	---	---	---	---	87	0.0087	---	---
OB-12-BR	---	---	---	---	---	---	---	---	---	---	---	---	---	---
OB-12-DO	3,300	0.33	200	0.02	0.3	0.00003	---	---	ND(<0.2)	NA	---	---	190	0.01903
OB-15-S	1.0	0.0001	---	---	---	---	---	---	---	---	---	---	---	---
OB-19-DO	---	---	---	---	---	---	ND(<0.2)	NA	---	---	---	---	ND(<0.2)	NA
OB-20-BR	12	0.0012	---	---	---	---	---	---	---	---	---	---	---	---
OB-25-BR	---	---	---	---	---	---	---	---	---	---	9,200	0.9	---	---
OB-25-DO	---	---	0.4	0.00004	---	---	---	---	---	---	---	---	---	---
OB-26-BR	---	---	0.4	0.00004	---	---	---	---	---	---	---	---	---	---
OB-27-BR	---	---	4200	0.42	---	---	7,400	0.74	---	---	14,000	1.4	1,500	0.1500
OB-27-DO	ND(<0.2)	NA	---	---	---	---	---	---	---	---	---	---	---	---
OB-28-BR	---	---	19	0.0019	---	---	---	---	---	---	15	0.0015	---	---
OB-32-DO	3400	0.34	1400	0.14	2,500	0.25	1,300	0.13	500	0.05	1,200	0.1	670	0.0670
OB-34-DO	38	0.0038	36	0.0036	24	0.0024	29	0.0029	41.3	0.00413	18	0.0018	ND(<0.2)	NA
OB 35-DO	ND(<0.2)	NA	0.3	0.00003	---	---	ND(<0.2)	NA	---	---	ND(<0.1)	NA	ND(<0.2)	NA
OB-36-DO	1	0.0001	0.4	0.00004	ND(<0.2)	NA	---	---	---	---	ND(<0.1)	NA	---	---
OB-37-DO	ND(<0.2)	NA	140	0.014	---	---	11,000	1.1	---	---	180,000	18.0	34.0	0.003
RW-2	---	---	---	---	---	---	---	---	---	---	---	---	---	---

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.
Pale Pink	mg NaMnO4/L = milligrams of sodium permanganate per liter

Table 8
Indoor Air Exposure Point Concentrations
Buildings 5 and 6
Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

	BLD5-1 8/22/2011	BLD5-1 10/7/2011	BLD5-1 1/9/2012	BLD5-2 8/22/2011	BLD5-2 10/7/2011	BLD5-2 1/9/2012	BLD5-2 EPC	BLD5-3 8/22/2011	BLD5-3 10/7/2011	BLD5-3 1/9/2012	BLD5-3 EPC	BLD5-4 8/22/2011	BLD5-4 10/7/2011	BLD5-4 1/9/2012
CONSTITUENT (ug/m^3)	**QA Area**			**Shipping**				**Sanding**				**Center of Production Area**		
Acetone	---	9700	10000	---	2000	3300	NA	---	1200	3400	NA	---	1000	670
Carbontetrachloride	0.61	<0.77	<1.1	0.59	0.63	<11	NA	0.55	0.58	0.58	NA	0.59	0.63	<3.1
Chloromethane	<2.3	<5.0	<7	<1.0	<1.2	<71	NA	<1.3	<1.2	<79	NA	1	<1.3	<20
cis-1,2-Dichloroethene	<2.3	<4.8	<6.8	2.4	1.3	<69	NA	1.5	<1.2	<77	NA	<0.81	<1.3	<19
m/p-xylene	<9.9	<21	<30	5.6	8	<300	NA	7.1	<5.2	<340	NA	<3.5	<5.6	<83
Tetrachloroethene	3.1	3.7	7.4	12	7.5	14	11.17	3.8	3.1	4.2	3.70	0.78	1	<3.5
trans-1,2-Dichloroethene	<2.3	<4.8	<6.8	<1.0	<1.2	<69	NA	<1.3	<1.2	<77	NA	<0.81	<1.3	<19
Trichloroethene	5.6	5.1	8.9	14	8.4	17	13.13	12	17	18	15.67	2.9	2.1	<2.6
Trichlorofluoromethane	<3.2	<6.8	<9.6	8.2	4	<97	NA	2.9	2.1	<110	NA	1.7	<1.8	<27
Xylene (total)	<9.9	<21	<30	5.6	8	<300	NA	7.1	<5.2	<340	NA	<3.5	<5.6	<83

Notes:
ug/m3 = Micrograms per cubic meter
--- = Not sampled for
NA - not applicable
Only detected constituents shown
EPC = Exposure point concentration, calculated as the arithmetic mean, not derived for BLD5-1 and BLD5-4, as concentrations were lower in these two locations.

For samples BLD5-1 and 5-3 (1/9/12), diluted result used for acetone; reanalysis used for all other compounds

Table 8
Indoor Air Exposure Point Concentrations
Buildings 5 and 6
Former Varian Facility Site
150 Sohier Road
Beverly, Massachusetts

	BLD6-1 8/22/2011	BLD6-1 10/6/2011	BLD6-1 1/10/2012	BLD6-1 EPC	BLD6-2 8/22/2011	BLD6-2 10/7/2011	BLD6-2 1/10/2012	BLD6-2 EPC
CONSTITUENT (ug/m^3)	**BLDG 6 Machine Shop**				**Cold Form**			
Acetone	---	660	1300	NA	---	690	1800	NA
Carbontetrachloride	0.59	0.65	<5.3	NA	0.59	0.62	<6.7	NA
Chloromethane	1	<2.6	<34	NA	1	<1.2	<43	NA
cis-1,2-Dichloroethene	<0.72	<2.6	<33	NA	<0.94	1.9	<42	NA
m/p-xylene	<3.1	<11	<140	NA	<4.1	<5.0	<180	NA
Tetrachloroethene	1.8	2	16	6.60	1.8	1.9	23	8.90
trans-1,2-Dichloroethene	1	<2.6	<33	NA	1.1	<1.2	<42	NA
Trichloroethene	1.2	1.1	9.8	4.03	1.1	1.8	13	5.30
Trichlorofluoromethane	1.6	<3.6	<47	NA	1.5	1.7	<59	NA
Xylene (total)	<3.1	<11	<140	NA	<4.1	<5.0	<180	NA

Notes:
ug/m3 = Micrograms per cubic meter
--- = Not sampled for
NA - not applicable
Only detected constituents shown

EPC = Exposure point concentration in Building 6, calculated as the maximum average concentration

Table 9
Imminent Hazard Evaluation - Indoor Air Exposures - Site Workers - Building 5 Shipping Room (August 2011 - January 2012 Indoor Air Data)

Former Varian Facility Site
150 Sohier Road
Beverly, MA

EXPOSURE ESTIMATES:

Inhalation of Volatiles

$$ADE = \frac{OHM_{air} * EF * ET * ED * C1}{AP_{nc}}$$

$$LADE = \frac{OHM_{air} * EF * ET * ED}{AP_{c}}$$

HI = ADE/RfC

ELCR = LADE * UR

Cumulative ELCR = 8E-07
Cumulative HI = 1

MassDEP Limit = 1E-05
MassDEP Limit = 10

Parameter		Description	Units	Value	Reference
ADE	=	Average daily exposure	m^3/mg	See below	Calculated
LADE	=	Lifetime average daily exposure	$\mu g/m^3$	See below	Calculated
HI	=	Hazard Index	unitless	See below	Calculated
ELCR	=	Excess lifetime cancer risk	unitless	See below	Calculated
RfC	=	Inhalation reference concentration	mg/m^3	See below	EPA, 2012
UR	=	Inhalation Unit Risk	$m^3/\mu g$	See below	EPA, 2012
OHM_{air}	=	Concentration in air	$\mu g/m^3$	See below	Measured
EF	=	Exposure frequency	days/year	250	5 days/week, 2 weeks vacation
ET	=	Exposure time	days/day	0.290	7 hours per day (site specific)
ED	=	Exposure duration	years	5.0	310 CMR 40.0953(1)
AP_{nc}	=	Averaging period, noncarcinogens	days	1,825	ED*365
AP_c	=	Averaging period, carcinogens	days	25,550	Lifetime
C1	=	Conversion factor	mg/µg	1.00E-03	Constant

Compound	OHM_{air} *	RfC *Chronic*	UR	ADE	HI	LADE	ELCR
Volatile Organic Compounds							
Tetrachloroethene	1.10E+01	4.00E-02	2.60E-07	2.18E-03	5.46E-02	1.56E-01	4.06E-08
Trichloroethene	1.31E+01	2.00E-03	4.00E-06	2.61E-03	1.30E+00	1.86E-01	7.45E-07
TOTAL RISK					**1.36E+00**		**7.86E-07**

Notes:
*OHM_{air} is average concentration concentration from 8/11, 10/11, and 1/12 indoor air sampling for location BLD5-2 (shipping room)

Table 10
Risk Evaluation - Indoor Air Exposures - Site Workers - Building 5 Shipping Room
(August 2011 - January 2012 Indoor Air Data)

Former Varian Facility Site
150 Sohier Road
Beverly, MA

EXPOSURE ESTIMATES:

Inhalation of Volatiles

$$ADE = \frac{OHM_{air} * EF * ET * ED * C1}{AP_{nc}}$$

$$LADE = \frac{OHM_{air} * EF * ET * ED}{AP_{c}}$$

HI = ADE/RfC

ELCR = LADE * UR

Cumulative ELCR = 4E-06
Cumulative HI = 1

MassDEP Limit = 1E-05
MassDEP Limit = 1

Parameter		Description	Units	Value	Reference
ADE	=	Average daily exposure	m^3/mg	See below	Calculated
LADE	=	Lifetime average daily exposure	$\mu g/m^3$	See below	Calculated
HI	=	Hazard Index	unitless	See below	Calculated
ELCR	=	Excess lifetime cancer risk	unitless	See below	Calculated
RfC	=	Inhalation reference concentration	mg/m^3	See below	EPA, 2012
UR	=	Inhalation Unit Risk	$m^3/\mu g$	See below	EPA, 2012
OHM_{air}	=	Concentration in air	$\mu g/m^3$	See below	Measured
EF	=	Exposure frequency	days/year	250	5 days/week, 2 weeks vacation
ET	=	Exposure time	days/day	0.290	7 hours per day (site specific)
ED	=	Exposure duration	years	27.0	MassDEP 2008a
AP_{nc}	=	Averaging period, noncarcinogens	days	9,855	ED*365
AP_c	=	Averaging period, carcinogens	days	25,550	Lifetime
C1	=	Conversion factor	mg/µg	1.00E-03	Constant

Compound	OHM_{air} *	RfC *Chronic*	UR	ADE	HI	LADE	ELCR
Volatile Organic Compounds							
Tetrachloroethene	1.10E+01	4.00E-02	2.60E-07	2.18E-03	5.46E-02	8.43E-01	2.19E-07
Trichloroethene	1.31E+01	2.00E-03	4.00E-06	2.61E-03	1.30E+00	1.01E+00	4.02E-06
TOTAL RISK					**1.36E+00**		**4.24E-06**

Notes:

*OHM_{air} is average concentration concentration from 8/11, 10/11, and 1/12 indoor air sampling for location BLD5-2 (shipping room)

Table 11
Imminent Hazard Evaluation - Indoor Air Exposures - Site Workers - Building 5 Sanding Room (August 2011 - January 2012 Indoor Air Data)

Former Varian Facility Site
150 Sohier Road
Beverly, MA

EXPOSURE ESTIMATES:

Inhalation of Volatiles

$$ADE = \frac{OHM_{air} * EF * ET * ED * C1}{AP_{nc}}$$

$$LADE = \frac{OHM_{air} * EF * ET * ED}{AP_{c}}$$

HI = ADE/RfC

ELCR = LADE * UR

Cumulative ELCR = 5E-07
Cumulative HI = 0.9

MassDEP Limit = 1E-05
MassDEP Limit = 10

Parameter		Description	Units	Value	Reference
ADE	=	Average daily exposure	m^3/mg	See below	Calculated
LADE	=	Lifetime average daily exposure	$\mu g/m^3$	See below	Calculated
HI	=	Hazard Index	unitless	See below	Calculated
ELCR	=	Excess lifetime cancer risk	unitless	See below	Calculated
RfC	=	Inhalation reference concentration	mg/m^3	See below	EPA, 2012
UR	=	Inhalation Unit Risk	$m^3/\mu g$	See below	EPA, 2012
OHM_{air}	=	Concentration in air	$\mu g/m^3$	See below	Measured
EF	=	Exposure frequency	days/year	250	5 days/week, 2 weeks vacation
ET	=	Exposure time	days/day	0.170	4 hours per day (site specific)
ED	=	Exposure duration	years	5.0	310 CMR 40.0953(1)
AP_{nc}	=	Averaging period, noncarcinogens	days	1,825	ED*365
AP_c	=	Averaging period, carcinogens	days	25,550	Lifetime
C1	=	Conversion factor	mg/µg	1.00E-03	Constant

Compound	OHM_{air} *	RfC *Chronic*	UR	ADE	HI	LADE	ELCR
Volatile Organic Compounds							
Tetrachloroethene	3.70E+00	4.00E-02	2.60E-07	4.31E-04	1.08E-02	3.08E-02	8.00E-09
Trichloroethene	1.56E+01	2.00E-03	4.00E-06	1.82E-03	9.08E-01	1.30E-01	5.19E-07
TOTAL RISK					**9.19E-01**		**5.27E-07**

Notes:

*OHM_{air} is average concentration concentration from 8/11, 10/11, and 1/12 indoor air sampling for location BLD5-3 (sanding room)

Exposure time of 4 hrs per day is used for the sanding room, even though estimated exposure time is 0.5 hrs/day because exposure time in adjacent paint room is 4 hrs/day

Table 12
Risk Evaluation - Indoor Air Exposures - Site Workers - Building 5 Sanding Room
(August 2011 - January 2012 Indoor Air Data)

Former Varian Facility Site
150 Sohier Road
Beverly, MA

EXPOSURE ESTIMATES:

Inhalation of Volatiles

$$ADE = \frac{OHM_{air} * EF * ET * ED * C1}{AP_{nc}}$$

$$LADE = \frac{OHM_{air} * EF * ET * ED}{AP_{c}}$$

HI = ADE/RfC

ELCR = LADE * UR

Cumulative ELCR = 3E-06
Cumulative HI = 0.9

MassDEP Limit = 1E-05
MassDEP Limit = 1

Parameter		Description	Units	Value	Reference
ADE	=	Average daily exposure	m^3/mg	See below	Calculated
LADE	=	Lifetime average daily exposure	$\mu g/m^3$	See below	Calculated
HI	=	Hazard Index	unitless	See below	Calculated
ELCR	=	Excess lifetime cancer risk	unitless	See below	Calculated
RfC	=	Inhalation reference concentration	mg/m^3	See below	EPA, 2012
UR	=	Inhalation Unit Risk	$m^3/\mu g$	See below	EPA, 2012
OHM_{air}	=	Concentration in air	$\mu g/m^3$	See below	Measured
EF	=	Exposure frequency	days/year	250	5 days/week, 2 weeks vacation
ET	=	Exposure time	days/day	0.170	4 hours per day (site specific)
ED	=	Exposure duration	years	27.0	MassDEP 2008a
AP_{nc}	=	Averaging period, noncarcinogens	days	9,855	ED*365
AP_{c}	=	Averaging period, carcinogens	days	25,550	Lifetime
C1	=	Conversion factor	mg/µg	1.00E-03	Constant

Compound	OHM_{air} *	RfC *Chronic*	UR	ADE	HI	LADE	ELCR
Volatile Organic Compounds							
Tetrachloroethene	3.70E+00	4.00E-02	2.60E-07	4.31E-04	1.08E-02	1.66E-01	4.32E-08
Trichloroethene	1.56E+01	2.00E-03	4.00E-06	1.82E-03	9.08E-01	7.01E-01	2.80E-06
TOTAL RISK					**9.19E-01**		**2.85E-06**

Notes:

*OHM_{air} is average concentration concentration from 8/11, 10/11, and 1/12 indoor air sampling for location BLD5-3 (sanding room)

Exposure time of 4 hrs per day is used for the sanding room, even though estimated exposure time is 0.5 hrs/day because exposure time in adjacent paint room is 4 hrs/day

Table 13
Imminent Hazard Evaluation - Indoor Air Exposures - Site Workers - Building 6 - August 2011 - January 2012 Indoor Air Data

Former Varian Facility Site
150 Sohier Road
Beverly, MA

EXPOSURE ESTIMATES:

Inhalation of Volatiles

$$ADE = \frac{OHM_{air} * EF * ET * ED * C1}{AP_{nc}}$$

$$LADE = \frac{OHM_{air} * EF * ET * ED}{AP_{c}}$$

HI = ADE/RfC

ELCR = LADE * UR

Cumulative ELCR = 4E-07
Cumulative HI = 0.6

MassDEP Limit = 1E-05
MassDEP Limit = 10

Parameter		Description	Units	Value	Reference
ADE	=	Average daily exposure	m³/mg	See below	Calculated
LADE	=	Lifetime average daily exposure	µg/m³	See below	Calculated
HI	=	Hazard Index	unitless	See below	Calculated
ELCR	=	Excess lifetime cancer risk	unitless	See below	Calculated
RfC	=	Inhalation reference concentration	mg/m³	See below	EPA, 2012
UR	=	Inhalation Unit Risk	m³/µg	See below	EPA, 2012
OHM_{air}	=	Concentration in air	µg/m³	See below	Measured
EF	=	Exposure frequency	days/year	250	5 days/week, 2 weeks vacation
ET	=	Exposure time	days/day	0.330	8 hours per day
ED	=	Exposure duration	years	5.0	310 CMR 40.0953(1)
AP_{nc}	=	Averaging period, noncarcinogens	days	1,825	ED*365
AP_{c}	=	Averaging period, carcinogens	days	25,550	Lifetime
C1	=	Conversion factor	mg/µg	1.00E-03	Constant

Compound	OHM_{air} *	RfC *Chronic*	UR	ADE	HI	LADE	ELCR
Volatile Organic Compounds							
Tetrachloroethene	8.90E+00	4.00E-02	2.60E-07	2.01E-03	5.03E-02	1.44E-01	3.74E-08
Trichloroethene	5.30E+00	2.00E-03	4.00E-06	1.20E-03	5.99E-01	8.56E-02	3.42E-07
TOTAL RISK					**6.49E-01**		**3.80E-07**

Notes:
EPC maximum average concentration from August and October 2011, and January 2012 indoor air sampling

Table 14
Risk Evaluation - Indoor Air Exposures - Site Workers - Building 6 - August 2011 - January 2012
Indoor Air Data

Former Varian Facility Site
150 Sohier Road
Beverly, MA

EXPOSURE ESTIMATES:

Inhalation of Volatiles

$$ADE = \frac{OHM_{air} * EF * ET * ED * C1}{AP_{nc}}$$

$$LADE = \frac{OHM_{air} * EF * ET * ED}{AP_{c}}$$

HI = ADE/RfC

ELCR = LADE * UR

Cumulative ELCR = 2E-06
Cumulative HI = 0.6

MassDEP Limit = 1E-05
MassDEP Limit = 1

Parameter		Description	Units	Value	Reference
ADE	=	Average daily exposure	m^3/mg	See below	Calculated
LADE	=	Lifetime average daily exposure	$\mu g/m^3$	See below	Calculated
HI	=	Hazard Index	unitless	See below	Calculated
ELCR	=	Excess lifetime cancer risk	unitless	See below	Calculated
RfC	=	Inhalation reference concentration	mg/m^3	See below	EPA, 2012
UR	=	Inhalation Unit Risk	$m^3/\mu g$	See below	EPA, 2012
OHM_{air}	=	Concentration in air	$\mu g/m^3$	See below	Measured
EF	=	Exposure frequency	days/year	250	5 days/week, 2 weeks vacation
ET	=	Exposure time	days/day	0.330	8 hours per day
ED	=	Exposure duration	years	27.0	MassDEP 2008a
AP_{nc}	=	Averaging period, noncarcinogens	days	9,855	ED*365
AP_c	=	Averaging period, carcinogens	days	25,550	Lifetime
C1	=	Conversion factor	mg/µg	1.00E-03	Constant

Compound	OHM_{air} *	RfC *Chronic*	UR	ADE	HI	LADE	ELCR
Volatile Organic Compounds							
Tetrachloroethene	8.90E+00	4.00E-02	2.60E-07	2.01E-03	5.03E-02	7.76E-01	2.02E-07
Trichloroethene	5.30E+00	2.00E-03	4.00E-06	1.20E-03	5.99E-01	4.62E-01	1.85E-06
TOTAL RISK					**6.49E-01**		**2.05E-06**

Notes:

EPC maximum average concentration from August and October 2011, and January 2012 indoor air sampling

Table 15
Groundwater Analytical Results Compared to GW-2 Standards
27, 30 and 39 Tozer Road
Former Varian Facility Site
Beverly, Massachusetts

CONSTITUENT (mg/L)	GW-2 Standard	OB-41-S 4/5/2011 13'	OB-41-S 10/25/2011 13'	OB-42-S 4/5/2011 13'	OB-42-S 10/24/2011 13'	OB-43-S 10/24/2011 16'
		39 Tozer		30 Tozer		27 Tozer
1,1,1-Trichloroethane	4	ND(0.0040)	ND(0.0020)	ND(0.040)	ND(0.050)	ND(0.0020)
1,1,2,2-Tetrachloroethane	0.009	ND(0.0040)	ND(0.0020)	ND(0.040)	ND(0.050)	ND(0.0020)
1,1,2-Trichloroethane	0.9	ND(0.0040)	ND(0.0020)	ND(0.040)	ND(0.050)	ND(0.0020)
1,1-Dichloroethane	1	ND(0.0040)	ND(0.0020)	ND(0.040)	ND(0.050)	ND(0.0020)
1,1-Dichloroethene	0.08	ND(0.0040)	ND(0.0020)	ND(0.040)	ND(0.050)	ND(0.0020)
1,2-Dichloroethane	0.005	ND(0.0040)	ND(0.0020)	ND(0.040)	ND(0.050)	ND(0.0020)
1,2-Dichloropropane	0.003	ND(0.0040)	ND(0.0020)	ND(0.040)	ND(0.050)	ND(0.0020)
Acetone	50	ND(0.020)	ND(0.010)	ND(0.20)	ND(0.25)	ND(0.010)
Bromodichloromethane	0.006	ND(0.0040)	ND(0.0020)	ND(0.040)	ND(0.050)	ND(0.0020)
Bromoform	0.7	ND(0.0040)	ND(0.0020)	ND(0.040)	ND(0.050)	ND(0.0020)
Bromomethane	0.007	ND(0.0040)	ND(0.0020)	ND(0.040)	ND(0.050)	ND(0.0020)
Carbontetrachloride	0.002	ND(0.0040)	ND(0.0020)	ND(0.040)	ND(0.050)	ND(0.0020)
Chlorobenzene	0.2	ND(0.0040)	ND(0.0020)	ND(0.040)	ND(0.050)	ND(0.0020)
Chloroethane	---	ND(0.0040)	ND(0.0020)	ND(0.040)	ND(0.050)	ND(0.0020)
Chloroform	0.05	ND(0.0040)	ND(0.0020)	ND(0.040)	ND(0.050)	ND(0.0020)
Chloromethane	---	ND(0.0040)	ND(0.0020)	ND(0.040)	ND(0.050)	ND(0.0020)
cis-1,2-Dichloroethene	0.1	0.081	0.04	**{1.2}**	**{1.0}**	ND(0.0020)
cis-1,3-Dichloropropene	---	ND(0.0040)	ND(0.0020)	ND(0.040)	ND(0.050)	ND(0.0020)
Dibromochloromethane	0.02	ND(0.0040)	ND(0.0020)	ND(0.040)	ND(0.050)	ND(0.0020)
Dichloromethane	10	ND(0.0040)	ND(0.0020)	ND(0.040)	ND(0.050)	ND(0.0020)
Tetrachloroethene	0.05	0.05	0.03	**{0.10}**	**{0.096}**	0.0052
trans-1,2-Dichloroethene	0.09	ND(0.0040)	ND(0.0020)	ND(0.040)	ND(0.050)	ND(0.0020)
Trans-1,3-Dichloropropene	---	ND(0.0040)	ND(0.0020)	ND(0.040)	ND(0.050)	ND(0.0020)
Trichloroethene	0.03	**{0.26}**	**{0.12}**	**{2.7}**	**{3.0}**	0.007
Trichlorofluoromethane	---	ND(0.0040)	ND(0.0020)	ND(0.040)	ND(0.050)	ND(0.0020)
Vinyl chloride	0.002	ND(0.0040)	ND(0.0020)	ND(0.040)	ND(0.050)	ND(0.0020)

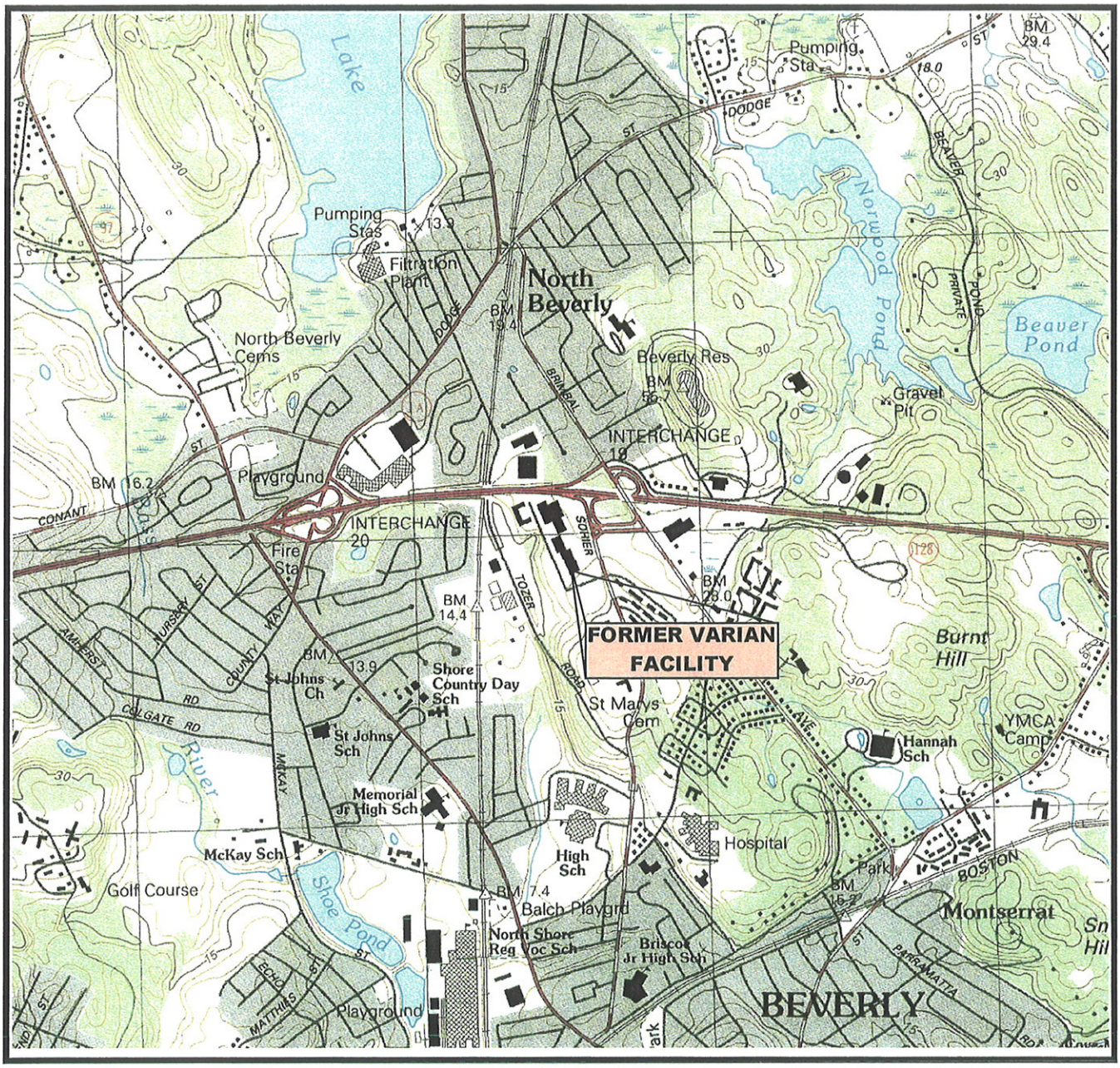
Notes:

{BOLD} = Result exceeds MCP Method 1 GW-2 Standard (310 CMR 40.0974(2))

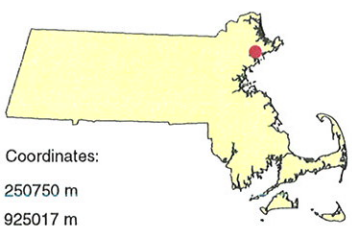
--- = Standard not established

mg/L = milligrams per liter

FIGURES



SOURCE: SCANNED USGS TOPOGRAPHIC QUADRANGLES SUPPLIED BY THE MASSACHUSETTS EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS, MASSGIS, JUNE 2003.



Site Coordinates:

x = 250750 m

y = 925017 m

MA State Plane Grid (meters)

1000 0 1000 2000

SCALE FEET

N

Shaw Environmental Inc.

DESIGNED:	**SITE LOCATION MAP**	
DETAILED: KCK	CLIENT: **VARIAN** **PALO ALTO, CALIFORNIA**	DRAWING DATE: 04/14/04
CHECKED:	LOCATION: **150 SOHIER ROAD** **BEVERLY, MASSACHUSETTS**	FIGURE: 1

N:\ARCVIEW\SITELOC\MISC\VARIAN-2.PS

XREF Files: SITE_XREF33 IMAGE Files:
File: N:\MISC\Varian\Beverly, Ma\Phase 4\Rev2\SITE_PLAN22b.dwg Layout: Layout1 User: chris.desiata Apr 23, 2012 – 4:56pm

DRAWN BY	CD	CHECKED BY	RC	04/23/12	DRAWING NAME SITE_PLAN22b
	04/23/12	APPROVED BY	RC	04/23/12	

SEE DETAIL

DETAIL

LEGEND:

- TEMPORARY PERMANGANATE INJECTION POINT
- ABANDONED OR DESTROYED WELL
- PIEZOMETER (P)
- BENCHMARK LOCATION (MSL)
- RECOVERY WELL (RW)
- MONITORING WELL (MW)
- PASSIVE PERMANGANATE BARRIER WELL (BW)
- SHALLOW BIOREMEDIATION BARRIER WELL (BW)
- 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

⊕ BIOREMEDIATION INJECTION WELLS INJECTION LOCATIONS SHOWN IN GREEN

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.

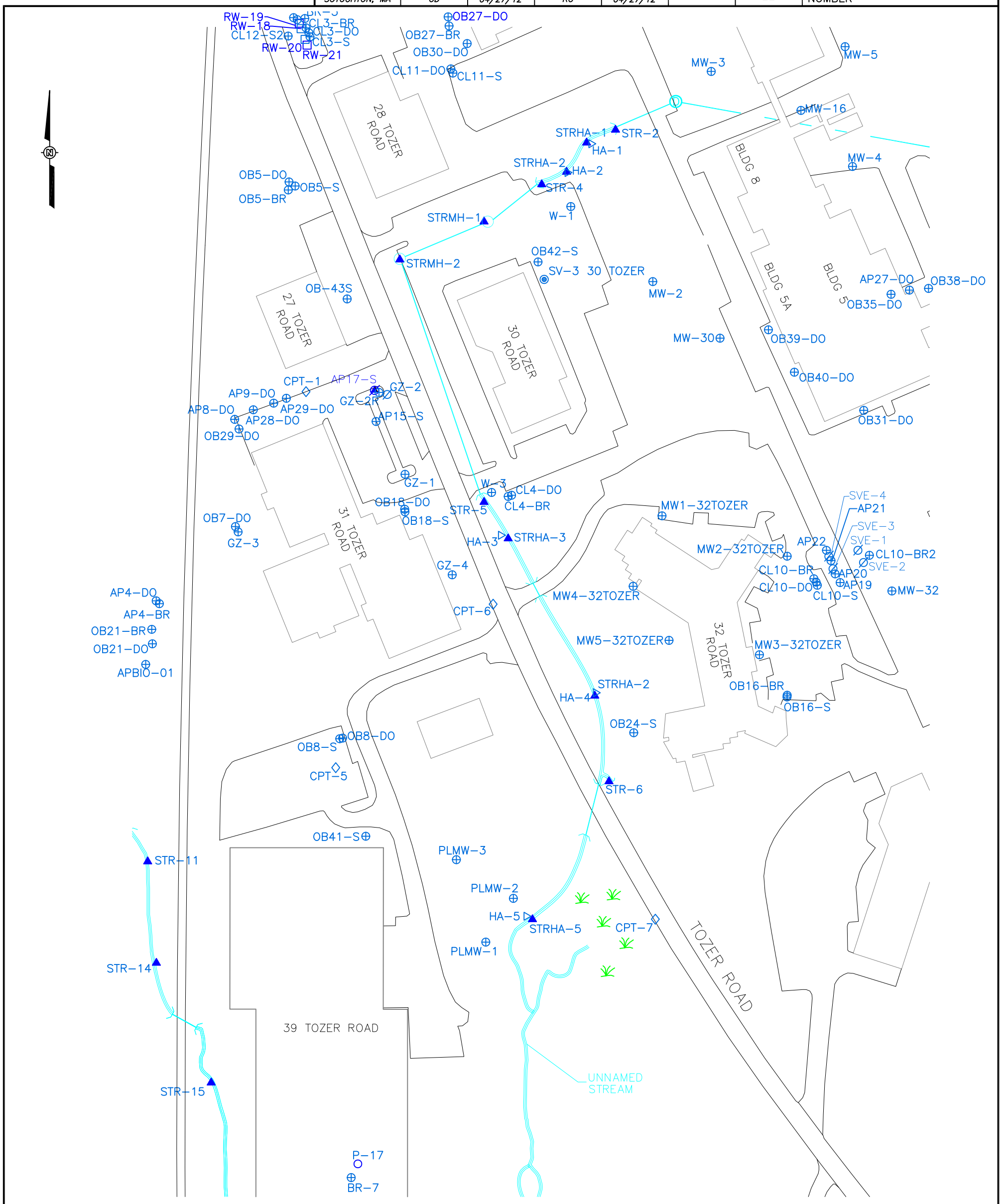
THIS MAP HAS BEEN COMPILED FROM SURVEY DATA COLLECTED IN JULY 1994, MARCH 1995, OCTOBER 1995, SEPTEMBER 1996, MARCH 1997, DECEMBER 1997, SEPTEMBER 1998, JANUARY 2000, FEBRUARY 2001, JUNE 2002, SEPTEMBER 2002, JULY 2003, FEBRUARY 2004, OCTOBER 2004; 2005, FROM VARIOUS EXISTING PLANS, AND OBSERVATIONS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

FIGURE 2
EXPANDED SITE PLAN FOR RTN 3-0485
FORMER VARIAN FACILITY SITE – BEVERLY, MA.

PREPARED FOR: VARIAN PALO ALTO, CALIFORNIA	
SCALE 0 250 500 FEET	DRAFTED BY: CD
DATE: 27 APRIL 2012	PROJECT NO.: 143267
PREPARED BY: Shaw Environmental & Infrastructure, Inc.	

XREF Files: IMAGE Files:
File: N:\MISC\Varian\Beverly, Ma\Phase 4\Rev2\39TOZER_ROAD_2.dwg
Plot Date/Time: Apr 24, 2012 - 10:29am
Plotted By: chris.desiata

OFFICE	DRAWN BY		CHECKED BY		APPROVED BY		DRAWING NUMBER	39TOZER_ROAD_2
SOTUGHTON, MA	CD	04/27/12	RC	04/27/12	--	--		



LEGEND

- TEMPORARY INJECTION POINT
- ABANDONED OR DESTROYED WELL
- PIEZOMETER (P)
- 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)
- SOIL VAPOR SAMPLE LOCATIONS

STRMH MANHOLE ACCESS TO THE STREAM LOCATED WITHIN A CULVERT

APPROXIMATE BUILDING LOCATION

APPROXIMATE LOCATION OF STREAM IN

APPROXIMATE STREAM LOCATION

SCALE
0 150 300 FEET

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.

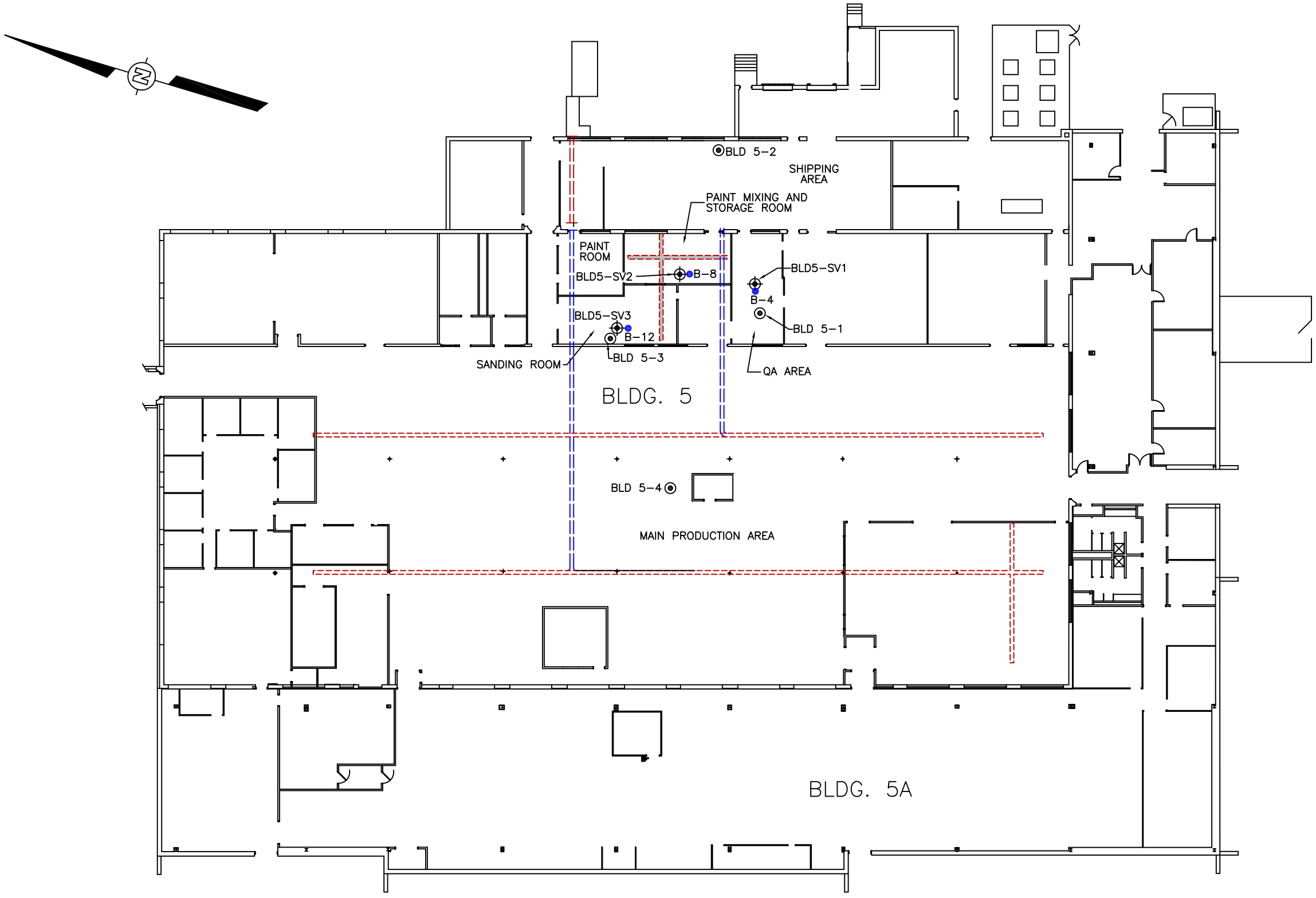
THIS MAP HAS BEEN COMPILED FROM SURVEY DATA COLLECTED IN JULY 1994, MARCH 1995, OCTOBER 1995, SEPTEMBER 1996, MARCH 1997, DECEMBER 1997, SEPTEMBER 1998, JANUARY 2000, FEBRUARY 2001, JUNE 2002, SEPTEMBER 2002, JULY 2003, FEBRUARY 2004, OCTOBER 2004; 2005, FROM VARIOUS EXISTING PLANS, AND OBSERVATIONS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

Shaw Environmental Inc.
100 TECHNOLOGY CENTER DRIVE
STOUGHTON, MASSACHUSETTS
(617) 589-5111

FIGURE 3

TOZER ROAD AREA

VARIAN MEDICAL SYSTEMS, INC.
150 SOHIER ROAD
BEVERLY, MASSACHUSETTS



LEGEND

- SUB–SLAB SOIL VAPOR SAMPLE LOCATION
- INDOOR AIR SAMPLE LOCATION
- 1995 SUB–SLAB SOIL VAPOR SAMPLE LOCATION
- FORMER UTILITY TRENCH FILLED WITH CONCRETE
- UTILITY TRENCH BENEATH CONCRETE FLOOR
- UTILITY TRENCH (COVERED WITH STEEL PLATE)

INDOOR AIR SAMPLE ID RTN 3–0485	ROOM
BLD 5–1	FINAL INSPECTION ROOM
BLD 5–2	SHIPPING
BLD 5–3	SAND BLASTING ROOM
BLD 5–4	PRODUCTION AREA

REFERENCE:

PLAN DERIVED FROM COMMUNICATIONS & POWER INDUSTRIES MAP, DATED 07/11/03, CLEAN HARBORS ENVIRONMENTAL SERVICES, INC. MAP TITLED "1962–BUILDING 5", AND SHAW ENVIRONMENTAL FIELD RECONNAISSANCE.

SCALE
0 30 60 FEET

Shaw Environmental & Infrastructure, Inc.
100 TECHNOLOGY CENTER DRIVE
STOUGHTON, MASSACHUSETTS
(617) 589–5111

FIGURE 4
BUILDING 5 PLAN
FORMER VARIAN FACILITY
150 SOHIER ROAD
BEVERLY, MASSACHUSETTS

OFFICE	DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
STOUGHTON, MA	CD 04/27/12	RC 04/27/12	--	139342-BLDG5

XREF Files: IMAGE Files:
File: N:\MISC\Varian\Beverly, Ma\Phase 4\139342-BLDG5.dwg
Plot Date/Time: Apr 24, 2012 - 9:54am
Plotted By: chris.desiato

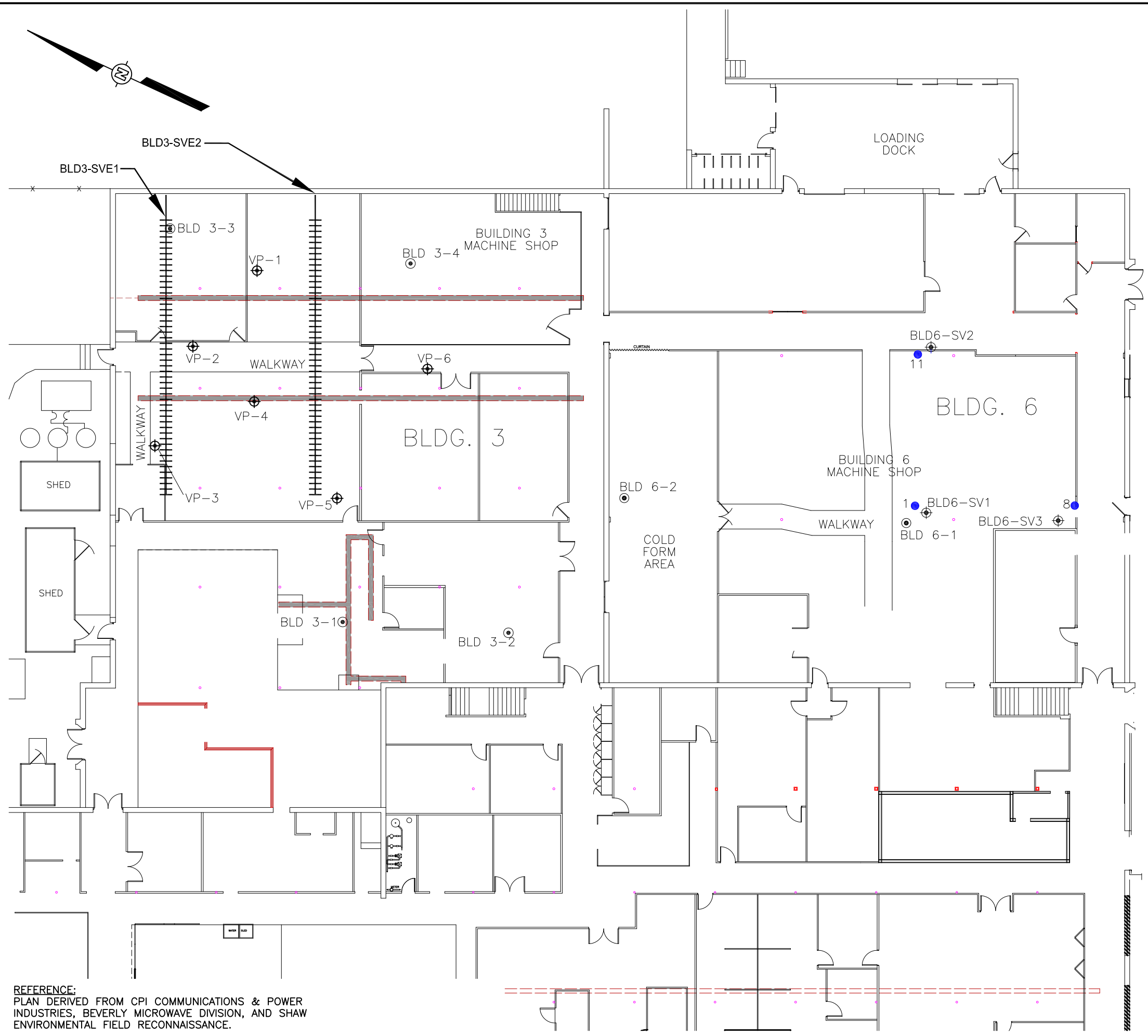
DRAWING NUMBER 139342-CPI BLDG 6

APPROVED BY -- --

CHECKED BY RC 04/27/12

DRAWN BY CD 04/27/12

OFFICE STOUGHTON, MA



LEGEND

- HORIZONTAL SOIL VAPOR EXTRACTION (SVE) WELL LOCATION (RTN 3-28531)
- SUB-SLAB SOIL VAPOR MONITORING POINT
- 1995 SUB-SLAB SOIL VAPOR SAMPLE LOCATION
- BUILDING COLUMNS
- UTILITY TRENCH (COVERED WITH STEEL PLATE)
- FORMER UTILITY TRENCH-FILLED WITH CONCRETE
- BUILDING WALLS
- FENCE LINE
- INDOOR AIR SAMPLE LOCATION

INDOOR AIR SAMPLE ID RTN 3-28531	ROOM
BLD 2-6	ENVIRONMENTAL TESTING ROOM BUILDING 2 BASEMENT
BLD 3-1	MAIN CHEMICAL LABORATORY
BLD 3-2	CHEMISTRY LABORATORY BENCH TESTING ROOM
BLD 3-3	MID STOCK ROOM
BLD 3-4	BUILDING 3 MACHINE SHOP
BLD 3-5	BOILER ROOM BUILDING 3 BASEMENT
RTN 3-0485	**ROOM**
BLD 6-1	BUILDING 6 MACHINE SHOP
BLD 6-2	COLD FORMING DEPARTMENT

SCALE

0 20 40 FEET

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

Shaw Environmental & Infrastructure, Inc.

100 TECHNOLOGY CENTER DRIVE
STOUGHTON, MASSACHUSETTS
(617) 589-5111

FIGURE 5
BUILDING 6 PLAN
FORMER VARIAN FACILITY
150 SOHIER ROAD
BEVERLY, MASSACHUSETTS

XREF Files: IMAGE Files:
File: N:\MISC\Varian\Beverly, Ma\Phase 4\139342-CPI BLDG 6.dwg
Plot Date/Time: Apr 24, 2012 - 10:00am
Plotted By: chris.desiata

APPENDIX A

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

Cadorette, Raymond

From: eDEPConfirmation@massmail.state.ma.us
Sent: Wednesday, May 02, 2012 11:58 AM
To: Kemper, Tim W
Cc: Cadorette, Raymond
Subject: eDEP Submittal Confirmation for DEP Transaction ID: 463714

Thank you for using eDEP Online Filing from the Massachusetts Department of Environmental Protection. Your transaction is complete and has been submitted to MassDEP.

This email is your receipt for the eDEP Online Filing transaction described below. Please review it and keep a copy for your records.

Please do NOT reply to this message, this email address will not receive messages. For assistance with eDEP Online Filing, please email the EEA Help Desk at mailto:helpdesk.eea@massmail.state.ma.us or call 617-626-1111.

MassDEP is interested in how we can serve you better. To help us make improvements to eDEP, please take a minute to complete our eDEP Online Filing Survey at http://www.mass.gov/dep/service/compliance/edepsurv.htm.

To contact MassDEP Programs, please see http://mass.gov/dep/about/contacts.htm.

****
DEP Transaction ID: 463714

Date and Time Submitted: 05/02/2012 11:48:53
****
Form Name: BWSC108 Comp. Res. Action Transmittal Form & Phase I

RTN: 3-485
Location: VARIAN-MICROWAVE DIV
Address: 150 SOHIER RD
BEVERLY
019150000
Person Making Submittal
VARIAN MEDICAL SYSTEMS INC
JOHN R
BUCHANAN
3120 HANSEN WAY M/S G-100
PALO ALTO
CA
943041030
LSP
LSP #: 9070
LSP Name: TIMOTHY W
KEMPER
Person Making Certification
VARIAN MEDICAL SYSTEMS INC
John R Buchanan
VARIAN MEDICAL SYSTEMS INC
John R Buchanan

Additional Forms Submitted
BWSC 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
RMR-A G5 Additional Supporting Information - By Mail
****

EMAIL ID OF THE USER: tim.kemper@shawgrp.com
****

EMAIL ID OF THE OTHER USERS: raymond.cadorette@shawgrp.com
****

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC108

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 a Tier Classification Submittal has been provided to DEP for this disposal site.

☐ a. Tier IA ☑ b. Tier IB ☐ c. Tier IC ☐ d. Tier II

6. If applicable, provide the Permit Number: P23730

B. THIS FORM IS BEING USED (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 Response Action Outcome.

☐ b. The requirements of a Class A Response Action Outcome have been met. No additional Operation, Maintenance or Monitoring is necessary to ensure the integrity of the Response Action Outcome. A completed Response Action Outcome Statement and Report (BWSC104) will be submitted to DEP.

☐ c. The requirements of a Class C Response Action Outcome have been met. No additional Operation, Maintenance or Monitoring is necessary to ensure the integrity of the Response Action Outcome. A completed Response Action Outcome Statement and Report (BWSC104) has been or will be submitted to DEP.

☐ d. The requirements of a Class C Response Action Outcome have been met. Further Operation, Maintenance or Monitoring of the remedial action is necessary to ensure that conditions are maintained and that further progress is made toward a Permanent Solution. A completed Response Action Outcome Statement and Report (BWSC104) has been or will be submitted to DEP.

COMPREHENSIVE RESPONSE ACTION TRANSMITTAL FORM & PHASE I COMPLETION STATEMENT

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

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 concurrent with a Status Report.

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

d. Number of Remedial Systems and/or Monitoring Programs: 1

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 Class A Response Action Outcome have been met. No additional Operation, Maintenance or Monitoring is necessary to ensure the integrity of the Response Action Outcome. A completed Response Action Outcome Statement (BWSC104) will be submitted to DEP.

☐ b. The requirements of a Class C Response Action Outcome have been met. No additional Operation, Maintenance or Monitoring is necessary to ensure the integrity of the Response Action Outcome. A completed Response Action Outcome Statement and Report (BWSC104) will be submitted to DEP.

☐ c. The requirements of a Class C Response Action Outcome have been met. Further Operation, Maintenance or Monitoring of the remedial action is necessary to ensure that conditions are maintained and/or that further progress is made toward a Permanent Solution. A completed Response Action Outcome 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 **Post-Class C Response Action Outcome Status Report**, pursuant to 310 CMR 40.0898.

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC108

COMPREHENSIVE RESPONSE ACTION TRANSMITTAL FORM & PHASE I COMPLETION STATEMENT

Release Tracking Number: 3 - 485

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,

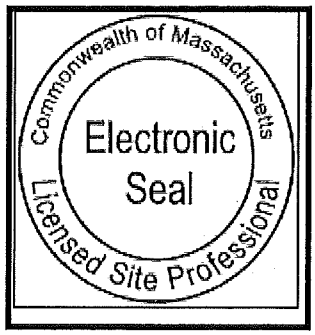
> *if Section B indicates that a* ***Phase I, Phase II, Phase III, Phase IV or Phase V Completion Statement*** *and/or a* ***Termination of a Remedy Operation Status*** *is being submitted,* the response action(s) that is (are) the subject of this submittal (i) has (have) been developed and implemented 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 Post-Class C RAO 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 #: 9070
2. First Name: TIMOTHY W
3. Last Name: KEMPER
4. Telephone: 6175896162
5. Ext.:
6. FAX: 6175892223
7. Signature: Timothy W Kemper
8. Date: 5/2/2012 (mm/dd/yyyy)
9. LSP Stamp:



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC108

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)

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: MGR OF ENVMTL AFFAIRS

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

10. Telephone: 6504246103 11. Ext.: 12. FAX:

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. Site Name. 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.

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC108

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)

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 perform ing 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: MGR OF ENVMTL AFFAIRS

4. For: VARIAN MEDICAL SYSTEMS INC (Name of person or entity recorded in Section D) 5. Date: 5/1/2012 (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. FAX: _____

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

5/2/2012 11:48:54 AM

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC108A

CRA REMEDIAL MONITORING REPORT

Pursuant to 310 CMR 40.0800 (SUBPART H)

Release Tracking Number: 3 - 485

Remedial System or Monitoring Program: 1 of: 1

A. DESCRIPTION OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM:

1. Type of Active Remedial System or Active Remedial Monitoring Program: (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. Application of Remedial Additives: (check all that apply)

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

☐ c. 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 F5)

☐ 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: NOT APPLICABLE

B. MONITORING FREQUENCY:

1. Reporting period that is the subject of this submittal: From: 10/1/2011 (mm/dd/yyyy) To: 3/31/2012 (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. 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):

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

☑ 4. Other Describe: NOT APPLICABLE

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC108A

CRA REMEDIAL MONITORING REPORT

Pursuant to 310 CMR 40.0800 (SUBPART H)

Remedial System or Monitoring Program: 1 of: 1

Release Tracking Number: 3 - 485

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

☐ 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.) (check all that apply)

☐ 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.

APPENDIX B

32 TOZER ROAD URAM STATUS REPORT

Phone (508) 653-8007
Fax (508) 653-8194

IRWIN Engineers
CHEMICAL & ENVIRONMENTAL

33 West Central Street
Natick, MA 01760-4503

January 31, 2012

Department of Environmental Protection
Bureau of Waste Site Cleanup – Northeast Regional Office
205B Lowell Street
Wilmington, MA 01887

Re: URAM Status Report
32 Tozer Road, Beverly, MA
RTN 3-30449
IRWIN Engineers Project #413-06C

To Whom it May Concern:

We are pleased to submit this URAM Status Report in accordance with our Client Agreement dated April 29, 2011 for the above referenced property (the Site). This report is subject to the limitations outlined in Appendix A attached hereto and incorporated herein.

I. INTRODUCTION

The initial URAM Notification submitted on November 21, 2011 involved test pit exploration of limited soil quantities for environmental sampling and evaluation of subslab conditions; this notification pertained specifically to the installation of utilities during renovation of the existing building. See Figure 1 for a site locus and Figure 2 for a site plan indicating monitoring well, soil boring, and test pit locations.

This Status Report is intended to expand the scope of the URAM work to address installation of utilities within essentially the entire existing building footprint and outdoors adjacent to the building as necessary for the renovation construction, including systems for sanitary and process wastewater, drainage, electricity, and communications.

The construction work will be conducted in conformance with the following:

40.0464: Performance Standards for Utility-related Abatement Measures

The following performance standards shall be met for all Utility-related Abatement Measures:

(1) contamination at the disposal site shall not be exacerbated as a result of Utility-related Abatement Measures or as a result of structures placed within an area of identified contamination;

It is expected that contaminated ground water will be encountered during certain areas of excavation. As excavation dewatering will be necessary for the work, the contaminated groundwater must be managed appropriately. The dewatering will remove contaminant mass and

should not have a negative impact on the disposal site. The proposed utilities and associated structures are mostly within the existing building footprint and the construction will not alter accessibility of the contaminated ground water plume underlying the property.

> (2) construction workers, surrounding human populations, and environmental receptors shall be reasonably protected from exposure to oil and/or hazardous material during and following construction activities; and

A risk characterization conducted to evaluate the construction worker scenario indicates that conditions pose no significant risk (see Appendix B). The contractor will periodically monitor ambient conditions for solvent vapors and employ standard practices for worker safety.

> (3) contaminated soil, contaminated groundwater, and other Remediation Wastes removed from the disposal site and construction area shall be managed in compliance with the provisions of 310 CMR 40.0030 and all applicable federal, state and local laws.

Ground water with contaminant concentrations greater than Reportable Concentrations will likely be generated during construction dewatering and will either be containerized and disposed off-site as listed hazardous waste or containerized, treated, and discharged to surface water under the EPA Remediation General Permit. See Table 1 and Figure 3 for a summary of site groundwater data.

Soils have been tested and found not to contain VOCs at concentrations greater than Reportable Concentrations (see Table 2). Soils will be reused on-site to the extent feasible and excess soils will be managed off-site in accordance with 310 CMR 40.0032(3).

Concrete from demolition has been tested with non-detect results for VOCs and will be managed by recycling (see Table 3).

II. URAM STATUS REPORT

A. Status of response operations

Test pit excavations remain open and soils are stockpiled inside the building and covered with plastic sheeting. Concrete debris is stockpiled both inside and outside the building awaiting shipment for recycling. To date, there has been no removal of groundwater for dewatering and there is no containerized contaminated media.

Utility construction is prepared to commence immediately. The General Contractor is responsible for securing necessary permits to perform the work.

Dewatering activities will be conducted as necessary.

B. Significant new site information or data

Soil testing within the building has been conducted with the finding that soils to a depth of 6 feet below the existing slab and within the depth of excavation planned for utility construction are not Contaminated Media.

Testing of groundwater from underneath the building within 6 feet of the slab surface indicates that groundwater that may be pumped from construction dewatering will be Contaminated Media.

The pertinent laboratory analytical data are included as Appendix C and summarized in Tables 1, 2, and 3.

C. Details of and/or plans for the management of Remediation Waste, Remedial Wastewater and/or Remedial Additives

Dewatering will start with containerizing of contaminated ground water in drums or in a portable tank. The actual rate and quantity of water generated from dewatering will inform the decision either to transport and dispose off-site or to obtain a permit to discharge and install treatment. Based upon the source of chlorinated solvents (historical reported dumping of containerized waste material) and upon the concentrations detected in groundwater, the wastewater will be considered a Listed F002 Hazardous Waste and applicable rules pursuant to 310 CMR 30.000 for management of accumulation tanks and containers must be followed. If water treatment is employed, then provisions of 310 CMR 30.605 applicable to Waste Water Treatment Units must be followed.

III. SUMMARY

Based upon periodic inspection of the Site and discussions with the general contractor superintendant it is my LSP Opinion that the Utility-related Abatement Measure is being conducted in conformance with the provisions of 310 CMR 40.0000.

In the event you have any questions regarding this report please contact us.

Very truly yours,

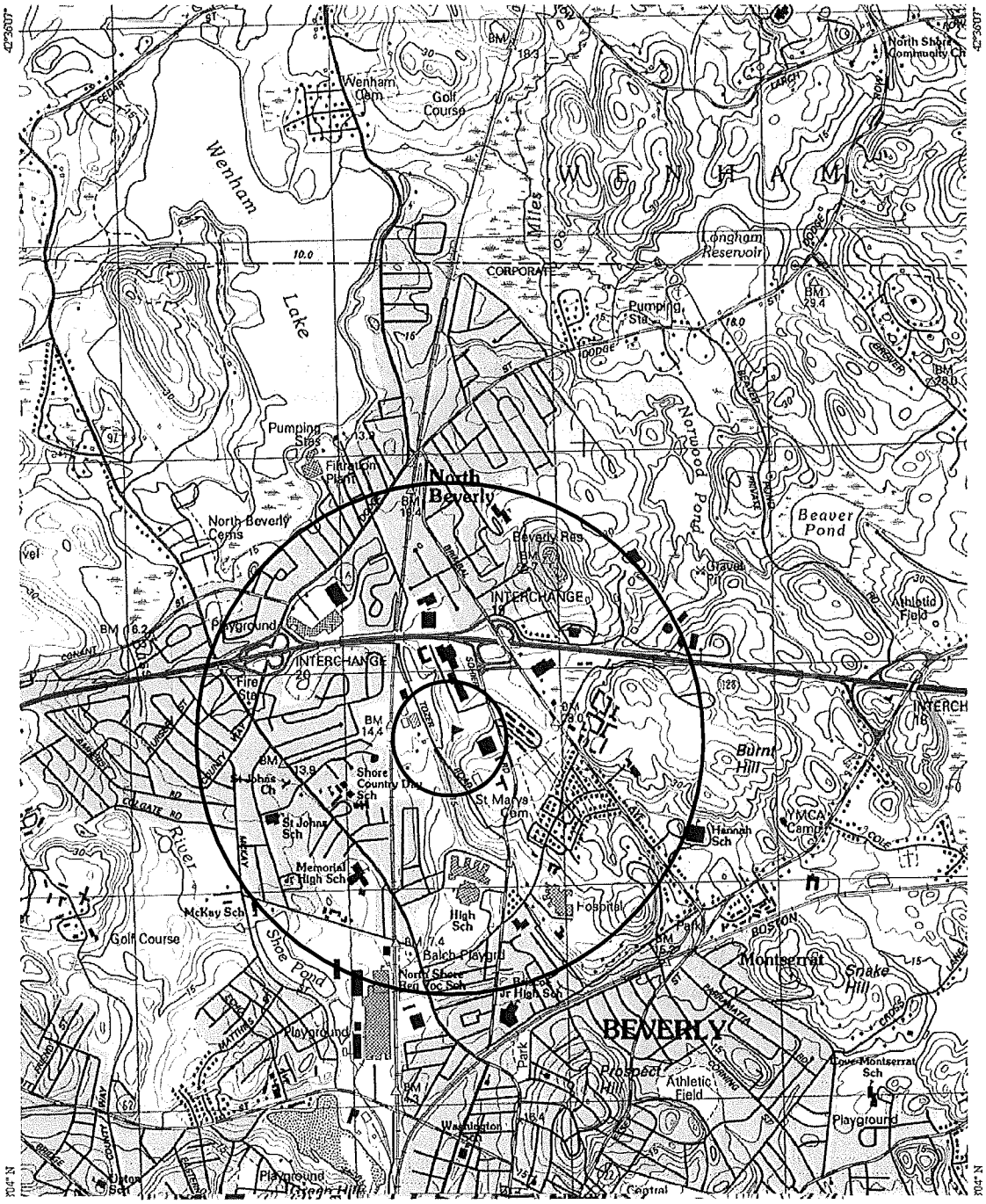
IRWIN Engineers, Inc.

J. Andrew Irwin, P.E., LSP
President

ATTACHMENTS:

Figure 1:	Site Locus
Figure 2:	Site Plan
Figure 3:	Groundwater Sampling Results (November & December 2011)
Table 1:	Groundwater Analytical Results - VOCs
Table 2 :	Soil Analytical Results – VOCs
Table 3 :	Concrete Analytical Results - VOCs
Appendix A:	Limitations
Appendix B:	Construction Worker Risk Characterization
Appendix C:	Analytical Laboratory Reports

FIGURES



0 1/2 1 MILE

0 1000 FEET 0 500 m 1000 m

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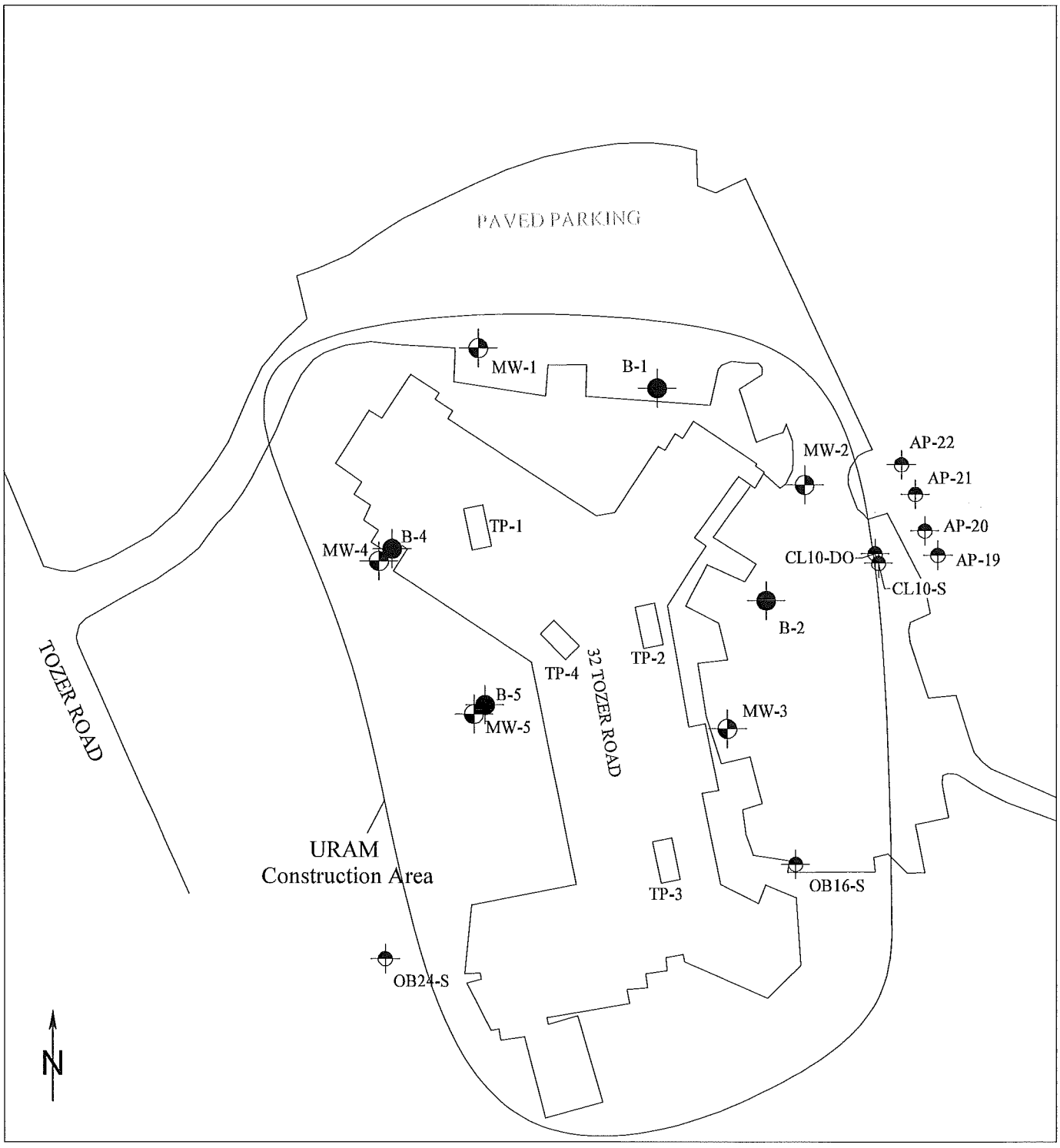
NOTE:

LOCUS CIRCLES FOR 500 FT AND 0.5 MILE RADIUS

IRWIN Engineers
CHEMICAL & ENVIRONMENTAL
33 West Central Street
Natick, MA 01760
(508) 653-8007

CLIENT	CELL SIGNALING TECHNOLOGY INC 3 TRASK LANE DANVERS, MA 01923
TITLE	FIGURE 1: SITE LOCUS 32 Tozer Road Beverly, MA 01915
DRAWING BY: ICL	SIZE B | CAGE CODE | DWG NO 413-06 SITE LOCUS | REV 0
CHECKED BY: JAI	
APPROVED BY: JAI	SCALE NTS | DATE 18 MAR 2011 | SHEET 1 OF 1



LEGEND

- INDOOR AIR
- SUB-SLAB SOIL GAS
- VARIAN MONITORING POINT
- TEST PIT LOCATION

40 0 20 40 80 160

GRAPHIC SCALE

DRAWN FROM BASE PLAN:
SHAW ENVIRONMENTAL, INC.
RTN #3-0485
PHASE V ROS STATUS REPORT
FIGURE 9
JUNE 7, 2010

IRWIN Engineers
CHEMICAL & ENVIRONMENTAL
33 West Central Street
Natick, MA 01760
(508) 653-8007

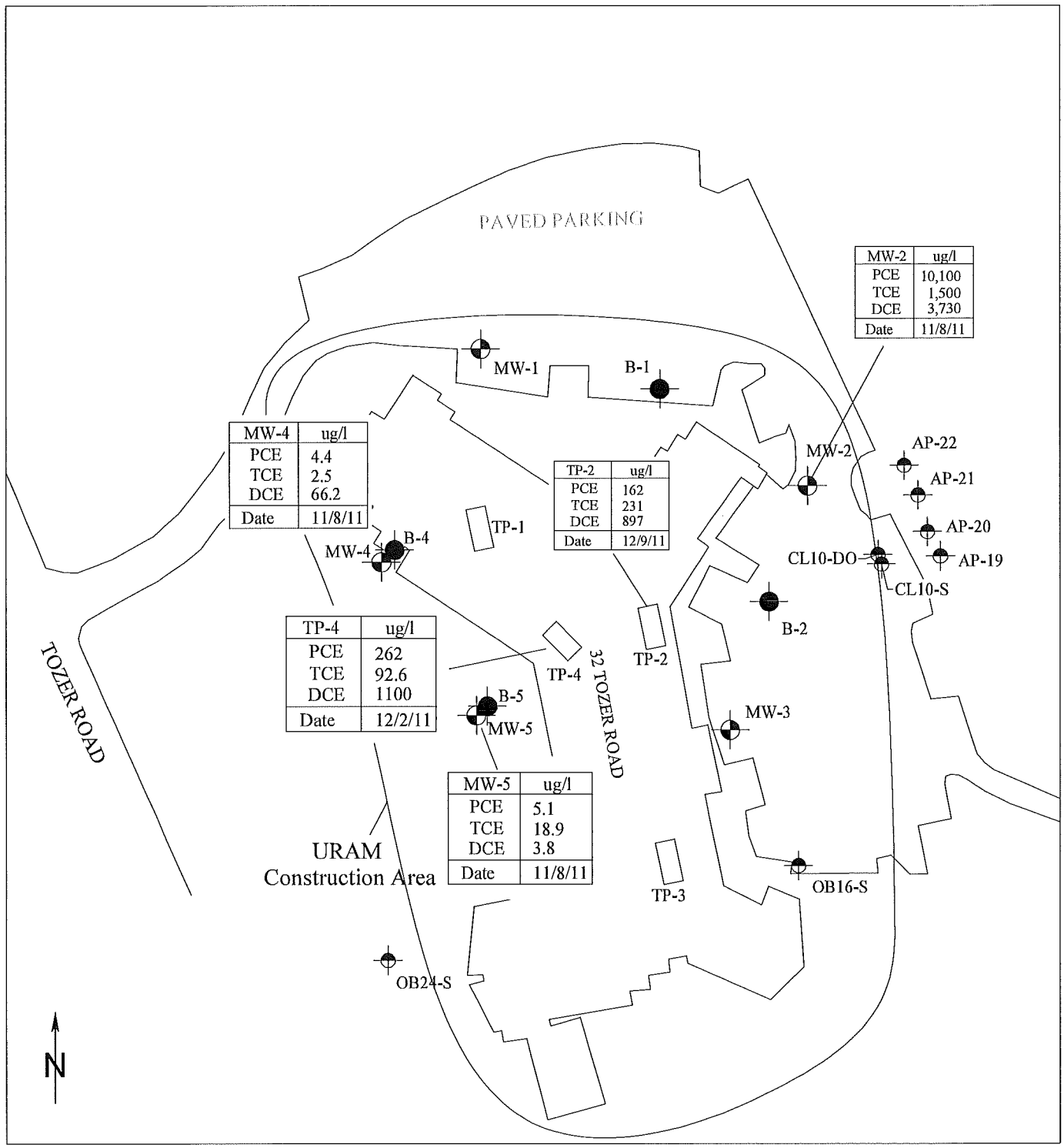
DRAWING BY: KAR
CHECKED BY: JAI
APPROVED BY: JAI

CLIENT: CELL SIGNALING TECHNOLOGY, INC.
3 TRASK LANE
DANVERS, MA

TITLE: FIGURE 2
SITE PLAN

SIZE	CAGE CODE	DWG NO	REV
A		413-06B D001 P2.TCW	-

SCALE	DATE	SHEET
GRAPHIC	03-28-2011	1 / 1



40 0 20 40 80 160

GRAPHIC SCALE

LEGEND

- IEI SOIL BORING/ MONITORING WELL
- IEI SOIL BORING
- VARIAN MONITORING POINT

DRAWN FROM BASE PLAN:
SHAW ENVIRONMENTAL, INC.
RTN #3-0485
PHASE V ROS STATUS REPORT
FIGURE 9
JUNE 7, 2010

IRWIN Engineers
CHEMICAL & ENVIRONMENTAL
33 West Central Street
Natick, MA 01760
(508) 653-8007

DRAWING BY: KAR
CHECKED BY: JAI
APPROVED BY: JAI

CLIENT: CELL SIGNALING TECHNOLOGY, INC.
3 TRASK LANE
DANVERS, MA

TITLE: FIGURE 3
GROUNDWATER
SAMPLING RESULTS
(Nov & Dec 2011)

SIZE	CAGE CODE	DWG NO	REV
A		413-06B D001 P2.TCW	-

SCALE	DATE	SHEET
GRAPHIC	03-28-2011	1 / 1

TABLES

Table 1 - Groundwater Analytical Results - VOCs							
	Units	MW-4	MW-5	MW-2	TP-4-GW	TP-2	MA S-1 Soil & GW-2
Sample Date		11/8/2011	11/8/2011	11/8/2011	12/2/2011	12/9/2011	
Method / Analyte							
SW846 8260C							
Acetone	µg/l	ND[10]	27.7	ND[2000]	ND[200]	ND[250]	50000
Benzene	µg/l	ND[1]	2.3	ND[200]	ND[20]	ND[25]	30000
2-Butanone (MEK)	µg/l	ND[10]	30.2	ND[2000]	ND[200]	ND[250]	50000
1,1-Dichloroethane	µg/l	ND[1]	2.6	ND[200]	ND[20]	ND[25]	5000
cis-1,2-Dichloroethene	µg/l	66.2	3.8	3730	1100	897	400
Tetrachloroethene	µg/l	4.4	5.1	10100	262	162	10000
Trichloroethene	µg/l	2.5	18.9	1500	92.6	231	2000
Tetrahydrofuran	µg/l	4.3	20.2	ND[400]	ND[40]	ND[50]	
ND = Not detected above [reporting limit]							
Other VOCs detected below reporting limit in all samples							

Table 2 - Soil Analytical Results - VOCs							
	Units	**MW-4 0.5-2.5**	**MW-5A 0.5-2.5**	**CB-1**	**TP-1-1'**	**TP-2-1'**	
Sample Date		11/3/2011	11/3/2011	11/3/2011	11/21/2011	11/21/2011	
Sample Depth	ft				1	1	
Method / Analyte							
SW846 8260C							
Acetone	µg/kg	ND[60.5]	ND[48.8]	149	ND[48.8]	ND[52.1]	
cis-1,2-Dichloroethene	µg/kg	ND[6.1]	ND[4.9]	ND[7]	ND[4.9]	75.3	
Naphthalene	µg/kg	ND[6.1]	ND[4.9]	7.3	ND[4.9]	ND[5.2]	
Tetrachloroethene	µg/kg	ND[6.1]	ND[4.9]	ND[7]	ND[4.9]	ND[5.2]	
Trichloroethene	µg/kg	ND[6.1]	ND[4.9]	ND[7]	ND[4.9]	ND[5.2]	
	Units	**TP-3-1'**	**TP-1-2'**	**TP-2-2'**	**TP-3-2'**	**TP-1-3'**	
Sample Date		11/21/2011	11/21/2011	11/21/2011	11/21/2011	11/21/2011	
Sample Depth	ft	1	2	2	2	3	
Method / Analyte							
SW846 8260C							
Acetone	µg/kg	ND[50]	ND[53.2]	ND[47.7]	ND[50.8]	ND[48.8]	
cis-1,2-Dichloroethene	µg/kg	ND[5]	16.3	74.4	ND[5.1]	8.5	
Naphthalene	µg/kg	ND[5]	ND[5.3]	ND[4.8]	ND[5.1]	ND[4.9]	
Tetrachloroethene	µg/kg	ND[5]	ND[5.3]	5.7	ND[5.1]	ND[4.9]	
Trichloroethene	µg/kg	ND[5]	ND[5.3]	ND[4.8]	ND[5.1]	ND[4.9]	
	Units	**TP-2-3'**	**TP-2-4'**	**TP-2-5'**	**TP-2-6'**	**B-4 6-7'**	
Sample Date		12/2/2011	12/2/2011	12/2/2011	12/2/2011	12/9/2011	
Sample Depth	ft	3	4	5	6	6-7	
Method / Analyte							
SW846 8260C							
Acetone	µg/kg	ND[48]	ND[54.5]	ND[52.2]	ND[52.5]	ND[56.6]	
cis-1,2-Dichloroethene	µg/kg	33.2	61.3	43.1	7.6	ND[5.7]	
Naphthalene	µg/kg	ND[4.8]	ND[5.5]	ND[5.2]	ND[5.2]	ND[5.7]	
Tetrachloroethene	µg/kg	5.9	20.1	25.9	9	ND[5.7]	
Trichloroethene	µg/kg	6.7	22.6	37.2	16.5	ND[5.7]	
	Units	**B-5 10-11'**	**B-2 4'**	**B-2 6'**	**B-2 8'**	**B-2 10'**	**MA S-1 Soil & GW-2**
Sample Date		12/9/2011	12/9/2011	12/9/2011	12/9/2011	12/9/2011	
Sample Depth	ft	10-11	4	6	8	10	
Method / Analyte							
SW846 8260C							
Acetone	µg/kg	ND[678]	ND[59.5]	ND[59.8]	ND[59.9]	ND[55.4]	50000
cis-1,2-Dichloroethene	µg/kg	ND[67.8]	ND[5.9]	ND[6]	ND[6]	ND[5.5]	400
Naphthalene	µg/kg	ND[67.8]	ND[5.9]	ND[6]	ND[6]	ND[5.5]	40000
Tetrachloroethene	µg/kg	ND[67.8]	ND[5.9]	ND[6]	ND[6]	ND[5.5]	10000
Trichloroethene	µg/kg	ND[67.8]	ND[5.9]	ND[6]	ND[6]	ND[5.5]	2000
ND = Not detected above [reporting limit]							
Other VOCs detected below reporting limit in all samples							

Table 3 - Concrete Analytical Results - VOCs				
	Units	Concrete 1	Concrete 2	MA S-1 Soil & GW-2
Sample Date		12/22/2011	12/22/2011	
Method / Analyte				
SW846 8260C				
Acetone	µg/kg	ND[48]	ND[45.4]	
Benzene	µg/kg	ND[4.8]	ND[4.5]	50000
2-Butanone (MEK)	µg/kg	ND[48]	ND[45.4]	1000
1,1-Dichloroethane	µg/kg	ND[4.8]	ND[4.5]	4000
cis-1,2-Dichloroethene	µg/kg	ND[4.8]	ND[4.5]	100
Naphthalene	µg/kg	ND[4.8]	ND[4.5]	50000
Tetrachloroethene	µg/kg	ND[4.8]	ND[4.5]	100
Trichloroethene	µg/kg	ND[4.8]	ND[4.5]	500000
Tetrahydrofuran	µg/kg	ND[9.6]	ND[9.1]	
ND = Not detected above [reporting limit]				
Other VOCs detected below reporting limit in all concrete, soil, and GW samples				

APPENDIX A - LIMITATIONS

STATEMENT OF LIMITATIONS AND CONDITIONS

Attachment to Opinion of Massachusetts Licensed Site Professional

Irwin Engineers, Inc.

Name of Licensed Site Professional:	J. Andrew Irwin, President
LSP Registration Number:	9997
Date of Opinion:	January 2012
Client to Whom Opinion was Rendered:	Cell Signaling Technology, Inc.
Date of Agreement between Irwin Engineers and Client pursuant to which Opinion was Rendered:	April 29, 2011
Response Tracking No./Site No.:	RTN #3-30449

This Statement of Limitations and Conditions is an integral part of, and is incorporated by reference into, the Opinion of Massachusetts Licensed Site Professional referenced above.

Limitations

1. Purpose of Opinion

A. This Opinion is being provided in compliance with the requirements set forth in the Massachusetts Contingency Plan ("MCP"), 310 CMR 40.0000 et seq. Specifically, the LSP has prepared this Opinion at the request of the Client identified above as part of a Response Action Outcome Statement. This stated purpose has been a significant factor in determining the scope and level of services required to render this Opinion.

B. Should the purpose for which this Opinion is to be used change, this Opinion shall no longer be valid.

2. General

This Opinion was prepared for the sole and exclusive use of the Client, subject to the provisions of the MCP. Except for our Client, their attorneys, banker, or insurance carriers, no other party is entitled to rely in any way on the conclusions, observations, specifications, or data contained herein without the express written consent of Irwin Engineers, Inc. and the LSP who rendered this opinion. This Opinion was prepared pursuant to an Agreement between Irwin Engineers, Inc. and the Client referenced above which defines the scope of work and sets out agreements regarding waivers of consequential damages, limitations on liability, and other important conditions and restrictions pursuant to which the Opinion is rendered. Any use of this Opinion by anyone other than Client, or any use of this Opinion by Client or others for any purpose other than the stated purpose set forth above, without the LSP's review and the written authorization of Irwin Engineers, Inc. and the LSP, shall be at the user's sole risk, and neither Irwin Engineers, Inc. nor the LSP shall have any liability or responsibility therefor.

3. Scope of Services

The observations and conclusions described in this Opinion are based solely on the Services provided pursuant to the Agreement with the Client and any approved additional services authorized by Client. Without limitation of any other applicable limitations or conditions, neither Irwin Engineers, Inc. nor the LSP shall be liable for the existence of any condition, the discovery of which would have required the performance of services not authorized under the Agreement. To the best of the knowledge and belief of Irwin Engineers, Inc. and the LSP who signed this Opinion, no inquiry of an attorney-at-law having being made, no laws, regulations, orders, permits or approvals are applicable to the response actions to which this opinion relates except, if and to the extent applicable, M.G.L. c.21A, Sections 19-19J, 309CMR, M.G.L. c. 21 E and 310 CMR 40.0000. Accordingly, this opinion is not intended to and does not address compliance with any other laws, regulation, orders, permits or approvals.

4. **Changed Circumstances**

The passage of time may result in changes in technology, economic conditions or regulatory standards, manifestations of latent conditions, or the occurrence of future events which would render this Opinion inaccurate or otherwise inapplicable. Neither Irwin Engineers, Inc. nor the LSP shall be liable or responsible for the consequences of any such changed circumstances or conditions on the accuracy of this Opinion. In addition, under no circumstances shall the Client nor any other person or entity rely on the information or conclusions contained in this Opinion after six months from its date of submission without the express written consent of Irwin Engineers, Inc. and the LSP. Reliance on the Opinion after such period of time shall be at the user's sole risk.

5. Should Irwin Engineers, Inc. or the LSP be required or requested to review or authorize others to use this Opinion after its date of submission, Irwin Engineers, Inc. shall be entitled to additional compensation at then existing rates or such other terms as may be agreed upon between Irwin Engineers, Inc. and the Client. Nothing herein contained shall be deemed to require Irwin Engineers, Inc. or the LSP to undertake any such review or authorize others to use this Opinion.

6. The conclusions stated in this Opinion are based upon [check and initial appropriate boxes]:

2/31/12

☑ FCL Visual inspection of existing physical conditions;

☑ FCL Review and interpretation of Site history and Site usage information which was made available or obtained within the scope of work authorized by the Client;

☑ FCL Information provided by the Client;

☑ FCL Information and/or analyses for designated substances or parameters provided by an independent testing service or laboratory on a limited number of samples;

☑ FCL A limited number of subsurface explorations made on dates indicated in documentation supporting this Opinion;

☐ FCL Other _____

upon which the LSP has relied and presumed accurate, and upon which the LSP is entitled to reasonably rely. The LSP was not authorized and did not attempt to independently verify the accuracy or completeness of information or materials received from the Client and/or from laboratories and other third parties during the performance of its services. Neither Irwin Engineers, Inc. nor the LSP shall be liable for any condition, information, or conclusion, the

discovery of which required information not available to the LSP or for independent investigation of information provided to the LSP by the Client and/or independent third parties.

7. This Opinion is rendered for the limited purpose stated above, and is not and should not be deemed to be an opinion concerning the compliance of any past or present owner or operator of the Site with any federal, state or local law or regulation. **No warranty or guarantee, whether express or implied, is made by this opinion, and any implied warranties of merchantability or fitness for a particular purpose are expressly disclaimed. Without limiting the generality of the foregoing, no warranty or guarantee is made that all contamination at a Site or sources or contamination has been detected or identified, that any action or recommended action will achieve all of its objectives, or that this Opinion or any action as to which this Opinion relates will be upheld by any audit conducted by the DEP or any other party.**

APPENDIX B
Construction Worker Risk Characterization

Screening-Level
Characterization of Worker Health Risk

For the Property
Located at

32 Tozer Road
Beverly, Massachusetts

Prepared for:

IRWIN Engineers, Inc.
33 West Central Street
Natick, MA 01760

Prepared by:

OAK CREEK, Inc.
60 Oak Creek
Buxton, Maine 04093-6616

November 4, 2011

TABLE OF CONTENTS

List of Tables in Appendix A

1.0 INTRODUCTION

Irwin Engineers, Inc. (IRWIN) retained OAK CREEK, Inc. (OCI) to provide a screening-level characterization of worker health risk at the Cell Signaling Technology, Inc. (CST) Site located at 32 Tozer Road in Beverly, Massachusetts. Specifically, IRWIN asked OCI to characterize worker health risk posed by CoPC in soil, groundwater, and air under two scenarios; (1) pre-construction exposure of persons working within the facility (i.e., facility workers), and (2) potential future exposure of construction workers involved in building renovations.

The purpose of this risk characterization is two fold. Firstly, to establish whether a condition of "No Significant Risk" of harm to health exists for facility workers currently working at the Site (i.e., prior to the beginning of any construction activity), and secondly, to establish whether there is any potential risk of harm to construction workers who would be involved in planned renovation of the building at the Site. CST is considering expansion and/or renovation of their building at the Site. The result of this risk characterization will be used to identify actions that might be necessary to mitigate current and/or potential future health risks during Site construction activity.

OCI characterized worker health risk in a manner consistent with the MCP [310 CMR 40.0900-40.0960] and using applicable risk assessment guidance from Massachusetts Department of Environmental Protection (MassDEP) (MassDEP 1994, 1995, 1996a, b, 1998, 1999a, b, 2002b, c, d, e, f, h, 2006b) and the U.S. Environmental Protection Agency (U.S. EPA) (USEPA 1989, 1991, 1992a, b, 1993, 1995a, b, 1996, 1997, 2000, 2001b, 2005, 2008a, e).

1.1 Site Characterization

IRWIN conducted a subsurface environmental assessment of the CST facility located at 32 Tozer Road in Beverly, Massachusetts (the Site) (IRWIN 2011). IRWIN determined that contamination detected in environmental media at the CST Site sources from the nearby Varian Medical Systems, Inc. (Varian) property located at 150 Sohier Road in Beverly, Massachusetts. Environmental monitoring and remediation activities conducted at the Varian site, to address historic disposal of volatile organic compounds (VOCs), indicate that VOCs have migrated onto the CST Site. Contaminants of potential concern (CoPC) migrating onto the CST Site include perchloroethene (PCE or tetrachloroethylene), trichloroethene (TCE), and cis-1,2-dichloroethene (cis-1,2-DCE).

Currently, CST is exploring the feasibility of expansion and/or renovation of their facility for use as a production laboratory and supporting activities that include warehousing. Part of that exploration includes the pre-construction environmental assessment conducted by IRWIN (IRWIN 2011). The purpose of this assessment is to determine whether current environmental conditions pose a health risk to facility workers currently using the Site and whether protective measures will be required to protect construction workers during planned

building rennovation activities. To date, this assessment includes sampling and analysis of CST Site soils, groundwater, sub-slab soil gas, and indoor air.

1.1.1 Preconstruction Environmental Assessment

On February 15 and 16 of 2011, IRWIN completed five (5) soil borings, three (3) of which were developed into two-inch groundwater monitoring wells (i.e., MW-l, MW-2, MW-3) (IRWIN 2011). IRWIN collected soil samples at five foot intervals from borings completed to depths between 16 and 25 feet below the ground surface (ft bgs). IRWIN characterized Site soils between 10 and 20 ft bgs as generally consisting of a medium to very dense brown fine to medium sand with varying amounts of silt. These soils were underlain by a very dense gray till.

IRWIN field screened each soil sample with a photoionization detector (PID) to determine the presence of VOC and identify soil samples for further laboratory analysis (IRWIN 2011). Using this screening approach, IRWIN sent a single soil sample collected from each sampling location to Spectrum Analytical, Inc. for analysis of VOCs by method SW846/8260C. In addition, four soil samples were analyzed for disposal acceptance criteria in accordance with MassDEP *Policy #COMM-97-001: Reuse and disposal on contaminated soils at Massachusetts landfills.* These disposal acceptance criteria included analyses for PCBs, VOC's, SVOC's, metals (As, Cd, Cr, Pb, Hg), Total Petroleum Hydrocarbon (TPH), and conductivity. The result of CST soil analyses is summarized in IRWIN Table 1 (IRWIN 2011).

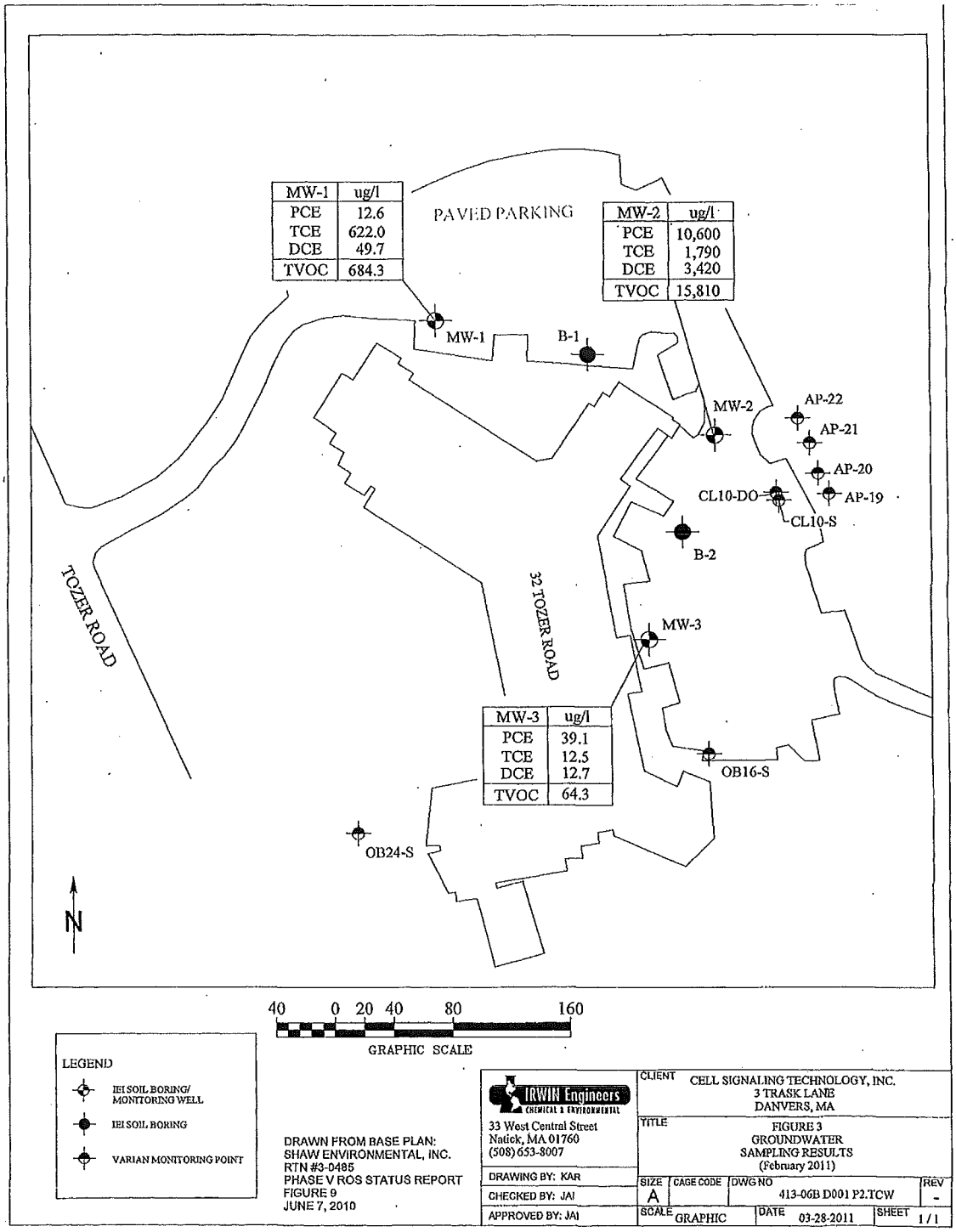
Table 1: Soil Sampling Analysis Results

Analyte	Concentration			
	MW-1 S-4, 20.5' (2/15/11)	**B-1 S-1, 5-6' (2/15/11)**	**MW-2 S-3, 15.9' (2/15/11)**	**B-2 S-1, 5-7' (2/16/11)**
PID Screening, ppmv	3.4	0.0	23	0.0
Perchlorethene (PCE), mg/kg	ND	ND	1.49	ND
Trichloroethene (TCE), mg/kg	0.0869	ND	0.185	ND
Cis-1,2-Dichloroethene (DCE), mg/kg	ND	ND	0.261	ND
ND = Not Detected				

(Taken From IRWIN 2011)

IRWIN converted three (3) of the five (5) soil borings into two-inch groundwater monitoring wells (MW-I, MW-2 and MW-3). The remaining two (2) boring locations were backfilled with native material to the ground surface. On February 24 of 2011, IRWIN sampled groundwater from the three (3) monitoring wells. Samples were sent to Spectrum Analytical, Inc. for analysis of VOCs by method SW846/8260C. Results of the groundwater analysis are depicted in IRWIN Figure 3 (provided in Figure 3 below) and identify concentrations of PCE,

TCE, and cis-1,2-DCE in Site groundwater. CoPC concentrations appear to be highest in groundwater sampled from MW-2.

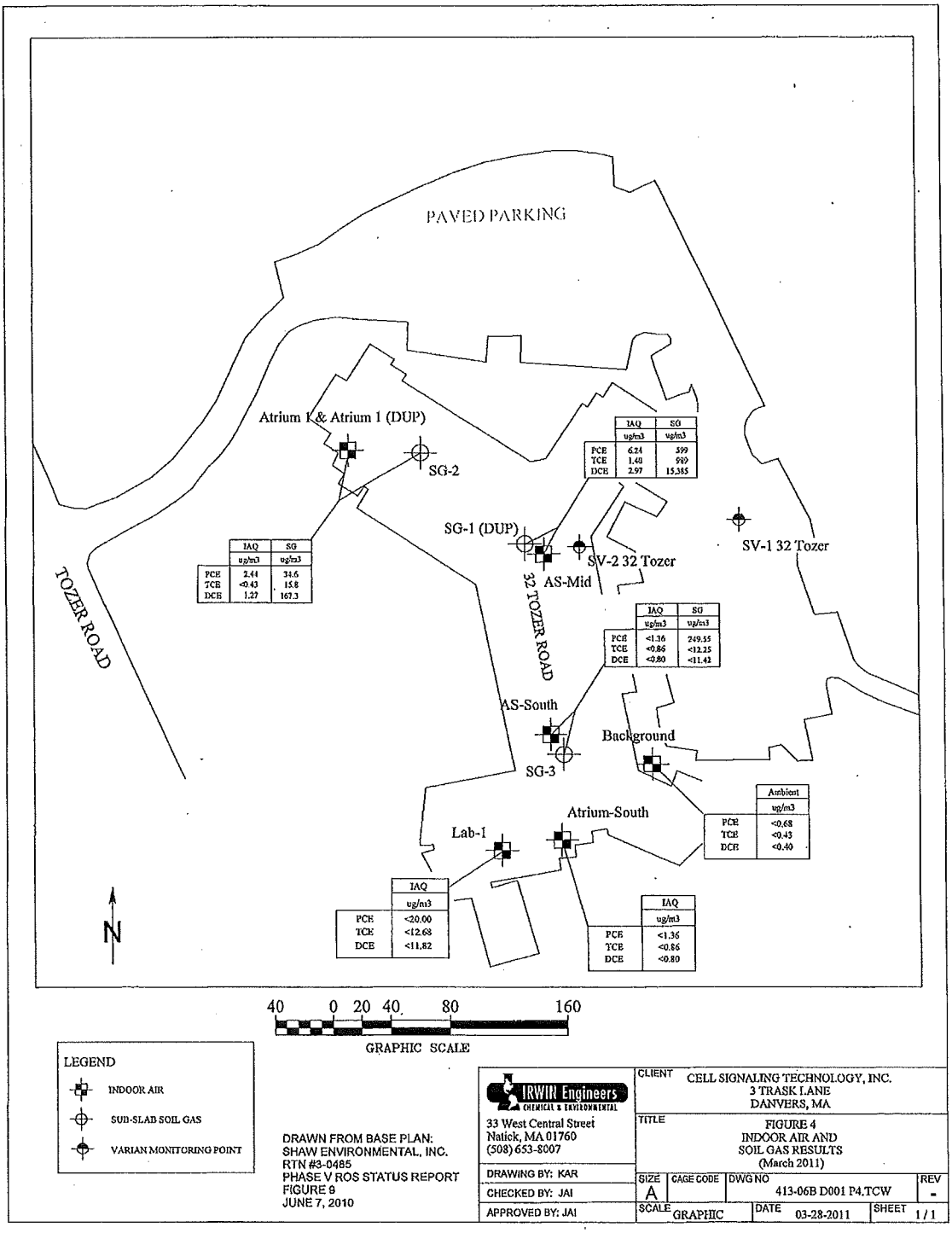


(Taken From IRWIN 2011)

On March 2 and March 17 of 2011 , IRWIN sampled indoor air, collecting seven (7) indoor air samples from the Site including, a background sample outside the southern entrance to the building, duplicate samples in the northern atrium identified as Atrium-I and Atrium I (DUP), a sample in the occupied laboratory in the lowest level of the southern portion of the building (Lab-I), a sample in the lowest level of the building approximately down gradient from MW-2 (AS-Mid), a sample in the lower level of the building outside the occupied laboratory in the southern portion of the building (AS-South), and a sample in the southern Atrium (Atrium-South). IRWIN collected indoor air samples in 6-liter Summa Canisters with 4-hour regulators and sent them to Spectrum Analytical, Inc. for analysis by U.S. EPA Method TO-I5.

On March 3, 2011, IRWIN conducted subsurface soil gas sampling, collecting three (3) soil gas samples in close proximity to indoor air samples Atrium I and Atrium I (DUP), AS-Mid, and AS-South. Soil Tech, LLC installed the soil gas sampling points by drilling through the concrete slab (approximately 8-inches) and installing sealed soil gas sampling points approximately 1.5 feet below the top of the slab. Soil gas samples were collected using 6-liter Summa Canisters with 2-hour regulators. Samples were sent to Spectrum Analytical, Inc. for analysis of VOCs using U.S. EPA method TO-15. During sampling, the Summa canister used to collect sample SG-I filled in approximately 15 minutes, compromising the quality of that sample. It was not analyzed. After sample collection, Soil Tech removed the soil gas sampling points and filled in the holes with concrete, such that the entire hole was sealed and concrete was flush with the top of the slab.

The results of the indoor air and soil gas analyses are depicted in IRWIN Figure 4 (provided below) and show detected concentrations of PCE, TCE, and cis-1,2-DCE in indoor air and in soil vapor. CoPC concentrations appear to be highest in SG-1, which is located near the highest CoPC concentrations measured in groundwater.



(Taken From IRWIN 2011)

Analytical results, obtained during IRWIN's preconstruction environmental assessment, detected concentrations of PCE, TCE and cis-1,2-DCE in soil, groundwater, soil gas, and

indoor air. These results suggest that VOCs migrate into indoor air from the subsurface. IRWIN retained OCI to determine whether CoPC in indoor air pose a risk of harm to current workers at the facility and to determine whether planned construction activities directed at renovating the onsite building pose a potential risk of harm to construction workers.

1.2 Conceptual Site Model

A conceptual model is an important first step in defining the potential for exposure (USEPA 1989). A conceptual model identifies all potential or suspected sources of release; types and concentrations of contaminants detected in media, all potentially impacted media, potential exposure pathways, and potentially exposed receptors. A site conceptual model provides a systematic way to identify and summarize this information based on current and potential future site-specific land use considerations.

The extent of contamination at the subject Site appears to be limited to chlorinated VOCs (cVOCs) in environmental media. These cVOCs appear to have migrated from where they were released on the Varian property. Analytical analyses, conducted during IRWIN's pre-construction environmental assessment, detected PCE, TCE, and cis-1,2-DCE in Site soils, groundwater, soil vapor, and indoor air. Although Site soils appear to contain relatively low concentrations of these cVOCs (IRWIN Table 1), relatively high concentrations of these cVOCs were detected in groundwater (IRWIN Figure 3), especially in samples collected from MW-2. cVOC concentrations detected in soil vapor and indoor air analyses (IRWIN Figure 4) appear to mirror their relative concentration magnitude in groundwater, suggesting that the cVOC detected in groundwater are the source of cVOCs infiltrating indoor air of the CST facility.

Facility workers currently working at the CST facility may have direct contact with contaminated surface soils (i.e., maintenance workers and landscapers/gardeners) and volatile CoPC that have infiltrated indoor air (i.e., office workers). While soil contamination appears to reside at depths of 5 to 20.5 ft bgs, it is possible that re-development of the Site may result in some soils being brought to the surface and used in areas where a landscaper/gardener might have direct contact with them. In contrast, there is no assumption required for facility workers contact with CoPC detected in indoor air of the facility. For simplicity, in the characterization of facility worker risk, OCI assumed that a current facility worker might work as a maintenance worker, landscaper/gardener, and as an office worker. As such, OCI characterized facility worker risk assuming this workers exposure to both CoPC in soils and to CoPC vapors in indoor air (i.e., an aggregate exposure). OCI did not fractionate the facility worker exposure based on job function. Intuitively, it is unreasonable to assume that a facility worker works 24 hours a day, as assumed in this risk characterization (i.e., 8-hours a day as a maintenance worker, 8-hours a day as a landscaper/gardener, and then 8-hours a day as an office worker).

OCI assumed construction workers are involved in construction activities directed at the renovation/expansion of the CST facility. Planned construction activities, to be conducted as part of Release Abatement Measures (RAM) at the CST Site, include breaching the concrete floor slab within the facility, removal of impacted soils, and installation of an effective barrier

to soil vapor infiltration. Construction workers breaching the concrete floor will likely contact contaminated media (i.e., soils, shallow groundwater, and vapors in air), which could pose an unacceptable risk of harm to their health. IRWIN estimates that as much as twenty percent (20%) of the interior floor area may be breached during construction activities. Breach of the concrete floor and the temporary stockpiling of excavated soils on the floor slab inside the facility may result exposure of construction workers to unsafe concentrations of cVOCs in indoor air.

Current and potential future exposure pathways for facility workers are limited to inhalation of CoPC vapors infiltrating indoor air, the incidental ingestion of outdoor surface soils, and dermal contact outdoor surface soils. Potential future exposure pathways for construction workers involved in IRWIN's planned construction activities at the Site include inhalation of vapors in indoor air over the breach in the floor slab, incidental ingestion of sub-slab soils, dermal contact with sub-slab soils, dermal contact with exposed shallow groundwater within the floor breach, and although unlikely, the ingestion and inhalation of soil-derived airborne particulate generated during construction activity within sub-slab soils.

Consistent with the pre-construction use of the site, OCI assumed facility workers have direct contact with CoPC detected in indoor air, and in exterior soils. OCI assumed that construction workers involved in Site construction activities have direct contact with CoPC in site soils and contaminated groundwater exposed within the floor slab breach, airborne soil particulate generated while working in sub-slab soils, and CoPC vapors emanating from that breach into indoor air of the building. To estimate the concentration of CoPC vapors in indoor air during construction activities, OCI used a simple box model balancing CoPC gas-flux from exposed shallow groundwater with CoPC vapor loss through facility air exchange. This box model and the assumptions used in its application to the CST facility are defined and discussed later in this report (Section 2.4.5.2.3).

Finally, OCI integrated worker CoPC exposures with CoPC-specific toxicity values to generate cumulative quantitative CoPC-specific estimates of worker health risk. These health risks are compared with MassDEP target risks for excess lifetime cancer risk and chronic hazard. This screening-level characterization of worker health risk is, by design, intended to conservatively identify potential risk of harm to facility worker health associated with pre-construction use of the Site and potential risk of harm to construction workers involved in planned construction activities to be conducted in the renovation/expansion of the CST building.

2.0 CHARACTERIZATION OF WORKER RISK

OCI relied on risk assessment guidance from MassDEP (MassDEP 1994, 1995, 1996a, b, 1998, 1999a, b, 2002b, c, d, e, f, h, 2006b) and the U.S. Environmental Protection Agency ("U.S. EPA") (USEPA 1989, 1991, 1992a, b, 1993, 1995a, b, 1996, 1997, 2000, 2001b, 2005, 2008a, e) in the characterization of worker health risk. Human health risk characterization integrates five separate components: hazard identification, dose-response assessment, exposure assessment, risk characterization, and uncertainty analysis. The result of human

health risk characterization is a set of quantitative estimates of non-cancer hazards or hazard indices ("HIs") and excess lifetime cancer risks ("ELCRs") posed by representative concentrations of CoPC in various site media. In this screening-level characterization of worker health risk, OCI used the maximum detected concentration for individual CoPC detected in each of the impacted media to conservatively characterize worker health risk. OCI considers several preliminary steps prior to characterizing health risk at the site.

2.1 Preliminary Steps

Preliminary steps required under a MCP Method 3 characterization of human health risk include the determination of current and foreseeable site land uses, categorization of site soils and groundwater, determination of background concentrations, and defining any assumptions or limitations regarding allowable site activities and uses. In a screening-level characterization of human health risk, the maximum CoPC concentration detected in each environmental media is used as the exposure point concentration (EPC). Such a characterization of health risk is unlikely to under-predict actual health risk associated with the Site, and therefore should be viewed as a conservative health-protective characterization of Site health risks. The following sections address these preliminary steps and each of the major components of a human health risk characterization.

2.1.1 Foreseeable Site Activities and Uses

This risk characterization is limited to current and potential future pre-construction facility workers and potential future construction workers involved in building renovation/expansion. This risk characterization does not evaluate potential future use of the Site as a single family residence, play ground, daycare, school, or any other use and therefore this report is not suitable for use in support of Site closure under the MCP.

2.1.2 Soil Categorization

Soil at the site is categorized S-1, S-2, and S-3. An S-1 soil categorization is consistent with current and potential future unrestricted use of the site (i.e., residential uses and activities). S-1 categorized soils at the site include surface soils with which receptors may have high intensity and high frequency contact. S-1 category soils may also include those soils used in children's play areas, yards, and gardens, within which children frequently play (MassDEP 1995). S-2 categorized soils include those contacted with less frequently and with less intensity and include soils under pavement or at a depth making frequent and high intensity contact less likely (MassDEP 1995).

OCI assumed that current and potential future facility workers have high intensity and high frequency contact with Site soils during maintenance and landscaping/gardening activities even though the only impacted soils appear to be those between 5 and 20.5 ft bgs. This conservative assumption is based on the expectation that future activities at the Site might bring impacted soils to the future where maintenance and landscaper/gardeners might have contact with them. OCI also assumed that potential future construction workers, involved in

planned construction activities at the Site, have high frequency and high intensity contact with sub-slab soils within the floor breach and those that might be stockpiled inside on the floor slab of the CST facility. Under these assumptions, OCI conservatively categorized all Site soils S-1.

2.1.3 Groundwater Categorization

Groundwater at the subject property is appropriately categorized GW-2 and GW-3. A groundwater classification of GW-1 is not appropriate under the MCP [310 CMR 40.0932] since, the site is not located within a Zone II of a public water supply, within an Interim Wellhead Protection Area, within a Potentially Productive Aquifer, within a Zone A of a Class A surface water body, and is not greater than 500 feet from a public water supply pipeline, and based on work conducted by Varian, does not lie within 500 feet of a private water supply well. In contrast, a groundwater category GW-2 is applicable at the Site since the average annual depth to ground water is less than 15 ft bgs (i.e., ranging from 3.4 to 12.3 ft bgs depending on the monitoring well location) and the existing CST facility is located within 30 feet of contaminated groundwater. Because MassDEP categorizes all sites GW-3, groundwater at the subject property is also appropriately categorized GW-3.

2.1.4 Established Background

MassDEP has not established a background concentration for cVOCs in soils (MassDEP 2002b). OCI compared measured and estimated CoPC concentrations in indoor air with applicable Threshold Values (TV) provided for Commercial/Industrial locations ($TV_{c/i}$) (MassDEP 2010).

Table 2. Comparison of Measured and Estimated Vapor Concentrations with Applicable $TV_{c/i}$.

CoPC	Indoor Air $TV_{c/i}$ (ug/m^3)	Maximum *Measured* Indoor Air (ug/m^3)	Upper-Bound *Estimated* Exposure Box Air (ug/m^3)	Sub-Slab Soil Gas $50 \times TV_{c/i}$ (ug/m^3)	Maximum *Measured* Sub-Slab Soil Gas (ug/m^3)
PCE	4.1	6.24	1,107	205	599
TCE	2.0	1.40	195	100	989
cis-1,2-DCE	10	2.97	402	5,000	15,385

In contrast to PCE, the maximum measured concentration of TCE and cis-1,2-DCE in indoor air of the CST facility do not exceed the MassDEP-identified Threshold Value (TV) for a Commercial/Industrial location ($TV_{c/i}$).

Using a simple box model, OCI estimated upper-bound CoPC concentrations in air within the facility during construction activity that includes breaching the building floor. The upper-bound estimate of PCE, TCE, and cis-1,2-DCE in indoor air over an open floor breach, greatly exceed their applicable $TV_{c/i}$. This is consistent with measured maximum soil vapor concentrations beneath the CST facility slab that exceed applicable soil vapor TV (i.e., $50 \times TV_{c/i}$) identified by MassDEP. From a human health risk perspective, even the MassDEP

$TV_{c/i}$ concentrations for PCE and TCE exceed U.S. EPA Region III calculated generic allowable risk-based concentrations for industrial air (i.e., 2.1 ug/m^3 for PCE and 6.1 ug/m^3 for TCE). U.S. EPA Region III does not provide a similar risk-based concentration for cis-1,2-DCE in industrial air.

2.1.5 Assumptions Concerning Activity and Use Limitations

Specific land uses and activities, which are reasonably foreseeable, "*may be eliminated*" from further consideration in risk characterization through the implementation of an Activity and Use Limitation (AUL) (MassDEP 1995, 1999a) An AUL is a declaration of the acceptable and unacceptable future land uses and activities at the site (MassDEP 1999a). An AUL is not required if the site is suitable for unrestricted land use in the future (i.e., all activities and land uses are permitted and consistent with a level of "No Significant Risk"). This characterization of worker risks does not rely on an AUL or any other restriction on facility worker or construction worker activities at the Site.

This characterization of worker risk alone is not sufficient to support Site closure under the MCP since it dos not evaluate all potential future use scenarios at the Site. An AUL may be used to limit potential future Site uses to those considered here, thereby allowing the result of this characterization to be used to support further remedial efforts and/or even Site closure.

2.1.6 Data Useability

Under the MCP [310 CMR 40.0017 and 40.0191(2)], analytical and environmental monitoring data should be scientifically valid and defensible, exhibiting of a level of precision and accuracy commensurate with the data's stated or intended use, while taking into consideration relevant policies and guidelines issued by MassDEP and the US EPA. The MCP [310 CMR 40.0017(3)(i)] further provides that all response action submittals to MassDEP shall include details on any known conditions or findings that may affect the validity of analytical data, including unsatisfactory results obtained for blank, duplicate, surrogate or spiked samples.

OCI's review of IRWIN's summary of the available laboratory data finds the necessary precision, accuracy, representativeness, completeness, comparability, and sensitivity ("PARCCS") required for the characterization of worker health risk. A brief review of the analytical data evaluation follows:

Precision Evaluation: There appears to be mutual agreement between field observations and laboratory analytical results. Generally, field screening of soil data using PID offers a useful approach for biasing the selection of soil samples for further laboratory analysis. The overall result is that soil analytical data likely depict the highest volatile contaminant concentrations from each soil boring. Screening of indoor air using a PID during soil vapor and indoor air sampling served to control for conditions at the time of sampling.

Accuracy Evaluation: OCI relies on IRWIN to have evaluated the accuracy of laboratory analytical results.

Representative Evaluation: IRWIN collected soil and groundwater from Site areas most likely to exhibit contamination. These areas reflect the current understanding of IRWIN as to the likely source of contamination (i.e., subsurface migration from the up-gradient Varian Site) and the potential for receptors to contact that contamination. Laboratory analytical results are consistent with the Conceptual Site Model (CSM), migration from the point of release (i.e., the Varian property), and vapor migration. Sample collection procedures are appropriate for the contaminants of interest and sample procedures for collection and analysis appear to be appropriate for the samples collected.

According to MassDEP guidance on the use of vapor transport models: "*current exposure pathways should be evaluated/validated with actual site data ...*" (MassDEP 2002e). The current IRWIN pre-construction environmental assessment provides adequate information from which to characterize pre-construction facility worker health risk. Groundwater analytical information analysis is sufficient to estimate potential future construction worker exposure to volatiles in indoor air over a breach in the building floor using a simple mass-balance-based box model and site-specific parameters.

Completeness Evaluation: IRWIN collected an appropriate number and distribution of samples in a variety of environmental media for use in the characterization of worker risk. While soil sample analyses are limited in number and location, they are consistent with the presumed source of contamination from an off-site location (i.e., the up-gradient Varian property). Additional soil sampling and analyses are unlikely to provide additional information useful in risk characterization.

Comparability Evaluation: OCI finds the laboratory analytical data generated to date is comparable to each other and across media.

Sensitivity Evaluation: OCI finds the available soil and groundwater data are of the appropriate sensitivity for use in risk characterization.

Data Usability Assessment: OCI assumed that the laboratory analysis of soil, groundwater, soil vapor, and indoor air samples are CAM compliant and have presumptive certainty for use in the characterization of worker health risk.

2.2 Hazard Identification

Hazard identification describes the nature of a substance that causes it to be of regulatory concern and identifies the effects of substances determined to cause adverse effects in humans. The U.S. EPA has characterized substances, commonly encountered at hazardous waste sites, as to whether they are likely to have carcinogenic and/or non-carcinogenic effects in humans. The relative hazard of each CoPC is fully discussed by the U.S. EPA (USEPA 2008b, d) and by MassDEP (MassDEP 1995, 2002f) and will not be further addressed within this risk characterization.

2.2.1 Identification of CoPC

OCI tentatively identifies CoPC as including all compounds detected at least once in the analyses of soil, groundwater, soil vapor, and indoor air. These CoPC include PCE and its daughter products, TCE and cis-1,2-DCE. Vinyl chloride and other daughter products of PCE were not detected in media assessed during the pre-construction environmental assessment.

2.2.2 Elimination of CoPC

OCI did not eliminate any CoPC from further consideration in this risk characterization for any reason, carrying all CoPC detected at least once in an assessed environmental medium forward into the risk assessment.

2.3 Dose-Response or Toxicity Assessment

Dose-response assessment describes the observed effects in humans and/or laboratory animals that are associated with particular exposure to CoPC (USEPA 1989). U.S. EPA obtains this information from published literature describing epidemiological or toxicological studies involving the CoPC of interest. U.S. EPA uses this information to characterize the relationship between the dose of the CoPC and the incidence of adverse effects in an exposed population. In order of preference, OCI obtained cancer and non-cancer toxicity values (Appendix A; Table 6) from MassDEP (MassDEP 1995, 1998, 2002f) and U.S. EPA's Integrated Risk Information System ("IRIS") (USEPA 2011).

MassDEP suggests (MassDEP 1995) that where it has not determined a toxicity value, U.S. EPA's toxicity values should be used to assess the relative hazard posed by a CoPC. MassDEP and the U.S. EPA indicate the carcinogenic potency of a compound by the oral cancer slope factor (CSF_O), expressed as the reciprocal of standard intake units (i.e., milligrams per kilogram body weight per day or mg/kg-bw/day). For inhalation exposures, MassDEP and the U.S. EPA recommend the use the Unit Risk value for air ("UR_{AIR}"), expressed as the reciprocal of air concentration (i.e., micrograms per cubic meter air or ug/m^3) in characterizing health risk.

For non-carcinogenic effects, the highest dose deemed unlikely to cause adverse effects when administered over a lifetime, is termed the chronic oral reference dose ("RfD") or, for inhalation exposure, the chronic inhalation reference concentration ("RfC"). The units for the RfD and RfC are milligrams per kilogram body weight per day (mg/kg-bw/day) and milligrams per cubic meter (mg/m^3), respectively.

In characterizing health risks for subchronic exposures, typical of construction workers, the chronic RfD_O value is adjusted upwards by a factor of 10 to account for the relatively short-term exposure of these receptors. This adjustment is consistent with those suggested and used by MassDEP (MassDEP 1995, 1996a, 2002a, c, d, g, 2006a, b).

2.4 Exposure Assessment

Exposure assessment involves identifying potential routes of exposure; characterizing the populations exposed; and determining the frequency, duration, and extent of exposure to CoPC in site media (MassDEP 1995, 1996a, 1999b, 2002c, d, e, h; USEPA 1989, 1991, 1992a, 1995a, b, 1996, 1997, 2000, 2001b, 2008a, e). Consistent with guidance from MassDEP, OCI divides exposure assessment into several sections, which include discussion of exposure profiles and scenarios, assumptions relating to the selection of exposure parameters, selection of exposure points, determination of exposure point concentrations ("EPC"), and the calculation of quantitative estimates of exposure.

2.4.1 Exposure Profiles

An exposure profile is a narrative description of the assumed potential for receptor exposure to CoPC at the site (MassDEP 1995). OCI developed an exposure profile for the pre-current and potential future facility worker and potential future construction worker involved in IRWIN's planned renovation/expansion of the building at the Site. Exposure profiles in Table 3 (Appendix A) describe the various exposure media, routes, and characteristics by which receptors are assumed to have contact with CoPC in site media.

2.4.2 Exposure Parameters

OCI obtained default exposure parameters for workers from MassDEP (MassDEP 1994, 1995, 1999b, 2002d, h, 2006b) and U.S. EPA (USEPA 1989, 1991, 1992a, 1995a, b, 1996, 1997, 1999, 2000, 2001a, b, 2005, 2008a, e). For potential future construction workers involved in Site construction activities, OCI relied on information contained within the latest MassDEP guidance (MassDEP 2002c, d, e, h) and U.S. EPA sources of information relating to worker exposure in preference to earlier MassDEP guidance (MassDEP 1996a).

The construction worker scenario is protective of receptors experiencing less intense (i.e., reduced physical contact) and less frequent contact with Site media. For example, the default MassDEP exposure frequency for a utility worker is one day per year (MassDEP 1995). This is much less than the 130 day per year default exposure frequency assumed for construction workers (MassDEP 1996a, 2002d). Since all other exposure parameters are essentially the same for these two receptors, an evaluation of construction worker exposure is protective of utility worker health, a receptor with the same intensity of contact, but with far less frequent contact with Site media. OCI describes the parameters used to estimate worker exposure (i.e., intake) from site media below and within Tables 3, 4, and 5 (Appendix A).

2.4.2.1 Exposure Times:

Facility Workers: OCI assumed that facility workers have contact with surface soils, including soils from depths to 15 ft bgs that are brought to the surface, and have contact with vapors infiltrating indoor air from the subsurface. In this context, OCI assumed that facility workers incidentally ingest surface soils, have dermal contact with surface soils, and inhale

vapors infiltrating indoor air. Such exposures are typical for maintenance workers, landscapers/gardeners, and office workers. Typically, maintenance workers, landscapers/gardeners, and office workers are assumed to each work an 8-hour workday, 5 days a week, 250 days each year (MassDEP 1996a), over an upper-bound estimate of the time of employment (i.e., 27 years) (USEPA 1996, 1997). OCI conservatively assumes that one individual facility worker may work in three different occupations; as a maintenance worker, landscaper/gardener and office worker. OCI did not adjust the exposure time (ET) to reflect the fraction of each day spent in these three occupations, but instead assumed that one individual has contact with contaminated environmental media for 8-hours a day throughout their period of employment (i.e., assumes the individual works a 24 hour day). This is an unreasonably conservative assumption that will overstate actual health risk posed to such facility workers.

Facility Workers (i.e., applied to each exposure scenario):

- ET (Exposure Time) = 8 hours/day
- EF (Exposure Frequency) = 250 days/year
- ED (Exposure Duration) = 27 years

Construction Workers: Consistent with the "*Draft Commercial/Industrial ShortForm Exposure Scenarios*" (MassDEP 1996a), construction workers involved in planned renovation/expansion of the CST facility are assumed to have direct contact with soils beneath the floor slab during the entire course of copnstruction activities. MassDEP indicates that construction activities last half a year (i.e. 182 days), with exposure occurring during an 8-hour workday, 5-days a week, for a total of 130 days (MassDEP 2002d). OCI assumed that these construction workers have high intensity and high frequency contact with soils between 0 and 15 ft bgs and that the maximum contaminant concentrations measured in Site soils are representative of all Site soils to which construction workers may have contact.

Construction Workers:

- ET = 8 hours/day
- EF = 130 days/year
- ED = 0.50 years (182 days/365 days per year)

2.4.2.2 Ages

OCI identified facility and construction worker ages as between 18 and 45 years, inclusive.

2.4.2.3 Body Weights (BW)

For facility and construction workers, OCI uses the U.S. EPA mean default adult body weight of 70 kg, (MassDEP 1994, 1995; USEPA 1989, 1991, 1995a, 1996, 1997). This is a conservative approximation of the mean adult body weight. Sex and age-adjusted adult body weights for this age group is actually greater, 71.8 kg (USEPA 1997).

Facility Workers Ages 18-45:

- BW = 70 kg

Construction Workers Ages 18-45:

- BW = 70 kg

2.4.2.4 Dermal Contact Surface Area (SA)

Facility and Construction Workers: For adult residents, U.S. EPA guidance suggests a default dermal contact surface area of 5,700 cm^2 (USEPA 2000, 2001b). This value is not substantially different from the 5,834 cm^2 suggested by MassDEP for construction workers in their "*Draft Commercial/Industrial ShortForm Exposure Scenarios*" (MassDEP 1996a). MassDEP based this contact surface area on the surface area of the construction workers face, neck, hands, forearms, lower legs, and feet. The actual surface area available for contact with soil, however, may be much lower given the industry standard for acceptable work attire during surface and subsurface activities. More recent MassDEP guidance recommends use of a smaller construction worker skin surface area available for contact with soils (MassDEP 2002h). This guidance reports the actual skin surface areas available for contact with soils for "heavy construction workers" is 3,477 cm^2. This value is the sum of exposed surface areas of the face, hands, forearms, lower legs, and feet. OCI uses this value in this risk characterization for the evaluation of both facility and construction worker exposures.

Facility and Construction Workers Ages 18-45:

- SA = 3,447 cm^2

2.4.2.5 Adherence Factor (AF)

U.S. EPA indicates that very few adherence factors ("AF") are available for soil types and body parts (USEPA 1989, 1991). U.S. EPA guidance, concerning the use of standardized default exposure assumptions in the evaluation of dermal exposures, uses AF values to estimate a receptors dermal exposure (USEPA 2000, 2001b). Consistent with this guidance, subsequent MassDEP guidance suggests an AF for "*heavy construction workers*" of 0.29 mg/cm^2 (MassDEP 2002h), with maintenance workers involved in landscaping and keeping of grounds (i.e., "*Landscaper/Groundskeeper*") having an AF of 0.19 mg/cm^2 (MassDEP 2002h). OCI uses these AF values to evaluate facility and construction worker intake of CoPC from dermal contact with Site soils.

2.4.2.6 Ingestion Rates (IR)

MassDEP guidance suggests that construction and maintenance workers (i.e., facility workers) consume 100 mg soil each day (MassDEP 2002c). In this risk characterization, OCI uses the enhanced soil consumption rate (100 mg/day) to evaluate both facility and construction worker exposure to CoPC through the accidental or incidental ingestion of Site soils.

2.4.2.7 Fractional Intake (FI)

OCI uses unit-less fractional intake ("FI") values to adjust receptor CoPC intake from soils to reflect seasonal differences in soil accessibility. With the following exceptions, OCI set FI values to 1, reflecting the lack of fractional exposure to environmental media at the Site.

2.4.2.7.1 FI for Incidental Soil Ingestion. For facility workers, OCI adjusted CoPC intake associated with the incidental ingestion of soils by an FI of 0.47 to reflect the inaccessibility of soils during winter months (i.e., 170 days each year). Because construction workers are expected to be involved in renovation/expansion activities within the CST building, OCI assumed that sub-slab soils are available at all times (FI = 1).

2.4.2.7.2 FI for Dermal Contact with Soil. For facility workers, OCI adjusted CoPC intake associated with the dermal contact of soils by an FI of 0.47 to reflect the inaccessibility of soils during winter months (i.e., 170 days each year). Because construction workers are expected to be involved in renovation/expansion activities within the CST building, OCI assumed that sub-slab soils are available at all times (FI = 1).

2.4.2.7.3 Inhalation of Soil-Derived Airborne Particulate. MassDEP guidance (MassDEP 2002d) estimates effective exposure concentrations ("EEC") based on PM_{10}. MassDEP uses these EEC to account for CoPC intake that occurs through ingestion of particulates trapped in mucosal membranes and absorption of CoPC from particulate deposited in the lungs. The EEC for ingestion of trapped particulates is equivalent to 1.5-times the concentration of PM_{10}, while that for deposition and absorption in the lungs is 0.5-times the PM_{10}.

$EEC_{INHALATION}$ (Facility and Construction Worker) = 0.5. OCI uses this EEC to adjust receptor the intake of CoPC in airborne particulate to reflect the MassDEP assumption that only half (0.5) of the particulate concentration in air is deposited and absorbed in the lungs (MassDEP 2002d).

$EEC_{INGESTION}$ (Facility and Construction Worker) = 1.5. OCI uses this EEC to adjust receptor intake of CoPC in airborne particulate to reflect the MassDEP assumption that 1.5 times the particulate concentration in air, is trapped in mucosal membranes, and subsequently swallowed (MassDEP 2002d).

2.4.2.8 Particulate Emission Factor (PEF)

For construction workers, OCI uses the construction site MassDEP default particulate emission factor ("PEF") of 60 ug/m^3 (MassDEP 1995, 1996a, 2002d). At first glance, the use of the construction site PEF seems appropriate for use in characterizing the risk of harm to potential future construction workers. In fact, because planned renovation/expansion of the

CST building will only breach the floor within the building. MassDEP's construction site PEF, based on dusts generated by truck traffic and other outdoor construction site characteristics and activities is likely to be much greater than that generated within the CST facility.

2.4.2.9 Averaging Time (AT)

OCI uses an averaging time (AT), typically used to determine an average daily dose ("ADD") for non-carcinogenic CoPC (ATn), equivalent to the exposure duration ("ED") in days (MassDEP 1995, 1999b, 2006b; USEPA 1989, 1991, 1995a, 1996, 1997). OCI uses an averaging time (AT) for carcinogenic CoPC (ATc), typically used to determine the lifetime average daily dose ("LADD"), equivalent to a human lifetime in days to characterize a receptors cancer risk. This ATc is set equivalent to 75 years or 27,375 days as recommended by U.S. EPA (USEPA 1996, 1997). According to recent U.S. EPA guidance, AT values used in the characterization of inhalation risks are generally provided in units of hours (USEPA 2009).

2.4.3 Exposure Points

Exposure points are physical locations where exposure of potential receptors is evaluated (MassDEP 1995; USEPA 1989). OCI evaluates facility and construction worker health risk to soils assuming the maximum measured CoPC concentration in Site soils is representative of all soils from 0 to 15 ft bgs. For facility workers, OCI assumed direct contact with surface soils that in the future might include those brought to the surface and used in landscaped areas. For potential future construction workers involved in the renovation/expansion of the CST building, OCI assumed construction workers have direct contact with soils from beneath the CST building floor slab. The fact that the highest soil contamination resides between 5 and 20.5 ft bgs and is unlikely to be contacted by either facility or construction workers suggests that the use of the maximum CoPC soil concentration detected in any soil from across the Site is a conservative EPC for these receptors. Exposure points for potential future construction workers are limited to soils between 0 and 15 ft bgs beneath the existing structure as these are the soils existing beneath areas of the Site that might be accessed, stockpiled, and removed/treated in IRWIN's planned renovation/expansion of the CST building on Site.

2.4.4 Exposure Media

Exposure media refer to the variety of contaminated environmental media with which receptors may have contact (MassDEP 1995; USEPA 1989). Exposure media evaluated in this risk characterization are limited to site soils between 0 and 15 ft bgs, shallow exposed groundwater, and air. Specifically, OCI assumed that facility workers are exposed to CoPC in Site soils, and in indoor air, while potential future construction workers are potentially exposed to CoPC in Site soils, groundwater, and within indoor air over a breach in the building floor.

2.4.5 Exposure Point Concentrations

OCI provides chemical- and media-specific exposure point concentrations ("EPCs") in Table 9 (Appendix A). These EPC are determined from the available soil analytical data (IRWIN Table 1), the available groundwater analytical data (IRWIN Figure 3), the available indoor air analytical data (IRWIN Figure 4), and as derived using a groundwater analytical data as input into a simple box model.

OCI identified the EPC for CoPC in soils as the maximum CoPC soil concentration reported in Table 1, regardless of location or depth. OCI estimated an EPC for airborne soil particulate (i.e., dusts) as the product of construction site particulate emission factor ("PEF"), an appropriate conversion factor, and the EPC for that CoPC in soil (Appendix A; Table 9). OCI used the maximum CoPC concentration measured in indoor air as the EPC for use in characterizing risk of harm to facility workers inhaling CoPC vapors in indoor air. OCI used the maximum CoPC concentration detected in groundwater, regardless of location or depth, as the EPC for characterizing the intake of CoPC through dermal contact with groundwater and for use in estimating the CoPC concentration in air within the CST facility during planned construction activities during renovation/expansion of the CST building. OCI describes the derivation of each EPC in additional detail in the following sections.

2.4.5.1 EPC in Soil

Analytical soil results (IRWIN Table 1) consist of 4 samples MW-1, B-1, MW-2, and B-2 collected from depths of 20.5, 5-6, 15.9, and 5-7 ft bgs, respectively. OCI set the EPC equivalent to the maximum CoPC concentration for each cVOC detected regardless of location or depth in soil.

Under the MCP [310 CMR 40.0924(2)], OCI must evaluate hot spots as additional, individual exposure points within the risk characterization. Hot spots are relatively small areas with relatively high contaminant concentrations. The MCP defines a hot spot by the concentration of the individual CoPC in relation to its spatial distribution. Specifically, under the MCP a "hot spot" is where the CoPC concentration is greater than ten times the concentration of the surrounding area. This is applicable unless there is evidence that the area of higher concentration is not associated with a greater exposure potential *and* a site-specific evaluation indicates that the area of higher contamination should not be considered a hot spot (MassDEP 1995). In any case, a soil area with a CoPC concentration that is 100-fold greater than the surrounding area is always considered a "hot spot." Within a screening-level characterization of worker health risk, the use of the maximum CoPC concentration in soil eliminates the need to evaluate the Site for CoPC hot spots or define them as additional individual exposure points.

2.4.5.2 EPC in Air

For facility workers, OCI set the EPC for CoPC in indoor air as the maximum measured CoPC concentration in indoor air. In contrast, OCI derived EPC in indoor air for CoPC vapors and CoPC on airborne particulate over a breach in the CST building floor.

2.4.5.2.1 EPC for Particulate in Air Above the Floor Breach

OCI estimated EPC for soil-derived airborne particulate as the product of the MassDEP default construction site respirable particulate emission factor ("PEF"), a unit conversion factor, and that CoPC's soil EPC. Use of MassDEP's default construction site PEF values (60 ug/m^3) assumes that the CoPC concentration in the respirable airborne particulate fraction is equivalent to the CoPC concentration in soil (i.e., that airborne particulate and soil contain the same amount of each CoPC on a per weight basis). Generally, characterization of construction worker risk uses the construction site PEF value. Such a PEF relies on MassDEP default conditions that relate to truck traffic, vegetative cover, wind speed, and soil composition/type, all parameters that are associated with open construction sites (i.e., located outside). OCI, however, uses the construction site PEF to characterize the potential risk of harm to construction workers involved in construction activities inside the CST facility. Because the construction worker scenario occurs inside, dust generation activities are less likely to be as intense as MassDEP default conditions assumed in derivation of the construction site PEF. Consequently, OCI's use of the construction site PEF to evaluate CoPC intake form particulate in construction workers working within the CST building will likely result in a significant over-estimation of the actual CoPC intake from this media. OCI did not characterize exposure of facility workers (i.e., maintenance workers, landscapers/gardeners, and office workers) to soil-derived airborne particulate, since it is unlikely that such exposure would result in significant uptake of CoPC. This is because all of the known soil contamination lies at depths greater than 5 ft bgs.

2.4.5.2.2 EPC for Vapors In Indoor Air

OCI uses the maximum CoPC concentration measured in indoor air as the EPC for characterizing the risk of harm to current and potential future facility workers. This exposure route is the same as that which might be evaluated for office workers at the CST facility. In contrast, the CoPC concentrations in indoor air during IRWIN's planned construction activities within the CST building were estimated using a simple box model, where mass-balance inputs and outputs are used to conservatively predict an upper-bound indoor air CoPC concentration to which construction workers are potentially exposed.

2.4.5.2.3 EPC for Vapors in Facility Air During Construction

OCI used a simple box model to estimate the concentration of CoPC volatilizing from exposed shallow groundwater, within an excavation trench beneath the breached CST building floor to ambient air within the CST facility. In *Principles and Practices for Petroleum Contaminated Soils*, Paustenbach et al. (1993) describes the use of a similar box model to estimate CoPC concentrations in air given an emission flux rate. According to Paustenbach et al., the model described is equally applicable to any media for which an

emission flux rate can be estimated or calculated. The assumption inherent in the use of such a box model is that the area of interest can be sufficiently represented by a theoretical enclosed space to which inputs and outputs are calculated.

In this case, OCI used a simple box model assuming that vapors volatilize from exposed groundwater (i.e., vapor emissions) from an excavation area inside the CST facility (i.e., an input to the box) and that during normal operation of the facilities heating, ventilation, and air conditioning (HVAC) system air is removed from the building, diluting CoPC vapors within the CST facility (i.e., blowing vapor out of the box). OCI assumed that the CST facility has an air-exchange rate of 4 air changes per hour (ACH), the minimum recommended for laboratory facilities (USEPA 2008c). OCI used groundwater CoPC concentrations to estimate an upper-bound EPC for indoor air above a floor breach within the CST facility and to which construction workers are potentially exposed during building renovation/expansion.

Because it is so simplistic, the box mode fails to take into account various other processes by which volatile CoPC might be added or removed from the exposure box (i.e., indoor air of the CST facility). For example, an additional source of CoPC mass to indoor air may come from exposed soils within the breached area of the building floor and/or from stockpiled soils stored on the building floor slab within the CST facility. Alternatively, a lower CoPC concentration in CST facility air might result from a higher than assumed air exchange rate (i.e., higher ACH), and/or routine opening windows and doors. In contrast, a smaller than projected breach of the floor slab (i.e., less than 20%), and/or the lack of exposed shallow groundwater within the breach area excavation pit could result in lower concentrations of CoPC in indoor air. Because OCI used the maximum groundwater CoPC concentration and conservative default assumptions (e.g., the minimum recommended air exchange rate), the actual CoPC concentration estimated to exist in indoor air during renovation/expansion activities is unlikely to be higher than that predicted by this simple box model.

Simple Box Model: The box model used here is based on a mass-balance expression that assumes gas-flux from surface water is instantly mixed with air flowing across a specified area and within the entirety of the exposure box. Mathematically, this is expressed as the mass rate entering the "exposure box," divided by the volumetric rate of air that flows through the exposure box:

Equation 1

$$C_A = \frac{J_S \times A_{EMIT} \times A_{ADJ}}{V_{WIND} \times A_{WIND}}$$

Where:

C_A = Concentration in air (mg/m^3).
J_S = Emission Rate (mg/m^2-sec).
A_{ADJ} = Adjustment factor (A_{EMIT}/A_{EXP}).
A_{EMIT} = Emitting Area (m^2).
A_{WIND} = Vertical area through which the wind passes (m^2).
V_{WIND} = Velocity of the wind through the box (m/sec)
A_{EXP} = Exposure Area (area of wind through the box) (m^2)

During the planned construction within the CST building, IRWIN estimates the emitting area ("A_{EMIT}") (i.e., the area of the slab breached, excavated to expose soils and groundwater, and open to indoor air) will not exceed 20 percent of the total floor surface area of the facility. OCI estimated the CST facility has a floor area of approximately 42,000 ft^2 or a little less than 4,000 m^2. IRWIN plans to conduct construction activities in sections of the CST facility that measure approximately 15 ft by 50 ft (i.e., and area of 750 ft^2 or 77 m^2), but only breaching the concrete floor by 150 ft^2 (15.4 m^2) within that section. The adjustment factor (A_{ADJ}) of 0.2 (20%) is used to account for differences in these emission (i.e., area breached) and exposure areas (section of building within which construction activities are taking place). OCI arbitrarily increased this adjustment factor by 2 to (40%) to address the potential for exposed soils within the breach and stockpiled soils stored atop the CST floor slab within the building to volatilize an additional mass of cVOCs to indoor air.

The CST facility is comprised of several discrete areas (See IRWIN Figures 3 and 4 for a simple outline of the CST facility) with a total floor area of approximately 42,000 ft^2 or approximately 3,900 m^2. IRWIN expects that construction activities to occur inside the CST facility in an area approximately 50 ft by 15 ft (750 ft^2) under a 9 ft ceiling. This is equivalent to a 15.4 m by 5 m (77 m^2) area under a 3 m ceiling. According to IRWIN, this exposure area (A_{EXP}) is unlikely to be greater than 20 percent of the total floor area (15.4 m^2) in the construction area. The volume of the exposure box (i.e., the construction area) is approximately 231 m^3. Given a recommended minimum air-exchange rate of 4 air changes per hour (4 ACH) through a vertical cross sectional area equivalent to 36 m^2, the width and ceiling (12 m by 3 m), results in an air speed (V_{WIND}) through the CST facility of about 0.083 m/sec, which is less than 0.59 miles per hour (i.e., the rate at which CoPC vapors are removed from CST building air). The derivation of CoPC-specific emission rates used in Equation 1 is discussed in the following text.

Two (2) aspects of the simple box model require further explanation: 1) the determination of surface water emission rates; and 2) the model's steady state assumptions.

Estimation of Volatile CoPC Emission Rates from Surface Water: The emission rate (J_S) for a CoPC may be estimated using Equation 2. This emission rate is dependent on the concentration in water and assumes that steady state equilibrium exists between the concentration of the CoPC in water and that in air. Equation 2 also assumes that a steady state concentration in ambient air is reached instantaneously from a standing body of water (McCord, S.A. and S.G. Schadow 1993). While moving surface waters will produce higher CoPC emission rates, by increasing the surface area for emission ("A_{EMIT}"), this is not expected to be the case within the excavation planned within the CST facility. The emission rate per unit surface area-time should remain relatively constant for a particular CoPC, temperature, and mean air speed.

Equation 2

$$J_s = K_{OL} \times C_W \times 0.01\ m/cm \times 1000\ L/m^3$$

Where:

J_s = Emission Rate (mg/m^2-sec)
C_w = Concentration in exposed shallow groundwater (mg/L)

K_{OL} = Air-water transfer velocity (m/sec)

The air-water transfer velocity (K_{OL}) is estimated using Equation 3 (McCord, S.A. and S.G. Schadow 1993). In Equation 2, K_{OL} is converted from cm/sec to m/sec.

Equation 3

$$\frac{1}{K_{OL}} = \frac{1}{KL} + \frac{R \times T_W}{H \times K_G}$$

Where:

K_{OL} = Air-water transfer velocity (cm/sec)
K_L = Transfer velocity in water (cm/sec)
R = Universal gas constant (8.2×10^{-5} atm-m^3/mol)
H = Henry's Gas Law Coefficient (atm-m^3/mol-°K)
T_W = Surface water temperature (°K; equivalent to 273 + °C)
K_G = Transfer velocity in air (cm/sec)

In order to calculate K_{OL}, estimates of the transfer velocity in water (K_L) and air (K_G) are derived using equations 4 and 5 (McCord, S.A. and S.G. Schadow 1993).

Equation 4

$$K_L = 0.45 \times C \times V_{WIND}^{1.64} \times \sqrt{\frac{600 \times D_W}{\nu}}$$

Where:

K_L = Transfer velocity in water (cm/sec)
V_{WIND} = Wind speed (m/sec)
D_W = Molecular diffusivity in water (cm^2/sec)
C = Conversion from meters to centimeters (100 cm/m).
ν = Kinematic viscosity of water (cm^2/sec)

Equation 4 assumes a wind velocity (V_W) of 0.0121 m/s (0.025 mph). The kinematic viscosity of water is 1.0E-02 cm^2/s. OCI used CoPC-specific values of D_W published by U.S. EPA Regional offices. Finally K_G is calculated given Equation 5 (McCord, S.A. and S.G. Schadow 1993).

Equation 5

$$K_G = (0.2 \times V_W + 0.3) \times (18/MW)^{0.67}$$

Where:

K_G = Transfer velocity in air (cm/sec)
V_{WIND} = wind speed (m/sec)
MW = Molecular weight (g/mol)

For each CoPC, OCI used the calculated values of K_L and K_G to solve Equation 3 for the air-water transfer value ("K_{OL}"). OCI used this result to solve Equation 2, giving CoPC-specific emission rates ("J_S") used as input to Equation 2. Solving Equation 1 gives CoPC-specific air concentrations within the exposure box (i.e., the entire 2,700 m^2 volume of the CST facility).

2. Receptor Exposure Under the Steady State Assumption: A simple box model assumes that receptor exposure to CoPC in air occurs at any point within the exposure box

(i.e., the CST facility). OCI assumed that during construction activities, construction workers breach the concrete floor slab, excavate soils to expose shallow groundwater, and stockpile excavated soils atop of the remaining concrete floor slab within the CST facility. OCI used the maximum groundwater CoPC concentrations measured in any monitoring well at the Site as input into the box model. This use of maximum CoPC groundwater concentrations is important since it results in the derivation of a upper-bound CoPC concentration in indoor air, reducing the likelihood that actual CoPC concentrations in indoor air in the area of the CST building undergoing renovation/expansion would be exceeded.

2.4.6 Quantification of Exposure

OCI determined quantitative exposure estimates in accordance with the MCP and guidance from MassDEP (MassDEP 1994, 1995, 1996a, 1998, 1999b, 2002c, d, e, h) and where applicable, U.S. EPA (USEPA 1989, 1991, 1992a, 1995a, 1996, 1997, 2000, 2001b, 2008a, e).

2.4.6.1 Risk Characterization Calculations Quantifying Intake

OCI uses the equations provided in guidance from MassDEP (MassDEP 1994, 1995, 1996a, 1998, 1999b, 2002c, d, e, h) and U.S. EPA (USEPA 1989, 1991, 1992a, 1995a, 1996, 1997, 2000, 2001b, 2008a, e, 2009) in quantifying CoPC intake and health risk. OCI lists exposure parameters used in theses calculations in Tables 4, 5, and 6.

In accordance with applicable risk assessment guidance and consistent with the approach used within the attached risk characterization spreadsheets (Appendix A), OCI used the following equations and variables to determine CoPC intake and risk:

Incidental Ingestion of Soil:

Equation 6

$$\text{ADD (mg/kg-day)} = \frac{C_S \times RAF_{SI} \times IR \times FI \times EF \times ED \times CF}{BW \times AT}$$

Dermal Contact with Soil:

Equation 7

$$\text{ADD (mg/kg-day)} = \frac{C_S \times RAF_{SD} \times SA \times AF \times FI \times EF \times ED \times CF}{BW \times AT}$$

Inhalation of Fugitive Dusts:

Equation 8

$$ADD_{INHALED}\ \text{(mg/kg-day)} = \frac{C_S \times EEC_{INH} \times PEF \times VR \times P \times FI \times EF \times ED \times CF}{BW \times AT}$$

Equation 9

$$ADD_{INGESTED}\ \text{(mg/kg-day)} = \frac{C_S \times EEC_{ING} \times PEF \times VR \times P \times FI \times EF \times ED \times CF}{BW \times AT}$$

Inhalation of Vapors in Air:

Equation 10

$$EC = (C_A \times ET \times EF \times ED) / AT$$

Where:

ADD = average daily dose (mg/kg-day).
C_A = concentration of compound in air (ug/m^3).
C_S = concentration of chemical in soil (mg/kg).
EC = exposure concentration (ug/m^3)
RAF = route-specific chemical-specific relative absorption factor (unit less).
RAF_{IA} = inhalation air RAF.
RAF_{SI} = soil ingestion RAF.
RAF_{SD} = dermal contact RAF.
RAF_{IP} = ingestion of homegrown produce RAF.
IR = ingestion rate (mg/day).
IR_F = food ingestion rate (mg/day), a daily intake based on MassDEP estimates of age-specific food consumption patterns.
PEF = respiratory particulate ($\mu g/m^3$).
VR = mean age-specific ventilation rate (m^3/hrs).
SA = mean age-specific surface contact area (cm^2/event).
AF = skin adherence factor (mg/cm^2).
CF = conversion factor (units as required).
FI = route- and pathway-specific fractional intake (unit less).
EEC_{INH} = Effective Exposure Concentration Inhalation.
EEC_{ING} = Effective Exposure Concentration Ingestion.
ET = time of exposure (hrs/day).
EF = exposure frequency (days/year).
ED = exposure duration (years).
BW = mean age-specific body weight (kg).
AT = effect specific averaging time (days) described earlier as ATn and ATc for non-cancer and cancer effects respectively. Note: the AT value used in the evaluation of inhalation intake is in units of hours.

OCI calculates a chemical independent uptake ("CIU") value for each exposure pathway and receptor. Non-cancer and cancer health risks are estimated using separate non-cancer, and cancer averaging times (i.e., ATn or ATc, respectively). Calculation of a CIU for each receptor, exposure pathway, and environmental media simplifies the process of risk characterization allowing for the subsequent calculation of risk estimates (Appendix A; Tables 11 through 36) by integrating chemical-specific information such as CoPC- and route-specific RAF, CoPC-specific toxicity values, and other chemical-specific parameters (Appendix A; Tables 7, 8, and 10). OCI lists exposure parameter values used in each exposure pathway equation and for each exposure profile in Tables 4, 5, and 6 (Appendix A).

The calculation of a CIU allows for a streamlined quantification of exposure and risk for each receptor class (i.e., facility and construction workers), media (i.e., soil), and exposure pathways (i.e., ingestion, dermal contact, and inhalation) and essentially the same methodology used by MassDEP within its *Residential ShortForms* to generate risk estimates (MassDEP 2006b).

OCI assumed a 100 percent (100%) relative absorption for all the CoPC considered in this risk characterization. OCI calculates CoPC-specific non-cancer and cancer risks for each receptor, and completed exposure pathway in Tables 11 through 36 (Appendix A). Briefly,

OCI determined CIU for the incidental ingestion of soil, and dermal contact with soil and groundwater using guidance from MassDEP (MassDEP 1994, 1995, 1996a, 2002h) and U.S. EPA (USEPA 1989, 1991, 1992a, 1995a, 1996, 1997, 2000, 2001b, 2008a, e). OCI used newly developed and conservative adherence factors ("AF") and skin surface areas ("SA") available for contact with soil for each of the various receptor classes within this risk characterization. OCI calculated CIU for inhalation of dusts by residential receptors and workers using MassDEP guidance considering the inhalation of inhaled and ingested soil-derived airborne particulate (MassDEP 2002d). OCI used US EPA guidance for the characterization of inhalation risks (USEPA 2009) that is essentially the same as that use within MassDEP *ShortForms* characterizing inhalation risks(MassDEP 2006a, b).

2.5 Risk Characterization

The final step in the process, risk characterization, integrates hazard identification, dose-response assessment, and exposure assessment information to quantify potential carcinogenic and non-carcinogenic human health risks at the site. OCI provides quantified risk estimates for each CoPC, receptor class, exposure pathway, and media in Tables 11 through 19 (Appendix A). OCI provides a summary of these risks for each CoPC in Table 20 and for each exposure pathway in Table 21.

2.5.1 Cancer Risk

OCI's characterization of worker health risk determined an overall excess lifetime cancer risk ("ELCR") to potential future construction workers (i.e., the sum of all exposure pathways for this receptor) of 9E-06. Individually, the predominant contributor to the ELCR comes from exposure to PCE (93%), with TCE accounting for the remaining risk (7%). No other CoPC contributes more than 1% to the ELCR (Appendix A; Table 20). The only exposure pathway contributing significantly to construction worker ELCR is the inhalation of vapors within facility air during renovation/expansion of the CST building (100%). No other exposure pathway contributes more than 1% to the construction worker ELCR (Appendix A; Table 21).

For current and potential facility workers the sum of cancer risks attributable for all exposure pathways (i.e., maintenance, landscapers/gardeners, and office workers) is 2E-08. The largest contributor to a facility worker ELCR is exposure to TCE (90%), with PCE accounting for the remaining risk (10%). No other CoPC contributes more than 1% to the ELCR (Appendix A; Table 20). Exposure pathways contributing most to facility worker ELCR come from the incidental ingestion of soils (48%), dermal contact with soil (32%), and the inhalation of CoPC vapors in indoor air (20%). No other exposure pathway contributes more than 1% to the facility worker ELCR (Appendix A; Table 21).

This risk characterization demonstrates a condition of "No Significant Risk" of harm to workers exposed to carcinogenic agents currently detected in Site media. Additional discussion of this result follows within the Uncertainty Section (Section 2.6).

2.5.2 Non-Cancer Risk

The overall HI for construction workers is 1 (Appendix A; Table 21), which is equivalent to the MassDEP target HI of 1 (MassDEP 1995) and represents an acceptable level of non-cancer health risk for workers potentially involved in Site construction activities. Only one exposure pathway contributes to the non-cancer risk of construction workers (100%), the inhalation of CoPC vapors estimated to exist in indoor air during renovation/expansion of the CST building. No other pathway contributes more than 1% of the non-cancer risk to this receptor. In order of their relative contribution, the CoPC contributing to the construction worker HI are TCE (89%) and cis-1,2-DCE (11%) (Appendix A; Table 20). No other CoPC contributes more than 1% to the HI of construction workers non cancer risk (Appendix A; Table 20).

The overall HI to facility workers is 0.2 (Appendix A; Table 21), which is below the MassDEP target HI of 1 (MassDEP 1995). The only exposure pathway contributing significantly to the facility worker HI is the inhalation of indoor air (100%). No other exposure pathway contributes more than 1% to the facility workers non-cancer risk. TCE (89%) and cis-1,2-DCE (11%) are the only CoPC contributing more than 1% to the facility workers HI (Appendix A; Table 20).

Overall, this risk characterization demonstrates that a condition of "No Significant Risk" of harm to workers for non-cancer effects exists now and into the future. Additional discussion of this result follows within the Uncertainty Section (Section 2.6).

2.6 Uncertainty Analysis

OCI performed a screening-level characterization of worker health risk in accordance with the MCP [310 CMR 40.0900-40.0960] and risk assessment guidance provided by MassDEP (MassDEP 1994, 1995, 1996a, b, 1998, 1999a, b, 2002b, c, d, e, f, h, 2006b) and U.S. Environmental Protection Agency ("U.S. EPA") (USEPA 1989, 1991, 1992a, b, 1993, 1995a, b, 1996, 1997, 2000, 2001b, 2005, 2008a, e). Use of the maximum detected CoPC concentration in environmental media and conservative MassDEP and U.S. EPA default exposure factors and guidance ensures that this risk characterization provides a conservative estimate of site-related worker health risks at the Site. OCI's combination of facility worker exposures for maintenance, landscaper/gardener, and office workers, without fractional apportionment of the receptors exposure by job (i.e., assuming a facility worker works 24 hour days) also likely over estimates this receptors exposure and risk. The use of additional site- and chemical-specific information and more reasonable site-specific exposure parameters would likely reduce the magnitude of worker health risk estimated at this Site.

Four typical areas of uncertainty in risk characterization are media concentrations, vapor transport modeling, exposure assumptions, and toxicity factors. State certified laboratories determined media concentrations using applicable QA/QC guidance and appropriate analytical protocols. Although such measures do not guarantee good quality data, OCI has no reason to suspect that site soil, groundwater, or indoor air analytical data are inappropriate for use in the characterization of health risks at this site.

OCI used a simple box model to estimate an upper-bound CoPC concentration in indoor air during IRWIN planned construction activities. This included a doubling of the source term to account for additional volatilization of CoPC from breached area excavation sidewalls and soils stockpiled atop the CST facility floor slab. The simplistic nature of the box model used likely predicts a higher indoor air CoPC concentration than would exist during renovation/expansion activities at the Site. Such estimated indoor air CoPC concentrations might be used as a default benchmark identifying a safe level of indoor air contamination for which there is unlikely to be any adverse health consequence for construction workers (Table 22).

OCI used default exposure assumptions, guidance, and toxicity values provided by MassDEP and U.S. EPA in the conduct of this risk characterization (MassDEP 1995, 1998; RAIS 2008; USEPA 2008b, d), each providing an additional layer of conservatism to the characterization of worker health risk. U.S. EPA alone stipulates that non-cancer toxicity values likely overestimate CoPC toxicity by an order of magnitude. The use of uncertainty factors ("UF") totaling several orders of magnitude in the derivation of RfD values may increase their conservative nature by a similar amount. Furthermore, U.S. EPA indicates that CSF values overestimate cancer potency for compounds that may have no cancer causing potential at all.

Overall, the use of MassDEP and U.S. EPA default exposure parameters, conservative approximation methods, and toxicity values likely results in an overstatement of health risk at the site, minimizing the potential for this risk characterization to under estimate actual health risks posed by CoPC at this site.

2.8 Conclusion

This screening-level characterization of worker health risk demonstrates that a condition of "No Significant Risk" of harm to worker health exists at the site, now and into the foreseeable future.

Table 22. Cumulative Risk Estimates.

Receptor	ELCR	HI
Construction Worker	*9E-06*	*1*
Facility Worker	*2E-07*	*0.2*

This screening-level characterization suggests that there is "No Significant Risk" of harm to construction workers who might be involved in IRWIN planned renovation/expansion of the CST building, including breach of the floor slab, excavation of sub-slab soils, stockpiling of those soils, construction of a vapor barrier, and replacement of the floor slab.

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APPENDIX A – RISK CHARACTERIZATION TABLES

TABLE 2. COMPOUNDS OF POTENTIAL CONCERN

Volatile Organic Compounds	CASRN
Tetrachloroethene	71-43-2
Trichloroethene	104-51-8
cis-1,2-Dichloroethene	108-88-3

CASRN = Chemical Abstract Service Registry Number

Table 3. Receptor Exposure Profiles

Receptor	Source Medium	Route		Age	CF		IR	FI	ET	EF	ED	SA	AF	PEF	BW	AT.n	AT.c	CIU[A]
					Varies	Effect	mg/day	unitless	hours/day	days/year	Year	cm^2/day	mg/cm^2	mg/m^3	kg	days[B]	days[B]	mg/kg-day
Construction Worker	*Soil*	Ingestion		Age 18-45	1.E-06	Carc	100	1.00	--	130	0.50	--	--	--	70.0	--	27,375	3.38E-09
					1.E-06	NonC	100	1.00	--	130	0.50	--	--	--	70.0	182	--	5.09E-07
		Inhalation	inhaled	Age 18-45	1.E-03	Carc	--	1	8	130	0.50	--	--	60	70.0	--	27,375	4.47E-07
			swallowed		1.E-03		--	1	8	130	0.50	--	--	60	70.0	--	27,375	1.79E-06
			inhaled		1.E-03	NonC	--	1	8	130	0.50	--	--	60	70.0	182	--	6.72E-05
			swallowed		1.E-03		--	1	8	130	0.50	--	--	60	70.0	182	--	2.69E-04
		Dermal		Age 18-45	1.E-06	Carc	--	1.00	--	130	0.50	3,477	0.29	--	70.0	--	27,375	3.41E-08
					1.E-06	NonC	--	1.00	--	130	0.50	3,477	0.29	--	70.0	182	--	5.13E-06
	Groundwater	Inhalation		Age 18-45	--	Carc	--	1	8	130	0.50	--	--	--	70.0	--	657,000	7.89E-04
		(Estimated Vapors in Air)			--	NonC	--	1	8	130	0.50	--	--	--	70.0	4,368	--	1.19E-01
		Dermal		Age 18-45	1.E-06	Carc	--	1	1	130	0.50	3,477	--	--	70.0	--	27,375	1.18E-07
					1.E-06	NonC	--	1	1	130	0.50	3,477	--	--	70.0	182	--	1.77E-05
Facility Worker	*Soil*	Ingestion		Age 18-45	1.E-06	Carc	100	0.47	--	250	27	--	--	--	70.0	--	27,375	1.61E-07
					1.E-06	Nonc	100	0.47	--	250	27	--	--	--	70.0	9,855	--	4.48E-07
		Dermal		Age 18-45	1.E-06	Carc	--	0.47	--	250	27	3,473	0.19	--	70.0	--	27,375	1.06E-06
					1.E-06	Nonc	--	0.47	--	250	27	3,473	0.19	--	70.0	9,855	--	2.93E-06
	Indoor Air	Inhalation		Age 18-45	--	Carc	--	1	8	250	27	--	--	--	70.0	--	657,000	8.22E-02
		(Vapors in Indoor Air)			--	Nonc	--	1	8	250	27	--	--	--	70.0	236,520	--	2.28E-01

NOTES:

AF - Soil adherence factor
BW - Body weight
Carc - Carcinogenic effect
CF - Conversion Factor
ED - Exposure Duration
EF - Exposure Frequency
ET - ExposureTime
IR - Ingestion Rate
FI - Fraction Intake
NonC - Non-carcinogenic effect
PEF - Particulate Emission Factor or PM_{10}, Respirable particulate concentration in air.
SA - Contact Surface Area

[A] Chemical independent uptake (CIU) values are exclusive of chemical-specific concentration, K_p, and relative absorption factors (RAF).

[B] Averaging Time (AT) values for vapor inhalation exposures are in hours (U.S. EPA 2009).

TABLE 4. Receptor and Route Specific Fractional Intake Values.

Receptor	Media	Route	Age	Fractional Intake Adjustment Value	FI Value
Construction Worker					
	Sub-Slab Soils (Construction)				
		Ingestion		*Availability of Soils Beneath the Floor Slab During Construction.*	
			Age 18-45	All soils beneath the floor slab are assumed to be available for receptor contact.	1
		Dermal Contact		*Availability of Soils Beneath the Floor Slab During Construction.*	
			Age 18-45	All soils beneath the floor slab are assumed to be available for receptor contact.	1
	Exposed Shallow Groundwater (Construction)				
		Dermal Contact		*Fractional Time in Excavation Immersed in Shallow Groundwater.*	
			Age 18-45	FI value assumes construction workers spend all their time in the excavation.	1
		Vapor Inhalation		*Fractional Time in Spent in the Excavation.*	
			Age 18-45	FI value assumes construction workers spend all their time in the excavation.	1
	Facility Air (Construction)				
		Particualte Inhalation		*Fractional Source Term*	
			Age 18-45	No Fractional Intake (FI) value is applied for this pathway.	1
		Vapor Inhalation		*Fractional Source Term*	
			Age 18-45	No Fractional Intake (FI) value is applied for this pathway.	1
Facility Worker					
	Outdoor Soils				
		Ingestion		*Seasonal Availability of Surface Soils.*	
			Age 18-45	FI value reflects the seasonal availability of surface soils (170 days per year).	0.47
		Dermal Contact		*Seasonal Availability of Surface Soils.*	
			Age 18-45	FI value reflects the seasonal availability of surface soils (170 days per year).	0.47
	Facility Air				
		Vapor Inhalation		*Fractional Source Term*	
			Age 18-45	No Fractional Intake (FI) value is applied for this pathway.	1

TABLE 5. QUANTITATIVE EXPOSURE ESTIMATES

Scenario:	Variable	Units	Value
TABLE 5. 1 Incidental Soil Ingestion - Construction Worker.			
Exposure Assumptions:			
Chemical Concentration in Soil	C_S	mg/kg	--
Conversion Factor	CF	kg/mg	1E-06
Relative Absorption Factor (default=1; or chemical-specific)	RAF	--	--
Ingestion Rate	IR	mg/day	100
Fractional Ingestion	FI	unitless	1
Exposure Frequency	EF	days/year	130
Exposure Duration	ED	years	0.50
Body Weight - Adult	BW	kg	70
Averaging Time - Carcinogenic	AT.c	days	27,375
Averaging Time - Noncarcinogenic - Adult	AT.n	days	182
CIU.c =(CF*IR*FI*EF*ED)/(BW*AT.c)	CIU.c	(1/day)	3.4E-9
CIU.n =(CF*IR*FI*EF*ED)/(BW*AT.n)	CIU.n	(1/day)	5.1E-7

TABLE 5. QUANTITATIVE EXPOSURE ESTIMATES

Scenario:	Variable	Units	Value
TABLE 5. 2 Dermal Contact with Soil - Construction Worker.			
Exposure Assumptions:			
Chemical Concentration in Soil	CS	mg/kg	--
Conversion Factor	CF	kg/mg	1E-06
Skin Surface Area Available for Contact (1 event/day)	SA	cm^2/events	3,477
Soil-to-Skin Adherence Factor	AF	mg/cm^2	0.29
Relative Absorption Factor (default=1: or chemical specific)	RAF	unitless	--
Events each day	FI	events/day	1.00
Exposure Frequency	EF	days/year	130
Exposure Duration	ED	years	0.50
Body Weight - Adult	BW	kg	70
Averaging Time - Carcinogenic	AT.c	days	27,375
Averaging Time - Noncarcinogenic - Adult	AT.n	days	182
CIU.c =(CF*SA*AF*EF*ED)/(BW*AT.c)	CIU.c	(1/day)	3.4E-08
CIU.n =(CF*SA*AF*EF*ED)/(BW.AT.n)	CIU.n	(1/day)	5.1E-06

TABLE 5. QUANTITATIVE EXPOSURE ESTIMATES

Scenario:	Variable	Units	Value
TABLE 5. 3 Dermal Contact With Exposed Shallow Groundwater - Construction Worker.			
Exposure Assumptions:			
Chemical Concentration in Water (convert to mg/cm ^{3})	C_W	ug/L	--
Conversion Factor	CF	cm^3-mg/L-ug	1.00E-06
Dermally Absorbed Dose per Event	DA_{EVENT}	mg/cm^2-event	--
Skin Surface Area Available for Contact	SA	cm^2	3,477
Fractional Intake (Time in exposed shallow groundwater)	FI	unitless	1
Exposure Time	ET	event/day	1
Exposure Frequency	EF	days/year	130
Exposure Duration	ED	years	0.50
Body Weight - Adult	BW	kg	70
Averaging Time - Carcinogenic	AT.c	days	27,375
Averaging Time - Noncarcinogenic - Adult	AT.n	days	182
CDI.c =(SA*CF*FI*ET*EF*ED)/(BW*AT.c)	CIU.c	cm^2-event/kg-day	1.2E-07
CDI.n =(SA*CF*FI*ET*EF*ED)/(BW*AT.n)	CIU.n	cm^2-event/kg-day	1.8E-05

TABLE 5. QUANTITATIVE EXPOSURE ESTIMATES

Scenario:		Variable	Units	Value
TABLE 5. 4	**Inhalation & Ingestion of Airborne Dusts - Construction Worker.**			
	Exposure Assumptions:			
	Chemical Concentration in Air	$OHM_{particulate}$	ug/m^3	$= (OHM_{soil}*CFa*PM_{10})$
	Chemical Concentration in Soil	OHM_{soil}	mg/kg	
	Respirable particulate fraction	PM_{10}	mg/m^3	60
	Conversion factor to calculate OHM_{air} from OHM_{soil} (Table 8)	CFa	kg/mg	1.E-06
	Conversion Factor	CF	mg/ug	1.E-03
	Inhalation Rate (Equivalent to 26.4 m^3/8 hour-day)	VR	m^3/hr	3.3
	Fraction Inhaled from Contamination Source (P)	FI	--	1
	Exposure Time	ET	hours/day	8
	Exposure Frequency	EF	days/year	130
	Exposure Duration	ED	years	0.50
	Body Weight - Adult	BW	kg	70
	Averaging Time - Carcinogenic	AT.c	days	27,375
	Averaging Time - Noncarcinogenic - Adult	AT.n	days	182
Inhalation				
CIU.c	=(0.5*CF*VR*FI*ET*EF*ED)/(BW*AT.c)	CIU.c	(mg-m^3/ug-kg-d)	4.5E-07
CIU.n	=(0.5*CF*VR*FI*ET*EF*ED)/(BW*AT.n)	CIU.n	(mg-m^3/ug-kg-d)	6.7E-05
Ingestion				
CIU.c	=(2*CF*VR*FI*ET*EF*ED)/(BW*AT.c)	CIU.c	(mg-m^3/ug-kg-d)	1.8E-06
CIU.n	=(2*CF*VR*FI*ET*EF*ED)/(BW*AT.n)	CIU.n	(mg-m^3/ug-kg-d)	2.7E-04

TABLE 5. QUANTITATIVE EXPOSURE ESTIMATES

Scenario:	Variable	Units	Value
TABLE 5. 5 Inhalation of Volatiles Emanating From Exposed Shallow Groundwater - Construction Worker.			
Exposure Assumptions:			
Chemical Concentration in Air	C_A	ug/m^3	--
Exposure Time	ET	hours/day	8
Exposure Frequency	EF	days/year	130
Exposure Duration	ED	years	0.50
Averaging Time - Carcinogenic	AT.c	hrs	657,000
Averaging Time - Noncarcinogenic - Adult	AT.n	hrs	4,368
CDI.c =(ET*EF*ED)/(AT.c)	CDI.c	(unitless)	7.9E-04
CDI.n =(ET*EF*ED)/(AT.n)	CDI.n	(unitless)	1.2E-01

TABLE 5. QUANTITATIVE EXPOSURE ESTIMATES

Scenario:	Variable	Units	Value
TABLE 5. 6 Incidental Soil Ingestion - Facility Worker.			
Exposure Assumptions:			
Chemical Concentration in Soil	C_S	mg/kg	--
Conversion Factor	CF	kg/mg	1E-06
Relative Absorption Factor (default=1; or chemical-specific)	RAF	--	--
Ingestion Rate	IR	mg/day	100
Fractional Ingestion	FI	unitless	0.47
Exposure Frequency	EF	days/year	250
Exposure Duration	ED	years	27
Body Weight - Adult	BW	kg	70
Averaging Time - Carcinogenic	AT.c	days	27,375
Averaging Time - Noncarcinogenic - Adult	AT.n	days	9,855
CIU.c =(CF*IR*FI*EF*ED)/(BW*AT.c)	CIU.c	(1/day)	1.6E-7
CIU.n =(CF*IR*FI*EF*ED)/(BW*AT.n)	CIU.n	(1/day)	4.5E-7

TABLE 5. QUANTITATIVE EXPOSURE ESTIMATES

Scenario:	Variable	Units	Value
TABLE 5. 7 Dermal Contact with Soil - Facility Worker.			
Exposure Assumptions:			
Chemical Concentration in Soil	C_S	mg/kg	--
Conversion Factor	CF	kg/mg	1E-06
Skin Surface Area Available for Contact (1 event/day)	SA	cm^2/events	3,473.3
Soil-to-Skin Adherence Factor	AF	mg/cm^2	0.19
Relative Absorption Factor (default=1: or chemical specific)	RAF	unitless	--
Events each day	FI	events/day	0.47
Exposure Frequency	EF	days/year	250
Exposure Duration	ED	years	27
Body Weight - Adult	BW	kg	70
Averaging Time - Carcinogenic	AT.c	days	27,375
Averaging Time - Noncarcinogenic - Adult	AT.n	days	9,855
CDI.c =(CF*SA*AF*FI*EF*ED)/(BW*AT.c)	CDI.c	(1/day)	1.1E-06
CDI.n =(CF*SA*AF*FI*EF*ED)/(BW.AT.n)	CDI.n	(1/day)	2.9E-06

TABLE 5. QUANTITATIVE EXPOSURE ESTIMATES

Scenario:	Variable	Units	Value
TABLE 5. 8 Inhalation of Volatiles In Indoor Air - Facility Worker.			
Exposure Assumptions:			
Chemical Concentration in Air	C_A	ug/m^3	--
Exposure Time	ET	hours/day	8
Exposure Frequency	EF	days/year	250
Exposure Duration	ED	years	27
Averaging Time - Carcinogenic	AT.c	hrs	657,000
Averaging Time - Noncarcinogenic - Adult	AT.n	hrs	236,520
CIU.c =(ET*EF*ED)/(AT.c)	CIU.c	(unitless)	8.2E-02
CIU.n =(ET*EF*ED)/(AT.n)	CIU.n	(unitless)	2.3E-01

TABLE 6. CoPC Toxicity Values

Compounds	CAS	CSF_{ORAL} $(mg/kg\text{-}day)^{-1}$		URF $(ug/m^3)^{-1}$		RfD_O (mg/kg-day)		RfC (mg/m^3)		Comment
Volatile Organic Compounds										
Tetrachloroethene	127-18-4	5.10E-02	M	1.00E-05	M	1.00E-02	M	4.60E+00	M	
Trichloroethene	79-01-6	4.60E-02	I	4.10E-06	I	5.00E-04	I	2.00E-03	I	
cis-1,2-Dichloroethene	156-59-2	NA	M	NA	M	1.00E-02	M	3.50E-02	M	

NOTES:

CSF_{ORAL} = Chronic oral cancer slope factor.
$CSF_{INHALATION}$ = Chronic inhalation cancer slope factor.
NA = Not Available
RfC = Chronic inhalation reference concentration.
RfD_O = Chronic oral reference dose.

[M] Obtained from MassDEP's ShortForms (v0808; downloaded from MassDEP 9-14-2011).
MassDEP ShortForm subchronic RfD vaues are 10-fold higher than the chronic RfD.

TABLE 7. CHEMICAL-SPECIFIC RELATIVE ABSORPTION FACTORS

Class Compound	Study Media	RAF_{SI}	RAF_{SD}	RAF_{IA}
Volatile Organic Compounds				
Tetrachloroethene		1.00 [1]	0.1000 [1]	1.00
Trichloroethene		1.00 [1]	0.1000 [1]	1.00
cis-1,2-Dichloroethene		1.00 A	0.1000 [1]	1.00

NOTE: For all non-referenced relative absorption factors, OCI determined the RAF using default MADEP (1995) guidance (Appendix B).

A = Assumed RAF based on other compounds in class (i.e., tetrachloroethene and trichloroethene).

NA = Not Available

RAF_{SI} = RAF Soil Ingestion

RAF_{SD} = RAF Soil Dermal Contact

RAF_{IA} = RAF Inhalation of Indoor Air

RAF_{WI} = RAF Ingestion of Water.

Relative absorption was determined using the toxicological studies relating to the derivation of the RfD, and if necessary studies used in the derivation of CSF. The use of inhalation studies for RAF determination was avoided whenever possible.

REFERENCES

[1] MassDEP. 2006. Shortforms: Method 3 Human Health Risk Assessment. Available Online at: http://www.mass.gov/dep/service/compliance/riskasmt.htm. June 2006.

TABLE 8. SIMPLE BOX MODEL:

Estimation of Contaminate Levels in Building Air Emanating from Exposed Shallow Groundwater in a Hypothetical Excavation.

COMPOUND	Units	MAX C_W	BOX MODEL PARAMETERS J_S	A_{EMIT}	A_{ADJ}	V_W	A_{WIND}	C_1	C_2	MAX C_{WADJ}	K_{OL}	K_L	dC	T_W	H	K_G	R	D_W	v	u	V	MW	C_3	Estimated C_A
		(ug/L)	(mg/m^2-s)	(m^2)	(unitless)	(m/s)	(m^2)	(L/m^3)	(m/cm)	(mg/L)	(cm/s)	(cm/s)	(deg. C)	(deg. K)	(atm-m^3/mol-K)	(cm/s)	(atm-m^3/mol-°K)	(cm^2/s)	(cm^2/s)	(centiposes)	(cm^3/mol)	(g/mol)	(ug/g)	(ug/m^3)
Volatile Organic Compounds																								
Tetrachloroethene		10,600	4.20E-02	15.4	0.400	0.0171	15.00	1,000	0.01	1.06E+01	0.00040	0.0004	11	284	1.77E-02	0.068	8.20E-05	8.20E-06	0.01	1.00499	?	166	1,000,000	1,009
Trichloroethene		1,790	7.45E-03	15.4	0.400	0.0171	15.00	1,000	0.01	1.79E+00	0.00042	0.0004	11	284	9.85E-03	0.080	8.20E-05	9.10E-06	0.01	1.00499	?	131	1,000,000	179
cis-1,2-Dichloroethene		3,420.0	1.56E-02	15.4	0.400	0.0171	15.00	1,000	0.01	3.42E+00	0.00046	0.0005	11	284	4.08E-03	0.098	8.20E-05	1.13E-05	0.01	1.00499	?	97	1,000,000	375

NA = Not Applicable.
NR = Not Reported.

All chemical-physical parameters are obtained from v8080 of MassDEP's ShortForms.

EQUATIONS AND PARAMETERS FOR ESTIMATING VAPORS FROM EXPOSED SHALLOW GROUNDWATER IN A TRENCH.

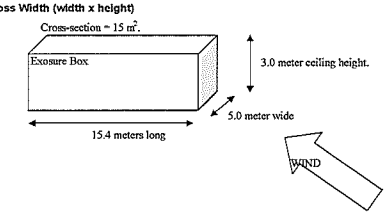
Variables

C_W	Varies	ug/L	Contaminant concentration in groundwater in units of ug/L..
C_{WADJ}	Varies	mg/L	Contaminant concentration in groundwater in mg/L.
J_S	Calc	mg/m^2-s	Contaminant emission rate from exposed shallow groundwater.
A_{EMIT}	15.4	m^2	Area of exposed shallow groundwater.
A_{ADJ}	0.4000	unitless	Ratio of emission surface area to exposure surface area.
V_W	0.0171	m/s	Mean building air exchange rate in meters/second air movement.
A_{WIND}	15.00	m^2	Vertical area through which building air passes through the exposure box.
C_1	1,000	L/m^3	Conversion Factor (1).
C_2	0.01	m/cm	Conversion Factor (2).
C_3	1,000,000	ug/g	Conversion Factor (2).
K_{OL}	Calc	cm/s	Air-water transfer velocity.
K_L	Calc	cm/s	Transfer velocity in water.
dC	11	Celcius.	Temperature of groundwater in degrees Celcius (U.S. EPA 2002).
T_W	284	Kelvin.	Temperature of surface water in degrees kelvin.
H	Varies	atm-m^3/mol-K	Chemical-specific Henry's Gas Law Coefficient.
K_G	Calc	cm/s	Transfer velocity in air.
R	8.20E-05	atm-m^3/mol	Universal Gas Constant.
D_W	Varies/Calc	cm^2/s	Chemical-specific molecular diffusivity in water (RAIS 2009).
v	1.00E-02	cm^2/s	Kinematic viscosity of water
u	1.00499	centiposes	Absolute viscosity of water
V	Varies	cm^3/mol	Chemical-specific molar volume at the boiling point. Chemical Properties Handbook
MW	Varies	g/mol	Chemical-specific molecular weight (RAIS 2009).
C_A	Calc	ug/m^3	Concentration of contaminant within the exposure box.

Assuming a 42,000 square foot building with 9 foot ceilings.
Approximaltey quivalent to a 4,000 square meters building with a 3 m ceiling.

			@ ACH		
Equivalent to:	231	m^3	4	924	m^3
				15.0	m^2
Cross width (m^2)=	15.0	Height (m) =	3.0	Width (m)=	5.0	Length (m) =	15.4	IRWIN Parameters	61.60	m/hr
							77	m^2 floor area	0.017	m/sec
Excavation area (m^2) =	15.4									

Cross Width (width x height)



Site Name: Cell Signaling Technology, Inc.
32 Tozer Road
Beverly, Massachusetts.

OAK CREEK, Inc.

TABLE 9. EXPOSURE POINT CONCENTRATIONS

COMPOUND	Maximum Soil (mg/kg)	Maximum Recent Groundwater (ug/L)	Vapor in Indoor Air (open trench) (ug/m^3)	Vapors in Indoor Air (worker) (ug/m^3)	Airborne Particulate (outdoors) (mg/m^3)
Volatile Organic Compounds					
Tetrachloroethene	1.49	10,600	1009.17	6.24	8.94E-05
Trichloroethene	0.185	1,790	178.69	1.40	1.11E-05
cis-1,2-Dichloroethene	0.261	3,420	374.93	2.97	1.57E-05

TABLE 10. CHEMICAL-SPECIFIC FACTORS

Analyte	CAS	Dermal Contact[A] K_p (aqueous) (cm/hr)[L]	FA[B]	Tau (hr/event)[B]	t* (hr)[B]	B (unitless)[B]
Volatile Organic Compounds						
Tetrachloroethene	71-43-2	3.269E-02	1.0	0.91	2.18	0.2 [B]
Trichloroethene	104-51-8	1.158E-02	1.0	0.58	1.39	0.1 [B]
cis-1,2-Dichloroethene	108-88-3	7.663E-03	1.0	0.37	0.89	0.0 [B]

NOTES:

-- = No value is available.

NA = Not Applicable.

K_p = Aqueous skin permeability coefficient (measured preferred)

Tau = Resistance to diffusion (hour).

t* = time to reach steady state (hrs).

B = Dimensionless ratio of skin permeability.

KEY

[A]MassDEP ShortForm v8080 values are used unless otherwise noted.

[B]Obtained from U.S. EPA (U.S. EPA 1992, 2004)

TABLE 11 INCIDENTAL INGESTION OF SOIL - CONSTRUCTION WORKER

Chemical	Soil Concentration (mg/kg)	Compound RAF	Carcinogenic Effects: CIU[b] (1/day)	Carcinogenic Effects: Oral CSF[a] (mg/kg-day)$^{-1}$	Carcinogenic Effects: Excess Risk	Noncarcinogenic Effects: CIU[b] (1/day)	Noncarcinogenic Effects: Adj RfD_O[a] (mg/kg-day)	Noncarcinogenic Effects: Hazard Quotient
Volatile Organic Compounds								
Tetrachloroethene	1.49	1.00	3.4E-9	5.10E-02	3.E-10	5.1E-7	1.00E-01	8.E-06
Trichloroethene	0.19	1.00	3.4E-9	4.60E-02	3.E-11	5.1E-7	5.00E-03	2.E-05
cis-1,2-Dichloroethene	0.26	1.00	3.4E-9	NA	--	5.1E-7	1.00E-01	1.E-06
Ingestion Total Cancer Risk:					3.E-10			
Total Hazard Index:								3.E-05
Ingestion Total Cancer Risk:					3.E-10			
Ingestion Total Hazard Index:								3.E-05

NOTES:
RfD_O - Chronic oral reference dose
CSF - Cancer slope factor
-- - Not applicable
ND - Not Detected
NA - Not Available
RAF - Relative absorption factor (default absorption efficiency, MADP 1995)
[a] Toxicity values obtained from IRIS (2009) Adj refers to a 10-fold adjustment of the RfD to accoount for subchronic receptor exposure.
[b] Chemical independent uptake (CIU) values are exclusive of chemical concentrations and RAF values.

TABLE 12 DERMAL CONTACT WITH SOIL - CONSTRUCTION WORKER

Organic Chemical	Soil Concentration (mg/kg)	Compound ABS	Carcinogenic Effects CIU[b] (1/day)	Oral CSF[a] (mg/kg-day)$^{-1}$	Excess Risk	Noncarcinogenic Effects CIU[b] (1/day)	Adj RfD_o[a] (mg/kg-day)	Hazard Quotient
Volatile Organic Compounds								
Tetrachloroethene	1.49	0.10	3.4E-8	5.10E-02	3.E-10	5.1E-6	1.00E-01	8.E-06
Trichloroethene	0.19	0.10	3.4E-8	4.60E-02	3.E-11	5.1E-6	5.00E-03	2.E-05
cis-1,2-Dichloroethene	0.26	0.10	3.4E-8	NA	--	5.1E-6	1.00E-01	1.E-06
Ingestion Total Cancer Risk:					3.E-10			
Total Hazard Index:								3.E-05
Dermal Contact Pathway Total Cancer Risk:					3.E-10			
Dermal Contact Pathway Total Hazard Index:								3.E-05

NOTES:
RfD_o - Chronic oral reference dose
CSF - Cancer slope factor
-- - Not applicable
ND - Not Detected
NA - Not Available
RAF - Relative absorption factor (default absorption efficiency, MADP 1995)
[a] Toxicity values obtained from IRIS (2009) Adj refers to a 10-fold adjustment of the RfD to accoount for subchronic receptor exposure.
[b] Chemical independent uptake (CIU) values are exclusive of chemical concentrations and RAF values.

TABLE 13 INHALATION & INGESTION OFAIRBORNE DUSTS - CONSTRUCTION WORKER (INHALATION)

Organic Chemical	Particulate Air Concentration (ug/m^3)	Compound RAF	Carcinogenic Effects CIU[b] (mg-m3/ug-kg-d)	Inhalation CSF[a] $(mg/kg\text{-}day)^{-1}$	Excess Risk	Noncarcinogenic Effects CIU[b] (mg-m3/ug-kg-d)	Adj RfD_i[a] (mg/kg-day)	Hazard Quotient
Volatile Organic Compounds								
Tetrachloroethene	8.9E-05	1.00	4.5E-7	1.00E-05	4.E-16	6.7E-5	4.60E+01	1.E-10
Trichloroethene	1.1E-05	1.00	4.5E-7	4.10E-06	2.E-17	6.7E-5	2.00E-02	4.E-08
cis-1,2-Dichloroethene	1.6E-05	1.00	4.5E-7	NA	--	6.7E-5	3.50E-01	3.E-09
Inhalation Total Cancer Risk:					4.E-16			
Total Hazard Index:								4.E-08
Total InhalationCancer Risk:					4.E-16			
Total Inhalation Hazard Index:								4.E-08

NOTES:

RfD_i - Chronic inhalation reference dose

CSF - Cancer slope factor

-- - Not applicable

ND - Not Detected

NA - Not Available

RAF - Relative absorption factor (default absorption efficiency, MADP 1995)

[a] Toxicity values obtained from IRIS (2009) Adj refers to a 10-fold adjustment of the RfD to accoount for subchronic receptor exposure.

[b] Chemical independent uptake (CIU) values are exclusive of chemical concentrations and RAF values.

TABLE 14 INHALATION & INGESTION OF AIRBORNE DUSTS - CONSTRUCTION WORKER (INGESTION)

Organic Chemical	Particulate Air Concentration (ug/m^3)	Compound RAF	Carcinogenic Effects CIU[b] (mg-m3/ug-kg-d)	Oral CSF[a] $(mg/kg\text{-}day)^{-1}$	Excess Risk	Noncarcinogenic Effects CIU[b] (mg-m3/ug-kg-d)	Adj RfD_O[a] (mg/kg-day)	Hazard Quotient
Volatile Organic Compounds								
Tetrachloroethene	8.9E-05	1.00	1.8E-6	5.10E-02	8.E-12	2.7E-4	1.00E-01	2.E-07
Trichloroethene	1.1E-05	1.00	1.8E-6	4.60E-02	9.E-13	2.7E-4	5.00E-03	6.E-07
cis-1,2-Dichloroethene	1.6E-05	1.00	1.8E-6	NA	--	2.7E-4	1.00E-01	4.E-08
Ingestion Total Cancer Risk:					9.E-12			
Total Hazard Index:								9.E-07
Ingestion Total Cancer Risk:					3.E-10			
Ingestion Total Hazard Index:								3.E-05

NOTES:

RfD_O - Chronic oral reference dose

CSF - Cancer slope factor

-- - Not applicable

ND - Not Detected

NA - Not Available

RAF - Relative absorption factor (default absorption efficiency, MADP 1995)

[a] Toxicity values obtained from IRIS (2009) Adj refers to a 10-fold adjustment of the RfD to accoount for subchronic receptor exposure.

[b] Chemical independent uptake (CIU) values are exclusive of chemical concentrations and RAF values.

TABLE 15 INHALATION OF VAPORS EMANATING FROM EXPOSED SHALLOW GROUNDWATER - CONSTRUCTIC

Organic Chemical	Outdoor Air Concentration (ug/m^3)	Compound RAF	Carcinogenic Effects: CIU_i[b] (unitless)	URF ($(ug/m^3)^{-1}$)	Excess Risk	Noncarcinogenic Effects: CIU_i[b] (unitless)	RfC (mg/m^3)	Hazard Quotient
Volatile Organic Compounds								
Tetrachloroethene	1,009.2	1.00	7.9E-4	1.00E-05	8.E-06	1.2E-1	4.60E+01	3.E-03
Trichloroethene	178.7	1.00	7.9E-4	4.10E-06	6.E-07	1.2E-1	2.00E-02	1.E+00
cis-1,2-Dichloroethene	374.9	1.00	7.9E-4	NA	--	1.2E-1	3.50E-01	1.E-01
Dermal Contact Total Cancer Risk:					9.E-06			
Total Hazard Index:								1.E+00
Total Dermal Contact Cancer Risk:					9.E-06			
Total Dermal Contact Hazard Index:								1.E+00

NOTES:
RfD - Chronic oral reference dose
CSF - Cancer slope factor
-- - Not applicable
ND - Not Detected
NA - Not Available
RAF - Relative absorption factor (default absorption efficiency, MADP 1995)
[a] Toxicity values obtained from IRIS (2009) Adj refers to a 10-fold adjustment of the RfD to accoount for subchronic receptor exposure.
[b] Chemical independent uptake (CIU) values are exclusive of chemical concentrations and RAF values.

TABLE 16 DERMAL CONTACT WITH EXPOSED SHALLOW GROUNDWATER - CONSTRUCTION WORKER

Organic Chemical	Mean Water Concentration (ug/L)	DA_{EVENT} (mg/cm^2-event)		Carcinogenic Effects: CIU[b] (cm^2-event/kg-d)	Carcinogenic Effects: Oral CSF[a] $(mg/kg\text{-}day)^{-1}$	Carcinogenic Effects: Excess Risk	Noncarcinogenic Effects: CIU[b] (cm^2-event/kg-d)	Noncarcinogenic Effects: Adj RfD_O[a] (mg/kg-day)	Noncarcinogenic Effects: Hazard Quotient
Volatile Organic Compounds									
Tetrachloroethene	10,600	1.50E+00	C	1.2E-7	5.10E-02	9.E-09	1.8E-5	1.00E-01	3.E-04
Trichloroethene	1,790	5.15E-02	C	1.2E-7	4.60E-02	3.E-10	1.8E-5	5.00E-03	2.E-04
cis-1,2-Dichloroethene	3,420	4.17E-02	D	1.2E-7	NA	--	1.8E-5	1.00E-01	7.E-06
Dermal Contact	Total Cancer Risk:					9.E-09			
	Total Hazard Index:								5.E-04
Total Dermal Contact Cancer Risk:						1.E-08			
Total Dermal Contact Hazard Index:									5.E-04

NOTES:

RfD_O - Chronic oral reference dose

CSF - Cancer slope factor

-- - Not applicable

ND - Not Detected

NA - Not Available

RAF - Relative absorption factor (default absorption efficiency, MADP 1995)

C= DA_{EVENT} Calculated as: $2FA \times K_P \times C_W \times ((6 \times Tau \times t_{event})/Pi)^{0.5})$

D= DA_{EVENT} Calculated as: $FA \times K_P \times C_W \times \{(t_{event}/(1+B)) + (2 \times Tau \times ((1+3 \times B^2)/(1+B)^2))\}$

E= DA_{EVENT} Calculated as: $K_P \times C_W \times t^*$

Adj RfD_O and Adj RfD_I refer to RfD_O and RfD_I adjusted for subchronic exposure.

[a] Toxicity values obtained from IRIS (2009) Adj refers to a 10-fold adjustment of the RfD to accoount for subchronic receptor exposure.

[b] Chemical independent uptake (CIU) values are exclusive of chemical concentrations and RAF values.

TABLE 17 INCIDENTAL INGESTION OF SOIL - FACILITY WORKER

Chemical	Soil Concentration (mg/kg)	Compound RAF	Carcinogenic Effects: CIU[b] (1/day)	Carcinogenic Effects: Oral CSF[a] (mg/kg-day)$^{-1}$	Carcinogenic Effects: Excess Risk	Noncarcinogenic Effects: CIU[b] (1/day)	Noncarcinogenic Effects: RfD_o[a] (mg/kg-day)	Noncarcinogenic Effects: Hazard Quotient
Volatile Organic Compounds								
Tetrachloroethene	1.49	1.00	1.6E-7	5.10E-02	1.E-08	4.5E-7	1.00E-02	7.E-05
Trichloroethene	0.19	1.00	1.6E-7	4.60E-02	1.E-09	4.5E-7	5.00E-04	2.E-04
cis-1,2-Dichloroethene	0.26	1.00	1.6E-7	NA	--	4.5E-7	1.00E-02	1.E-05
Ingestion Total Cancer Risk:					1.E-08			
Total Hazard Index:								2.E-04
Ingestion Total Cancer Risk:					1.E-08			
Ingestion Total Hazard Index:								2.E-04

NOTES:
RfD_o - Chronic oral reference dose
CSF - Cancer slope factor
-- - Not applicable
ND - Not Detected
NA - Not Available
RAF - Relative absorption factor (default absorption efficiency, MADP 1995)
[a] Toxicity values obtained from IRIS (2009) Adj refers to a 10-fold adjustment of the RfD to accoount for subchronic receptor exposure.
[b] Chemical independent uptake (CIU) values are exclusive of chemical concentrations and RAF values.

TABLE 18 DERMAL CONTACT WITH SOIL - FACILITY WORKER

Organic Chemical	Soil Concentration (mg/kg)	Compound ABS	Carcinogenic Effects CIU[b] (1/day)	Oral CSF[a] (mg/kg-day)$^{-1}$	Excess Risk	Noncarcinogenic Effects CIU[b] (1/day)	RfD_o[a] (mg/kg-day)	Hazard Quotient
Volatile Organic Compounds								
Tetrachloroethene	1.49	0.10	1.1E-6	5.10E-02	8.E-09	2.9E-6	1.00E-02	4.E-05
Trichloroethene	0.19	0.10	1.1E-6	4.60E-02	9.E-10	2.9E-6	5.00E-04	1.E-04
cis-1,2-Dichloroethene	0.26	0.10	1.1E-6	NA	--	2.9E-6	1.00E-02	8.E-06
Ingestion Total Cancer Risk:					9.E-09			
Total Hazard Index:								2.E-04
Dermal Contact Pathway Total Cancer Risk:					9.E-09			
Dermal Contact Pathway Total Hazard Index:								2.E-04

NOTES:

RfD_o - Chronic oral reference dose

CSF - Cancer slope factor

-- - Not applicable

ND - Not Detected

NA - Not Available

RAF - Relative absorption factor (default absorption efficiency, MADP 1995)

[a] Toxicity values obtained from IRIS (2009) Adj refers to a 10-fold adjustment of the RfD to accoount for subchronic receptor exposure.

[b] Chemical independent uptake (CIU) values are exclusive of chemical concentrations and RAF values.

ɔN \ **TABLE 19 INHALATION OF VAPORS IN INDOOR AIR - FACILITY WORKER**

Organic Chemical	Indoor Air Concentration (ug/m^3)	Compound RAF	Carcinogenic Effects CIU[b] (unitless)	Carcinogenic Effects URF ($(ug/m^3)^{-1}$)	Carcinogenic Effects Excess Risk	Noncarcinogenic Effects CIU[b] (unitless)	Noncarcinogenic Effects RfC (mg/m^3)	Noncarcinogenic Effects Hazard Quotient
Volatile Organic Compounds								
Tetrachloroethene	6.24	1.00	8.2E-2	1.00E-05	5.E-09	2.3E-1	4.60E+00	3.E-04
Trichloroethene	1.40	1.00	8.2E-2	4.10E-06	5.E-10	2.3E-1	2.00E-03	2.E-01
cis-1,2-Dichloroethene	2.97	1.00	8.2E-2	NA	--	2.3E-1	3.50E-02	2.E-02
Ingestion Total Cancer Risk:					6.E-09			
Total Hazard Index:								2.E-01
Inhalation Pathway Total Cancer Risk:					6.E-09			
Inhalation Pathway Total Hazard Index:								2.E-01

NOTES:
RfD - Chronic oral reference dose
CSF - Cancer slope factor
-- - Not applicable
ND - Not Detected
NA - Not Available
RAF - Relative absorption factor (default absorption efficiency, MADP 1995)
[a] Toxicity values obtained from EPA Integrated Risk Information System (IRIS) files (April 1996), unless otherwise noted.
[b] Chemical dependent intake (CDI) values are exclusive of chemical concentrations and RAF values.

TABLE 20. SUMMARY OF CHEMICAL-SPECIFIC UPPER-BOUND EXCESS LIFETIME CARCINOGENIC RISKS AND NONCARCINOGENIC HAZARD INDICES FOR EACH RECEPTOR SCENARIO

Receptors	WORKERS			
	Construction		Facility	
Upper-Bound Risk Estimates **Compounds**	Excess Lifetime Cancer Risk	Non-Cancer Hazard Index	Excess Lifetime Cancer Risk	Non-Cancer Hazard Index
Volatile Organic Compounds				
Tetrachloroethene	8E-06	3E-03	2E-08	4E-04
Trichloroethene	6E-07	1E+00	2E-09	2E-01
cis-1,2-Dichloroethene	--	1E-01	--	2E-02
TOTAL SITE RISK	**9E-06**	**1E+00**	**2E-08**	**2E-01**

NOTES:
-- - Not applicable

TABLE 21. SUMMARY OF UPPER-BOUND EXCESS LIFETIME CARCINOGENIC RISKS AND NONCARCINOGENIC HAZARD INDICES FOR EACH PATHWAY AND SCENARIO

Exposure Pathway *Route* Media	Upper-Bound Lifetime Excess Carcinogenic Risk Estimate	Upper-Bound Total Non-Carcinogenic Hazard Index
Construction Worker		
Ingestion		
Soil	3E-10	3E-05
Inhaled-Particulate	9E-12	9E-07
Ingestion Total	**3E-10**	**3E-05**
Dermal Contact		
Soil	3E-10	3E-05
Groundwater	9E-09	5E-04
Dermal Contact Total	**1E-08**	**5E-04**
Inhalation		
Indoor Air During Remediation	9E-06	1E+00
Particulate	4E-16	4E-08
Inhalation Total	**9E-06**	**1E+00**
Total Receptor Risk	**9E-06**	**1E+00**
Facility Worker		
Ingestion		
Soil	**1E-08**	**2E-04**
Dermal Contact		
Soil	**9E-09**	**2E-04**
Inhalation		
Indoor Air	**6E-09**	**2E-01**
Total Receptor Risk	**3E-08**	**2E-01**

APPENDIX C
Analytical Laboratory Reports

APPENDIX C

27 TOZER ROAD ASSESSMENT ACTIVITIES

Shaw
Shaw E & I, Inc.

Drilling Log

Monitoring Well **OB43-S**

Project *Varian Beverly* Owner *Varian Medical Systems, Inc.*

Location *27 Tozer Road, Beverly, Massachusetts* Proj. No. *139340*

Surface Elev. *NA* Total Hole Depth *16.8 ft.* North _____ East _____

Top of Casing *NA* Water Level Initial ▽ *11.2 ft.* Static *NA* Diameter _____

Screen: Dia *2 in.* Length *12 ft.* Type/Size *PVC/Slot 0.010 in.*

Casing: Dia *2 in.* Length *5 ft.* Type *PVC*

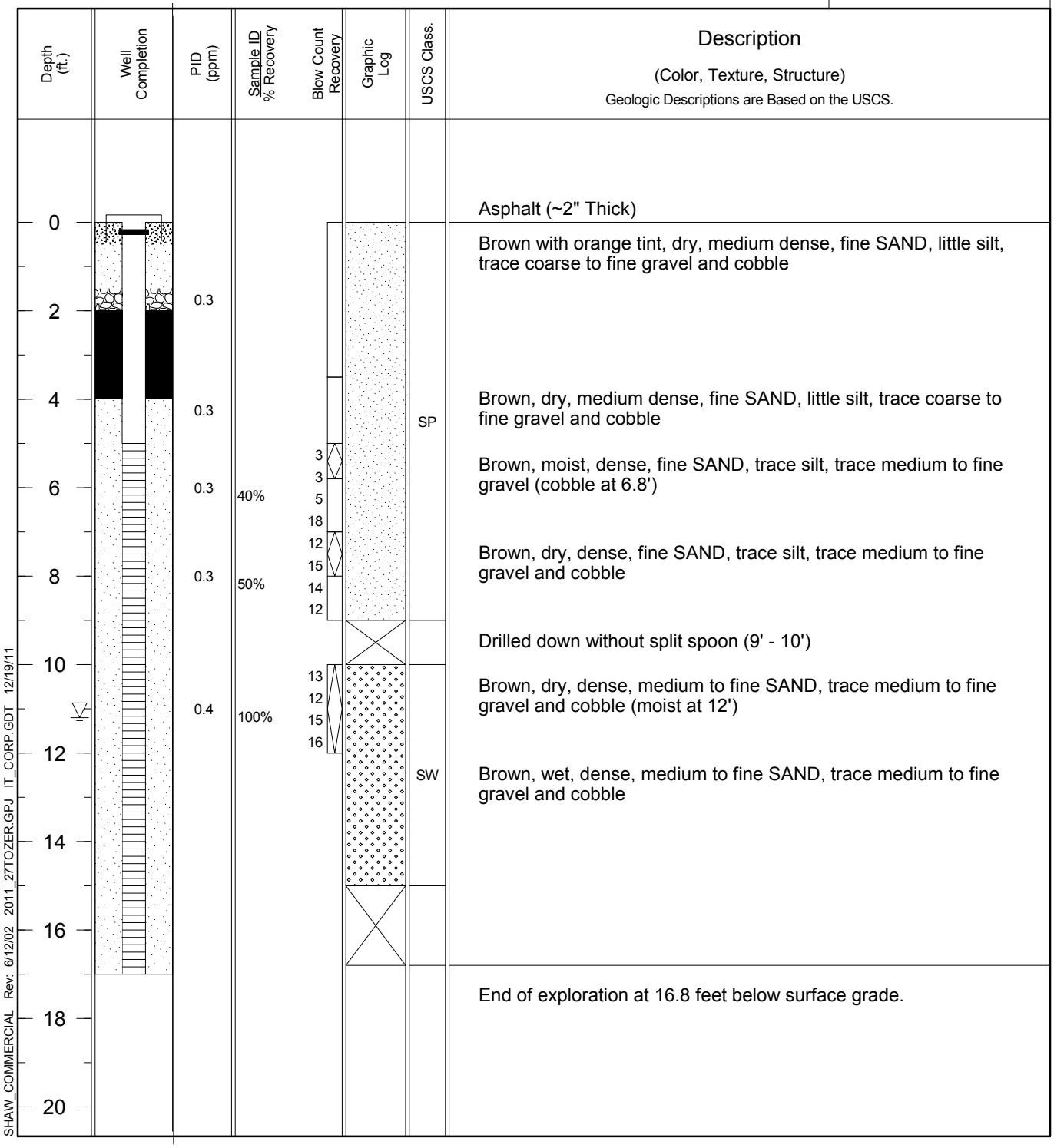
Fill Material *Cement, Native, Silica Sand, Bentonite* Rig/Core *CME 75*

Drill Co. *Geosearch* Method *Hollow Stem Auger*

Driller *Justin E.* Log By *Sheila Barry* Date *10/3/11* Permit # *NA*

Checked By *Ray Cadorette* License No. _____

COMMENTS



SHAW_COMMERCIAL Rev: 6/12/02 2011_27TOZER.GPJ IT_CORP.GDT 12/19/11

NON HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MAR000067341 — Manifest Document No. 18170 — 2. Page 1 of 1

3. Generator's Name and Mailing Address
Varian Medical Systems, Inc
c/o Shaw E & I, 100 Technology Drive
Stoughton MA 02072
Attn: Raymond Cadorette
4. Generator's Phone (617) 589-6102

A. Non-Hazardous Manifest Document Number: NHZ001 18170
B. S.G.I. (Gen. Site Address): 150 Sohier Road, Beverly MA 01915
C. S.T.I. (Lic. Plate #): ME
D. Transporter's Phone: 978-465-1595
E. S.T.I. (Lic. Plate #):
F. Transporter's Phone:
G. State Facility's ID: SAME
H. Facility's Phone: 207-799-0850

5. Transporter 1 Company Name: ENPRO SERVICES, INC. — 6. US EPA ID Number: MAD980670004
7. Transporter 2 Company Name — 8. US EPA ID Number:

9. Designated Facility Name and Site Address
ENPRO SERVICES OF MAINE, INC.
106 MAIN STREET
SOUTH PORTLAND ME 04106
10. US EPA ID Number: MED019051069

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. NON DOT, NON RCRA REGULATED MATERIAL	001	DM	130	G	State NONE
					State NONE
b. NON DOT, NON RCRA REGULATED MATERIAL	001	DM	600	P	State NONE
					State NONE
c.					State
					State
d.					State
					State

J. Additional Descriptions for Materials Listed Above
(L) WASTEWATER
a. ME-1211-05071
(S) SOIL CUTTINGS
b. ME-1211-05070
c.
d.

K. Handling Codes for Wastes Listed Above — Interim / Final
a. H135 — b. H141
c. — d.

15. Special Handling Instructions and Additional Information
ER CONTACT: ENPRO SERVICES, INC. - 24 HOURS - (800) 966-1102
1) 2) ENPRO PO# 12754
Point of Departure: ENPRO JOB# 8431-11

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, and all applicable state laws and regulations.

Printed/Typed Name: Raymond J. Cadorette Agent for VMS — Signature — Month Day Year: 01 06 12

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: Eric Truesdell — Signature — Month Day Year: 01 09 12

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name — Signature — Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.

Printed/Typed Name: William S. Rolls — Signature — Month Day Year: 01 09 12

ORIGINAL-RETURN TO GENERATOR

NON HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MAR000067341 — Manifest Document No. 18170 — 2. Page 1 of 1

GENERATOR

3. Generator's Name and Mailing Address
Varian Medical Systems, Inc
c/o Shaw E & I, 100 Technology Drive Attn: Raymond Cadorette
Stoughton MA 02072
4. Generator's Phone (617) 589-6102

A. Non-Hazardous Manifest Document Number: NHZ001 18170
B. S.G.I. (Gen. Site Address): 150 Sohier Road Beverly MA 01915
C. S.T.I. (Lic. Plate #): ME
D. Transporter's Phone: 978-465-1595

5. Transporter 1 Company Name: ENPRO SERVICES, INC.
6. US EPA ID Number: MAD980670004
7. Transporter 2 Company Name:
8. US EPA ID Number:
E. S.T.I. (Lic. Plate #):
F. Transporter's Phone:

9. Designated Facility Name and Site Address
ENPRO SERVICES OF MAINE, INC.
106 MAIN STREET
SOUTH PORTLAND ME 04106
10. US EPA ID Number: MED019051069
G. State Facility's ID: SAME
H. Facility's Phone: 207-799-0850

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. NON DOT, NON RCRA REGULATED MATERIAL		DM			State NONE State NONE
b. NON DOT, NON RCRA REGULATED MATERIAL		DM			State NONE State NONE
c.					State State
d.					State State

J. Additional Descriptions for Materials Listed Above
(L) WASTEWATER
a. ME-1211-05071
(S) SOIL CUTTINGS
b. ME-1211-05070
c.
d.

K. Handling Codes for Wastes Listed Above

Interim	Final	Interim	Final
a.		b.	
c.		d.	

15. Special Handling Instructions and Additional Information
ENPRO SERVICES, INC. - 24 HOURS - (800) 966-1102 1) 2) ENPRO PO# 12754
Point of Departure: ENPRO JOB# 8431-11

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, and all applicable state laws and regulations.

Printed/Typed Name: Raymond J. Cadorette Agent for VMS — Signature — Month Day Year: 01 06 12

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials — Date
Printed/Typed Name: Eric Trancell — Signature — Month Day Year: 01 06 12

18. Transporter 2 Acknowledgement of Receipt of Materials — Date
Printed/Typed Name — Signature — Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19. — Date
Printed/Typed Name — Signature — Month Day Year

GENERATOR'S COPY

APPENDIX D

LABORATORY ANALYTICAL REPORTS

Data Usability Worksheet

Project Name : Varian Medical Systems, Inc
Job Number : 143276

Prepared By: Pernilla Haley
Date : 12/5/2011

Analyte Group : Volatile Organics
Analytical Method : TO-15

Completed MADEP CAM Certification Form included: Yes

Laboratory ID No. : R1105621

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
10/6/2011	TO-15		30 days	10/14/11, 10/17/11
10/7/2011	TO-15		30 days	10/14/11, 10/15/11, 10/17/11

Sample temperature above QC limit: 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: No

Equipment Field Blank ID : NA
Trip Blank ID : NA
Method Blank: TO-15 10/14/11, 10/17/11

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:

Reviewed By: RJC

Columbia Analytical Services™ 1565 Jefferson Rd, Building 300, Suite 360 | Rochester, NY 14623 | 585-288-5380 | 585-288-8475 fax |

October 26, 2011 Service Request No: R1105621

Mr. Ray Cadorette
Shaw Environmental & Infrastructure, Inc.
100 Technology Center
Stoughton, MA 02072

Laboratory Results for: Varian Beverly Air Samples/139340/143267

Dear Mr. Cadorette:

Enclosed are the results of the sample(s) submitted to our laboratory on October 10, 2011. For your reference, these analyses have been assigned our service request number **R1105621**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. 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 7469. You may also contact me via email at MPerry@caslab.com.

Respectfully submitted,

Columbia Analytical Services, Inc.

Michael Perry
Laboratory Manager

COLUMBIA ANALYTICAL SERVICES, INC.

Client:	Shaw E & I, Inc.	**Service Request No.:**	R1105621
Project:	Varian Beverly	**Project No.:**	143267/139340
Sample Matrix:	Air	**Date Received:**	10/10/11

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. This report contains analytical results for samples designated for Tier II, MASS. CAM deliverables. When appropriate to the method, blank and LCS results have been reported with each analytical test.

Sample Receipt

Shaw air samples were collected on 10/06/11and 10/07/11 and received at CAS in good condition as noted on the receipt and preservation check form. The samples were stored in the laboratory at room temperature prior to analysis. See the CAS case narrative for a cross-reference between Client ID and CAS Job #.

TO - 15 Air Analysis

Eighteen air samples were analyzed for a site specific list of Volatile Organics by EPA method TO-15.

All samples were analyzed at appropriate dilutions based on prescreening of the samples and/or historical data to bring the target analytes within the calibration range of the method.

All initial and continuing calibrations were compliant.

All surrogate standard recoveries were within QC limits.

The LCS/LCSD recoveries were all within QC limits of 70 – 130 %. All RPD data were within QC limits.

No analytical or QC problems were encountered with these analyses.

CASE NARRATIVE

This report contains analytical results for the following samples:
Service Request Number: R1105621

Lab ID	Client ID
R1105621-001	VP-3
R1105621-002	VP-5
R1105621-003	VP-6
R1105621-004	BLDG 3-3
R1105621-005	BLDG 3-2
R1105621-006	BLDG 2-6
R1105621-007	BLDG 6-SV1
R1105621-008	BDLG 6-SV2
R1105621-009	BLDG 6-SV3
R1105621-010	BLDG 6-1
R1105621-011	BLDG 6-2
R1105621-012	BLDG 5-1
R1105621-013	BLDG 5-2
R1105621-014	BLDG 5-3
R1105621-015	BLDG 5-4
R1105621-016	BLDG 5-SV1
R1105621-017	BLDG 5-SV2
R1105621-018	BLDG 5-SV3

MassDEP Analytical Protocol Certification Form

Laboratory Name: Columbia Analytical Services, Inc. Project #:139340/143267

Project Location: Varian Beverly RTN:

This Form provides certifications for the following data set: list Laboratory Sample ID Number(s):
R1105621–001 - 018

Matrices: ☐Groundwater/Surface Water ☐ Soil/Sediment ☐ Drinking Water X 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 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?	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?	X Yes ☐ No ☐ Yes X 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)?	X 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:** Laboratory Manager

Printed Name: Michael K. Perry **Date:** 10/26/11

Columbia Analytical Services™

REPORT QUALIFIERS

U	Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.
J	Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/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.

ACCREDITED IN ACCORDANCE WITH nelac

CAS/Rochester 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

COLUMBIA ANALYTICAL SERVICES
1565 JEFFERSON RD
BUILDING 300, SUITE 360
ROCHESTER, NY 14623-0000

Laboratory Director: Michael K. Perry

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: 01 JUL 2011
Expires: 30 JUN 2012

Oscar C. Parcaba

Director, Division of Environmental Analysis

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 25 AUG 2011

M-NY032 COLUMBIA ANALYTICAL SERVICES
ROCHESTER NY

NON POTABLE WATER (CHEMISTRY) Effective Date 25 AUG 2011 Expiration Date 30 JUN 2012

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
PH	SM 4500-H-B
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

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 25 AUG 2011

M-NY032 COLUMBIA ANALYTICAL SERVICES
ROCHESTER NY

NON POTABLE WATER (CHEMISTRY) Effective Date 25 AUG 2011 Expiration Date 30 JUN 2012

Analytes	Methods
ALKALINITY, TOTAL	SM 2320B
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

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian Beverly Air Samples/139340/143267
Sample Matrix: Air

Service Request: R1105621
Date Collected: 10/ 6/11 1359
Date Received: 10/10/11

Sample Name: VP-3
Lab Code: R1105621-001

Analytical Method: TO-15

Date Analyzed: 10/17/11 2029
Canister Dilution Factor: 2.20

Initial Pressure (psig): -1.5 Final Pressure (psig): 14.3

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
74-87-3	Chloromethane	70	14	14	6.9	6.9	U
75-01-4	Vinyl Chloride	70	1.9	1.9	0.74	0.74	U
74-83-9	Bromomethane	70	14	14	3.5	3.5	U
75-00-3	Chloroethane	70	18	18	6.9	6.9	U
75-69-4	Trichlorofluoromethane (CFC 11)	70	19	19	3.5	3.5	U
75-35-4	1,1-Dichloroethene	70	14	14	3.5	3.5	U
75-09-2	Methylene Chloride	70	12	12	3.4	3.4	U
156-60-5	trans-1,2-Dichloroethene	70	14	14	3.5	3.5	U
75-34-3	1,1-Dichloroethane (1,1-DCA)	70	14	14	3.5	3.5	U
156-59-2	cis-1,2-Dichloroethene	70	14	14	3.5	3.5	U
67-66-3	Chloroform	70	17	17	3.5	3.5	U
107-06-2	1,2-Dichloroethane	70	14	14	3.5	3.5	U
71-55-6	1,1,1-Trichloroethane (TCA)	70	19	19	3.5	3.5	U
56-23-5	Carbon Tetrachloride	70	2.2	2.2	0.35	0.35	U
78-87-5	1,2-Dichloropropane	70	16	16	3.5	3.5	U
75-27-4	Bromodichloromethane	70	4.7	4.7	0.70	0.70	U
79-01-6	**Trichloroethene (TCE)**	70	**42**	1.9	**7.7**	0.35	
10061-01-5	cis-1,3-Dichloropropene	70	31	31	6.9	6.9	U
10061-02-6	trans-1,3-Dichloropropene	70	16	16	3.5	3.5	U
79-00-5	1,1,2-Trichloroethane	70	19	19	3.5	3.5	U
124-48-1	Dibromochloromethane	70	6.0	6.0	0.70	0.70	U
127-18-4	**Tetrachloroethene (PCE)**	70	**410**	2.5	**61**	0.37	
108-90-7	Chlorobenzene	70	16	16	3.5	3.5	U
100-41-4	Ethylbenzene	70	30	30	6.9	6.9	U
179601-23-1	m,p-Xylenes	70	60	60	14	14	U
75-25-2	Bromoform	70	36	36	3.5	3.5	U
95-47-6	o-Xylene	70	30	30	6.9	6.9	U
79-34-5	1,1,2,2-Tetrachloroethane	70	4.7	4.7	0.69	0.69	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	91	70-130	10/17/11 2029	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian Beverly Air Samples/139340/143267
Sample Matrix: Air

Service Request: R1105621
Date Collected: 10/ 6/11 1401
Date Received: 10/10/11

Sample Name: VP-5
Lab Code: R1105621-002

Analytical Method: TO-15

Date Analyzed: 10/14/11 1536
Canister Dilution Factor: 2.16

Initial Pressure (psig): -1.3 Final Pressure (psig): 14.3

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
74-87-3	Chloromethane	0.400	2400	2400	1200	1200	U
75-01-4	Vinyl Chloride	0.400	320	320	130	130	U
74-83-9	Bromomethane	0.400	2300	2300	600	600	U
75-00-3	Chloroethane	0.400	3100	3100	1200	1200	U
75-69-4	Trichlorofluoromethane (CFC 11)	0.400	3300	3300	600	600	U
75-35-4	1,1-Dichloroethene	0.400	2400	2400	600	600	U
75-09-2	Methylene Chloride	0.400	2100	2100	590	590	U
156-60-5	trans-1,2-Dichloroethene	0.400	2400	2400	600	600	U
75-34-3	1,1-Dichloroethane (1,1-DCA)	0.400	2400	2400	600	600	U
156-59-2	cis-1,2-Dichloroethene	0.400	2400	2400	600	600	U
67-66-3	Chloroform	0.400	2900	2900	600	600	U
107-06-2	1,2-Dichloroethane	0.400	2400	2400	600	600	U
71-55-6	1,1,1-Trichloroethane (TCA)	0.400	3200	3200	590	590	U
56-23-5	Carbon Tetrachloride	0.400	380	380	60	60	U
78-87-5	1,2-Dichloropropane	0.400	2800	2800	600	600	U
75-27-4	Bromodichloromethane	0.400	810	810	120	120	U
79-01-6	Trichloroethene (TCE)	0.400	320	320	60	60	U
10061-01-5	cis-1,3-Dichloropropene	0.400	5400	5400	1200	1200	U
10061-02-6	trans-1,3-Dichloropropene	0.400	2700	2700	590	590	U
79-00-5	1,1,2-Trichloroethane	0.400	3200	3200	590	590	U
124-48-1	Dibromochloromethane	0.400	1000	1000	120	120	U
127-18-4	Tetrachloroethene (PCE)	0.400	430	430	64	64	U
108-90-7	Chlorobenzene	0.400	2800	2800	600	600	U
100-41-4	**Ethylbenzene**	0.400	**120000**	5100	**28000**	1200	
179601-23-1	**m,p-Xylenes**	0.400	**470000**	10000	**110000**	2400	
75-25-2	Bromoform	0.400	6200	6200	600	600	U
95-47-6	**o-Xylene**	0.400	**47000**	5100	**11000**	1200	
79-34-5	1,1,2,2-Tetrachloroethane	0.400	810	810	120	120	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	102	70-130	10/14/11 1536	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian Beverly Air Samples/139340/143267
Sample Matrix: Air

Service Request: R1105621
Date Collected: 10/ 6/11 1402
Date Received: 10/10/11

Sample Name: VP-6
Lab Code: R1105621-003

Analytical Method: TO-15

Date Analyzed: 10/14/11 1448
Canister Dilution Factor: 2.16

Initial Pressure (psig): -1.3 Final Pressure (psig): 14.3

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
74-87-3	Chloromethane	0.150	6500	6500	3100	3100	U
75-01-4	Vinyl Chloride	0.150	860	860	340	340	U
74-83-9	Bromomethane	0.150	6200	6200	1600	1600	U
75-00-3	Chloroethane	0.150	8400	8400	3200	3200	U
75-69-4	Trichlorofluoromethane (CFC 11)	0.150	8900	8900	1600	1600	U
75-35-4	1,1-Dichloroethene	0.150	6300	6300	1600	1600	U
75-09-2	Methylene Chloride	0.150	5500	5500	1600	1600	U
156-60-5	trans-1,2-Dichloroethene	0.150	6300	6300	1600	1600	U
75-34-3	1,1-Dichloroethane (1,1-DCA)	0.150	6500	6500	1600	1600	U
156-59-2	cis-1,2-Dichloroethene	0.150	6300	6300	1600	1600	U
67-66-3	Chloroform	0.150	7800	7800	1600	1600	U
107-06-2	1,2-Dichloroethane	0.150	6500	6500	1600	1600	U
71-55-6	1,1,1-Trichloroethane (TCA)	0.150	8600	8600	1600	1600	U
56-23-5	Carbon Tetrachloride	0.150	1000	1000	160	160	U
78-87-5	1,2-Dichloropropane	0.150	7300	7300	1600	1600	U
75-27-4	Bromodichloromethane	0.150	2200	2200	320	320	U
79-01-6	Trichloroethene (TCE)	0.150	860	860	160	160	U
10061-01-5	cis-1,3-Dichloropropene	0.150	14000	14000	3200	3200	U
10061-02-6	trans-1,3-Dichloropropene	0.150	7200	7200	1600	1600	U
79-00-5	1,1,2-Trichloroethane	0.150	8600	8600	1600	1600	U
124-48-1	Dibromochloromethane	0.150	2700	2700	320	320	U
127-18-4	Tetrachloroethene (PCE)	0.150	1200	1200	170	170	U
108-90-7	Chlorobenzene	0.150	7300	7300	1600	1600	U
100-41-4	**Ethylbenzene**	0.150	**200000**	14000	**45000**	3200	
179601-23-1	**m,p-Xylenes**	0.150	**700000**	28000	**160000**	6300	
75-25-2	Bromoform	0.150	16000	16000	1600	1600	U
95-47-6	**o-Xylene**	0.150	**62000**	14000	**14000**	3200	
79-34-5	1,1,2,2-Tetrachloroethane	0.150	2200	2200	310	310	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	100	70-130	10/14/11 1448	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian Beverly Air Samples/139340/143267
Sample Matrix: Air

Service Request: R1105621
Date Collected: 10/ 6/11 1542
Date Received: 10/10/11

Sample Name: BLDG 3-3
Lab Code: R1105621-004

Analytical Method: TO-15

Date Analyzed: 10/17/11 1350
Canister Dilution Factor: 2.10

Initial Pressure (psig): -0.9 Final Pressure (psig): 14.3

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
74-87-3	Chloromethane	800	1.2	1.2	0.57	0.57	U
75-01-4	Vinyl Chloride	800	0.16	0.16	0.062	0.062	U
74-83-9	Bromomethane	800	1.1	1.1	0.29	0.29	U
75-00-3	Chloroethane	800	1.5	1.5	0.58	0.58	U
75-69-4	Trichlorofluoromethane (CFC 11)	800	1.6	1.6	0.29	0.29	U
75-35-4	1,1-Dichloroethene	800	1.2	1.2	0.29	0.29	U
75-09-2	Methylene Chloride	800	1.0	1.0	0.29	0.29	U
156-60-5	trans-1,2-Dichloroethene	800	1.2	1.2	0.29	0.29	U
75-34-3	1,1-Dichloroethane (1,1-DCA)	800	1.2	1.2	0.29	0.29	U
156-59-2	cis-1,2-Dichloroethene	800	1.2	1.2	0.29	0.29	U
67-66-3	Chloroform	800	1.4	1.4	0.29	0.29	U
107-06-2	1,2-Dichloroethane	800	1.2	1.2	0.29	0.29	U
71-55-6	1,1,1-Trichloroethane (TCA)	800	1.6	1.6	0.29	0.29	U
56-23-5	**Carbon Tetrachloride**	800	**0.55**	0.18	**0.088**	0.029	
78-87-5	1,2-Dichloropropane	800	1.3	1.3	0.29	0.29	U
75-27-4	Bromodichloromethane	800	0.39	0.39	0.059	0.059	U
79-01-6	**Trichloroethene (TCE)**	800	**0.70**	0.16	**0.13**	0.029	
10061-01-5	cis-1,3-Dichloropropene	800	2.6	2.6	0.58	0.58	U
10061-02-6	trans-1,3-Dichloropropene	800	1.3	1.3	0.29	0.29	U
79-00-5	1,1,2-Trichloroethane	800	1.6	1.6	0.29	0.29	U
124-48-1	Dibromochloromethane	800	0.50	0.50	0.059	0.059	U
127-18-4	**Tetrachloroethene (PCE)**	800	**0.83**	0.21	**0.12**	0.031	
108-90-7	Chlorobenzene	800	1.3	1.3	0.29	0.29	U
100-41-4	Ethylbenzene	800	2.5	2.5	0.57	0.57	U
179601-23-1	m,p-Xylenes	800	5.0	5.0	1.2	1.2	U
75-25-2	Bromoform	800	3.0	3.0	0.29	0.29	U
95-47-6	o-Xylene	800	2.5	2.5	0.57	0.57	U
79-34-5	1,1,2,2-Tetrachloroethane	800	0.39	0.39	0.057	0.057	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	107	70-130	10/17/11 1350	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian Beverly Air Samples/139340/143267
Sample Matrix: Air

Service Request: R1105621
Date Collected: 10/ 6/11 1540
Date Received: 10/10/11

Sample Name: BLDG 3-2
Lab Code: R1105621-005

Analytical Method: TO-15

Date Analyzed: 10/17/11 1446
Canister Dilution Factor: 2.19

Initial Pressure (psig): -1.5 Final Pressure (psig): 14.3

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
74-87-3	Chloromethane	900	1.1	1.1	0.53	0.53	U
75-01-4	Vinyl Chloride	900	0.15	0.15	0.057	0.057	U
74-83-9	Bromomethane	900	1.0	1.0	0.27	0.27	U
75-00-3	Chloroethane	900	1.4	1.4	0.54	0.54	U
75-69-4	**Trichlorofluoromethane (CFC 11)**	900	**1.7**	1.5	**0.30**	0.27	
75-35-4	1,1-Dichloroethene	900	1.1	1.1	0.27	0.27	U
75-09-2	Methylene Chloride	900	0.92	0.92	0.27	0.27	U
156-60-5	trans-1,2-Dichloroethene	900	1.1	1.1	0.27	0.27	U
75-34-3	1,1-Dichloroethane (1,1-DCA)	900	1.1	1.1	0.27	0.27	U
156-59-2	cis-1,2-Dichloroethene	900	1.1	1.1	0.27	0.27	U
67-66-3	Chloroform	900	1.3	1.3	0.27	0.27	U
107-06-2	1,2-Dichloroethane	900	1.1	1.1	0.27	0.27	U
71-55-6	1,1,1-Trichloroethane (TCA)	900	1.5	1.5	0.27	0.27	U
56-23-5	**Carbon Tetrachloride**	900	**0.62**	0.17	**0.099**	0.027	
78-87-5	1,2-Dichloropropane	900	1.2	1.2	0.27	0.27	U
75-27-4	Bromodichloromethane	900	0.37	0.37	0.055	0.055	U
79-01-6	**Trichloroethene (TCE)**	900	**1.3**	0.15	**0.24**	0.027	
10061-01-5	cis-1,3-Dichloropropene	900	2.4	2.4	0.54	0.54	U
10061-02-6	trans-1,3-Dichloropropene	900	1.2	1.2	0.27	0.27	U
79-00-5	1,1,2-Trichloroethane	900	1.5	1.5	0.27	0.27	U
124-48-1	Dibromochloromethane	900	0.46	0.46	0.054	0.054	U
127-18-4	**Tetrachloroethene (PCE)**	900	**1.0**	0.19	**0.15**	0.029	
108-90-7	Chlorobenzene	900	1.2	1.2	0.27	0.27	U
100-41-4	Ethylbenzene	900	2.3	2.3	0.53	0.53	U
179601-23-1	m,p-Xylenes	900	4.6	4.6	1.1	1.1	U
75-25-2	Bromoform	900	2.8	2.8	0.27	0.27	U
95-47-6	o-Xylene	900	2.3	2.3	0.53	0.53	U
79-34-5	1,1,2,2-Tetrachloroethane	900	0.37	0.37	0.053	0.053	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	102	70-130	10/17/11 1446	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1105621
Project:	Varian Beverly Air Samples/139340/143267	**Date Collected:**	10/ 6/11 1541
Sample Matrix:	Air	**Date Received:**	10/10/11
Sample Name:	BLDG 2-6		
Lab Code:	R1105621-006		

Analytical Method: TO-15 **Date Analyzed:** 10/17/11 1538

Canister Dilution Factor: 2.14

Initial Pressure (psig): -1.2 Final Pressure (psig): 14.3

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
74-87-3	**Chloromethane**	900	**1.1**	1.1	**0.55**	0.52	
75-01-4	Vinyl Chloride	900	0.14	0.14	0.056	0.056	U
74-83-9	Bromomethane	900	1.0	1.0	0.26	0.26	U
75-00-3	Chloroethane	900	1.4	1.4	0.52	0.52	U
75-69-4	**Trichlorofluoromethane (CFC 11)**	900	**1.7**	1.5	**0.30**	0.26	
75-35-4	1,1-Dichloroethene	900	1.0	1.0	0.26	0.26	U
75-09-2	Methylene Chloride	900	0.90	0.90	0.26	0.26	U
156-60-5	trans-1,2-Dichloroethene	900	1.0	1.0	0.26	0.26	U
75-34-3	1,1-Dichloroethane (1,1-DCA)	900	1.1	1.1	0.26	0.26	U
156-59-2	cis-1,2-Dichloroethene	900	1.0	1.0	0.26	0.26	U
67-66-3	Chloroform	900	1.3	1.3	0.26	0.26	U
107-06-2	1,2-Dichloroethane	900	1.1	1.1	0.26	0.26	U
71-55-6	1,1,1-Trichloroethane (TCA)	900	1.4	1.4	0.26	0.26	U
56-23-5	**Carbon Tetrachloride**	900	**0.59**	0.17	**0.094**	0.026	
78-87-5	1,2-Dichloropropane	900	1.2	1.2	0.26	0.26	U
75-27-4	Bromodichloromethane	900	0.36	0.36	0.053	0.053	U
79-01-6	**Trichloroethene (TCE)**	900	**1.5**	0.14	**0.28**	0.027	
10061-01-5	cis-1,3-Dichloropropene	900	2.4	2.4	0.52	0.52	U
10061-02-6	trans-1,3-Dichloropropene	900	1.2	1.2	0.26	0.26	U
79-00-5	1,1,2-Trichloroethane	900	1.4	1.4	0.26	0.26	U
124-48-1	Dibromochloromethane	900	0.45	0.45	0.053	0.053	U
127-18-4	**Tetrachloroethene (PCE)**	900	**3.1**	0.19	**0.45**	0.028	
108-90-7	Chlorobenzene	900	1.2	1.2	0.26	0.26	U
100-41-4	Ethylbenzene	900	2.3	2.3	0.52	0.52	U
179601-23-1	m,p-Xylenes	900	4.5	4.5	1.0	1.0	U
75-25-2	Bromoform	900	2.7	2.7	0.26	0.26	U
95-47-6	o-Xylene	900	2.3	2.3	0.52	0.52	U
79-34-5	1,1,2,2-Tetrachloroethane	900	0.36	0.36	0.052	0.052	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	113	70-130	10/17/11 1538	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian Beverly Air Samples/139340/143267
Sample Matrix: Air

Service Request: R1105621
Date Collected: 10/ 6/11 1408
Date Received: 10/10/11

Sample Name: BLDG 6-SV1
Lab Code: R1105621-007

Analytical Method: TO-15

Date Analyzed: 10/14/11 1624
Canister Dilution Factor: 2.20

Initial Pressure (psig): -1.5 Final Pressure (psig): 14.3

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
74-87-3	Chloromethane	4.8	210	210	100	100	U
75-01-4	Vinyl Chloride	4.8	28	28	11	11	U
74-83-9	Bromomethane	4.8	200	200	51	51	U
75-00-3	Chloroethane	4.8	270	270	100	100	U
75-69-4	Trichlorofluoromethane (CFC 11)	4.8	280	280	51	51	U
75-35-4	1,1-Dichloroethene	4.8	200	200	51	51	U
75-09-2	Methylene Chloride	4.8	170	170	50	50	U
156-60-5	trans-1,2-Dichloroethene	4.8	200	200	51	51	U
75-34-3	1,1-Dichloroethane (1,1-DCA)	4.8	210	210	51	51	U
156-59-2	cis-1,2-Dichloroethene	4.8	200	200	51	51	U
67-66-3	Chloroform	4.8	250	250	51	51	U
107-06-2	1,2-Dichloroethane	4.8	210	210	51	51	U
71-55-6	1,1,1-Trichloroethane (TCA)	4.8	280	280	50	50	U
56-23-5	Carbon Tetrachloride	4.8	32	32	5.1	5.1	U
78-87-5	1,2-Dichloropropane	4.8	230	230	51	51	U
75-27-4	Bromodichloromethane	4.8	69	69	10	10	U
79-01-6	**Trichloroethene (TCE)**	4.8	**14000**	28	**2700**	5.1	
10061-01-5	cis-1,3-Dichloropropene	4.8	460	460	100	100	U
10061-02-6	trans-1,3-Dichloropropene	4.8	230	230	50	50	U
79-00-5	1,1,2-Trichloroethane	4.8	280	280	50	50	U
124-48-1	Dibromochloromethane	4.8	87	87	10	10	U
127-18-4	**Tetrachloroethene (PCE)**	4.8	**32000**	37	**4700**	5.4	
108-90-7	Chlorobenzene	4.8	230	230	51	51	U
100-41-4	Ethylbenzene	4.8	440	440	100	100	U
179601-23-1	m,p-Xylenes	4.8	880	880	200	200	U
75-25-2	Bromoform	4.8	520	520	51	51	U
95-47-6	o-Xylene	4.8	440	440	100	100	U
79-34-5	1,1,2,2-Tetrachloroethane	4.8	69	69	10	10	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	93	70-130	10/14/11 1624	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1105621
Project:	Varian Beverly Air Samples/139340/143267	**Date Collected:**	10/ 6/11 1415
Sample Matrix:	Air	**Date Received:**	10/10/11
Sample Name:	BDLG 6-SV2		
Lab Code:	R1105621-008		

Analytical Method: TO-15 **Date Analyzed:** 10/14/11 1712

Canister Dilution Factor: 2.14

Initial Pressure (psig): -1.1 Final Pressure (psig): 14.3

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
74-87-3	Chloromethane	2.3	420	420	200	200	U
75-01-4	Vinyl Chloride	2.3	56	56	22	22	U
74-83-9	Bromomethane	2.3	400	400	100	100	U
75-00-3	Chloroethane	2.3	540	540	200	200	U
75-69-4	Trichlorofluoromethane (CFC 11)	2.3	580	580	100	100	U
75-35-4	1,1-Dichloroethene	2.3	410	410	100	100	U
75-09-2	Methylene Chloride	2.3	350	350	100	100	U
156-60-5	trans-1,2-Dichloroethene	2.3	410	410	100	100	U
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.3	420	420	100	100	U
156-59-2	cis-1,2-Dichloroethene	2.3	410	410	100	100	U
67-66-3	Chloroform	2.3	500	500	100	100	U
107-06-2	1,2-Dichloroethane	2.3	420	420	100	100	U
71-55-6	1,1,1-Trichloroethane (TCA)	2.3	560	560	100	100	U
56-23-5	Carbon Tetrachloride	2.3	65	65	10	10	U
78-87-5	1,2-Dichloropropane	2.3	470	470	100	100	U
75-27-4	Bromodichloromethane	2.3	140	140	21	21	U
79-01-6	**Trichloroethene (TCE)**	2.3	**10000**	56	**1900**	10	
10061-01-5	cis-1,3-Dichloropropene	2.3	930	930	210	210	U
10061-02-6	trans-1,3-Dichloropropene	2.3	470	470	100	100	U
79-00-5	1,1,2-Trichloroethane	2.3	560	560	100	100	U
124-48-1	Dibromochloromethane	2.3	180	180	21	21	U
127-18-4	**Tetrachloroethene (PCE)**	2.3	**64000**	74	**9500**	11	
108-90-7	Chlorobenzene	2.3	470	470	100	100	U
100-41-4	Ethylbenzene	2.3	880	880	200	200	U
179601-23-1	m,p-Xylenes	2.3	1800	1800	410	410	U
75-25-2	Bromoform	2.3	1100	1100	100	100	U
95-47-6	o-Xylene	2.3	880	880	200	200	U
79-34-5	1,1,2,2-Tetrachloroethane	2.3	140	140	20	20	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	94	70-130	10/14/11 1712	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1105621
Project:	Varian Beverly Air Samples/139340/143267	**Date Collected:**	10/ 6/11 1413
Sample Matrix:	Air	**Date Received:**	10/10/11
Sample Name:	BLDG 6-SV3		
Lab Code:	R1105621-009		

Analytical Method: TO-15 **Date Analyzed:** 10/17/11 1026

Canister Dilution Factor: 2.19

Initial Pressure (psig): -1.5 Final Pressure (psig): 14.3

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
74-87-3	Chloromethane	7.6	130	130	63	63	U
75-01-4	Vinyl Chloride	7.6	17	17	6.8	6.8	U
74-83-9	Bromomethane	7.6	120	120	32	32	U
75-00-3	Chloroethane	7.6	170	170	63	63	U
75-69-4	Trichlorofluoromethane (CFC 11)	7.6	180	180	32	32	U
75-35-4	1,1-Dichloroethene	7.6	130	130	32	32	U
75-09-2	Methylene Chloride	7.6	110	110	32	32	U
156-60-5	trans-1,2-Dichloroethene	7.6	130	130	32	32	U
75-34-3	1,1-Dichloroethane (1,1-DCA)	7.6	130	130	32	32	U
156-59-2	cis-1,2-Dichloroethene	7.6	130	130	32	32	U
67-66-3	Chloroform	7.6	160	160	32	32	U
107-06-2	1,2-Dichloroethane	7.6	130	130	32	32	U
71-55-6	1,1,1-Trichloroethane (TCA)	7.6	170	170	32	32	U
56-23-5	Carbon Tetrachloride	7.6	20	20	3.2	3.2	U
78-87-5	1,2-Dichloropropane	7.6	150	150	32	32	U
75-27-4	Bromodichloromethane	7.6	43	43	6.5	6.5	U
79-01-6	**Trichloroethene (TCE)**	7.6	**8800**	17	**1600**	3.2	
10061-01-5	cis-1,3-Dichloropropene	7.6	290	290	63	63	U
10061-02-6	trans-1,3-Dichloropropene	7.6	140	140	32	32	U
79-00-5	1,1,2-Trichloroethane	7.6	170	170	32	32	U
124-48-1	Dibromochloromethane	7.6	55	55	6.4	6.4	U
127-18-4	**Tetrachloroethene (PCE)**	7.6	**20000**	23	**2900**	3.4	
108-90-7	Chlorobenzene	7.6	150	150	32	32	U
100-41-4	Ethylbenzene	7.6	270	270	63	63	U
179601-23-1	m,p-Xylenes	7.6	550	550	130	130	U
75-25-2	Bromoform	7.6	330	330	32	32	U
95-47-6	o-Xylene	7.6	270	270	63	63	U
79-34-5	1,1,2,2-Tetrachloroethane	7.6	43	43	6.3	6.3	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	91	70-130	10/17/11 1026	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian Beverly Air Samples/139340/143267
Sample Matrix: Air

Service Request: R1105621
Date Collected: 10/ 6/11 1520
Date Received: 10/10/11

Sample Name: BLDG 6-1
Lab Code: R1105621-010

Analytical Method: TO-15

Date Analyzed: 10/14/11 2057
Canister Dilution Factor: 2.32

Initial Pressure (psig): -2.2 Final Pressure (psig): 14.3

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
74-87-3	Chloromethane	400	2.6	2.6	1.3	1.3	U
75-01-4	Vinyl Chloride	400	0.35	0.35	0.14	0.14	U
74-83-9	Bromomethane	400	2.5	2.5	0.64	0.64	U
75-00-3	Chloroethane	400	3.4	3.4	1.3	1.3	U
75-69-4	Trichlorofluoromethane (CFC 11)	400	3.6	3.6	0.64	0.64	U
75-35-4	1,1-Dichloroethene	400	2.6	2.6	0.64	0.64	U
75-09-2	Methylene Chloride	400	2.2	2.2	0.63	0.63	U
156-60-5	trans-1,2-Dichloroethene	400	2.6	2.6	0.64	0.64	U
75-34-3	1,1-Dichloroethane (1,1-DCA)	400	2.6	2.6	0.65	0.65	U
156-59-2	cis-1,2-Dichloroethene	400	2.6	2.6	0.64	0.64	U
67-66-3	Chloroform	400	3.1	3.1	0.64	0.64	U
107-06-2	1,2-Dichloroethane	400	2.6	2.6	0.65	0.65	U
71-55-6	1,1,1-Trichloroethane (TCA)	400	3.5	3.5	0.64	0.64	U
56-23-5	**Carbon Tetrachloride**	400	**0.65**	0.41	**0.10**	0.065	
78-87-5	1,2-Dichloropropane	400	3.0	3.0	0.64	0.64	U
75-27-4	Bromodichloromethane	400	0.87	0.87	0.13	0.13	U
79-01-6	**Trichloroethene (TCE)**	400	**1.1**	0.35	**0.20**	0.065	
10061-01-5	cis-1,3-Dichloropropene	400	5.8	5.8	1.3	1.3	U
10061-02-6	trans-1,3-Dichloropropene	400	2.9	2.9	0.64	0.64	U
79-00-5	1,1,2-Trichloroethane	400	3.5	3.5	0.64	0.64	U
124-48-1	Dibromochloromethane	400	1.1	1.1	0.13	0.13	U
127-18-4	**Tetrachloroethene (PCE)**	400	**2.0**	0.46	**0.29**	0.068	
108-90-7	Chlorobenzene	400	3.0	3.0	0.64	0.64	U
100-41-4	Ethylbenzene	400	5.5	5.5	1.3	1.3	U
179601-23-1	m,p-Xylenes	400	11	11	2.6	2.6	U
75-25-2	Bromoform	400	6.6	6.6	0.64	0.64	U
95-47-6	o-Xylene	400	5.5	5.5	1.3	1.3	U
79-34-5	1,1,2,2-Tetrachloroethane	400	0.87	0.87	0.13	0.13	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	98	70-130	10/14/11 2057	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian Beverly Air Samples/139340/143267
Sample Matrix: Air

Service Request: R1105621
Date Collected: 10/ 7/11 1544
Date Received: 10/10/11

Sample Name: BLDG 6-2
Lab Code: R1105621-011

Analytical Method: TO-15

Date Analyzed: 10/17/11 1628
Canister Dilution Factor: 2.11

Initial Pressure (psig): -0.9 Final Pressure (psig): 14.3

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
74-87-3	Chloromethane	800	1.2	1.2	**0.57**	0.57	U
75-01-4	Vinyl Chloride	800	0.16	0.16	0.062	0.062	U
74-83-9	Bromomethane	800	1.1	1.1	0.29	0.29	U
75-00-3	Chloroethane	800	1.5	1.5	0.58	0.58	U
75-69-4	**Trichlorofluoromethane (CFC 11)**	800	**1.7**	1.6	**0.30**	0.29	
75-35-4	1,1-Dichloroethene	800	1.2	1.2	0.29	0.29	U
75-09-2	Methylene Chloride	800	1.0	1.0	0.29	0.29	U
156-60-5	trans-1,2-Dichloroethene	800	1.2	1.2	0.29	0.29	U
75-34-3	1,1-Dichloroethane (1,1-DCA)	800	1.2	1.2	0.29	0.29	U
156-59-2	**cis-1,2-Dichloroethene**	800	**1.9**	1.2	**0.49**	0.29	
67-66-3	Chloroform	800	1.4	1.4	0.29	0.29	U
107-06-2	1,2-Dichloroethane	800	1.2	1.2	0.29	0.29	U
71-55-6	1,1,1-Trichloroethane (TCA)	800	1.6	1.6	0.29	0.29	U
56-23-5	**Carbon Tetrachloride**	800	**0.62**	0.18	**0.099**	0.029	
78-87-5	1,2-Dichloropropane	800	1.3	1.3	0.29	0.29	U
75-27-4	Bromodichloromethane	800	0.40	0.40	0.059	0.059	U
79-01-6	**Trichloroethene (TCE)**	800	**1.8**	0.16	**0.34**	0.029	
10061-01-5	cis-1,3-Dichloropropene	800	2.6	2.6	0.58	0.58	U
10061-02-6	trans-1,3-Dichloropropene	800	1.3	1.3	0.29	0.29	U
79-00-5	1,1,2-Trichloroethane	800	1.6	1.6	0.29	0.29	U
124-48-1	Dibromochloromethane	800	0.50	0.50	0.059	0.059	U
127-18-4	**Tetrachloroethene (PCE)**	800	**1.9**	0.21	**0.28**	0.031	
108-90-7	Chlorobenzene	800	1.3	1.3	0.29	0.29	U
100-41-4	Ethylbenzene	800	2.5	2.5	0.58	0.58	U
179601-23-1	m,p-Xylenes	800	5.0	5.0	1.2	1.2	U
75-25-2	Bromoform	800	3.0	3.0	0.29	0.29	U
95-47-6	o-Xylene	800	2.5	2.5	0.58	0.58	U
79-34-5	1,1,2,2-Tetrachloroethane	800	0.40	0.40	0.058	0.058	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	99	70-130	10/17/11 1628	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1105621
Project:	Varian Beverly Air Samples/139340/143267	**Date Collected:**	10/ 7/11 1242
Sample Matrix:	Air	**Date Received:**	10/10/11
Sample Name:	BLDG 5-1		
Lab Code:	R1105621-012		

Analytical Method: TO-15 **Date Analyzed:** 10/14/11 2229

Canister Dilution Factor: 2.20

Initial Pressure (psig): -1.5 Final Pressure (psig): 14.3

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
74-87-3	Chloromethane	200	5.0	5.0	2.4	2.4	U
75-01-4	Vinyl Chloride	200	0.66	0.66	0.26	0.26	U
74-83-9	Bromomethane	200	4.7	4.7	1.2	1.2	U
75-00-3	Chloroethane	200	6.4	6.4	2.4	2.4	U
75-69-4	Trichlorofluoromethane (CFC 11)	200	6.8	6.8	1.2	1.2	U
75-35-4	1,1-Dichloroethene	200	4.8	4.8	1.2	1.2	U
75-09-2	Methylene Chloride	200	4.2	4.2	1.2	1.2	U
156-60-5	trans-1,2-Dichloroethene	200	4.8	4.8	1.2	1.2	U
75-34-3	1,1-Dichloroethane (1,1-DCA)	200	5.0	5.0	1.2	1.2	U
156-59-2	cis-1,2-Dichloroethene	200	4.8	4.8	1.2	1.2	U
67-66-3	Chloroform	200	5.9	5.9	1.2	1.2	U
107-06-2	1,2-Dichloroethane	200	5.0	5.0	1.2	1.2	U
71-55-6	1,1,1-Trichloroethane (TCA)	200	6.6	6.6	1.2	1.2	U
56-23-5	Carbon Tetrachloride	200	0.77	0.77	0.12	0.12	U
78-87-5	1,2-Dichloropropane	200	5.6	5.6	1.2	1.2	U
75-27-4	Bromodichloromethane	200	1.7	1.7	0.25	0.25	U
79-01-6	**Trichloroethene (TCE)**	200	**5.1**	0.66	**0.95**	0.12	
10061-01-5	cis-1,3-Dichloropropene	200	11	11	2.4	2.4	U
10061-02-6	trans-1,3-Dichloropropene	200	5.5	5.5	1.2	1.2	U
79-00-5	1,1,2-Trichloroethane	200	6.6	6.6	1.2	1.2	U
124-48-1	Dibromochloromethane	200	2.1	2.1	0.25	0.25	U
127-18-4	**Tetrachloroethene (PCE)**	200	**3.7**	0.88	**0.55**	0.13	
108-90-7	Chlorobenzene	200	5.6	5.6	1.2	1.2	U
100-41-4	Ethylbenzene	200	10	10	2.4	2.4	U
179601-23-1	m,p-Xylenes	200	21	21	4.8	4.8	U
75-25-2	Bromoform	200	13	13	1.2	1.2	U
95-47-6	o-Xylene	200	10	10	2.4	2.4	U
79-34-5	1,1,2,2-Tetrachloroethane	200	1.7	1.7	0.24	0.24	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	98	70-130	10/14/11 2229	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1105621
Project:	Varian Beverly Air Samples/139340/143267	**Date Collected:**	10/ 7/11 1235
Sample Matrix:	Air	**Date Received:**	10/10/11
Sample Name:	BLDG 5-2		
Lab Code:	R1105621-013		

Analytical Method: TO-15 **Date Analyzed:** 10/17/11 1719

Canister Dilution Factor: 2.15

Initial Pressure (psig): -1.2 Final Pressure (psig): 14.3

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
74-87-3	Chloromethane	800	1.2	1.2	0.59	0.59	U
75-01-4	Vinyl Chloride	800	0.16	0.16	0.063	0.063	U
74-83-9	Bromomethane	800	1.2	1.2	0.30	0.30	U
75-00-3	Chloroethane	800	1.6	1.6	0.59	0.59	U
75-69-4	**Trichlorofluoromethane (CFC 11)**	800	**4.0**	1.7	**0.71**	0.30	
75-35-4	1,1-Dichloroethene	800	1.2	1.2	0.30	0.30	U
75-09-2	Methylene Chloride	800	1.0	1.0	0.29	0.29	U
156-60-5	trans-1,2-Dichloroethene	800	1.2	1.2	0.30	0.30	U
75-34-3	1,1-Dichloroethane (1,1-DCA)	800	1.2	1.2	0.30	0.30	U
156-59-2	**cis-1,2-Dichloroethene**	800	**1.3**	1.2	**0.32**	0.30	
67-66-3	Chloroform	800	1.5	1.5	0.30	0.30	U
107-06-2	1,2-Dichloroethane	800	1.2	1.2	0.30	0.30	U
71-55-6	1,1,1-Trichloroethane (TCA)	800	1.6	1.6	0.30	0.30	U
56-23-5	**Carbon Tetrachloride**	800	**0.63**	0.19	**0.10**	0.030	
78-87-5	1,2-Dichloropropane	800	1.4	1.4	0.30	0.30	U
75-27-4	Bromodichloromethane	800	0.40	0.40	0.060	0.060	U
79-01-6	**Trichloroethene (TCE)**	800	**8.4**	0.16	**1.6**	0.030	
10061-01-5	cis-1,3-Dichloropropene	800	2.7	2.7	0.59	0.59	U
10061-02-6	trans-1,3-Dichloropropene	800	1.3	1.3	0.30	0.30	U
79-00-5	1,1,2-Trichloroethane	800	1.6	1.6	0.30	0.30	U
124-48-1	Dibromochloromethane	800	0.51	0.51	0.060	0.060	U
127-18-4	**Tetrachloroethene (PCE)**	800	**7.5**	0.22	**1.1**	0.032	
108-90-7	Chlorobenzene	800	1.4	1.4	0.30	0.30	U
100-41-4	Ethylbenzene	800	2.6	2.6	0.59	0.59	U
179601-23-1	**m,p-Xylenes**	800	**8.0**	5.1	**1.8**	1.2	
75-25-2	Bromoform	800	3.1	3.1	0.30	0.30	U
95-47-6	o-Xylene	800	2.6	2.6	**0.59**	0.59	U
79-34-5	1,1,2,2-Tetrachloroethane	800	0.40	0.40	0.059	0.059	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	99	70-130	10/17/11 1719	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1105621
Project:	Varian Beverly Air Samples/139340/143267	**Date Collected:**	10/ 7/11 1240
Sample Matrix:	Air	**Date Received:**	10/10/11
Sample Name:	BLDG 5-3		
Lab Code:	R1105621-014		

Analytical Method: TO-15 **Date Analyzed:** 10/17/11 1810

Canister Dilution Factor: 2.17

Initial Pressure (psig): -1.3 Final Pressure (psig): 14.3

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
74-87-3	Chloromethane	800	1.2	1.2	0.59	0.59	U
75-01-4	Vinyl Chloride	800	0.16	0.16	0.064	0.064	U
74-83-9	Bromomethane	800	1.2	1.2	0.30	0.30	U
75-00-3	Chloroethane	800	1.6	1.6	0.60	0.60	U
75-69-4	**Trichlorofluoromethane (CFC 11)**	800	**2.1**	1.7	**0.37**	0.30	
75-35-4	1,1-Dichloroethene	800	1.2	1.2	0.30	0.30	U
75-09-2	Methylene Chloride	800	1.0	1.0	0.30	0.30	U
156-60-5	trans-1,2-Dichloroethene	800	1.2	1.2	0.30	0.30	U
75-34-3	1,1-Dichloroethane (1,1-DCA)	800	1.2	1.2	0.30	0.30	U
156-59-2	cis-1,2-Dichloroethene	800	1.2	1.2	0.30	0.30	U
67-66-3	Chloroform	800	1.5	1.5	0.30	0.30	U
107-06-2	1,2-Dichloroethane	800	1.2	1.2	0.30	0.30	U
71-55-6	1,1,1-Trichloroethane (TCA)	800	1.6	1.6	0.30	0.30	U
56-23-5	**Carbon Tetrachloride**	800	**0.58**	0.19	**0.092**	0.030	
78-87-5	1,2-Dichloropropane	800	1.4	1.4	0.30	0.30	U
75-27-4	Bromodichloromethane	800	0.41	0.41	0.061	0.061	U
79-01-6	**Trichloroethene (TCE)**	800	**17**	0.16	**3.1**	0.030	
10061-01-5	cis-1,3-Dichloropropene	800	2.7	2.7	0.60	0.60	U
10061-02-6	trans-1,3-Dichloropropene	800	1.4	1.4	0.30	0.30	U
79-00-5	1,1,2-Trichloroethane	800	1.6	1.6	0.30	0.30	U
124-48-1	Dibromochloromethane	800	0.52	0.52	0.061	0.061	U
127-18-4	**Tetrachloroethene (PCE)**	800	**3.1**	0.22	**0.45**	0.032	
108-90-7	Chlorobenzene	800	1.4	1.4	0.30	0.30	U
100-41-4	Ethylbenzene	800	2.6	2.6	0.59	0.59	U
179601-23-1	m,p-Xylenes	800	5.2	5.2	1.2	1.2	U
75-25-2	Bromoform	800	3.1	3.1	0.30	0.30	U
95-47-6	o-Xylene	800	2.6	2.6	0.59	0.59	U
79-34-5	1,1,2,2-Tetrachloroethane	800	0.41	0.41	0.059	0.059	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	99	70-130	10/17/11 1810	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian Beverly Air Samples/139340/143267
Sample Matrix: Air

Service Request: R1105621
Date Collected: 10/ 7/11 1230
Date Received: 10/10/11

Sample Name: BLDG 5-4
Lab Code: R1105621-015

Analytical Method: TO-15

Date Analyzed: 10/17/11 1901
Canister Dilution Factor: 2.35

Initial Pressure (psig): -2.4 Final Pressure (psig): 14.3

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
74-87-3	Chloromethane	800	1.3	1.3	0.64	0.64	U
75-01-4	Vinyl Chloride	800	0.18	0.18	0.069	0.069	U
74-83-9	Bromomethane	800	1.3	1.3	0.33	0.33	U
75-00-3	Chloroethane	800	1.7	1.7	0.65	0.65	U
75-69-4	Trichlorofluoromethane (CFC 11)	800	1.8	1.8	0.32	0.32	U
75-35-4	1,1-Dichloroethene	800	1.3	1.3	0.33	0.33	U
75-09-2	Methylene Chloride	800	1.1	1.1	0.32	0.32	U
156-60-5	trans-1,2-Dichloroethene	800	1.3	1.3	0.33	0.33	U
75-34-3	1,1-Dichloroethane (1,1-DCA)	800	1.3	1.3	0.33	0.33	U
156-59-2	cis-1,2-Dichloroethene	800	1.3	1.3	0.33	0.33	U
67-66-3	Chloroform	800	1.6	1.6	0.32	0.32	U
107-06-2	1,2-Dichloroethane	800	1.3	1.3	0.33	0.33	U
71-55-6	1,1,1-Trichloroethane (TCA)	800	1.8	1.8	0.32	0.32	U
56-23-5	**Carbon Tetrachloride**	800	**0.63**	0.21	**0.10**	0.033	
78-87-5	1,2-Dichloropropane	800	1.5	1.5	0.32	0.32	U
75-27-4	Bromodichloromethane	800	0.44	0.44	0.066	0.066	U
79-01-6	**Trichloroethene (TCE)**	800	**2.1**	0.18	**0.39**	0.033	
10061-01-5	cis-1,3-Dichloropropene	800	2.9	2.9	0.65	0.65	U
10061-02-6	trans-1,3-Dichloropropene	800	1.5	1.5	0.32	0.32	U
79-00-5	1,1,2-Trichloroethane	800	1.8	1.8	0.32	0.32	U
124-48-1	Dibromochloromethane	800	0.56	0.56	0.066	0.066	U
127-18-4	**Tetrachloroethene (PCE)**	800	**1.0**	0.24	**0.15**	0.035	
108-90-7	Chlorobenzene	800	1.5	1.5	0.33	0.33	U
100-41-4	Ethylbenzene	800	2.8	2.8	0.64	0.64	U
179601-23-1	m,p-Xylenes	800	5.6	5.6	1.3	1.3	U
75-25-2	Bromoform	800	3.3	3.3	0.32	0.32	U
95-47-6	o-Xylene	800	2.8	2.8	0.64	0.64	U
79-34-5	1,1,2,2-Tetrachloroethane	800	0.44	0.44	0.064	0.064	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	104	70-130	10/17/11 1901	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1105621
Project:	Varian Beverly Air Samples/139340/143267	**Date Collected:**	10/ 7/11 1105
Sample Matrix:	Air	**Date Received:**	10/10/11
Sample Name:	BLDG 5-SV1		
Lab Code:	R1105621-016		

Analytical Method: TO-15

Date Analyzed: 10/17/11 1114
Canister Dilution Factor: 2.06

Initial Pressure (psig): -0.6 Final Pressure (psig): 14.3

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
74-87-3	Chloromethane	18.8	49	49	24	24	U
75-01-4	Vinyl Chloride	18.8	6.6	6.6	2.6	2.6	U
74-83-9	Bromomethane	18.8	47	47	12	12	U
75-00-3	Chloroethane	18.8	64	64	24	24	U
75-69-4	Trichlorofluoromethane (CFC 11)	18.8	68	68	12	12	U
75-35-4	1,1-Dichloroethene	18.8	48	48	12	12	U
75-09-2	Methylene Chloride	18.8	42	42	12	12	U
156-60-5	trans-1,2-Dichloroethene	18.8	48	48	12	12	U
75-34-3	1,1-Dichloroethane (1,1-DCA)	18.8	49	49	12	12	U
156-59-2	**cis-1,2-Dichloroethene**	18.8	**130**	48	**33**	12	
67-66-3	Chloroform	18.8	59	59	12	12	U
107-06-2	1,2-Dichloroethane	18.8	49	49	12	12	U
71-55-6	1,1,1-Trichloroethane (TCA)	18.8	66	66	12	12	U
56-23-5	Carbon Tetrachloride	18.8	7.7	7.7	1.2	1.2	U
78-87-5	1,2-Dichloropropane	18.8	56	56	12	12	U
75-27-4	Bromodichloromethane	18.8	16	16	2.5	2.5	U
79-01-6	**Trichloroethene (TCE)**	18.8	**5100**	6.6	**960**	1.2	
10061-01-5	cis-1,3-Dichloropropene	18.8	110	110	24	24	U
10061-02-6	trans-1,3-Dichloropropene	18.8	55	55	12	12	U
79-00-5	1,1,2-Trichloroethane	18.8	66	66	12	12	U
124-48-1	Dibromochloromethane	18.8	21	21	2.4	2.4	U
127-18-4	**Tetrachloroethene (PCE)**	18.8	**790**	8.8	**120**	1.3	
108-90-7	Chlorobenzene	18.8	56	56	12	12	U
100-41-4	Ethylbenzene	18.8	100	100	24	24	U
179601-23-1	m,p-Xylenes	18.8	210	210	48	48	U
75-25-2	Bromoform	18.8	120	120	12	12	U
95-47-6	o-Xylene	18.8	100	100	24	24	U
79-34-5	1,1,2,2-Tetrachloroethane	18.8	16	16	2.4	2.4	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	93	70-130	10/17/11 1114	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1105621
Project:	Varian Beverly Air Samples/139340/143267	**Date Collected:**	10/ 7/11 1111
Sample Matrix:	Air	**Date Received:**	10/10/11
Sample Name:	BLDG 5-SV2		
Lab Code:	R1105621-017		

Analytical Method: TO-15 **Date Analyzed:** 10/15/11 0136

Canister Dilution Factor: 2.14

Initial Pressure (psig): -1.2 Final Pressure (psig): 14.3

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
74-87-3	Chloromethane	370	2.6	2.6	1.3	1.3	U
75-01-4	**Vinyl Chloride**	370	**1.2**	0.35	**0.45**	0.14	
74-83-9	Bromomethane	370	2.5	2.5	0.64	0.64	U
75-00-3	Chloroethane	370	3.4	3.4	1.3	1.3	U
75-69-4	Trichlorofluoromethane (CFC 11)	370	3.6	3.6	0.64	0.64	U
75-35-4	1,1-Dichloroethene	370	2.5	2.5	0.64	0.64	U
75-09-2	Methylene Chloride	370	2.2	2.2	0.63	0.63	U
156-60-5	trans-1,2-Dichloroethene	370	2.5	2.5	0.64	0.64	U
75-34-3	1,1-Dichloroethane (1,1-DCA)	370	2.6	2.6	0.64	0.64	U
156-59-2	**cis-1,2-Dichloroethene**	370	**5.1**	2.5	**1.3**	0.64	
67-66-3	Chloroform	370	3.1	3.1	0.64	0.64	U
107-06-2	1,2-Dichloroethane	370	2.6	2.6	0.64	0.64	U
71-55-6	1,1,1-Trichloroethane (TCA)	370	3.5	3.5	0.64	0.64	U
56-23-5	**Carbon Tetrachloride**	370	**0.64**	0.40	**0.10**	0.064	
78-87-5	1,2-Dichloropropane	370	2.9	2.9	0.64	0.64	U
75-27-4	Bromodichloromethane	370	0.87	0.87	0.13	0.13	U
79-01-6	**Trichloroethene (TCE)**	370	**470**	0.35	**88**	0.065	E
10061-01-5	cis-1,3-Dichloropropene	370	5.8	5.8	1.3	1.3	U
10061-02-6	trans-1,3-Dichloropropene	370	2.9	2.9	0.64	0.64	U
79-00-5	1,1,2-Trichloroethane	370	3.5	3.5	0.64	0.64	U
124-48-1	Dibromochloromethane	370	1.1	1.1	0.13	0.13	U
127-18-4	**Tetrachloroethene (PCE)**	370	**25**	0.46	**3.8**	0.068	
108-90-7	Chlorobenzene	370	2.9	2.9	0.64	0.64	U
100-41-4	**Ethylbenzene**	370	**8.1**	5.5	**1.9**	1.3	
179601-23-1	**m,p-Xylenes**	370	**28**	11	**6.4**	2.5	
75-25-2	Bromoform	370	6.6	6.6	0.64	0.64	U
95-47-6	**o-Xylene**	370	**11**	5.5	**2.5**	1.3	
79-34-5	1,1,2,2-Tetrachloroethane	370	0.87	0.87	0.13	0.13	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	99	70-130	10/15/11 0136	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1105621
Project:	Varian Beverly Air Samples/139340/143267	**Date Collected:**	10/ 7/11 1111
Sample Matrix:	Air	**Date Received:**	10/10/11
Sample Name:	BLDG 5-SV2		
Lab Code:	R1105621-017		
Run Type:	Dilution		

Analytical Method: TO-15 **Date Analyzed:** 10/17/11 1945

Canister Dilution Factor: 2.14

Initial Pressure (psig): -1.2 Final Pressure (psig): 14.3

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
74-87-3	Chloromethane	175	5.5	5.5	2.7	2.7	U
75-01-4	**Vinyl Chloride**	175	**1.2**	0.73	**0.46**	0.29	D
74-83-9	Bromomethane	175	5.3	5.3	1.4	1.4	U
75-00-3	Chloroethane	175	7.1	7.1	2.7	2.7	U
75-69-4	Trichlorofluoromethane (CFC 11)	175	7.6	7.6	1.3	1.3	U
75-35-4	1,1-Dichloroethene	175	5.4	5.4	1.4	1.4	U
75-09-2	Methylene Chloride	175	4.6	4.6	1.3	1.3	U
156-60-5	trans-1,2-Dichloroethene	175	5.4	5.4	1.4	1.4	U
75-34-3	1,1-Dichloroethane (1,1-DCA)	175	5.5	5.5	1.4	1.4	U
156-59-2	cis-1,2-Dichloroethene	175	5.4	5.4	1.4	1.4	U
67-66-3	Chloroform	175	6.6	6.6	1.4	1.4	U
107-06-2	1,2-Dichloroethane	175	5.5	5.5	1.4	1.4	U
71-55-6	1,1,1-Trichloroethane (TCA)	175	7.3	7.3	1.3	1.3	U
56-23-5	Carbon Tetrachloride	175	0.86	0.86	0.14	0.14	U
78-87-5	1,2-Dichloropropane	175	6.2	6.2	1.3	1.3	U
75-27-4	Bromodichloromethane	175	1.8	1.8	0.27	0.27	U
79-01-6	**Trichloroethene (TCE)**	175	**410**	0.73	**77**	0.14	D
10061-01-5	cis-1,3-Dichloropropene	175	12	12	2.7	2.7	U
10061-02-6	trans-1,3-Dichloropropene	175	6.1	6.1	1.3	1.3	U
79-00-5	1,1,2-Trichloroethane	175	7.3	7.3	1.3	1.3	U
124-48-1	Dibromochloromethane	175	2.3	2.3	0.27	0.27	U
127-18-4	**Tetrachloroethene (PCE)**	175	**23**	0.98	**3.4**	0.14	D
108-90-7	Chlorobenzene	175	6.2	6.2	1.4	1.4	U
100-41-4	Ethylbenzene	175	12	12	2.7	2.7	U
179601-23-1	**m,p-Xylenes**	175	**25**	23	**5.7**	5.4	D
75-25-2	Bromoform	175	14	14	1.3	1.3	U
95-47-6	o-Xylene	175	12	12	2.7	2.7	U
79-34-5	1,1,2,2-Tetrachloroethane	175	1.8	1.8	0.27	0.27	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	96	70-130	10/17/11 1945	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1105621
Project:	Varian Beverly Air Samples/139340/143267	**Date Collected:**	10/ 7/11 1117
Sample Matrix:	Air	**Date Received:**	10/10/11
Sample Name:	BLDG 5-SV3		
Lab Code:	R1105621-018		

Analytical Method: TO-15 **Date Analyzed:** 10/17/11 1259

Canister Dilution Factor: 2.14

Initial Pressure (psig): -1.1 Final Pressure (psig): 14.3

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
74-87-3	Chloromethane	5.8	170	170	80	80	U
75-01-4	Vinyl Chloride	5.8	22	22	8.7	8.7	U
74-83-9	Bromomethane	5.8	160	160	41	41	U
75-00-3	Chloroethane	5.8	210	210	81	81	U
75-69-4	Trichlorofluoromethane (CFC 11)	5.8	230	230	41	41	U
75-35-4	1,1-Dichloroethene	5.8	160	160	41	41	U
75-09-2	Methylene Chloride	5.8	140	140	40	40	U
156-60-5	trans-1,2-Dichloroethene	5.8	160	160	41	41	U
75-34-3	1,1-Dichloroethane (1,1-DCA)	5.8	170	170	41	41	U
156-59-2	cis-1,2-Dichloroethene	5.8	160	160	41	41	U
67-66-3	Chloroform	5.8	200	200	41	41	U
107-06-2	1,2-Dichloroethane	5.8	170	170	41	41	U
71-55-6	1,1,1-Trichloroethane (TCA)	5.8	220	220	41	41	U
56-23-5	Carbon Tetrachloride	5.8	26	26	4.1	4.1	U
78-87-5	1,2-Dichloropropane	5.8	190	190	41	41	U
75-27-4	Bromodichloromethane	5.8	55	55	8.3	8.3	U
79-01-6	**Trichloroethene (TCE)**	5.8	**20000**	22	**3700**	4.1	
10061-01-5	cis-1,3-Dichloropropene	5.8	370	370	81	81	U
10061-02-6	trans-1,3-Dichloropropene	5.8	180	180	41	41	U
79-00-5	1,1,2-Trichloroethane	5.8	220	220	41	41	U
124-48-1	Dibromochloromethane	5.8	70	70	8.2	8.2	U
127-18-4	**Tetrachloroethene (PCE)**	5.8	**1400**	30	**210**	4.4	
108-90-7	Chlorobenzene	5.8	190	190	41	41	U
100-41-4	Ethylbenzene	5.8	350	350	81	81	U
179601-23-1	m,p-Xylenes	5.8	700	700	160	160	U
75-25-2	Bromoform	5.8	420	420	41	41	U
95-47-6	o-Xylene	5.8	350	350	81	81	U
79-34-5	1,1,2,2-Tetrachloroethane	5.8	55	55	8.1	8.1	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	94	70-130	10/17/11 1259	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian Beverly Air Samples/139340/143267
Sample Matrix: Air

Service Request: R1105621
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ1110532-01

Analytical Method: TO-15

Date Analyzed: 10/14/11 1312

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
74-87-3	Chloromethane	1000	0.45	0.45	0.22	0.22	U
75-01-4	Vinyl Chloride	1000	0.060	0.060	0.023	0.023	U
74-83-9	Bromomethane	1000	0.43	0.43	0.11	0.11	U
75-00-3	Chloroethane	1000	0.58	0.58	0.22	0.22	U
75-69-4	Trichlorofluoromethane (CFC 11)	1000	0.62	0.62	0.11	0.11	U
75-35-4	1,1-Dichloroethene	1000	0.44	0.44	0.11	0.11	U
75-09-2	Methylene Chloride	1000	0.38	0.38	0.11	0.11	U
156-60-5	trans-1,2-Dichloroethene	1000	0.44	0.44	0.11	0.11	U
75-34-3	1,1-Dichloroethane (1,1-DCA)	1000	0.45	0.45	0.11	0.11	U
156-59-2	cis-1,2-Dichloroethene	1000	0.44	0.44	0.11	0.11	U
67-66-3	Chloroform	1000	0.54	0.54	0.11	0.11	U
107-06-2	1,2-Dichloroethane	1000	0.45	0.45	0.11	0.11	U
71-55-6	1,1,1-Trichloroethane (TCA)	1000	0.60	0.60	0.11	0.11	U
56-23-5	Carbon Tetrachloride	1000	0.070	0.070	0.011	0.011	U
78-87-5	1,2-Dichloropropane	1000	0.51	0.51	0.11	0.11	U
75-27-4	Bromodichloromethane	1000	0.15	0.15	0.022	0.022	U
79-01-6	Trichloroethene (TCE)	1000	0.060	0.060	0.011	0.011	U
10061-01-5	cis-1,3-Dichloropropene	1000	1.0	1.0	0.22	0.22	U
10061-02-6	trans-1,3-Dichloropropene	1000	0.50	0.50	0.11	0.11	U
79-00-5	1,1,2-Trichloroethane	1000	0.60	0.60	0.11	0.11	U
124-48-1	Dibromochloromethane	1000	0.19	0.19	0.022	0.022	U
127-18-4	Tetrachloroethene (PCE)	1000	0.080	0.080	0.012	0.012	U
108-90-7	Chlorobenzene	1000	0.51	0.51	0.11	0.11	U
100-41-4	Ethylbenzene	1000	0.95	0.95	0.22	0.22	U
179601-23-1	m,p-Xylenes	1000	1.9	1.9	0.44	0.44	U
75-25-2	Bromoform	1000	1.1	1.1	0.11	0.11	U
95-47-6	o-Xylene	1000	0.95	0.95	0.22	0.22	U
79-34-5	1,1,2,2-Tetrachloroethane	1000	0.15	0.15	0.022	0.022	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	97	70-130	10/14/11 1312	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1105621
Project:	Varian Beverly Air Samples/139340/143267	**Date Collected:**	NA
Sample Matrix:	Air	**Date Received:**	NA
Sample Name:	Method Blank		
Lab Code:	RQ1110533-01		

Analytical Method: TO-15 **Date Analyzed:** 10/17/11 0938

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
74-87-3	Chloromethane	1000	0.45	0.45	0.22	0.22	U
75-01-4	Vinyl Chloride	1000	0.060	0.060	0.023	0.023	U
74-83-9	Bromomethane	1000	0.43	0.43	0.11	0.11	U
75-00-3	Chloroethane	1000	0.58	0.58	0.22	0.22	U
75-69-4	Trichlorofluoromethane (CFC 11)	1000	0.62	0.62	0.11	0.11	U
75-35-4	1,1-Dichloroethene	1000	0.44	0.44	0.11	0.11	U
75-09-2	Methylene Chloride	1000	0.38	0.38	0.11	0.11	U
156-60-5	trans-1,2-Dichloroethene	1000	0.44	0.44	0.11	0.11	U
75-34-3	1,1-Dichloroethane (1,1-DCA)	1000	0.45	0.45	0.11	0.11	U
156-59-2	cis-1,2-Dichloroethene	1000	0.44	0.44	0.11	0.11	U
67-66-3	Chloroform	1000	0.54	0.54	0.11	0.11	U
107-06-2	1,2-Dichloroethane	1000	0.45	0.45	0.11	0.11	U
71-55-6	1,1,1-Trichloroethane (TCA)	1000	0.60	0.60	0.11	0.11	U
56-23-5	Carbon Tetrachloride	1000	0.070	0.070	0.011	0.011	U
78-87-5	1,2-Dichloropropane	1000	0.51	0.51	0.11	0.11	U
75-27-4	Bromodichloromethane	1000	0.15	0.15	0.022	0.022	U
79-01-6	Trichloroethene (TCE)	1000	0.060	0.060	0.011	0.011	U
10061-01-5	cis-1,3-Dichloropropene	1000	1.0	1.0	0.22	0.22	U
10061-02-6	trans-1,3-Dichloropropene	1000	0.50	0.50	0.11	0.11	U
79-00-5	1,1,2-Trichloroethane	1000	0.60	0.60	0.11	0.11	U
124-48-1	Dibromochloromethane	1000	0.19	0.19	0.022	0.022	U
127-18-4	Tetrachloroethene (PCE)	1000	0.080	0.080	0.012	0.012	U
108-90-7	Chlorobenzene	1000	0.51	0.51	0.11	0.11	U
100-41-4	Ethylbenzene	1000	0.95	0.95	0.22	0.22	U
179601-23-1	m,p-Xylenes	1000	1.9	1.9	0.44	0.44	U
75-25-2	Bromoform	1000	1.1	1.1	0.11	0.11	U
95-47-6	o-Xylene	1000	0.95	0.95	0.22	0.22	U
79-34-5	1,1,2,2-Tetrachloroethane	1000	0.15	0.15	0.022	0.022	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	93	70-130	10/17/11 0938	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian Beverly Air Samples/139340/143267
Sample Matrix: Air

Service Request: R1105621
Date Analyzed: 10/14/11

Lab Control Sample Summary
Volatile Organic Compounds in Air Collected In SUMMA Passivated Canisters and Analyzed By GC/MS

Analytical Method: TO-15

Units: µg/m³
Basis: NA

Analysis Lot: 266092

Analyte Name	Lab Control Sample RQ1110532-02 Result	Spike Amount	% Rec	Duplicate Lab Control Sample RQ1110532-03 Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Chloromethane	5.24	5.21	101	5.41	5.21	104	70 - 130	3	25
Vinyl Chloride	6.27	6.45	97	6.36	6.45	99	70 - 130	1	25
Bromomethane	8.62	9.80	88	8.80	9.80	90	70 - 130	2	25
Chloroethane	5.99	6.59	91	6.13	6.59	93	70 - 130	2	25
Trichlorofluoromethane (CFC 11)	15.5	14.6	106	15.6	14.6	107	70 - 130	<1	25
1,1-Dichloroethene	10.6	10.2	104	10.8	10.2	106	70 - 130	2	25
Methylene Chloride	8.16	8.94	91	8.35	8.94	93	70 - 130	2	25
trans-1,2-Dichloroethene	10.5	10.3	102	10.6	10.3	103	70 - 130	2	25
1,1-Dichloroethane (1,1-DCA)	10.3	10.4	99	10.4	10.4	100	70 - 130	1	25
cis-1,2-Dichloroethene	9.59	10.4	92	9.72	10.4	93	70 - 130	1	25
Chloroform	13.1	12.8	103	13.3	12.8	104	70 - 130	1	25
1,2-Dichloroethane	12.6	10.6	119	12.5	10.6	118	70 - 130	<1	25
1,1,1-Trichloroethane (TCA)	15.2	14.0	109	15.1	14.0	107	70 - 130	1	25
Carbon Tetrachloride	17.6	16.0	110	17.3	16.0	108	70 - 130	2	25
1,2-Dichloropropane	12.1	12.1	100	12.0	12.1	99	70 - 130	<1	25
Bromodichloromethane	18.8	17.4	108	18.8	17.4	108	70 - 130	<1	25
Trichloroethene (TCE)	13.5	14.0	97	13.5	14.0	96	70 - 130	<1	25
cis-1,3-Dichloropropene	12.4	12.3	101	12.5	12.3	102	70 - 130	<1	25
trans-1,3-Dichloropropene	12.0	11.2	107	12.0	11.2	107	70 - 130	<1	25
1,1,2-Trichloroethane	14.1	14.5	97	14.1	14.5	97	70 - 130	<1	25
Dibromochloromethane	23.5	23.2	101	23.4	23.2	101	70 - 130	<1	25
Tetrachloroethene (PCE)	17.7	17.6	100	17.6	17.6	100	70 - 130	<1	25
Chlorobenzene	11.9	12.3	97	11.8	12.3	96	70 - 130	<1	25
Ethylbenzene	11.3	11.5	98	11.2	11.5	97	70 - 130	<1	25
m,p-Xylenes	22.1	22.8	97	22.0	22.8	97	70 - 130	<1	25
Bromoform	27.8	27.1	102	27.7	27.1	102	70 - 130	<1	25
o-Xylene	11.6	11.7	99	11.5	11.7	98	70 - 130	<1	25
1,1,2,2-Tetrachloroethane	17.2	18.5	93	17.0	18.5	92	70 - 130	<1	25

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, INC.

QA/QC Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian Beverly Air Samples/139340/143267
Sample Matrix: Air

Service Request: R1105621
Date Analyzed: 10/17/11

Lab Control Sample Summary
Volatile Organic Compounds in Air Collected In SUMMA Passivated Canisters and Analyzed By GC/MS

Analytical Method: TO-15

Units: µg/m³
Basis: NA

Analysis Lot: 266096

	Lab Control Sample RQ1110533-02			Duplicate Lab Control Sample RQ1110533-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Chloromethane	5.20	5.21	100	5.35	5.21	103	70 - 130	3	25
Vinyl Chloride	6.07	6.45	94	6.26	6.45	97	70 - 130	3	25
Bromomethane	8.38	9.80	86	8.45	9.80	86	70 - 130	<1	25
Chloroethane	5.93	6.59	90	6.06	6.59	92	70 - 130	2	25
Trichlorofluoromethane (CFC 11)	15.6	14.6	107	15.7	14.6	108	70 - 130	1	25
1,1-Dichloroethene	10.7	10.2	105	10.7	10.2	105	70 - 130	<1	25
Methylene Chloride	8.17	8.94	91	8.41	8.94	94	70 - 130	3	25
trans-1,2-Dichloroethene	10.4	10.3	101	10.6	10.3	103	70 - 130	2	25
1,1-Dichloroethane (1,1-DCA)	10.3	10.4	99	10.4	10.4	100	70 - 130	2	25
cis-1,2-Dichloroethene	9.50	10.4	91	9.72	10.4	93	70 - 130	2	25
Chloroform	13.3	12.8	104	13.4	12.8	104	70 - 130	<1	25
1,2-Dichloroethane	12.5	10.6	118	12.8	10.6	121	70 - 130	3	25
1,1,1-Trichloroethane (TCA)	14.9	14.0	106	15.1	14.0	108	70 - 130	1	25
Carbon Tetrachloride	17.1	16.0	106	17.3	16.0	108	70 - 130	1	25
1,2-Dichloropropane	11.9	12.1	98	11.8	12.1	97	70 - 130	<1	25
Bromodichloromethane	18.7	17.4	107	19.0	17.4	109	70 - 130	2	25
Trichloroethene (TCE)	12.8	14.0	92	13.1	14.0	94	70 - 130	2	25
cis-1,3-Dichloropropene	12.2	12.3	100	12.3	12.3	101	70 - 130	<1	25
trans-1,3-Dichloropropene	12.0	11.2	106	12.1	11.2	107	70 - 130	<1	25
1,1,2-Trichloroethane	13.7	14.5	95	13.9	14.5	96	70 - 130	1	25
Dibromochloromethane	23.1	23.2	99	23.3	23.2	100	70 - 130	<1	25
Tetrachloroethene (PCE)	17.0	17.6	96	17.1	17.6	97	70 - 130	1	25
Chlorobenzene	11.4	12.3	93	11.7	12.3	95	70 - 130	2	25
Ethylbenzene	11.0	11.5	95	11.2	11.5	97	70 - 130	2	25
m,p-Xylenes	21.7	22.8	95	22.1	22.8	97	70 - 130	2	25
Bromoform	26.7	27.1	98	27.3	27.1	101	70 - 130	2	25
o-Xylene	11.3	11.7	97	11.5	11.7	98	70 - 130	2	25
1,1,2,2-Tetrachloroethane	16.8	18.5	91	17.2	18.5	93	70 - 130	2	25

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.

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CASROCH Contract: SHAW

Lab Code: 10145 Case No.: R1-5621 SAS No.: _____ SDG No.: VP-3

Lab File ID (Standard): B1663.D Date Analyzed: 10/14/2011

Instrument ID: MS#13 Time Analyzed: 9:51

GC Column: DB-624 ID: 0.25 (mm) Heated Purge: (Y/N) N

		IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
	12 HOUR ST	145144	12.84	554576	14.49	503191	19.60
	UPPER LIMIT	203202	13.34	776406	14.99	704467	20.10
	LOWER LIMIT	87086	12.34	332746	13.99	301915	19.10
	EPA SAMPLE NO.						
01	LCS1	148916	12.84	552676	14.49	491356	19.60
02	DLCS1	146425	12.84	556821	14.49	495683	19.60
03	VBLK1	156419	12.84	579707	14.49	494501	19.60
04	VP-6	143278	12.84	527437	14.49	454567	19.60
05	VP-5	141567	12.84	523049	14.49	450232	19.60
06	BLD6-SV1	136956	12.84	501032	14.49	437299	19.60
07	BLD6-SV2	134506	12.84	499092	14.49	435232	19.60
08	BLD6-1	135156	12.84	492670	14.49	431768	19.60
09	BLD5-1	134411	12.84	488292	14.49	431665	19.60
10	BLD5-SV2	135704	12.84	513756	14.49	554125	19.60

IS1 = bromochloromethane
IS2 = 1,4-difluorobenzene
IS3 = chlorobenzene-d5

AREA UPPER LIMIT = +40% of internal standard area
AREA LOWER LIMIT = - 40% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column to be used to flag values outside QC limit with an asterisk.
* Values outside of contract required QC limits

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CASROCH Contract: SHAW

Lab Code: 10145 Case No.: R1-5621 SAS No.: _____ SDG No.: VP-3

Lab File ID (Standard): B1686.D Date Analyzed: 10/17/2011

Instrument ID: MS#13 Time Analyzed: 5:27

GC Column: DB-624 ID: 0.25 (mm) Heated Purge: (Y/N) N

		IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
	12 HOUR ST	136389	12.84	524187	14.49	493717	19.60
	UPPER LIMIT	190945	13.34	733862	14.99	691204	20.10
	LOWER LIMIT	81833	12.34	314512	13.99	296230	19.10
	EPA SAMPLE NO.						
01	LCS2	135617	12.84	520931	14.49	469537	19.60
02	DLCS2	136507	12.84	521580	14.49	465029	19.60
03	VBLK2	140499	12.84	521260	14.49	448792	19.60
04	BLD6-SV3	133596	12.84	499822	14.49	439910	19.60
05	BLD5-SV1	129533	12.84	481963	14.49	433761	19.60
06	BLD5-SV3	142503	12.83	538684	14.49	469356	19.60
07	BLD3-3	139338	12.84	521556	14.49	456963	19.60
08	BLD3-2	131632	12.83	492419	14.49	434080	19.59
09	BLD2-6	133678	12.84	494321	14.49	438770	19.60
10	BLD6-2	128726	12.84	482114	14.49	432053	19.60
11	BLD5-2	132965	12.84	494066	14.49	485996	19.60
12	BLD5-3	135770	12.84	508328	14.49	468761	19.60
13	BLD5-4	133935	12.84	497394	14.49	456896	19.60
14	BLD5-SV2DL	128792	12.84	492900	14.49	503336	19.60
15	VP-3	137323	12.84	508241	14.49	451829	19.60

IS1 = bromochloromethane

IS2 = 1,4-difluorobenzene

IS3 = chlorobenzene-d5

AREA UPPER LIMIT = +40% of internal standard area

AREA LOWER LIMIT = - 40% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column to be used to flag values outside QC limit with an asterisk.

* Values outside of contract required QC limits

CAS Flow Controller Calibration
Flows in mL/min.
Values retrievd from LIMS

Folder # R1105621

Order #	ID #	Pre Cal	Post Cal	RPD	Comment
R1105621-001	FC00753	9.75	9.81	0.6	
R1105621-002	FC00715	9.74	9.91	1.7	
R1105621-003	FC00719	9.79	9.87	0.8	
R1105621-004	FC00850	4.82	5.18	7.2	
R1105621-005	FC00852	4.82	4.86	0.8	
R1105621-006	FC00851	4.88	5.11	4.6	
R1105621-007	FC00750	9.67	9.67	0.0	
R1105621-008	FC00823	9.70	10.06	3.6	
R1105621-009	FC00832	9.70	9.64	-0.6	
R1105621-010	FC00855	4.86	5.22	7.1	
R1105621-011	FC00853	4.84	4.89	1.0	
R1105621-012	FC00847	4.81	5.09	5.7	
R1105621-013	FC00846	4.82	5.32	9.9	
R1105621-014	FC00845	4.87	5.08	4.2	
R1105621-015	FC00849	4.84	5.01	3.5	
R1105621-016	FC00831	9.77	10.17	4.0	
R1105621-017	FC00830	9.65	9.73	0.8	
R1105621-018	FC00749	9.70	9.91	2.1	

Client: Shaw Environmental & Infrastructure, Inc. **Folder:** R1105621

Project: Varian Beverly Air Samples 139340

Detailed Sample Information

CAS Sample ID	Client Sample ID	Container Type	Pi1 (Hg)	Pi1 (psig)	Pf1	Pi2 (Hg)	Pi2 (psig)	Pf2	Cont ID	Order #	FC ID
R1105621-001.01	VP-3	1.4 L-Non-Specified SC	-3.10	-1.52	14.30				SS00015	26986	FC00753
R1105621-002.01	VP-5	1.4 L-Non-Specified SC	-2.60	-1.28	14.30				SS00016	26986	FC00715
R1105621-003.01	VP-6	1.4 L-Non-Specified SC	-2.60	-1.28	14.30				SS00001	26986	FC00719
R1105621-004.01	BLDG 3-3	1.4 L-Non-Specified SC	-1.80	-0.88	14.30				SS00010	26986	FC00850
R1105621-005.01	BLDG 3-2	1.4 L-Non-Specified SC	-3.00	-1.47	14.30				SS00021	26986	FC00852
R1105621-006.01	BLDG 2-6	1.4 L-Non-Specified SC	-2.40	-1.18	14.30				SS00028	26986	FC00851
R1105621-007.01	BLDG 6-SV1	1.4 L-Non-Specified SC	-3.10	-1.52	14.30				SS00014	26986	FC00750
R1105621-008.01	BDLG 6-SV2	1.4 L-Non-Specified SC	-2.30	-1.13	14.30				SS00002	26986	FC00823
R1105621-009.01	BLDG 6-SV3	1.4 L-Non-Specified SC	-3.00	-1.47	14.30				SS00023	26986	FC00832
R1105621-010.01	BLDG 6-1	1.4 L-Non-Specified SC	-4.50	-2.21	14.30				SS00009	26986	FC00855
R1105621-011.01	BLDG 6-2	1.4 L-Non-Specified SC	-1.90	-0.93	14.30				SS00003	26986	FC00853
R1105621-012.01	BLDG 5-1	1.4 L-Non-Specified SC	-3.10	-1.52	14.30				SS00005	26986	FC00847
R1105621-013.01	BLDG 5-2	1.4 L-Non-Specified SC	-2.50	-1.23	14.30				SS00008	26986	FC00846
R1105621-014.01	BLDG 5-3	1.4 L-Non-Specified SC	-2.70	-1.33	14.30				SS00018	26986	FC00845
R1105621-015.01	BLDG 5-4	1.4 L-Non-Specified SC	-4.80	-2.36	14.30				SS00024	26986	FC00849
R1105621-016.01	BLDG 5-SV1	1.4 L-Non-Specified SC	-1.30	-0.64	14.30				SS00022	26986	FC00831
R1105621-017.01	BLDG 5-SV2	1.4 L-Non-Specified SC	-2.40	-1.18	14.30				SS00027	26986	FC00830
R1105621-018.01	BLDG 5-SV3	1.4 L-Non-Specified SC	-2.30	-1.13	14.30				SS00017	26986	FC00749

Miscellaneous Items - received

CS000

Sample Collection Supplies

T019262

Order #: 26986
Date Required: 10/4/11
Project Chemist: Michael Perry
Phone Number: 585-288-5380 x7469

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian Beverly
SDG Name: Varian Beverly Air Samples

P.O. Number: 635358

Shipped Date: 10/03/2011
Shipping Cost: $ 0.00

Shipped To: Paul LaDoux
100 Technology Center
Stoughton, MA 02072

Phone: 617-589-6163

Comments: **Bag containers by sample template.**

Grouped by Container Type

Container	Shipped Pressure
1.4L-Non-Specified	1.4L Summa Canister

Precautions: Preserved sample containers should not be overflowed while filling. Under no circumstances should the inside of the containers or lids be handled.

Please return this form with your coolers when delivering your samples to Columbia Analytical Services.

Sample Collection Supplies

T019262

Order #: 26986
Date Required: 10/4/11
Project Chemist: Michael Perry
Phone Number: 585-288-5380 x7469

Client: Shaw Environmental & Infrastructure, Inc.
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Shipping Cost: $ 0.00

Shipped To: Paul LaDoux
100 Technology Center
Stoughton, MA 02072

Phone: 617-589-6163

Comments: **Bag containers by sample template.**

FC00849	1 each-Flow Controller Stainless Steel	
FC00850	1 each-Flow Controller Stainless Steel	
FC00846	1 each-Flow Controller Stainless Steel	
FC00847	1 each-Flow Controller Stainless Steel	
FC00852	1 each-Flow Controller Stainless Steel	
FC00845	1 each-Flow Controller Stainless Steel	
FC00851	1 each-Flow Controller Stainless Steel	
FC00855	1 each-Flow Controller Stainless Steel	
FC00853	1 each-Flow Controller Stainless Steel	
FC00830	1 each-Flow Controller Stainless Steel	
FC00719	1 each-Flow Controller Stainless Steel	
FC00823	1 each-Flow Controller Stainless Steel	
FC00750	1 each-Flow Controller Stainless Steel	
FC00753	1 each-Flow Controller Stainless Steel	
FC00715	1 each-Flow Controller Stainless Steel	
FC00832	1 each-Flow Controller Stainless Steel	
FC00831	1 each-Flow Controller Stainless Steel	
FC00749	1 each-Flow Controller Stainless Steel	
SS00008	1.4 L-Non-Specified SC	-29.00
SS00005	1.4 L-Non-Specified SC	-29.00
SS00027	1.4 L-Non-Specified SC	-29.00
SS00024	1.4 L-Non-Specified SC	-29.00
SS00017	1.4 L-Non-Specified SC	-29.00
SS00014	1.4 L-Non-Specified SC	-29.00
SS00018	1.4 L-Non-Specified SC	-29.00
SS00015	1.4 L-Non-Specified SC	-29.00
SS00028	1.4 L-Non-Specified SC	-29.00
SS00023	1.4 L-Non-Specified SC	-29.00
SS00022	1.4 L-Non-Specified SC	-29.00
SS00002	1.4 L-Non-Specified SC	-29.00
SS00016	1.4 L-Non-Specified SC	-29.00
SS00010	1.4 L-Non-Specified SC	-29.00
SS00001	1.4 L-Non-Specified SC	-29.00
SS00009	1.4 L-Non-Specified SC	-29.00
SS00021	1.4 L-Non-Specified SC	-29.00

Precautions: Preserved sample containers should not be overflowed while filling. Under no circumstances should the inside of the containers or lids be handled.

Please return this form with your coolers when delivering your samples to Columbia Analytical Services.

Sample Collection Supplies

T019262

Order #: 26986
Date Required: 10/4/11
Project Chemist: Michael Perry
Phone Number: 585-288-5380 x7469

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian Beverly
SDG Name: Varian Beverly Air Samples

P.O. Number: 635358

Shipped Date: 10/03/2011
Shipping Cost: $ 0.00

Shipped To: Paul LaDoux
100 Technology Center
Stoughton, MA 02072

Phone: 617-589-6163

Comments: **Bag containers by sample template.**

SS00003 1.4 L-Non-Specified SC -29.00

Grouped by Sample Template

Sample Template Number / Name	Expected Number of Samples	Containers	Number of Containers per Sample	Comments
002 / TO-15 - Full List	18			
		1.4L-Non-Specified SC - TO-15	1	1.4L Summa Canister

Quantity	Miscellaneous Supply
9	Flow Controller, 6L, 2hr
9	Flow Controller, 6L, 4hr

Precautions: Preserved sample containers should not be overflowed while filling. Under no circumstances should the inside of the containers or lids be handled.

Please return this form with your coolers when delivering your samples to Columbia Analytical Services.

QC Certification

Columbia Analytical Services, Inc.
1565 Jefferson Rd, Building 300
Suite 360
Rochester, NY 14623
Ph. 585-288-5380
Fax 585-288-8475

Container IDs	Cleaned Date	Date Analyzed	QC Results	Comments
FC00715	5/16/11	5/17/11		
FC00719	5/16/11	5/17/11		
FC00749	5/16/11	5/17/11		
FC00750	5/16/11	5/17/11		
FC00753	5/16/11	5/17/11		
FC00823	5/16/11	5/17/11		
FC00830	6/15/11	6/16/11		
FC00831	5/16/11	5/17/11		
FC00832	6/15/11	6/16/11		
FC00845	6/29/11	8/29/11		
FC00846	3/22/11	3/22/11		
FC00847	6/29/11	8/29/11		
FC00849	6/29/11	8/29/11		
FC00850	3/22/11	3/22/11		
FC00851	3/15/11	3/15/11		
FC00852	6/29/11	8/29/11		
FC00853	6/29/11	8/29/11		
FC00855	3/22/11	3/22/11		
SS00001	4/26/11	4/28/11	Pass w/ Conditions	EPA TO-15 (43 Cmpds. + TICs)
SS00002	6/6/11	6/14/11	Pass w/ Conditions	EPA TO-15 (43 Cmpds. + TICs)
SS00003	4/26/11	4/28/11	Pass w/ Conditions	EPA TO-15 (43 Cmpds. + TICs)
SS00005	4/12/11	4/14/11	Pass w/ Conditions	EPA TO-15 (43 Cmpds. + TICs)
SS00008	4/26/11	4/28/11	Pass w/ Conditions	EPA TO-15 (43 Cmpds. + TICs)
SS00009	4/26/11	4/28/11	Pass w/ Conditions	EPA TO-15 (43 Cmpds. + TICs)
SS00010	4/26/11	4/28/11	Pass w/ Conditions	EPA TO-15 (43 Cmpds. + TICs)
SS00014	7/5/11	7/7/11	Pass w/ Conditions	EPA TO-15 (43 Cmpds. + TICs)
SS00015	4/26/11	4/28/11	Pass w/ Conditions	EPA TO-15 (43 Cmpds. + TICs)

*** QC Canister**

Container IDs	Cleaned Date	Date Analyzed	QC Results	Comments
SS00016	6/6/11	6/14/11	Pass w/ Conditions	EPA TO-15 (43 Cmpds. + TICs)
SS00017	7/5/11	7/7/11	Pass w/ Conditions	EPA TO-15 (43 Cmpds. + TICs)
SS00018	7/5/11	7/7/11	Pass w/ Conditions	EPA TO-15 (43 Cmpds. + TICs)
SS00021	6/6/11	6/14/11	Pass w/ Conditions	EPA TO-15 (43 Cmpds. + TICs)
SS00022	6/6/11	6/14/11	Pass w/ Conditions	EPA TO-15 (43 Cmpds. + TICs)
SS00023	6/6/11	6/14/11	Pass w/ Conditions	EPA TO-15 (43 Cmpds. + TICs)
SS00024	7/5/11	7/7/11	Pass w/ Conditions	EPA TO-15 (43 Cmpds. + TICs)
SS00027	4/26/11	4/28/11	Pass w/ Conditions	EPA TO-15 (43 Cmpds. + TICs)
SS00028	6/6/11	6/14/11	Pass w/ Conditions	EPA TO-15 (43 Cmpds. + TICs)

*** QC Canister**

Air - Chain of Custody Record & Analytical Service Request

Page 1 of 2

Columbia Analytical Services, Inc.
Rochester, New York 14609-6925
Phone (585) 288-5380
Fax (585) 288-8475

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 No.

Company Name & Address (Reporting Information)
Shaw Environmental, Inc.
100 Technology Center Drive
Stoughton, MA 02072

Project Name: Varian Beverly
Project Number: 143267
P.O. # / Billing Information: PO 727459

CAS Contact:

Project Manager: Raymond Cadorette
Phone: 617-589-6102
Fax: 617-589-5495
Email Address for Result Reporting: Raymond.Cadorette@Shawgrp.com
Sampler (Print & Sign): Paul Ledoux

Client Sample ID	Laboratory ID Number	Date Collected	Time Collected	Canister ID	Flow Controller ID	Hg start	Hg end	Analysis Method and/or Analytes: TO15 (Site Specific List)				Comments / Specific Instructions
VP-3		10.6.11	1359	00015	00753	30	3.5	1				
VP-5			1401	00016	00715	29	4.0	1				
VP-6			1402	00001	00719	30	4.0	1				
Bldg 3-3			1542	00010	00850	30	3.0	1				
Bldg 3-2			1540	00021	00852	30	4.0	1				
Bldg 2-6			1541	00028	00851	30	3.5	1				

R1105621
Shaw Environmental & Infrastructure, Inc.
Varian Beverly Air Samples

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
ug/m3 & EDD Units: ppbv

Project Requirements (MRLs, QAPP)
QA/QC: MADEP CAM

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
Paul Ledoux	10.7.11	1500		10/8/11	0913
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:

Air - Chain of Custody Record & Analytical Service Request

Page 2 of 2

Columbia Analytical Services INC
Rochester, New York 14609-6925
Phone (585) 288-5380
Fax (585) 288-8475

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 No.

Company Name & Address (Reporting Information)
Shaw Environmental, Inc.
100 Technology Center Drive
Stoughton, MA 02072

Project Name: Varian Beverly
Project Number: 139340
P.O. # / Billing Information: PO 727661

Project Manager: Raymond Cadorette
Phone: 617-589-6102
Fax: 617-589-5495
Email Address for Result Reporting: Raymond.Cadorette@Shawgrp.com
Sampler (Print & Sign): Paul Ledoux

CAS Contact:

Client Sample ID	Laboratory ID Number	Date Collected	Time Collected	Canister ID	Flow Controller ID	Hg start	Hg End	Analysis Method and/or Analytes: TO15 (Site Specific List)				Comments / Specific Instructions
Bldg 6-SV1		10.6.11	1408	00014	00750	30	5.0	1				
Bldg 6-SV2			1415	00002	00823	30	3.0	1				
Bldg 6-SV3			1413	00023	00832	30	3.0	1				
Bldg 6-1			1520	00009	00855	29.5	4.5	1				
Bldg 6-2			1544	00003	00853	30	3.0	1				
Bldg 5-1		10.7.11	1242	00005	00847	29.5	4.0	1				
Bldg 5-2			1235	00008	00846	30	4.0	1				
Bldg 5-3			1240	00018	00845	30	4.0	1				
Bldg 5-4			1230	00024	00849	30+	4.0	1				
Bldg 5-SV1			1125	00022	00831	30+	3.5	1				
Bldg 5-SV2			1111	00027	00830	30	3.5	1				
Bldg 5-SV3			1117	00017	00749	30	4.0	1				

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
ug/m3 & EDD Units: ppbv

Project Requirements (MRLs, QAPP)
QA/QC: MADEP CAM

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
Paul Ledoux	10.7.11	1500		10/8/11	0913
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:

Cooler Receipt And Preservation Check Form

Project/Client Shaw Folder Number _____.

Cooler received on 10/10/11 by: (M) **COURIER:** CAS (UPS) FEDEX VELOCITY CLIENT

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

7. Temperature of cooler(s) upon receipt:	AIR				
Is the temperature within 0° - 6° C?:	Yes	Yes	Yes	Yes	Yes
If No, Explain Below	No	No	No	No	No

Date/Time Temperatures Taken: AIR

Thermometer ID: IR GUN#3 / IR GUN#4 Reading From: Temp Blank / Sample Bottle

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

PC Secondary Review: MKP 10/10/11

Cooler Breakdown: Date: _____ Time: _____ 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
≥12	NaOH				
≤2	HNO_3				
≤2	H_2SO_4				
Residual Chlorine (-)	For TCN and Phenol			If present, contact PM to add ascorbic acid	
	$Na_2S_2O_3$	-	-		
	Zn Aceta	-	-		
	HCl	*	*		

Sample ID	Vol. Added	Lot Added	Final pH

*Not to be tested before analysis – pH tested and recorded by VOAs or GenChem on a separate worksheet

Yes = All samples OK

No = Samples were preserved at lab as listed

PM OK to Adjust: _____

Bottle lot numbers: _____

Other Comments:

PC Secondary Review: MKP 10/25/11

*significant air bubbles: VOA > 5-6 mm : WC >1 in. diameter

H:\SMODOCS\Cooler Receipt 3.doc

Data Usability Worksheet

Project Name : Varian Medical Systems, Inc

Job Number : 139340

Prepared By: Jennifer Gailey

Date : 12/19/2011

Analyte Group : Volatile Organics
Metabolic Acid
Methane, Ethane, Ethene

Analytical Method : 8021B
HPLC
RSK 175

Completed MADEP CAM Certification Form included: Yes

Laboratory ID No. : R1106033

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
10/25-10/26/2011	VOC 8260B		14 days	11/2, 11/3, 11/4, 11/5, 11/8, 11/9/2011
10/25-10/26/2011	Metabolic Acid HPLC		14 days	11/4, 11/5/2011
10/25-10/26/2011	RSK 175		14 days	11/4, 11/7/2011

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 : 11/2/2011

Trip Blank ID : 11/2/2011

Method Blank:

VOC 8260B	11/2, 1/3, 11/4, 11/8, 11/9/2011
Metabolic Acid HPLC	11/4, 11/5/2011
RSK 175	11/3, 11/7/2011

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:

For VOC and RSK-175 analytes - several samples were initially analyzed at dilutions to bring target analytes within the calibration range of method. Samples were subsequently reanalyzed at higher dilutions to bring target analytes within the calibration range of method.
Dilutions were reported with analytes over the calibration range flagged with an"E" and the diluted analytes flagged with a ""D".

All samples were analyzed within the required holding times except for sample AP24DO at the high dilution was analyzed 1 day outide the recommended 14 day holding time. Positive results for diluted samples were flagged with J

Reviewed By: RJC

Columbia Analytical Services™ 1565 Jefferson Rd, Building 300, Suite 360 | Rochester, NY 14623 | 585-288-5380 | 585-288-8475 fax |

November 15, 2011 Service Request No: R1106033

Mr. Ray Cadorette
Shaw Environmental & Infrastructure, Inc.
100 Technology Center
Stoughton, MA 02072

Laboratory Results for: Varian Beverly/143276-02000000

Dear Mr. Cadorette:

Enclosed are the results of the sample(s) submitted to our laboratory on October 27, 2011. For your reference, these analyses have been assigned our service request number **R1106033**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. 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 7469. You may also contact me via email at MPerry@caslab.com.

Respectfully submitted,

Columbia Analytical Services, Inc.

Michael Perry
Laboratory Manager

COLUMBIA ANALYTICAL SERVICES, INC.

Client:	Shaw Environmental, Inc	**Service Request No.:**	R1106033
Project:	Varian Beverly	**Project Number:**	143276-02010200
Sample Matrix:	Water	**Date Received:**	10/27/11

CASE NARRATIVE

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

Sample Receipt

Water samples were collected on 10/25/11 and 10/26/11 and received at CAS in good condition in the proper temperature range (1.7 °C) as noted on the cooler receipt and preservation check form. The samples were stored in a refrigerator at 1 - 6 °C upon receipt at the laboratory. See the second page of the Case Narrative for a cross-reference between Client ID and CAS Job #.

Volatile Organics

Twenty-one 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. Samples AP13DO, AP23DO, AP24DO, BW-5, BW-6, BW-8, OB-9S, OB9-DO, and OB9-BR were re-analyzed at larger dilutions to bring target analytes within the calibration range of the method. Both dilutions were reported with analytes over the calibration range flagged with an "E" and the diluted analytes flagged with a "D".

All initial and continuing calibrations were compliant.

All Surrogate Standard recoveries were within QC limits.

The Blank Spike (LCS)/Blank Spike Duplicate (LCSD) recoveries were all within the QC limits.

All samples were analyzed within the required holding times except the re-analysis for sample AP24DO at the higher dilution was analyzed 1 day outside the recommended 14 day holding time.

No other analytical or QC problems were encountered with these analyses.

Metabolic Acid Analysis

Fifteen water samples were analyzed for Metabolic Acids by HPLC using a modified in house method. Several samples were initially analyzed at dilutions to bring target analytes within the calibration range of the method.

All the initial and continuing calibration criteria were met for all analytes except as noted below.

The Blank Spike (LCS)/Blank Spike Duplicate (LCSD) recoveries were all within the QC limits.

The Method Blanks associated with these samples are free of contamination.

No other analytical or QC problems were encountered.

Modified RSK-175

Fifteen water samples were analyzed for the hydrocarbon gases Methane, Ethane, and Ethene by modified RSK-175.

Several samples were initially analyzed at dilutions to bring target analytes within the calibration range of the method. Samples BW-8, OB-15S, Unnamed Stream, and OB9-DO were re-analyzed at larger dilutions to bring target analytes within the calibration range of the method. Both dilutions were reported with analytes over the calibration range flagged with an "E" and the diluted analytes flagged with a "D".

All the initial and continuing calibration criteria were met for all analytes.

The Blank Spike (LCS)/Blank Spike Duplicate (LCSD) recoveries were all within the QC limits.

The Method Blanks associated with these samples were free of contamination.

No other analytical or QC problems were encountered.

MassDEP Analytical Protocol Certification Form

Laboratory Name: Columbia Analytical Services, Inc. Project #:143276

Project Location: Varian Beverly RTN:

This Form provides certifications for the following data set: list Laboratory Sample ID Number(s):
R1106033 – 001 - 021

Matrices: X Groundwater ☐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 ☐	6850 Perchlorate CAM VIII B ☐	Other: Rsk-175(M) Metabolic Acids

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?	☐Yes X 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:** Laboratory Manager

Printed Name: Michael K. Perry **Date:** 11/15/11

CASE NARRATIVE

This report contains analytical results for the following samples:
Service Request Number: R1106033

Lab ID	Client ID
R1106033-001	AP13DO
R1106033-002	AP23DO
R1106033-003	AP24DO
R1106033-004	BW-4
R1106033-005	BW-5
R1106033-006	BW-6
R1106033-007	BW-8
R1106033-008	BW-9
R1106033-009	MW-9
R1106033-010	OB9S
R1106033-011	OB15-S
R1106033-012	STR-3
R1106033-013	UNNAMED STREAM
R1106033-014	OB9-DO
R1106033-015	OB9-BR
R1106033-016	AP25 - DO
R1106033-017	OB10-S(29')
R1106033-018	OB10-DO(48.5')
R1106033-019	OB-12S(26')
R1106033-020	EB-1
R1106033-021	TB-1

Columbia Analytical Services™

REPORT QUALIFIERS

U	Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.
J	Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/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.

ACCREDITED IN ACCORDANCE WITH nelac

CAS/Rochester 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

COLUMBIA ANALYTICAL SERVICES
1565 JEFFERSON RD
BUILDING 300, SUITE 360
ROCHESTER, NY 14623-0000

Laboratory Director: Michael K. Perry

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: 01 JUL 2011
Expires: 30 JUN 2012

Director, Division of Environmental Analysis

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 25 AUG 2011

M-NY032 COLUMBIA ANALYTICAL SERVICES
ROCHESTER NY

NON POTABLE WATER (CHEMISTRY) Effective Date 25 AUG 2011 Expiration Date 30 JUN 2012

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
PH	SM 4500-H-B
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

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 25 AUG 2011

M-NY032 COLUMBIA ANALYTICAL SERVICES
ROCHESTER NY

NON POTABLE WATER (CHEMISTRY) Effective Date 25 AUG 2011 Expiration Date 30 JUN 2012

Analytes	Methods
ALKALINITY, TOTAL	SM 2320B
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

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106033
Project:	Varian Beverly/143276-02000000	**Date Collected:**	10/25/11 1430
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/2/11 23:08
Sample Name:	AP13DO	**Units:**	µg/L
Lab Code:	R1106033-001	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	267824
Data File Name:	J:\ACQUDATA\MSVOA7\DATA\110211\J4291.D\	**Instrument Name:**	R-MS-07
		Dilution Factor:	1000

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	**19000**		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)	**44000**		2000	
79-01-6	Trichloroethene (TCE)	**220000**	E	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	**7200**		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	98	70-130	11/2/11 23:08	
Dibromofluoromethane	101	70-130	11/2/11 23:08	
Toluene-d8	99	70-130	11/2/11 23:08	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106033
Project:	Varian Beverly/143276-02000000	**Date Collected:**	10/25/11 1430
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/4/11 10:31
Sample Name:	AP13DO	**Units:**	µg/L
Lab Code:	R1106033-001	**Basis:**	NA
Run Type:	Dilution		

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	267827
Data File Name:	J:\ACQUDATA\MSVOA7\DATA\110311\J4329.D\	**Instrument Name:**	R-MS-07
		Dilution Factor:	2000

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	**20000**	D	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	20000	U	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)	**47000**	D	4000	
79-01-6	Trichloroethene (TCE)	**230000**	D	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	**7800**	D	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	100	70-130	11/4/11 10:31	
Dibromofluoromethane	101	70-130	11/4/11 10:31	
Toluene-d8	100	70-130	11/4/11 10:31	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106033
Project:	Varian Beverly/143276-02000000	**Date Collected:**	10/25/11 1430
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/4/11 14:39
Sample Name:	AP13DO	**Units:**	µg/L
Lab Code:	R1106033-001	**Basis:**	NA

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	268312
Data File Name:	star418.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	**35**		1.0	
74-82-8	Methane	**3.6**		2.0	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106033
Project:	Varian Beverly/143276-02000000	**Date Collected:**	10/25/11 1430
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/7/11 22:05
Sample Name:	AP13DO	**Units:**	mg/L
Lab Code:	R1106033-001	**Basis:**	NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analytical Method:	Organic Acids	**Analysis Lot:**	268467
Data File Name:	J:\ACQUDATA\HPLC05\DATA\110711\X0006661.D\	**Instrument Name:**	R-HPLC-05
		Dilution Factor:	50

CAS No.	Analyte Name	Result	Q	MRL	Note
127-17-3	Pyruvic Acid	25	U	25	
64-19-7	Acetic Acid	**2500**		50	
107-92-6	Butanoic Acid (Butyric Acid)	100	U	100	
50-21-5	Lactic Acid	**6300**		50	
79-09-4	Propionic Acid	**210**		50	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106033
Project:	Varian Beverly/143276-02000000	**Date Collected:**	10/25/11 1500
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/3/11 20:00
Sample Name:	AP23DO	**Units:**	µg/L
Lab Code:	R1106033-002	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	267982
Data File Name:	J:\ACQUDATA\MSVOA7\DATA\110311\J4311.D\	**Instrument Name:**	R-MS-07
		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)	**23000**		2000	
79-01-6	Trichloroethene (TCE)	**220000**	E	2000	
75-69-4	Trichlorofluoromethane (CFC 11)	2000	U	2000	
75-01-4	Vinyl Chloride	**3300**		2000	
156-59-2	cis-1,2-Dichloroethene	**9600**		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	100	70-130	11/3/11 20:00	
Dibromofluoromethane	104	70-130	11/3/11 20:00	
Toluene-d8	100	70-130	11/3/11 20:00	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106033
Project:	Varian Beverly/143276-02000000	**Date Collected:**	10/25/11 1500
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/8/11 18:51
Sample Name:	AP23DO	**Units:**	µg/L
Lab Code:	R1106033-002	**Basis:**	NA
Run Type:	Dilution		

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	268634
Data File Name:	J:\ACQUDATA\msvoa10\data\110811\D5944.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	2000

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	4000	U	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	20000	U	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)	**21000**	D	4000	
79-01-6	Trichloroethene (TCE)	**240000**	D	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	**9300**	D	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	103	70-130	11/8/11 18:51	
Dibromofluoromethane	102	70-130	11/8/11 18:51	
Toluene-d8	108	70-130	11/8/11 18:51	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106033
Project:	Varian Beverly/143276-02000000	**Date Collected:**	10/25/11 1500
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/5/11 11:02
Sample Name:	AP23DO	**Units:**	µg/L
Lab Code:	R1106033-002	**Basis:**	NA

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	268319
Data File Name:	star898.run	**Instrument Name:**	R-GC-02
		Dilution Factor:	2

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	2.0	U	2.0	
74-85-1	Ethene	**65**		2.0	
74-82-8	Methane	**120**		4.0	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106033
Project:	Varian Beverly/143276-02000000	**Date Collected:**	10/25/11 1500
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/7/11 17:22
Sample Name:	AP23DO	**Units:**	mg/L
Lab Code:	R1106033-002	**Basis:**	NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analytical Method:	Organic Acids	**Analysis Lot:**	268467
Data File Name:	J:\ACQUDATA\HPLC05\DATA\110711\X0006656.D\	**Instrument Name:**	R-HPLC-05
		Dilution Factor:	2

CAS No.	Analyte Name	Result	Q	MRL	Note
127-17-3	Pyruvic Acid	1.0	U	1.0	
64-19-7	Acetic Acid	**220**		2.0	
107-92-6	Butanoic Acid (Butyric Acid)	**25**		4.0	
50-21-5	Lactic Acid	**5.5**		2.0	
79-09-4	Propionic Acid	**390**		2.0	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106033
Project:	Varian Beverly/143276-02000000	**Date Collected:**	10/25/11 0730
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/3/11 20:37
Sample Name:	AP24DO	**Units:**	µg/L
Lab Code:	R1106033-003	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	267982
Data File Name:	J:\ACQUDATA\MSVOA7\DATA\110311\J4312.D\	**Instrument Name:**	R-MS-07
		Dilution Factor:	100

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	**32000**	E	200	
79-34-5	1,1,2,2-Tetrachloroethane	200	U	200	
79-00-5	1,1,2-Trichloroethane	**270**		200	
75-34-3	1,1-Dichloroethane (1,1-DCA)	200	U	200	
75-35-4	1,1-Dichloroethene (1,1-DCE)	**1200**		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	**740**		200	
74-87-3	Chloromethane	200	U	200	
124-48-1	Dibromochloromethane	200	U	200	
75-09-2	Methylene Chloride	**220**		200	
127-18-4	Tetrachloroethene (PCE)	**32000**	E	200	
79-01-6	Trichloroethene (TCE)	**170000**	E	200	
75-69-4	Trichlorofluoromethane (CFC 11)	200	U	200	
75-01-4	Vinyl Chloride	**6900**		200	
156-59-2	cis-1,2-Dichloroethene	**12000**		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	101	70-130	11/3/11 20:37	
Dibromofluoromethane	99	70-130	11/3/11 20:37	
Toluene-d8	101	70-130	11/3/11 20:37	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106033
Project:	Varian Beverly/143276-02000000	**Date Collected:**	10/25/11 0730
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/9/11 14:01
Sample Name:	AP24DO	**Units:**	µg/L
Lab Code:	R1106033-003	**Basis:**	NA
Run Type:	Dilution		

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	268792
Data File Name:	J:\ACQUDATA\msvoa10\data\110911\D5981.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	5000

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	**35000**	D	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	50000	U	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)	**31000**	D	10000	*
79-01-6	Trichloroethene (TCE)	**350000**	D	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	**11000**	D	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	97	70-130	11/9/11 14:01	
Dibromofluoromethane	101	70-130	11/9/11 14:01	
Toluene-d8	108	70-130	11/9/11 14:01	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106033
Project:	Varian Beverly/143276-02000000	**Date Collected:**	10/25/11 0730
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/5/11 11:13
Sample Name:	AP24DO	**Units:**	µg/L
Lab Code:	R1106033-003	**Basis:**	NA

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	268319
Data File Name:	star899.run	**Instrument Name:**	R-GC-02
		Dilution Factor:	4

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	4.0	U	4.0	
74-85-1	Ethene	**300**		4.0	
74-82-8	Methane	8.0	U	8.0	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106033
Project:	Varian Beverly/143276-02000000	**Date Collected:**	10/25/11 0730
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/7/11 19:16
Sample Name:	AP24DO	**Units:**	mg/L
Lab Code:	R1106033-003	**Basis:**	NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analytical Method:	Organic Acids	**Analysis Lot:**	268467
Data File Name:	J:\ACQUDATA\HPLC05\DATA\110711\X0006658.D\	**Instrument Name:**	R-HPLC-05
		Dilution Factor:	10

CAS No.	Analyte Name	Result	Q	MRL	Note
127-17-3	Pyruvic Acid	**6.5**		5.0	
64-19-7	Acetic Acid	**780**		10	
107-92-6	Butanoic Acid (Butyric Acid)	**710**		20	
50-21-5	Lactic Acid	**750**		10	
79-09-4	Propionic Acid	**1600**		10	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106033
Project:	Varian Beverly/143276-02000000	**Date Collected:**	10/25/11 1200
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/8/11 16:52
Sample Name:	BW-4	**Units:**	µg/L
Lab Code:	R1106033-004	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	268634
Data File Name:	J:\ACQUDATA\msvoa10\data\110811\D5940.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)	**95**		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)	**32**		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)	**2.3**		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	**98**		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	103	70-130	11/8/11 16:52	
Dibromofluoromethane	101	70-130	11/8/11 16:52	
Toluene-d8	106	70-130	11/8/11 16:52	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106033
Project:	Varian Beverly/143276-02000000	**Date Collected:**	10/25/11 1200
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/5/11 11:34
Sample Name:	BW-4	**Units:**	µg/L
Lab Code:	R1106033-004	**Basis:**	NA

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	268319
Data File Name:	star901.run	**Instrument Name:**	R-GC-02
		Dilution Factor:	2.5

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	**19**		2.5	
74-85-1	Ethene	**130**		2.5	
74-82-8	Methane	**240**		5.0	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106033
Project:	Varian Beverly/143276-02000000	**Date Collected:**	10/25/11 1200
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/4/11 00:16
Sample Name:	BW-4	**Units:**	mg/L
Lab Code:	R1106033-004	**Basis:**	NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analytical Method:	Organic Acids	**Analysis Lot:**	268042
Data File Name:	J:\ACQUDATA\HPLC05\DATA\110311\X0006618.D\	**Instrument Name:**	R-HPLC-05
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
127-17-3	Pyruvic Acid	0.50	U	0.50	
64-19-7	Acetic Acid	1.0	U	1.0	
107-92-6	Butanoic Acid (Butyric Acid)	2.0	U	2.0	
50-21-5	Lactic Acid	1.0	U	1.0	
79-09-4	Propionic Acid	1.0	U	1.0	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106033
Project:	Varian Beverly/143276-02000000	**Date Collected:**	10/25/11 1115
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/2/11 17:38
Sample Name:	BW-5	**Units:**	µg/L
Lab Code:	R1106033-005	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	267824
Data File Name:	J:\ACQUDATA\MSVOA7\DATA\110211\J4282.D\	**Instrument Name:**	R-MS-07
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	**1100**	E	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)	**1700**	E	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	**20**		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	**4.7**		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	**3.1**		2.0	
127-18-4	Tetrachloroethene (PCE)	**3.0**		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	**790**	E	2.0	
156-59-2	cis-1,2-Dichloroethene	**64**		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	11/2/11 17:38	
Dibromofluoromethane	99	70-130	11/2/11 17:38	
Toluene-d8	102	70-130	11/2/11 17:38	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106033
Project:	Varian Beverly/143276-02000000	**Date Collected:**	10/25/11 1115
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/4/11 09:18
Sample Name:	BW-5	**Units:**	µg/L
Lab Code:	R1106033-005	**Basis:**	NA
Run Type:	Dilution		

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	267827
Data File Name:	J:\ACQUDATA\MSVOA7\DATA\110311\J4327.D\	**Instrument Name:**	R-MS-07
		Dilution Factor:	25

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	**1500**	D	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)	**4300**	D	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)	50	U	50	
79-01-6	Trichloroethene (TCE)	50	U	50	
75-69-4	Trichlorofluoromethane (CFC 11)	50	U	50	
75-01-4	Vinyl Chloride	**970**	D	50	
156-59-2	cis-1,2-Dichloroethene	**66**	D	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	98	70-130	11/4/11 09:18	
Dibromofluoromethane	101	70-130	11/4/11 09:18	
Toluene-d8	101	70-130	11/4/11 09:18	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106033
Project:	Varian Beverly/143276-02000000	**Date Collected:**	10/25/11 1115
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/5/11 11:43
Sample Name:	BW-5	**Units:**	µg/L
Lab Code:	R1106033-005	**Basis:**	NA

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	268319
Data File Name:	star902.run	**Instrument Name:**	R-GC-02
		Dilution Factor:	25

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	25	U	25	
74-85-1	Ethene	**1700**		25	
74-82-8	Methane	**110**		50	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106033
Project:	Varian Beverly/143276-02000000	**Date Collected:**	10/25/11 1115
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/4/11 05:55
Sample Name:	BW-5	**Units:**	mg/L
Lab Code:	R1106033-005	**Basis:**	NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analytical Method:	Organic Acids	**Analysis Lot:**	268042
Data File Name:	J:\ACQUDATA\HPLC05\DATA\110311\X0006624.D\	**Instrument Name:**	R-HPLC-05
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
127-17-3	Pyruvic Acid	0.50	U	0.50	
64-19-7	Acetic Acid	**53**		1.0	
107-92-6	Butanoic Acid (Butyric Acid)	2.0	U	2.0	
50-21-5	Lactic Acid	1.0	U	1.0	
79-09-4	Propionic Acid	**20**		1.0	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106033
Project:	Varian Beverly/143276-02000000	**Date Collected:**	10/25/11 1000
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/2/11 18:15
Sample Name:	BW-6	**Units:**	µg/L
Lab Code:	R1106033-006	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	267824
Data File Name:	J:\ACQUDATA\MSVOA7\DATA\110211\J4283.D\	**Instrument Name:**	R-MS-07
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	**1800**	E	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)	**850**	E	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	**60**		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	**17**		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)	**27**		2.0	
79-01-6	Trichloroethene (TCE)	**19**		2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	**790**	E	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	100	70-130	11/2/11 18:15	
Dibromofluoromethane	99	70-130	11/2/11 18:15	
Toluene-d8	101	70-130	11/2/11 18:15	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106033
Project:	Varian Beverly/143276-02000000	**Date Collected:**	10/25/11 1000
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/3/11 17:33
Sample Name:	BW-6	**Units:**	µg/L
Lab Code:	R1106033-006	**Basis:**	NA
Run Type:	Dilution		

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	267982
Data File Name:	J:\ACQUDATA\MSVOA7\DATA\110311\J4307.D\	**Instrument Name:**	R-MS-07
		Dilution Factor:	20

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	**3500**	D	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)	**1100**	D	40	
75-35-4	1,1-Dichloroethene (1,1-DCE)	**60**	D	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	**920**	D	40	
156-59-2	cis-1,2-Dichloroethene	**100**	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	98	70-130	11/3/11 17:33	
Dibromofluoromethane	101	70-130	11/3/11 17:33	
Toluene-d8	100	70-130	11/3/11 17:33	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106033
Project:	Varian Beverly/143276-02000000	**Date Collected:**	10/25/11 1000
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/5/11 12:21
Sample Name:	BW-6	**Units:**	µg/L
Lab Code:	R1106033-006	**Basis:**	NA

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	268319
Data File Name:	star905.run	**Instrument Name:**	R-GC-02
		Dilution Factor:	5

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	5.0	U	5.0	
74-85-1	Ethene	**380**		5.0	
74-82-8	Methane	**51**		10	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106033
Project:	Varian Beverly/143276-02000000	**Date Collected:**	10/25/11 1000
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/4/11 07:48
Sample Name:	BW-6	**Units:**	mg/L
Lab Code:	R1106033-006	**Basis:**	NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analytical Method:	Organic Acids	**Analysis Lot:**	268042
Data File Name:	J:\ACQUDATA\HPLC05\DATA\110311\X0006626.D\	**Instrument Name:**	R-HPLC-05
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
127-17-3	Pyruvic Acid	0.50	U	0.50	
64-19-7	Acetic Acid	**1.5**		1.0	
107-92-6	Butanoic Acid (Butyric Acid)	2.0	U	2.0	
50-21-5	Lactic Acid	1.0	U	1.0	
79-09-4	Propionic Acid	1.0	U	1.0	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106033
Project:	Varian Beverly/143276-02000000	**Date Collected:**	10/25/11 0915
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/2/11 18:51
Sample Name:	BW-8	**Units:**	µg/L
Lab Code:	R1106033-007	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	267824
Data File Name:	J:\ACQUDATA\MSVOA7\DATA\110211\J4284.D\	**Instrument Name:**	R-MS-07
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	**120**		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)	**670**	E	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	**3.1**		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	**260**	E	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)	**9.6**		2.0	
79-01-6	Trichloroethene (TCE)	**17**		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	**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	99	70-130	11/2/11 18:51	
Dibromofluoromethane	100	70-130	11/2/11 18:51	
Toluene-d8	101	70-130	11/2/11 18:51	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106033
Project:	Varian Beverly/143276-02000000	**Date Collected:**	10/25/11 0915
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/3/11 18:09
Sample Name:	BW-8	**Units:**	µg/L
Lab Code:	R1106033-007	**Basis:**	NA
Run Type:	Dilution		

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	267982
Data File Name:	J:\ACQUDATA\MSVOA7\DATA\110311\J4308.D\	**Instrument Name:**	R-MS-07
		Dilution Factor:	5

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	**100**	D	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)	**730**	D	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	**240**	D	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)	**15**	D	10	
75-69-4	Trichlorofluoromethane (CFC 11)	10	U	10	
75-01-4	Vinyl Chloride	**300**	D	10	
156-59-2	cis-1,2-Dichloroethene	**12**	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	99	70-130	11/3/11 18:09	
Dibromofluoromethane	101	70-130	11/3/11 18:09	
Toluene-d8	97	70-130	11/3/11 18:09	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106033
Project:	Varian Beverly/143276-02000000	**Date Collected:**	10/25/11 0915
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/5/11 12:43
Sample Name:	BW-8	**Units:**	µg/L
Lab Code:	R1106033-007	**Basis:**	NA

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	268319
Data File Name:	star907.run	**Instrument Name:**	R-GC-02
		Dilution Factor:	10

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	**17**		10	
74-85-1	Ethene	**1000**	E	10	
74-82-8	Methane	**250**		20	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106033
Project:	Varian Beverly/143276-02000000	**Date Collected:**	10/25/11 0915
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/5/11 13:10
Sample Name:	BW-8	**Units:**	µg/L
Lab Code:	R1106033-007	**Basis:**	NA
Run Type:	Dilution		

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	268319
Data File Name:	star909.run	**Instrument Name:**	R-GC-02
		Dilution Factor:	12.5

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	**17**	D	13	
74-85-1	Ethene	**1000**	D	13	
74-82-8	Methane	**250**	D	25	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106033
Project:	Varian Beverly/143276-02000000	**Date Collected:**	10/25/11 0915
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/4/11 10:38
Sample Name:	BW-8	**Units:**	mg/L
Lab Code:	R1106033-007	**Basis:**	NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analytical Method:	Organic Acids	**Analysis Lot:**	268042
Data File Name:	J:\ACQUDATA\HPLC05\DATA\110311\X0006629.D\	**Instrument Name:**	R-HPLC-05
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
127-17-3	Pyruvic Acid	0.50	U	0.50	
64-19-7	Acetic Acid	**1.8**		1.0	
107-92-6	Butanoic Acid (Butyric Acid)	2.0	U	2.0	
50-21-5	Lactic Acid	1.0	U	1.0	
79-09-4	Propionic Acid	1.0	U	1.0	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106033
Project:	Varian Beverly/143276-02000000	**Date Collected:**	10/25/11 0830
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/8/11 16:23
Sample Name:	BW-9	**Units:**	µg/L
Lab Code:	R1106033-008	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	268634
Data File Name:	J:\ACQUDATA\msvoa10\data\110811\D5939.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)	**9.4**		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)	**62**		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	**92**		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	11/8/11 16:23	
Dibromofluoromethane	101	70-130	11/8/11 16:23	
Toluene-d8	107	70-130	11/8/11 16:23	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106033
Project:	Varian Beverly/143276-02000000	**Date Collected:**	10/25/11 0830
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/5/11 12:58
Sample Name:	BW-9	**Units:**	µg/L
Lab Code:	R1106033-008	**Basis:**	NA

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	268319
Data File Name:	star908.run	**Instrument Name:**	R-GC-02
		Dilution Factor:	100

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	**1500**		100	
74-85-1	Ethene	**280**		100	
74-82-8	Methane	**7400**		200	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106033
Project:	Varian Beverly/143276-02000000	**Date Collected:**	10/25/11 0830
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/4/11 12:31
Sample Name:	BW-9	**Units:**	mg/L
Lab Code:	R1106033-008	**Basis:**	NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analytical Method:	Organic Acids	**Analysis Lot:**	268042
Data File Name:	J:\ACQUDATA\HPLC05\DATA\110311\X0006631.D\	**Instrument Name:**	R-HPLC-05
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
127-17-3	Pyruvic Acid	0.50	U	0.50	
64-19-7	Acetic Acid	1.0	U	1.0	
107-92-6	Butanoic Acid (Butyric Acid)	2.0	U	2.0	
50-21-5	Lactic Acid	1.0	U	1.0	
79-09-4	Propionic Acid	1.0	U	1.0	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106033
Project:	Varian Beverly/143276-02000000	**Date Collected:**	10/25/11 1330
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/3/11 15:04
Sample Name:	MW-9	**Units:**	µg/L
Lab Code:	R1106033-009	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	267982
Data File Name:	J:\ACQUDATA\MSVOA7\DATA\110311\J4303.D\	**Instrument Name:**	R-MS-07
		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	**11**		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	**9.6**		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	**16**		2.0	
156-59-2	cis-1,2-Dichloroethene	**20**		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	11/3/11 15:04	
Dibromofluoromethane	101	70-130	11/3/11 15:04	
Toluene-d8	100	70-130	11/3/11 15:04	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106033
Project:	Varian Beverly/143276-02000000	**Date Collected:**	10/25/11 1330
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/5/11 13:31
Sample Name:	MW-9	**Units:**	µg/L
Lab Code:	R1106033-009	**Basis:**	NA

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	268319
Data File Name:	star911.run	**Instrument Name:**	R-GC-02
		Dilution Factor:	125

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	**830**		130	
74-85-1	Ethene	**1100**		130	
74-82-8	Methane	**9500**		250	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106033
Project:	Varian Beverly/143276-02000000	**Date Collected:**	10/25/11 1330
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/4/11 14:25
Sample Name:	MW-9	**Units:**	mg/L
Lab Code:	R1106033-009	**Basis:**	NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analytical Method:	Organic Acids	**Analysis Lot:**	268042
Data File Name:	J:\ACQUDATA\HPLC05\DATA\110311\X0006633.D\	**Instrument Name:**	R-HPLC-05
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
127-17-3	Pyruvic Acid	0.50	U	0.50	
64-19-7	Acetic Acid	1.0	U	1.0	
107-92-6	Butanoic Acid (Butyric Acid)	2.0	U	2.0	
50-21-5	Lactic Acid	1.0	U	1.0	
79-09-4	Propionic Acid	1.0	U	1.0	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106033
Project:	Varian Beverly/143276-02000000	**Date Collected:**	10/25/11 1045
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/2/11 20:05
Sample Name:	OB9S	**Units:**	µg/L
Lab Code:	R1106033-010	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	267824
Data File Name:	J:\ACQUDATA\MSVOA7\DATA\110211\J4286.D\	**Instrument Name:**	R-MS-07
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	**140**		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)	**910**	E	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	**4.2**		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	**540**	E	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	**95**		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	98	70-130	11/2/11 20:05	
Dibromofluoromethane	101	70-130	11/2/11 20:05	
Toluene-d8	97	70-130	11/2/11 20:05	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106033
Project:	Varian Beverly/143276-02000000	**Date Collected:**	10/25/11 1045
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/3/11 18:46
Sample Name:	OB9S	**Units:**	µg/L
Lab Code:	R1106033-010	**Basis:**	NA
Run Type:	Dilution		

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	267982
Data File Name:	J:\ACQUDATA\MSVOA7\DATA\110311\J4309.D\	**Instrument Name:**	R-MS-07
		Dilution Factor:	5

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	**94**	D	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)	**890**	D	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	**450**	D	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)	10	U	10	
75-69-4	Trichlorofluoromethane (CFC 11)	10	U	10	
75-01-4	Vinyl Chloride	**68**	D	10	
156-59-2	cis-1,2-Dichloroethene	**14**	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	99	70-130	11/3/11 18:46	
Dibromofluoromethane	103	70-130	11/3/11 18:46	
Toluene-d8	100	70-130	11/3/11 18:46	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106033
Project:	Varian Beverly/143276-02000000	**Date Collected:**	10/25/11 1045
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/5/11 13:40
Sample Name:	OB9S	**Units:**	µg/L
Lab Code:	R1106033-010	**Basis:**	NA

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	268319
Data File Name:	star912.run	**Instrument Name:**	R-GC-02
		Dilution Factor:	250

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	**290**		250	
74-85-1	Ethene	250	U	250	
74-82-8	Methane	**18000**		500	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106033
Project:	Varian Beverly/143276-02000000	**Date Collected:**	10/25/11 1045
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/7/11 23:58
Sample Name:	OB9S	**Units:**	mg/L
Lab Code:	R1106033-010	**Basis:**	NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analytical Method:	Organic Acids	**Analysis Lot:**	268467
Data File Name:	J:\ACQUDATA\HPLC05\DATA\110711\X0006663.D\	**Instrument Name:**	R-HPLC-05
		Dilution Factor:	2

CAS No.	Analyte Name	Result	Q	MRL	Note
127-17-3	Pyruvic Acid	1.0	U	1.0	
64-19-7	Acetic Acid	**360**		2.0	
107-92-6	Butanoic Acid (Butyric Acid)	**74**		4.0	
50-21-5	Lactic Acid	2.0	U	2.0	
79-09-4	Propionic Acid	**300**		2.0	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106033
Project:	Varian Beverly/143276-02000000	**Date Collected:**	10/25/11 1400
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/3/11 15:40
Sample Name:	OB15-S	**Units:**	µg/L
Lab Code:	R1106033-011	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	267982
Data File Name:	J:\ACQUDATA\MSVOA7\DATA\110311\J4304.D\	**Instrument Name:**	R-MS-07
		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)	**5.1**		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	**13**		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	**5.4**		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	**2.2**		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	**180**		2.0	
156-59-2	cis-1,2-Dichloroethene	**150**		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	11/3/11 15:40	
Dibromofluoromethane	101	70-130	11/3/11 15:40	
Toluene-d8	102	70-130	11/3/11 15:40	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106033
Project:	Varian Beverly/143276-02000000	**Date Collected:**	10/25/11 1400
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/5/11 13:50
Sample Name:	OB15-S	**Units:**	µg/L
Lab Code:	R1106033-011	**Basis:**	NA

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	268319
Data File Name:	star913.run	**Instrument Name:**	R-GC-02
		Dilution Factor:	100

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	**210**		100	
74-85-1	Ethene	**480**		100	
74-82-8	Methane	**11000**	E	200	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106033
Project:	Varian Beverly/143276-02000000	**Date Collected:**	10/25/11 1400
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/5/11 14:02
Sample Name:	OB15-S	**Units:**	µg/L
Lab Code:	R1106033-011	**Basis:**	NA
Run Type:	Dilution		

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	268319
Data File Name:	star914.run	**Instrument Name:**	R-GC-02
		Dilution Factor:	125

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	**210**	D	130	
74-85-1	Ethene	**460**	D	130	
74-82-8	Methane	**11000**	D	250	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106033
Project:	Varian Beverly/143276-02000000	**Date Collected:**	10/25/11 1400
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/8/11 01:52
Sample Name:	OB15-S	**Units:**	mg/L
Lab Code:	R1106033-011	**Basis:**	NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analytical Method:	Organic Acids	**Analysis Lot:**	268467
Data File Name:	J:\ACQUDATA\HPLC05\DATA\110711\X0006665.D\	**Instrument Name:**	R-HPLC-05
		Dilution Factor:	2

CAS No.	Analyte Name	Result	Q	MRL	Note
127-17-3	Pyruvic Acid	1.0	U	1.0	
64-19-7	Acetic Acid	**230**		2.0	
107-92-6	Butanoic Acid (Butyric Acid)	**37**		4.0	
50-21-5	Lactic Acid	2.0	U	2.0	
79-09-4	Propionic Acid	**310**		2.0	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106033
Project:	Varian Beverly/143276-02000000	**Date Collected:**	10/25/11 1230
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/3/11 16:17
Sample Name:	STR-3	**Units:**	µg/L
Lab Code:	R1106033-012	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	267982
Data File Name:	J:\ACQUDATA\MSVOA7\DATA\110311\J4305.D\	**Instrument Name:**	R-MS-07
		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	6.7		2.0	
156-59-2	cis-1,2-Dichloroethene	27		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	97	70-130	11/3/11 16:17	
Dibromofluoromethane	100	70-130	11/3/11 16:17	
Toluene-d8	96	70-130	11/3/11 16:17	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106033
Project:	Varian Beverly/143276-02000000	**Date Collected:**	10/25/11 1230
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/5/11 14:12
Sample Name:	STR-3	**Units:**	µg/L
Lab Code:	R1106033-012	**Basis:**	NA

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	268319
Data File Name:	star915.run	**Instrument Name:**	R-GC-02
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	**2.5**		1.0	
74-85-1	Ethene	**7.8**		1.0	
74-82-8	Methane	**49**		2.0	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106033
Project:	Varian Beverly/143276-02000000	**Date Collected:**	10/25/11 1230
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/4/11 21:01
Sample Name:	STR-3	**Units:**	mg/L
Lab Code:	R1106033-012	**Basis:**	NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analytical Method:	Organic Acids	**Analysis Lot:**	268042
Data File Name:	J:\ACQUDATA\HPLC05\DATA\110311\X0006640.D\	**Instrument Name:**	R-HPLC-05
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
127-17-3	Pyruvic Acid	0.50	U	0.50	
64-19-7	Acetic Acid	1.0	U	1.0	
107-92-6	Butanoic Acid (Butyric Acid)	2.0	U	2.0	
50-21-5	Lactic Acid	1.0	U	1.0	
79-09-4	Propionic Acid	1.0	U	1.0	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106033
Project:	Varian Beverly/143276-02000000	**Date Collected:**	10/25/11 1300
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/8/11 17:22
Sample Name:	UNNAMED STREAM	**Units:**	µg/L
Lab Code:	R1106033-013	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	268634
Data File Name:	J:\ACQUDATA\msvoa10\data\110811\D5941.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)	**910**		20	
79-01-6	Trichloroethene (TCE)	**590**		20	
75-69-4	Trichlorofluoromethane (CFC 11)	20	U	20	
75-01-4	Vinyl Chloride	**160**		20	
156-59-2	cis-1,2-Dichloroethene	**1400**		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	102	70-130	11/8/11 17:22	
Dibromofluoromethane	100	70-130	11/8/11 17:22	
Toluene-d8	104	70-130	11/8/11 17:22	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106033
Project:	Varian Beverly/143276-02000000	**Date Collected:**	10/25/11 1300
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/5/11 15:11
Sample Name:	UNNAMED STREAM	**Units:**	µg/L
Lab Code:	R1106033-013	**Basis:**	NA

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	268326
Data File Name:	star919.run	**Instrument Name:**	R-GC-02
		Dilution Factor:	5

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	**52**		5.0	
74-85-1	Ethene	**32**		5.0	
74-82-8	Methane	**620**	E	10	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106033
Project:	Varian Beverly/143276-02000000	**Date Collected:**	10/25/11 1300
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/5/11 15:21
Sample Name:	UNNAMED STREAM	**Units:**	µg/L
Lab Code:	R1106033-013	**Basis:**	NA
Run Type:	Dilution		

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	268326
Data File Name:	star920.run	**Instrument Name:**	R-GC-02
		Dilution Factor:	10

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	**53**	D	10	
74-85-1	Ethene	**33**	D	10	
74-82-8	Methane	**620**	D	20	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106033
Project:	Varian Beverly/143276-02000000	**Date Collected:**	10/25/11 1300
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/4/11 22:54
Sample Name:	UNNAMED STREAM	**Units:**	mg/L
Lab Code:	R1106033-013	**Basis:**	NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analytical Method:	Organic Acids	**Analysis Lot:**	268042
Data File Name:	J:\ACQUDATA\HPLC05\DATA\110311\X0006642.D\	**Instrument Name:**	R-HPLC-05
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
127-17-3	Pyruvic Acid	0.50	U	0.50	
64-19-7	Acetic Acid	1.0	U	1.0	
107-92-6	Butanoic Acid (Butyric Acid)	2.0	U	2.0	
50-21-5	Lactic Acid	1.0	U	1.0	
79-09-4	Propionic Acid	1.0	U	1.0	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106033
Project:	Varian Beverly/143276-02000000	**Date Collected:**	10/25/11 1030
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/4/11 11:08
Sample Name:	OB9-DO	**Units:**	µg/L
Lab Code:	R1106033-014	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	267827
Data File Name:	J:\ACQUDATA\MSVOA7\DATA\110311\J4330.D\	**Instrument Name:**	R-MS-07
		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)	**410**		40	
79-01-6	Trichloroethene (TCE)	**1000**		40	
75-69-4	Trichlorofluoromethane (CFC 11)	40	U	40	
75-01-4	Vinyl Chloride	**150**		40	
156-59-2	cis-1,2-Dichloroethene	**4300**	E	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	100	70-130	11/4/11 11:08	
Dibromofluoromethane	102	70-130	11/4/11 11:08	
Toluene-d8	98	70-130	11/4/11 11:08	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106033
Project:	Varian Beverly/143276-02000000	**Date Collected:**	10/25/11 1030
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/8/11 19:21
Sample Name:	OB9-DO	**Units:**	µg/L
Lab Code:	R1106033-014	**Basis:**	NA
Run Type:	Dilution		

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	268634
Data File Name:	J:\ACQUDATA\msvoa10\data\110811\D5945.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)	**470**	D	100	
79-01-6	Trichloroethene (TCE)	**1500**	D	100	
75-69-4	Trichlorofluoromethane (CFC 11)	100	U	100	
75-01-4	Vinyl Chloride	**180**	D	100	
156-59-2	cis-1,2-Dichloroethene	**5100**	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	104	70-130	11/8/11 19:21	
Dibromofluoromethane	102	70-130	11/8/11 19:21	
Toluene-d8	108	70-130	11/8/11 19:21	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106033
Project:	Varian Beverly/143276-02000000	**Date Collected:**	10/25/11 1030
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/5/11 15:30
Sample Name:	OB9-DO	**Units:**	µg/L
Lab Code:	R1106033-014	**Basis:**	NA

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	268326
Data File Name:	star921.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	**37**		10	
74-82-8	Methane	**2100**	E	20	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106033
Project:	Varian Beverly/143276-02000000	**Date Collected:**	10/25/11 1030
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/5/11 16:04
Sample Name:	OB9-DO	**Units:**	µg/L
Lab Code:	R1106033-014	**Basis:**	NA
Run Type:	Dilution		

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	268326
Data File Name:	star924.run	**Instrument Name:**	R-GC-02
		Dilution Factor:	25

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	25	U	25	
74-85-1	Ethene	**34**	D	25	
74-82-8	Methane	**1800**	D	50	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106033
Project:	Varian Beverly/143276-02000000	**Date Collected:**	10/25/11 1030
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/5/11 00:47
Sample Name:	OB9-DO	**Units:**	mg/L
Lab Code:	R1106033-014	**Basis:**	NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analytical Method:	Organic Acids	**Analysis Lot:**	268042
Data File Name:	J:\ACQUDATA\HPLC05\DATA\110311\X0006644.D\	**Instrument Name:**	R-HPLC-05
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
127-17-3	Pyruvic Acid	0.50	U	0.50	
64-19-7	Acetic Acid	**7.8**		1.0	
107-92-6	Butanoic Acid (Butyric Acid)	2.0	U	2.0	
50-21-5	Lactic Acid	1.0	U	1.0	
79-09-4	Propionic Acid	1.0	U	1.0	

Client:	Shaw Environmental & Infrastructure, Inc	**Service Request:**	R1106033
Project:	Varian Beverly/143276-02000000	**Date Collected:**	10/25/11 0930
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/8/11 17:52
Sample Name:	OB9-BR	**Units:**	µg/L
Lab Code:	R1106033-015	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	268634
Data File Name:	J:\ACQUDATA\msvoa10\data\110811\D5942.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)	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	**1600**		40	
156-59-2	cis-1,2-Dichloroethene	**1100**		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	103	70-130	11/8/11 17:52	
Dibromofluoromethane	103	70-130	11/8/11 17:52	
Toluene-d8	108	70-130	11/8/11 17:52	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106033
Project:	Varian Beverly/143276-02000000	**Date Collected:**	10/25/11 0930
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/5/11 15:53
Sample Name:	OB9-BR	**Units:**	µg/L
Lab Code:	R1106033-015	**Basis:**	NA

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	268326
Data File Name:	star923.run	**Instrument Name:**	R-GC-02
		Dilution Factor:	20

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	20	U	20	
74-85-1	Ethene	20	U	20	
74-82-8	Methane	**1200**		40	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106033
Project:	Varian Beverly/143276-02000000	**Date Collected:**	10/25/11 0930
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/5/11 02:40
Sample Name:	OB9-BR	**Units:**	mg/L
Lab Code:	R1106033-015	**Basis:**	NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analytical Method:	Organic Acids	**Analysis Lot:**	268042
Data File Name:	J:\ACQUDATA\HPLC05\DATA\110311\X0006646.D\	**Instrument Name:**	R-HPLC-05
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
127-17-3	Pyruvic Acid	0.50	U	0.50	
64-19-7	Acetic Acid	**1.5**		1.0	
107-92-6	Butanoic Acid (Butyric Acid)	2.0	U	2.0	
50-21-5	Lactic Acid	1.0	U	1.0	
79-09-4	Propionic Acid	1.0	U	1.0	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106033
Project:	Varian Beverly/143276-02000000	**Date Collected:**	10/25/11 0800
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/8/11 18:22
Sample Name:	AP25 - DO	**Units:**	µg/L
Lab Code:	R1106033-016	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	268634
Data File Name:	J:\ACQUDATA\msvoa10\data\110811\D5943.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)	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	**1600**		40	
156-59-2	cis-1,2-Dichloroethene	**2700**		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	11/8/11 18:22	
Dibromofluoromethane	102	70-130	11/8/11 18:22	
Toluene-d8	107	70-130	11/8/11 18:22	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106033
Project:	Varian Beverly/143276-02000000	**Date Collected:**	10/26/11 0715
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/2/11 21:55
Sample Name:	OB10-S(29')	**Units:**	µg/L
Lab Code:	R1106033-017	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	267824
Data File Name:	J:\ACQUDATA\MSVOA7\DATA\110211\J4289.D\	**Instrument Name:**	R-MS-07
		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	11/2/11 21:55	
Dibromofluoromethane	102	70-130	11/2/11 21:55	
Toluene-d8	98	70-130	11/2/11 21:55	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106033
Project:	Varian Beverly/143276-02000000	**Date Collected:**	10/26/11 0730
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/4/11 11:45
Sample Name:	OB10-DO(48.5')	**Units:**	µg/L
Lab Code:	R1106033-018	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	267827
Data File Name:	J:\ACQUDATA\MSVOA7\DATA\110311\J4331.D\	**Instrument Name:**	R-MS-07
		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	**24**		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)	**250**		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	**810**		10	
10061-01-5	cis-1,3-Dichloropropene	10	U	10	
156-60-5	trans-1,2-Dichloroethene	**19**		10	
10061-02-6	trans-1,3-Dichloropropene	10	U	10	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	101	70-130	11/4/11 11:45	
Dibromofluoromethane	104	70-130	11/4/11 11:45	
Toluene-d8	100	70-130	11/4/11 11:45	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106033
Project:	Varian Beverly/143276-02000000	**Date Collected:**	10/26/11 0745
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/2/11 22:31
Sample Name:	OB-12S(26')	**Units:**	µg/L
Lab Code:	R1106033-019	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	267824
Data File Name:	J:\ACQUDATA\MSVOA7\DATA\110211\J4290.D\	**Instrument Name:**	R-MS-07
		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)	**58**		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	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	11/2/11 22:31	
Dibromofluoromethane	100	70-130	11/2/11 22:31	
Toluene-d8	98	70-130	11/2/11 22:31	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106033
Project:	Varian Beverly/143276-02000000	**Date Collected:**	10/26/11 1000
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/2/11 16:24
Sample Name:	EB-1	**Units:**	µg/L
Lab Code:	R1106033-020	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	267824
Data File Name:	J:\ACQUDATA\MSVOA7\DATA\110211\J4280.D\	**Instrument Name:**	R-MS-07
		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	11/2/11 16:24	
Dibromofluoromethane	102	70-130	11/2/11 16:24	
Toluene-d8	96	70-130	11/2/11 16:24	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106033
Project:	Varian Beverly/143276-02000000	**Date Collected:**	10/26/11 0920
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/2/11 17:01
Sample Name:	TB-1	**Units:**	µg/L
Lab Code:	R1106033-021	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	267824
Data File Name:	J:\ACQUDATA\MSVOA7\DATA\110211\J4281.D\	**Instrument Name:**	R-MS-07
		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	98	70-130	11/2/11 17:01	
Dibromofluoromethane	102	70-130	11/2/11 17:01	
Toluene-d8	98	70-130	11/2/11 17:01	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106033
Project:	Varian Beverly/143276-02000000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	11/2/11 14:35
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1111077-05	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	267824
Data File Name:	J:\ACQUDATA\MSVOA7\DATA\110211\J4277.D\	**Instrument Name:**	R-MS-07
		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	11/2/11 14:35	
Dibromofluoromethane	102	70-130	11/2/11 14:35	
Toluene-d8	99	70-130	11/2/11 14:35	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106033
Project:	Varian Beverly/143276-02000000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	11/3/11 14:27
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1111126-05	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	267982
Data File Name:	J:\ACQUDATA\MSVOA7\DATA\110311\J4302.D\	**Instrument Name:**	R-MS-07
		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	98	70-130	11/3/11 14:27	
Dibromofluoromethane	100	70-130	11/3/11 14:27	
Toluene-d8	99	70-130	11/3/11 14:27	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106033
Project:	Varian Beverly/143276-02000000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	11/4/11 04:27
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1111078-05	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	267827
Data File Name:	J:\ACQUDATA\MSVOA7\DATA\110311\J4325.D\	**Instrument Name:**	R-MS-07
		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	11/4/11 04:27	
Dibromofluoromethane	101	70-130	11/4/11 04:27	
Toluene-d8	100	70-130	11/4/11 04:27	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106033
Project:	Varian Beverly/143276-02000000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	11/8/11 15:53
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1111455-01	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	268634
Data File Name:	J:\ACQUDATA\msvoa10\data\110811\D5938.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	102	70-130	11/8/11 15:53	
Dibromofluoromethane	101	70-130	11/8/11 15:53	
Toluene-d8	107	70-130	11/8/11 15:53	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106033
Project:	Varian Beverly/143276-02000000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	11/9/11 13:32
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1111484-01	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	268792
Data File Name:	J:\ACQUDATA\msvoa10\data\110911\D5980.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	96	70-130	11/9/11 13:32	
Dibromofluoromethane	101	70-130	11/9/11 13:32	
Toluene-d8	106	70-130	11/9/11 13:32	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106033
Project:	Varian Beverly/143276-02000000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	11/4/11 09:46
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1111222-01	**Basis:**	NA

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	268312
Data File Name:	star404.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	2.0	U	2.0	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106033
Project:	Varian Beverly/143276-02000000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	11/5/11 10:19
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1111224-01	**Basis:**	NA

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	268319
Data File Name:	star895.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	2.0	U	2.0	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106033
Project:	Varian Beverly/143276-02000000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	11/5/11 14:34
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1111225-01	**Basis:**	NA

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	268326
Data File Name:	star917.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	2.0	U	2.0	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106033
Project:	Varian Beverly/143276-02000000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	11/3/11 14:43
Sample Name:	Method Blank	**Units:**	mg/L
Lab Code:	RQ1111150-01	**Basis:**	NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analytical Method:	Organic Acids	**Analysis Lot:**	268042
Data File Name:	J:\ACQUDATA\HPLC05\DATA\110311\X0006608.D\	**Instrument Name:**	R-HPLC-05
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
127-17-3	Pyruvic Acid	0.50	U	0.50	
64-19-7	Acetic Acid	1.0	U	1.0	
107-92-6	Butanoic Acid (Butyric Acid)	2.0	U	2.0	
50-21-5	Lactic Acid	1.0	U	1.0	
79-09-4	Propionic Acid	1.0	U	1.0	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106033
Project:	Varian Beverly/143276-02000000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	11/7/11 12:25
Sample Name:	Method Blank	**Units:**	mg/L
Lab Code:	RQ1111307-01	**Basis:**	NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analytical Method:	Organic Acids	**Analysis Lot:**	268467
Data File Name:	J:\ACQUDATA\HPLC05\DATA\110711\X0006651.D\	**Instrument Name:**	R-HPLC-05
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
127-17-3	Pyruvic Acid	0.50	U	0.50	
64-19-7	Acetic Acid	1.0	U	1.0	
107-92-6	Butanoic Acid (Butyric Acid)	2.0	U	2.0	
50-21-5	Lactic Acid	1.0	U	1.0	
79-09-4	Propionic Acid	1.0	U	1.0	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian Beverly/143276-02000000
Sample Matrix: Water

Service Request: R1106033
Date Analyzed: 11/ 2/11

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260C

Units: µg/L
Basis: NA

Analysis Lot: 267824

Analyte Name	Lab Control Sample RQ1111077-03 Result	Spike Amount	% Rec	Duplicate Lab Control Sample RQ1111077-04 Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
1,1,1-Trichloroethane (TCA)	17.2	20.0	86	15.5	20.0	78	70 - 130	10	20
1,1,2,2-Tetrachloroethane	19.6	20.0	98	20.6	20.0	103	70 - 130	5	20
1,1,2-Trichloroethane	19.2	20.0	96	19.7	20.0	98	70 - 130	2	20
1,1-Dichloroethane (1,1-DCA)	19.9	20.0	100	18.6	20.0	93	70 - 130	7	20
1,1-Dichloroethene (1,1-DCE)	19.4	20.0	97	18.4	20.0	92	70 - 130	5	20
1,2-Dichloroethane	17.6	20.0	88	17.5	20.0	88	70 - 130	<1	20
1,2-Dichloropropane	20.1	20.0	100	19.2	20.0	96	70 - 130	4	20
Acetone	17.4	20.0	87	16.5	20.0	83	40 - 160	5	20
Bromodichloromethane	18.7	20.0	93	18.1	20.0	90	70 - 130	3	20
Bromoform	20.3	20.0	101	20.7	20.0	103	70 - 130	2	20
Bromomethane	18.5	20.0	93	18.0	20.0	90	40 - 160	3	20
Carbon Tetrachloride	17.0	20.0	85	15.3	20.0	76	70 - 130	11	20
Chlorobenzene	19.3	20.0	97	18.4	20.0	92	70 - 130	5	20
Chloroethane	20.2	20.0	101	19.9	20.0	99	70 - 130	2	20
Chloroform	19.0	20.0	95	18.6	20.0	93	70 - 130	2	20
Chloromethane	19.2	20.0	96	17.7	20.0	88	40 - 160	8	20
Dibromochloromethane	18.9	20.0	95	18.9	20.0	95	70 - 130	<1	20
Methylene Chloride	19.7	20.0	98	19.1	20.0	95	70 - 130	3	20
Tetrachloroethene (PCE)	18.5	20.0	92	16.6	20.0	83	70 - 130	11	20
Trichloroethene (TCE)	18.0	20.0	90	17.7	20.0	88	70 - 130	2	20
Trichlorofluoromethane (CFC 11)	16.6	20.0	83	16.1	20.0	81	70 - 130	3	20
Vinyl Chloride	20.6	20.0	103	18.4	20.0	92	70 - 130	11	20
cis-1,2-Dichloroethene	21.8	20.0	109	20.4	20.0	102	70 - 130	7	20
cis-1,3-Dichloropropene	18.3	20.0	92	18.1	20.0	91	70 - 130	<1	20
trans-1,2-Dichloroethene	19.8	20.0	99	18.6	20.0	93	70 - 130	6	20
trans-1,3-Dichloropropene	18.4	20.0	92	18.1	20.0	91	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, INC.

QA/QC Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian Beverly/143276-02000000
Sample Matrix: Water

Service Request: R1106033
Date Analyzed: 11/ 3/11

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260C

Units: µg/L
Basis: NA

Analysis Lot: 267982

Analyte Name	Lab Control Sample RQ1111126-03 Result	Spike Amount	% Rec	Duplicate Lab Control Sample RQ1111126-04 Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
1,1,1-Trichloroethane (TCA)	16.7	20.0	84	18.4	20.0	92	70 - 130	10	20
1,1,2,2-Tetrachloroethane	23.3	20.0	116	23.0	20.0	115	70 - 130	1	20
1,1,2-Trichloroethane	21.6	20.0	108	21.1	20.0	105	70 - 130	3	20
1,1-Dichloroethane (1,1-DCA)	19.0	20.0	95	20.1	20.0	100	70 - 130	5	20
1,1-Dichloroethene (1,1-DCE)	18.6	20.0	93	20.5	20.0	103	70 - 130	10	20
1,2-Dichloroethane	19.4	20.0	97	19.2	20.0	96	70 - 130	<1	20
1,2-Dichloropropane	20.7	20.0	103	21.4	20.0	107	70 - 130	3	20
Acetone	22.6	20.0	113	20.0	20.0	100	40 - 160	12	20
Bromodichloromethane	19.7	20.0	98	19.7	20.0	98	70 - 130	<1	20
Bromoform	23.7	20.0	118	23.0	20.0	115	70 - 130	3	20
Bromomethane	17.3	20.0	87	18.5	20.0	92	40 - 160	7	20
Carbon Tetrachloride	17.4	20.0	87	19.0	20.0	95	70 - 130	9	20
Chlorobenzene	20.0	20.0	100	20.5	20.0	103	70 - 130	3	20
Chloroethane	19.7	20.0	99	21.0	20.0	105	70 - 130	6	20
Chloroform	18.4	20.0	92	19.5	20.0	97	70 - 130	5	20
Chloromethane	18.9	20.0	94	20.0	20.0	100	40 - 160	6	20
Dibromochloromethane	21.2	20.0	106	20.6	20.0	103	70 - 130	3	20
Methylene Chloride	19.2	20.0	96	19.6	20.0	98	70 - 130	2	20
Tetrachloroethene (PCE)	19.0	20.0	95	21.3	20.0	106	70 - 130	11	20
Trichloroethene (TCE)	18.9	20.0	95	19.7	20.0	99	70 - 130	4	20
Trichlorofluoromethane (CFC 11)	16.5	20.0	83	18.3	20.0	92	70 - 130	10	20
Vinyl Chloride	20.1	20.0	101	21.6	20.0	108	70 - 130	7	20
cis-1,2-Dichloroethene	20.8	20.0	104	21.5	20.0	107	70 - 130	3	20
cis-1,3-Dichloropropene	19.0	20.0	95	19.0	20.0	95	70 - 130	<1	20
trans-1,2-Dichloroethene	19.7	20.0	99	20.2	20.0	101	70 - 130	2	20
trans-1,3-Dichloropropene	19.6	20.0	98	19.1	20.0	96	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.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian Beverly/143276-02000000
Sample Matrix: Water

Service Request: R1106033
Date Analyzed: 11/ 4/11

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260C

Units: µg/L
Basis: NA

Analysis Lot: 267827

Analyte Name	Lab Control Sample RQ1111078-03 Result	Spike Amount	% Rec	Duplicate Lab Control Sample RQ1111078-04 Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
1,1,1-Trichloroethane (TCA)	18.0	20.0	90	17.9	20.0	89	70 - 130	1	20
1,1,2,2-Tetrachloroethane	23.0	20.0	115	24.4	20.0	122	70 - 130	6	20
1,1,2-Trichloroethane	23.4	20.0	117	22.4	20.0	112	70 - 130	4	20
1,1-Dichloroethane (1,1-DCA)	19.9	20.0	100	20.2	20.0	101	70 - 130	1	20
1,1-Dichloroethene (1,1-DCE)	19.9	20.0	100	19.5	20.0	98	70 - 130	2	20
1,2-Dichloroethane	20.8	20.0	104	20.8	20.0	104	70 - 130	<1	20
1,2-Dichloropropane	21.7	20.0	109	21.5	20.0	107	70 - 130	1	20
Acetone	27.4	20.0	137	24.9	20.0	124	40 - 160	10	20
Bromodichloromethane	21.0	20.0	105	21.1	20.0	106	70 - 130	<1	20
Bromoform	24.7	20.0	124	24.3	20.0	122	70 - 130	2	20
Bromomethane	19.0	20.0	95	18.5	20.0	93	40 - 160	3	20
Carbon Tetrachloride	18.8	20.0	94	18.3	20.0	91	70 - 130	3	20
Chlorobenzene	20.5	20.0	103	20.2	20.0	101	70 - 130	2	20
Chloroethane	20.5	20.0	103	20.5	20.0	102	70 - 130	<1	20
Chloroform	19.7	20.0	99	20.4	20.0	102	70 - 130	3	20
Chloromethane	19.1	20.0	96	19.5	20.0	98	40 - 160	2	20
Dibromochloromethane	22.1	20.0	111	21.5	20.0	107	70 - 130	3	20
Methylene Chloride	20.6	20.0	103	20.4	20.0	102	70 - 130	1	20
Tetrachloroethene (PCE)	19.8	20.0	99	18.7	20.0	94	70 - 130	6	20
Trichloroethene (TCE)	21.9	20.0	110	19.7	20.0	99	70 - 130	11	20
Trichlorofluoromethane (CFC 11)	17.2	20.0	86	17.8	20.0	89	70 - 130	3	20
Vinyl Chloride	19.6	20.0	98	19.8	20.0	99	70 - 130	<1	20
cis-1,2-Dichloroethene	22.5	20.0	113	21.9	20.0	109	70 - 130	3	20
cis-1,3-Dichloropropene	18.8	20.0	94	18.9	20.0	95	70 - 130	<1	20
trans-1,2-Dichloroethene	19.3	20.0	96	19.8	20.0	99	70 - 130	3	20
trans-1,3-Dichloropropene	19.2	20.0	96	18.8	20.0	94	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.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian Beverly/143276-02000000
Sample Matrix: Water

Service Request: R1106033
Date Analyzed: 11/ 8/11

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260C

Units: µg/L
Basis: NA

Analysis Lot: 268634

Analyte Name	Lab Control Sample RQ1111455-02 Result	Spike Amount	% Rec	Duplicate Lab Control Sample RQ1111455-03 Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
1,1,1-Trichloroethane (TCA)	21.2	20.0	106	22.0	20.0	110	70 - 130	4	20
1,1,2,2-Tetrachloroethane	21.5	20.0	107	21.5	20.0	107	70 - 130	<1	20
1,1,2-Trichloroethane	20.6	20.0	103	21.4	20.0	107	70 - 130	3	20
1,1-Dichloroethane (1,1-DCA)	22.3	20.0	112	22.9	20.0	115	70 - 130	3	20
1,1-Dichloroethene (1,1-DCE)	20.5	20.0	102	21.2	20.0	106	70 - 130	4	20
1,2-Dichloroethane	21.6	20.0	108	22.4	20.0	112	70 - 130	4	20
1,2-Dichloropropane	21.8	20.0	109	22.3	20.0	112	70 - 130	3	20
Acetone	20.4	20.0	102	20.2	20.0	101	40 - 160	<1	20
Bromodichloromethane	22.4	20.0	112	23.2	20.0	116	70 - 130	3	20
Bromoform	23.7	20.0	119	24.3	20.0	121	70 - 130	2	20
Bromomethane	17.1	20.0	86	17.5	20.0	88	40 - 160	2	20
Carbon Tetrachloride	22.9	20.0	114	24.1	20.0	121	70 - 130	5	20
Chlorobenzene	21.2	20.0	106	21.7	20.0	108	70 - 130	2	20
Chloroethane	22.5	20.0	112	23.4	20.0	117	70 - 130	4	20
Chloroform	22.2	20.0	111	22.6	20.0	113	70 - 130	2	20
Chloromethane	20.2	20.0	101	20.3	20.0	101	40 - 160	<1	20
Dibromochloromethane	22.7	20.0	114	23.0	20.0	115	70 - 130	1	20
Methylene Chloride	21.3	20.0	106	21.6	20.0	108	70 - 130	1	20
Tetrachloroethene (PCE)	20.6	20.0	103	21.4	20.0	107	70 - 130	4	20
Trichloroethene (TCE)	20.7	20.0	103	21.4	20.0	107	70 - 130	3	20
Trichlorofluoromethane (CFC 11)	23.0	20.0	115	23.7	20.0	119	70 - 130	3	20
Vinyl Chloride	23.7	20.0	118	24.3	20.0	122	70 - 130	3	20
cis-1,2-Dichloroethene	22.2	20.0	111	22.3	20.0	112	70 - 130	<1	20
cis-1,3-Dichloropropene	21.7	20.0	108	21.8	20.0	109	70 - 130	<1	20
trans-1,2-Dichloroethene	21.1	20.0	105	22.0	20.0	110	70 - 130	4	20
trans-1,3-Dichloropropene	21.2	20.0	106	21.6	20.0	108	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.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian Beverly/143276-02000000
Sample Matrix: Water

Service Request: R1106033
Date Analyzed: 11/ 9/11

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260C

Units: µg/L
Basis: NA

Analysis Lot: 268792

Analyte Name	Lab Control Sample RQ1111484-02 Result	Spike Amount	% Rec	Duplicate Lab Control Sample RQ1111484-03 Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
1,1,1-Trichloroethane (TCA)	19.9	20.0	100	21.2	20.0	106	70 - 130	6	20
1,1,2,2-Tetrachloroethane	21.5	20.0	107	21.8	20.0	109	70 - 130	1	20
1,1,2-Trichloroethane	20.1	20.0	101	21.0	20.0	105	70 - 130	4	20
1,1-Dichloroethane (1,1-DCA)	20.6	20.0	103	22.0	20.0	110	70 - 130	7	20
1,1-Dichloroethene (1,1-DCE)	18.7	20.0	93	20.3	20.0	102	70 - 130	8	20
1,2-Dichloroethane	20.8	20.0	104	21.5	20.0	108	70 - 130	4	20
1,2-Dichloropropane	20.5	20.0	103	21.7	20.0	108	70 - 130	5	20
Acetone	19.8	20.0	99	20.2	20.0	101	40 - 160	2	20
Bromodichloromethane	21.1	20.0	106	22.6	20.0	113	70 - 130	7	20
Bromoform	23.6	20.0	118	24.7	20.0	123	70 - 130	5	20
Bromomethane	16.0	20.0	80	16.9	20.0	84	40 - 160	5	20
Carbon Tetrachloride	21.4	20.0	107	23.5	20.0	118	70 - 130	10	20
Chlorobenzene	20.5	20.0	103	22.1	20.0	111	70 - 130	7	20
Chloroethane	20.9	20.0	104	22.5	20.0	112	70 - 130	7	20
Chloroform	20.7	20.0	103	21.9	20.0	109	70 - 130	6	20
Chloromethane	18.6	20.0	93	19.7	20.0	99	40 - 160	6	20
Dibromochloromethane	22.5	20.0	112	23.6	20.0	118	70 - 130	5	20
Methylene Chloride	20.2	20.0	101	20.8	20.0	104	70 - 130	3	20
Tetrachloroethene (PCE)	20.2	20.0	101	21.7	20.0	109	70 - 130	7	20
Trichloroethene (TCE)	19.3	20.0	97	21.1	20.0	106	70 - 130	9	20
Trichlorofluoromethane (CFC 11)	21.2	20.0	106	22.6	20.0	113	70 - 130	6	20
Vinyl Chloride	22.2	20.0	111	23.3	20.0	117	70 - 130	5	20
cis-1,2-Dichloroethene	20.3	20.0	102	21.9	20.0	110	70 - 130	8	20
cis-1,3-Dichloropropene	20.0	20.0	100	21.8	20.0	109	70 - 130	9	20
trans-1,2-Dichloroethene	19.7	20.0	99	21.1	20.0	105	70 - 130	7	20
trans-1,3-Dichloropropene	19.9	20.0	99	21.3	20.0	107	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, INC.

QA/QC Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian Beverly/143276-02000000
Sample Matrix: Water

Service Request: R1106033
Date Analyzed: 11/ 4/11

Lab Control Sample Summary
Dissolved Gases by GC/FID

Analytical Method: RSK 175

Units: µg/L
Basis: NA

Analysis Lot: 268312

	Lab Control Sample RQ1111222-02			
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**
Ethane	30.3	26.0	116	56 - 148
Ethene	27.4	24.3	112	58 - 155
Methane	30.4	26.2	116	55 - 150

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, INC.

QA/QC Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian Beverly/143276-02000000
Sample Matrix: Water

Service Request: R1106033
Date Analyzed: 11/ 5/11

Lab Control Sample Summary
Dissolved Gases by GC/FID

Analytical Method: RSK 175

Units: µg/L
Basis: NA

Analysis Lot: 268319

	Lab Control Sample RQ1111224-02			Duplicate Lab Control Sample RQ1111224-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Ethane	31.1	26.0	120	29.5	26.0	114	56 - 148	5	30
Ethene	27.5	24.3	113	26.2	24.3	108	58 - 155	5	30
Methane	30.7	26.2	117	29.3	26.2	112	55 - 150	5	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.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian Beverly/143276-02000000
Sample Matrix: Water

Service Request: R1106033
Date Analyzed: 11/ 5/11

Lab Control Sample Summary
Dissolved Gases by GC/FID

Analytical Method: RSK 175

Units: µg/L
Basis: NA

Analysis Lot: 268326

Lab Control Sample
RQ1111225-02

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Ethane	28.7	26.0	110	56 - 148
Ethene	26.3	24.3	108	58 - 155
Methane	28.4	26.2	108	55 - 150

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, INC.

QA/QC Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian Beverly/143276-02000000
Sample Matrix: Water

Service Request: R1106033
Date Analyzed: 11/ 3/11

Lab Control Sample Summary
Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analytical Method: Organic Acids

Units: mg/L
Basis: NA

Analysis Lot: 268042

	Lab Control Sample RQ1111150-02			Duplicate Lab Control Sample RQ1111150-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Pyruvic Acid	1.07	1.00	107	1.07	1.00	107	70 - 130	<1	30
Acetic Acid	9.81	10.0	98	9.84	10.0	98	70 - 135	<1	30
Butanoic Acid (Butyric Acid)	10.7	10.0	107	9.97	10.0	100	78 - 113	7	30
Lactic Acid	8.83	9.97	89	8.86	9.97	89	61 - 109	<1	30
Propionic Acid	8.69	9.97	87	8.97	9.97	90	80 - 125	3	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.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian Beverly/143276-02000000
Sample Matrix: Water

Service Request: R1106033
Date Analyzed: 11/ 7/11

Lab Control Sample Summary
Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analytical Method: Organic Acids

Units: mg/L
Basis: NA

Analysis Lot: 268467

	Lab Control Sample RQ1111307-02			Duplicate Lab Control Sample RQ1111307-03				
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Pyruvic Acid	1.03	1.00	103	1.04	1.00	104	70 - 130	<1	30
Acetic Acid	9.70	10.0	97	9.70	10.0	97	70 - 135	<1	30
Butanoic Acid (Butyric Acid)	9.84	10.0	98	10.3	10.0	103	78 - 113	4	30
Lactic Acid	8.82	9.97	88	8.82	9.97	88	61 - 109	<1	30
Propionic Acid	9.07	9.97	91	8.66	9.97	87	80 - 125	5	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.

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: 143276-02000000
Project Manager: Raymond Cadorette	Report CC: Sheila Barry
Company/Address: Shaw Environmental, Inc. 100 Technology Center Drive Stoughton, MA 02072	
Phone #: 617-589-6102	E-mail: Raymond.Cadorette@Shawgrp.com
Sampler's Signature: [signature]	Sampler's Printed Name: Paul Gedace

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

PRESERVATIVE: 2 1 8

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) Fe + Mn	Methane, Ethane, Ethene	Metabolic Acids	REMARKS/ ALTERNATE DESCRIPTION
AP13DO		10/25/11	1430	GW	7	3							3	1	
AP23DO		↓	1500	↓	7	3							3	1	
AP24DO			0730		7	3							3	1	
BW-4			1200		7	3							3	1	
RW-5			1115		7	3							3	1	
BW-6			1000		7	3							3	1	
BW-8			0915		7	3							3	1	
BW-9			0830		7	3							3	1	
MW-9			1330		7	3							3	1	
OB9S		↓	1045	↓	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 Phosphoric Acid

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@Shawgrp.com.

See QAPP ☐

STATE WHERE SAMPLES WERE COLLECTED: MASS

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 #: 709510
BILL TO: Shaw Environmental

R1106033
Shaw Environmental & Infrastructure, Inc.
Varian Beverly

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	
Signature: [signature]	Signature: [signature]	Signature	Signature	Signature	Signature
Printed Name: Daniel Leahy	Printed Name: Amy Hentschke	Printed Name	Printed Name	Printed Name	Printed Name
Firm: Shaw Environmental	Firm: CAS	Firm	Firm	Firm	Firm
Date/Time: 10/26/11 1400	Date/Time: 10/27/11 0900	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 2 OF 3

Project Name	Project Number
Varian Beverly	143276-02000000
Project Manager	**Report CC**
Raymond Cadorette	Sheila Barry

Company/Address: Shaw Environmental, Inc.
100 Technology Center Drive
Stoughton, MA 02072

Phone #	E-mail
617-589-6102	Raymond.Cadorette@Shawgrp.com
Sampler's Signature	**Sampler's Printed Name**
Paul Ledoux	Paul Ledoux

ANALYSIS REQUESTED *(Include Method Number and Container Preservative)*

PRESERVATIVE: 1 | 2 | 1 | 8

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 + STARS	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	Methane, Ethane, Ethene	Metabolic Acids	REMARKS/ ALTERNATE DESCRIPTION
OB 15-S		10.25.11	1400	GW	7	3						3	1		
STR-3			1230		7	3						3	1		
UN Named Stream			1300		7	3						3	1		
OB 9-DO			1030		7	3						3	1		
OB 9-BR			0930		7	3						3	1		
AP 25-DO			0800		3	3									
OB10-S(29')		10/26/11	0715		3	3									
OB 10-DO(48.5')			0730		3	3									
OB 12-S(26')			0745		3	3									
EB-1			1000	↓	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 Phosphoric Acid

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@Shawgrp.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 #: 709510
BILL TO: Shaw Environmental

STATE WHERE SAMPLES WERE COLLECTED: MASS

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature	Signature Amy Hentschke	Signature	Signature	Signature	Signature
Printed Name Miscovich SHAW E&I	Printed Name Amy Hentschke	Printed Name	Printed Name	Printed Name	Printed Name
Firm 10/26/11 C	Firm CAS	Firm	Firm	Firm	Firm
Date/Time 10/26/11 1400	Date/Time 10/27/11 0900	Date/Time	Date/Time	Date/Time	Date/Time

Distribution: White - Lab Copy; Yellow - Return To Originator

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: Varian Beverly	Project Number: 143276-02000000
Project Manager: Raymond Cadorette	Report CC: Sheila Barry
Company/Address: Shaw Environmental, Inc. 100 Technology Center Drive Stoughton, MA 02072	
Phone #: 617-589-6102	E-mail: Raymond.Cadorette@Shawgrp.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 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) Fe + Mn	Methane, Ethane, Ethene	Metabolic Acids	REMARKS/ ALTERNATE DESCRIPTION
PRESERVATIVE						1						2	1	8	
TB-1		10/7/11	0920	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 Phosphoric Acid

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@Shawgrp.com.

See QAPP ☐

STATE WHERE SAMPLES WERE COLLECTED: MASS

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 #: 709510
BILL TO: Shaw Environmental

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature: [signature]	Signature: [signature]	Signature	Signature	Signature	Signature
Printed Name: M Viscovich	Printed Name: Amy Hentschke	Printed Name	Printed Name	Printed Name	Printed Name
Firm: Shaw E&I	Firm: CAS	Firm	Firm	Firm	Firm
Date/Time: 10/26/11 1400	Date/Time: 10/27/11 0900	Date/Time	Date/Time	Date/Time	Date/Time

Distribution: White - Lab Copy; Yellow - Return To Originator

SCOC Rev. 10/2010

Cooler Receipt And Preservation Check Form

Project/Client Shaw Folder Number R11-6033

Cooler received on 10/27/11 by: AH COURIER: CAS (UPS) FEDEX VELOCITY CLIENT

1.	Were custody seals on outside of cooler?	YES	(NO)			
2.	Were custody papers properly filled out (ink, signed, etc.)?	(YES)	NO			
3.	Did all bottles arrive in good condition (unbroken)?	(YES)	NO			
4.	Did VOA vials, Alkalinity, or Sulfide have significant* air bubbles?	YES	(NO)	N/A		
5.	Were **Ice** or **Ice packs** present?	(YES)	NO			
6.	Where did the bottles originate?	CAS/ROC, CLIENT				
7.	Temperature of cooler(s) upon receipt:	1.7°				
	Is the temperature within 0° - 6° C?:	(Yes)	Yes	Yes	Yes	Yes
	If No, Explain Below	No	No	No	No	No

Date/Time Temperatures Taken: 10/27/11 0919

Thermometer ID: IR GUN#3 / (IR GUN#4) Reading From: (Temp Blank) / Sample Bottle

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

PC Secondary Review: MM 10/27/11

Cooler Breakdown: Date: 10/27/11 Time: 1330 by: JH

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 TCN Phenol and 522			If present, contact PM to add ascorbic acid Or sodium sulfite (522)					
	$Na_2S_2O_3$	-	-						
	Zn Aceta	-	-						
	HCl	*	*	411010	9/12				

*Not to be tested before analysis – pH tested and recorded by VOAs or GenChem on a separate worksheet

Yes = All samples OK

No = Samples were preserved at lab as listed

PM OK to Adjust: _____

Bottle lot numbers: 1-132-001, 050211-1R

Other Comments:

PC Secondary Review: MM 11/15/11

*significant air bubbles: VOA > 5-6 mm : WC >1 in. diameter

Data Usability Worksheet

Project Name : Varian Medical Systems, Inc

Job Number : 143276

Prepared By: Jennifer Gailey

Date : 12/19/2011

Analyte Group : Volatile Organics

Analytical Method : 8260C

Completed MADEP CAM Certification Form included: Yes

Laboratory ID No. : R1106037

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
10/24/11, 10/25/11, 10/26/11	VOC 8260C		14 days	11/1/11, 11/2/11, 11/4/11

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: RPD were outside control limits for acetone and bromomethane on the LCS/LCSD from 11/03/11. These RPD's were noted in the report with an "*"

Equipment Field Blank ID : 11/1/2011

Trip Blank ID : 11/1/2011

Method Blank: VOC 8260C 11/1, 11/2, 11/3, 11/4/2011

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:

CL10BR(36') had the wrong label it was corrected in the notes and database already.

Notes:

VOC analysis - six samples were initially analyzed at dilutions to bring target analytes within the calibration range of method. Samples were subsequently reanalyzed at higher dilutions to bring target analytes within the calibration range of method. Dilutions were reported with analytes over the calibration range flagged with an"E" and the diluted analytes flagged with a ""D".

Reviewed By: RJC

Columbia Analytical Services
1565 Jefferson Rd, Building 300, Suite 360 | Rochester, NY 14623 | 585-288-5380 | 585-288-8475 fax |

November 11, 2011 Service Request No: R1106037

Mr. Ray Cadorette
Shaw Environmental & Infrastructure, Inc.
100 Technology Center
Stoughton, MA 02072

Laboratory Results for: Varian Beverly/143267-04000000

Dear Mr. Cadorette:

Enclosed are the results of the sample(s) submitted to our laboratory on October 27, 2011. For your reference, these analyses have been assigned our service request number **R1106037**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. 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 7469. You may also contact me via email at MPerry@caslab.com.

Respectfully submitted,

Columbia Analytical Services, Inc.

Michael Perry
Laboratory Manager

COLUMBIA ANALYTICAL SERVICES, INC.

Client:	Shaw Environmental, Inc	**Service Request No.:**	R1106037
Project:	Varian Beverly	**Project Number:**	143267-0400000
Sample Matrix:	Water	**Date Received:**	10/27/11

CASE NARRATIVE

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

Sample Receipt

Water samples were collected on 10/24/11 – 10/26/11and received at CAS in good condition in the proper temperature range (2.1 °C) as noted on the cooler receipt and preservation check form. The samples were stored in a refrigerator at 1 - 6 °C upon receipt at the laboratory. See the second page of the Case Narrative for a cross-reference between Client ID and CAS Job #.

Volatile Organics

Forty 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. Samples OB-5-DO(81'), GZ-4(14'), OB21-DO(79'), OB20-BR(97'), CL9-BR-ZONE1, CL9-BR-ZONE3 were re-analyzed at larger dilutions to bring target analytes within the calibration range of the method. Analytes over the calibration range have been flagged with an "E" and the diluted analytes were flagged with a "D".

All initial and continuing calibrations were compliant.

All Surrogate Standard recoveries were within QC limits.

The Blank Spike (LCS)/Blank Spike Duplicate (LCSD) recoveries were all within the QC limits. The RPD were all within QC limits except Acetone and Bromomethane on the LCS/LCSD from 11/03/11. These RPD's were flagged with an "*".

All samples were analyzed within the required holding times.

No other analytical or QC problems were encountered with these analyses.

MassDEP Analytical Protocol Certification Form

Laboratory Name: Columbia Analytical Services, Inc. Project #:143267

Project Location: Varian Beverly RTN:

This Form provides certifications for the following data set: list Laboratory Sample ID Number(s):
R1106037 – 001 - 040

Matrices: X 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 ☐	6850 Perchlorate CAM VIII B ☐	Other:

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?	☐Yes X 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: Michael K. P **Position:** Laboratory Manager

Printed Name: Michael K. Perry **Date:** 11/11/11

00003

CASE NARRATIVE

This report contains analytical results for the following samples:
Service Request Number: R1106037

Lab ID	Client ID
R1106037-001	TB-1
R1106037-002	EB-1
R1106037-003	CL2-BR(42')
R1106037-004	MW-2R(9.8')
R1106037-005	MW-4R(35.5'
R1106037-006	W-1(9')
R1106037-007	OB-42-S(13')
R1106037-008	OB-5-BR(109')
R1106037-009	OB-5-DO(81')
R1106037-010	OB-5-S(27')
R1106037-011	OB43-S(16')
R1106037-012	OB6-BR(101')
R1106037-013	OB6-DO(75')
R1106037-014	OB8-DO(79')
R1106037-015	OB8-S(12')
R1106037-016	OB41-S(13')
R1106037-017	GZ-4(14')
R1106037-018	OB18-DO(23')
R1106037-019	OB18-S(11')
R1106037-020	AP-15S(12')
R1106037-021	STRHA-7A
R1106037-022	STRHA-7B
R1106037-023	OB22-DO(55')
R1106037-024	CL10-S(15')
R1106037-025	CL10-DO(46')
R1106037-026	EB-2
R1106037-027	OB21-BR(97')
R1106037-028	OB21-DO(79')
R1106037-029	OB20-BR(97')
R1106037-030	OB-20-DO(75')
R1106037-031	P-9R(4.5')
R1106037-032	P-19A(10')
R1106037-033	CL9-BR-ZONE1
R1106037-034	CL9-BR-ZONE2
R1106037-035	CL9-BR-ZONE3
R1106037-036	BR-1-ZONE1
R1106037-037	BR-1-ZONE2
R1106037-038	BR-1-ZONE3
R1106037-039	OB-20-S(12')
R1106037-040	STREAM A SCDS

Columbia Analytical Services™

REPORT QUALIFIERS

U	Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.
J	Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/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.

ACCREDITED IN ACCORDANCE WITH nelac

CAS/Rochester 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

COLUMBIA ANALYTICAL SERVICES
1565 JEFFERSON RD
BUILDING 300, SUITE 360
ROCHESTER, NY 14623-0000

Laboratory Director: Michael K. Perry

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.

Oscar C. Parcado

Director, Division of Environmental Analysis

Issued: 01 JUL 2011
Expires: 30 JUN 2012

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 25 AUG 2011

M-NY032 COLUMBIA ANALYTICAL SERVICES
ROCHESTER NY

NON POTABLE WATER (CHEMISTRY) Effective Date 25 AUG 2011 Expiration Date 30 JUN 2012

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
PH	SM 4500-H-B
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

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 25 AUG 2011

M-NY032 COLUMBIA ANALYTICAL SERVICES
ROCHESTER NY

NON POTABLE WATER (CHEMISTRY) Effective Date 25 AUG 2011 Expiration Date 30 JUN 2012

Analytes	Methods
ALKALINITY, TOTAL	SM 2320B
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

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106037
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/24/11 0920
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/1/11 01:46
Sample Name:	TB-1	**Units:**	µg/L
Lab Code:	R1106037-001	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	267469
Data File Name:	J:\ACQUDATA\msvoa10\data\103111\D5667.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	97	70-130	11/1/11 01:46	
Dibromofluoromethane	101	70-130	11/1/11 01:46	
Toluene-d8	101	70-130	11/1/11 01:46	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106037
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/24/11 0800
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/1/11 02:15
Sample Name:	EB-1	**Units:**	µg/L
Lab Code:	R1106037-002	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	267469
Data File Name:	J:\ACQUDATA\msvoa10\data\103111\D5668.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	97	70-130	11/1/11 02:15	
Dibromofluoromethane	101	70-130	11/1/11 02:15	
Toluene-d8	102	70-130	11/1/11 02:15	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106037
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/24/11 0900
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/1/11 02:45
Sample Name:	CL2-BR(42')	**Units:**	µg/L
Lab Code:	R1106037-003	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	267469
Data File Name:	J:\ACQUDATA\msvoa10\data\103111\D5669.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	**9.7**		2.0	
156-59-2	cis-1,2-Dichloroethene	**35**		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	97	70-130	11/1/11 02:45	
Dibromofluoromethane	101	70-130	11/1/11 02:45	
Toluene-d8	103	70-130	11/1/11 02:45	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106037
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/24/11 0930
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/1/11 03:14
Sample Name:	MW-2R(9.8')	**Units:**	µg/L
Lab Code:	R1106037-004	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	267469
Data File Name:	J:\ACQUDATA\msvoa10\data\103111\D5670.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	98	70-130	11/1/11 03:14	
Dibromofluoromethane	102	70-130	11/1/11 03:14	
Toluene-d8	104	70-130	11/1/11 03:14	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106037
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/24/11 1000
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/1/11 03:44
Sample Name:	MW-4R(35.5'	**Units:**	µg/L
Lab Code:	R1106037-005	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	267469
Data File Name:	J:\ACQUDATA\msvoa10\data\103111\D5671.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)	**48**		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	**6.5**		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	98	70-130	11/1/11 03:44	
Dibromofluoromethane	102	70-130	11/1/11 03:44	
Toluene-d8	104	70-130	11/1/11 03:44	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106037
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/24/11 1030
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/1/11 19:23
Sample Name:	W-1(9')	**Units:**	µg/L
Lab Code:	R1106037-006	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	267722
Data File Name:	J:\ACQUDATA\msvoa10\data\110111\D5699.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)	**6.6**		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	95	70-130	11/1/11 19:23	
Dibromofluoromethane	100	70-130	11/1/11 19:23	
Toluene-d8	104	70-130	11/1/11 19:23	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106037
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/24/11 1100
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/1/11 19:53
Sample Name:	OB-42-S(13')	**Units:**	µg/L
Lab Code:	R1106037-007	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	267722
Data File Name:	J:\ACQUDATA\msvoa10\data\110111\D5700.D\	**Instrument Name:**	R-MS-10
		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)	**96**		50	
79-01-6	Trichloroethene (TCE)	**3000**		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	**1000**		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	97	70-130	11/1/11 19:53	
Dibromofluoromethane	101	70-130	11/1/11 19:53	
Toluene-d8	105	70-130	11/1/11 19:53	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106037
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/24/11 1130
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/1/11 05:13
Sample Name:	OB-5-BR(109')	**Units:**	µg/L
Lab Code:	R1106037-008	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	267469
Data File Name:	J:\ACQUDATA\msvoa10\data\103111\D5674.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)	**4.2**		2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	**86**		2.0	
156-59-2	cis-1,2-Dichloroethene	**13**		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	98	70-130	11/1/11 05:13	
Dibromofluoromethane	101	70-130	11/1/11 05:13	
Toluene-d8	104	70-130	11/1/11 05:13	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106037
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/24/11 1200
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/1/11 05:43
Sample Name:	OB-5-DO(81')	**Units:**	µg/L
Lab Code:	R1106037-009	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	267469
Data File Name:	J:\ACQUDATA\msvoa10\data\103111\D5675.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)	**990**		10	
79-01-6	Trichloroethene (TCE)	**2900**	E	10	
75-69-4	Trichlorofluoromethane (CFC 11)	10	U	10	
75-01-4	Vinyl Chloride	**26**		10	
156-59-2	cis-1,2-Dichloroethene	**1000**	E	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	97	70-130	11/1/11 05:43	
Dibromofluoromethane	102	70-130	11/1/11 05:43	
Toluene-d8	104	70-130	11/1/11 05:43	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106037
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/24/11 1200
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/1/11 20:22
Sample Name:	OB-5-DO(81')	**Units:**	µg/L
Lab Code:	R1106037-009	**Basis:**	NA
Run Type:	Dilution		

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	267722
Data File Name:	J:\ACQUDATA\msvoa10\data\110111\D5701.D\	**Instrument Name:**	R-MS-10
		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)	**950**	D	50	
79-01-6	Trichloroethene (TCE)	**2700**	D	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	**1000**	D	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	96	70-130	11/1/11 20:22	
Dibromofluoromethane	99	70-130	11/1/11 20:22	
Toluene-d8	106	70-130	11/1/11 20:22	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106037
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/24/11 1230
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/1/11 20:51
Sample Name:	OB-5-S(27')	**Units:**	µg/L
Lab Code:	R1106037-010	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	267722
Data File Name:	J:\ACQUDATA\msvoa10\data\110111\D5702.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)	**3.4**		2.0	
79-01-6	Trichloroethene (TCE)	**5.3**		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	11/1/11 20:51	
Dibromofluoromethane	100	70-130	11/1/11 20:51	
Toluene-d8	106	70-130	11/1/11 20:51	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106037
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/24/11 1300
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/1/11 06:43
Sample Name:	OB43-S(16')	**Units:**	µg/L
Lab Code:	R1106037-011	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	267469
Data File Name:	J:\ACQUDATA\msvoa10\data\103111\D5677.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)	**5.2**		2.0	
79-01-6	Trichloroethene (TCE)	**7.0**		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	99	70-130	11/1/11 06:43	
Dibromofluoromethane	102	70-130	11/1/11 06:43	
Toluene-d8	104	70-130	11/1/11 06:43	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106037
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/24/11 1330
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/1/11 21:20
Sample Name:	OB6-BR(101')	**Units:**	µg/L
Lab Code:	R1106037-012	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	267722
Data File Name:	J:\ACQUDATA\msvoa10\data\110111\D5703.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)	**70**		2.0	
79-01-6	Trichloroethene (TCE)	**140**		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	94	70-130	11/1/11 21:20	
Dibromofluoromethane	98	70-130	11/1/11 21:20	
Toluene-d8	104	70-130	11/1/11 21:20	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106037
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/24/11 1400
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/1/11 21:49
Sample Name:	OB6-DO(75')	**Units:**	µg/L
Lab Code:	R1106037-013	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	267722
Data File Name:	J:\ACQUDATA\msvoa10\data\110111\D5704.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)	**250**		10	
79-01-6	Trichloroethene (TCE)	**490**		10	
75-69-4	Trichlorofluoromethane (CFC 11)	10	U	10	
75-01-4	Vinyl Chloride	**14**		10	
156-59-2	cis-1,2-Dichloroethene	**770**		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	96	70-130	11/1/11 21:49	
Dibromofluoromethane	101	70-130	11/1/11 21:49	
Toluene-d8	105	70-130	11/1/11 21:49	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106037
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/25/11 0800
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/1/11 08:25
Sample Name:	OB8-DO(79')	**Units:**	µg/L
Lab Code:	R1106037-014	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	267469
Data File Name:	J:\ACQUDATA\msvoa10\data\103111\D5680.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)	**340**		40	
79-01-6	Trichloroethene (TCE)	**2200**		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	**1100**		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	98	70-130	11/1/11 08:25	
Dibromofluoromethane	102	70-130	11/1/11 08:25	
Toluene-d8	104	70-130	11/1/11 08:25	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106037
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/25/11 0830
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/1/11 22:18
Sample Name:	OB8-S(12')	**Units:**	µg/L
Lab Code:	R1106037-015	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	267722
Data File Name:	J:\ACQUDATA\msvoa10\data\110111\D5705.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)	**38**		2.0	
79-01-6	Trichloroethene (TCE)	**150**		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	**42**		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	11/1/11 22:18	
Dibromofluoromethane	101	70-130	11/1/11 22:18	
Toluene-d8	106	70-130	11/1/11 22:18	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106037
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/25/11 0900
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/1/11 09:25
Sample Name:	OB41-S(13')	**Units:**	µg/L
Lab Code:	R1106037-016	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	267469
Data File Name:	J:\ACQUDATA\msvoa10\data\103111\D5682.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)	**30**		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	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	**40**		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	98	70-130	11/1/11 09:25	
Dibromofluoromethane	101	70-130	11/1/11 09:25	
Toluene-d8	104	70-130	11/1/11 09:25	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106037
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/25/11 0930
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/1/11 09:54
Sample Name:	GZ-4(14')	**Units:**	µg/L
Lab Code:	R1106037-017	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	267469
Data File Name:	J:\ACQUDATA\msvoa10\data\103111\D5683.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)	**2.7**		2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	**2.0**		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)	**3.7**		2.0	
79-01-6	Trichloroethene (TCE)	**3.0**		2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	**110**		2.0	
156-59-2	cis-1,2-Dichloroethene	**320**	E	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	97	70-130	11/1/11 09:54	
Dibromofluoromethane	102	70-130	11/1/11 09:54	
Toluene-d8	104	70-130	11/1/11 09:54	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106037
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/25/11 0930
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/1/11 22:47
Sample Name:	GZ-4(14')	**Units:**	µg/L
Lab Code:	R1106037-017	**Basis:**	NA
Run Type:	Dilution		

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	267722
Data File Name:	J:\ACQUDATA\msvoa10\data\110111\D5706.D\	**Instrument Name:**	R-MS-10
		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)	5.0	U	5.0	
79-01-6	Trichloroethene (TCE)	5.0	U	5.0	
75-69-4	Trichlorofluoromethane (CFC 11)	5.0	U	5.0	
75-01-4	Vinyl Chloride	**120**	D	5.0	
156-59-2	cis-1,2-Dichloroethene	**360**	D	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	93	70-130	11/1/11 22:47	
Dibromofluoromethane	100	70-130	11/1/11 22:47	
Toluene-d8	105	70-130	11/1/11 22:47	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106037
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/25/11 1000
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/1/11 23:16
Sample Name:	OB18-DO(23')	**Units:**	µg/L
Lab Code:	R1106037-018	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	267722
Data File Name:	J:\ACQUDATA\msvoa10\data\110111\D5707.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)	**27**		2.0	
79-01-6	Trichloroethene (TCE)	**160**		2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	**7.0**		2.0	
156-59-2	cis-1,2-Dichloroethene	**99**		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	11/1/11 23:16	
Dibromofluoromethane	99	70-130	11/1/11 23:16	
Toluene-d8	106	70-130	11/1/11 23:16	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106037
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/25/11 1030
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/1/11 23:45
Sample Name:	OB18-S(11')	**Units:**	µg/L
Lab Code:	R1106037-019	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	267722
Data File Name:	J:\ACQUDATA\msvoa10\data\110111\D5708.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	11/1/11 23:45	
Dibromofluoromethane	98	70-130	11/1/11 23:45	
Toluene-d8	104	70-130	11/1/11 23:45	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106037
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/25/11 1100
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/2/11 00:14
Sample Name:	AP-15S(12')	**Units:**	µg/L
Lab Code:	R1106037-020	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	267722
Data File Name:	J:\ACQUDATA\msvoa10\data\110111\D5709.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	**23**		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	11/2/11 00:14	
Dibromofluoromethane	98	70-130	11/2/11 00:14	
Toluene-d8	105	70-130	11/2/11 00:14	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106037
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/25/11 1130
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/2/11 00:43
Sample Name:	STRHA-7A	**Units:**	µg/L
Lab Code:	R1106037-021	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	267722
Data File Name:	J:\ACQUDATA\msvoa10\data\110111\D5710.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)	**2.1**		2.0	
79-01-6	Trichloroethene (TCE)	**11**		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	93	70-130	11/2/11 00:43	
Dibromofluoromethane	99	70-130	11/2/11 00:43	
Toluene-d8	104	70-130	11/2/11 00:43	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106037
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/25/11 1200
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/2/11 01:12
Sample Name:	STRHA-7B	**Units:**	µg/L
Lab Code:	R1106037-022	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	267722
Data File Name:	J:\ACQUDATA\msvoa10\data\110111\D5711.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)	**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	**7.6**		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	93	70-130	11/2/11 01:12	
Dibromofluoromethane	99	70-130	11/2/11 01:12	
Toluene-d8	99	70-130	11/2/11 01:12	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106037
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/25/11 1230
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/4/11 00:59
Sample Name:	OB22-DO(55')	**Units:**	µg/L
Lab Code:	R1106037-023	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	268015
Data File Name:	J:\ACQUDATA\msvoa10\data\110311\D5792.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)	**6.9**		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	**31**		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	98	70-130	11/4/11 00:59	
Dibromofluoromethane	102	70-130	11/4/11 00:59	
Toluene-d8	104	70-130	11/4/11 00:59	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106037
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/25/11 1300
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/2/11 14:06
Sample Name:	CL10-S(15')	**Units:**	µg/L
Lab Code:	R1106037-024	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	267849
Data File Name:	J:\ACQUDATA\msvoa10\data\110211\D5723.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	**11**		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)	**45**		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	**9.6**		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	98	70-130	11/2/11 14:06	
Dibromofluoromethane	102	70-130	11/2/11 14:06	
Toluene-d8	105	70-130	11/2/11 14:06	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106037
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/25/11 1330
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/2/11 14:36
Sample Name:	CL10-DO(46')	**Units:**	µg/L
Lab Code:	R1106037-025	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	267849
Data File Name:	J:\ACQUDATA\msvoa10\data\110211\D5724.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)	**3.6**		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	**2.7**		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	98	70-130	11/2/11 14:36	
Dibromofluoromethane	101	70-130	11/2/11 14:36	
Toluene-d8	105	70-130	11/2/11 14:36	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106037
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/26/11 1400
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/2/11 15:06
Sample Name:	EB-2	**Units:**	µg/L
Lab Code:	R1106037-026	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	267849
Data File Name:	J:\ACQUDATA\msvoa10\data\110211\D5725.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	96	70-130	11/2/11 15:06	
Dibromofluoromethane	102	70-130	11/2/11 15:06	
Toluene-d8	105	70-130	11/2/11 15:06	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106037
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/26/11 0830
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/2/11 15:36
Sample Name:	OB21-BR(97')	**Units:**	µg/L
Lab Code:	R1106037-027	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	267849
Data File Name:	J:\ACQUDATA\msvoa10\data\110211\D5726.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)	**33**		20	
79-01-6	Trichloroethene (TCE)	**61**		20	
75-69-4	Trichlorofluoromethane (CFC 11)	20	U	20	
75-01-4	Vinyl Chloride	**22**		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	97	70-130	11/2/11 15:36	
Dibromofluoromethane	102	70-130	11/2/11 15:36	
Toluene-d8	104	70-130	11/2/11 15:36	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106037
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/26/11 0900
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/2/11 16:05
Sample Name:	OB21-DO(79')	**Units:**	µg/L
Lab Code:	R1106037-028	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	267849
Data File Name:	J:\ACQUDATA\msvoa10\data\110211\D5727.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)	**11**		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)	**280**		10	
79-01-6	Trichloroethene (TCE)	**1300**	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	**510**		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	99	70-130	11/2/11 16:05	
Dibromofluoromethane	102	70-130	11/2/11 16:05	
Toluene-d8	105	70-130	11/2/11 16:05	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106037
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/26/11 0900
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/4/11 01:29
Sample Name:	OB21-DO(79')	**Units:**	µg/L
Lab Code:	R1106037-028	**Basis:**	NA
Run Type:	Dilution		

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	268015
Data File Name:	J:\ACQUDATA\msvoa10\data\110311\D5793.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)	**290**	D	20	
79-01-6	Trichloroethene (TCE)	**1400**	D	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**	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	100	70-130	11/4/11 01:29	
Dibromofluoromethane	102	70-130	11/4/11 01:29	
Toluene-d8	106	70-130	11/4/11 01:29	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106037
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/26/11 0930
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/2/11 16:35
Sample Name:	OB20-BR(97')	**Units:**	µg/L
Lab Code:	R1106037-029	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	267849
Data File Name:	J:\ACQUDATA\msvoa10\data\110211\D5728.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)	**3.1**		2.0	
79-01-6	Trichloroethene (TCE)	**130**		2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	**2.4**		2.0	
156-59-2	cis-1,2-Dichloroethene	**530**	E	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	**2.0**		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	11/2/11 16:35	
Dibromofluoromethane	105	70-130	11/2/11 16:35	
Toluene-d8	105	70-130	11/2/11 16:35	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106037
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/26/11 0930
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/4/11 01:58
Sample Name:	OB20-BR(97')	**Units:**	µg/L
Lab Code:	R1106037-029	**Basis:**	NA
Run Type:	Dilution		

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	268015
Data File Name:	J:\ACQUDATA\msvoa10\data\110311\D5794.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)	10	U	10	
79-01-6	Trichloroethene (TCE)	**110**	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	**470**	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	99	70-130	11/4/11 01:58	
Dibromofluoromethane	103	70-130	11/4/11 01:58	
Toluene-d8	106	70-130	11/4/11 01:58	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106037
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/26/11 1000
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/2/11 17:05
Sample Name:	OB-20-DO(75')	**Units:**	µg/L
Lab Code:	R1106037-030	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	267849
Data File Name:	J:\ACQUDATA\msvoa10\data\110211\D5729.D\	**Instrument Name:**	R-MS-10
		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)	5.0	U	5.0	
79-01-6	Trichloroethene (TCE)	**12**		5.0	
75-69-4	Trichlorofluoromethane (CFC 11)	5.0	U	5.0	
75-01-4	Vinyl Chloride	**27**		5.0	
156-59-2	cis-1,2-Dichloroethene	**470**		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	97	70-130	11/2/11 17:05	
Dibromofluoromethane	102	70-130	11/2/11 17:05	
Toluene-d8	104	70-130	11/2/11 17:05	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106037
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/24/11 0841
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/2/11 17:34
Sample Name:	P-9R(4.5')	**Units:**	µg/L
Lab Code:	R1106037-031	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	267849
Data File Name:	J:\ACQUDATA\msvoa10\data\110211\D5730.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	97	70-130	11/2/11 17:34	
Dibromofluoromethane	101	70-130	11/2/11 17:34	
Toluene-d8	104	70-130	11/2/11 17:34	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106037
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/24/11 1057
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/2/11 18:04
Sample Name:	P-19A(10')	**Units:**	µg/L
Lab Code:	R1106037-032	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	267849
Data File Name:	J:\ACQUDATA\msvoa10\data\110211\D5731.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)	**4.7**		4.0	
79-01-6	Trichloroethene (TCE)	**21**		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	**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	98	70-130	11/2/11 18:04	
Dibromofluoromethane	101	70-130	11/2/11 18:04	
Toluene-d8	105	70-130	11/2/11 18:04	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106037
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/24/11 1155
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/2/11 18:34
Sample Name:	CL9-BR-ZONE1	**Units:**	µg/L
Lab Code:	R1106037-033	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	267849
Data File Name:	J:\ACQUDATA\msvoa10\data\110211\D5732.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)	**830**		20	
79-01-6	Trichloroethene (TCE)	**2300**	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	**1000**		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	11/2/11 18:34	
Dibromofluoromethane	101	70-130	11/2/11 18:34	
Toluene-d8	105	70-130	11/2/11 18:34	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106037
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/24/11 1155
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/4/11 02:28
Sample Name:	CL9-BR-ZONE1	**Units:**	µg/L
Lab Code:	R1106037-033	**Basis:**	NA
Run Type:	Dilution		

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	268015
Data File Name:	J:\ACQUDATA\msvoa10\data\110311\D5795.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)	**690**	D	40	
79-01-6	Trichloroethene (TCE)	**2000**	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	**920**	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	98	70-130	11/4/11 02:28	
Dibromofluoromethane	102	70-130	11/4/11 02:28	
Toluene-d8	106	70-130	11/4/11 02:28	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106037
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/24/11 1231
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/4/11 02:58
Sample Name:	CL9-BR-ZONE2	**Units:**	µg/L
Lab Code:	R1106037-034	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	268015
Data File Name:	J:\ACQUDATA\msvoa10\data\110311\D5796.D\	**Instrument Name:**	R-MS-10
		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)	**330**		50	
79-01-6	Trichloroethene (TCE)	**1000**		50	
75-69-4	Trichlorofluoromethane (CFC 11)	50	U	50	
75-01-4	Vinyl Chloride	**67**		50	
156-59-2	cis-1,2-Dichloroethene	**2700**		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	100	70-130	11/4/11 02:58	
Dibromofluoromethane	102	70-130	11/4/11 02:58	
Toluene-d8	105	70-130	11/4/11 02:58	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106037
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/24/11 1328
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/2/11 19:33
Sample Name:	CL9-BR-ZONE3	**Units:**	µg/L
Lab Code:	R1106037-035	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	267849
Data File Name:	J:\ACQUDATA\msvoa10\data\110211\D5734.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)	**50**		10	
79-01-6	Trichloroethene (TCE)	**90**		10	
75-69-4	Trichlorofluoromethane (CFC 11)	10	U	10	
75-01-4	Vinyl Chloride	**1200**	E	10	
156-59-2	cis-1,2-Dichloroethene	**1100**	E	10	
10061-01-5	cis-1,3-Dichloropropene	10	U	10	
156-60-5	trans-1,2-Dichloroethene	**14**		10	
10061-02-6	trans-1,3-Dichloropropene	10	U	10	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	96	70-130	11/2/11 19:33	
Dibromofluoromethane	102	70-130	11/2/11 19:33	
Toluene-d8	102	70-130	11/2/11 19:33	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106037
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/24/11 1328
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/4/11 03:27
Sample Name:	CL9-BR-ZONE3	**Units:**	µg/L
Lab Code:	R1106037-035	**Basis:**	NA
Run Type:	Dilution		

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	268015
Data File Name:	J:\ACQUDATA\msvoa10\data\110311\D5797.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)	**46**	D	20	
79-01-6	Trichloroethene (TCE)	**93**	D	20	
75-69-4	Trichlorofluoromethane (CFC 11)	20	U	20	
75-01-4	Vinyl Chloride	**1200**	D	20	
156-59-2	cis-1,2-Dichloroethene	**1200**	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	100	70-130	11/4/11 03:27	
Dibromofluoromethane	102	70-130	11/4/11 03:27	
Toluene-d8	104	70-130	11/4/11 03:27	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106037
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/24/11 1415
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/4/11 03:57
Sample Name:	BR-1-ZONE1	**Units:**	µg/L
Lab Code:	R1106037-036	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	268015
Data File Name:	J:\ACQUDATA\msvoa10\data\110311\D5798.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)	**10**		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	**41**		2.0	
156-59-2	cis-1,2-Dichloroethene	**190**		2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	**3.1**		2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	98	70-130	11/4/11 03:57	
Dibromofluoromethane	103	70-130	11/4/11 03:57	
Toluene-d8	100	70-130	11/4/11 03:57	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106037
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/24/11 1457
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/2/11 20:33
Sample Name:	BR-1-ZONE2	**Units:**	µg/L
Lab Code:	R1106037-037	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	267849
Data File Name:	J:\ACQUDATA\msvoa10\data\110211\D5736.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)	**5.0**		2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	**16**		2.0	
156-59-2	cis-1,2-Dichloroethene	**200**		2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	**3.1**		2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	99	70-130	11/2/11 20:33	
Dibromofluoromethane	104	70-130	11/2/11 20:33	
Toluene-d8	100	70-130	11/2/11 20:33	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106037
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/24/11 1531
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/2/11 21:03
Sample Name:	BR-1-ZONE3	**Units:**	µg/L
Lab Code:	R1106037-038	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	267849
Data File Name:	J:\ACQUDATA\msvoa10\data\110211\D5737.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	99	70-130	11/2/11 21:03	
Dibromofluoromethane	101	70-130	11/2/11 21:03	
Toluene-d8	102	70-130	11/2/11 21:03	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106037
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/26/11 1030
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/3/11 01:00
Sample Name:	OB-20-S(12')	**Units:**	µg/L
Lab Code:	R1106037-039	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	267850
Data File Name:	J:\ACQUDATA\msvoa10\data\110211\D5745.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	99	70-130	11/3/11 01:00	
Dibromofluoromethane	101	70-130	11/3/11 01:00	
Toluene-d8	105	70-130	11/3/11 01:00	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106037
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/26/11 1100
Sample Matrix:	Water	**Date Received:**	10/27/11
		Date Analyzed:	11/3/11 01:30
Sample Name:	STREAM A SCDS	**Units:**	µg/L
Lab Code:	R1106037-040	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	267850
Data File Name:	J:\ACQUDATA\msvoa10\data\110211\D5746.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)	**2.5**		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	97	70-130	11/3/11 01:30	
Dibromofluoromethane	102	70-130	11/3/11 01:30	
Toluene-d8	100	70-130	11/3/11 01:30	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106037
Project:	Varian Beverly/143267-04000000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	11/1/11 01:16
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1111237-01	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	267469
Data File Name:	J:\ACQUDATA\msvoa10\data\103111\D5666.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	97	70-130	11/1/11 01:16	
Dibromofluoromethane	102	70-130	11/1/11 01:16	
Toluene-d8	104	70-130	11/1/11 01:16	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106037
Project:	Varian Beverly/143267-04000000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	11/1/11 16:56
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1111072-01	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	267722
Data File Name:	J:\ACQUDATA\msvoa10\data\110111\D5694.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	97	70-130	11/1/11 16:56	
Dibromofluoromethane	102	70-130	11/1/11 16:56	
Toluene-d8	103	70-130	11/1/11 16:56	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106037
Project:	Varian Beverly/143267-04000000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	11/2/11 11:57
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1111238-01	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	267849
Data File Name:	J:\ACQUDATA\msvoa10\data\110211\D5720.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	98	70-130	11/2/11 11:57	
Dibromofluoromethane	102	70-130	11/2/11 11:57	
Toluene-d8	105	70-130	11/2/11 11:57	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106037
Project:	Varian Beverly/143267-04000000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	11/3/11 00:30
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1111219-01	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	267850
Data File Name:	J:\ACQUDATA\msvoa10\data\110211\D5744.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	99	70-130	11/3/11 00:30	
Dibromofluoromethane	103	70-130	11/3/11 00:30	
Toluene-d8	105	70-130	11/3/11 00:30	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106037
Project:	Varian Beverly/143267-04000000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	11/4/11 00:29
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1111370-01	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	268015
Data File Name:	J:\ACQUDATA\msvoa10\data\110311\D5791.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	99	70-130	11/4/11 00:29	
Dibromofluoromethane	101	70-130	11/4/11 00:29	
Toluene-d8	104	70-130	11/4/11 00:29	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian Beverly/143267-04000000
Sample Matrix: Water

Service Request: R1106037
Date Analyzed: 10/31/11 - 11/ 1/11

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260C

Units: µg/L
Basis: NA

Analysis Lot: 267469

Analyte Name	Lab Control Sample RQ1111237-02 Result	Spike Amount	% Rec	Duplicate Lab Control Sample RQ1111237-03 Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
1,1,1-Trichloroethane (TCA)	18.8	20.0	94	18.2	20.0	91	70 - 130	3	20
1,1,2,2-Tetrachloroethane	16.7	20.0	84	19.2	20.0	96	70 - 130	14	20
1,1,2-Trichloroethane	20.0	20.0	100	21.0	20.0	105	70 - 130	5	20
1,1-Dichloroethane (1,1-DCA)	19.3	20.0	97	19.4	20.0	97	70 - 130	<1	20
1,1-Dichloroethene (1,1-DCE)	17.6	20.0	88	16.7	20.0	83	70 - 130	6	20
1,2-Dichloroethane	21.0	20.0	105	22.1	20.0	110	70 - 130	5	20
1,2-Dichloropropane	20.2	20.0	101	20.2	20.0	101	70 - 130	<1	20
Acetone	21.7	20.0	108	21.0	20.0	105	40 - 160	3	20
Bromodichloromethane	21.3	20.0	106	21.0	20.0	105	70 - 130	1	20
Bromoform	23.7	20.0	118	24.9	20.0	124	70 - 130	5	20
Bromomethane	12.9	20.0	65	12.7	20.0	63	40 - 160	2	20
Carbon Tetrachloride	20.9	20.0	105	20.1	20.0	100	70 - 130	4	20
Chlorobenzene	20.1	20.0	100	20.0	20.0	100	70 - 130	<1	20
Chloroethane	18.5	20.0	93	17.6	20.0	88	70 - 130	5	20
Chloroform	19.6	20.0	98	19.5	20.0	98	70 - 130	<1	20
Chloromethane	15.9	20.0	80	15.7	20.0	78	40 - 160	2	20
Dibromochloromethane	22.6	20.0	113	23.3	20.0	116	70 - 130	3	20
Methylene Chloride	18.9	20.0	95	19.6	20.0	98	70 - 130	3	20
Tetrachloroethene (PCE)	19.9	20.0	100	19.0	20.0	95	70 - 130	5	20
Trichloroethene (TCE)	22.5	20.0	113	21.0	20.0	105	70 - 130	7	20
Trichlorofluoromethane (CFC 11)	18.3	20.0	91	17.8	20.0	89	70 - 130	2	20
Vinyl Chloride	18.2	20.0	91	17.5	20.0	87	70 - 130	4	20
cis-1,2-Dichloroethene	19.7	20.0	99	19.4	20.0	97	70 - 130	2	20
cis-1,3-Dichloropropene	19.0	20.0	95	19.2	20.0	96	70 - 130	1	20
trans-1,2-Dichloroethene	18.8	20.0	94	18.0	20.0	90	70 - 130	4	20
trans-1,3-Dichloropropene	19.2	20.0	96	19.7	20.0	98	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, INC.

QA/QC Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian Beverly/143267-04000000
Sample Matrix: Water

Service Request: R1106037
Date Analyzed: 11/ 1/11

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260C

Units: µg/L
Basis: NA

Analysis Lot: 267722

Analyte Name	Lab Control Sample RQ1111072-02 Result	Spike Amount	% Rec	Duplicate Lab Control Sample RQ1111072-03 Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
1,1,1-Trichloroethane (TCA)	18.4	20.0	92	17.6	20.0	88	70 - 130	5	20
1,1,2,2-Tetrachloroethane	18.5	20.0	92	19.7	20.0	98	70 - 130	6	20
1,1,2-Trichloroethane	17.8	20.0	89	18.3	20.0	91	70 - 130	3	20
1,1-Dichloroethane (1,1-DCA)	19.5	20.0	98	18.9	20.0	94	70 - 130	3	20
1,1-Dichloroethene (1,1-DCE)	17.6	20.0	88	16.9	20.0	84	70 - 130	4	20
1,2-Dichloroethane	19.6	20.0	98	19.8	20.0	99	70 - 130	1	20
1,2-Dichloropropane	19.5	20.0	98	19.1	20.0	95	70 - 130	2	20
Acetone	18.5	20.0	93	18.7	20.0	94	40 - 160	1	20
Bromodichloromethane	20.3	20.0	102	20.1	20.0	100	70 - 130	1	20
Bromoform	21.6	20.0	108	21.5	20.0	107	70 - 130	<1	20
Bromomethane	14.2	20.0	71	13.2	20.0	66	40 - 160	7	20
Carbon Tetrachloride	20.2	20.0	101	19.3	20.0	96	70 - 130	5	20
Chlorobenzene	19.2	20.0	96	18.6	20.0	93	70 - 130	3	20
Chloroethane	18.5	20.0	93	17.8	20.0	89	70 - 130	4	20
Chloroform	19.2	20.0	96	18.9	20.0	94	70 - 130	2	20
Chloromethane	16.0	20.0	80	15.0	20.0	75	40 - 160	6	20
Dibromochloromethane	20.7	20.0	104	20.9	20.0	105	70 - 130	<1	20
Methylene Chloride	18.5	20.0	93	18.2	20.0	91	70 - 130	2	20
Tetrachloroethene (PCE)	18.9	20.0	95	18.0	20.0	90	70 - 130	5	20
Trichloroethene (TCE)	18.5	20.0	92	17.6	20.0	88	70 - 130	5	20
Trichlorofluoromethane (CFC 11)	19.3	20.0	96	17.7	20.0	88	70 - 130	9	20
Vinyl Chloride	18.3	20.0	92	16.9	20.0	84	70 - 130	8	20
cis-1,2-Dichloroethene	19.3	20.0	97	18.9	20.0	94	70 - 130	2	20
cis-1,3-Dichloropropene	19.1	20.0	95	19.1	20.0	96	70 - 130	<1	20
trans-1,2-Dichloroethene	18.1	20.0	91	17.6	20.0	88	70 - 130	3	20
trans-1,3-Dichloropropene	18.8	20.0	94	18.8	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.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian Beverly/143267-04000000
Sample Matrix: Water

Service Request: R1106037
Date Analyzed: 11/ 2/11

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260C

Units: µg/L
Basis: NA

Analysis Lot: 267849

Analyte Name	Lab Control Sample RQ1111238-02 Result	Spike Amount	% Rec	Duplicate Lab Control Sample RQ1111238-03 Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
1,1,1-Trichloroethane (TCA)	17.5	20.0	88	17.8	20.0	89	70 - 130	1	20
1,1,2,2-Tetrachloroethane	19.8	20.0	99	20.2	20.0	101	70 - 130	2	20
1,1,2-Trichloroethane	19.3	20.0	97	19.0	20.0	95	70 - 130	2	20
1,1-Dichloroethane (1,1-DCA)	18.9	20.0	95	18.9	20.0	95	70 - 130	<1	20
1,1-Dichloroethene (1,1-DCE)	16.6	20.0	83	17.0	20.0	85	70 - 130	2	20
1,2-Dichloroethane	20.5	20.0	102	20.4	20.0	102	70 - 130	<1	20
1,2-Dichloropropane	19.2	20.0	96	19.5	20.0	98	70 - 130	1	20
Acetone	18.5	20.0	92	19.2	20.0	96	40 - 160	4	20
Bromodichloromethane	20.5	20.0	102	20.0	20.0	100	70 - 130	2	20
Bromoform	22.4	20.0	112	21.8	20.0	109	70 - 130	2	20
Bromomethane	13.5	20.0	68	14.0	20.0	70	40 - 160	4	20
Carbon Tetrachloride	19.2	20.0	96	19.1	20.0	95	70 - 130	<1	20
Chlorobenzene	19.3	20.0	96	19.0	20.0	95	70 - 130	1	20
Chloroethane	17.8	20.0	89	17.9	20.0	90	70 - 130	<1	20
Chloroform	19.1	20.0	95	19.4	20.0	97	70 - 130	2	20
Chloromethane	15.1	20.0	76	15.5	20.0	77	40 - 160	2	20
Dibromochloromethane	21.6	20.0	108	21.2	20.0	106	70 - 130	2	20
Methylene Chloride	18.7	20.0	93	18.6	20.0	93	70 - 130	<1	20
Tetrachloroethene (PCE)	18.1	20.0	91	18.3	20.0	92	70 - 130	<1	20
Trichloroethene (TCE)	18.0	20.0	90	17.7	20.0	89	70 - 130	1	20
Trichlorofluoromethane (CFC 11)	17.9	20.0	89	18.6	20.0	93	70 - 130	4	20
Vinyl Chloride	17.1	20.0	86	17.8	20.0	89	70 - 130	4	20
cis-1,2-Dichloroethene	18.8	20.0	94	19.1	20.0	96	70 - 130	2	20
cis-1,3-Dichloropropene	19.7	20.0	98	19.5	20.0	98	70 - 130	<1	20
trans-1,2-Dichloroethene	17.4	20.0	87	17.5	20.0	87	70 - 130	<1	20
trans-1,3-Dichloropropene	19.1	20.0	96	19.3	20.0	97	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, INC.

QA/QC Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian Beverly/143267-04000000
Sample Matrix: Water

Service Request: R1106037
Date Analyzed: 11/ 2/11

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260C

Units: µg/L
Basis: NA

Analysis Lot: 267850

	Lab Control Sample RQ1111219-02			Duplicate Lab Control Sample RQ1111219-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
1,1,1-Trichloroethane (TCA)	19.4	20.0	97	19.9	20.0	100	70 - 130	3	20
1,1,2,2-Tetrachloroethane	18.2	20.0	91	19.4	20.0	97	70 - 130	6	20
1,1,2-Trichloroethane	19.8	20.0	99	21.2	20.0	106	70 - 130	7	20
1,1-Dichloroethane (1,1-DCA)	20.6	20.0	103	21.1	20.0	105	70 - 130	3	20
1,1-Dichloroethene (1,1-DCE)	18.7	20.0	94	18.9	20.0	95	70 - 130	1	20
1,2-Dichloroethane	21.4	20.0	107	22.3	20.0	112	70 - 130	4	20
1,2-Dichloropropane	20.6	20.0	103	20.9	20.0	105	70 - 130	1	20
Acetone	22.5	20.0	112	23.4	20.0	117	40 - 160	4	20
Bromodichloromethane	21.0	20.0	105	22.0	20.0	110	70 - 130	5	20
Bromoform	22.6	20.0	113	24.5	20.0	122	70 - 130	8	20
Bromomethane	15.3	20.0	77	15.0	20.0	75	40 - 160	2	20
Carbon Tetrachloride	21.2	20.0	106	21.1	20.0	105	70 - 130	<1	20
Chlorobenzene	20.1	20.0	100	20.8	20.0	104	70 - 130	4	20
Chloroethane	19.8	20.0	99	20.0	20.0	100	70 - 130	1	20
Chloroform	20.5	20.0	103	21.3	20.0	106	70 - 130	4	20
Chloromethane	17.1	20.0	86	17.2	20.0	86	40 - 160	<1	20
Dibromochloromethane	22.0	20.0	110	23.6	20.0	118	70 - 130	7	20
Methylene Chloride	20.0	20.0	100	20.7	20.0	103	70 - 130	3	20
Tetrachloroethene (PCE)	19.4	20.0	97	20.1	20.0	100	70 - 130	3	20
Trichloroethene (TCE)	21.6	20.0	108	21.7	20.0	108	70 - 130	<1	20
Trichlorofluoromethane (CFC 11)	20.2	20.0	101	20.3	20.0	102	70 - 130	<1	20
Vinyl Chloride	19.5	20.0	98	19.6	20.0	98	70 - 130	<1	20
cis-1,2-Dichloroethene	20.3	20.0	101	21.1	20.0	105	70 - 130	4	20
cis-1,3-Dichloropropene	19.1	20.0	95	20.1	20.0	101	70 - 130	5	20
trans-1,2-Dichloroethene	19.3	20.0	96	20.0	20.0	100	70 - 130	4	20
trans-1,3-Dichloropropene	18.9	20.0	94	20.6	20.0	103	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.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian Beverly/143267-04000000
Sample Matrix: Water

Service Request: R1106037
Date Analyzed: 11/ 3/11 - 11/ 4/11

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260C

Units: µg/L
Basis: NA

Analysis Lot: 268015

	Lab Control Sample RQ1111370-02			Duplicate Lab Control Sample RQ1111370-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**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	5	20
1,1,2,2-Tetrachloroethane	19.9	20.0	100	19.6	20.0	98	70 - 130	2	20
1,1,2-Trichloroethane	20.5	20.0	102	18.7	20.0	93	70 - 130	9	20
1,1-Dichloroethane (1,1-DCA)	20.7	20.0	104	20.9	20.0	104	70 - 130	<1	20
1,1-Dichloroethene (1,1-DCE)	18.1	20.0	91	19.1	20.0	95	70 - 130	5	20
1,2-Dichloroethane	21.4	20.0	107	20.2	20.0	101	70 - 130	6	20
1,2-Dichloropropane	20.4	20.0	102	20.2	20.0	101	70 - 130	1	20
Acetone	21.9	20.0	109	17.2	20.0	86	40 - 160	24 *	20
Bromodichloromethane	21.3	20.0	107	20.6	20.0	103	70 - 130	3	20
Bromoform	23.7	20.0	118	20.5	20.0	102	70 - 130	15	20
Bromomethane	16.5	20.0	83	10.4	20.0	52	40 - 160	46 *	20
Carbon Tetrachloride	21.2	20.0	106	21.3	20.0	107	70 - 130	<1	20
Chlorobenzene	20.0	20.0	100	20.1	20.0	101	70 - 130	<1	20
Chloroethane	20.0	20.0	100	20.6	20.0	103	70 - 130	3	20
Chloroform	20.5	20.0	103	20.4	20.0	102	70 - 130	<1	20
Chloromethane	15.9	20.0	79	16.7	20.0	83	40 - 160	5	20
Dibromochloromethane	22.7	20.0	114	20.1	20.0	101	70 - 130	12	20
Methylene Chloride	19.8	20.0	99	19.8	20.0	99	70 - 130	<1	20
Tetrachloroethene (PCE)	19.4	20.0	97	20.0	20.0	100	70 - 130	3	20
Trichloroethene (TCE)	21.1	20.0	105	19.3	20.0	96	70 - 130	9	20
Trichlorofluoromethane (CFC 11)	20.0	20.0	100	21.5	20.0	107	70 - 130	7	20
Vinyl Chloride	18.8	20.0	94	20.0	20.0	100	70 - 130	6	20
cis-1,2-Dichloroethene	20.4	20.0	102	20.7	20.0	103	70 - 130	2	20
cis-1,3-Dichloropropene	19.5	20.0	97	19.0	20.0	95	70 - 130	2	20
trans-1,2-Dichloroethene	19.3	20.0	96	19.8	20.0	99	70 - 130	3	20
trans-1,3-Dichloropropene	19.9	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.

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 4

Project Name: Varian Beverly	Project Number: 143267-04000000
Project Manager: Raymond Cadorette	Report CC: Sheila Barry
Company/Address: Shaw Environmental, Inc. 100 Technology Center Drive Stoughton, MA 02072	
Phone #: 617-589-6102	E-mail: Raymond.Cadorette@Shawgrp.com
Sampler's Signature: [signature]	Sampler's Printed Name: DANIEL C. LEAHY

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

Preservative row: GC/MS VOA's = 1; Metals, Dissolved = 2; Chloride = 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) Fe + Mn	Chloride							REMARKS/ ALTERNATE DESCRIPTION
TB-1		10/7/11	0920	LW	3	3														
EB-1		10/24/11	0800	↓	3	3														
CL2-BR (42')		10/24/11	0900	GW	3	3														
MW-2R (9.8)		10/24/11	0930	GW	3	3														
MW-4R (35.5')		10/24/11	1000	GW	3	3														
W-1 (9')		10/24/11	1030	GW	3	3														
OB-42-S (13')		10/24/11	1100	GW	3	3														
OB-5-BR (109')		10/24/11	1130	GW	3	3														
OB-5-DO (81')		10/24/11	1200	GW	3	3														
OB-5-S (27')		10/24/11	1230	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 = Field Filtered
Site specific VOC list.
Massachusetts CAM analyses reporting and QA/QC.
Email GISKey formatted EDD and PDF of report to:
Catherine.Mainville@Shawgrp.com.
TB-1 BY LAB DD
LAB PO # 727459

See QAPP ☐

STATE WHERE SAMPLES WERE COLLECTED: MASS

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 #:
BILL TO: Shaw Environmental

R1106037
Shaw Environmental & Infrastructure, Inc.
Varian Beverly

	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	
Signature	[signature]	[signature]				
Printed Name	DANIEL LEAHY	Amy Hentschke				
Firm	SHAW ENVIRONMENTAL	CAS				
Date/Time	10/26/11 1400	10/27/11 0900				

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	Project Number
Varian Beverly	143267-04000000
Project Manager	**Report CC**
Raymond Cadorette	Sheila Barry

Company/Address: Shaw Environmental, Inc.
100 Technology Center Drive
Stoughton, MA 02072

Phone #	E-mail
617-589-6102	Raymond.Cadorette@Shawgrp.com
Sampler's Signature	**Sampler's Printed Name**
	DANIEL 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 5172 ☐8260 ☐624 ☐CLP ☐150	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)	Ferrous iron	Chloride	REMARKS/ ALTERNATE DESCRIPTION
OB43-S (16')		10/24/11	1300	GW	3	3									
OB6-BR (101')		10/24/11	1330		3	3									
OB6-DO (75')		10/24/11	1400		3	3									
OB8-DO (79')		10/25/11	0800		3	3									
OB8-S (12')		10/25/11	0830		3	3									
OB41-S (13')		10/25/11	0900		3	3									
GZ-4 (14')		10/25/11	0930		3	3									
OB18-DO (23')		10/25/11	1000		3	3									
OB18-S (11')		10/25/11	1030		3	3									
AP-15S (12')		10/25/11	1100	↓	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.
Email GISKey formatted EDD and PDF of report to:
Catherine.Mainville@Shawgrp.com
LAB # PO # 727459

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 #:
BILL TO: Shaw Environmental

☐ See QAPP

STATE WHERE SAMPLES WERE COLLECTED: MASS

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature	Signature	Signature	Signature	Signature	Signature
Printed Name: DANIEL LEARY	Printed Name: Amy Hentschke	Printed Name	Printed Name	Printed Name	Printed Name
Firm: SHAW ENVIRONMENTAL	Firm: CAS	Firm	Firm	Firm	Firm
Date/Time: 10/26/11 1400	Date/Time: 10/27/11 0900	Date/Time	Date/Time	Date/Time	Date/Time

Distribution: White - Lab Copy; Yellow - Return To Originator

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	Project Number
Varian Beverly	143267-04000000
Project Manager	**Report CC**
Raymond Cadorette	Sheila Barry

Company/Address: Shaw Environmental, Inc.
100 Technology Center Drive
Stoughton, MA 02072

Phone #	E-mail
617-589-6102	Raymond.Cadorette@Shawgrp.com
Sampler's Signature	**Sampler's Printed Name**
[signature]	Daniel C. Leahy

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	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
STRHA-7A		10/25/11	1130	GW	3	3								
STRHA-7B		10/25/11	1200		3	3								
OB22-DO (55')		10/25/11	1230		3	3								
CL10-S (15')		10/25/11	1300		3	3								
CL10-BR (46')		10/25/11	1330		3	3								
BG-D		10/25/11	1400		3	3								
OB21-BR (97')		10/26/11	0830		3	3								
OB21-DO (79')		10/26/11	0900		3	3								
OB20-BR (97')		10/26/11	0930		3	3								
OB-20-DO (75')		10/26/11	1000	✓	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.
Email GISKey formatted EDD and PDF of report to:
Catherine.Mainville@Shawgrp.com

LAB PO# 727459

See QAPP ☐

STATE WHERE SAMPLES WERE COLLECTED: MASS

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 #:
BILL TO: Shaw Environmental

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature: [signature]	Signature: [signature]	Signature	Signature	Signature	Signature
Printed Name: Daniel Leahy	Printed Name: Amy Hentschke	Printed Name	Printed Name	Printed Name	Printed Name
Firm: Shaw Environmental	Firm: QAS	Firm	Firm	Firm	Firm
Date/Time: 10/26/11 1400	Date/Time: 10/27/11 0900	Date/Time	Date/Time	Date/Time	Date/Time

Distribution: White - Lab Copy; Yellow - Return To Originator

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: 143267-04000000
Project Manager: Raymond Cadorette	Report CC: Sheila Barry
Company/Address: Shaw Environmental, Inc. 100 Technology center drive Stoughton, MA 02072	
Phone #: 617-589-6102 Raymond	E-mail: .Cadorette@Shawgrp.com
Sampler's Signature:	Sampler's Printed Name: MATTHEW VISCOVICH

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	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+2	Chloride	REMARKS/ ALTERNATE DESCRIPTION
P-9R(4.5')		10/24/11	0841	GW	3	✓									
P-19A(10')			1057		3	✓									
CL9-BR-ZONE1			1155		3	✓									
CL9-BR-ZONE2			1231		3	✓									
CL9-BR-ZONE3			1328		3	✓									
BR-1-ZONE1			1415		3	✓									
BR-1-ZONE2			1457		3	✓									
BR-1-ZONE3			1531		3	✓									
OB-20-S(12')		10/26/11	1030		3	3									
STREAM A SCDS		10/26/11	1100		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.
Email GISKey formatted EDD and PDF of report to:
Catherine.Mainville@Shawgrp.com.

LAB PO # 727459

See QAPP ☐

STATE WHERE SAMPLES WERE COLLECTED: MASS

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 #:
BILL TO: Shaw Environmental

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature:	Signature:	Signature:	Signature:	Signature:	Signature:
Printed Name: M Viscovich	Printed Name: DANIEL C. VESSEY	Printed Name:	Printed Name: Amy Hentschke	Printed Name:	Printed Name:
Firm: SHAW E&I	Firm: SHAW ENVIRONMENTAL	Firm:	Firm: CAS	Firm:	Firm:
Date/Time: 10/26/11 1400	Date/Time: 10/26/11 1400	Date/Time:	Date/Time: 10/27/11 0900	Date/Time:	Date/Time:

Distribution: White - Lab Copy; Yellow - Return To Originator

Cooler Receipt And Preservation Check Form

Project/Client Shaw Folder Number R11-6037

Cooler received on 10/27/11 by: [illegible] **COURIER:** CAS (UPS) FEDEX VELOCITY CLIENT

1.	Were custody seals on outside of cooler?			YES	(NO)	
2.	Were custody papers properly filled out (ink, signed, etc.)?			(YES)	NO	
3.	Did all bottles arrive in good condition (unbroken)?			(YES)	NO	
4.	Did VOA vials, Alkalinity, or Sulfide have significant* air bubbles?			YES	(NO)	N/A
5.	Were **Ice** or **Ice packs** present?			(YES)	NO	
6.	Where did the bottles originate?			(CAS/ROC,)	CLIENT	
7.	Temperature of cooler(s) upon receipt:	2.1°				
	Is the temperature within 0° - 6° C?:	(Yes)	Yes	Yes	Yes	Yes
	If No, Explain Below	No	No	No	No	No

Date/Time Temperatures Taken: 10/27/11 0911

Thermometer ID: IR GUN#3 / IR GUN#4 Reading From: (Temp Blank) / Sample Bottle

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

PC Secondary Review: MM 10/29/11

Cooler Breakdown: Date: 10/27/11 Time: 1720 by: JH

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?	JH 10/27 ~~YES~~	(NO) A
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 TCN Phenol and 522			If present, contact PM to add ascorbic acid Or sodium sulfite (522)					
	$Na_2S_2O_3$	-	-						
	Zn Aceta	-	-						
	HCl	*	*	411010	9/12				

*Not to be tested before analysis – pH tested and recorded by VOAs or GenChem on a separate worksheet

Yes = All samples OK

No = Samples were preserved at lab as listed

PM OK to Adjust: _____

Bottle lot numbers: Client

Other Comments:

no CL10 BR (4/6')
but there is CL10-DO (36')
at sample Sample Date/Time

PC Secondary Review: MM 10/11/11

*significant air bubbles: VOA > 5-6 mm : WC >1 in. diameter

Data Usability Worksheet

Project Name : Varian Medical Systems, Inc

Job Number : 143276

Prepared By: Pernilla Haley

Date : 12/5/2011

Analyte Group : Volatile Organics
Dissolved Fe & Mn
Chloride

Analytical Method : SW 846 8260C
SW 846 6010B
SM 4500 CL-E

Completed MADEP CAM Certification Form included: Yes

Laboratory ID No. : R1106071

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
10/26/11, 10/27/11	VOC 8260B		14 days	11/4/11, 11/5/11, 11/7/11, 11/8/11
10/26/11, 10/27/11	SW 846 6010B		180 days	11/15/11, 11/16/11
10/26/11, 10/27/11	SM 4500 CL-E		28 days	11/1/11

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 :		11/4/2011
Trip Blank ID :		11/4/2011
Method Blank:	VOC 8260B	11/4/11, 11/5/11, 11/7/11, 11/8/11
	Dissolved Fe & Mn	11/15/2011
	Chloride	11/1/2011

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:
For VOC analysis - several samples were initially analyzed at dilutions to bring target analytes within the calibration range of method.
Samples were subsequently reanalyzed at higher dilutions to bring target analytes within the calibration range of method.
Dilutions were reported with analytes over the calibration range flagged with an "E" and the diluted analytes flagged with a "D".

Reviewed By: RJC

Columbia Analytical Services
1565 Jefferson Rd, Building 300, Suite 360 | Rochester, NY 14623 | 585-288-5380 | 585-288-8475 fax |

November 18, 2011 Service Request No: R1106071

Mr. Ray Cadorette
Shaw Environmental & Infrastructure, Inc.
100 Technology Center
Stoughton, MA 02072

Laboratory Results for: Varian Beverly/143267-04000000

Dear Mr. Cadorette:

Enclosed are the results of the sample(s) submitted to our laboratory on October 28, 2011. For your reference, these analyses have been assigned our service request number **R1106071**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. 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 7469. You may also contact me via email at MPerry@caslab.com.

Respectfully submitted,

Columbia Analytical Services, Inc.

Michael Perry
Laboratory Manager

COLUMBIA ANALYTICAL SERVICES, INC.

Client:	Shaw Environmental, Inc	**Service Request No.:**	R1106071
Project:	Varian Beverly	**Project Number:**	143267
Sample Matrix:	Water	**Date Received:**	10/28/11

CASE NARRATIVE

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

Sample Receipt

Water samples were collected on 10/26/11 and 10/27/11 and received at CAS in good condition in the proper temperature range (3.5 °C) as noted on the cooler receipt and preservation check form. The samples were stored in a refrigerator at 1 - 6 °C upon receipt at the laboratory. See the second page of the Case Narrative for a cross-reference between Client ID and CAS Job #.

Volatile Organics

Twenty-one water samples were analyzed for a site list of Volatile Organics and two samples were analyzed for the complete MASS CAM 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. Samples BR-6-ZONE1, OB19-DO(64'), OB38-DO(45'), AP27-DO(61'), and AP-26-DO(64') were re-analyzed at larger dilutions to bring target analytes within the calibration range of the method. Both dilutions were reported with analytes over the calibration range flagged with an "E" and the diluted analytes flagged with a "D".

All initial and continuing calibrations were compliant.

All Surrogate Standard recoveries were within QC limits.

The Blank Spike (LCS)/Blank Spike Duplicate (LCSD) recoveries were all within the QC limits.

All samples were analyzed within the required holding times.

No other analytical or QC problems were encountered with these analyses.

Inorganic Analyses

Nine water samples were analyzed for dissolved Iron and dissolved Manganese by SW-846 method 6010B and for Chloride by method SM 4500-CL-E.

The initial and continuing calibration criteria were met for all analytes.

All Blank Spike (LCS) recoveries were within QC limits.

No analytical or QC problems were encountered.

MassDEP Analytical Protocol Certification Form

Laboratory Name: Columbia Analytical Services, Inc. Project #:143267

Project Location: Varian Beverly RTN:

This Form provides certifications for the following data set: list Laboratory Sample ID Number(s):
R1106071 – 001 - 023

Matrices: X Groundwater ☐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 ☐	6850 Perchlorate CAM VIII B ☐	Other: CL by SM4500-Cl-E

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?	☐Yes X No[1]
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	X 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:** Laboratory Manager

Printed Name: Michael K. Perry **Date:** 11/1811 00002

CASE NARRATIVE

This report contains analytical results for the following samples:
Service Request Number: R1106071

Lab ID	Client ID
R1106071-001	CL-3-DO (79')
R1106071-002	CL-10DO (36')
R1106071-003	AP-19 (29')
R1106071-004	AP-20 (19')
R1106071-005	AP-21 (29')
R1106071-006	AP-22 (19')
R1106071-007	TB-2
R1106071-008	MW-13 (41')
R1106071-009	B-2 (11.5')
R1106071-010	BR-6-ZONE1
R1106071-011	BR-6-ZONE2
R1106071-012	BR-6-ZONE3
R1106071-013	OB35-DO (62')
R1106071-014	OB12-DO (48')
R1106071-015	OB19-DO (64')
R1106071-016	AP-26-DO (64')
R1106071-017	OB25-BR (99.5')
R1106071-018	EB-3
R1106071-019	MW-9A (13')
R1106071-020	B-3 (12')
R1106071-021	AP-13S (16')
R1106071-022	OB38-DO (45')
R1106071-023	AP27-DO (61')

Columbia Analytical Services™

REPORT QUALIFIERS

U	Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.
J	Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/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.

ACCREDITED IN ACCORDANCE WITH nelac

CAS/Rochester 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

COLUMBIA ANALYTICAL SERVICES
1565 JEFFERSON RD
BUILDING 300, SUITE 360
ROCHESTER, NY 14623-0000

Laboratory Director: Michael K. Perry

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: 01 JUL 2011
Expires: 30 JUN 2012

Director, Division of Environmental Analysis

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 25 AUG 2011

M-NY032 COLUMBIA ANALYTICAL SERVICES
ROCHESTER NY

NON POTABLE WATER (CHEMISTRY) Effective Date 25 AUG 2011 Expiration Date 30 JUN 2012

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
PH	SM 4500-H-B
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

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 25 AUG 2011

M-NY032 COLUMBIA ANALYTICAL SERVICES
ROCHESTER NY

NON POTABLE WATER (CHEMISTRY) Effective Date 25 AUG 2011 Expiration Date 30 JUN 2012

Analytes	Methods
ALKALINITY, TOTAL	SM 2320B
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

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106071
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/27/11 0800
Sample Matrix:	Water	**Date Received:**	10/28/11
		Date Analyzed:	11/4/11 20:23
Sample Name:	CL-3-DO (79')	**Units:**	µg/L
Lab Code:	R1106071-001	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	268266
Data File Name:	J:\ACQUDATA\msvoa10\data\110411\D5828.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)	**8.9**		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	**3.4**		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	11/4/11 20:23	
Dibromofluoromethane	101	70-130	11/4/11 20:23	
Toluene-d8	103	70-130	11/4/11 20:23	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106071
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/27/11 0900
Sample Matrix:	Water	**Date Received:**	10/28/11
		Date Analyzed:	11/4/11 20:53
Sample Name:	CL-10DO (36')	**Units:**	µg/L
Lab Code:	R1106071-002	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	268266
Data File Name:	J:\ACQUDATA\msvoa10\data\110411\D5829.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	99	70-130	11/4/11 20:53	
Dibromofluoromethane	100	70-130	11/4/11 20:53	
Toluene-d8	105	70-130	11/4/11 20:53	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106071
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/27/11 1000
Sample Matrix:	Water	**Date Received:**	10/28/11
Sample Name:	AP-19 (29')		
Lab Code:	R1106071-003	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chloride	SM 4500-Cl- E	1.0	U	mg/L	1.0	1	NA	11/1/11 13:51	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106071
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/27/11 1000
Sample Matrix:	Water	**Date Received:**	10/28/11
Sample Name:	AP-19 (29')		
Lab Code:	R1106071-003	**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	11/ 1/11	11/15/11 17:01	
Manganese, Dissolved	6010C	12		µg/L	10	1	11/ 1/11	11/15/11 17:01	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106071
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/27/11 1000
Sample Matrix:	Water	**Date Received:**	10/28/11
		Date Analyzed:	11/7/11 12:37
Sample Name:	AP-19 (29')	**Units:**	µg/L
Lab Code:	R1106071-003	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	268435
Data File Name:	J:\ACQUDATA\msvoa10\data\110711\D5884.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)	**260**		4.0	
79-01-6	Trichloroethene (TCE)	**36**		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	4.0	U	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	101	70-130	11/7/11 12:37	
Dibromofluoromethane	100	70-130	11/7/11 12:37	
Toluene-d8	107	70-130	11/7/11 12:37	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106071
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/27/11 1100
Sample Matrix:	Water	**Date Received:**	10/28/11
Sample Name:	AP-20 (19')		
Lab Code:	R1106071-004	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chloride	SM 4500-Cl- E	**2.0**		mg/L	1.0	1	NA	11/1/11 13:52	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106071
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/27/11 1100
Sample Matrix:	Water	**Date Received:**	10/28/11
Sample Name:	AP-20 (19')		
Lab Code:	R1106071-004	**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	11/ 1/11	11/15/11 17:07	
Manganese, Dissolved	6010C	**28**		µg/L	10	1	11/ 1/11	11/15/11 17:07	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106071
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/27/11 1100
Sample Matrix:	Water	**Date Received:**	10/28/11
		Date Analyzed:	11/7/11 13:06
Sample Name:	AP-20 (19')	**Units:**	µg/L
Lab Code:	R1106071-004	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	268435
Data File Name:	J:\ACQUDATA\msvoa10\data\110711\D5885.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)	7.0		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	11/7/11 13:06	
Dibromofluoromethane	100	70-130	11/7/11 13:06	
Toluene-d8	106	70-130	11/7/11 13:06	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106071
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/27/11 1200
Sample Matrix:	Water	**Date Received:**	10/28/11
Sample Name:	AP-21 (29')		
Lab Code:	R1106071-005	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chloride	SM 4500-Cl- E	**190**		mg/L	20	20	NA	11/1/11 14:12	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106071
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/27/11 1200
Sample Matrix:	Water	**Date Received:**	10/28/11
Sample Name:	AP-21 (29')		
Lab Code:	R1106071-005	**Basis:**	NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Iron, Dissolved	6010C	2500	U	µg/L	2500	5	11/ 1/11	11/16/11 19:58	
Manganese, Dissolved	6010C	**1080000**		µg/L	5000	100	11/ 1/11	11/15/11 17:25	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106071
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/27/11 1200
Sample Matrix:	Water	**Date Received:**	10/28/11
		Date Analyzed:	11/5/11 01:50
Sample Name:	AP-21 (29')	**Units:**	µg/L
Lab Code:	R1106071-005	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	268268
Data File Name:	J:\ACQUDATA\msvoa10\data\110411\D5839.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)	**190**		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	**13**		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	11/5/11 01:50	
Dibromofluoromethane	102	70-130	11/5/11 01:50	
Toluene-d8	103	70-130	11/5/11 01:50	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106071
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/27/11 1300
Sample Matrix:	Water	**Date Received:**	10/28/11
Sample Name:	AP-22 (19')		
Lab Code:	R1106071-006	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chloride	SM 4500-Cl- E	**225**		mg/L	20	20	NA	11/1/11 14:12	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106071
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/27/11 1300
Sample Matrix:	Water	**Date Received:**	10/28/11
Sample Name:	AP-22 (19')		
Lab Code:	R1106071-006	**Basis:**	NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Iron, Dissolved	6010C	2500	U	µg/L	2500	5	11/ 1/11	11/16/11 20:10	
Manganese, Dissolved	6010C	**1210000**		µg/L	5000	100	11/ 1/11	11/15/11 17:31	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106071
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/27/11 1300
Sample Matrix:	Water	**Date Received:**	10/28/11
		Date Analyzed:	11/5/11 02:20
Sample Name:	AP-22 (19')	**Units:**	µg/L
Lab Code:	R1106071-006	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	268268
Data File Name:	J:\ACQUDATA\msvoa10\data\110411\D5840.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	**15**		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	**2.8**		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	11/5/11 02:20	
Dibromofluoromethane	102	70-130	11/5/11 02:20	
Toluene-d8	105	70-130	11/5/11 02:20	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106071
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/27/11 0730
Sample Matrix:	Water	**Date Received:**	10/28/11
		Date Analyzed:	11/4/11 19:23
Sample Name:	TB-2	**Units:**	µg/L
Lab Code:	R1106071-007	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	268266
Data File Name:	J:\ACQUDATA\msvoa10\data\110411\D5826.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	99	70-130	11/4/11 19:23	
Dibromofluoromethane	102	70-130	11/4/11 19:23	
Toluene-d8	104	70-130	11/4/11 19:23	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106071
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/27/11 1330
Sample Matrix:	Water	**Date Received:**	10/28/11
Sample Name:	MW-13 (41')		
Lab Code:	R1106071-008	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chloride	SM 4500-Cl- E	**1410**		mg/L	50	50	NA	11/1/11 13:55	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106071
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/27/11 1330
Sample Matrix:	Water	**Date Received:**	10/28/11
Sample Name:	MW-13 (41')		
Lab Code:	R1106071-008	**Basis:**	NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Iron, Dissolved	6010C	500	U	µg/L	500	1	11/ 1/11	11/15/11 20:18	
Manganese, Dissolved	6010C	**506000**		µg/L	5000	100	11/ 1/11	11/15/11 17:37	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106071
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/27/11 1330
Sample Matrix:	Water	**Date Received:**	10/28/11
		Date Analyzed:	11/7/11 13:36
Sample Name:	MW-13 (41')	**Units:**	µg/L
Lab Code:	R1106071-008	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	268435
Data File Name:	J:\ACQUDATA\msvoa10\data\110711\D5886.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	2.5

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	**250**		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	**420**		5.0	
108-90-7	Chlorobenzene	**5.3**		5.0	
75-00-3	Chloroethane	5.0	U	5.0	
67-66-3	Chloroform	**240**		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)	**6.6**		5.0	
79-01-6	Trichloroethene (TCE)	5.0	U	5.0	
75-69-4	Trichlorofluoromethane (CFC 11)	5.0	U	5.0	
75-01-4	Vinyl Chloride	5.0	U	5.0	
156-59-2	cis-1,2-Dichloroethene	5.0	U	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	100	70-130	11/7/11 13:36	
Dibromofluoromethane	101	70-130	11/7/11 13:36	
Toluene-d8	105	70-130	11/7/11 13:36	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106071
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/27/11 1330
Sample Matrix:	Water	**Date Received:**	10/28/11
		Date Analyzed:	11/7/11 14:06
Sample Name:	B-2 (11.5')	**Units:**	µg/L
Lab Code:	R1106071-009	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	268435
Data File Name:	J:\ACQUDATA\msvoa10\data\110711\D5887.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)	**17**		2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	**190**		2.0	
156-59-2	cis-1,2-Dichloroethene	**180**		2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	**5.3**		2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	101	70-130	11/7/11 14:06	
Dibromofluoromethane	102	70-130	11/7/11 14:06	
Toluene-d8	107	70-130	11/7/11 14:06	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106071
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/27/11 1053
Sample Matrix:	Water	**Date Received:**	10/28/11
		Date Analyzed:	11/5/11 03:49
Sample Name:	BR-6-ZONE1	**Units:**	µg/L
Lab Code:	R1106071-010	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	268268
Data File Name:	J:\ACQUDATA\msvoa10\data\110411\D5843.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)	**2.3**		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	**24**		2.0	
156-59-2	cis-1,2-Dichloroethene	**210**	E	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	11/5/11 03:49	
Dibromofluoromethane	101	70-130	11/5/11 03:49	
Toluene-d8	104	70-130	11/5/11 03:49	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106071
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/27/11 1053
Sample Matrix:	Water	**Date Received:**	10/28/11
		Date Analyzed:	11/7/11 14:35
Sample Name:	BR-6-ZONE1	**Units:**	µg/L
Lab Code:	R1106071-010	**Basis:**	NA
Run Type:	Dilution		

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	268435
Data File Name:	J:\ACQUDATA\msvoa10\data\110711\D5888.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)	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	**23**	D	4.0	
156-59-2	cis-1,2-Dichloroethene	**200**	D	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	103	70-130	11/7/11 14:35	
Dibromofluoromethane	103	70-130	11/7/11 14:35	
Toluene-d8	107	70-130	11/7/11 14:35	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106071
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/27/11 1146
Sample Matrix:	Water	**Date Received:**	10/28/11
		Date Analyzed:	11/5/11 04:18
Sample Name:	BR-6-ZONE2	**Units:**	µg/L
Lab Code:	R1106071-011	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	268268
Data File Name:	J:\ACQUDATA\msvoa10\data\110411\D5844.D\	**Instrument Name:**	R-MS-10
		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)	5.0	U	5.0	
79-01-6	Trichloroethene (TCE)	5.0	U	5.0	
75-69-4	Trichlorofluoromethane (CFC 11)	5.0	U	5.0	
75-01-4	Vinyl Chloride	**21**		5.0	
156-59-2	cis-1,2-Dichloroethene	**400**		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	99	70-130	11/5/11 04:18	
Dibromofluoromethane	102	70-130	11/5/11 04:18	
Toluene-d8	105	70-130	11/5/11 04:18	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106071
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/27/11 1239
Sample Matrix:	Water	**Date Received:**	10/28/11
		Date Analyzed:	11/5/11 04:48
Sample Name:	BR-6-ZONE3	**Units:**	µg/L
Lab Code:	R1106071-012	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	268268
Data File Name:	J:\ACQUDATA\msvoa10\data\110411\D5845.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	**17**		2.0	
156-59-2	cis-1,2-Dichloroethene	**61**		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	11/5/11 04:48	
Dibromofluoromethane	103	70-130	11/5/11 04:48	
Toluene-d8	106	70-130	11/5/11 04:48	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106071
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/27/11 1330
Sample Matrix:	Water	**Date Received:**	10/28/11
Sample Name:	OB35-DO (62')		
Lab Code:	R1106071-013	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chloride	SM 4500-Cl- E	**84.3**		mg/L	1.0	1	NA	11/1/11 13:55	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106071
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/27/11 1330
Sample Matrix:	Water	**Date Received:**	10/28/11
Sample Name:	OB35-DO (62')		
Lab Code:	R1106071-013	**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	11/ 1/11	11/15/11 17:44	
Manganese, Dissolved	6010C	66		µg/L	10	1	11/ 1/11	11/15/11 17:44	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106071
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/27/11 1330
Sample Matrix:	Water	**Date Received:**	10/28/11
		Date Analyzed:	11/5/11 05:18
Sample Name:	OB35-DO (62')	**Units:**	µg/L
Lab Code:	R1106071-013	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	268268
Data File Name:	J:\ACQUDATA\msvoa10\data\110411\D5846.D\	**Instrument Name:**	R-MS-10
		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)	**29000**		400	
79-01-6	Trichloroethene (TCE)	**5000**		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	**950**		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	100	70-130	11/5/11 05:18	
Dibromofluoromethane	101	70-130	11/5/11 05:18	
Toluene-d8	105	70-130	11/5/11 05:18	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106071
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/26/11 0815
Sample Matrix:	Water	**Date Received:**	10/28/11
Sample Name:	OB12-DO (48')		
Lab Code:	R1106071-014	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chloride	SM 4500-Cl- E	**87.6**		mg/L	2.0	2	NA	11/1/11 14:14	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106071
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/26/11 0815
Sample Matrix:	Water	**Date Received:**	10/28/11
Sample Name:	OB12-DO (48')		
Lab Code:	R1106071-014	**Basis:**	NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Iron, Dissolved	6010C	500	U	µg/L	500	1	11/ 1/11	11/15/11 20:25	
Manganese, Dissolved	6010C	**54500**		µg/L	5000	100	11/ 1/11	11/15/11 17:50	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106071
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/26/11 0815
Sample Matrix:	Water	**Date Received:**	10/28/11
		Date Analyzed:	11/7/11 18:03
Sample Name:	OB12-DO (48')	**Units:**	µg/L
Lab Code:	R1106071-014	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	268435
Data File Name:	J:\ACQUDATA\msvoa10\data\110711\D5895.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	**2.4**		2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	**6.9**		2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	**2.2**		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	**2.8**		2.0	
127-18-4	Tetrachloroethene (PCE)	**3.4**		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	11/7/11 18:03	
Dibromofluoromethane	101	70-130	11/7/11 18:03	
Toluene-d8	107	70-130	11/7/11 18:03	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106071
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/26/11 0845
Sample Matrix:	Water	**Date Received:**	10/28/11
Sample Name:	OB19-DO (64')		
Lab Code:	R1106071-015	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chloride	SM 4500-Cl- E	**34.0**		mg/L	1.0	1	NA	11/1/11 13:57	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106071
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/26/11 0845
Sample Matrix:	Water	**Date Received:**	10/28/11
Sample Name:	OB19-DO (64')		
Lab Code:	R1106071-015	**Basis:**	NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Iron, Dissolved	6010C	**780**		µg/L	100	1	11/ 1/11	11/15/11 17:56	
Manganese, Dissolved	6010C	**3250**		µg/L	10	1	11/ 1/11	11/15/11 17:56	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106071
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/26/11 0845
Sample Matrix:	Water	**Date Received:**	10/28/11
		Date Analyzed:	11/5/11 06:17
Sample Name:	OB19-DO (64')	**Units:**	µg/L
Lab Code:	R1106071-015	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	268268
Data File Name:	J:\ACQUDATA\msvoa10\data\110411\D5848.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)	**720**		20	
79-01-6	Trichloroethene (TCE)	**3200**	E	20	
75-69-4	Trichlorofluoromethane (CFC 11)	20	U	20	
75-01-4	Vinyl Chloride	**79**		20	
156-59-2	cis-1,2-Dichloroethene	**1300**		20	
10061-01-5	cis-1,3-Dichloropropene	20	U	20	
156-60-5	trans-1,2-Dichloroethene	**53**		20	
10061-02-6	trans-1,3-Dichloropropene	20	U	20	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	99	70-130	11/5/11 06:17	
Dibromofluoromethane	102	70-130	11/5/11 06:17	
Toluene-d8	107	70-130	11/5/11 06:17	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106071
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/26/11 0845
Sample Matrix:	Water	**Date Received:**	10/28/11
		Date Analyzed:	11/7/11 15:35
Sample Name:	OB19-DO (64')	**Units:**	µg/L
Lab Code:	R1106071-015	**Basis:**	NA
Run Type:	Dilution		

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	268435
Data File Name:	J:\ACQUDATA\msvoa10\data\110711\D5890.D\	**Instrument Name:**	R-MS-10
		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)	**690**	D	50	
79-01-6	Trichloroethene (TCE)	**3200**	D	50	
75-69-4	Trichlorofluoromethane (CFC 11)	50	U	50	
75-01-4	Vinyl Chloride	**86**	D	50	
156-59-2	cis-1,2-Dichloroethene	**1300**	D	50	
10061-01-5	cis-1,3-Dichloropropene	50	U	50	
156-60-5	trans-1,2-Dichloroethene	**52**	D	50	
10061-02-6	trans-1,3-Dichloropropene	50	U	50	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	102	70-130	11/7/11 15:35	
Dibromofluoromethane	102	70-130	11/7/11 15:35	
Toluene-d8	108	70-130	11/7/11 15:35	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106071
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/26/11 0900
Sample Matrix:	Water	**Date Received:**	10/28/11
		Date Analyzed:	11/5/11 06:47
Sample Name:	AP-26-DO (64')	**Units:**	µg/L
Lab Code:	R1106071-016	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	268268
Data File Name:	J:\ACQUDATA\msvoa10\data\110411\D5849.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**		200	
79-01-6	Trichloroethene (TCE)	**28000**	E	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	101	70-130	11/5/11 06:47	
Dibromofluoromethane	101	70-130	11/5/11 06:47	
Toluene-d8	107	70-130	11/5/11 06:47	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106071
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/26/11 0900
Sample Matrix:	Water	**Date Received:**	10/28/11
		Date Analyzed:	11/7/11 16:05
Sample Name:	AP-26-DO (64')	**Units:**	µg/L
Lab Code:	R1106071-016	**Basis:**	NA
Run Type:	Dilution		

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	268435
Data File Name:	J:\ACQUDATA\msvoa10\data\110711\D5891.D\	**Instrument Name:**	R-MS-10
		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)	**9600**	D	500	
79-01-6	Trichloroethene (TCE)	**25000**	D	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	500	U	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	101	70-130	11/7/11 16:05	
Dibromofluoromethane	101	70-130	11/7/11 16:05	
Toluene-d8	108	70-130	11/7/11 16:05	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106071
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/26/11 0930
Sample Matrix:	Water	**Date Received:**	10/28/11
		Date Analyzed:	11/7/11 16:34
Sample Name:	OB25-BR (99.5')	**Units:**	µg/L
Lab Code:	R1106071-017	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	268435
Data File Name:	J:\ACQUDATA\msvoa10\data\110711\D5892.D\	**Instrument Name:**	R-MS-10
		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)	**1900**		400	
79-01-6	Trichloroethene (TCE)	**8800**		400	
75-69-4	Trichlorofluoromethane (CFC 11)	400	U	400	
75-01-4	Vinyl Chloride	**4000**		400	
156-59-2	cis-1,2-Dichloroethene	**22000**		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	101	70-130	11/7/11 16:34	
Dibromofluoromethane	102	70-130	11/7/11 16:34	
Toluene-d8	107	70-130	11/7/11 16:34	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106071
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/26/11 1000
Sample Matrix:	Water	**Date Received:**	10/28/11
		Date Analyzed:	11/4/11 19:53
Sample Name:	EB-3	**Units:**	µg/L
Lab Code:	R1106071-018	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	268266
Data File Name:	J:\ACQUDATA\msvoa10\data\110411\D5827.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	99	70-130	11/4/11 19:53	
Dibromofluoromethane	101	70-130	11/4/11 19:53	
Toluene-d8	104	70-130	11/4/11 19:53	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106071
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/26/11 1100
Sample Matrix:	Water	**Date Received:**	10/28/11
		Date Analyzed:	11/5/11 07:46
Sample Name:	MW-9A (13')	**Units:**	µg/L
Lab Code:	R1106071-019	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	268268
Data File Name:	J:\ACQUDATA\msvoa10\data\110411\D5851.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)	**4.9**		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	**97**		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	100	70-130	11/5/11 07:46	
Dibromofluoromethane	101	70-130	11/5/11 07:46	
Toluene-d8	106	70-130	11/5/11 07:46	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106071
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/26/11 1130
Sample Matrix:	Water	**Date Received:**	10/28/11
		Date Analyzed:	11/5/11 08:16
Sample Name:	B-3 (12')	**Units:**	µg/L
Lab Code:	R1106071-020	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	268268
Data File Name:	J:\ACQUDATA\msvoa10\data\110411\D5852.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
630-20-6	1,1,1,2-Tetrachloroethane	2.0	U	2.0	
71-55-6	1,1,1-Trichloroethane (TCA)	**69**		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)	**2.8**		2.0	
563-58-6	1,1-Dichloropropene	2.0	U	2.0	
87-61-6	1,2,3-Trichlorobenzene	2.0	U	2.0	
96-18-4	1,2,3-Trichloropropane	2.0	U	2.0	
120-82-1	1,2,4-Trichlorobenzene	2.0	U	2.0	
95-63-6	1,2,4-Trimethylbenzene	2.0	U	2.0	
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	2.0	U	2.0	
106-93-4	1,2-Dibromoethane	2.0	U	2.0	
95-50-1	1,2-Dichlorobenzene	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	
108-67-8	1,3,5-Trimethylbenzene	2.0	U	2.0	
541-73-1	1,3-Dichlorobenzene	2.0	U	2.0	
142-28-9	1,3-Dichloropropane	2.0	U	2.0	
106-46-7	1,4-Dichlorobenzene	2.0	U	2.0	
123-91-1	1,4-Dioxane	40	U	40	
594-20-7	2,2-Dichloropropane	2.0	U	2.0	
78-93-3	2-Butanone (MEK)	10	U	10	
95-49-8	2-Chlorotoluene	2.0	U	2.0	
591-78-6	2-Hexanone	10	U	10	
106-43-4	4-Chlorotoluene	2.0	U	2.0	
99-87-6	p-Isopropyltoluene	2.0	U	2.0	
108-10-1	4-Methyl-2-pentanone	10	U	10	
67-64-1	Acetone	10	U	10	
71-43-2	Benzene	2.0	U	2.0	
108-86-1	Bromobenzene	2.0	U	2.0	
74-97-5	Bromochloromethane	2.0	U	2.0	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106071
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/26/11 1130
Sample Matrix:	Water	**Date Received:**	10/28/11
		Date Analyzed:	11/5/11 08:16
Sample Name:	B-3 (12')	**Units:**	µg/L
Lab Code:	R1106071-020	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	268268
Data File Name:	J:\ACQUDATA\msvoa10\data\110411\D5852.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
74-83-9	Bromomethane	2.0	U	2.0	
75-15-0	Carbon Disulfide	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	
74-95-3	Dibromomethane	2.0	U	2.0	
75-71-8	Dichlorodifluoromethane (CFC 12)	2.0	U	2.0	
75-09-2	Dichloromethane	2.0	U	2.0	
60-29-7	Diethyl Ether	2.0	U	2.0	
108-20-3	Diisopropyl Ether	2.0	U	2.0	
637-92-3	Ethyl tert-Butyl Ether	2.0	U	2.0	
100-41-4	Ethylbenzene	2.0	U	2.0	
87-68-3	Hexachlorobutadiene	2.0	U	2.0	
98-82-8	Isopropylbenzene (Cumene)	2.0	U	2.0	
1634-04-4	Methyl tert-Butyl Ether	2.0	U	2.0	
91-20-3	Naphthalene	2.0	U	2.0	
100-42-5	Styrene	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	**16**		2.0	
109-99-9	Tetrahydrofuran (THF)	2.0	U	2.0	
108-88-3	Toluene	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	**13**		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	
179601-23-1	m,p-Xylenes	2.0	U	2.0	
104-51-8	n-Butylbenzene	2.0	U	2.0	
103-65-1	n-Propylbenzene	2.0	U	2.0	
95-47-6	o-Xylene	2.0	U	2.0	
135-98-8	sec-Butylbenzene	2.0	U	2.0	
994-05-8	tert-Amyl Methyl Ether	2.0	U	2.0	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106071
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/26/11 1130
Sample Matrix:	Water	**Date Received:**	10/28/11
		Date Analyzed:	11/5/11 08:16
Sample Name:	B-3 (12')	**Units:**	µg/L
Lab Code:	R1106071-020	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	268268
Data File Name:	J:\ACQUDATA\msvoa10\data\110411\D5852.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
98-06-6	tert-Butylbenzene	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	98	70-130	11/5/11 08:16	
Dibromofluoromethane	102	70-130	11/5/11 08:16	
Toluene-d8	104	70-130	11/5/11 08:16	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106071
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/26/11 1145
Sample Matrix:	Water	**Date Received:**	10/28/11
		Date Analyzed:	11/5/11 08:45
Sample Name:	AP-13S (16')	**Units:**	µg/L
Lab Code:	R1106071-021	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	268268
Data File Name:	J:\ACQUDATA\msvoa10\data\110411\D5853.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
630-20-6	1,1,1,2-Tetrachloroethane	2.0	U	2.0	
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	
563-58-6	1,1-Dichloropropene	2.0	U	2.0	
87-61-6	1,2,3-Trichlorobenzene	2.0	U	2.0	
96-18-4	1,2,3-Trichloropropane	2.0	U	2.0	
120-82-1	1,2,4-Trichlorobenzene	2.0	U	2.0	
95-63-6	1,2,4-Trimethylbenzene	2.0	U	2.0	
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	2.0	U	2.0	
106-93-4	1,2-Dibromoethane	2.0	U	2.0	
95-50-1	1,2-Dichlorobenzene	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	
108-67-8	1,3,5-Trimethylbenzene	2.0	U	2.0	
541-73-1	1,3-Dichlorobenzene	2.0	U	2.0	
142-28-9	1,3-Dichloropropane	2.0	U	2.0	
106-46-7	1,4-Dichlorobenzene	2.0	U	2.0	
123-91-1	1,4-Dioxane	40	U	40	
594-20-7	2,2-Dichloropropane	2.0	U	2.0	
78-93-3	2-Butanone (MEK)	10	U	10	
95-49-8	2-Chlorotoluene	2.0	U	2.0	
591-78-6	2-Hexanone	10	U	10	
106-43-4	4-Chlorotoluene	2.0	U	2.0	
99-87-6	p-Isopropyltoluene	2.0	U	2.0	
108-10-1	4-Methyl-2-pentanone	10	U	10	
67-64-1	Acetone	10	U	10	
71-43-2	Benzene	2.0	U	2.0	
108-86-1	Bromobenzene	2.0	U	2.0	
74-97-5	Bromochloromethane	2.0	U	2.0	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106071
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/26/11 1145
Sample Matrix:	Water	**Date Received:**	10/28/11
		Date Analyzed:	11/5/11 08:45
Sample Name:	AP-13S (16')	**Units:**	µg/L
Lab Code:	R1106071-021	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	268268
Data File Name:	J:\ACQUDATA\msvoa10\data\110411\D5853.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
74-83-9	Bromomethane	2.0	U	2.0	
75-15-0	Carbon Disulfide	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	
74-95-3	Dibromomethane	2.0	U	2.0	
75-71-8	Dichlorodifluoromethane (CFC 12)	2.0	U	2.0	
75-09-2	Dichloromethane	2.0	U	2.0	
60-29-7	Diethyl Ether	2.0	U	2.0	
108-20-3	Diisopropyl Ether	2.0	U	2.0	
637-92-3	Ethyl tert-Butyl Ether	2.0	U	2.0	
100-41-4	Ethylbenzene	2.0	U	2.0	
87-68-3	Hexachlorobutadiene	2.0	U	2.0	
98-82-8	Isopropylbenzene (Cumene)	2.0	U	2.0	
1634-04-4	Methyl tert-Butyl Ether	2.0	U	2.0	
91-20-3	Naphthalene	2.0	U	2.0	
100-42-5	Styrene	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	**3.6**		2.0	
109-99-9	Tetrahydrofuran (THF)	2.0	U	2.0	
108-88-3	Toluene	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	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	
179601-23-1	m,p-Xylenes	2.0	U	2.0	
104-51-8	n-Butylbenzene	2.0	U	2.0	
103-65-1	n-Propylbenzene	2.0	U	2.0	
95-47-6	o-Xylene	2.0	U	2.0	
135-98-8	sec-Butylbenzene	2.0	U	2.0	
994-05-8	tert-Amyl Methyl Ether	2.0	U	2.0	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106071
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/26/11 1145
Sample Matrix:	Water	**Date Received:**	10/28/11
		Date Analyzed:	11/5/11 08:45
Sample Name:	AP-13S (16')	**Units:**	µg/L
Lab Code:	R1106071-021	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	268268
Data File Name:	J:\ACQUDATA\msvoa10\data\110411\D5853.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
98-06-6	tert-Butylbenzene	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	98	70-130	11/5/11 08:45	
Dibromofluoromethane	101	70-130	11/5/11 08:45	
Toluene-d8	103	70-130	11/5/11 08:45	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106071
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/26/11 1230
Sample Matrix:	Water	**Date Received:**	10/28/11
		Date Analyzed:	11/5/11 09:15
Sample Name:	OB38-DO (45')	**Units:**	µg/L
Lab Code:	R1106071-022	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	268268
Data File Name:	J:\ACQUDATA\msvoa10\data\110411\D5854.D\	**Instrument Name:**	R-MS-10
		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)	**600**	E	5.0	
79-01-6	Trichloroethene (TCE)	**390**		5.0	
75-69-4	Trichlorofluoromethane (CFC 11)	5.0	U	5.0	
75-01-4	Vinyl Chloride	**5.2**		5.0	
156-59-2	cis-1,2-Dichloroethene	**280**		5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0	U	5.0	
156-60-5	trans-1,2-Dichloroethene	**5.7**		5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0	U	5.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	99	70-130	11/5/11 09:15	
Dibromofluoromethane	101	70-130	11/5/11 09:15	
Toluene-d8	105	70-130	11/5/11 09:15	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106071
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/26/11 1230
Sample Matrix:	Water	**Date Received:**	10/28/11
		Date Analyzed:	11/7/11 17:04
Sample Name:	OB38-DO (45')	**Units:**	µg/L
Lab Code:	R1106071-022	**Basis:**	NA
Run Type:	Dilution		

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	268435
Data File Name:	J:\ACQUDATA\msvoa10\data\110711\D5893.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)	**520**	D	10	
79-01-6	Trichloroethene (TCE)	**360**	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	**260**	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	100	70-130	11/7/11 17:04	
Dibromofluoromethane	100	70-130	11/7/11 17:04	
Toluene-d8	106	70-130	11/7/11 17:04	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106071
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/26/11 1315
Sample Matrix:	Water	**Date Received:**	10/28/11
Sample Name:	AP27-DO (61')		
Lab Code:	R1106071-023	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chloride	SM 4500-Cl- E	**140**		mg/L	2.0	2	NA	11/1/11 14:14	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106071
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/26/11 1315
Sample Matrix:	Water	**Date Received:**	10/28/11
Sample Name:	AP27-DO (61')		
Lab Code:	R1106071-023	**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	11/ 1/11	11/15/11 18:02	
Manganese, Dissolved	6010C	**2760**		µg/L	10	1	11/ 1/11	11/15/11 18:02	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106071
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/26/11 1315
Sample Matrix:	Water	**Date Received:**	10/28/11
		Date Analyzed:	11/5/11 09:44
Sample Name:	AP27-DO (61')	**Units:**	µg/L
Lab Code:	R1106071-023	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	268268
Data File Name:	J:\ACQUDATA\msvoa10\data\110411\D5855.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)	**2.7**		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)	**170**		2.0	
79-01-6	Trichloroethene (TCE)	**6600**	E	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	**3.1**		2.0	
156-59-2	cis-1,2-Dichloroethene	**80**		2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	**37**		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	11/5/11 09:44	
Dibromofluoromethane	102	70-130	11/5/11 09:44	
Toluene-d8	109	70-130	11/5/11 09:44	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106071
Project:	Varian Beverly/143267-04000000	**Date Collected:**	10/26/11 1315
Sample Matrix:	Water	**Date Received:**	10/28/11
		Date Analyzed:	11/8/11 20:20
Sample Name:	AP27-DO (61')	**Units:**	µg/L
Lab Code:	R1106071-023	**Basis:**	NA
Run Type:	Dilution		

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	268634
Data File Name:	J:\ACQUDATA\msvoa10\data\110811\D5947.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)	**12000**	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	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	103	70-130	11/8/11 20:20	
Dibromofluoromethane	101	70-130	11/8/11 20:20	
Toluene-d8	108	70-130	11/8/11 20:20	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106071
Project:	Varian Beverly/143267-04000000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank		
Lab Code:	R1106071-MB1	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chloride	SM 4500-Cl- E	1.0	U	mg/L	1.0	1	NA	11/1/11 13:38	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106071
Project:	Varian Beverly/143267-04000000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank		
Lab Code:	R1106071-MB2	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chloride	SM 4500-Cl- E	1.0	U	mg/L	1.0	1	NA	11/1/11 13:53	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106071
Project:	Varian Beverly/143267-04000000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank		
Lab Code:	R1106071-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	11/ 1/11	11/15/11 16:10	
Manganese, Dissolved	6010C	10	U	µg/L	10	1	11/ 1/11	11/15/11 16:10	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106071
Project:	Varian Beverly/143267-04000000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	11/4/11 13:27
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1111377-01	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	268266
Data File Name:	J:\ACQUDATA\msvoa10\data\110411\D5814.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	98	70-130	11/4/11 13:27	
Dibromofluoromethane	100	70-130	11/4/11 13:27	
Toluene-d8	105	70-130	11/4/11 13:27	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106071
Project:	Varian Beverly/143267-04000000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	11/5/11 01:20
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1111543-01	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	268268
Data File Name:	J:\ACQUDATA\msvoa10\data\110411\D5838.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
630-20-6	1,1,1,2-Tetrachloroethane	2.0	U	2.0	
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	
563-58-6	1,1-Dichloropropene	2.0	U	2.0	
87-61-6	1,2,3-Trichlorobenzene	2.0	U	2.0	
96-18-4	1,2,3-Trichloropropane	2.0	U	2.0	
120-82-1	1,2,4-Trichlorobenzene	2.0	U	2.0	
95-63-6	1,2,4-Trimethylbenzene	2.0	U	2.0	
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	2.0	U	2.0	
106-93-4	1,2-Dibromoethane	2.0	U	2.0	
95-50-1	1,2-Dichlorobenzene	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	
108-67-8	1,3,5-Trimethylbenzene	2.0	U	2.0	
541-73-1	1,3-Dichlorobenzene	2.0	U	2.0	
142-28-9	1,3-Dichloropropane	2.0	U	2.0	
106-46-7	1,4-Dichlorobenzene	2.0	U	2.0	
123-91-1	1,4-Dioxane	40	U	40	
594-20-7	2,2-Dichloropropane	2.0	U	2.0	
78-93-3	2-Butanone (MEK)	10	U	10	
95-49-8	2-Chlorotoluene	2.0	U	2.0	
591-78-6	2-Hexanone	10	U	10	
106-43-4	4-Chlorotoluene	2.0	U	2.0	
99-87-6	p-Isopropyltoluene	2.0	U	2.0	
108-10-1	4-Methyl-2-pentanone	10	U	10	
67-64-1	Acetone	10	U	10	
71-43-2	Benzene	2.0	U	2.0	
108-86-1	Bromobenzene	2.0	U	2.0	
74-97-5	Bromochloromethane	2.0	U	2.0	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106071
Project:	Varian Beverly/143267-04000000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	11/5/11 01:20
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1111543-01	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	268268
Data File Name:	J:\ACQUDATA\msvoa10\data\110411\D5838.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
74-83-9	Bromomethane	2.0	U	2.0	
75-15-0	Carbon Disulfide	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	
74-95-3	Dibromomethane	2.0	U	2.0	
75-71-8	Dichlorodifluoromethane (CFC 12)	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
60-29-7	Diethyl Ether	2.0	U	2.0	
108-20-3	Diisopropyl Ether	2.0	U	2.0	
637-92-3	Ethyl tert-Butyl Ether	2.0	U	2.0	
100-41-4	Ethylbenzene	2.0	U	2.0	
87-68-3	Hexachlorobutadiene	2.0	U	2.0	
98-82-8	Isopropylbenzene (Cumene)	2.0	U	2.0	
1634-04-4	Methyl tert-Butyl Ether	2.0	U	2.0	
91-20-3	Naphthalene	2.0	U	2.0	
100-42-5	Styrene	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
109-99-9	Tetrahydrofuran (THF)	2.0	U	2.0	
108-88-3	Toluene	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	
179601-23-1	m,p-Xylenes	2.0	U	2.0	
104-51-8	n-Butylbenzene	2.0	U	2.0	
103-65-1	n-Propylbenzene	2.0	U	2.0	
95-47-6	o-Xylene	2.0	U	2.0	
135-98-8	sec-Butylbenzene	2.0	U	2.0	
994-05-8	tert-Amyl Methyl Ether	2.0	U	2.0	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106071
Project:	Varian Beverly/143267-04000000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	11/5/11 01:20
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1111543-01	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	268268
Data File Name:	J:\ACQUDATA\msvoa10\data\110411\D5838.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
98-06-6	tert-Butylbenzene	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	98	70-130	11/5/11 01:20	
Dibromofluoromethane	100	70-130	11/5/11 01:20	
Toluene-d8	106	70-130	11/5/11 01:20	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106071
Project:	Varian Beverly/143267-04000000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	11/7/11 12:07
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1111357-01	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	268435
Data File Name:	J:\ACQUDATA\msvoa10\data\110711\D5883.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	101	70-130	11/7/11 12:07	
Dibromofluoromethane	102	70-130	11/7/11 12:07	
Toluene-d8	106	70-130	11/7/11 12:07	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106071
Project:	Varian Beverly/143267-04000000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	11/8/11 15:53
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1111455-01	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	268634
Data File Name:	J:\ACQUDATA\msvoa10\data\110811\D5938.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	102	70-130	11/8/11 15:53	
Dibromofluoromethane	101	70-130	11/8/11 15:53	
Toluene-d8	107	70-130	11/8/11 15:53	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian Beverly/143267-04000000
Sample Matrix: Water

Service Request: R1106071
Date Analyzed: 11/ 1/11

Lab Control Sample Summary
General Chemistry Parameters

Units: mg/L
Basis: NA

Analyte Name	Method	Lab Control Sample R1106071-LCS1 Result	Spike Amount	% Rec	% Rec Limits
Chloride	SM 4500-Cl- E	25.3	25.0	101	86 - 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.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian Beverly/143267-04000000
Sample Matrix: Water

Service Request: R1106071
Date Analyzed: 11/ 1/11

Lab Control Sample Summary
General Chemistry Parameters

Units: mg/L
Basis: NA

Analyte Name	Method	Lab Control Sample R1106071-LCS2 Result	Spike Amount	% Rec	% Rec Limits
Chloride	SM 4500-Cl- E	25.3	25.0	101	86 - 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.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian Beverly/143267-04000000
Sample Matrix: Water

Service Request: R1106071
Date Analyzed: 11/15/11

Lab Control Sample Summary
Inorganic Parameters

Units: µg/L
Basis: NA

		Lab Control Sample R1106071-LCS			
Analyte Name	**Method**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**
Iron, Dissolved	6010C	1020	1000	102	80 - 120
Manganese, Dissolved	6010C	500	500	100	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.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian Beverly/143267-04000000
Sample Matrix: Water

Service Request: R1106071
Date Analyzed: 11/ 4/11

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260C

Units: µg/L
Basis: NA

Analysis Lot: 268266

Analyte Name	Lab Control Sample RQ1111377-02 Result	Spike Amount	% Rec	Duplicate Lab Control Sample RQ1111377-03 Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
1,1,1-Trichloroethane (TCA)	18.6	20.0	93	18.8	20.0	94	70 - 130	<1	20
1,1,2,2-Tetrachloroethane	20.5	20.0	102	20.6	20.0	103	70 - 130	<1	20
1,1,2-Trichloroethane	19.6	20.0	98	19.7	20.0	98	70 - 130	<1	20
1,1-Dichloroethane (1,1-DCA)	20.0	20.0	100	19.9	20.0	99	70 - 130	<1	20
1,1-Dichloroethene (1,1-DCE)	17.7	20.0	89	17.8	20.0	89	70 - 130	<1	20
1,2-Dichloroethane	20.4	20.0	102	20.8	20.0	104	70 - 130	2	20
1,2-Dichloropropane	20.5	20.0	103	20.0	20.0	100	70 - 130	3	20
Acetone	18.5	20.0	93	18.1	20.0	90	40 - 160	2	20
Bromodichloromethane	20.8	20.0	104	20.7	20.0	103	70 - 130	<1	20
Bromoform	21.8	20.0	109	22.3	20.0	112	70 - 130	2	20
Bromomethane	16.5	20.0	83	15.9	20.0	79	40 - 160	4	20
Carbon Tetrachloride	20.9	20.0	104	19.7	20.0	99	70 - 130	6	20
Chlorobenzene	19.9	20.0	99	19.8	20.0	99	70 - 130	<1	20
Chloroethane	19.2	20.0	96	19.2	20.0	96	70 - 130	<1	20
Chloroform	19.7	20.0	99	20.2	20.0	101	70 - 130	2	20
Chloromethane	15.4	20.0	77	15.8	20.0	79	40 - 160	3	20
Dibromochloromethane	21.8	20.0	109	21.5	20.0	108	70 - 130	1	20
Methylene Chloride	19.4	20.0	97	19.4	20.0	97	70 - 130	<1	20
Tetrachloroethene (PCE)	19.3	20.0	96	19.1	20.0	96	70 - 130	<1	20
Trichloroethene (TCE)	18.9	20.0	95	18.7	20.0	93	70 - 130	2	20
Trichlorofluoromethane (CFC 11)	18.7	20.0	94	19.3	20.0	96	70 - 130	3	20
Vinyl Chloride	18.3	20.0	92	18.6	20.0	93	70 - 130	1	20
cis-1,2-Dichloroethene	19.8	20.0	99	19.9	20.0	100	70 - 130	<1	20
cis-1,3-Dichloropropene	20.0	20.0	100	20.1	20.0	100	70 - 130	<1	20
trans-1,2-Dichloroethene	18.7	20.0	94	18.6	20.0	93	70 - 130	<1	20
trans-1,3-Dichloropropene	19.8	20.0	99	20.1	20.0	101	70 - 130	1	20

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COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian Beverly/143267-04000000
Sample Matrix: Water

Service Request: R1106071
Date Analyzed: 11/ 4/11 - 11/ 5/11

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260C

Units: µg/L
Basis: NA

Analysis Lot: 268268

	Lab Control Sample RQ1111543-02			Duplicate Lab Control Sample RQ1111543-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
1,1,1,2-Tetrachloroethane	21.8	20.0	109	20.8	20.0	104	70 - 130	5	20
1,1,1-Trichloroethane (TCA)	20.1	20.0	101	19.2	20.0	96	70 - 130	5	20
1,1,2,2-Tetrachloroethane	18.8	20.0	94	18.9	20.0	95	70 - 130	<1	20
1,1,2-Trichloroethane	20.1	20.0	101	19.9	20.0	100	70 - 130	1	20
1,1-Dichloroethane (1,1-DCA)	21.1	20.0	106	20.3	20.0	102	70 - 130	4	20
1,1-Dichloroethene (1,1-DCE)	18.8	20.0	94	18.0	20.0	90	70 - 130	4	20
1,1-Dichloropropene	20.3	20.0	101	19.8	20.0	99	70 - 130	2	20
1,2,3-Trichlorobenzene	21.6	20.0	108	20.5	20.0	102	70 - 130	5	20
1,2,3-Trichloropropane	20.0	20.0	100	19.1	20.0	95	70 - 130	4	20
1,2,4-Trichlorobenzene	19.7	20.0	98	18.7	20.0	94	70 - 130	5	20
1,2,4-Trimethylbenzene	21.1	20.0	106	20.2	20.0	101	70 - 130	4	20
1,2-Dibromo-3-chloropropane (DBCP)	20.1	20.0	100	18.9	20.0	95	70 - 130	6	20
1,2-Dibromoethane	20.2	20.0	101	20.0	20.0	100	70 - 130	<1	20
1,2-Dichlorobenzene	20.4	20.0	102	19.3	20.0	96	70 - 130	5	20
1,2-Dichloroethane	21.2	20.0	106	20.9	20.0	105	70 - 130	1	20
1,2-Dichloropropane	21.0	20.0	105	20.7	20.0	104	70 - 130	1	20
1,3,5-Trimethylbenzene	21.2	20.0	106	20.3	20.0	101	70 - 130	4	20
1,3-Dichlorobenzene	20.9	20.0	105	20.0	20.0	100	70 - 130	4	20
1,3-Dichloropropane	20.6	20.0	103	20.3	20.0	101	70 - 130	2	20
1,4-Dichlorobenzene	20.6	20.0	103	19.6	20.0	98	70 - 130	5	20
1,4-Dioxane	475	400	119	432	400	108	40 - 160	9	20
2,2-Dichloropropane	16.6	20.0	83	15.5	20.0	77	70 - 130	7	20
2-Butanone (MEK)	19.3	20.0	97	18.2	20.0	91	40 - 160	6	20
2-Chlorotoluene	21.6	20.0	108	20.6	20.0	103	70 - 130	4	20
2-Hexanone	19.8	20.0	99	19.8	20.0	99	40 - 160	<1	20
4-Chlorotoluene	21.7	20.0	109	20.7	20.0	103	70 - 130	5	20
p-Isopropyltoluene	20.8	20.0	104	19.7	20.0	98	70 - 130	5	20
4-Methyl-2-pentanone	20.0	20.0	100	20.5	20.0	103	40 - 160	3	20
Acetone	18.9	20.0	94	21.3	20.0	106	40 - 160	12	20
Benzene	20.1	20.0	100	19.4	20.0	97	70 - 130	3	20
Bromobenzene	20.1	20.0	101	19.3	20.0	97	70 - 130	4	20
Bromochloromethane	20.5	20.0	102	19.9	20.0	100	70 - 130	3	20

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COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian Beverly/143267-04000000
Sample Matrix: Water

Service Request: R1106071
Date Analyzed: 11/ 4/11 - 11/ 5/11

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260C

Units: µg/L
Basis: NA

Analysis Lot: 268268

Analyte Name	Lab Control Sample RQ1111543-02 Result	Spike Amount	% Rec	Duplicate Lab Control Sample RQ1111543-03 Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Bromodichloromethane	21.7	20.0	108	21.2	20.0	106	70 - 130	2	20
Bromoform	22.5	20.0	113	22.5	20.0	112	70 - 130	<1	20
Bromomethane	14.4	20.0	72	14.3	20.0	71	40 - 160	<1	20
Carbon Disulfide	22.1	20.0	110	21.0	20.0	105	70 - 130	5	20
Carbon Tetrachloride	21.4	20.0	107	20.6	20.0	103	70 - 130	4	20
Chlorobenzene	21.0	20.0	105	20.2	20.0	101	70 - 130	4	20
Chloroethane	20.1	20.0	101	19.4	20.0	97	70 - 130	4	20
Chloroform	20.9	20.0	104	20.4	20.0	102	70 - 130	3	20
Chloromethane	16.6	20.0	83	15.7	20.0	78	40 - 160	5	20
Dibromochloromethane	22.5	20.0	112	22.4	20.0	112	70 - 130	<1	20
Dibromomethane	19.7	20.0	98	19.2	20.0	96	70 - 130	3	20
Dichlorodifluoromethane (CFC 12)	15.9	20.0	80	15.2	20.0	76	40 - 160	4	20
Methylene Chloride	20.1	20.0	100	19.7	20.0	98	70 - 130	2	20
Diethyl Ether	20.3	20.0	101	19.9	20.0	100	70 - 130	2	20
Diisopropyl Ether	20.8	20.0	104	20.2	20.0	101	70 - 130	3	20
Ethyl tert-Butyl Ether	19.7	20.0	99	19.1	20.0	95	70 - 130	3	20
Ethylbenzene	20.8	20.0	104	20.3	20.0	101	70 - 130	3	20
Hexachlorobutadiene	19.2	20.0	96	16.7	20.0	84	70 - 130	14	20
Isopropylbenzene (Cumene)	22.7	20.0	114	21.8	20.0	109	70 - 130	4	20
Methyl tert-Butyl Ether	19.3	20.0	97	18.8	20.0	94	70 - 130	2	20
Naphthalene	21.3	20.0	107	20.2	20.0	101	70 - 130	6	20
Styrene	20.7	20.0	103	20.2	20.0	101	70 - 130	2	20
Tetrachloroethene (PCE)	20.4	20.0	102	19.3	20.0	96	70 - 130	5	20
Tetrahydrofuran (THF)	17.8	20.0	89	18.6	20.0	93	70 - 130	4	20
Toluene	20.7	20.0	104	19.9	20.0	99	70 - 130	4	20
Trichloroethene (TCE)	21.3	20.0	107	20.2	20.0	101	70 - 130	5	20
Trichlorofluoromethane (CFC 11)	20.5	20.0	102	19.2	20.0	96	70 - 130	6	20
Vinyl Chloride	19.4	20.0	97	19.1	20.0	95	70 - 130	2	20
cis-1,2-Dichloroethene	20.9	20.0	105	20.4	20.0	102	70 - 130	3	20
cis-1,3-Dichloropropene	19.6	20.0	98	19.0	20.0	95	70 - 130	3	20
m,p-Xylenes	41.5	40.0	104	39.6	40.0	99	70 - 130	5	20
n-Butylbenzene	20.9	20.0	104	19.4	20.0	97	70 - 130	7	20

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COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian Beverly/143267-04000000
Sample Matrix: Water

Service Request: R1106071
Date Analyzed: 11/ 4/11 - 11/ 5/11

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260C

Units: µg/L
Basis: NA

Analysis Lot: 268268

	Lab Control Sample RQ1111543-02			Duplicate Lab Control Sample RQ1111543-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
n-Propylbenzene	21.5	20.0	108	20.4	20.0	102	70 - 130	5	20
o-Xylene	20.6	20.0	103	19.9	20.0	100	70 - 130	4	20
sec-Butylbenzene	20.9	20.0	104	19.7	20.0	99	70 - 130	6	20
tert-Amyl Methyl Ether	19.1	20.0	95	18.9	20.0	95	70 - 130	<1	20
tert-Butylbenzene	20.4	20.0	102	19.3	20.0	96	70 - 130	6	20
trans-1,2-Dichloroethene	20.0	20.0	100	19.3	20.0	96	70 - 130	4	20
trans-1,3-Dichloropropene	19.3	20.0	96	19.2	20.0	96	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, INC.

QA/QC Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian Beverly/143267-04000000
Sample Matrix: Water

Service Request: R1106071
Date Analyzed: 11/ 7/11

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260C

Units: µg/L
Basis: NA

Analysis Lot: 268435

Analyte Name	Lab Control Sample RQ1111357-02 Result	Spike Amount	% Rec	Duplicate Lab Control Sample RQ1111357-03 Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
1,1,1-Trichloroethane (TCA)	18.2	20.0	91	18.5	20.0	93	70 - 130	2	20
1,1,2,2-Tetrachloroethane	19.2	20.0	96	19.7	20.0	98	70 - 130	3	20
1,1,2-Trichloroethane	18.9	20.0	94	19.3	20.0	97	70 - 130	3	20
1,1-Dichloroethane (1,1-DCA)	19.7	20.0	99	19.1	20.0	96	70 - 130	3	20
1,1-Dichloroethene (1,1-DCE)	17.2	20.0	86	17.5	20.0	87	70 - 130	1	20
1,2-Dichloroethane	19.8	20.0	99	20.0	20.0	100	70 - 130	<1	20
1,2-Dichloropropane	19.8	20.0	99	19.7	20.0	98	70 - 130	<1	20
Acetone	19.2	20.0	96	16.6	20.0	83	40 - 160	15	20
Bromodichloromethane	20.4	20.0	102	20.3	20.0	102	70 - 130	<1	20
Bromoform	22.8	20.0	114	22.9	20.0	115	70 - 130	<1	20
Bromomethane	13.3	20.0	67	13.1	20.0	65	40 - 160	2	20
Carbon Tetrachloride	19.8	20.0	99	20.2	20.0	101	70 - 130	2	20
Chlorobenzene	19.1	20.0	96	19.1	20.0	96	70 - 130	<1	20
Chloroethane	18.6	20.0	93	18.6	20.0	93	70 - 130	<1	20
Chloroform	19.6	20.0	98	19.4	20.0	97	70 - 130	1	20
Chloromethane	15.5	20.0	77	14.9	20.0	74	40 - 160	4	20
Dibromochloromethane	20.9	20.0	105	21.0	20.0	105	70 - 130	<1	20
Methylene Chloride	19.3	20.0	96	18.7	20.0	94	70 - 130	3	20
Tetrachloroethene (PCE)	18.5	20.0	93	18.6	20.0	93	70 - 130	<1	20
Trichloroethene (TCE)	18.2	20.0	91	18.5	20.0	92	70 - 130	1	20
Trichlorofluoromethane (CFC 11)	19.1	20.0	96	18.8	20.0	94	70 - 130	1	20
Vinyl Chloride	18.0	20.0	90	17.8	20.0	89	70 - 130	<1	20
cis-1,2-Dichloroethene	19.7	20.0	98	19.7	20.0	98	70 - 130	<1	20
cis-1,3-Dichloropropene	19.3	20.0	97	19.2	20.0	96	70 - 130	<1	20
trans-1,2-Dichloroethene	18.6	20.0	93	18.4	20.0	92	70 - 130	<1	20
trans-1,3-Dichloropropene	19.1	20.0	96	19.5	20.0	97	70 - 130	2	20

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COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian Beverly/143267-04000000
Sample Matrix: Water

Service Request: R1106071
Date Analyzed: 11/ 8/11

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260C

Units: µg/L
Basis: NA

Analysis Lot: 268634

Analyte Name	Lab Control Sample RQ1111455-02 Result	Spike Amount	% Rec	Duplicate Lab Control Sample RQ1111455-03 Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
1,1,1-Trichloroethane (TCA)	21.2	20.0	106	22.0	20.0	110	70 - 130	4	20
1,1,2,2-Tetrachloroethane	21.5	20.0	107	21.5	20.0	107	70 - 130	<1	20
1,1,2-Trichloroethane	20.6	20.0	103	21.4	20.0	107	70 - 130	3	20
1,1-Dichloroethane (1,1-DCA)	22.3	20.0	112	22.9	20.0	115	70 - 130	3	20
1,1-Dichloroethene (1,1-DCE)	20.5	20.0	102	21.2	20.0	106	70 - 130	4	20
1,2-Dichloroethane	21.6	20.0	108	22.4	20.0	112	70 - 130	4	20
1,2-Dichloropropane	21.8	20.0	109	22.3	20.0	112	70 - 130	3	20
Acetone	20.4	20.0	102	20.2	20.0	101	40 - 160	<1	20
Bromodichloromethane	22.4	20.0	112	23.2	20.0	116	70 - 130	3	20
Bromoform	23.7	20.0	119	24.3	20.0	121	70 - 130	2	20
Bromomethane	17.1	20.0	86	17.5	20.0	88	40 - 160	2	20
Carbon Tetrachloride	22.9	20.0	114	24.1	20.0	121	70 - 130	5	20
Chlorobenzene	21.2	20.0	106	21.7	20.0	108	70 - 130	2	20
Chloroethane	22.5	20.0	112	23.4	20.0	117	70 - 130	4	20
Chloroform	22.2	20.0	111	22.6	20.0	113	70 - 130	2	20
Chloromethane	20.2	20.0	101	20.3	20.0	101	40 - 160	<1	20
Dibromochloromethane	22.7	20.0	114	23.0	20.0	115	70 - 130	1	20
Methylene Chloride	21.3	20.0	106	21.6	20.0	108	70 - 130	1	20
Tetrachloroethene (PCE)	20.6	20.0	103	21.4	20.0	107	70 - 130	4	20
Trichloroethene (TCE)	20.7	20.0	103	21.4	20.0	107	70 - 130	3	20
Trichlorofluoromethane (CFC 11)	23.0	20.0	115	23.7	20.0	119	70 - 130	3	20
Vinyl Chloride	23.7	20.0	118	24.3	20.0	122	70 - 130	3	20
cis-1,2-Dichloroethene	22.2	20.0	111	22.3	20.0	112	70 - 130	<1	20
cis-1,3-Dichloropropene	21.7	20.0	108	21.8	20.0	109	70 - 130	<1	20
trans-1,2-Dichloroethene	21.1	20.0	105	22.0	20.0	110	70 - 130	4	20
trans-1,3-Dichloropropene	21.2	20.0	106	21.6	20.0	108	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.

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 _____ OF _____

Project Name: Varian Beverly	Project Number: 143267-04000000
Project Manager: Raymond Cadorette	Report CC: Sheila Barry
Company/Address: Shaw Environmental, Inc. 100 Technology Center Drive Stoughton, MA 02072	
Phone #: 617-589-6102	E-mail: Raymond.Cadorette@Shawgrp.com
Sampler's Signature:	Sampler's Printed Name: Matthew Visocki

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

PRESERVATIVE: 1 2 0 1

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	GCMS VOA's SIM 8260 ☐ 624 ☐ GLP List	GCMS 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	8260 Full List	REMARKS/ ALTERNATE DESCRIPTION
OB12-DO(48')		10/24/11	0815	GW	5							✓	✓		
OB19-DO(64')			0845		5	✓						✓	✓		
AP-26-DO(64')			0900		3	✓									
OB25-BE(99.5)			0930		3	✓									
EB-3			1000		3	✓									
MW-9A(13')			1100		3	✓									
B-3(12')			1130		3								✓		
AP-13S(16')			1145		3								✓		
OB38-DO(45')			1230		3	✓									
AP27-DO(61')			1315	↓	5	✓						✓	✓		

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 = FE & Mn are field filtered
Site specific VOC list.
Massachusetts CAM analyses reporting and QA/QC.
Email GISKey formatted EDD and PDF of report to:
Catherine.Mainville@Shawgrp.com

LAB PO # 727459

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 #:
BILL TO: Shaw Environmental

STATE WHERE SAMPLES WERE COLLECTED: MASS

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	
Signature:	Signature:	Signature:	Signature:	Signature:	Signature:
Printed Name: M. Visocki	Printed Name:	Printed Name:	Printed Name:	Printed Name:	Printed Name:
Firm: Shaw E&I	Firm: CAS	Firm:	Firm:	Firm:	Firm:
Date/Time: 10/26/11 1400	Date/Time: 10/27/11 0850	Date/Time:	Date/Time:	Date/Time:	Date/Time:

R1106071
Shaw Environmental & Infrastructure, Inc.
Varian Beverly

Distribution: White - Lab Copy; Yellow - Return To Originator

COC 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 _____ OF _____

Project Name	Project Number
Varian Beverly	143267-04000000
Project Manager	**Report CC**
Raymond Cadorette	Sheila Barry

Company/Address
Shaw Environmental, Inc.
100 Technology Center Drive
Stoughton, MA 02072

Phone #	E-mail
617-589-6102	Raymond.Cadorette@Shawgrp.com
Sampler's Signature	**Sampler's Printed Name**
	Matthew Viscovich

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	
B-2(11.5')		10/24/11	1330	GW	3	✓								
BR-6-ZONE1		10/27/11	1053		3	✓								
BR-6-ZONE2			1146		3	✓								
BR-6-ZONE3			1239		3	✓								
OB35-DO(62')			1330		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 = Fe & Mn are field filtered
Site specific VOC list.
Massachusetts CAM analyses reporting and QA/QC.
Email GISKey formatted EDD and PDF of report to:
Catherine.Mainville@shawgrp.com
LAB PO# 727459

☐ See QAPP

STATE WHERE SAMPLES WERE COLLECTED: MASS

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 #:
BILL TO: Shaw Environmental

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature	Signature	Signature	Signature	Signature	Signature
M. Viscovich	David Wade				
Printed Name	Printed Name	Printed Name	Printed Name	Printed Name	Printed Name
Shaw GEI	CAS				
Firm	Firm	Firm	Firm	Firm	Firm
	10/28/11/0850				
Date/Time	Date/Time	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 1 OF _____

Project Name	Project Number
Varian Beverly	143267-04000000
Project Manager	**Report CC**
Raymond Cadorette	Sheila Barry

Company/Address
Shaw Environmental
100 Technology Center Drive
Stoughton, MA 02072
Phone # 617-589-6102 E-mail Raymond.Cadorette@Shawgrp.com

Sampler's Signature: [signature] Sampler's Printed Name: Daniel Leahy

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	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
CL-3-DO (79')		10/27/11	0800	GW	3	3						+	TDL	
CL-10-DO (30')		10/27/11	0900		3	3						+		
AP-19 (39')		10/27/11	1000		5	3						1	1	
AP-20 (19')		10/27/11	1100		5	3						1	1	
AP-21 (29')		10/27/11	1200		5	3						1	1	
AP-22 (19')		10/27/11	1300		5	3						1	1	
TB-2		10/27/11	0730		3	3								
MW-13 (41')		10/27/11	1330		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 = Fe & Mn are field filtered
Site specific VOC list
Massachusetts CAM analyses reporting and QA/QC
Email GISKey formatted EDD and PDF of report to:
Catherine.Mainville@Shawgrp.com.

* LAB PO # 727459

See QAPP ☐

STATE WHERE SAMPLES WERE COLLECTED: MASS

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 ____

INVOICE INFORMATION
PO #:
BILL TO: Shaw Environmental

R1106071
Shaw Environmental & Infrastructure, Inc.
Varian Beverly

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	
Signature: [signature]	Signature: Daniel Ward	Signature	Signature	Signature	Signature
Printed Name: Daniel Leahy	Printed Name: CAS	Printed Name	Printed Name	Printed Name	Printed Name
Firm: Shaw Environmental	Firm: 10/28/11/0850	Firm	Firm	Firm	Firm
Date/Time: 10/27/11 1400	Date/Time	Date/Time	Date/Time	Date/Time	Date/Time

Distribution: White - Lab Copy; Yellow - Return To Originator

Cooler Receipt And Preservation Check Form

Project/Client Shaw Folder Number R11-6071

Cooler received on 10/28/11 by: DN COURIER: CAS ~~UPS~~ FEDEX VELOCITY CLIENT

1.	Were custody seals on outside of cooler?	~~YES~~	NO			
2.	Were custody papers properly filled out (ink, signed, etc.)?	~~YES~~	NO			
3.	Did all bottles arrive in good condition (unbroken)?	~~YES~~	NO			
4.	Did VOA vials, Alkalinity, or Sulfide have significant* air bubbles?	YES	~~NO~~	N/A		
5.	Were ~~Ice~~ or **Ice packs** present?	~~YES~~	NO			
6.	Where did the bottles originate?	~~CAS/ROC~~, CLIENT				
7.	Temperature of cooler(s) upon receipt:	3.5°				
	Is the temperature within 0° - 6° C?:	~~Yes~~	Yes	Yes	Yes	Yes
	If No, Explain Below	No	No	No	No	No

Date/Time Temperatures Taken: 10/28/11/0901

Thermometer ID: IR GUN#3 / IR ~~GUN#4~~ Reading From: Temp Blank / ~~Sample Bottle~~

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

PC Secondary Review: MM 10/28/11

Cooler Breakdown: Date: 10/28/11 Time: 1216 by: JH

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	Y		5082611 3	9/12				
≤2	H_2SO_4								
<4	$NaHSO_4$								
Residual Chlorine (-)	For TCN Phenol and 522			If present, contact PM to add ascorbic acid Or sodium sulfite (522)					
	$Na_2S_2O_3$	-	-						
	Zn Aceta	-	-						
	HCl	*	*	411010	9/12				

*Not to be tested before analysis – pH tested and recorded by VOAs or GenChem on a separate worksheet

Yes = All samples OK

No = Samples were preserved at lab as listed

PM OK to Adjust: _____

Bottle lot numbers: 060611-2W, 091911-2LL, 1-132-007

Other Comments:

PC Secondary Review: MM 11/18/11

*significant air bubbles: VOA > 5-6 mm : WC >1 in. diameter

Data Usability Worksheet

Project Name : Varian Medical Systems, Inc

Job Number : 143276

Prepared By: Pernilla Haley

Date : 4/5/2012

Analyte Group : Volatile Organics
Dissolved Fe & Mn
Chloride

Analytical Method : SW 846 8260C
SW 846 6010B
SM 4500 CL-E

Completed MADEP CAM Certification Form included: Yes

Laboratory ID No. : R1106121

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
10/28/2011	VOC 8260B		14 days	11/8
10/28/2011	SW 846 6010B		180 days	11/8, 11/11, 11/14/11
10/28/2011	SM 4500 CL-E		28 days	11/15/11

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:

Equipment Field Blank ID : 11/8/2011
Trip Blank ID : 11/8/2011

Method Blank:

VOC 8260B	11/7/11, 11/8/11
Dissolved Fe & Mn	11/8/11, 11/14/11
Chloride	11/15/2011

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:
VOC - several samples were initially analyzed at dilutions to bring target analytes within the calibration range of method. Samples were subsequently reanalyzed at higher dilutions to bring target analytes within the calibration range of method. Dilutions were reported with analytes over the calibration range flagged with an"E" and the diluted analytes flagged with a ""D".

Reviewed By: RJC

Columbia Analytical Services™ 1565 Jefferson Rd, Building 300, Suite 360 | Rochester, NY 14623 | 585-288-5380 | 585-288-8475 fax |

November 17, 2011 Service Request No: R1106121

Mr. Ray Cadorette
Shaw Environmental & Infrastructure, Inc.
100 Technology Center
Stoughton, MA 02072

Laboratory Results for: Varian Beverly/143267

Dear Mr. Cadorette:

Enclosed are the results of the sample(s) submitted to our laboratory on November 1, 2011. For your reference, these analyses have been assigned our service request number **R1106121**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. 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 7469. You may also contact me via email at MPerry@caslab.com.

Respectfully submitted,

Columbia Analytical Services, Inc.

Michael Perry
Laboratory Manager

COLUMBIA ANALYTICAL SERVICES, INC.

Client:	Shaw Environmental, Inc	**Service Request No.:**	R1106121
Project:	Varian Beverly	**Project Number:**	143267
Sample Matrix:	Water	**Date Received:**	11/01/11

CASE NARRATIVE

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

Sample Receipt

Water samples were collected on 10/28/11 and received at CAS in good condition in the proper temperature range (5.2 °C) as noted on the cooler receipt and preservation check form. The samples were stored in a refrigerator at 1 - 6 °C upon receipt at the laboratory. See the second page of the Case Narrative for a cross-reference between Client ID and CAS Job #.

Volatile Organics

Nine 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. Samples OB27-BR(86'), OB34-DO(63'), and AP-12-DO(44') were re-analyzed at larger dilutions to bring target analytes within the calibration range of the method. Both dilutions were reported with analytes over the calibration range flagged with an "E" and the diluted analytes flagged with a "D".

All initial and continuing calibrations were compliant.

All Surrogate Standard recoveries were within QC limits.

The Blank Spike (LCS)/Blank Spike Duplicate (LCSD) recoveries were all within the QC limits.

All samples were analyzed within the required holding times.

No other analytical or QC problems were encountered with these analyses.

Inorganic Analyses

Four water samples were analyzed for dissolved Iron and dissolved Manganese by SW-846 method 6010B and for Chloride by method SM 4500-CL-E.

The initial and continuing calibration criteria were met for all analytes.

All Blank Spike (LCS) recoveries were within QC limits.

No analytical or QC problems were encountered.

MassDEP Analytical Protocol Certification Form

Laboratory Name: Columbia Analytical Services, Inc. Project #:143267

Project Location: Varian Beverly RTN:

This Form provides certifications for the following data set: list Laboratory Sample ID Number(s):
R1106121 – 011 - 019

Matrices: X Groundwater ☐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 ☐	6850 Perchlorate CAM VIII B ☐	Other: CL by SM4500-Cl-E

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?	☐Yes X No[1]
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	X 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:** Laboratory Manager

Printed Name: Michael K. Perry **Date:** 11/1711 09:00

CASE NARRATIVE

This report contains analytical results for the following samples:
Service Request Number: R1106121

Lab ID	Client ID
R1106121-011	TB-3
R1106121-012	OB37-DO (61')
R1106121-013	OB36-DO (61')
R1106121-014	OB27-BR (86')
R1106121-015	OB32-DO (60')
R1106121-016	OB34-DO (63')
R1106121-017	AP-12-DO (44')
R1106121-018	AP-12-BR (74')
R1106121-019	EB-4

Columbia Analytical Services™

REPORT QUALIFIERS

U	Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.
J	Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/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.

ACCREDITED IN ACCORDANCE WITH nelac

CAS/Rochester 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

COLUMBIA ANALYTICAL SERVICES
1565 JEFFERSON RD
BUILDING 300, SUITE 360
ROCHESTER, NY 14623-0000

Laboratory Director: Michael K. Perry

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: 01 JUL 2011
Expires: 30 JUN 2012

Oscar C. Jacobs

Director, Division of Environmental Analysis

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 25 AUG 2011

M-NY032 COLUMBIA ANALYTICAL SERVICES
ROCHESTER NY

NON POTABLE WATER (CHEMISTRY) Effective Date 25 AUG 2011 Expiration Date 30 JUN 2012

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
PH	SM 4500-H-B
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

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 25 AUG 2011

M-NY032 COLUMBIA ANALYTICAL SERVICES
ROCHESTER NY

NON POTABLE WATER (CHEMISTRY) Effective Date 25 AUG 2011 Expiration Date 30 JUN 2012

Analytes	Methods
ALKALINITY, TOTAL	SM 2320B
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

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106121
Project:	Varian Beverly/143267	**Date Collected:**	10/28/11 0920
Sample Matrix:	Water	**Date Received:**	11/ 1/11
		Date Analyzed:	11/8/11 00:00
Sample Name:	TB-3	**Units:**	µg/L
Lab Code:	R1106121-011	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	268437
Data File Name:	J:\ACQUDATA\msvoa10\data\110711\D5907.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	102	70-130	11/8/11 00:00	
Dibromofluoromethane	101	70-130	11/8/11 00:00	
Toluene-d8	106	70-130	11/8/11 00:00	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106121
Project:	Varian Beverly/143267	**Date Collected:**	10/28/11 0700
Sample Matrix:	Water	**Date Received:**	11/ 1/11
Sample Name:	OB37-DO (61')		
Lab Code:	R1106121-012	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chloride	SM 4500-Cl- E	**890**		mg/L	100	100	NA	11/15/11 14:52	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106121
Project:	Varian Beverly/143267	**Date Collected:**	10/28/11 0700
Sample Matrix:	Water	**Date Received:**	11/ 1/11
Sample Name:	OB37-DO (61')		
Lab Code:	R1106121-012	**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	20	11/ 2/11	11/11/11 18:41	
Manganese, Dissolved	6010C	**14700000**		µg/L	100000	2000	11/ 2/11	11/14/11 18:46	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106121
Project:	Varian Beverly/143267	**Date Collected:**	10/28/11 0700
Sample Matrix:	Water	**Date Received:**	11/ 1/11
		Date Analyzed:	11/8/11 00:29
Sample Name:	OB37-DO (61')	**Units:**	µg/L
Lab Code:	R1106121-012	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	268437
Data File Name:	J:\ACQUDATA\msvoa10\data\110711\D5908.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)	**8.4**		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	**120**		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	**3.3**		2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	**7.0**		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	11/8/11 00:29	
Dibromofluoromethane	101	70-130	11/8/11 00:29	
Toluene-d8	107	70-130	11/8/11 00:29	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106121
Project:	Varian Beverly/143267	**Date Collected:**	10/28/11 0750
Sample Matrix:	Water	**Date Received:**	11/ 1/11
		Date Analyzed:	11/8/11 20:50
Sample Name:	OB36-DO (61')	**Units:**	µg/L
Lab Code:	R1106121-013	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	268634
Data File Name:	J:\ACQUDATA\msvoa10\data\110811\D5948.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)	**6600**		100	
79-01-6	Trichloroethene (TCE)	**5200**		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	105	70-130	11/8/11 20:50	
Dibromofluoromethane	101	70-130	11/8/11 20:50	
Toluene-d8	108	70-130	11/8/11 20:50	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106121
Project:	Varian Beverly/143267	**Date Collected:**	10/28/11 0930
Sample Matrix:	Water	**Date Received:**	11/ 1/11
Sample Name:	OB27-BR (86')		
Lab Code:	R1106121-014	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chloride	SM 4500-Cl- E	94		mg/L	10	10	NA	11/15/11 14:22	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106121
Project:	Varian Beverly/143267	**Date Collected:**	10/28/11 0930
Sample Matrix:	Water	**Date Received:**	11/ 1/11
Sample Name:	OB27-BR (86')		
Lab Code:	R1106121-014	**Basis:**	NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Iron, Dissolved	6010C	500	U	µg/L	500	1	11/ 2/11	11/8/11 13:35	
Manganese, Dissolved	6010C	**305000**		µg/L	5000	100	11/ 2/11	11/14/11 18:51	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106121
Project:	Varian Beverly/143267	**Date Collected:**	10/28/11 0930
Sample Matrix:	Water	**Date Received:**	11/ 1/11
		Date Analyzed:	11/8/11 01:29
Sample Name:	OB27-BR (86')	**Units:**	µg/L
Lab Code:	R1106121-014	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	268437
Data File Name:	J:\ACQUDATA\msvoa10\data\110711\D5910.D\	**Instrument Name:**	R-MS-10
		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)	**36**		5.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	**50**		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)	**6900**	E	5.0	
79-01-6	Trichloroethene (TCE)	**13000**	E	5.0	
75-69-4	Trichlorofluoromethane (CFC 11)	5.0	U	5.0	
75-01-4	Vinyl Chloride	**30**		5.0	
156-59-2	cis-1,2-Dichloroethene	**5900**	E	5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0	U	5.0	
156-60-5	trans-1,2-Dichloroethene	**12**		5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0	U	5.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	105	70-130	11/8/11 01:29	
Dibromofluoromethane	103	70-130	11/8/11 01:29	
Toluene-d8	108	70-130	11/8/11 01:29	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106121
Project:	Varian Beverly/143267	**Date Collected:**	10/28/11 0930
Sample Matrix:	Water	**Date Received:**	11/ 1/11
		Date Analyzed:	11/8/11 21:20
Sample Name:	OB27-BR (86')	**Units:**	µg/L
Lab Code:	R1106121-014	**Basis:**	NA
Run Type:	Dilution		

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	268634
Data File Name:	J:\ACQUDATA\msvoa10\data\110811\D5949.D\	**Instrument Name:**	R-MS-10
		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)	**7400**	D	400	
79-01-6	Trichloroethene (TCE)	**22000**	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	**4900**	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	104	70-130	11/8/11 21:20	
Dibromofluoromethane	101	70-130	11/8/11 21:20	
Toluene-d8	109	70-130	11/8/11 21:20	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106121
Project:	Varian Beverly/143267	**Date Collected:**	10/28/11 1030
Sample Matrix:	Water	**Date Received:**	11/ 1/11
Sample Name:	OB32-DO (60')		
Lab Code:	R1106121-015	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chloride	SM 4500-Cl- E	175		mg/L	4.0	4	NA	11/15/11 14:22	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106121
Project:	Varian Beverly/143267	**Date Collected:**	10/28/11 1030
Sample Matrix:	Water	**Date Received:**	11/ 1/11
Sample Name:	OB32-DO (60')		
Lab Code:	R1106121-015	**Basis:**	NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Iron, Dissolved	6010C	500	U	µg/L	500	1	11/ 2/11	11/8/11 13:41	
Manganese, Dissolved	6010C	**288000**		µg/L	5000	100	11/ 2/11	11/14/11 18:57	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106121
Project:	Varian Beverly/143267	**Date Collected:**	10/28/11 1030
Sample Matrix:	Water	**Date Received:**	11/ 1/11
		Date Analyzed:	11/8/11 21:49
Sample Name:	OB32-DO (60')	**Units:**	µg/L
Lab Code:	R1106121-015	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	268634
Data File Name:	J:\ACQUDATA\msvoa10\data\110811\D5950.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	2.5

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	**430**		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	**450**		5.0	
108-90-7	Chlorobenzene	5.0	U	5.0	
75-00-3	Chloroethane	5.0	U	5.0	
67-66-3	Chloroform	**79**		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)	**6.8**		5.0	
79-01-6	Trichloroethene (TCE)	5.0	U	5.0	
75-69-4	Trichlorofluoromethane (CFC 11)	5.0	U	5.0	
75-01-4	Vinyl Chloride	5.0	U	5.0	
156-59-2	cis-1,2-Dichloroethene	5.0	U	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	103	70-130	11/8/11 21:49	
Dibromofluoromethane	101	70-130	11/8/11 21:49	
Toluene-d8	107	70-130	11/8/11 21:49	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106121
Project:	Varian Beverly/143267	**Date Collected:**	10/28/11 1130
Sample Matrix:	Water	**Date Received:**	11/ 1/11
		Date Analyzed:	11/8/11 02:28
Sample Name:	OB34-DO (63')	**Units:**	µg/L
Lab Code:	R1106121-016	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	268437
Data File Name:	J:\ACQUDATA\msvoa10\data\110711\D5912.D\	**Instrument Name:**	R-MS-10
		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)	**6.0**		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	**5.8**		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)	**1500**	E	5.0	
79-01-6	Trichloroethene (TCE)	**9200**	E	5.0	
75-69-4	Trichlorofluoromethane (CFC 11)	5.0	U	5.0	
75-01-4	Vinyl Chloride	5.0	U	5.0	
156-59-2	cis-1,2-Dichloroethene	**960**	E	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	104	70-130	11/8/11 02:28	
Dibromofluoromethane	102	70-130	11/8/11 02:28	
Toluene-d8	108	70-130	11/8/11 02:28	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106121
Project:	Varian Beverly/143267	**Date Collected:**	10/28/11 1130
Sample Matrix:	Water	**Date Received:**	11/ 1/11
		Date Analyzed:	11/8/11 22:19
Sample Name:	OB34-DO (63')	**Units:**	µg/L
Lab Code:	R1106121-016	**Basis:**	NA
Run Type:	Dilution		

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	268634
Data File Name:	J:\ACQUDATA\msvoa10\data\110811\D5951.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)	**1300**	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	**950**	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	103	70-130	11/8/11 22:19	
Dibromofluoromethane	102	70-130	11/8/11 22:19	
Toluene-d8	110	70-130	11/8/11 22:19	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106121
Project:	Varian Beverly/143267	**Date Collected:**	10/28/11 1230
Sample Matrix:	Water	**Date Received:**	11/ 1/11
		Date Analyzed:	11/8/11 02:58
Sample Name:	AP-12-DO (44')	**Units:**	µg/L
Lab Code:	R1106121-017	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	268437
Data File Name:	J:\ACQUDATA\msvoa10\data\110711\D5913.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)	**14000**	E	100	
79-01-6	Trichloroethene (TCE)	**37000**	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	**2700**		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	105	70-130	11/8/11 02:58	
Dibromofluoromethane	102	70-130	11/8/11 02:58	
Toluene-d8	108	70-130	11/8/11 02:58	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106121
Project:	Varian Beverly/143267	**Date Collected:**	10/28/11 1230
Sample Matrix:	Water	**Date Received:**	11/ 1/11
		Date Analyzed:	11/8/11 22:49
Sample Name:	AP-12-DO (44')	**Units:**	µg/L
Lab Code:	R1106121-017	**Basis:**	NA
Run Type:	Dilution		

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	268634
Data File Name:	J:\ACQUDATA\msvoa10\data\110811\D5952.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	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)	**10000**	D	1000	
79-01-6	Trichloroethene (TCE)	**27000**	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	**2100**	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	104	70-130	11/8/11 22:49	
Dibromofluoromethane	101	70-130	11/8/11 22:49	
Toluene-d8	109	70-130	11/8/11 22:49	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106121
Project:	Varian Beverly/143267	**Date Collected:**	10/28/11 1330
Sample Matrix:	Water	**Date Received:**	11/ 1/11
Sample Name:	AP-12-BR (74')		
Lab Code:	R1106121-018	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chloride	SM 4500-Cl- E	**225**		mg/L	50	50	NA	11/15/11 14:53	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106121
Project:	Varian Beverly/143267	**Date Collected:**	10/28/11 1330
Sample Matrix:	Water	**Date Received:**	11/ 1/11
Sample Name:	AP-12-BR (74')		
Lab Code:	R1106121-018	**Basis:**	NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Iron, Dissolved	6010C	5000	U	µg/L	5000	10	11/ 2/11	11/11/11 18:46	
Manganese, Dissolved	6010C	**3900000**		µg/L	50000	1000	11/ 2/11	11/14/11 19:03	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106121
Project:	Varian Beverly/143267	**Date Collected:**	10/28/11 1330
Sample Matrix:	Water	**Date Received:**	11/ 1/11
		Date Analyzed:	11/8/11 23:18
Sample Name:	AP-12-BR (74')	**Units:**	µg/L
Lab Code:	R1106121-018	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	268634
Data File Name:	J:\ACQUDATA\msvoa10\data\110811\D5953.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**		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	**3.1**		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	11/8/11 23:18	
Dibromofluoromethane	101	70-130	11/8/11 23:18	
Toluene-d8	108	70-130	11/8/11 23:18	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106121
Project:	Varian Beverly/143267	**Date Collected:**	10/28/11 1340
Sample Matrix:	Water	**Date Received:**	11/ 1/11
		Date Analyzed:	11/8/11 03:57
Sample Name:	EB-4	**Units:**	µg/L
Lab Code:	R1106121-019	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	268437
Data File Name:	J:\ACQUDATA\msvoa10\data\110711\D5915.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	102	70-130	11/8/11 03:57	
Dibromofluoromethane	98	70-130	11/8/11 03:57	
Toluene-d8	108	70-130	11/8/11 03:57	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106121
Project:	Varian Beverly/143267	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank		
Lab Code:	R1106121-MB	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chloride	SM 4500-Cl- E	1.0	U	mg/L	1.0	1	NA	11/15/11 14:04	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106121
Project:	Varian Beverly/143267	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank		
Lab Code:	R1106121-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	11/2/11	11/8/11 10:35	
Manganese, Dissolved	6010C	10	U	µg/L	10	1	11/2/11	11/14/11 18:25	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106121
Project:	Varian Beverly/143267	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	11/7/11 23:30
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1111651-01	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	268437
Data File Name:	J:\ACQUDATA\msvoa10\data\110711\D5906.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	102	70-130	11/7/11 23:30	
Dibromofluoromethane	102	70-130	11/7/11 23:30	
Toluene-d8	107	70-130	11/7/11 23:30	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106121
Project:	Varian Beverly/143267	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	11/8/11 15:53
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1111455-01	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	268634
Data File Name:	J:\ACQUDATA\msvoa10\data\110811\D5938.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	102	70-130	11/8/11 15:53	
Dibromofluoromethane	101	70-130	11/8/11 15:53	
Toluene-d8	107	70-130	11/8/11 15:53	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian Beverly/143267
Sample Matrix: Water

Service Request: R1106121
Date Analyzed: 11/15/11

Lab Control Sample Summary
General Chemistry Parameters

Units: mg/L
Basis: NA

Analyte Name	Method	Lab Control Sample R1106121-LCS Result	Spike Amount	% Rec	% Rec Limits
Chloride	SM 4500-Cl- E	24.3	25.0	97	86 - 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.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian Beverly/143267
Sample Matrix: Water

Service Request: R1106121
Date Analyzed: 11/ 8/11 - 11/14/11

Lab Control Sample Summary
Inorganic Parameters

Units: µg/L
Basis: NA

		Lab Control Sample R1106121-LCS			
Analyte Name	**Method**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**
Iron, Dissolved	6010C	1030	1000	103	80 - 120
Manganese, Dissolved	6010C	514	500	103	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.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian Beverly/143267
Sample Matrix: Water

Service Request: R1106121
Date Analyzed: 11/ 7/11

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260C

Units: µg/L
Basis: NA

Analysis Lot: 268437

Analyte Name	Lab Control Sample RQ1111651-02 Result	Spike Amount	% Rec	Duplicate Lab Control Sample RQ1111651-03 Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
1,1,1-Trichloroethane (TCA)	21.9	20.0	109	19.7	20.0	98	70 - 130	11	20
1,1,2,2-Tetrachloroethane	20.6	20.0	103	20.0	20.0	100	70 - 130	3	20
1,1,2-Trichloroethane	21.9	20.0	110	21.3	20.0	106	70 - 130	3	20
1,1-Dichloroethane (1,1-DCA)	23.1	20.0	115	20.7	20.0	103	70 - 130	11	20
1,1-Dichloroethene (1,1-DCE)	20.4	20.0	102	18.5	20.0	92	70 - 130	10	20
1,2-Dichloroethane	22.8	20.0	114	21.8	20.0	109	70 - 130	4	20
1,2-Dichloropropane	22.6	20.0	113	20.8	20.0	104	70 - 130	8	20
Acetone	21.1	20.0	106	21.8	20.0	109	40 - 160	3	20
Bromodichloromethane	23.7	20.0	119	21.4	20.0	107	70 - 130	10	20
Bromoform	24.9	20.0	125	24.3	20.0	121	70 - 130	3	20
Bromomethane	16.0	20.0	80	13.8	20.0	69	40 - 160	15	20
Carbon Tetrachloride	23.2	20.0	116	21.4	20.0	107	70 - 130	8	20
Chlorobenzene	21.8	20.0	109	20.1	20.0	101	70 - 130	8	20
Chloroethane	22.3	20.0	111	19.7	20.0	98	70 - 130	12	20
Chloroform	23.0	20.0	115	21.3	20.0	107	70 - 130	8	20
Chloromethane	17.6	20.0	88	16.3	20.0	81	40 - 160	8	20
Dibromochloromethane	23.8	20.0	119	22.8	20.0	114	70 - 130	4	20
Methylene Chloride	22.4	20.0	112	20.4	20.0	102	70 - 130	9	20
Tetrachloroethene (PCE)	21.3	20.0	106	19.4	20.0	97	70 - 130	9	20
Trichloroethene (TCE)	22.5	20.0	112	20.8	20.0	104	70 - 130	8	20
Trichlorofluoromethane (CFC 11)	22.6	20.0	113	20.1	20.0	101	70 - 130	12	20
Vinyl Chloride	21.5	20.0	107	19.2	20.0	96	70 - 130	11	20
cis-1,2-Dichloroethene	23.2	20.0	116	21.0	20.0	105	70 - 130	10	20
cis-1,3-Dichloropropene	21.9	20.0	109	20.2	20.0	101	70 - 130	8	20
trans-1,2-Dichloroethene	21.1	20.0	106	19.6	20.0	98	70 - 130	8	20
trans-1,3-Dichloropropene	21.0	20.0	105	20.3	20.0	101	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.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian Beverly/143267
Sample Matrix: Water

Service Request: R1106121
Date Analyzed: 11/ 8/11

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260C

Units: µg/L
Basis: NA

Analysis Lot: 268634

	Lab Control Sample RQ1111455-02			Duplicate Lab Control Sample RQ1111455-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
1,1,1-Trichloroethane (TCA)	21.2	20.0	106	22.0	20.0	110	70 - 130	4	20
1,1,2,2-Tetrachloroethane	21.5	20.0	107	21.5	20.0	107	70 - 130	<1	20
1,1,2-Trichloroethane	20.6	20.0	103	21.4	20.0	107	70 - 130	3	20
1,1-Dichloroethane (1,1-DCA)	22.3	20.0	112	22.9	20.0	115	70 - 130	3	20
1,1-Dichloroethene (1,1-DCE)	20.5	20.0	102	21.2	20.0	106	70 - 130	4	20
1,2-Dichloroethane	21.6	20.0	108	22.4	20.0	112	70 - 130	4	20
1,2-Dichloropropane	21.8	20.0	109	22.3	20.0	112	70 - 130	3	20
Acetone	20.4	20.0	102	20.2	20.0	101	40 - 160	<1	20
Bromodichloromethane	22.4	20.0	112	23.2	20.0	116	70 - 130	3	20
Bromoform	23.7	20.0	119	24.3	20.0	121	70 - 130	2	20
Bromomethane	17.1	20.0	86	17.5	20.0	88	40 - 160	2	20
Carbon Tetrachloride	22.9	20.0	114	24.1	20.0	121	70 - 130	5	20
Chlorobenzene	21.2	20.0	106	21.7	20.0	108	70 - 130	2	20
Chloroethane	22.5	20.0	112	23.4	20.0	117	70 - 130	4	20
Chloroform	22.2	20.0	111	22.6	20.0	113	70 - 130	2	20
Chloromethane	20.2	20.0	101	20.3	20.0	101	40 - 160	<1	20
Dibromochloromethane	22.7	20.0	114	23.0	20.0	115	70 - 130	1	20
Methylene Chloride	21.3	20.0	106	21.6	20.0	108	70 - 130	1	20
Tetrachloroethene (PCE)	20.6	20.0	103	21.4	20.0	107	70 - 130	4	20
Trichloroethene (TCE)	20.7	20.0	103	21.4	20.0	107	70 - 130	3	20
Trichlorofluoromethane (CFC 11)	23.0	20.0	115	23.7	20.0	119	70 - 130	3	20
Vinyl Chloride	23.7	20.0	118	24.3	20.0	122	70 - 130	3	20
cis-1,2-Dichloroethene	22.2	20.0	111	22.3	20.0	112	70 - 130	<1	20
cis-1,3-Dichloropropene	21.7	20.0	108	21.8	20.0	109	70 - 130	<1	20
trans-1,2-Dichloroethene	21.1	20.0	105	22.0	20.0	110	70 - 130	4	20
trans-1,3-Dichloropropene	21.2	20.0	106	21.6	20.0	108	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.

Columbia Analytical Services[SM]
1 Mustard Street, Suite 250, Rochester, NY 14609 | 585.288.5380 | 800.695.7222 | 585.288.8475 (fax)

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

PAGE 1 OF ____

Project Name: Varian Beverly	Project Number: 143267-04000000
Project Manager: Raymond Cadorette	Report CC: Sheila Barry
Company/Address: Shaw Environmental, Inc. 100 Technology Center Drive Stoughton, MA 02072	
Phone #: 617-589-6102	E-mail: Raymond.Cadorette@Shawgrp.com
Sampler's Signature: [signature]	Sampler's Printed Name: DANIEL LEAHY

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 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)	Fe + Mn / Chloride						REMARKS/ ALTERNATE DESCRIPTION
PRESERVATIVE						1								2	0				
TB-3		10/17/11	0920	GW	3	3													
0B37-DO (61')		10/28/11	0700	GW	5	3						1	1						
0B36-DO (61')		10/28/11	0750	↓	3	3													
0B27-BR (86')		10/28/11	0930	↓	5	3						1	1						
0B32-DO (60')		10/28/11	1030	↓	5	3						1	1						
0B34-DO (63')		10/28/11	1130	↓	3	3													
AP-12-DO (44')		10/28/11	1230	↓	3	3													
AP-12-BR (74')		10/28/11	1330	↓	6	3						1	1						
EB-4		10/28/11	1340	↓	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 = Fe & Mn are field filtered
Site specific VOC list
Massachusetts CAM analyses reporting and QA/QC
Email GISKey formatted EDD & PDF of report to:
Catherine.Mainville@Shawgrp.com.
TB-3 BY LAB
LAB PO # 727459

See QAPP ☐

STATE WHERE SAMPLES WERE COLLECTED: MASS

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 #:
BILL TO: Shaw Environmental

R1106121
Shaw Environmental & Infrastructure, Inc.
Varian Beverly

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	
Signature: [signature]	Signature: [signature]	Signature	Signature	Signature	Signature
Printed Name: DANIEL LEAHY	Printed Name: Amy Hentschke	Printed Name	Printed Name	Printed Name	Printed Name
Firm: SHAW ENVIRONMENTAL	Firm: CAS	Firm	Firm	Firm	Firm
Date/Time: 10/28/11 1400	Date/Time: 11/1/11 0925	Date/Time	Date/Time	Date/Time	Date/Time

Cooler Receipt And Preservation Check Form

Project/Client Shaw Folder Number R11-6121

Cooler received on 11/1/11 by: AHH **COURIER:** CAS (UPS) FEDEX VELOCITY CLIENT

1.	Were custody seals on outside of cooler?	YES	(NO)			
2.	Were custody papers properly filled out (ink, signed, etc.)?	(YES)	NO			
3.	Did all bottles arrive in good condition (unbroken)?	(YES)	NO			
4.	Did VOA vials, Alkalinity, or Sulfide have significant* air bubbles?	(YES)*	NO	N/A		
5.	Were **Ice** or **Ice packs** present?	(YES)	NO			
6.	Where did the bottles originate?	(CAS/ROC)	CLIENT			
7.	Temperature of cooler(s) upon receipt:	5.2°				
	Is the temperature within 0° - 6° C?:	(Yes)	Yes	Yes	Yes	Yes
	If No, Explain Below	No	No	No	No	No

Date/Time Temperatures Taken: 11/1/11 0948

Thermometer ID: (IR GUN#3) / IR GUN#4 Reading From: (Temp Blank) / Sample Bottle

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

PC Secondary Review: MP 11/1/11

Cooler Breakdown: Date: 11/1/11 Time: 1411 by: AHH

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	✓	✓	BDB26113J	9/12	samples too much color, to			
≤2	H_2SO_4					indicate ≤2 pH			
<4	$NaHSO_4$								
Residual Chlorine (-)	For TCN Phenol and 522			If present, contact PM to add ascorbic acid Or sodium sulfite (522)					
	$Na_2S_2O_3$	-	-						
	Zn Aceta	-	-						
	HCl	*	*	4111010	9/12				

*Not to be tested before analysis – pH tested and recorded by VOAs or GenChem on a separate worksheet

Yes = All samples OK

No = Samples were preserved at lab as listed

PM OK to Adjust: _____

Bottle lot numbers: 060611-2W, 091911-2LL, 1-132-001

Other Comments:

*TB-3 - 1 vial w/ bubble

**only rec'd samples on 2nd COC, no samples from 1st page rec'd.

PC Secondary Review: MP 11/7/11

*significant air bubbles: VOA > 5-6 mm : WC >1 in. diameter

Data Usability Worksheet

Project Name : Varian Medical Systems, Inc

Job Number : 143276

Prepared By: Pernilla Haley

Date : 4/5/2012

Analyte Group : Volatile Organics
Dissolved Fe & Mn
Chloride

Analytical Method : SW 846 8260C
SW 846 6010B
SM 4500 CL-E

Completed MADEP CAM Certification Form included: Yes

Laboratory ID No. : R1106271

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
11/7/2011	VOC 8260B		14 days	11/11/11, 11/14/11
11/7//11	SW 846 6010B		180 days	11/16/11, 11/18/11
11/7/2011	SM 4500 CL-E		28 days	11/15/11

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: LCS/LCSD recoveries were within QC limits except bormoform in the LCSD from 11/11/11
This recovery was flagged with a "*"

Equipment Field Blank ID : NA

Trip Blank ID : 11/11/2011

Method Blank:

VOC 8260B	11/11/11, 11/14/11
Dissolved Fe & Mn	11/16/11, 11/18/11
Chloride	11/15/2011

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:
VOC - several samples were initially analyzed at dilutions to bring target analytes within the calibration range of method.
Samples were subsequently reanalyzed at higher dilutions to bring target analytes within the calibration range of method.
Dilutions were reported with analytes over the calibration range flagged with an"E" and the diluted analytes flagged with a ""D".

Reviewed By: RJC

Columbia Analytical Services™ 1565 Jefferson Rd, Building 300, Suite 360 | Rochester, NY 14623 | 585-288-5380 | 585-288-8475 fax |

November 23, 2011 Service Request No: R1106271

Mr. Ray Cadorette
Shaw Environmental & Infrastructure, Inc.
100 Technology Center
Stoughton, MA 02072

Laboratory Results for: Varian Beverly/139342

Dear Mr. Cadorette:

Enclosed are the results of the sample(s) submitted to our laboratory on November 8, 2011. For your reference, these analyses have been assigned our service request number **R1106271**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. 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 7469. You may also contact me via email at MPerry@caslab.com.

Respectfully submitted,

Columbia Analytical Services, Inc.

Michael K. Perry

Michael Perry
Laboratory Manager

COLUMBIA ANALYTICAL SERVICES, INC.

Client:	Shaw Environmental, Inc	**Service Request No.:**	R1106271
Project:	Varian Beverly	**Project Number:**	143267
Sample Matrix:	Water	**Date Received:**	11/08/11

CASE NARRATIVE

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

Sample Receipt

Water samples were collected on 11/07/11 and received at CAS in good condition at a cooler temperature of 6.5 °C as noted on the cooler receipt and preservation check form. The samples were stored in a refrigerator at 1 - 6 °C upon receipt at the laboratory. See the second page of the Case Narrative for a cross-reference between Client ID and CAS Job #.

Volatile Organics

Four 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. Samples AP-30R-DO and AP-32-DO were re-analyzed at larger dilutions to bring target analytes within the calibration range of the method. Both dilutions were reported with analytes over the calibration range flagged with an "E" and the diluted analytes flagged with a "D".

All initial and continuing calibrations were compliant.

All Surrogate Standard recoveries were within QC limits.

The Blank Spike (LCS)/Blank Spike Duplicate (LCSD) recoveries were all within the QC limits except Bromoform in the LCSD from 11/11/11. This recovery was flagged with an "*".

All samples were analyzed within the required holding times.

No other analytical or QC problems were encountered with these analyses.

Inorganic Analyses

Three water samples were analyzed for dissolved Iron and dissolved Manganese by SW-846 method 6010B and for Chloride by method SM 4500-CL-E.

The initial and continuing calibration criteria were met for all analytes.

All Blank Spike (LCS) recoveries were within QC limits.

No analytical or QC problems were encountered.

MassDEP Analytical Protocol Certification Form

Laboratory Name: Columbia Analytical Services, Inc. Project #:143267

Project Location: Varian Beverly RTN:

This Form provides certifications for the following data set: list Laboratory Sample ID Number(s):
R1106271 – 001 - 004

Matrices: X Groundwater ☐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 ☐	6850 Perchlorate CAM VIII B ☐	Other: CL by SM4500-Cl-E

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?	☐Yes X No[1]
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	X 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:** Laboratory Manager

Printed Name: Michael K. Perry **Date:** 11/2811 88883

CASE NARRATIVE

This report contains analytical results for the following samples:
Service Request Number: R1106271

Lab ID	Client ID
R1106271-001	AP-30R-DO (-')
R1106271-002	AP-31-DO (-')
R1106271-003	AP-32-DO (-')
R1106271-004	TRIP BLANK

Columbia Analytical Services

REPORT QUALIFIERS

U	Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.
J	Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/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.

ACCREDITED IN ACCORDANCE WITH nelac

CAS/Rochester 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

COLUMBIA ANALYTICAL SERVICES
1565 JEFFERSON RD
BUILDING 300, SUITE 360
ROCHESTER, NY 14623-0000

Laboratory Director: Michael K. Perry

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.

Director, Division of Environmental Analysis

Issued: 01 JUL 2011
Expires: 30 JUN 2012

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 25 AUG 2011

M-NY032 COLUMBIA ANALYTICAL SERVICES
ROCHESTER NY

NON POTABLE WATER (CHEMISTRY) Effective Date 25 AUG 2011 Expiration Date 30 JUN 2012

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
PH	SM 4500-H-B
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

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 25 AUG 2011

M-NY032 COLUMBIA ANALYTICAL SERVICES
ROCHESTER NY

NON POTABLE WATER (CHEMISTRY) **Effective Date** **25 AUG 2011** **Expiration Date** **30 JUN 2012**

Analytes	Methods
ALKALINITY, TOTAL	SM 2320B
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

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106271
Project:	Varian Beverly/139342	**Date Collected:**	11/ 7/11 0700
Sample Matrix:	Water	**Date Received:**	11/ 8/11
Sample Name:	AP-30R-DO (-')		
Lab Code:	R1106271-001	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chloride	SM 4500-Cl- E	**2730**		mg/L	200	200	NA	11/15/11 14:56	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106271
Project:	Varian Beverly/139342	**Date Collected:**	11/ 7/11 0700
Sample Matrix:	Water	**Date Received:**	11/ 8/11
Sample Name:	AP-30R-DO (-')		
Lab Code:	R1106271-001	**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	50	11/ 9/11	11/18/11 17:14	
Manganese, Dissolved	6010C	**20000000**		µg/L	100000	1000	11/ 9/11	11/21/11 17:42	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106271
Project:	Varian Beverly/139342	**Date Collected:**	11/ 7/11 0700
Sample Matrix:	Water	**Date Received:**	11/ 8/11
		Date Analyzed:	11/11/11 04:43
Sample Name:	AP-30R-DO (-')	**Units:**	µg/L
Lab Code:	R1106271-001	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	269072
Data File Name:	J:\ACQUDATA\msvoa10\data\111011\D6055.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)	**85**		2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	**3.1**		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	**13**		10	
75-27-4	Bromodichloromethane	**3.0**		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	**230**	E	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	**180**		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	97	70-130	11/11/11 04:43	
Dibromofluoromethane	103	70-130	11/11/11 04:43	
Toluene-d8	106	70-130	11/11/11 04:43	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106271
Project:	Varian Beverly/139342	**Date Collected:**	11/ 7/11 0700
Sample Matrix:	Water	**Date Received:**	11/ 8/11
		Date Analyzed:	11/11/11 18:56
Sample Name:	AP-30R-DO (-')	**Units:**	µg/L
Lab Code:	R1106271-001	**Basis:**	NA
Run Type:	Dilution		

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	269323
Data File Name:	J:\ACQUDATA\msvoa10\data\111111\D6083.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)	**76**	D	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	**190**	D	4.0	
108-90-7	Chlorobenzene	4.0	U	4.0	
75-00-3	Chloroethane	4.0	U	4.0	
67-66-3	Chloroform	**160**	D	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	4.0	U	4.0	
156-59-2	cis-1,2-Dichloroethene	4.0	U	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	11/11/11 18:56	
Dibromofluoromethane	100	70-130	11/11/11 18:56	
Toluene-d8	104	70-130	11/11/11 18:56	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106271
Project:	Varian Beverly/139342	**Date Collected:**	11/ 7/11 0740
Sample Matrix:	Water	**Date Received:**	11/ 8/11
Sample Name:	AP-31-DO (-')		
Lab Code:	R1106271-002	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chloride	SM 4500-Cl- E	**3240**		mg/L	40	40	NA	11/15/11 14:07	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106271
Project:	Varian Beverly/139342	**Date Collected:**	11/ 7/11 0740
Sample Matrix:	Water	**Date Received:**	11/ 8/11
Sample Name:	AP-31-DO (-')		
Lab Code:	R1106271-002	**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	11/ 9/11	11/16/11 10:04	
Manganese, Dissolved	6010C	**775000**		µg/L	10000	100	11/ 9/11	11/18/11 17:20	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106271
Project:	Varian Beverly/139342	**Date Collected:**	11/ 7/11 0740
Sample Matrix:	Water	**Date Received:**	11/ 8/11
		Date Analyzed:	11/11/11 19:25
Sample Name:	AP-31-DO (-')	**Units:**	µg/L
Lab Code:	R1106271-002	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	269323
Data File Name:	J:\ACQUDATA\msvoa10\data\111111\D6084.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)	**1800**		20	
79-34-5	1,1,2,2-Tetrachloroethane	20	U	20	
79-00-5	1,1,2-Trichloroethane	**140**		20	
75-34-3	1,1-Dichloroethane (1,1-DCA)	**41**		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	**520**		20	
108-90-7	Chlorobenzene	20	U	20	
75-00-3	Chloroethane	20	U	20	
67-66-3	Chloroform	**1900**		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)	**43**		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	96	70-130	11/11/11 19:25	
Dibromofluoromethane	104	70-130	11/11/11 19:25	
Toluene-d8	104	70-130	11/11/11 19:25	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106271
Project:	Varian Beverly/139342	**Date Collected:**	11/ 7/11 0820
Sample Matrix:	Water	**Date Received:**	11/ 8/11
Sample Name:	AP-32-DO (-')		
Lab Code:	R1106271-003	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chloride	SM 4500-Cl- E	979		mg/L	20	20	NA	11/15/11 14:10	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106271
Project:	Varian Beverly/139342	**Date Collected:**	11/ 7/11 0820
Sample Matrix:	Water	**Date Received:**	11/ 8/11
Sample Name:	AP-32-DO (-')		
Lab Code:	R1106271-003	**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	11/ 9/11	11/16/11 10:20	
Manganese, Dissolved	6010C	**55**		µg/L	10	1	11/ 9/11	11/18/11 17:25	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106271
Project:	Varian Beverly/139342	**Date Collected:**	11/ 7/11 0820
Sample Matrix:	Water	**Date Received:**	11/ 8/11
		Date Analyzed:	11/14/11 13:10
Sample Name:	AP-32-DO (-')	**Units:**	µg/L
Lab Code:	R1106271-003	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	269539
Data File Name:	J:\ACQUDATA\msvoa10\data\111411\D6128.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)	**1800**		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	**3300**		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)	**41000**		1000	
79-01-6	Trichloroethene (TCE)	**100000**	E	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	U	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	97	70-130	11/14/11 13:10	
Dibromofluoromethane	99	70-130	11/14/11 13:10	
Toluene-d8	106	70-130	11/14/11 13:10	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106271
Project:	Varian Beverly/139342	**Date Collected:**	11/ 7/11 0820
Sample Matrix:	Water	**Date Received:**	11/ 8/11
		Date Analyzed:	11/14/11 13:53
Sample Name:	AP-32-DO (-')	**Units:**	µg/L
Lab Code:	R1106271-003	**Basis:**	NA
Run Type:	Dilution		

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	269539
Data File Name:	J:\ACQUDATA\msvoa10\data\111411\D6129.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	**2700**	D	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)	**32000**	D	2000	
79-01-6	Trichloroethene (TCE)	**81000**	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	2000	U	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	97	70-130	11/14/11 13:53	
Dibromofluoromethane	102	70-130	11/14/11 13:53	
Toluene-d8	106	70-130	11/14/11 13:53	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106271
Project:	Varian Beverly/139342	**Date Collected:**	11/ 7/11 0800
Sample Matrix:	Water	**Date Received:**	11/ 8/11
		Date Analyzed:	11/11/11 04:13
Sample Name:	TRIP BLANK	**Units:**	µg/L
Lab Code:	R1106271-004	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	269072
Data File Name:	J:\ACQUDATA\msvoa10\data\111011\D6054.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	95	70-130	11/11/11 04:13	
Dibromofluoromethane	100	70-130	11/11/11 04:13	
Toluene-d8	106	70-130	11/11/11 04:13	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106271
Project:	Varian Beverly/139342	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank		
Lab Code:	R1106271-MB1	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chloride	SM 4500-Cl- E	1.0	U	mg/L	1.0	1	NA	11/15/11 13:44	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106271
Project:	Varian Beverly/139342	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank		
Lab Code:	R1106271-MB2	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chloride	SM 4500-Cl- E	1.0	U	mg/L	1.0	1	NA	11/15/11 14:04	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106271
Project:	Varian Beverly/139342	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank		
Lab Code:	R1106271-MB3	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chloride	SM 4500-Cl- E	1.0	U	mg/L	1.0	1	NA	11/15/11 14:54	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106271
Project:	Varian Beverly/139342	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank		
Lab Code:	R1106271-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	11/ 9/11	11/16/11 09:12	
Manganese, Dissolved	6010C	10	U	µg/L	10	1	11/ 9/11	11/18/11 16:56	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106271
Project:	Varian Beverly/139342	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	11/11/11 03:43
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1111628-01	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	269072
Data File Name:	J:\ACQUDATA\msvoa10\data\111011\D6053.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	97	70-130	11/11/11 03:43	
Dibromofluoromethane	100	70-130	11/11/11 03:43	
Toluene-d8	107	70-130	11/11/11 03:43	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106271
Project:	Varian Beverly/139342	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	11/11/11 15:27
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1111690-01	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	269323
Data File Name:	J:\ACQUDATA\msvoa10\data\111111\D6076.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	95	70-130	11/11/11 15:27	
Dibromofluoromethane	100	70-130	11/11/11 15:27	
Toluene-d8	106	70-130	11/11/11 15:27	

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1106271
Project:	Varian Beverly/139342	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	11/14/11 12:10
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1111758-01	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	269539
Data File Name:	J:\ACQUDATA\msvoa10\data\111411\D6126.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	96	70-130	11/14/11 12:10	
Dibromofluoromethane	100	70-130	11/14/11 12:10	
Toluene-d8	104	70-130	11/14/11 12:10	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian Beverly/139342
Sample Matrix: Water

Service Request: R1106271
Date Analyzed: 11/15/11

Lab Control Sample Summary
General Chemistry Parameters

Units: mg/L
Basis: NA

Analyte Name	Method	Lab Control Sample R1106271-LCS1 Result	Spike Amount	% Rec	% Rec Limits
Chloride	SM 4500-Cl- E	24.2	25.0	97	86 - 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.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian Beverly/139342
Sample Matrix: Water

Service Request: R1106271
Date Analyzed: 11/15/11

Lab Control Sample Summary
General Chemistry Parameters

Units: mg/L
Basis: NA

Analyte Name	Method	Lab Control Sample R1106271-LCS2 Result	Spike Amount	% Rec	% Rec Limits
Chloride	SM 4500-Cl- E	24.3	25.0	97	86 - 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.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian Beverly/139342
Sample Matrix: Water

Service Request: R1106271
Date Analyzed: 11/15/11

Lab Control Sample Summary
General Chemistry Parameters

Units: mg/L
Basis: NA

Analyte Name	Method	Lab Control Sample R1106271-LCS3 Result	Spike Amount	% Rec	% Rec Limits
Chloride	SM 4500-Cl- E	24.7	25.0	99	86 - 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.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian Beverly/139342
Sample Matrix: Water

Service Request: R1106271
Date Analyzed: 11/16/11 - 11/18/11

Lab Control Sample Summary
Inorganic Parameters

Units: µg/L
Basis: NA

Analyte Name	Method	Lab Control Sample R1106271-LCS Result	Spike Amount	% Rec	% Rec Limits
Iron, Dissolved	6010C	1070	1000	107	80 - 120
Manganese, Dissolved	6010C	486	500	97	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.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian Beverly/139342
Sample Matrix: Water

Service Request: R1106271
Date Analyzed: 11/11/11

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260C

Units: µg/L
Basis: NA

Analysis Lot: 269072

	Lab Control Sample RQ1111628-02			Duplicate Lab Control Sample RQ1111628-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
1,1,1-Trichloroethane (TCA)	20.2	20.0	101	19.8	20.0	99	70 - 130	2	20
1,1,2,2-Tetrachloroethane	19.7	20.0	99	19.3	20.0	97	70 - 130	2	20
1,1,2-Trichloroethane	21.7	20.0	108	21.9	20.0	110	70 - 130	1	20
1,1-Dichloroethane (1,1-DCA)	21.4	20.0	107	21.1	20.0	106	70 - 130	1	20
1,1-Dichloroethene (1,1-DCE)	19.0	20.0	95	18.9	20.0	94	70 - 130	<1	20
1,2-Dichloroethane	21.8	20.0	109	22.1	20.0	110	70 - 130	1	20
1,2-Dichloropropane	21.7	20.0	108	21.5	20.0	108	70 - 130	<1	20
Acetone	21.7	20.0	108	24.3	20.0	122	40 - 160	12	20
Bromodichloromethane	22.4	20.0	112	22.0	20.0	110	70 - 130	2	20
Bromoform	25.7	20.0	129	26.1	20.0	130	70 - 130	1	20
Bromomethane	16.7	20.0	83	16.5	20.0	82	40 - 160	1	20
Carbon Tetrachloride	21.3	20.0	107	21.1	20.0	106	70 - 130	<1	20
Chlorobenzene	21.1	20.0	106	20.7	20.0	103	70 - 130	2	20
Chloroethane	20.7	20.0	104	20.6	20.0	103	70 - 130	<1	20
Chloroform	21.4	20.0	107	21.0	20.0	105	70 - 130	2	20
Chloromethane	18.9	20.0	95	18.4	20.0	92	40 - 160	3	20
Dibromochloromethane	23.6	20.0	118	23.6	20.0	118	70 - 130	<1	20
Methylene Chloride	21.1	20.0	106	20.5	20.0	102	70 - 130	3	20
Tetrachloroethene (PCE)	20.2	20.0	101	19.6	20.0	98	70 - 130	3	20
Trichloroethene (TCE)	22.5	20.0	113	22.4	20.0	112	70 - 130	<1	20
Trichlorofluoromethane (CFC 11)	20.1	20.0	101	20.1	20.0	101	70 - 130	<1	20
Vinyl Chloride	21.5	20.0	107	21.3	20.0	106	70 - 130	1	20
cis-1,2-Dichloroethene	21.2	20.0	106	21.3	20.0	106	70 - 130	<1	20
cis-1,3-Dichloropropene	20.5	20.0	103	20.6	20.0	103	70 - 130	<1	20
trans-1,2-Dichloroethene	20.1	20.0	101	19.9	20.0	99	70 - 130	1	20
trans-1,3-Dichloropropene	20.6	20.0	103	20.4	20.0	102	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, INC.

QA/QC Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian Beverly/139342
Sample Matrix: Water

Service Request: R1106271
Date Analyzed: 11/11/11

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260C

Units: µg/L
Basis: NA

Analysis Lot: 269323

Analyte Name	Lab Control Sample RQ1111690-02 Result	Spike Amount	% Rec	Duplicate Lab Control Sample RQ1111690-03 Result	Spike Amount	% Rec		% Rec Limits	RPD	RPD Limit
1,1,1-Trichloroethane (TCA)	20.9	20.0	105	21.1	20.0	106		70 - 130	1	20
1,1,2,2-Tetrachloroethane	23.0	20.0	115	25.9	20.0	130		70 - 130	12	20
1,1,2-Trichloroethane	20.9	20.0	104	22.4	20.0	112		70 - 130	7	20
1,1-Dichloroethane (1,1-DCA)	21.9	20.0	109	21.9	20.0	109		70 - 130	<1	20
1,1-Dichloroethene (1,1-DCE)	19.6	20.0	98	19.5	20.0	97		70 - 130	<1	20
1,2-Dichloroethane	21.0	20.0	105	21.8	20.0	109		70 - 130	4	20
1,2-Dichloropropane	22.0	20.0	110	21.6	20.0	108		70 - 130	2	20
Acetone	19.2	20.0	96	22.6	20.0	113		40 - 160	16	20
Bromodichloromethane	21.7	20.0	109	22.6	20.0	113		70 - 130	4	20
Bromoform	24.4	20.0	122	26.6	20.0	133	*	70 - 130	9	20
Bromomethane	17.5	20.0	87	17.1	20.0	86		40 - 160	2	20
Carbon Tetrachloride	22.3	20.0	111	22.1	20.0	110		70 - 130	<1	20
Chlorobenzene	21.6	20.0	108	22.2	20.0	111		70 - 130	3	20
Chloroethane	22.1	20.0	111	21.3	20.0	107		70 - 130	4	20
Chloroform	21.8	20.0	109	22.0	20.0	110		70 - 130	<1	20
Chloromethane	19.1	20.0	95	19.4	20.0	97		40 - 160	2	20
Dibromochloromethane	23.4	20.0	117	24.4	20.0	122		70 - 130	4	20
Methylene Chloride	20.9	20.0	105	21.6	20.0	108		70 - 130	3	20
Tetrachloroethene (PCE)	21.4	20.0	107	20.8	20.0	104		70 - 130	3	20
Trichloroethene (TCE)	20.9	20.0	105	20.2	20.0	101		70 - 130	4	20
Trichlorofluoromethane (CFC 11)	21.7	20.0	108	21.5	20.0	108		70 - 130	<1	20
Vinyl Chloride	23.0	20.0	115	22.8	20.0	114		70 - 130	1	20
cis-1,2-Dichloroethene	21.4	20.0	107	22.3	20.0	112		70 - 130	4	20
cis-1,3-Dichloropropene	20.8	20.0	104	21.7	20.0	109		70 - 130	4	20
trans-1,2-Dichloroethene	21.2	20.0	106	20.9	20.0	104		70 - 130	2	20
trans-1,3-Dichloropropene	20.2	20.0	101	21.5	20.0	107		70 - 130	6	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, INC.

QA/QC Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian Beverly/139342
Sample Matrix: Water

Service Request: R1106271
Date Analyzed: 11/14/11

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260C

Units: µg/L
Basis: NA

Analysis Lot: 269539

Analyte Name	Lab Control Sample RQ1111758-02 Result	Spike Amount	% Rec	Duplicate Lab Control Sample RQ1111758-03 Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
1,1,1-Trichloroethane (TCA)	17.8	20.0	89	19.3	20.0	97	70 - 130	8	20
1,1,2,2-Tetrachloroethane	19.8	20.0	99	22.1	20.0	110	70 - 130	11	20
1,1,2-Trichloroethane	18.8	20.0	94	20.6	20.0	103	70 - 130	9	20
1,1-Dichloroethane (1,1-DCA)	18.8	20.0	94	20.4	20.0	102	70 - 130	8	20
1,1-Dichloroethene (1,1-DCE)	17.0	20.0	85	18.3	20.0	92	70 - 130	8	20
1,2-Dichloroethane	18.7	20.0	94	20.6	20.0	103	70 - 130	10	20
1,2-Dichloropropane	19.2	20.0	96	20.4	20.0	102	70 - 130	6	20
Acetone	19.5	20.0	98	19.4	20.0	97	40 - 160	<1	20
Bromodichloromethane	19.5	20.0	98	21.3	20.0	106	70 - 130	8	20
Bromoform	22.8	20.0	114	25.0	20.0	125	70 - 130	9	20
Bromomethane	14.9	20.0	74	15.7	20.0	79	40 - 160	6	20
Carbon Tetrachloride	19.7	20.0	98	21.1	20.0	106	70 - 130	7	20
Chlorobenzene	18.8	20.0	94	20.4	20.0	102	70 - 130	8	20
Chloroethane	17.7	20.0	88	19.1	20.0	96	70 - 130	8	20
Chloroform	18.7	20.0	93	20.5	20.0	102	70 - 130	9	20
Chloromethane	16.1	20.0	81	17.2	20.0	86	40 - 160	6	20
Dibromochloromethane	21.0	20.0	105	22.7	20.0	113	70 - 130	7	20
Methylene Chloride	18.6	20.0	93	19.8	20.0	99	70 - 130	6	20
Tetrachloroethene (PCE)	18.6	20.0	93	19.7	20.0	99	70 - 130	6	20
Trichloroethene (TCE)	17.8	20.0	89	19.6	20.0	98	70 - 130	10	20
Trichlorofluoromethane (CFC 11)	17.8	20.0	89	18.9	20.0	95	70 - 130	6	20
Vinyl Chloride	18.3	20.0	92	19.8	20.0	99	70 - 130	8	20
cis-1,2-Dichloroethene	19.1	20.0	95	20.5	20.0	103	70 - 130	7	20
cis-1,3-Dichloropropene	19.3	20.0	97	20.4	20.0	102	70 - 130	5	20
trans-1,2-Dichloroethene	18.3	20.0	91	19.3	20.0	97	70 - 130	6	20
trans-1,3-Dichloropropene	19.1	20.0	95	20.5	20.0	103	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 1

Project Name	Project Number
Varian Beverly	143267-04000000
Project Manager	**Report CC**
Raymond Cadorette	

Company/Address
Shaw Environmental, Inc.
100 Technology Center Drive
Stoughton, MA 02072

Phone # 617-589-6102
E-mail raymond.cadorette@shawgrp.com

Sampler's Signature
Sampler's Printed Name MATTHEW VISCOVICH

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
AP-30R-DO(-)		11/7/11	0700	GW	5	3						1	1							
AP-31-DO(-)			0740		5	3						1	1							
AP-32-DO(-)			0820		5	3						1	1							
TRIP BLANK		11/1/11	0800		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.
Email GISKey EDD & PDF of report to:
Catherine.Mainville@Shawgrp.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 R

Edata ✓ Yes ____ No

INVOICE INFORMATION
PO #: 727459
BILL TO: Shaw Environmental

R1106271
Shaw Environmental & Infrastructure, Inc.
Varian Beverly

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature	Signature	Signature	Signature	Signature	Signature
Printed Name MATTHEW VISCOVICH	Printed Name JESSICA HALL	Printed Name	Printed Name	Printed Name	Printed Name
Firm SHAW ENV	Firm CAS	Firm	Firm	Firm	Firm
Date/Time 11/7/11 0900	Date/Time 11/18/11 0905	Date/Time	Date/Time	Date/Time	Date/Time

Distribution: White - Lab Copy; Yellow - Return To Originator

SCOC Rev. 10/2010

Cooler Receipt And Preservation Check Form

Project/Client Shaw Folder Number 211-6271

Cooler received on 11/8/11 by: JH **COURIER:** CAS (UPS) FEDEX VELOCITY CLIENT

1.	Were custody seals on outside of cooler?	(YES)	NO
2.	Were custody papers properly filled out (ink, signed, etc.)?	(YES)	NO
3.	Did all bottles arrive in good condition (unbroken)?	(YES)	NO
4.	Did VOA vials, Alkalinity, or Sulfide have significant* air bubbles?	YES	(NO) N/A
5.	Were (Ice) or **Ice packs** present?	(YES)	NO
6.	Where did the bottles originate?	(GAS/ROC), CLIENT	
7.	Temperature of cooler(s) upon receipt:	0.5	

Is the temperature within 0° - 6° C?:	Yes	Yes	Yes	Yes	Yes
If No, Explain Below	(No)	No	No	No	No

Date/Time Temperatures Taken: 11/8/11 0926

Thermometer ID: IR (GUN#3) / IR GUN#4 Reading From: (Temp Blank) / Sample Bottle

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

PC Secondary Review: MVP 11/8/11

Cooler Breakdown: Date: 11/8/11 Time: 1112 by: JH

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	X		B10B76113	9/12				
≤2	H_2SO_4								
<4	$NaHSO_4$								
Residual Chlorine (-)	For TCN Phenol and 522			If present, contact PM to add ascorbic acid Or sodium sulfite (522)					
	$Na_2S_2O_3$	-	-						
	Zn Aceta	-	-						
	HCl	*	*	411010	10/12				

*Not to be tested before analysis – pH tested and recorded by VOAs or GenChem on a separate worksheet

Yes = All samples OK

No = Samples were preserved at lab as listed

PM OK to Adjust: _____

Bottle lot numbers: 1-192-0072, 091911-2LL, 060611-2W

Other Comments:

PC Secondary Review: MVP 11/28/11

*significant air bubbles: VOA > 5-6 mm : WC >1 in. diameter

Data Usability Worksheet

Project Name : Varian Medical Systems, Inc

Job Number : 143276

Prepared By: Jennifer Gailey

Date : 1/31/2012

Analyte Group : Volatile Organics

Analytical Method : TO-15

Completed MADEP CAM Certification Form included: Yes

Laboratory ID No. : R1200219

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
1/9, 1/10/2012	TO-15		30 days	1/17, 1/18/2012

Sample temperature above QC limit: 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 1/17/2012, 1/18/2012

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 anlayzed at appropriate dilutions based on prescreening of the samples and/or historical data to bring the target analytes within the calibration range of the method. Sample Bldg 5-SV2 was re-analyzed at a larger dilution to bring target analytes With in the calibration range of the method. Both dilutions were reported. Analytes over the calibration range have been flagged with an "E" and diluted analytes were flagged with a "D"

Reviewed By: PH

January 26, 2012 Service Request No: R1200219

Mr. Ray Cadorette
Shaw Environmental & Infrastructure, Inc.
100 Technology Center
Stoughton, MA 02072

Laboratory Results for: Varian Beverly Bldg. 5 & 6/143276/16000000

Dear Mr. Cadorette:

Enclosed are the results of the sample(s) submitted to our laboratory on January 12, 2012. For your reference, these analyses have been assigned our service request number **R1200219**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. 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 7469. You may also contact me via email at MPerry@caslab.com.

Respectfully submitted,

Columbia Analytical Services, Inc.

Michael Perry
Laboratory Manager

Columbia Analytical Services
ADDRESS 1565 Jefferson Rd, Building 300, Suite 360, Rochester, NY 14623
PHONE 585-288-5380 | FAX 585-288-8475
Columbia Analytical Services, Inc.
Part of the ALS Group A Campbell Brothers Limited Company
www.caslab.com • www.alsglobal.com

COLUMBIA ANALYTICAL SERVICES, INC.

Client:	Shaw E & I, Inc.	**Service Request No.:**	R1200219
Project:	Varian Beverly	**Project No.:**	143276
Sample Matrix:	Air	**Date Received:**	1/12/12

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. This report contains analytical results for samples designated for Tier II, MASS. CAM deliverables. When appropriate to the method, blank and LCS results have been reported with each analytical test.

Sample Receipt

Shaw air samples were collected on 1/10/12 and received at CAS in good condition as noted on the receipt and preservation check form. The samples were stored in the laboratory at room temperature prior to analysis. See the CAS case narrative for a cross-reference between Client ID and CAS Job #.

TO - 15 Air Analysis

Twelve air samples were analyzed for a site specific list of Volatile Organics or the Mass. CAM list of Volatile Organics by EPA method TO-15.

All samples were analyzed at appropriate dilutions based on prescreening of the samples and/or historical data to bring the target analytes within the calibration range of the method. Sample Bldg 5-SV2 was re-analyzed at a larger dilution to bring the target analytes within the calibration range of the method. Both dilutions were reported. Analytes over the calibration range have been flagged with an "E" and the diluted analytes were flagged with a "D".

All initial and continuing calibrations were compliant.

All surrogate standard recoveries were within QC limits.

The LCS recoveries were all within QC limits of 70 – 130 %. All RPD data were within QC limits.

No analytical or QC problems were encountered with these analyses.

MassDEP Analytical Protocol Certification Form

Laboratory Name: Columbia Analytical Services, Inc. Project #:143276

Project Location: Varian Beverly RTN:

This Form provides certifications for the following data set: list Laboratory Sample ID Number(s):
R1200219–001 - 012

Matrices: ☐Groundwater/Surface Water ☐ Soil/Sediment ☐ Drinking Water X 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 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?	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?	X Yes ☐ No ☐ Yes X 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)?some site/some full	X 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: Michael K. Perry **Position:** Laboratory Manager

Printed Name: Michael K. Perry **Date:** 1/26/12

CASE NARRATIVE

This report contains analytical results for the following samples:
Service Request Number: R1200219

Lab ID	Client ID
R1200219-001	Bldg 5-SV3
R1200219-002	Bldg 5-3
R1200219-003	Bldg 5-SV2
R1200219-004	Bldg 5-SV1
R1200219-005	Bldg 5-1
R1200219-006	Bldg 5-4
R1200219-007	Bldg 5-2
R1200219-008	Bldg 6-SV2
R1200219-009	Bldg 6-SV1
R1200219-010	Bldg 6-SV3
R1200219-011	Bldg 6-1
R1200219-012	Bldg 6-2

Columbia Analytical Services

REPORT QUALIFIERS

U	Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.
J	Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/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.

ACCREDITED IN ACCORDANCE WITH nelac

CAS/Rochester 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

COLUMBIA ANALYTICAL SERVICES
1565 JEFFERSON RD
BUILDING 300, SUITE 360
ROCHESTER, NY 14623-0000

Laboratory Director: Michael K. Perry

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: 01 JUL 2011
Expires: 30 JUN 2012

Director, Division of Environmental Analysis

00006

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 25 AUG 2011

M-NY032 COLUMBIA ANALYTICAL SERVICES
ROCHESTER NY

NON POTABLE WATER (CHEMISTRY) Effective Date 25 AUG 2011 Expiration Date 30 JUN 2012

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
PH	SM 4500-H-B
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

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 25 AUG 2011

M-NY032 COLUMBIA ANALYTICAL SERVICES
ROCHESTER NY

NON POTABLE WATER (CHEMISTRY) Effective Date 25 AUG 2011 Expiration Date 30 JUN 2012

Analytes	Methods
ALKALINITY, TOTAL	SM 2320B
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

COLUMBIA ANALYTICAL SERVICES, INC.
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Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian Beverly Bldg. 5 & 6/143276/16000000
Sample Matrix: Air

Service Request: R1200219
Date Collected: 1/ 9/12 1410
Date Received: 1/12/12

Sample Name: Bldg 5-SV3
Lab Code: R1200219-001

Analytical Method: TO-15

Date Analyzed: 1/17/12 1238
Canister Dilution Factor: 1.67

Initial Pressure (psig): -3.83 Final Pressure (psig): 3.50

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
75-01-4	Vinyl Chloride	3.0	33	33	13	13	U
74-83-9	Bromomethane	3.0	240	240	62	62	U
67-64-1	Acetone	3.0	2800	2800	1200	1200	U
75-35-4	1,1-Dichloroethene	3.0	240	240	62	62	U
75-09-2	Methylene Chloride	3.0	210	210	61	61	U
156-60-5	trans-1,2-Dichloroethene	3.0	240	240	62	62	U
75-34-3	1,1-Dichloroethane	3.0	250	250	62	62	U
1634-04-4	Methyl tert-Butyl Ether	3.0	440	440	120	120	U
78-93-3	2-Butanone (MEK)	3.0	360	360	120	120	U
156-59-2	cis-1,2-Dichloroethene	3.0	240	240	62	62	U
67-66-3	Chloroform	3.0	300	300	62	62	U
107-06-2	1,2-Dichloroethane	3.0	250	250	62	62	U
71-55-6	1,1,1-Trichloroethane (TCA)	3.0	330	330	61	61	U
71-43-2	Benzene	3.0	190	190	61	61	U
56-23-5	Carbon Tetrachloride	3.0	39	39	6.2	6.2	U
78-87-5	1,2-Dichloropropane	3.0	280	280	61	61	U
75-27-4	Bromodichloromethane	3.0	84	84	12	12	U
79-01-6	**Trichloroethene (TCE)**	3.0	**22000**	33	**4100**	6.2	
123-91-1	1,4-Dioxane	3.0	2800	2800	770	770	U
10061-01-5	cis-1,3-Dichloropropene	3.0	560	560	120	120	U
108-10-1	4-Methyl-2-pentanone (MIBK)	3.0	500	500	120	120	U
10061-02-6	trans-1,3-Dichloropropene	3.0	280	280	61	61	U
79-00-5	1,1,2-Trichloroethane	3.0	330	330	61	61	U
108-88-3	Toluene	3.0	230	230	61	61	U
591-78-6	2-Hexanone	3.0	250	250	61	61	U
124-48-1	Dibromochloromethane	3.0	110	110	12	12	U
106-93-4	1,2-Dibromoethane (EDB)	3.0	95	95	12	12	U
127-18-4	**Tetrachloroethene (PCE)**	3.0	**2100**	45	**310**	6.6	
108-90-7	Chlorobenzene	3.0	280	280	62	62	U
100-41-4	Ethylbenzene	3.0	530	530	120	120	U
179601-23-1	m,p-Xylenes	3.0	1100	1100	240	240	U
75-25-2	Bromoform	3.0	630	630	61	61	U
100-42-5	Styrene	3.0	520	520	120	120	U
95-47-6	o-Xylene	3.0	530	530	120	120	U
79-34-5	1,1,2,2-Tetrachloroethane	3.0	84	84	12	12	U
541-73-1	1,3-Dichlorobenzene	3.0	730	730	120	120	U

COLUMBIA ANALYTICAL SERVICES, INC.
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Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200219
Project:	Varian Beverly Bldg. 5 & 6/143276/16000000	**Date Collected:**	1/ 9/12 1410
Sample Matrix:	Air	**Date Received:**	1/12/12
Sample Name:	Bldg 5-SV3		
Lab Code:	R1200219-001		

Analytical Method: TO-15

Date Analyzed: 1/17/12 1238
Canister Dilution Factor: 1.67

Initial Pressure (psig): -3.83 Final Pressure (psig): 3.50

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
106-46-7	1,4-Dichlorobenzene	3.0	730	730	120	120	U
95-50-1	1,2-Dichlorobenzene	3.0	730	730	120	120	U
91-20-3	Naphthalene	3.0	1100	1100	210	210	U
87-68-3	Hexachlorobutadiene	3.0	1700	1700	160	160	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	95	70-130	1/17/12 1238	

COLUMBIA ANALYTICAL SERVICES, INC.
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Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian Beverly Bldg. 5 & 6/143276/16000000
Sample Matrix: Air

Service Request: R1200219
Date Collected: 1/ 9/12 1611
Date Received: 1/12/12

Sample Name: Bldg 5-3
Lab Code: R1200219-002

Analytical Method: TO-15

Date Analyzed: 1/17/12 1326
Canister Dilution Factor: 1.51

Initial Pressure (psig): -2.65 Final Pressure (psig): 3.50

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
74-87-3	Chloromethane	8.6	79	79	38	38	U
75-01-4	Vinyl Chloride	8.6	11	11	4.1	4.1	U
74-83-9	Bromomethane	8.6	76	76	19	19	U
75-00-3	Chloroethane	8.6	100	100	39	39	U
67-64-1	**Acetone**	8.6	**3400**	880	**1400**	370	
75-69-4	Trichlorofluoromethane (CFC 11)	8.6	110	110	19	19	U
75-35-4	1,1-Dichloroethene	8.6	77	77	19	19	U
75-09-2	Methylene Chloride	8.6	67	67	19	19	U
156-60-5	trans-1,2-Dichloroethene	8.6	77	77	19	19	U
75-34-3	1,1-Dichloroethane (1,1-DCA)	8.6	79	79	20	20	U
156-59-2	cis-1,2-Dichloroethene	8.6	77	77	19	19	U
67-66-3	Chloroform	8.6	95	95	19	19	U
107-06-2	1,2-Dichloroethane	8.6	79	79	20	20	U
71-55-6	1,1,1-Trichloroethane (TCA)	8.6	110	110	19	19	U
56-23-5	Carbon Tetrachloride	8.6	12	12	2.0	2.0	U
78-87-5	1,2-Dichloropropane	8.6	90	90	19	19	U
75-27-4	Bromodichloromethane	8.6	26	26	3.9	3.9	U
79-01-6	**Trichloroethene (TCE)**	8.6	**33**	11	**6.2**	2.0	
10061-01-5	cis-1,3-Dichloropropene	8.6	180	180	39	39	U
10061-02-6	trans-1,3-Dichloropropene	8.6	88	88	19	19	U
79-00-5	1,1,2-Trichloroethane	8.6	110	110	19	19	U
124-48-1	Dibromochloromethane	8.6	33	33	3.9	3.9	U
127-18-4	Tetrachloroethene (PCE)	8.6	14	14	2.1	2.1	U
108-90-7	Chlorobenzene	8.6	90	90	19	19	U
100-41-4	Ethylbenzene	8.6	170	170	38	38	U
179601-23-1	m,p-Xylenes	8.6	340	340	77	77	U
75-25-2	Bromoform	8.6	200	200	19	19	U
95-47-6	o-Xylene	8.6	170	170	38	38	U
79-34-5	1,1,2,2-Tetrachloroethane	8.6	26	26	3.8	3.8	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	95	70-130	1/17/12 1326	

COLUMBIA ANALYTICAL SERVICES, INC.
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Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200219
Project:	Varian Beverly Bldg. 5 & 6/143276/16000000	**Date Collected:**	1/ 9/12 1416
Sample Matrix:	Air	**Date Received:**	1/12/12
Sample Name:	Bldg 5-SV2		
Lab Code:	R1200219-003		

Analytical Method: TO-15 **Date Analyzed:** 1/17/12 1854
Canister Dilution Factor: 1.44

Initial Pressure (psig): -2.06 Final Pressure (psig): 3.50

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
75-01-4	Vinyl Chloride	54	1.6	1.6	0.63	0.63	U
74-83-9	Bromomethane	54	11	11	3.0	3.0	U
67-64-1	**Acetone**	54	**320**	130	**130**	56	
75-35-4	1,1-Dichloroethene	54	12	12	3.0	3.0	U
75-09-2	Methylene Chloride	54	10	10	2.9	2.9	U
156-60-5	trans-1,2-Dichloroethene	54	12	12	3.0	3.0	U
75-34-3	1,1-Dichloroethane	54	12	12	3.0	3.0	U
1634-04-4	Methyl tert-Butyl Ether	54	21	21	5.8	5.8	U
78-93-3	**2-Butanone (MEK)**	54	**300**	17	**100**	5.9	
156-59-2	cis-1,2-Dichloroethene	54	12	12	3.0	3.0	U
67-66-3	Chloroform	54	14	14	2.9	2.9	U
107-06-2	1,2-Dichloroethane	54	12	12	3.0	3.0	U
71-55-6	1,1,1-Trichloroethane (TCA)	54	16	16	2.9	2.9	U
71-43-2	Benzene	54	9.3	9.3	2.9	2.9	U
56-23-5	Carbon Tetrachloride	54	1.9	1.9	0.30	0.30	U
78-87-5	1,2-Dichloropropane	54	14	14	2.9	2.9	U
75-27-4	Bromodichloromethane	54	4.0	4.0	0.60	0.60	U
79-01-6	**Trichloroethene (TCE)**	54	**1500**	1.6	**280**	0.30	E
123-91-1	1,4-Dioxane	54	130	130	37	37	U
10061-01-5	cis-1,3-Dichloropropene	54	27	27	5.9	5.9	U
108-10-1	**4-Methyl-2-pentanone (MIBK)**	54	**24**	24	5.9	5.9	
10061-02-6	trans-1,3-Dichloropropene	54	13	13	2.9	2.9	U
79-00-5	1,1,2-Trichloroethane	54	16	16	2.9	2.9	U
108-88-3	**Toluene**	54	**24**	11	**6.4**	2.9	
591-78-6	**2-Hexanone**	54	**110**	0.65	**27**	2.9	
124-48-1	Dibromochloromethane	54	5.1	5.1	0.59	0.59	U
106-93-4	1,2-Dibromoethane (EDB)	54	4.5	4.5	0.59	0.59	U
127-18-4	**Tetrachloroethene (PCE)**	54	**140**	2.1	**21**	0.31	
108-90-7	Chlorobenzene	54	14	14	3.0	3.0	U
100-41-4	Ethylbenzene	54	25	25	5.8	5.8	U
179601-23-1	m,p-Xylenes	54	51	51	12	12	U
75-25-2	Bromoform	54	30	30	2.9	2.9	U
100-42-5	Styrene	54	25	25	5.9	5.9	U
95-47-6	o-Xylene	54	25	25	5.8	5.8	U
79-34-5	1,1,2,2-Tetrachloroethane	54	4.0	4.0	0.58	0.58	U
541-73-1	1,3-Dichlorobenzene	54	35	35	5.9	5.9	U

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian Beverly Bldg. 5 & 6/143276/16000000
Sample Matrix: Air

Service Request: R1200219
Date Collected: 1/ 9/12 1416
Date Received: 1/12/12

Sample Name: Bldg 5-SV2
Lab Code: R1200219-003

Analytical Method: TO-15

Date Analyzed: 1/17/12 1854
Canister Dilution Factor: 1.44

Initial Pressure (psig): -2.06 Final Pressure (psig): 3.50

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
106-46-7	1,4-Dichlorobenzene	54	35	35	5.9	5.9	U
95-50-1	1,2-Dichlorobenzene	54	35	35	5.9	5.9	U
91-20-3	Naphthalene	54	53	53	10	10	U
87-68-3	Hexachlorobutadiene	54	80	80	7.5	7.5	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	101	70-130	1/17/12 1854	

COLUMBIA ANALYTICAL SERVICES, INC.
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Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian Beverly Bldg. 5 & 6/143276/16000000
Sample Matrix: Air

Service Request: R1200219
Date Collected: 1/ 9/12 1416
Date Received: 1/12/12

Sample Name: Bldg 5-SV2
Lab Code: R1200219-003
Run Type: Dilution

Analytical Method: TO-15

Date Analyzed: 1/18/12 1800
Canister Dilution Factor: 1.44

Initial Pressure (psig): -2.06 Final Pressure (psig): 3.50

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
75-01-4	Vinyl Chloride	45	1.9	1.9	0.75	0.75	U
74-83-9	Bromomethane	45	14	14	3.5	3.5	U
67-64-1	**Acetone**	45	**260**	160	**110**	67	D
75-35-4	1,1-Dichloroethene	45	14	14	3.6	3.6	U
75-09-2	Methylene Chloride	45	12	12	3.5	3.5	U
156-60-5	trans-1,2-Dichloroethene	45	14	14	3.6	3.6	U
75-34-3	1,1-Dichloroethane	45	14	14	3.6	3.6	U
1634-04-4	Methyl tert-Butyl Ether	45	25	25	7.0	7.0	U
78-93-3	**2-Butanone (MEK)**	45	**240**	21	**82**	7.1	D
156-59-2	cis-1,2-Dichloroethene	45	14	14	3.6	3.6	U
67-66-3	Chloroform	45	17	17	3.5	3.5	U
107-06-2	1,2-Dichloroethane	45	14	14	3.6	3.6	U
71-55-6	1,1,1-Trichloroethane (TCA)	45	19	19	3.5	3.5	U
71-43-2	Benzene	45	11	11	3.5	3.5	U
56-23-5	Carbon Tetrachloride	45	2.2	2.2	0.36	0.36	U
78-87-5	1,2-Dichloropropane	45	16	16	3.5	3.5	U
75-27-4	Bromodichloromethane	45	4.8	4.8	0.72	0.72	U
79-01-6	**Trichloroethene (TCE)**	45	**1300**	1.9	**230**	0.36	D
123-91-1	1,4-Dioxane	45	160	160	44	44	U
10061-01-5	cis-1,3-Dichloropropene	45	32	32	7.1	7.1	U
108-10-1	4-Methyl-2-pentanone (MIBK)	45	29	29	7.0	7.0	U
10061-02-6	trans-1,3-Dichloropropene	45	16	16	3.5	3.5	U
79-00-5	1,1,2-Trichloroethane	45	19	19	3.5	3.5	U
108-88-3	**Toluene**	45	**19**	13	**4.9**	3.5	D
591-78-6	**2-Hexanone**	45	**78**	14	**19**	3.5	D
124-48-1	Dibromochloromethane	45	6.1	6.1	0.71	0.71	U
106-93-4	1,2-Dibromoethane (EDB)	45	5.4	5.4	0.71	0.71	U
127-18-4	**Tetrachloroethene (PCE)**	45	**120**	2.6	**18**	0.38	D
108-90-7	Chlorobenzene	45	16	16	3.5	3.5	U
100-41-4	Ethylbenzene	45	30	30	7.0	7.0	U
179601-23-1	m,p-Xylenes	45	61	61	14	14	U
75-25-2	Bromoform	45	36	36	3.5	3.5	U
100-42-5	Styrene	45	30	30	7.1	7.1	U
95-47-6	o-Xylene	45	30	30	7.0	7.0	U
79-34-5	1,1,2,2-Tetrachloroethane	45	4.8	4.8	0.70	0.70	U
541-73-1	1,3-Dichlorobenzene	45	42	42	7.0	7.0	U

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian Beverly Bldg. 5 & 6/143276/16000000
Sample Matrix: Air

Service Request: R1200219
Date Collected: 1/ 9/12 1416
Date Received: 1/12/12

Sample Name: Bldg 5-SV2
Lab Code: R1200219-003
Run Type: Dilution

Analytical Method: TO-15

Date Analyzed: 1/18/12 1800
Canister Dilution Factor: 1.44

Initial Pressure (psig): -2.06 Final Pressure (psig): 3.50

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
106-46-7	1,4-Dichlorobenzene	45	42	42	7.0	7.0	U
95-50-1	1,2-Dichlorobenzene	45	42	42	7.0	7.0	U
91-20-3	Naphthalene	45	64	64	12	12	U
87-68-3	Hexachlorobutadiene	45	96	96	9.0	9.0	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	99	70-130	1/18/12 1800	

COLUMBIA ANALYTICAL SERVICES, INC.
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Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian Beverly Bldg. 5 & 6/143276/16000000
Sample Matrix: Air

Service Request: R1200219
Date Collected: 1/ 9/12 1421
Date Received: 1/12/12

Sample Name: Bldg 5-SV1
Lab Code: R1200219-004

Analytical Method: TO-15

Date Analyzed: 1/17/12 1413
Canister Dilution Factor: 1.41

Initial Pressure (psig): -1.82 Final Pressure (psig): 3.50

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
75-01-4	Vinyl Chloride	10.6	8.0	8.0	3.1	3.1	U
74-83-9	Bromomethane	10.6	57	57	15	15	U
67-64-1	Acetone	10.6	670	670	280	280	U
75-35-4	1,1-Dichloroethene	10.6	59	59	15	15	U
75-09-2	Methylene Chloride	10.6	51	51	15	15	U
156-60-5	trans-1,2-Dichloroethene	10.6	59	59	15	15	U
75-34-3	1,1-Dichloroethane	10.6	60	60	15	15	U
1634-04-4	Methyl tert-Butyl Ether	10.6	110	110	29	29	U
78-93-3	2-Butanone (MEK)	10.6	86	86	29	29	U
156-59-2	**cis-1,2-Dichloroethene**	10.6	**96**	59	**24**	15	
67-66-3	Chloroform	10.6	72	72	15	15	U
107-06-2	1,2-Dichloroethane	10.6	60	60	15	15	U
71-55-6	1,1,1-Trichloroethane (TCA)	10.6	80	80	15	15	U
71-43-2	Benzene	10.6	47	47	15	15	U
56-23-5	Carbon Tetrachloride	10.6	9.3	9.3	1.5	1.5	U
78-87-5	1,2-Dichloropropane	10.6	68	68	15	15	U
75-27-4	Bromodichloromethane	10.6	20	20	3.0	3.0	U
79-01-6	**Trichloroethene (TCE)**	10.6	**5800**	8.0	**1100**	1.5	
123-91-1	1,4-Dioxane	10.6	670	670	180	180	U
10061-01-5	cis-1,3-Dichloropropene	10.6	130	130	29	29	U
108-10-1	4-Methyl-2-pentanone (MIBK)	10.6	120	120	29	29	U
10061-02-6	trans-1,3-Dichloropropene	10.6	67	67	15	15	U
79-00-5	1,1,2-Trichloroethane	10.6	80	80	15	15	U
108-88-3	Toluene	10.6	55	55	14	14	U
591-78-6	2-Hexanone	10.6	60	60	15	15	U
124-48-1	Dibromochloromethane	10.6	25	25	3.0	3.0	U
106-93-4	1,2-Dibromoethane (EDB)	10.6	23	23	2.9	2.9	U
127-18-4	**Tetrachloroethene (PCE)**	10.6	**2700**	11	**390**	1.6	
108-90-7	Chlorobenzene	10.6	68	68	15	15	U
100-41-4	Ethylbenzene	10.6	130	130	29	29	U
179601-23-1	m,p-Xylenes	10.6	250	250	59	59	U
75-25-2	Bromoform	10.6	150	150	15	15	U
100-42-5	Styrene	10.6	130	130	29	29	U
95-47-6	o-Xylene	10.6	130	130	29	29	U
79-34-5	1,1,2,2-Tetrachloroethane	10.6	20	20	2.9	2.9	U
541-73-1	1,3-Dichlorobenzene	10.6	180	180	29	29	U

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian Beverly Bldg. 5 & 6/143276/16000000
Sample Matrix: Air

Service Request: R1200219
Date Collected: 1/ 9/12 1421
Date Received: 1/12/12

Sample Name: Bldg 5-SV1
Lab Code: R1200219-004

Analytical Method: TO-15

Date Analyzed: 1/17/12 1413
Canister Dilution Factor: 1.41

Initial Pressure (psig): -1.82 Final Pressure (psig): 3.50

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
106-46-7	1,4-Dichlorobenzene	10.6	180	180	29	29	U
95-50-1	1,2-Dichlorobenzene	10.6	180	180	29	29	U
91-20-3	Naphthalene	10.6	270	270	51	51	U
87-68-3	Hexachlorobutadiene	10.6	400	400	37	37	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	94	70-130	1/17/12 1413	

COLUMBIA ANALYTICAL SERVICES, INC.
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Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200219
Project:	Varian Beverly Bldg. 5 & 6/143276/16000000	**Date Collected:**	1/ 9/12 1622
Sample Matrix:	Air	**Date Received:**	1/12/12
Sample Name:	Bldg 5-1		
Lab Code:	R1200219-005		

Analytical Method: TO-15

Date Analyzed: 1/17/12 1501
Canister Dilution Factor: 1.55

Initial Pressure (psig): -2.95 Final Pressure (psig): 3.50

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
74-87-3	Chloromethane	3.0	230	230	110	110	U
75-01-4	Vinyl Chloride	3.0	31	31	12	12	U
74-83-9	Bromomethane	3.0	220	220	57	57	U
75-00-3	Chloroethane	3.0	300	300	110	110	U
67-64-1	**Acetone**	3.0	**10000**	2600	**4300**	1100	
75-69-4	Trichlorofluoromethane (CFC 11)	3.0	320	320	57	57	U
75-35-4	1,1-Dichloroethene	3.0	230	230	57	57	U
75-09-2	Methylene Chloride	3.0	200	200	57	57	U
156-60-5	trans-1,2-Dichloroethene	3.0	230	230	57	57	U
75-34-3	1,1-Dichloroethane (1,1-DCA)	3.0	230	230	57	57	U
156-59-2	cis-1,2-Dichloroethene	3.0	230	230	57	57	U
67-66-3	Chloroform	3.0	280	280	57	57	U
107-06-2	1,2-Dichloroethane	3.0	230	230	57	57	U
71-55-6	1,1,1-Trichloroethane (TCA)	3.0	310	310	57	57	U
56-23-5	Carbon Tetrachloride	3.0	36	36	5.8	5.8	U
78-87-5	1,2-Dichloropropane	3.0	260	260	57	57	U
75-27-4	Bromodichloromethane	3.0	78	78	12	12	U
79-01-6	Trichloroethene (TCE)	3.0	31	31	5.8	5.8	U
10061-01-5	cis-1,3-Dichloropropene	3.0	520	520	110	110	U
10061-02-6	trans-1,3-Dichloropropene	3.0	260	260	57	57	U
79-00-5	1,1,2-Trichloroethane	3.0	310	310	57	57	U
124-48-1	Dibromochloromethane	3.0	98	98	12	12	U
127-18-4	Tetrachloroethene (PCE)	3.0	41	41	6.1	6.1	U
108-90-7	Chlorobenzene	3.0	260	260	57	57	U
100-41-4	Ethylbenzene	3.0	490	490	110	110	U
179601-23-1	m,p-Xylenes	3.0	990	990	230	230	U
75-25-2	Bromoform	3.0	590	590	57	57	U
95-47-6	o-Xylene	3.0	490	490	110	110	U
79-34-5	1,1,2,2-Tetrachloroethane	3.0	78	78	11	11	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	95	70-130	1/17/12 1501	

COLUMBIA ANALYTICAL SERVICES, INC.
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Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian Beverly Bldg. 5 & 6/143276/16000000
Sample Matrix: Air

Service Request: R1200219
Date Collected: 1/ 9/12 1626
Date Received: 1/12/12

Sample Name: Bldg 5-4
Lab Code: R1200219-006

Analytical Method: TO-15

Date Analyzed: 1/18/12 1055
Canister Dilution Factor: 1.53

Initial Pressure (psig): -2.80 Final Pressure (psig): 3.50

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
74-87-3	Chloromethane	35	20	20	9.5	9.5	U
75-01-4	Vinyl Chloride	35	2.6	2.6	1.0	1.0	U
74-83-9	Bromomethane	35	19	19	4.8	4.8	U
75-00-3	Chloroethane	35	25	25	9.6	9.6	U
67-64-1	**Acetone**	35	**670**	220	**280**	92	
75-69-4	Trichlorofluoromethane (CFC 11)	35	27	27	4.8	4.8	U
75-35-4	1,1-Dichloroethene	35	19	19	4.9	4.9	U
75-09-2	Methylene Chloride	35	17	17	4.8	4.8	U
156-60-5	trans-1,2-Dichloroethene	35	19	19	4.9	4.9	U
75-34-3	1,1-Dichloroethane (1,1-DCA)	35	20	20	4.9	4.9	U
156-59-2	cis-1,2-Dichloroethene	35	19	19	4.9	4.9	U
67-66-3	Chloroform	35	24	24	4.8	4.8	U
107-06-2	1,2-Dichloroethane	35	20	20	4.9	4.9	U
71-55-6	1,1,1-Trichloroethane (TCA)	35	26	26	4.8	4.8	U
56-23-5	Carbon Tetrachloride	35	3.1	3.1	0.49	0.49	U
78-87-5	1,2-Dichloropropane	35	22	22	4.8	4.8	U
75-27-4	Bromodichloromethane	35	6.6	6.6	0.98	0.98	U
79-01-6	Trichloroethene (TCE)	35	2.6	2.6	0.49	0.49	U
10061-01-5	cis-1,3-Dichloropropene	35	44	44	9.6	9.6	U
10061-02-6	trans-1,3-Dichloropropene	35	22	22	4.8	4.8	U
79-00-5	1,1,2-Trichloroethane	35	26	26	4.8	4.8	U
124-48-1	Dibromochloromethane	35	8.3	8.3	0.98	0.98	U
127-18-4	Tetrachloroethene (PCE)	35	3.5	3.5	0.52	0.52	U
108-90-7	Chlorobenzene	35	22	22	4.8	4.8	U
100-41-4	Ethylbenzene	35	42	42	9.6	9.6	U
179601-23-1	m,p-Xylenes	35	83	83	19	19	U
75-25-2	Bromoform	35	50	50	4.8	4.8	U
95-47-6	o-Xylene	35	42	42	9.6	9.6	U
79-34-5	1,1,2,2-Tetrachloroethane	35	6.6	6.6	0.96	0.96	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	95	70-130	1/18/12 1055	

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian Beverly Bldg. 5 & 6/143276/16000000
Sample Matrix: Air

Service Request: R1200219
Date Collected: 1/ 9/12 1628
Date Received: 1/12/12

Sample Name: Bldg 5-2
Lab Code: R1200219-007

Analytical Method: TO-15

Date Analyzed: 1/17/12 1634
Canister Dilution Factor: 1.54

Initial Pressure (psig): -2.85 Final Pressure (psig): 3.50

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
74-87-3	Chloromethane	9.8	71	71	34	34	U
75-01-4	Vinyl Chloride	9.8	9.4	9.4	3.7	3.7	U
74-83-9	Bromomethane	9.8	68	68	17	17	U
75-00-3	Chloroethane	9.8	91	91	35	35	U
67-64-1	**Acetone**	9.8	**3300**	790	**1400**	330	
75-69-4	Trichlorofluoromethane (CFC 11)	9.8	97	97	17	17	U
75-35-4	1,1-Dichloroethene	9.8	69	69	17	17	U
75-09-2	Methylene Chloride	9.8	60	60	17	17	U
156-60-5	trans-1,2-Dichloroethene	9.8	69	69	17	17	U
75-34-3	1,1-Dichloroethane (1,1-DCA)	9.8	71	71	17	17	U
156-59-2	cis-1,2-Dichloroethene	9.8	69	69	17	17	U
67-66-3	Chloroform	9.8	85	85	17	17	U
107-06-2	1,2-Dichloroethane	9.8	71	71	17	17	U
71-55-6	1,1,1-Trichloroethane (TCA)	9.8	94	94	17	17	U
56-23-5	Carbon Tetrachloride	9.8	11	11	1.7	1.7	U
78-87-5	1,2-Dichloropropane	9.8	80	80	17	17	U
75-27-4	Bromodichloromethane	9.8	24	24	3.5	3.5	U
79-01-6	**Trichloroethene (TCE)**	9.8	**17**	9.4	**3.2**	1.8	
10061-01-5	cis-1,3-Dichloropropene	9.8	160	160	35	35	U
10061-02-6	trans-1,3-Dichloropropene	9.8	79	79	17	17	U
79-00-5	1,1,2-Trichloroethane	9.8	94	94	17	17	U
124-48-1	Dibromochloromethane	9.8	30	30	3.5	3.5	U
127-18-4	**Tetrachloroethene (PCE)**	9.8	**14**	13	**2.1**	1.9	
108-90-7	Chlorobenzene	9.8	80	80	17	17	U
100-41-4	Ethylbenzene	9.8	150	150	34	34	U
179601-23-1	m,p-Xylenes	9.8	300	300	69	69	U
75-25-2	Bromoform	9.8	180	180	17	17	U
95-47-6	o-Xylene	9.8	150	150	34	34	U
79-34-5	1,1,2,2-Tetrachloroethane	9.8	24	24	3.4	3.4	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	94	70-130	1/17/12 1634	

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian Beverly Bldg. 5 & 6/143276/16000000
Sample Matrix: Air

Service Request: R1200219
Date Collected: 1/10/12 1339
Date Received: 1/12/12

Sample Name: Bldg 6-SV2
Lab Code: R1200219-008

Analytical Method: TO-15

Date Analyzed: 1/18/12 1142
Canister Dilution Factor: 1.47

Initial Pressure (psig): -2.36 Final Pressure (psig): 3.50

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
75-01-4	Vinyl Chloride	0.54	160	160	64	64	U
74-83-9	Bromomethane	0.54	1200	1200	300	300	U
67-64-1	Acetone	0.54	14000	14000	5700	5700	U
75-35-4	1,1-Dichloroethene	0.54	1200	1200	300	300	U
75-09-2	Methylene Chloride	0.54	1000	1000	300	300	U
156-60-5	trans-1,2-Dichloroethene	0.54	1200	1200	300	300	U
75-34-3	1,1-Dichloroethane	0.54	1200	1200	300	300	U
1634-04-4	Methyl tert-Butyl Ether	0.54	2200	2200	600	600	U
78-93-3	2-Butanone (MEK)	0.54	1800	1800	600	600	U
156-59-2	cis-1,2-Dichloroethene	0.54	1200	1200	300	300	U
67-66-3	Chloroform	0.54	1500	1500	300	300	U
107-06-2	1,2-Dichloroethane	0.54	1200	1200	300	300	U
71-55-6	1,1,1-Trichloroethane (TCA)	0.54	1600	1600	300	300	U
71-43-2	Benzene	0.54	950	950	300	300	U
56-23-5	Carbon Tetrachloride	0.54	190	190	30	30	U
78-87-5	1,2-Dichloropropane	0.54	1400	1400	300	300	U
75-27-4	Bromodichloromethane	0.54	410	410	61	61	U
79-01-6	**Trichloroethene (TCE)**	0.54	**22000**	160	**4100**	30	
123-91-1	1,4-Dioxane	0.54	14000	14000	3800	3800	U
10061-01-5	cis-1,3-Dichloropropene	0.54	2700	2700	600	600	U
108-10-1	4-Methyl-2-pentanone (MIBK)	0.54	2500	2500	600	600	U
10061-02-6	trans-1,3-Dichloropropene	0.54	1400	1400	300	300	U
79-00-5	1,1,2-Trichloroethane	0.54	1600	1600	300	300	U
108-88-3	Toluene	0.54	1100	1100	300	300	U
591-78-6	2-Hexanone	0.54	1200	1200	300	300	U
124-48-1	Dibromochloromethane	0.54	520	520	61	61	U
106-93-4	1,2-Dibromoethane (EDB)	0.54	460	460	60	60	U
127-18-4	**Tetrachloroethene (PCE)**	0.54	**90000**	220	**13000**	32	
108-90-7	Chlorobenzene	0.54	1400	1400	300	300	U
100-41-4	Ethylbenzene	0.54	2600	2600	600	600	U
179601-23-1	m,p-Xylenes	0.54	5200	5200	1200	1200	U
75-25-2	Bromoform	0.54	3100	3100	300	300	U
100-42-5	Styrene	0.54	2600	2600	600	600	U
95-47-6	o-Xylene	0.54	2600	2600	600	600	U
79-34-5	1,1,2,2-Tetrachloroethane	0.54	410	410	59	59	U
541-73-1	1,3-Dichlorobenzene	0.54	3600	3600	600	600	U

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian Beverly Bldg. 5 & 6/143276/16000000
Sample Matrix: Air

Service Request: R1200219
Date Collected: 1/10/12 1339
Date Received: 1/12/12

Sample Name: Bldg 6-SV2
Lab Code: R1200219-008

Analytical Method: TO-15

Date Analyzed: 1/18/12 1142
Canister Dilution Factor: 1.47

Initial Pressure (psig): -2.36 Final Pressure (psig): 3.50

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
106-46-7	1,4-Dichlorobenzene	0.54	3600	3600	600	600	U
95-50-1	1,2-Dichlorobenzene	0.54	3600	3600	600	600	U
91-20-3	Naphthalene	0.54	5400	5400	1000	1000	U
87-68-3	Hexachlorobutadiene	0.54	8200	8200	770	770	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	95	70-130	1/18/12 1142	

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Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200219
Project:	Varian Beverly Bldg. 5 & 6/143276/16000000	**Date Collected:**	1/10/12 1222
Sample Matrix:	Air	**Date Received:**	1/12/12
Sample Name:	Bldg 6-SV1		
Lab Code:	R1200219-009		

Analytical Method: TO-15 **Date Analyzed:** 1/18/12 1229
Canister Dilution Factor: 1.32

Initial Pressure (psig): -0.93 Final Pressure (psig): 3.50

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
75-01-4	Vinyl Chloride	0.50	160	160	62	62	U
74-83-9	Bromomethane	0.50	1100	1100	290	290	U
67-64-1	Acetone	0.50	13000	13000	5600	5600	U
75-35-4	1,1-Dichloroethene	0.50	1200	1200	290	290	U
75-09-2	Methylene Chloride	0.50	1000	1000	290	290	U
156-60-5	trans-1,2-Dichloroethene	0.50	1200	1200	290	290	U
75-34-3	1,1-Dichloroethane	0.50	1200	1200	290	290	U
1634-04-4	Methyl tert-Butyl Ether	0.50	2100	2100	580	580	U
78-93-3	2-Butanone (MEK)	0.50	1700	1700	580	580	U
156-59-2	cis-1,2-Dichloroethene	0.50	1200	1200	290	290	U
67-66-3	Chloroform	0.50	1400	1400	290	290	U
107-06-2	1,2-Dichloroethane	0.50	1200	1200	290	290	U
71-55-6	1,1,1-Trichloroethane (TCA)	0.50	1600	1600	290	290	U
71-43-2	Benzene	0.50	920	920	290	290	U
56-23-5	Carbon Tetrachloride	0.50	180	180	29	29	U
78-87-5	1,2-Dichloropropane	0.50	1300	1300	290	290	U
75-27-4	Bromodichloromethane	0.50	400	400	59	59	U
79-01-6	**Trichloroethene (TCE)**	0.50	**41000**	160	**7600**	29	
123-91-1	1,4-Dioxane	0.50	13000	13000	3700	3700	U
10061-01-5	cis-1,3-Dichloropropene	0.50	2600	2600	580	580	U
108-10-1	4-Methyl-2-pentanone (MIBK)	0.50	2400	2400	580	580	U
10061-02-6	trans-1,3-Dichloropropene	0.50	1300	1300	290	290	U
79-00-5	1,1,2-Trichloroethane	0.50	1600	1600	290	290	U
108-88-3	Toluene	0.50	1100	1100	290	290	U
591-78-6	2-Hexanone	0.50	1200	1200	290	290	U
124-48-1	Dibromochloromethane	0.50	500	500	59	59	U
106-93-4	1,2-Dibromoethane (EDB)	0.50	450	450	58	58	U
127-18-4	**Tetrachloroethene (PCE)**	0.50	**100000**	210	**15000**	31	
108-90-7	Chlorobenzene	0.50	1300	1300	290	290	U
100-41-4	Ethylbenzene	0.50	2500	2500	580	580	U
179601-23-1	m,p-Xylenes	0.50	5000	5000	1200	1200	U
75-25-2	Bromoform	0.50	3000	3000	290	290	U
100-42-5	Styrene	0.50	2500	2500	580	580	U
95-47-6	o-Xylene	0.50	2500	2500	580	580	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	400	400	58	58	U
541-73-1	1,3-Dichlorobenzene	0.50	3500	3500	580	580	U

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200219
Project:	Varian Beverly Bldg. 5 & 6/143276/16000000	**Date Collected:**	1/10/12 1222
Sample Matrix:	Air	**Date Received:**	1/12/12
Sample Name:	Bldg 6-SV1		
Lab Code:	R1200219-009		

Analytical Method: TO-15 **Date Analyzed:** 1/18/12 1229
Canister Dilution Factor: 1.32

Initial Pressure (psig): -0.93 Final Pressure (psig): 3.50

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
106-46-7	1,4-Dichlorobenzene	0.50	3500	3500	580	580	U
95-50-1	1,2-Dichlorobenzene	0.50	3500	3500	580	580	U
91-20-3	Naphthalene	0.50	5300	5300	1000	1000	U
87-68-3	Hexachlorobutadiene	0.50	7900	7900	740	740	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	96	70-130	1/18/12 1229	

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Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian Beverly Bldg. 5 & 6/143276/16000000
Sample Matrix: Air

Service Request: R1200219
Date Collected: 1/10/12 1224
Date Received: 1/12/12

Sample Name: Bldg 6-SV3
Lab Code: R1200219-010

Analytical Method: TO-15

Date Analyzed: 1/18/12 1317
Canister Dilution Factor: 1.40

Initial Pressure (psig): -1.67 Final Pressure (psig): 3.50

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
75-01-4	Vinyl Chloride	4.1	20	20	8.0	8.0	U
74-83-9	Bromomethane	4.1	150	150	38	38	U
67-64-1	Acetone	4.1	1700	1700	720	720	U
75-35-4	1,1-Dichloroethene	4.1	150	150	38	38	U
75-09-2	Methylene Chloride	4.1	130	130	37	37	U
156-60-5	trans-1,2-Dichloroethene	4.1	150	150	38	38	U
75-34-3	1,1-Dichloroethane	4.1	150	150	38	38	U
1634-04-4	Methyl tert-Butyl Ether	4.1	270	270	75	75	U
78-93-3	**2-Butanone (MEK)**	4.1	**510**	220	**170**	75	
156-59-2	cis-1,2-Dichloroethene	4.1	150	150	38	38	U
67-66-3	Chloroform	4.1	180	180	38	38	U
107-06-2	1,2-Dichloroethane	4.1	150	150	38	38	U
71-55-6	1,1,1-Trichloroethane (TCA)	4.1	200	200	38	38	U
71-43-2	Benzene	4.1	120	120	37	37	U
56-23-5	Carbon Tetrachloride	4.1	24	24	3.8	3.8	U
78-87-5	1,2-Dichloropropane	4.1	170	170	38	38	U
75-27-4	Bromodichloromethane	4.1	51	51	7.6	7.6	U
79-01-6	**Trichloroethene (TCE)**	4.1	**7600**	20	**1400**	3.8	
123-91-1	1,4-Dioxane	4.1	1700	1700	470	470	U
10061-01-5	cis-1,3-Dichloropropene	4.1	340	340	75	75	U
108-10-1	4-Methyl-2-pentanone (MIBK)	4.1	310	310	75	75	U
10061-02-6	trans-1,3-Dichloropropene	4.1	170	170	38	38	U
79-00-5	1,1,2-Trichloroethane	4.1	200	200	38	38	U
108-88-3	Toluene	4.1	140	140	37	37	U
591-78-6	2-Hexanone	4.1	150	150	38	38	U
124-48-1	Dibromochloromethane	4.1	65	65	7.6	7.6	U
106-93-4	1,2-Dibromoethane (EDB)	4.1	58	58	7.6	7.6	U
127-18-4	**Tetrachloroethene (PCE)**	4.1	**14000**	27	**2000**	4.0	
108-90-7	Chlorobenzene	4.1	170	170	38	38	U
100-41-4	Ethylbenzene	4.1	320	320	75	75	U
179601-23-1	m,p-Xylenes	4.1	650	650	150	150	U
75-25-2	Bromoform	4.1	390	390	38	38	U
100-42-5	Styrene	4.1	320	320	75	75	U
95-47-6	o-Xylene	4.1	320	320	75	75	U
79-34-5	1,1,2,2-Tetrachloroethane	4.1	51	51	7.5	7.5	U
541-73-1	1,3-Dichlorobenzene	4.1	450	450	75	75	U

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian Beverly Bldg. 5 & 6/143276/16000000
Sample Matrix: Air

Service Request: R1200219
Date Collected: 1/10/12 1224
Date Received: 1/12/12

Sample Name: Bldg 6-SV3
Lab Code: R1200219-010

Analytical Method: TO-15

Date Analyzed: 1/18/12 1317
Canister Dilution Factor: 1.40

Initial Pressure (psig): -1.67 Final Pressure (psig): 3.50

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
106-46-7	1,4-Dichlorobenzene	4.1	450	450	75	75	U
95-50-1	1,2-Dichlorobenzene	4.1	450	450	75	75	U
91-20-3	Naphthalene	4.1	680	680	130	130	U
87-68-3	Hexachlorobutadiene	4.1	1000	1000	96	96	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	95	70-130	1/18/12 1317	

COLUMBIA ANALYTICAL SERVICES, INC.
Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian Beverly Bldg. 5 & 6/143276/16000000
Sample Matrix: Air

Service Request: R1200219
Date Collected: 1/10/12 1437
Date Received: 1/12/12

Sample Name: Bldg 6-1
Lab Code: R1200219-011

Analytical Method: TO-15

Date Analyzed: 1/18/12 1406
Canister Dilution Factor: 1.50

Initial Pressure (psig): -2.60 Final Pressure (psig): 3.50

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
74-87-3	Chloromethane	20	34	34	16	16	U
75-01-4	Vinyl Chloride	20	4.5	4.5	1.8	1.8	U
74-83-9	Bromomethane	20	32	32	8.3	8.3	U
75-00-3	Chloroethane	20	44	44	16	16	U
67-64-1	**Acetone**	20	**1300**	380	**560**	160	
75-69-4	Trichlorofluoromethane (CFC 11)	20	47	47	8.3	8.3	U
75-35-4	1,1-Dichloroethene	20	33	33	8.3	8.3	U
75-09-2	Methylene Chloride	20	29	29	8.2	8.2	U
156-60-5	trans-1,2-Dichloroethene	20	33	33	8.3	8.3	U
75-34-3	1,1-Dichloroethane (1,1-DCA)	20	34	34	8.3	8.3	U
156-59-2	cis-1,2-Dichloroethene	20	33	33	8.3	8.3	U
67-66-3	Chloroform	20	41	41	8.3	8.3	U
107-06-2	1,2-Dichloroethane	20	34	34	8.3	8.3	U
71-55-6	1,1,1-Trichloroethane (TCA)	20	45	45	8.3	8.3	U
56-23-5	Carbon Tetrachloride	20	5.3	5.3	0.83	0.83	U
78-87-5	1,2-Dichloropropane	20	38	38	8.3	8.3	U
75-27-4	Bromodichloromethane	20	11	11	1.7	1.7	U
79-01-6	**Trichloroethene (TCE)**	20	**9.8**	4.5	**1.8**	0.84	
10061-01-5	cis-1,3-Dichloropropene	20	75	75	17	17	U
10061-02-6	trans-1,3-Dichloropropene	20	38	38	8.3	8.3	U
79-00-5	1,1,2-Trichloroethane	20	45	45	8.3	8.3	U
124-48-1	Dibromochloromethane	20	14	14	1.7	1.7	U
127-18-4	**Tetrachloroethene (PCE)**	20	**16**	6.0	**2.3**	0.89	
108-90-7	Chlorobenzene	20	38	38	8.3	8.3	U
100-41-4	Ethylbenzene	20	71	71	16	16	U
179601-23-1	m,p-Xylenes	20	140	140	33	33	U
75-25-2	Bromoform	20	86	86	8.3	8.3	U
95-47-6	o-Xylene	20	71	71	16	16	U
79-34-5	1,1,2,2-Tetrachloroethane	20	11	11	1.6	1.6	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	95	70-130	1/18/12 1406	

COLUMBIA ANALYTICAL SERVICES, INC.
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Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200219
Project:	Varian Beverly Bldg. 5 & 6/143276/16000000	**Date Collected:**	1/10/12 1440
Sample Matrix:	Air	**Date Received:**	1/12/12
Sample Name:	Bldg 6-2		
Lab Code:	R1200219-012		

Analytical Method: TO-15 **Date Analyzed:** 1/18/12 1453
Canister Dilution Factor: 1.52

Initial Pressure (psig): -2.75 Final Pressure (psig): 3.50

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
74-87-3	Chloromethane	16	43	43	21	21	U
75-01-4	Vinyl Chloride	16	5.7	5.7	2.2	2.2	U
74-83-9	Bromomethane	16	41	41	11	11	U
75-00-3	Chloroethane	16	55	55	21	21	U
67-64-1	**Acetone**	16	**1800**	480	**750**	200	
75-69-4	Trichlorofluoromethane (CFC 11)	16	59	59	10	10	U
75-35-4	1,1-Dichloroethene	16	42	42	11	11	U
75-09-2	Methylene Chloride	16	36	36	10	10	U
156-60-5	trans-1,2-Dichloroethene	16	42	42	11	11	U
75-34-3	1,1-Dichloroethane (1,1-DCA)	16	43	43	11	11	U
156-59-2	cis-1,2-Dichloroethene	16	42	42	11	11	U
67-66-3	Chloroform	16	51	51	11	11	U
107-06-2	1,2-Dichloroethane	16	43	43	11	11	U
71-55-6	1,1,1-Trichloroethane (TCA)	16	57	57	10	10	U
56-23-5	Carbon Tetrachloride	16	6.7	6.7	1.1	1.1	U
78-87-5	1,2-Dichloropropane	16	48	48	10	10	U
75-27-4	Bromodichloromethane	16	14	14	2.1	2.1	U
79-01-6	**Trichloroethene (TCE)**	16	**13**	5.7	**2.3**	1.1	
10061-01-5	cis-1,3-Dichloropropene	16	95	95	21	21	U
10061-02-6	trans-1,3-Dichloropropene	16	48	48	10	10	U
79-00-5	1,1,2-Trichloroethane	16	57	57	10	10	U
124-48-1	Dibromochloromethane	16	18	18	2.1	2.1	U
127-18-4	**Tetrachloroethene (PCE)**	16	**23**	7.6	**3.4**	1.1	
108-90-7	Chlorobenzene	16	48	48	11	11	U
100-41-4	Ethylbenzene	16	90	90	21	21	U
179601-23-1	m,p-Xylenes	16	180	180	42	42	U
75-25-2	Bromoform	16	110	110	10	10	U
95-47-6	o-Xylene	16	90	90	21	21	U
79-34-5	1,1,2,2-Tetrachloroethane	16	14	14	2.1	2.1	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	95	70-130	1/18/12 1453	

COLUMBIA ANALYTICAL SERVICES, INC.
Now part of the ALS Group
Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200219
Project:	Varian Beverly Bldg. 5 & 6/143276/16000000	**Date Collected:**	NA
Sample Matrix:	Air	**Date Received:**	NA
Sample Name:	Method Blank		
Lab Code:	RQ1200632-01		

Analytical Method: TO-15 **Date Analyzed:** 1/17/12 1053

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
74-87-3	Chloromethane	1000	0.45	0.45	0.22	0.22	U
75-01-4	Vinyl Chloride	1000	0.060	0.060	0.023	0.023	U
74-83-9	Bromomethane	1000	0.43	0.43	0.11	0.11	U
75-00-3	Chloroethane	1000	0.58	0.58	0.22	0.22	U
67-64-1	Acetone	1000	5.0	5.0	2.1	2.1	U
75-69-4	Trichlorofluoromethane (CFC 11)	1000	0.62	0.62	0.11	0.11	U
75-35-4	1,1-Dichloroethene	1000	0.44	0.44	0.11	0.11	U
75-09-2	Methylene Chloride	1000	0.38	0.38	0.11	0.11	U
156-60-5	trans-1,2-Dichloroethene	1000	0.44	0.44	0.11	0.11	U
75-34-3	1,1-Dichloroethane (1,1-DCA)	1000	0.45	0.45	0.11	0.11	U
1634-04-4	Methyl tert-Butyl Ether	1000	0.79	0.79	0.22	0.22	U
78-93-3	2-Butanone (MEK)	1000	0.65	0.65	0.22	0.22	U
156-59-2	cis-1,2-Dichloroethene	1000	0.44	0.44	0.11	0.11	U
67-66-3	Chloroform	1000	0.54	0.54	0.11	0.11	U
107-06-2	1,2-Dichloroethane	1000	0.45	0.45	0.11	0.11	U
71-55-6	1,1,1-Trichloroethane (TCA)	1000	0.60	0.60	0.11	0.11	U
71-43-2	Benzene	1000	0.35	0.35	0.11	0.11	U
56-23-5	Carbon Tetrachloride	1000	0.070	0.070	0.011	0.011	U
78-87-5	1,2-Dichloropropane	1000	0.51	0.51	0.11	0.11	U
75-27-4	Bromodichloromethane	1000	0.15	0.15	0.022	0.022	U
79-01-6	Trichloroethene (TCE)	1000	0.060	0.060	0.011	0.011	U
123-91-1	1,4-Dioxane	1000	5.0	5.0	1.4	1.4	U
10061-01-5	cis-1,3-Dichloropropene	1000	1.0	1.0	0.22	0.22	U
108-10-1	4-Methyl-2-pentanone (MIBK)	1000	0.90	0.90	0.22	0.22	U
10061-02-6	trans-1,3-Dichloropropene	1000	0.50	0.50	0.11	0.11	U
79-00-5	1,1,2-Trichloroethane	1000	0.60	0.60	0.11	0.11	U
108-88-3	Toluene	1000	0.41	0.41	0.11	0.11	U
591-78-6	2-Hexanone	1000	0.45	0.45	0.11	0.11	U
124-48-1	Dibromochloromethane	1000	0.19	0.19	0.022	0.022	U
106-93-4	1,2-Dibromoethane (EDB)	1000	0.17	0.17	0.022	0.022	U
127-18-4	Tetrachloroethene (PCE)	1000	0.080	0.080	0.012	0.012	U
108-90-7	Chlorobenzene	1000	0.51	0.51	0.11	0.11	U
100-41-4	Ethylbenzene	1000	0.95	0.95	0.22	0.22	U
179601-23-1	m,p-Xylenes	1000	1.9	1.9	0.44	0.44	U
75-25-2	Bromoform	1000	1.1	1.1	0.11	0.11	U
100-42-5	Styrene	1000	0.94	0.94	0.22	0.22	U

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian Beverly Bldg. 5 & 6/143276/16000000
Sample Matrix: Air

Service Request: R1200219
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ1200632-01

Analytical Method: TO-15

Date Analyzed: 1/17/12 1053

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
95-47-6	o-Xylene	1000	0.95	0.95	0.22	0.22	U
79-34-5	1,1,2,2-Tetrachloroethane	1000	0.15	0.15	0.022	0.022	U
541-73-1	1,3-Dichlorobenzene	1000	1.3	1.3	0.22	0.22	U
106-46-7	1,4-Dichlorobenzene	1000	1.3	1.3	0.22	0.22	U
95-50-1	1,2-Dichlorobenzene	1000	1.3	1.3	0.22	0.22	U
91-20-3	Naphthalene	1000	2.0	2.0	0.38	0.38	U
87-68-3	Hexachlorobutadiene	1000	3.0	3.0	0.28	0.28	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	95	70-130	1/17/12 1053	

COLUMBIA ANALYTICAL SERVICES, INC.
Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian Beverly Bldg. 5 & 6/143276/16000000
Sample Matrix: Air

Service Request: R1200219
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ1200633-01

Analytical Method: TO-15

Date Analyzed: 1/18/12 1007

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
74-87-3	Chloromethane	1000	0.45	0.45	0.22	0.22	U
75-01-4	Vinyl Chloride	1000	0.060	0.060	0.023	0.023	U
74-83-9	Bromomethane	1000	0.43	0.43	0.11	0.11	U
75-00-3	Chloroethane	1000	0.58	0.58	0.22	0.22	U
67-64-1	Acetone	1000	5.0	5.0	2.1	2.1	U
75-69-4	Trichlorofluoromethane (CFC 11)	1000	0.62	0.62	0.11	0.11	U
75-35-4	1,1-Dichloroethene	1000	0.44	0.44	0.11	0.11	U
75-09-2	Methylene Chloride	1000	0.38	0.38	0.11	0.11	U
156-60-5	trans-1,2-Dichloroethene	1000	0.44	0.44	0.11	0.11	U
75-34-3	1,1-Dichloroethane (1,1-DCA)	1000	0.45	0.45	0.11	0.11	U
1634-04-4	Methyl tert-Butyl Ether	1000	0.79	0.79	0.22	0.22	U
78-93-3	2-Butanone (MEK)	1000	0.65	0.65	0.22	0.22	U
156-59-2	cis-1,2-Dichloroethene	1000	0.44	0.44	0.11	0.11	U
67-66-3	Chloroform	1000	0.54	0.54	0.11	0.11	U
107-06-2	1,2-Dichloroethane	1000	0.45	0.45	0.11	0.11	U
71-55-6	1,1,1-Trichloroethane (TCA)	1000	0.60	0.60	0.11	0.11	U
71-43-2	Benzene	1000	0.35	0.35	0.11	0.11	U
56-23-5	Carbon Tetrachloride	1000	0.070	0.070	0.011	0.011	U
78-87-5	1,2-Dichloropropane	1000	0.51	0.51	0.11	0.11	U
75-27-4	Bromodichloromethane	1000	0.15	0.15	0.022	0.022	U
79-01-6	Trichloroethene (TCE)	1000	0.060	0.060	0.011	0.011	U
123-91-1	1,4-Dioxane	1000	5.0	5.0	1.4	1.4	U
10061-01-5	cis-1,3-Dichloropropene	1000	1.0	1.0	0.22	0.22	U
108-10-1	4-Methyl-2-pentanone (MIBK)	1000	0.90	0.90	0.22	0.22	U
10061-02-6	trans-1,3-Dichloropropene	1000	0.50	0.50	0.11	0.11	U
79-00-5	1,1,2-Trichloroethane	1000	0.60	0.60	0.11	0.11	U
108-88-3	Toluene	1000	0.41	0.41	0.11	0.11	U
591-78-6	2-Hexanone	1000	0.45	0.45	0.11	0.11	U
124-48-1	Dibromochloromethane	1000	0.19	0.19	0.022	0.022	U
106-93-4	1,2-Dibromoethane (EDB)	1000	0.17	0.17	0.022	0.022	U
127-18-4	Tetrachloroethene (PCE)	1000	0.080	0.080	0.012	0.012	U
108-90-7	Chlorobenzene	1000	0.51	0.51	0.11	0.11	U
100-41-4	Ethylbenzene	1000	0.95	0.95	0.22	0.22	U
179601-23-1	m,p-Xylenes	1000	1.9	1.9	0.44	0.44	U
75-25-2	Bromoform	1000	1.1	1.1	0.11	0.11	U
100-42-5	Styrene	1000	0.94	0.94	0.22	0.22	U

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200219
Project:	Varian Beverly Bldg. 5 & 6/143276/16000000	**Date Collected:**	NA
Sample Matrix:	Air	**Date Received:**	NA
Sample Name:	Method Blank		
Lab Code:	RQ1200633-01		

Analytical Method: TO-15 **Date Analyzed:** 1/18/12 1007

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
95-47-6	o-Xylene	1000	0.95	0.95	0.22	0.22	U
79-34-5	1,1,2,2-Tetrachloroethane	1000	0.15	0.15	0.022	0.022	U
541-73-1	1,3-Dichlorobenzene	1000	1.3	1.3	0.22	0.22	U
106-46-7	1,4-Dichlorobenzene	1000	1.3	1.3	0.22	0.22	U
95-50-1	1,2-Dichlorobenzene	1000	1.3	1.3	0.22	0.22	U
91-20-3	Naphthalene	1000	2.0	2.0	0.38	0.38	U
87-68-3	Hexachlorobutadiene	1000	3.0	3.0	0.28	0.28	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	97	70-130	1/18/12 1007	

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian Beverly Bldg. 5 & 6/143276/16000000
Sample Matrix: Air

Service Request: R1200219
Date Analyzed: 1/17/12

Lab Control Sample Summary
Volatile Organic Compounds in Air Collected In SUMMA Passivated Canisters and Analyzed By GC/MS

Analytical Method: TO-15

Units: µg/m³
Basis: NA

Analysis Lot: 277120

Lab Control Sample
RQ1200632-02

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Chloromethane	6.07	5.21	116	70 - 130
Vinyl Chloride	6.97	6.45	108	70 - 130
Bromomethane	9.58	9.80	98	70 - 130
Chloroethane	6.83	6.59	104	70 - 130
Acetone	6.86	6.35	108	50 - 150
Trichlorofluoromethane (CFC 11)	14.0	14.6	96	70 - 130
1,1-Dichloroethene	11.0	10.2	108	70 - 130
Methylene Chloride	9.74	8.94	109	70 - 130
trans-1,2-Dichloroethene	11.0	10.3	107	70 - 130
1,1-Dichloroethane (1,1-DCA)	11.1	10.4	107	70 - 130
Methyl tert-Butyl Ether	9.49	9.55	99	70 - 130
2-Butanone (MEK)	8.62	7.89	109	70 - 130
cis-1,2-Dichloroethene	10.6	10.4	102	70 - 130
Chloroform	13.2	12.8	103	70 - 130
1,2-Dichloroethane	10.5	10.6	99	70 - 130
1,1,1-Trichloroethane (TCA)	13.8	14.0	98	70 - 130
Benzene	8.77	8.30	106	70 - 130
Carbon Tetrachloride	15.7	16.0	98	70 - 130
1,2-Dichloropropane	13.3	12.1	110	70 - 130
Bromodichloromethane	18.5	17.4	106	70 - 130
Trichloroethene (TCE)	13.8	14.0	99	70 - 130
1,4-Dioxane	10.0	9.37	107	50 - 150
cis-1,3-Dichloropropene	12.8	12.3	105	70 - 130
4-Methyl-2-pentanone (MIBK)	12.1	11.0	110	70 - 130
trans-1,3-Dichloropropene	11.4	11.2	102	70 - 130
1,1,2-Trichloroethane	14.9	14.5	103	70 - 130
Toluene	10.1	9.98	101	70 - 130
2-Hexanone	12.7	11.2	113	70 - 130
Dibromochloromethane	22.6	23.2	98	70 - 130
1,2-Dibromoethane (EDB)	20.6	20.2	102	70 - 130
Tetrachloroethene (PCE)	17.7	17.6	100	70 - 130
Chlorobenzene	11.7	12.3	95	70 - 130
Ethylbenzene	11.2	11.5	97	70 - 130
m,p-Xylenes	21.4	22.8	94	70 - 130
Bromoform	25.8	27.1	95	70 - 130
Styrene	10.7	11.4	94	70 - 130

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, INC.
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QA/QC Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian Beverly Bldg. 5 & 6/143276/16000000
Sample Matrix: Air

Service Request: R1200219
Date Analyzed: 1/17/12

Lab Control Sample Summary
Volatile Organic Compounds in Air Collected In SUMMA Passivated Canisters and Analyzed By GC/MS

Analytical Method: TO-15

Units: µg/m³
Basis: NA

Analysis Lot: 277120

	Lab Control Sample RQ1200632-02			
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**
o-Xylene	11.1	11.7	95	70 - 130
1,1,2,2-Tetrachloroethane	18.0	18.5	97	70 - 130
1,3-Dichlorobenzene	15.1	15.9	95	70 - 130
1,4-Dichlorobenzene	14.4	15.6	92	70 - 130
1,2-Dichlorobenzene	14.6	15.8	93	70 - 130
Naphthalene	13.9	13.0	107	50 - 150
Hexachlorobutadiene	24.9	27.2	92	50 - 150

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, INC.
Now part of the ALS Group
QA/QC Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian Beverly Bldg. 5 & 6/143276/16000000
Sample Matrix: Air

Service Request: R1200219
Date Analyzed: 1/18/12

Lab Control Sample Summary
Volatile Organic Compounds in Air Collected In SUMMA Passivated Canisters and Analyzed By GC/MS

Analytical Method: TO-15

Units: µg/m³
Basis: NA

Analysis Lot: 277130

Lab Control Sample
RQ1200633-02

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Chloromethane	5.75	5.21	110	70 - 130
Vinyl Chloride	6.65	6.45	103	70 - 130
Bromomethane	8.97	9.80	92	70 - 130
Chloroethane	6.64	6.59	101	70 - 130
Acetone	7.35	6.35	116	50 - 150
Trichlorofluoromethane (CFC 11)	13.8	14.6	95	70 - 130
1,1-Dichloroethene	10.8	10.2	106	70 - 130
Methylene Chloride	9.68	8.94	108	70 - 130
trans-1,2-Dichloroethene	10.9	10.3	105	70 - 130
1,1-Dichloroethane (1,1-DCA)	11.2	10.4	107	70 - 130
Methyl tert-Butyl Ether	9.92	9.55	104	70 - 130
2-Butanone (MEK)	9.69	7.89	123	70 - 130
cis-1,2-Dichloroethene	10.6	10.4	102	70 - 130
Chloroform	13.2	12.8	103	70 - 130
1,2-Dichloroethane	10.6	10.6	100	70 - 130
1,1,1-Trichloroethane (TCA)	13.8	14.0	98	70 - 130
Benzene	8.68	8.30	105	70 - 130
Carbon Tetrachloride	15.6	16.0	97	70 - 130
1,2-Dichloropropane	13.3	12.1	110	70 - 130
Bromodichloromethane	18.5	17.4	106	70 - 130
Trichloroethene (TCE)	13.4	14.0	96	70 - 130
1,4-Dioxane	11.2	9.37	120	50 - 150
cis-1,3-Dichloropropene	12.9	12.3	105	70 - 130
4-Methyl-2-pentanone (MIBK)	12.9	11.0	118	70 - 130
trans-1,3-Dichloropropene	11.5	11.2	103	70 - 130
1,1,2-Trichloroethane	15.1	14.5	104	70 - 130
Toluene	10.2	9.98	102	70 - 130
2-Hexanone	13.3	11.2	119	70 - 130
Dibromochloromethane	22.5	23.2	97	70 - 130
1,2-Dibromoethane (EDB)	20.6	20.2	102	70 - 130
Tetrachloroethene (PCE)	17.3	17.6	98	70 - 130
Chlorobenzene	11.7	12.3	95	70 - 130
Ethylbenzene	11.6	11.5	101	70 - 130
m,p-Xylenes	22.1	22.8	97	70 - 130
Bromoform	25.6	27.1	95	70 - 130
Styrene	10.9	11.4	95	70 - 130

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.

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian Beverly Bldg. 5 & 6/143276/16000000
Sample Matrix: Air

Service Request: R1200219
Date Analyzed: 1/18/12

Lab Control Sample Summary
Volatile Organic Compounds in Air Collected In SUMMA Passivated Canisters and Analyzed By GC/MS

Analytical Method: TO-15

Units: µg/m³
Basis: NA

Analysis Lot: 277130

	Lab Control Sample RQ1200633-02			
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**
o-Xylene	11.5	11.7	98	70 - 130
1,1,2,2-Tetrachloroethane	18.4	18.5	99	70 - 130
1,3-Dichlorobenzene	15.2	15.9	95	70 - 130
1,4-Dichlorobenzene	14.4	15.6	92	70 - 130
1,2-Dichlorobenzene	14.8	15.8	94	70 - 130
Naphthalene	13.2	13.0	102	50 - 150
Hexachlorobutadiene	26.3	27.2	97	50 - 150

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 - AIR

PAGE 1 OF 1

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: Shaw E and I

Project Name: Varian Bldg 5 & 6

CAS Contact:

Address: 100 Technology Center Dr.

Project Number: 143276/160000000

City, State, Zip: Stoughton, MA 02072

P.O. #/Billing Information: PO# 709510

Project Manager: Raymond Cadorette

Phone: 617-589-6102 Fax:

Email (for result reporting): Raymond.Cadorette@shawgrp.com

Sampler (Print & Sign): Jon Gailey

Client Sample ID	Laboratory ID Number	Date Collected	Time Collected	Canister ID	Flow Controller ID	Hg Start/Stop	Analysis Method and/or Analytes: TO-15 (Full list)	TO-15 (Site Specific list)			Comments / Specific Instructions
Bldg5-SV3		1/9/2012	1208/1410	SLC00158	FC00720	-29/-7	✓				
Bldg 5-3			1210/1611	SLC00142	FC00725	-30/-7		✓			
Bldg 5-SV2			1216/1416	SLC00070	FC01831	-30/-9	✓				
Bldg 5-SV1			1221/1421	SLC00187	FC00715	-29/-4.5	✓				
Bldg 5-1			1222/1622	SLC00151	FC00740	-30/-5		✓			
Bldg 5-4			1226/1626	SLC00191	FC00756	-29.5/-5.5		✓			
Bldg 5-2		↓	1228/1628	SLC00171	FC00835	-28.5/-6		✓			
Bldg6-SV2		1/10/2012	1020/1339	SLC00189	FC00713	-29/-5.5	✓				
Bldg6-SV1			1022/1222	SLC00125	FC00737	-30/-2.5	✓				
Bldg6-SV3			1024/1224	SLC00167	FC00718	-30/-4.75	✓				
Bldg 6-1			1037/1437	SLC00067	FC00757	-29/-5		✓			
Bldg 6-2		↓	1040/1440	SLC00059	FC00727	-30/-5.5		✓			

What State were samples collected in: MA

Project Requirements (MRLs, QAPP, etc.): QA/QC MADEP CAM

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: _____ EDD Units: _____

Relinquished by: (Signature)	Date:	Time	Received by: (Signature)	Date:	Time:
	1/10/12	1530	AH Janet A Keuten	1/11/12	0945
Relinquished by: (Signature)	Date:	Time	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Date:	Time	Received by: (Signature)	Date:	Time:

R1200219
Shaw Environmental & Infrastructure, Inc.
Varian Beverly Air Samples

COC AIR REV 7-11

Cooler Receipt And Preservation Check Form

Project/Client Shaw Folder Number R12-219

Cooler received on 1/12/12 by: MX **COURIER:** CAS (UPS) FEDEX VELOCITY CLIENT

1.	Were custody seals on outside of cooler?	(YES)	NO			
2.	Were custody papers properly filled out (ink, signed, etc.)?	(YES)	NO			
3.	Did all bottles arrive in good condition (unbroken)?	(YES)	NO			
4.	Did VOA vials, Alkalinity, or Sulfide have significant* air bubbles?	YES	NO	(N/A)		
5.	Were **Ice** or **Ice packs** present?	YES	(NO)			
6.	Where did the bottles originate?	(CAS/ROC,)	CLIENT			
7.	Temperature of cooler(s) upon receipt:	A\A				
	Is the temperature within 0° - 6° C?:	Yes	Yes	Yes	Yes	Yes
	If No, Explain Below	No	No	No	No	No

Date/Time Temperatures Taken: A\A

Thermometer ID: IR GUN#3 / IR GUN#4 Reading From: Temp Blank / Sample Bottle

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

PC Secondary Review: MA 1/12/12

Cooler Breakdown: Date: 1/12/12 Time: 1426 by: ALH/DW/GL

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
≥12	NaOH				
≤2	HNO_3				
≤2	H_2SO_4				
<4	$NaHSO_4$				
Residual Chlorine (-)	For TCN Phenol and 522			If present, contact PM to add ascorbic acid Or sodium sulfite (522)	
	$Na_2S_2O_3$	-	-		
	Zn Aceta	-	-		
	HCl	*	*		

Sample ID	Vol. Added	Lot Added	Final pH

*Not to be tested before analysis – pH tested and recorded by VOAs or GenChem on a separate worksheet

Yes = All samples OK

No = Samples were preserved at lab as listed

PM OK to Adjust: _____

Bottle lot numbers: _____

Other Comments: _____

PC Secondary Review: MP 1/20/12

*significant air bubbles: VOA > 5-6 mm : WC >1 in. diameter

Data Usability Worksheet

Project Name : Varian Medical Systems, Inc
Job Number : 139340

Prepared By: Jennifer Gailey
Date : 1/31/2012

Analyte Group : Volatile Organics
Analytical Method : TO-15

Completed MADEP CAM Certification Form included: Yes

Laboratory ID No. : R1200222

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
1/10/2012	TO-15		30 days	1/17, 1/18/2012

Sample temperature above QC limit: 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 1/17, 1/18/2012

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:
Sample was re-analyzed at a larger dilution to bring the target analytes within the calibration range of the method. Both dilutions were reported. Analytes over the calibration range have been flaggedwith an "E" and the diluted analytes were flagged with a "D"

Reviewed By: PH

January 26, 2012 Service Request No: R1200222

Mr. Ray Cadorette
Shaw Environmental & Infrastructure, Inc.
100 Technology Center
Stoughton, MA 02072

Laboratory Results for: Varian 30 Tozer Rd/139340/15000000

Dear Mr. Cadorette:

Enclosed are the results of the sample(s) submitted to our laboratory on January 12, 2012. For your reference, these analyses have been assigned our service request number **R1200222**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. 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 7469. You may also contact me via email at MPerry@caslab.com.

Respectfully submitted,

Columbia Analytical Services, Inc.

Michael Perry
Laboratory Manager

Columbia Analytical Services
ADDRESS 1565 Jefferson Rd, Building 300, Suite 360, Rochester, NY 14623
PHONE 585-288-5380 | FAX 585-288-8475
Columbia Analytical Services, Inc.
Part of the ALS Group A Campbell Brothers Limited Company
www.caslab.com • www.alsglobal.com

COLUMBIA ANALYTICAL SERVICES, INC.

Client:	Shaw E & I, Inc.	**Service Request No.:**	R1200222
Project:	Varian Beverly	**Project No.:**	139340
Sample Matrix:	Air	**Date Received:**	1/12/12

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. This report contains analytical results for samples designated for Tier II, MASS. CAM deliverables. When appropriate to the method, blank and LCS results have been reported with each analytical test.

Sample Receipt

Shaw air samples were collected on 1/10/12 and received at CAS in good condition as noted on the receipt and preservation check form. The samples were stored in the laboratory at room temperature prior to analysis. See the CAS case narrative for a cross-reference between Client ID and CAS Job #.

TO - 15 Air Analysis

One air sample was analyzed for the Mass. CAM list of Volatile Organics by EPA method TO-15.

Sample SV-3 30 Tozer was re-analyzed at a larger dilution to bring the target analytes within the calibration range of the method. Both dilutions were reported. Analytes over the calibration range have been flagged with an "E" and the diluted analytes were flagged with a "D".

All initial and continuing calibrations were compliant.

All surrogate standard recoveries were within QC limits.

The LCS recoveries were all within QC limits of 70 – 130 %. All RPD data were within QC limits.

No analytical or QC problems were encountered with these analyses.

MassDEP Analytical Protocol Certification Form

Laboratory Name: Columbia Analytical Services, Inc. Project #:139340

Project Location: Varian Beverly RTN:

This Form provides certifications for the following data set: list Laboratory Sample ID Number(s):
R1200222–001

Matrices: ☐Groundwater/Surface Water ☐ Soil/Sediment ☐ Drinking Water X 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 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?	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?	X Yes ☐ No ☐ Yes X 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)?	X 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:** Laboratory Manager

Printed Name: Michael K. Perry **Date:** 1/26/12

CASE NARRATIVE

This report contains analytical results for the following samples:
Service Request Number: R1200222

Lab ID	Client ID
R1200222-001	SV-3 30 Tozer

Columbia Analytical Services INC

REPORT QUALIFIERS

U	Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.
J	Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/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.

ACCREDITED IN ACCORDANCE WITH nelac

CAS/Rochester 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 COLUMBIA ANALYTICAL SERVICES
1565 JEFFERSON RD
BUILDING 300, SUITE 360
ROCHESTER, NY 14623-0000

Laboratory Director: Michael K. Perry

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: 01 JUL 2011
Expires: 30 JUN 2012

Director, Division of Environmental Analysis

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 25 AUG 2011

M-NY032 COLUMBIA ANALYTICAL SERVICES
ROCHESTER NY

NON POTABLE WATER (CHEMISTRY) Effective Date 25 AUG 2011 Expiration Date 30 JUN 2012

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
PH	SM 4500-H-B
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

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 25 AUG 2011

M-NY032 COLUMBIA ANALYTICAL SERVICES
ROCHESTER NY

NON POTABLE WATER (CHEMISTRY) Effective Date 25 AUG 2011 Expiration Date 30 JUN 2012

Analytes	Methods
ALKALINITY, TOTAL	SM 2320B
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

COLUMBIA ANALYTICAL SERVICES, INC.
Now part of the ALS Group
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian 30 Tozer Rd/139340/15000000
Sample Matrix: Air

Service Request: R1200222
Date Collected: 1/10/12 1256
Date Received: 1/12/12

Sample Name: SV-3 30 Tozer
Lab Code: R1200222-001

Analytical Method: TO-15

Date Analyzed: 1/17/12 2234
Canister Dilution Factor: 1.29

Initial Pressure (psig): -0.54 Final Pressure (psig): 3.50

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
75-01-4	Vinyl Chloride	260	0.30	0.30	0.12	0.12	U
74-83-9	Bromomethane	260	2.1	2.1	0.55	0.55	U
67-64-1	**Acetone**	260	**55**	25	**23**	10	
75-35-4	1,1-Dichloroethene	260	2.2	2.2	0.55	0.55	U
75-09-2	Methylene Chloride	260	1.9	1.9	0.54	0.54	U
156-60-5	trans-1,2-Dichloroethene	260	2.2	2.2	0.55	0.55	U
75-34-3	1,1-Dichloroethane	260	2.2	2.2	0.55	0.55	U
1634-04-4	Methyl tert-Butyl Ether	260	3.9	3.9	1.1	1.1	U
78-93-3	**2-Butanone (MEK)**	260	**7.2**	3.2	**2.4**	1.1	
156-59-2	**cis-1,2-Dichloroethene**	260	**6.7**	2.2	**1.7**	0.55	
67-66-3	Chloroform	260	2.7	2.7	0.55	0.55	U
107-06-2	1,2-Dichloroethane	260	2.2	2.2	0.55	0.55	U
71-55-6	1,1,1-Trichloroethane (TCA)	260	3.0	3.0	0.55	0.55	U
71-43-2	**Benzene**	260	**5.2**	1.7	**1.6**	0.54	
56-23-5	Carbon Tetrachloride	260	0.35	0.35	0.055	0.055	U
78-87-5	1,2-Dichloropropane	260	2.5	2.5	0.55	0.55	U
75-27-4	Bromodichloromethane	260	0.74	0.74	0.11	0.11	U
79-01-6	**Trichloroethene (TCE)**	260	**280**	0.30	**52**	0.055	E
123-91-1	1,4-Dioxane	260	25	25	6.9	6.9	U
10061-01-5	cis-1,3-Dichloropropene	260	5.0	5.0	1.1	1.1	U
108-10-1	4-Methyl-2-pentanone (MIBK)	260	4.5	4.5	1.1	1.1	U
10061-02-6	trans-1,3-Dichloropropene	260	2.5	2.5	0.55	0.55	U
79-00-5	1,1,2-Trichloroethane	260	3.0	3.0	0.55	0.55	U
108-88-3	**Toluene**	260	**15**	2.0	**4.1**	0.54	
591-78-6	2-Hexanone	260	2.2	2.2	0.55	0.55	U
124-48-1	Dibromochloromethane	260	0.94	0.94	0.11	0.11	U
106-93-4	1,2-Dibromoethane (EDB)	260	0.84	0.84	0.11	0.11	U
127-18-4	**Tetrachloroethene (PCE)**	260	**73**	0.40	**11**	0.059	
108-90-7	Chlorobenzene	260	2.5	2.5	0.55	0.55	U
100-41-4	**Ethylbenzene**	260	**4.7**	4.7	1.1	1.1	
179601-23-1	**m,p-Xylenes**	260	**16**	9.5	**3.6**	2.2	
75-25-2	Bromoform	260	5.7	5.7	0.55	0.55	U
100-42-5	Styrene	260	4.7	4.7	1.1	1.1	U
95-47-6	**o-Xylene**	260	**5.2**	4.7	**1.2**	1.1	
79-34-5	1,1,2,2-Tetrachloroethane	260	0.74	0.74	0.11	0.11	U
541-73-1	1,3-Dichlorobenzene	260	6.5	6.5	1.1	1.1	U

COLUMBIA ANALYTICAL SERVICES, INC.
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Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200222
Project:	Varian 30 Tozer Rd/139340/15000000	**Date Collected:**	1/10/12 1256
Sample Matrix:	Air	**Date Received:**	1/12/12
Sample Name:	SV-3 30 Tozer		
Lab Code:	R1200222-001		

Analytical Method: TO-15 **Date Analyzed:** 1/17/12 2234
Canister Dilution Factor: 1.29

Initial Pressure (psig): -0.54 Final Pressure (psig): 3.50

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
106-46-7	1,4-Dichlorobenzene	260	6.5	6.5	1.1	1.1	U
95-50-1	1,2-Dichlorobenzene	260	6.5	6.5	1.1	1.1	U
91-20-3	Naphthalene	260	9.9	9.9	1.9	1.9	U
87-68-3	Hexachlorobutadiene	260	15	15	1.4	1.4	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	98	70-130	1/17/12 2234	

COLUMBIA ANALYTICAL SERVICES, INC.
Now part of the ALS Group
Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200222
Project:	Varian 30 Tozer Rd/139340/15000000	**Date Collected:**	1/10/12 1256
Sample Matrix:	Air	**Date Received:**	1/12/12
Sample Name:	SV-3 30 Tozer		
Lab Code:	R1200222-001		
Run Type:	Dilution		
Analytical Method:	TO-15	**Date Analyzed:**	1/18/12 1843
		Canister Dilution Factor:	1.29

Initial Pressure (psig): -0.54 Final Pressure (psig): 3.50

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
75-01-4	Vinyl Chloride	200	0.39	0.39	0.15	0.15	U
74-83-9	Bromomethane	200	2.8	2.8	0.71	0.71	U
67-64-1	**Acetone**	200	**47**	32	**20**	14	D
75-35-4	1,1-Dichloroethene	200	2.8	2.8	0.72	0.72	U
75-09-2	Methylene Chloride	200	2.5	2.5	0.71	0.71	U
156-60-5	trans-1,2-Dichloroethene	200	2.8	2.8	0.72	0.72	U
75-34-3	1,1-Dichloroethane	200	2.9	2.9	0.72	0.72	U
1634-04-4	Methyl tert-Butyl Ether	200	5.1	5.1	1.4	1.4	U
78-93-3	**2-Butanone (MEK)**	200	**6.5**	4.2	**2.2**	1.4	D
156-59-2	**cis-1,2-Dichloroethene**	200	**6.0**	2.8	**1.5**	0.72	D
67-66-3	Chloroform	200	3.5	3.5	0.71	0.71	U
107-06-2	1,2-Dichloroethane	200	2.9	2.9	0.72	0.72	U
71-55-6	1,1,1-Trichloroethane (TCA)	200	3.9	3.9	0.71	0.71	U
71-43-2	**Benzene**	200	**4.5**	2.3	**1.4**	0.71	D
56-23-5	Carbon Tetrachloride	200	0.45	0.45	0.072	0.072	U
78-87-5	1,2-Dichloropropane	200	3.3	3.3	0.71	0.71	U
75-27-4	Bromodichloromethane	200	0.97	0.97	0.14	0.14	U
79-01-6	**Trichloroethene (TCE)**	200	**250**	0.39	**47**	0.072	D
123-91-1	1,4-Dioxane	200	32	32	9.0	9.0	U
10061-01-5	cis-1,3-Dichloropropene	200	6.5	6.5	1.4	1.4	U
108-10-1	4-Methyl-2-pentanone (MIBK)	200	5.8	5.8	1.4	1.4	U
10061-02-6	trans-1,3-Dichloropropene	200	3.2	3.2	0.71	0.71	U
79-00-5	1,1,2-Trichloroethane	200	3.9	3.9	0.71	0.71	U
108-88-3	**Toluene**	200	**13**	2.6	**3.5**	0.70	D
591-78-6	2-Hexanone	200	2.9	2.9	0.71	0.71	U
124-48-1	Dibromochloromethane	200	1.2	1.2	0.14	0.14	U
106-93-4	1,2-Dibromoethane (EDB)	200	1.1	1.1	0.14	0.14	U
127-18-4	**Tetrachloroethene (PCE)**	200	**66**	0.52	**9.7**	0.076	D
108-90-7	Chlorobenzene	200	3.3	3.3	0.71	0.71	U
100-41-4	Ethylbenzene	200	6.1	6.1	1.4	1.4	U
179601-23-1	**m,p-Xylenes**	200	**13**	12	**2.9**	2.8	D
75-25-2	Bromoform	200	7.4	7.4	0.71	0.71	U
100-42-5	Styrene	200	6.1	6.1	1.4	1.4	U
95-47-6	o-Xylene	200	6.1	6.1	1.4	1.4	U
79-34-5	1,1,2,2-Tetrachloroethane	200	0.97	0.97	0.14	0.14	U
541-73-1	1,3-Dichlorobenzene	200	8.5	8.5	1.4	1.4	U

COLUMBIA ANALYTICAL SERVICES, INC.
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Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200222
Project:	Varian 30 Tozer Rd/139340/15000000	**Date Collected:**	1/10/12 1256
Sample Matrix:	Air	**Date Received:**	1/12/12
Sample Name:	SV-3 30 Tozer		
Lab Code:	R1200222-001		
Run Type:	Dilution		
Analytical Method:	TO-15	**Date Analyzed:**	1/18/12 1843
		Canister Dilution Factor:	1.29

Initial Pressure (psig): -0.54 Final Pressure (psig): 3.50

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
106-46-7	1,4-Dichlorobenzene	200	8.5	8.5	1.4	1.4	U
95-50-1	1,2-Dichlorobenzene	200	8.5	8.5	1.4	1.4	U
91-20-3	Naphthalene	200	13	13	2.5	2.5	U
87-68-3	Hexachlorobutadiene	200	19	19	1.8	1.8	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	94	70-130	1/18/12 1843	

COLUMBIA ANALYTICAL SERVICES, INC.
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Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian 30 Tozer Rd/139340/15000000
Sample Matrix: Air

Service Request: R1200222
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ1200632-01

Analytical Method: TO-15

Date Analyzed: 1/17/12 1053

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
75-01-4	Vinyl Chloride	1000	0.060	0.060	0.023	0.023	U
74-83-9	Bromomethane	1000	0.43	0.43	0.11	0.11	U
67-64-1	Acetone	1000	5.0	5.0	2.1	2.1	U
75-35-4	1,1-Dichloroethene	1000	0.44	0.44	0.11	0.11	U
75-09-2	Methylene Chloride	1000	0.38	0.38	0.11	0.11	U
156-60-5	trans-1,2-Dichloroethene	1000	0.44	0.44	0.11	0.11	U
75-34-3	1,1-Dichloroethane	1000	0.45	0.45	0.11	0.11	U
1634-04-4	Methyl tert-Butyl Ether	1000	0.79	0.79	0.22	0.22	U
78-93-3	2-Butanone (MEK)	1000	0.65	0.65	0.22	0.22	U
156-59-2	cis-1,2-Dichloroethene	1000	0.44	0.44	0.11	0.11	U
67-66-3	Chloroform	1000	0.54	0.54	0.11	0.11	U
107-06-2	1,2-Dichloroethane	1000	0.45	0.45	0.11	0.11	U
71-55-6	1,1,1-Trichloroethane (TCA)	1000	0.60	0.60	0.11	0.11	U
71-43-2	Benzene	1000	0.35	0.35	0.11	0.11	U
56-23-5	Carbon Tetrachloride	1000	0.070	0.070	0.011	0.011	U
78-87-5	1,2-Dichloropropane	1000	0.51	0.51	0.11	0.11	U
75-27-4	Bromodichloromethane	1000	0.15	0.15	0.022	0.022	U
79-01-6	Trichloroethene (TCE)	1000	0.060	0.060	0.011	0.011	U
123-91-1	1,4-Dioxane	1000	5.0	5.0	1.4	1.4	U
10061-01-5	cis-1,3-Dichloropropene	1000	1.0	1.0	0.22	0.22	U
108-10-1	4-Methyl-2-pentanone (MIBK)	1000	0.90	0.90	0.22	0.22	U
10061-02-6	trans-1,3-Dichloropropene	1000	0.50	0.50	0.11	0.11	U
79-00-5	1,1,2-Trichloroethane	1000	0.60	0.60	0.11	0.11	U
108-88-3	Toluene	1000	0.41	0.41	0.11	0.11	U
591-78-6	2-Hexanone	1000	0.45	0.45	0.11	0.11	U
124-48-1	Dibromochloromethane	1000	0.19	0.19	0.022	0.022	U
106-93-4	1,2-Dibromoethane (EDB)	1000	0.17	0.17	0.022	0.022	U
127-18-4	Tetrachloroethene (PCE)	1000	0.080	0.080	0.012	0.012	U
108-90-7	Chlorobenzene	1000	0.51	0.51	0.11	0.11	U
100-41-4	Ethylbenzene	1000	0.95	0.95	0.22	0.22	U
179601-23-1	m,p-Xylenes	1000	1.9	1.9	0.44	0.44	U
75-25-2	Bromoform	1000	1.1	1.1	0.11	0.11	U
100-42-5	Styrene	1000	0.94	0.94	0.22	0.22	U
95-47-6	o-Xylene	1000	0.95	0.95	0.22	0.22	U
79-34-5	1,1,2,2-Tetrachloroethane	1000	0.15	0.15	0.022	0.022	U
541-73-1	1,3-Dichlorobenzene	1000	1.3	1.3	0.22	0.22	U

COLUMBIA ANALYTICAL SERVICES, INC.
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Analytical Report

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200222
Project:	Varian 30 Tozer Rd/139340/15000000	**Date Collected:**	NA
Sample Matrix:	Air	**Date Received:**	NA
Sample Name:	Method Blank		
Lab Code:	RQ1200632-01		

Analytical Method: TO-15 **Date Analyzed:** 1/17/12 1053

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
106-46-7	1,4-Dichlorobenzene	1000	1.3	1.3	0.22	0.22	U
95-50-1	1,2-Dichlorobenzene	1000	1.3	1.3	0.22	0.22	U
91-20-3	Naphthalene	1000	2.0	2.0	0.38	0.38	U
87-68-3	Hexachlorobutadiene	1000	3.0	3.0	0.28	0.28	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	95	70-130	1/17/12 1053	

COLUMBIA ANALYTICAL SERVICES, INC.
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Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian 30 Tozer Rd/139340/15000000
Sample Matrix: Air

Service Request: R1200222
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ1200633-01

Analytical Method: TO-15

Date Analyzed: 1/18/12 1007

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
75-01-4	Vinyl Chloride	1000	0.060	0.060	0.023	0.023	U
74-83-9	Bromomethane	1000	0.43	0.43	0.11	0.11	U
67-64-1	Acetone	1000	5.0	5.0	2.1	2.1	U
75-35-4	1,1-Dichloroethene	1000	0.44	0.44	0.11	0.11	U
75-09-2	Methylene Chloride	1000	0.38	0.38	0.11	0.11	U
156-60-5	trans-1,2-Dichloroethene	1000	0.44	0.44	0.11	0.11	U
75-34-3	1,1-Dichloroethane	1000	0.45	0.45	0.11	0.11	U
1634-04-4	Methyl tert-Butyl Ether	1000	0.79	0.79	0.22	0.22	U
78-93-3	2-Butanone (MEK)	1000	0.65	0.65	0.22	0.22	U
156-59-2	cis-1,2-Dichloroethene	1000	0.44	0.44	0.11	0.11	U
67-66-3	Chloroform	1000	0.54	0.54	0.11	0.11	U
107-06-2	1,2-Dichloroethane	1000	0.45	0.45	0.11	0.11	U
71-55-6	1,1,1-Trichloroethane (TCA)	1000	0.60	0.60	0.11	0.11	U
71-43-2	Benzene	1000	0.35	0.35	0.11	0.11	U
56-23-5	Carbon Tetrachloride	1000	0.070	0.070	0.011	0.011	U
78-87-5	1,2-Dichloropropane	1000	0.51	0.51	0.11	0.11	U
75-27-4	Bromodichloromethane	1000	0.15	0.15	0.022	0.022	U
79-01-6	Trichloroethene (TCE)	1000	0.060	0.060	0.011	0.011	U
123-91-1	1,4-Dioxane	1000	5.0	5.0	1.4	1.4	U
10061-01-5	cis-1,3-Dichloropropene	1000	1.0	1.0	0.22	0.22	U
108-10-1	4-Methyl-2-pentanone (MIBK)	1000	0.90	0.90	0.22	0.22	U
10061-02-6	trans-1,3-Dichloropropene	1000	0.50	0.50	0.11	0.11	U
79-00-5	1,1,2-Trichloroethane	1000	0.60	0.60	0.11	0.11	U
108-88-3	Toluene	1000	0.41	0.41	0.11	0.11	U
591-78-6	2-Hexanone	1000	0.45	0.45	0.11	0.11	U
124-48-1	Dibromochloromethane	1000	0.19	0.19	0.022	0.022	U
106-93-4	1,2-Dibromoethane (EDB)	1000	0.17	0.17	0.022	0.022	U
127-18-4	Tetrachloroethene (PCE)	1000	0.080	0.080	0.012	0.012	U
108-90-7	Chlorobenzene	1000	0.51	0.51	0.11	0.11	U
100-41-4	Ethylbenzene	1000	0.95	0.95	0.22	0.22	U
179601-23-1	m,p-Xylenes	1000	1.9	1.9	0.44	0.44	U
75-25-2	Bromoform	1000	1.1	1.1	0.11	0.11	U
100-42-5	Styrene	1000	0.94	0.94	0.22	0.22	U
95-47-6	o-Xylene	1000	0.95	0.95	0.22	0.22	U
79-34-5	1,1,2,2-Tetrachloroethane	1000	0.15	0.15	0.022	0.022	U
541-73-1	1,3-Dichlorobenzene	1000	1.3	1.3	0.22	0.22	U

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian 30 Tozer Rd/139340/15000000
Sample Matrix: Air

Service Request: R1200222
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ1200633-01

Analytical Method: TO-15

Date Analyzed: 1/18/12 1007

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
106-46-7	1,4-Dichlorobenzene	1000	1.3	1.3	0.22	0.22	U
95-50-1	1,2-Dichlorobenzene	1000	1.3	1.3	0.22	0.22	U
91-20-3	Naphthalene	1000	2.0	2.0	0.38	0.38	U
87-68-3	Hexachlorobutadiene	1000	3.0	3.0	0.28	0.28	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	97	70-130	1/18/12 1007	

COLUMBIA ANALYTICAL SERVICES, INC.
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QA/QC Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian 30 Tozer Rd/139340/15000000
Sample Matrix: Air

Service Request: R1200222
Date Analyzed: 1/17/12

Lab Control Sample Summary
Volatile Organic Compounds in Air Collected In SUMMA Passivated Canisters and Analyzed By GC/MS

Analytical Method: TO-15

Units: µg/m³
Basis: NA

Analysis Lot: 277120

Analyte Name	Lab Control Sample RQ1200632-02 Result	Spike Amount	% Rec	% Rec Limits
Vinyl Chloride	6.97	6.45	108	70 - 130
Bromomethane	9.58	9.80	98	70 - 130
Acetone	6.86	6.35	108	50 - 150
1,1-Dichloroethene	11.0	10.2	108	70 - 130
Methylene Chloride	9.74	8.94	109	70 - 130
trans-1,2-Dichloroethene	11.0	10.3	107	70 - 130
1,1-Dichloroethane	11.1	10.4	107	70 - 130
Methyl tert-Butyl Ether	9.49	9.55	99	70 - 130
2-Butanone (MEK)	8.62	7.89	109	70 - 130
cis-1,2-Dichloroethene	10.6	10.4	102	70 - 130
Chloroform	13.2	12.8	103	70 - 130
1,2-Dichloroethane	10.5	10.6	99	70 - 130
1,1,1-Trichloroethane (TCA)	13.8	14.0	98	70 - 130
Benzene	8.77	8.30	106	70 - 130
Carbon Tetrachloride	15.7	16.0	98	70 - 130
1,2-Dichloropropane	13.3	12.1	110	70 - 130
Bromodichloromethane	18.5	17.4	106	70 - 130
Trichloroethene (TCE)	13.8	14.0	99	70 - 130
1,4-Dioxane	10.0	9.37	107	50 - 150
cis-1,3-Dichloropropene	12.8	12.3	105	70 - 130
4-Methyl-2-pentanone (MIBK)	12.1	11.0	110	70 - 130
trans-1,3-Dichloropropene	11.4	11.2	102	70 - 130
1,1,2-Trichloroethane	14.9	14.5	103	70 - 130
Toluene	10.1	9.98	101	70 - 130
2-Hexanone	12.7	11.2	113	70 - 130
Dibromochloromethane	22.6	23.2	98	70 - 130
1,2-Dibromoethane (EDB)	20.6	20.2	102	70 - 130
Tetrachloroethene (PCE)	17.7	17.6	100	70 - 130
Chlorobenzene	11.7	12.3	95	70 - 130
Ethylbenzene	11.2	11.5	97	70 - 130
m,p-Xylenes	21.4	22.8	94	70 - 130
Bromoform	25.8	27.1	95	70 - 130
Styrene	10.7	11.4	94	70 - 130
o-Xylene	11.1	11.7	95	70 - 130
1,1,2,2-Tetrachloroethane	18.0	18.5	97	70 - 130
1,3-Dichlorobenzene	15.1	15.9	95	70 - 130

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.

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian 30 Tozer Rd/139340/15000000
Sample Matrix: Air

Service Request: R1200222
Date Analyzed: 1/17/12

Lab Control Sample Summary
Volatile Organic Compounds in Air Collected In SUMMA Passivated Canisters and Analyzed By GC/MS

Analytical Method: TO-15

Units: µg/m³
Basis: NA

Analysis Lot: 277120

	Lab Control Sample RQ1200632-02			
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**
1,4-Dichlorobenzene	14.4	15.6	92	70 - 130
1,2-Dichlorobenzene	14.6	15.8	93	70 - 130
Naphthalene	13.9	13.0	107	50 - 150
Hexachlorobutadiene	24.9	27.2	92	50 - 150

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, INC.
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Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian 30 Tozer Rd/139340/15000000
Sample Matrix: Air

Service Request: R1200222
Date Analyzed: 1/18/12

Lab Control Sample Summary
Volatile Organic Compounds in Air Collected In SUMMA Passivated Canisters and Analyzed By GC/MS

Analytical Method: TO-15

Units: µg/m³
Basis: NA

Analysis Lot: 277130

	Lab Control Sample RQ1200633-02			
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**
Vinyl Chloride	6.65	6.45	103	70 - 130
Bromomethane	8.97	9.80	92	70 - 130
Acetone	7.35	6.35	116	50 - 150
1,1-Dichloroethene	10.8	10.2	106	70 - 130
Methylene Chloride	9.68	8.94	108	70 - 130
trans-1,2-Dichloroethene	10.9	10.3	105	70 - 130
1,1-Dichloroethane	11.2	10.4	107	70 - 130
Methyl tert-Butyl Ether	9.92	9.55	104	70 - 130
2-Butanone (MEK)	9.69	7.89	123	70 - 130
cis-1,2-Dichloroethene	10.6	10.4	102	70 - 130
Chloroform	13.2	12.8	103	70 - 130
1,2-Dichloroethane	10.6	10.6	100	70 - 130
1,1,1-Trichloroethane (TCA)	13.8	14.0	98	70 - 130
Benzene	8.68	8.30	105	70 - 130
Carbon Tetrachloride	15.6	16.0	97	70 - 130
1,2-Dichloropropane	13.3	12.1	110	70 - 130
Bromodichloromethane	18.5	17.4	106	70 - 130
Trichloroethene (TCE)	13.4	14.0	96	70 - 130
1,4-Dioxane	11.2	9.37	120	50 - 150
cis-1,3-Dichloropropene	12.9	12.3	105	70 - 130
4-Methyl-2-pentanone (MIBK)	12.9	11.0	118	70 - 130
trans-1,3-Dichloropropene	11.5	11.2	103	70 - 130
1,1,2-Trichloroethane	15.1	14.5	104	70 - 130
Toluene	10.2	9.98	102	70 - 130
2-Hexanone	13.3	11.2	119	70 - 130
Dibromochloromethane	22.5	23.2	97	70 - 130
1,2-Dibromoethane (EDB)	20.6	20.2	102	70 - 130
Tetrachloroethene (PCE)	17.3	17.6	98	70 - 130
Chlorobenzene	11.7	12.3	95	70 - 130
Ethylbenzene	11.6	11.5	101	70 - 130
m,p-Xylenes	22.1	22.8	97	70 - 130
Bromoform	25.6	27.1	95	70 - 130
Styrene	10.9	11.4	95	70 - 130
o-Xylene	11.5	11.7	98	70 - 130
1,1,2,2-Tetrachloroethane	18.4	18.5	99	70 - 130
1,3-Dichlorobenzene	15.2	15.9	95	70 - 130

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, INC.
Now part of the ALS Group
QA/QC Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian 30 Tozer Rd/139340/15000000
Sample Matrix: Air

Service Request: R1200222
Date Analyzed: 1/18/12

Lab Control Sample Summary
Volatile Organic Compounds in Air Collected In SUMMA Passivated Canisters and Analyzed By GC/MS

Analytical Method: TO-15

Units: µg/m³
Basis: NA

Analysis Lot: 277130

	Lab Control Sample RQ1200633-02			
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**
1,4-Dichlorobenzene	14.4	15.6	92	70 - 130
1,2-Dichlorobenzene	14.8	15.8	94	70 - 130
Naphthalene	13.2	13.0	102	50 - 150
Hexachlorobutadiene	26.3	27.2	97	50 - 150

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 - 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 circled)

CAS Project #:

CAS Contact:

Company Name: Shaw E and I

Address: 100 Technology Center Dr.

City, State, Zip: Stoughton, MA 02072

Project Manager: Raymond Cadorette

Phone: 617-589-6102

Fax:

Email (for result reporting): Raymond.Cadorette@shawgrp.com

Project Name: 139340/15000000

Project Number: Varian 30 Tozer Rd

P.O. #/Billing Information: PO#

Sampler (Print & Sign): Jen Gailey, Ben Short

Client Sample ID	Laboratory ID Number	Date Collected	Time Collected	Canister ID	Flow Controller ID	Hg Start / Stop	Analysis Method and/or Analytes: TO-15				Comments Specific Instructions
SY-3 30 Tozer		1/10/12	1100/1256	SL000100	FC00757	-30 / -2.5	✓				

What State were samples collected in: MA

Report Tier Levels - please select:
Tier I (Results/Default, if not specified) ___
Tier II (Results + QC) ✓
Tier III (CLP Forms Only) ___
Tier IV (Data Validation) ___

EDD required: YES / NO
Type: ______ EDD Units: ______

Project Requirements (MRLs, QAPP, etc.)
QA/QC DEPCAM

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
[signature]	1/10/12	1530	[signature] Janet Ald...	1/11/12	0945
[signature]					

R1200222
Shaw Environmental & Infrastructure, Inc.
Varian Beverly Air Samples

COC AIR REV 7-11

Cooler Receipt And Preservation Check Form

Project/Client SHAW Folder Number R12-222

Cooler received on 1/12/12 by: MV COURIER: CAS (UPS) FEDEX VELOCITY CLIENT

1.	Were custody seals on outside of cooler?	(YES)	NO			
2.	Were custody papers properly filled out (ink, signed, etc.)?	(YES)	NO			
3.	Did all bottles arrive in good condition (unbroken)?	(YES)	NO			
4.	Did VOA vials, Alkalinity, or Sulfide have significant* air bubbles?	YES	NO	(N/A)		
5.	Were **Ice** or **Ice packs** present?	YES	(NO)			
6.	Where did the bottles originate?	(CAS/ROC,)	CLIENT			
7.	Temperature of cooler(s) upon receipt:	A\R				
	Is the temperature within 0° - 6° C?:	Yes	Yes	Yes	Yes	Yes
	If No, Explain Below	No	No	No	No	No

Date/Time Temperatures Taken: A\R

Thermometer ID: IR GUN#3 / IR GUN#4 Reading From: Temp Blank / Sample Bottle

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

PC Secondary Review: MAP

Cooler Breakdown: Date: 1/12/12 Time: 1415 by: AD/ALH/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
≥12	NaOH				
≤2	HNO_3				
≤2	H_2SO_4				
<4	$NaHSO_4$				
Residual Chlorine (-)	For TCN Phenol and 522			If present, contact PM to add ascorbic acid Or sodium sulfite (522)	
	$Na_2S_2O_3$	-	-		
	Zn Aceta	-	-		
	HCl	*	*		

Sample ID	Vol. Added	Lot Added	Final pH

*Not to be tested before analysis – pH tested and recorded by VOAs or GenChem on a separate worksheet

Yes = All samples OK

No = Samples were preserved at lab as listed

PM OK to Adjust: _____

Bottle lot numbers: _____

Other Comments:

PC Secondary Review: MAP 1/20/12

*significant air bubbles: VOA > 5-6 mm : WC >1 in. diameter

Data Usability Worksheet

Project Name : Varian Medical Systems, Inc

Job Number : 143276

Prepared By: Jennifer Gailey

Date : 2/10/2012

Analyte Group : Volatile Organics
Metabolic Acid
Methane, Ethane, Ethene

Analytical Method : 8021B
HPLC
RSK 175

Completed MADEP CAM Certification Form included: Yes

Laboratory ID No. : R1200368

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
1/17, 1/18/12	VOC 8260B		14 days	1/24, 1/25, 1/26, 1/27/12
1/17, 1/18/12	Metabolic Acid HPLC		28 days	1/23, 1/24, 1/25/12
1/17, 1/18/12	RSK 175		14 days	1/24,1/26, 1/27/12

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 : 1/24/2012

Trip Blank ID : 1/24, 1/26/12

Method Blank:

VOC 8260C	1/24, 1/25, 1/26, 1/27, 1/31/2012
Metabolic Acid HPLC	1/23, 1/26, 1/27/2012
RSK 175	1/26, 1/27/2012

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:
For VOC and RSK-175 analytes - several samples were initially analyzed at dilutions to bring target analytes within the calibration range of method.
Samples were subsequently reanalyzed at higher dilutions to bring target analytes within the calibration range of method.
Dilutions were reported with analytes over the calibration range flagged with an"E" and the diluted analytes flagged with a ""D".

Reviewed By:RJC

February 01, 2012 Service Request No: R1200368

Mr. Ray Cadorette
Shaw Environmental & Infrastructure, Inc.
100 Technology Center
Stoughton, MA 02072

Laboratory Results for: Varian Beverly/143276-02000000

Dear Mr. Cadorette:

Enclosed are the results of the sample(s) submitted to our laboratory on January 19, 2012. For your reference, these analyses have been assigned our service request number **R1200368**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. 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 7469. You may also contact me via email at MPerry@caslab.com.

Respectfully submitted,

Columbia Analytical Services, Inc. dba ALS Environmental

Michael Perry
Laboratory Manager

Columbia Analytical Services
ADDRESS 1565 Jefferson Rd, Building 300, Suite 360, Rochester, NY 14623
PHONE 585-288-5380 | FAX 585-288-8475
Columbia Analytical Services, Inc.
Part of the ALS Group A Campbell Brothers Limited Company
www.caslab.com • www.alsglobal.com

COLUMBIA ANALYTICAL SERVICES, INC.

Client:	Shaw Environmental, Inc	**Service Request No.:**	R1200368
Project:	Varian Beverly	**Project Number:**	143276-02000000
Sample Matrix:	Water	**Date Received:**	1/19/12

CASE NARRATIVE

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

Sample Receipt

Water samples were collected on 1/17/12 and 1/18/12 and received at CAS in good condition in the proper temperature range (1.5 – 3.5 °C) as noted on the cooler receipt and preservation check form. The samples were stored in a refrigerator at 1 - 6 °C upon receipt at the laboratory. See the second page of the Case Narrative for a cross-reference between Client ID and CAS Job #.

Volatile Organics

Twenty-four 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. Samples AP-13-DO (51'), AP-23-DO (47.5'), OB12-DO (48.5'), BW-6 (13'), BW-8 (13.5'), BW-9 (12'), and OB9-S (23.5'-BR were re-analyzed at larger dilutions to bring target analytes within the calibration range of the method. Both dilutions were reported with analytes over the calibration range flagged with an "E" and the diluted analytes flagged with a "D".

All initial and continuing calibrations were compliant.

All Surrogate Standard recoveries were within QC limits.

The Blank Spike (LCS)/Blank Spike Duplicate (LCSD) recoveries were all within the QC limits.

All samples were analyzed within the required holding time of 14 days.

No other analytical or QC problems were encountered with these analyses.

Metabolic Acid Analysis

Fifteen water samples were analyzed for Metabolic Acids by HPLC using a modified in house method. Several samples were initially analyzed at dilutions to bring target analytes within the calibration range of the method.

All the initial and continuing calibration criteria were met for all analytes except as noted below.

The Blank Spike (LCS)/Blank Spike Duplicate (LCSD) recoveries were all within the QC limits.

The Method Blanks associated with these samples are free of contamination.

No other analytical or QC problems were encountered.

Modified RSK-175

Fifteen water samples were analyzed for the hydrocarbon gases Methane, Ethane, and Ethene by modified RSK-175.

Several samples were initially analyzed at dilutions to bring target analytes within the calibration range of the method. Samples MW-9 (20'), OB-15-S (18.5'), AP-23-DO (47.5'), BW-5 (9.5'), BW-6 (13'), BW-8 (13.5'), and STR-3 were re-analyzed at larger dilutions to bring target analytes within the calibration range of the method. Both dilutions were reported with analytes over the calibration range flagged with an "E" and the diluted analytes flagged with a "D".

All the initial and continuing calibration criteria were met for all analytes.

The Blank Spike (LCS)/Blank Spike Duplicate (LCSD) recoveries were all within the QC limits.

The Method Blanks associated with these samples were free of contamination.

No other analytical or QC problems were encountered.

MassDEP Analytical Protocol Certification Form

Laboratory Name: Columbia Analytical Services, Inc. Project #:143276

Project Location: Varian Beverly RTN:

This Form provides certifications for the following data set: list Laboratory Sample ID Number(s):
R1200368 – 001 - 025

Matrices: X Groundwater ☐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 ☐	6850 Perchlorate CAM VIII B ☐	Other: Rsk-175 and Metabolic Acids

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)?	X Yes ☐ No[1]

[1]*All negative responses must be addressed in an attached laboratory narrative.* (Site List)

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 Manager

Printed Name: Michael K. Perry **Date:** 2/01/12

00004

CASE NARRATIVE

This report contains analytical results for the following samples:
Service Request Number: R1200368

Lab ID	Client ID
R1200368-001	TB-1
R1200368-002	EB-1
R1200368-003	OB15-S (18.5')
R1200368-004	MW-9 (20')
R1200368-005	UNNAMED STREAM
R1200368-006	AP25-DO (46')
R1200368-007	AP-13-DO (51')
R1200368-008	AP-24-DO (16')
R1200368-009	AP-23-DO (47.5')
R1200368-010	OB-19-DO (56.5')
R1200368-011	OB12-DO (48.5')
R1200368-012	OB12-S (26.5')
R1200368-013	TB-2
R1200368-015	BW-4 (12.5')
R1200368-016	BW-5 (9.5')
R1200368-017	BW-6 (13')
R1200368-018	OB9-BR (121')
R1200368-019	OB9-S (23.5')
R1200368-020	OB9-DO (92')
R1200368-021	BW-8 (13.5')
R1200368-022	BW-9 (12')
R1200368-023	STR-3
R1200368-024	OB10-S (29')
R1200368-025	OB10-DO (46')

Columbia Analytical Services

REPORT QUALIFIERS

U	Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.
J	Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/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.

ACCREDITED IN ACCORDANCE WITH nelac

CAS/Rochester 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

COLUMBIA ANALYTICAL SERVICES
1565 JEFFERSON RD
BUILDING 300, SUITE 360
ROCHESTER, NY 14623-0000

Laboratory Director: Michael K. Perry

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: 01 JUL 2011
Expires: 30 JUN 2012

Director, Division of Environmental Analysis

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COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 25 AUG 2011

M-NY032 COLUMBIA ANALYTICAL SERVICES
ROCHESTER NY

NON POTABLE WATER (CHEMISTRY) Effective Date 25 AUG 2011 Expiration Date 30 JUN 2012

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
PH	SM 4500-H-B
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

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 25 AUG 2011

M-NY032 COLUMBIA ANALYTICAL SERVICES
ROCHESTER NY

NON POTABLE WATER (CHEMISTRY) Effective Date 25 AUG 2011 Expiration Date 30 JUN 2012

Analytes	Methods
ALKALINITY, TOTAL	SM 2320B
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

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200368
Project:	Varian Beverly/143276-02000000	**Date Collected:**	1/17/12 0800
Sample Matrix:	Water	**Date Received:**	1/19/12
		Date Analyzed:	1/24/12 13:52
Sample Name:	TB-1	**Units:**	µg/L
Lab Code:	R1200368-001	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	277364
Data File Name:	J:\ACQUDATA\MSVOA8\DATA\012412\F2704.D\	**Instrument Name:**	R-MS-08
		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	110	70-130	1/24/12 13:52	
Dibromofluoromethane	108	70-130	1/24/12 13:52	
Toluene-d8	107	70-130	1/24/12 13:52	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200368
Project:	Varian Beverly/143276-02000000	**Date Collected:**	1/17/12 0830
Sample Matrix:	Water	**Date Received:**	1/19/12
		Date Analyzed:	1/24/12 14:20
Sample Name:	EB-1	**Units:**	µg/L
Lab Code:	R1200368-002	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	277364
Data File Name:	J:\ACQUDATA\MSVOA8\DATA\012412\F2705.D\	**Instrument Name:**	R-MS-08
		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	108	70-130	1/24/12 14:20	
Dibromofluoromethane	107	70-130	1/24/12 14:20	
Toluene-d8	105	70-130	1/24/12 14:20	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200368
Project:	Varian Beverly/143276-02000000	**Date Collected:**	1/17/12 0900
Sample Matrix:	Water	**Date Received:**	1/19/12
		Date Analyzed:	1/24/12 14:48
Sample Name:	OB15-S (18.5')	**Units:**	µg/L
Lab Code:	R1200368-003	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	277364
Data File Name:	J:\ACQUDATA\MSVOA8\DATA\012412\F2706.D\	**Instrument Name:**	R-MS-08
		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	**4.3**		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	**5.2**		2.0	
156-59-2	cis-1,2-Dichloroethene	**4.5**		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	107	70-130	1/24/12 14:48	
Dibromofluoromethane	107	70-130	1/24/12 14:48	
Toluene-d8	105	70-130	1/24/12 14:48	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200368
Project:	Varian Beverly/143276-02000000	**Date Collected:**	1/17/12 0900
Sample Matrix:	Water	**Date Received:**	1/19/12
		Date Analyzed:	1/26/12 09:46
Sample Name:	OB15-S (18.5')	**Units:**	µg/L
Lab Code:	R1200368-003	**Basis:**	NA

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	277703
Data File Name:	star638.run	**Instrument Name:**	R-GC-02
		Dilution Factor:	125

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	**400**		130	
74-85-1	Ethene	**160**		130	
74-82-8	Methane	**21000**	E	250	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200368
Project:	Varian Beverly/143276-02000000	**Date Collected:**	1/17/12 0900
Sample Matrix:	Water	**Date Received:**	1/19/12
		Date Analyzed:	1/26/12 09:57
Sample Name:	OB15-S (18.5')	**Units:**	µg/L
Lab Code:	R1200368-003	**Basis:**	NA
Run Type:	Dilution		

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	277703
Data File Name:	star639.run	**Instrument Name:**	R-GC-02
		Dilution Factor:	250

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	**400**	D	250	
74-85-1	Ethene	250	U	250	
74-82-8	Methane	**21000**	D	500	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200368
Project:	Varian Beverly/143276-02000000	**Date Collected:**	1/17/12 0900
Sample Matrix:	Water	**Date Received:**	1/19/12
		Date Analyzed:	1/23/12 22:29
Sample Name:	OB15-S (18.5')	**Units:**	mg/L
Lab Code:	R1200368-003	**Basis:**	NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analytical Method:	Organic Acids	**Analysis Lot:**	277581
Data File Name:	J:\ACQUDATA\HPLC05\DATA\012312\X0007307.D\	**Instrument Name:**	R-HPLC-05
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
127-17-3	Pyruvic Acid	0.50	U	0.50	
64-19-7	Acetic Acid	**57**		1.0	
107-92-6	Butanoic Acid (Butyric Acid)	2.0	U	2.0	
50-21-5	Lactic Acid	1.0	U	1.0	
79-09-4	Propionic Acid	**31**		1.0	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200368
Project:	Varian Beverly/143276-02000000	**Date Collected:**	1/17/12 0930
Sample Matrix:	Water	**Date Received:**	1/19/12
		Date Analyzed:	1/25/12 11:58
Sample Name:	MW-9 (20')	**Units:**	µg/L
Lab Code:	R1200368-004	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	277543
Data File Name:	J:\ACQUDATA\MSVOA8\DATA\012512\F2717.D\	**Instrument Name:**	R-MS-08
		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	**6.0**		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)	**3.4**		2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	**9.3**		2.0	
156-59-2	cis-1,2-Dichloroethene	**39**		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	1/25/12 11:58	
Dibromofluoromethane	102	70-130	1/25/12 11:58	
Toluene-d8	101	70-130	1/25/12 11:58	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200368
Project:	Varian Beverly/143276-02000000	**Date Collected:**	1/17/12 0930
Sample Matrix:	Water	**Date Received:**	1/19/12
		Date Analyzed:	1/26/12 10:08
Sample Name:	MW-9 (20')	**Units:**	µg/L
Lab Code:	R1200368-004	**Basis:**	NA

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	277703
Data File Name:	star640.run	**Instrument Name:**	R-GC-02
		Dilution Factor:	125

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	**1900**		130	
74-85-1	Ethene	**2000**		130	
74-82-8	Methane	**17000**	E	250	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200368
Project:	Varian Beverly/143276-02000000	**Date Collected:**	1/17/12 0930
Sample Matrix:	Water	**Date Received:**	1/19/12
		Date Analyzed:	1/26/12 10:18
Sample Name:	MW-9 (20')	**Units:**	µg/L
Lab Code:	R1200368-004	**Basis:**	NA
Run Type:	Dilution		

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	277703
Data File Name:	star641.run	**Instrument Name:**	R-GC-02
		Dilution Factor:	250

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	**1900**	D	250	
74-85-1	Ethene	**2100**	D	250	
74-82-8	Methane	**17000**	D	500	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200368
Project:	Varian Beverly/143276-02000000	**Date Collected:**	1/17/12 0930
Sample Matrix:	Water	**Date Received:**	1/19/12
		Date Analyzed:	1/23/12 23:53
Sample Name:	MW-9 (20')	**Units:**	mg/L
Lab Code:	R1200368-004	**Basis:**	NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analytical Method:	Organic Acids	**Analysis Lot:**	277581
Data File Name:	J:\ACQUDATA\HPLC05\DATA\012312\X0007309.D\	**Instrument Name:**	R-HPLC-05
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
127-17-3	Pyruvic Acid	0.50	U	0.50	
64-19-7	Acetic Acid	1.0	U	1.0	
107-92-6	Butanoic Acid (Butyric Acid)	2.0	U	2.0	
50-21-5	Lactic Acid	1.0	U	1.0	
79-09-4	Propionic Acid	1.0	U	1.0	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200368
Project:	Varian Beverly/143276-02000000	**Date Collected:**	1/17/12 1000
Sample Matrix:	Water	**Date Received:**	1/19/12
		Date Analyzed:	1/26/12 11:34
Sample Name:	UNNAMED STREAM	**Units:**	µg/L
Lab Code:	R1200368-005	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	277692
Data File Name:	J:\ACQUDATA\MSVOA8\DATA\012612\F2744.D\	**Instrument Name:**	R-MS-08
		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)	**980**		10	
79-01-6	Trichloroethene (TCE)	**610**		10	
75-69-4	Trichlorofluoromethane (CFC 11)	10	U	10	
75-01-4	Vinyl Chloride	**37**		10	
156-59-2	cis-1,2-Dichloroethene	**480**		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	106	70-130	1/26/12 11:34	
Dibromofluoromethane	102	70-130	1/26/12 11:34	
Toluene-d8	101	70-130	1/26/12 11:34	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200368
Project:	Varian Beverly/143276-02000000	**Date Collected:**	1/17/12 1000
Sample Matrix:	Water	**Date Received:**	1/19/12
		Date Analyzed:	1/26/12 10:45
Sample Name:	UNNAMED STREAM	**Units:**	µg/L
Lab Code:	R1200368-005	**Basis:**	NA

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	277703
Data File Name:	star643.run	**Instrument Name:**	R-GC-02
		Dilution Factor:	2.5

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	**12**		2.5	
74-85-1	Ethene	**9.6**		2.5	
74-82-8	Methane	**200**		5.0	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200368
Project:	Varian Beverly/143276-02000000	**Date Collected:**	1/17/12 1000
Sample Matrix:	Water	**Date Received:**	1/19/12
		Date Analyzed:	1/24/12 01:16
Sample Name:	UNNAMED STREAM	**Units:**	mg/L
Lab Code:	R1200368-005	**Basis:**	NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analytical Method:	Organic Acids	**Analysis Lot:**	277581
Data File Name:	J:\ACQUDATA\HPLC05\DATA\012312\X0007311.D\	**Instrument Name:**	R-HPLC-05
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
127-17-3	Pyruvic Acid	0.50	U	0.50	
64-19-7	Acetic Acid	1.0	U	1.0	
107-92-6	Butanoic Acid (Butyric Acid)	2.0	U	2.0	
50-21-5	Lactic Acid	1.0	U	1.0	
79-09-4	Propionic Acid	1.0	U	1.0	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200368
Project:	Varian Beverly/143276-02000000	**Date Collected:**	1/17/12 1030
Sample Matrix:	Water	**Date Received:**	1/19/12
		Date Analyzed:	1/26/12 12:02
Sample Name:	AP25-DO (46')	**Units:**	µg/L
Lab Code:	R1200368-006	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	277692
Data File Name:	J:\ACQUDATA\MSVOA8\DATA\012612\F2745.D\	**Instrument Name:**	R-MS-08
		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)	**49**		40	
75-69-4	Trichlorofluoromethane (CFC 11)	40	U	40	
75-01-4	Vinyl Chloride	**730**		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	105	70-130	1/26/12 12:02	
Dibromofluoromethane	102	70-130	1/26/12 12:02	
Toluene-d8	100	70-130	1/26/12 12:02	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200368
Project:	Varian Beverly/143276-02000000	**Date Collected:**	1/17/12 1100
Sample Matrix:	Water	**Date Received:**	1/19/12
		Date Analyzed:	1/25/12 13:21
Sample Name:	AP-13-DO (51')	**Units:**	µg/L
Lab Code:	R1200368-007	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	277543
Data File Name:	J:\ACQUDATA\MSVOA8\DATA\012512\F2720.D\	**Instrument Name:**	R-MS-08
		Dilution Factor:	1000

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	**29000**		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**		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)	**53000**		2000	
79-01-6	Trichloroethene (TCE)	**310000**	E	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	**3700**		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	103	70-130	1/25/12 13:21	
Dibromofluoromethane	103	70-130	1/25/12 13:21	
Toluene-d8	101	70-130	1/25/12 13:21	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200368
Project:	Varian Beverly/143276-02000000	**Date Collected:**	1/17/12 1100
Sample Matrix:	Water	**Date Received:**	1/19/12
		Date Analyzed:	1/26/12 12:30
Sample Name:	AP-13-DO (51')	**Units:**	µg/L
Lab Code:	R1200368-007	**Basis:**	NA
Run Type:	Dilution		

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	277692
Data File Name:	J:\ACQUDATA\MSVOA8\DATA\012612\F2746.D\	**Instrument Name:**	R-MS-08
		Dilution Factor:	2500

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	**31000**	D	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)	**60000**	D	5000	
79-01-6	Trichloroethene (TCE)	**360000**	D	5000	
75-69-4	Trichlorofluoromethane (CFC 11)	5000	U	5000	
75-01-4	Vinyl Chloride	5000	U	5000	
156-59-2	cis-1,2-Dichloroethene	5000	U	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	109	70-130	1/26/12 12:30	
Dibromofluoromethane	105	70-130	1/26/12 12:30	
Toluene-d8	103	70-130	1/26/12 12:30	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200368
Project:	Varian Beverly/143276-02000000	**Date Collected:**	1/17/12 1100
Sample Matrix:	Water	**Date Received:**	1/19/12
		Date Analyzed:	1/26/12 10:55
Sample Name:	AP-13-DO (51')	**Units:**	µg/L
Lab Code:	R1200368-007	**Basis:**	NA

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	277703
Data File Name:	star644.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	**7.8**		1.0	
74-82-8	Methane	**3.0**		2.0	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200368
Project:	Varian Beverly/143276-02000000	**Date Collected:**	1/17/12 1100
Sample Matrix:	Water	**Date Received:**	1/19/12
		Date Analyzed:	1/25/12 17:48
Sample Name:	AP-13-DO (51')	**Units:**	mg/L
Lab Code:	R1200368-007	**Basis:**	NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analytical Method:	Organic Acids	**Analysis Lot:**	277581
Data File Name:	J:\ACQUDATA\HPLC05\DATA\012512\X0007349.D\	**Instrument Name:**	R-HPLC-05
		Dilution Factor:	20

CAS No.	Analyte Name	Result	Q	MRL	Note
127-17-3	Pyruvic Acid	10	U	10	
64-19-7	Acetic Acid	**1300**		20	
107-92-6	Butanoic Acid (Butyric Acid)	40	U	40	
50-21-5	Lactic Acid	**740**		20	
79-09-4	Propionic Acid	**41**		20	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200368
Project:	Varian Beverly/143276-02000000	**Date Collected:**	1/17/12 1130
Sample Matrix:	Water	**Date Received:**	1/19/12
		Date Analyzed:	1/26/12 12:57
Sample Name:	AP-24-DO (16')	**Units:**	µg/L
Lab Code:	R1200368-008	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	277692
Data File Name:	J:\ACQUDATA\MSVOA8\DATA\012612\F2747.D\	**Instrument Name:**	R-MS-08
		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	108	70-130	1/26/12 12:57	
Dibromofluoromethane	104	70-130	1/26/12 12:57	
Toluene-d8	102	70-130	1/26/12 12:57	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200368
Project:	Varian Beverly/143276-02000000	**Date Collected:**	1/17/12 1130
Sample Matrix:	Water	**Date Received:**	1/19/12
		Date Analyzed:	1/26/12 12:11
Sample Name:	AP-24-DO (16')	**Units:**	µg/L
Lab Code:	R1200368-008	**Basis:**	NA

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	277703
Data File Name:	star649.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	2.0	U	2.0	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200368
Project:	Varian Beverly/143276-02000000	**Date Collected:**	1/17/12 1130
Sample Matrix:	Water	**Date Received:**	1/19/12
		Date Analyzed:	1/24/12 04:44
Sample Name:	AP-24-DO (16')	**Units:**	mg/L
Lab Code:	R1200368-008	**Basis:**	NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analytical Method:	Organic Acids	**Analysis Lot:**	277581
Data File Name:	J:\ACQUDATA\HPLC05\DATA\012312\X0007316.D\	**Instrument Name:**	R-HPLC-05
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
127-17-3	Pyruvic Acid	0.50	U	0.50	
64-19-7	Acetic Acid	1.0	U	1.0	
107-92-6	Butanoic Acid (Butyric Acid)	2.0	U	2.0	
50-21-5	Lactic Acid	1.0	U	1.0	
79-09-4	Propionic Acid	1.0	U	1.0	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200368
Project:	Varian Beverly/143276-02000000	**Date Collected:**	1/17/12 1200
Sample Matrix:	Water	**Date Received:**	1/19/12
		Date Analyzed:	1/25/12 14:17
Sample Name:	AP-23-DO (47.5')	**Units:**	µg/L
Lab Code:	R1200368-009	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	277543
Data File Name:	J:\ACQUDATA\MSVOA8\DATA\012512\F2722.D\	**Instrument Name:**	R-MS-08
		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)	**41000**		2000	
79-01-6	Trichloroethene (TCE)	**410000**	E	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	**4700**		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	106	70-130	1/25/12 14:17	
Dibromofluoromethane	105	70-130	1/25/12 14:17	
Toluene-d8	105	70-130	1/25/12 14:17	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200368
Project:	Varian Beverly/143276-02000000	**Date Collected:**	1/17/12 1200
Sample Matrix:	Water	**Date Received:**	1/19/12
		Date Analyzed:	1/26/12 13:25
Sample Name:	AP-23-DO (47.5')	**Units:**	µg/L
Lab Code:	R1200368-009	**Basis:**	NA
Run Type:	Dilution		

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	277692
Data File Name:	J:\ACQUDATA\MSVOA8\DATA\012612\F2748.D\	**Instrument Name:**	R-MS-08
		Dilution Factor:	2500

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	5000	U	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)	**48000**	D	5000	
79-01-6	Trichloroethene (TCE)	**490000**	D	5000	
75-69-4	Trichlorofluoromethane (CFC 11)	5000	U	5000	
75-01-4	Vinyl Chloride	5000	U	5000	
156-59-2	cis-1,2-Dichloroethene	**5200**	D	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	107	70-130	1/26/12 13:25	
Dibromofluoromethane	105	70-130	1/26/12 13:25	
Toluene-d8	103	70-130	1/26/12 13:25	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200368
Project:	Varian Beverly/143276-02000000	**Date Collected:**	1/17/12 1200
Sample Matrix:	Water	**Date Received:**	1/19/12
		Date Analyzed:	1/26/12 12:21
Sample Name:	AP-23-DO (47.5')	**Units:**	µg/L
Lab Code:	R1200368-009	**Basis:**	NA

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	277703
Data File Name:	star650.run	**Instrument Name:**	R-GC-02
		Dilution Factor:	2

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	2.0	U	2.0	
74-85-1	Ethene	**230**	E	2.0	
74-82-8	Methane	**26**		4.0	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200368
Project:	Varian Beverly/143276-02000000	**Date Collected:**	1/17/12 1200
Sample Matrix:	Water	**Date Received:**	1/19/12
		Date Analyzed:	1/26/12 12:31
Sample Name:	AP-23-DO (47.5')	**Units:**	µg/L
Lab Code:	R1200368-009	**Basis:**	NA
Run Type:	Dilution		

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	277703
Data File Name:	star651.run	**Instrument Name:**	R-GC-02
		Dilution Factor:	4

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	4.0	U	4.0	
74-85-1	Ethene	**230**	D	4.0	
74-82-8	Methane	**26**	D	8.0	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200368
Project:	Varian Beverly/143276-02000000	**Date Collected:**	1/17/12 1200
Sample Matrix:	Water	**Date Received:**	1/19/12
		Date Analyzed:	1/24/12 06:07
Sample Name:	AP-23-DO (47.5')	**Units:**	mg/L
Lab Code:	R1200368-009	**Basis:**	NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analytical Method:	Organic Acids	**Analysis Lot:**	277581
Data File Name:	J:\ACQUDATA\HPLC05\DATA\012312\X0007318.D\	**Instrument Name:**	R-HPLC-05
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
127-17-3	Pyruvic Acid	0.50	U	0.50	
64-19-7	Acetic Acid	**26**		1.0	
107-92-6	Butanoic Acid (Butyric Acid)	2.0	U	2.0	
50-21-5	Lactic Acid	**6.0**		1.0	
79-09-4	Propionic Acid	**42**		1.0	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200368
Project:	Varian Beverly/143276-02000000	**Date Collected:**	1/17/12 1300
Sample Matrix:	Water	**Date Received:**	1/19/12
		Date Analyzed:	1/25/12 14:45
Sample Name:	OB-19-DO (56.5')	**Units:**	µg/L
Lab Code:	R1200368-010	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	277543
Data File Name:	J:\ACQUDATA\MSVOA8\DATA\012512\F2723.D\	**Instrument Name:**	R-MS-08
		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)	**820**		40	
79-01-6	Trichloroethene (TCE)	**3100**		40	
75-69-4	Trichlorofluoromethane (CFC 11)	40	U	40	
75-01-4	Vinyl Chloride	**94**		40	
156-59-2	cis-1,2-Dichloroethene	**1500**		40	
10061-01-5	cis-1,3-Dichloropropene	40	U	40	
156-60-5	trans-1,2-Dichloroethene	**66**		40	
10061-02-6	trans-1,3-Dichloropropene	40	U	40	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	108	70-130	1/25/12 14:45	
Dibromofluoromethane	106	70-130	1/25/12 14:45	
Toluene-d8	106	70-130	1/25/12 14:45	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200368
Project:	Varian Beverly/143276-02000000	**Date Collected:**	1/17/12 1330
Sample Matrix:	Water	**Date Received:**	1/19/12
		Date Analyzed:	1/25/12 15:13
Sample Name:	OB12-DO (48.5')	**Units:**	µg/L
Lab Code:	R1200368-011	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	277543
Data File Name:	J:\ACQUDATA\MSVOA8\DATA\012512\F2724.D\	**Instrument Name:**	R-MS-08
		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	**2.4**		2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	**8.0**		2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	**18**		2.0	
107-06-2	1,2-Dichloroethane	**2.1**		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	**2.5**		2.0	
127-18-4	Tetrachloroethene (PCE)	**1200**	E	2.0	
79-01-6	Trichloroethene (TCE)	**2800**	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	**1700**	E	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	**13**		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	1/25/12 15:13	
Dibromofluoromethane	106	70-130	1/25/12 15:13	
Toluene-d8	106	70-130	1/25/12 15:13	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200368
Project:	Varian Beverly/143276-02000000	**Date Collected:**	1/17/12 1330
Sample Matrix:	Water	**Date Received:**	1/19/12
		Date Analyzed:	1/27/12 12:06
Sample Name:	OB12-DO (48.5')	**Units:**	µg/L
Lab Code:	R1200368-011	**Basis:**	NA
Run Type:	Dilution		

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	277841
Data File Name:	J:\ACQUDATA\MSVOA8\DATA\012712\F2773.D\	**Instrument Name:**	R-MS-08
		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)	**1800**	D	200	
79-01-6	Trichloroethene (TCE)	**15000**	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	**5500**	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	107	70-130	1/27/12 12:06	
Dibromofluoromethane	102	70-130	1/27/12 12:06	
Toluene-d8	102	70-130	1/27/12 12:06	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200368
Project:	Varian Beverly/143276-02000000	**Date Collected:**	1/17/12 1400
Sample Matrix:	Water	**Date Received:**	1/19/12
		Date Analyzed:	1/26/12 14:20
Sample Name:	OB12-S (26.5')	**Units:**	µg/L
Lab Code:	R1200368-012	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	277692
Data File Name:	J:\ACQUDATA\MSVOA8\DATA\012612\F2750.D\	**Instrument Name:**	R-MS-08
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	**4.1**		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	**3.7**		2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	**3.3**		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)	**190**		2.0	
79-01-6	Trichloroethene (TCE)	**140**		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	107	70-130	1/26/12 14:20	
Dibromofluoromethane	103	70-130	1/26/12 14:20	
Toluene-d8	101	70-130	1/26/12 14:20	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200368
Project:	Varian Beverly/143276-02000000	**Date Collected:**	1/18/12 0730
Sample Matrix:	Water	**Date Received:**	1/19/12
		Date Analyzed:	1/26/12 14:48
Sample Name:	TB-2	**Units:**	µg/L
Lab Code:	R1200368-013	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	277692
Data File Name:	J:\ACQUDATA\MSVOA8\DATA\012612\F2751.D\	**Instrument Name:**	R-MS-08
		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	108	70-130	1/26/12 14:48	
Dibromofluoromethane	103	70-130	1/26/12 14:48	
Toluene-d8	102	70-130	1/26/12 14:48	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200368
Project:	Varian Beverly/143276-02000000	**Date Collected:**	1/18/12 0800
Sample Matrix:	Water	**Date Received:**	1/19/12
		Date Analyzed:	1/26/12 15:16
Sample Name:	BW-4 (12.5')	**Units:**	µg/L
Lab Code:	R1200368-015	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	277692
Data File Name:	J:\ACQUDATA\MSVOA8\DATA\012612\F2752.D\	**Instrument Name:**	R-MS-08
		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	108	70-130	1/26/12 15:16	
Dibromofluoromethane	102	70-130	1/26/12 15:16	
Toluene-d8	102	70-130	1/26/12 15:16	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200368
Project:	Varian Beverly/143276-02000000	**Date Collected:**	1/18/12 0800
Sample Matrix:	Water	**Date Received:**	1/19/12
		Date Analyzed:	1/26/12 12:58
Sample Name:	BW-4 (12.5')	**Units:**	µg/L
Lab Code:	R1200368-015	**Basis:**	NA

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	277703
Data File Name:	star653.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	**5.1**		1.0	
74-82-8	Methane	**17**		2.0	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200368
Project:	Varian Beverly/143276-02000000	**Date Collected:**	1/18/12 0800
Sample Matrix:	Water	**Date Received:**	1/19/12
		Date Analyzed:	1/24/12 07:30
Sample Name:	BW-4 (12.5')	**Units:**	mg/L
Lab Code:	R1200368-015	**Basis:**	NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analytical Method:	Organic Acids	**Analysis Lot:**	277581
Data File Name:	J:\ACQUDATA\HPLC05\DATA\012312\X0007320.D\	**Instrument Name:**	R-HPLC-05
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
127-17-3	Pyruvic Acid	0.50	U	0.50	
64-19-7	Acetic Acid	1.0	U	1.0	
107-92-6	Butanoic Acid (Butyric Acid)	2.0	U	2.0	
50-21-5	Lactic Acid	1.0	U	1.0	
79-09-4	Propionic Acid	1.0	U	1.0	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200368
Project:	Varian Beverly/143276-02000000	**Date Collected:**	1/18/12 0845
Sample Matrix:	Water	**Date Received:**	1/19/12
		Date Analyzed:	1/25/12 17:04
Sample Name:	BW-5 (9.5')	**Units:**	µg/L
Lab Code:	R1200368-016	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	277543
Data File Name:	J:\ACQUDATA\MSVOA8\DATA\012512\F2728.D\	**Instrument Name:**	R-MS-08
		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)	**21**		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	**18**		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	**24**		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	106	70-130	1/25/12 17:04	
Dibromofluoromethane	104	70-130	1/25/12 17:04	
Toluene-d8	103	70-130	1/25/12 17:04	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200368
Project:	Varian Beverly/143276-02000000	**Date Collected:**	1/18/12 0845
Sample Matrix:	Water	**Date Received:**	1/19/12
		Date Analyzed:	1/26/12 13:16
Sample Name:	BW-5 (9.5')	**Units:**	µg/L
Lab Code:	R1200368-016	**Basis:**	NA

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	277703
Data File Name:	star654.run	**Instrument Name:**	R-GC-02
		Dilution Factor:	25

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	25	U	25	
74-85-1	Ethene	**4100**	E	25	
74-82-8	Methane	**710**		50	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200368
Project:	Varian Beverly/143276-02000000	**Date Collected:**	1/18/12 0845
Sample Matrix:	Water	**Date Received:**	1/19/12
		Date Analyzed:	1/26/12 13:25
Sample Name:	BW-5 (9.5')	**Units:**	µg/L
Lab Code:	R1200368-016	**Basis:**	NA
Run Type:	Dilution		

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	277703
Data File Name:	star655.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	**4000**	D	50	
74-82-8	Methane	**700**	D	100	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200368
Project:	Varian Beverly/143276-02000000	**Date Collected:**	1/18/12 0845
Sample Matrix:	Water	**Date Received:**	1/19/12
		Date Analyzed:	1/24/12 08:53
Sample Name:	BW-5 (9.5')	**Units:**	mg/L
Lab Code:	R1200368-016	**Basis:**	NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analytical Method:	Organic Acids	**Analysis Lot:**	277581
Data File Name:	J:\ACQUDATA\HPLC05\DATA\012312\X0007322.D\	**Instrument Name:**	R-HPLC-05
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
127-17-3	Pyruvic Acid	0.50	U	0.50	
64-19-7	Acetic Acid	**30**		1.0	
107-92-6	Butanoic Acid (Butyric Acid)	2.0	U	2.0	
50-21-5	Lactic Acid	1.0	U	1.0	
79-09-4	Propionic Acid	1.0	U	1.0	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200368
Project:	Varian Beverly/143276-02000000	**Date Collected:**	1/18/12 0930
Sample Matrix:	Water	**Date Received:**	1/19/12
		Date Analyzed:	1/25/12 17:31
Sample Name:	BW-6 (13')	**Units:**	µg/L
Lab Code:	R1200368-017	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	277543
Data File Name:	J:\ACQUDATA\MSVOA8\DATA\012512\F2729.D\	**Instrument Name:**	R-MS-08
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	**2.7**		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)	**140**		2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	**2.8**		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	**960**	E	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**		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	107	70-130	1/25/12 17:31	
Dibromofluoromethane	104	70-130	1/25/12 17:31	
Toluene-d8	102	70-130	1/25/12 17:31	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200368
Project:	Varian Beverly/143276-02000000	**Date Collected:**	1/18/12 0930
Sample Matrix:	Water	**Date Received:**	1/19/12
		Date Analyzed:	1/31/12 14:55
Sample Name:	BW-6 (13')	**Units:**	µg/L
Lab Code:	R1200368-017	**Basis:**	NA
Run Type:	Dilution		

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	278170
Data File Name:	J:\ACQUDATA\MSVOA8\DATA\013112\F2807.D\	**Instrument Name:**	R-MS-08
		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)	**140**	D	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	**1100**	D	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	40	U	40	
156-59-2	cis-1,2-Dichloroethene	40	U	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	1/31/12 14:55	
Dibromofluoromethane	102	70-130	1/31/12 14:55	
Toluene-d8	100	70-130	1/31/12 14:55	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200368
Project:	Varian Beverly/143276-02000000	**Date Collected:**	1/18/12 0930
Sample Matrix:	Water	**Date Received:**	1/19/12
		Date Analyzed:	1/26/12 13:35
Sample Name:	BW-6 (13')	**Units:**	µg/L
Lab Code:	R1200368-017	**Basis:**	NA

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	277703
Data File Name:	star656.run	**Instrument Name:**	R-GC-02
		Dilution Factor:	5

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	5.0	U	5.0	
74-85-1	Ethene	4700	E	5.0	
74-82-8	Methane	270		10	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200368
Project:	Varian Beverly/143276-02000000	**Date Collected:**	1/18/12 0930
Sample Matrix:	Water	**Date Received:**	1/19/12
		Date Analyzed:	1/27/12 09:55
Sample Name:	BW-6 (13')	**Units:**	µg/L
Lab Code:	R1200368-017	**Basis:**	NA
Run Type:	Dilution		

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	277868
Data File Name:	star661.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	**3900**	D	50	
74-82-8	Methane	**240**	D	100	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200368
Project:	Varian Beverly/143276-02000000	**Date Collected:**	1/18/12 0930
Sample Matrix:	Water	**Date Received:**	1/19/12
		Date Analyzed:	1/24/12 10:58
Sample Name:	BW-6 (13')	**Units:**	mg/L
Lab Code:	R1200368-017	**Basis:**	NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analytical Method:	Organic Acids	**Analysis Lot:**	277581
Data File Name:	J:\ACQUDATA\HPLC05\DATA\012312\X0007325.D\	**Instrument Name:**	R-HPLC-05
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
127-17-3	Pyruvic Acid	0.50	U	0.50	
64-19-7	Acetic Acid	**110**		1.0	
107-92-6	Butanoic Acid (Butyric Acid)	**2.6**		2.0	
50-21-5	Lactic Acid	1.0	U	1.0	
79-09-4	Propionic Acid	**58**		1.0	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200368
Project:	Varian Beverly/143276-02000000	**Date Collected:**	1/18/12 1030
Sample Matrix:	Water	**Date Received:**	1/19/12
		Date Analyzed:	1/26/12 15:44
Sample Name:	OB9-BR (121')	**Units:**	µg/L
Lab Code:	R1200368-018	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	277692
Data File Name:	J:\ACQUDATA\MSVOA8\DATA\012612\F2753.D\	**Instrument Name:**	R-MS-08
		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	**46**		20	
156-59-2	cis-1,2-Dichloroethene	**1400**		20	
10061-01-5	cis-1,3-Dichloropropene	20	U	20	
156-60-5	trans-1,2-Dichloroethene	**33**		20	
10061-02-6	trans-1,3-Dichloropropene	20	U	20	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	107	70-130	1/26/12 15:44	
Dibromofluoromethane	103	70-130	1/26/12 15:44	
Toluene-d8	102	70-130	1/26/12 15:44	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200368
Project:	Varian Beverly/143276-02000000	**Date Collected:**	1/18/12 1030
Sample Matrix:	Water	**Date Received:**	1/19/12
		Date Analyzed:	1/27/12 10:20
Sample Name:	OB9-BR (121')	**Units:**	µg/L
Lab Code:	R1200368-018	**Basis:**	NA

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	277868
Data File Name:	star663.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	**11**		10	
74-82-8	Methane	**660**		20	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200368
Project:	Varian Beverly/143276-02000000	**Date Collected:**	1/18/12 1030
Sample Matrix:	Water	**Date Received:**	1/19/12
		Date Analyzed:	1/24/12 12:22
Sample Name:	OB9-BR (121')	**Units:**	mg/L
Lab Code:	R1200368-018	**Basis:**	NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analytical Method:	Organic Acids	**Analysis Lot:**	277581
Data File Name:	J:\ACQUDATA\HPLC05\DATA\012312\X0007327.D\	**Instrument Name:**	R-HPLC-05
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
127-17-3	Pyruvic Acid	0.50	U	0.50	
64-19-7	Acetic Acid	**110**		1.0	
107-92-6	Butanoic Acid (Butyric Acid)	**2.7**		2.0	
50-21-5	Lactic Acid	1.0	U	1.0	
79-09-4	Propionic Acid	**58**		1.0	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200368
Project:	Varian Beverly/143276-02000000	**Date Collected:**	1/18/12 1130
Sample Matrix:	Water	**Date Received:**	1/19/12
		Date Analyzed:	1/25/12 18:26
Sample Name:	OB9-S (23.5')	**Units:**	µg/L
Lab Code:	R1200368-019	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	277543
Data File Name:	J:\ACQUDATA\MSVOA8\DATA\012512\F2731.D\	**Instrument Name:**	R-MS-08
		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	**610**	E	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	**3.7**		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	1/25/12 18:26	
Dibromofluoromethane	103	70-130	1/25/12 18:26	
Toluene-d8	101	70-130	1/25/12 18:26	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200368
Project:	Varian Beverly/143276-02000000	**Date Collected:**	1/18/12 1130
Sample Matrix:	Water	**Date Received:**	1/19/12
		Date Analyzed:	1/26/12 16:12
Sample Name:	OB9-S (23.5')	**Units:**	µg/L
Lab Code:	R1200368-019	**Basis:**	NA
Run Type:	Dilution		

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	277692
Data File Name:	J:\ACQUDATA\MSVOA8\DATA\012612\F2754.D\	**Instrument Name:**	R-MS-08
		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	**560**	D	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)	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	105	70-130	1/26/12 16:12	
Dibromofluoromethane	102	70-130	1/26/12 16:12	
Toluene-d8	99	70-130	1/26/12 16:12	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200368
Project:	Varian Beverly/143276-02000000	**Date Collected:**	1/18/12 1130
Sample Matrix:	Water	**Date Received:**	1/19/12
		Date Analyzed:	1/27/12 10:30
Sample Name:	OB9-S (23.5')	**Units:**	µg/L
Lab Code:	R1200368-019	**Basis:**	NA

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	277868
Data File Name:	star664.run	**Instrument Name:**	R-GC-02
		Dilution Factor:	250

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	**310**		250	
74-85-1	Ethene	250	U	250	
74-82-8	Methane	**18000**		500	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200368
Project:	Varian Beverly/143276-02000000	**Date Collected:**	1/18/12 1130
Sample Matrix:	Water	**Date Received:**	1/19/12
		Date Analyzed:	1/24/12 13:45
Sample Name:	OB9-S (23.5')	**Units:**	mg/L
Lab Code:	R1200368-019	**Basis:**	NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analytical Method:	Organic Acids	**Analysis Lot:**	277581
Data File Name:	J:\ACQUDATA\HPLC05\DATA\012312\X0007329.D\	**Instrument Name:**	R-HPLC-05
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
127-17-3	Pyruvic Acid	0.50	U	0.50	
64-19-7	Acetic Acid	1.0	U	1.0	
107-92-6	Butanoic Acid (Butyric Acid)	2.0	U	2.0	
50-21-5	Lactic Acid	1.0	U	1.0	
79-09-4	Propionic Acid	1.0	U	1.0	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200368
Project:	Varian Beverly/143276-02000000	**Date Collected:**	1/18/12 1200
Sample Matrix:	Water	**Date Received:**	1/19/12
		Date Analyzed:	1/25/12 18:54
Sample Name:	OB9-DO (92')	**Units:**	µg/L
Lab Code:	R1200368-020	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	277543
Data File Name:	J:\ACQUDATA\MSVOA8\DATA\012512\F2732.D\	**Instrument Name:**	R-MS-08
		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	**1900**		40	
156-59-2	cis-1,2-Dichloroethene	**1600**		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	107	70-130	1/25/12 18:54	
Dibromofluoromethane	103	70-130	1/25/12 18:54	
Toluene-d8	103	70-130	1/25/12 18:54	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200368
Project:	Varian Beverly/143276-02000000	**Date Collected:**	1/18/12 1200
Sample Matrix:	Water	**Date Received:**	1/19/12
		Date Analyzed:	1/27/12 10:43
Sample Name:	OB9-DO (92')	**Units:**	µg/L
Lab Code:	R1200368-020	**Basis:**	NA

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	277868
Data File Name:	star665.run	**Instrument Name:**	R-GC-02
		Dilution Factor:	25

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	25	U	25	
74-85-1	Ethene	25	U	25	
74-82-8	Methane	**1200**		50	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200368
Project:	Varian Beverly/143276-02000000	**Date Collected:**	1/18/12 1200
Sample Matrix:	Water	**Date Received:**	1/19/12
		Date Analyzed:	1/24/12 15:08
Sample Name:	OB9-DO (92')	**Units:**	mg/L
Lab Code:	R1200368-020	**Basis:**	NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analytical Method:	Organic Acids	**Analysis Lot:**	277581
Data File Name:	J:\ACQUDATA\HPLC05\DATA\012312\X0007331.D\	**Instrument Name:**	R-HPLC-05
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
127-17-3	Pyruvic Acid	0.50	U	0.50	
64-19-7	Acetic Acid	**1.4**		1.0	
107-92-6	Butanoic Acid (Butyric Acid)	2.0	U	2.0	
50-21-5	Lactic Acid	1.0	U	1.0	
79-09-4	Propionic Acid	1.0	U	1.0	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200368
Project:	Varian Beverly/143276-02000000	**Date Collected:**	1/18/12 1230
Sample Matrix:	Water	**Date Received:**	1/19/12
		Date Analyzed:	1/26/12 16:40
Sample Name:	BW-8 (13.5')	**Units:**	µg/L
Lab Code:	R1200368-021	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	277692
Data File Name:	J:\ACQUDATA\MSVOA8\DATA\012612\F2755.D\	**Instrument Name:**	R-MS-08
		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)	**1100**	E	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	**880**	E	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	**2.1**		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	109	70-130	1/26/12 16:40	
Dibromofluoromethane	104	70-130	1/26/12 16:40	
Toluene-d8	103	70-130	1/26/12 16:40	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200368
Project:	Varian Beverly/143276-02000000	**Date Collected:**	1/18/12 1230
Sample Matrix:	Water	**Date Received:**	1/19/12
		Date Analyzed:	1/27/12 19:01
Sample Name:	BW-8 (13.5')	**Units:**	µg/L
Lab Code:	R1200368-021	**Basis:**	NA
Run Type:	Dilution		

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	277841
Data File Name:	J:\ACQUDATA\MSVOA8\DATA\012712\F2788.D\	**Instrument Name:**	R-MS-08
		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)	**3500**	D	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	**950**	D	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)	50	U	50	
79-01-6	Trichloroethene (TCE)	50	U	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	104	70-130	1/27/12 19:01	
Dibromofluoromethane	101	70-130	1/27/12 19:01	
Toluene-d8	99	70-130	1/27/12 19:01	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200368
Project:	Varian Beverly/143276-02000000	**Date Collected:**	1/18/12 1230
Sample Matrix:	Water	**Date Received:**	1/19/12
		Date Analyzed:	1/27/12 10:53
Sample Name:	BW-8 (13.5')	**Units:**	µg/L
Lab Code:	R1200368-021	**Basis:**	NA

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	277868
Data File Name:	star666.run	**Instrument Name:**	R-GC-02
		Dilution Factor:	12.5

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	**20**		13	
74-85-1	Ethene	**760**		13	
74-82-8	Methane	**1500**	E	25	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200368
Project:	Varian Beverly/143276-02000000	**Date Collected:**	1/18/12 1230
Sample Matrix:	Water	**Date Received:**	1/19/12
		Date Analyzed:	1/27/12 11:05
Sample Name:	BW-8 (13.5')	**Units:**	µg/L
Lab Code:	R1200368-021	**Basis:**	NA
Run Type:	Dilution		

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	277868
Data File Name:	star667.run	**Instrument Name:**	R-GC-02
		Dilution Factor:	25

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	25	U	25	
74-85-1	Ethene	**800**	D	25	
74-82-8	Methane	**1600**	D	50	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200368
Project:	Varian Beverly/143276-02000000	**Date Collected:**	1/18/12 1230
Sample Matrix:	Water	**Date Received:**	1/19/12
		Date Analyzed:	1/24/12 16:31
Sample Name:	BW-8 (13.5')	**Units:**	mg/L
Lab Code:	R1200368-021	**Basis:**	NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analytical Method:	Organic Acids	**Analysis Lot:**	277581
Data File Name:	J:\ACQUDATA\HPLC05\DATA\012312\X0007333.D\	**Instrument Name:**	R-HPLC-05
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
127-17-3	Pyruvic Acid	0.50	U	0.50	
64-19-7	Acetic Acid	**12**		1.0	
107-92-6	Butanoic Acid (Butyric Acid)	2.0	U	2.0	
50-21-5	Lactic Acid	1.0	U	1.0	
79-09-4	Propionic Acid	1.0	U	1.0	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200368
Project:	Varian Beverly/143276-02000000	**Date Collected:**	1/18/12 1300
Sample Matrix:	Water	**Date Received:**	1/19/12
		Date Analyzed:	1/26/12 17:08
Sample Name:	BW-9 (12')	**Units:**	µg/L
Lab Code:	R1200368-022	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	277692
Data File Name:	J:\ACQUDATA\MSVOA8\DATA\012612\F2756.D\	**Instrument Name:**	R-MS-08
		Dilution Factor:	2

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	**12**		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)	**990**	E	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	**2600**	E	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	4.0	U	4.0	
156-59-2	cis-1,2-Dichloroethene	4.0	U	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	109	70-130	1/26/12 17:08	
Dibromofluoromethane	108	70-130	1/26/12 17:08	
Toluene-d8	103	70-130	1/26/12 17:08	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200368
Project:	Varian Beverly/143276-02000000	**Date Collected:**	1/18/12 1300
Sample Matrix:	Water	**Date Received:**	1/19/12
		Date Analyzed:	1/27/12 13:02
Sample Name:	BW-9 (12')	**Units:**	µg/L
Lab Code:	R1200368-022	**Basis:**	NA
Run Type:	Dilution		

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	277841
Data File Name:	J:\ACQUDATA\MSVOA8\DATA\012712\F2775.D\	**Instrument Name:**	R-MS-08
		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)	**1100**	D	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	**3600**	D	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	40	U	40	
156-59-2	cis-1,2-Dichloroethene	40	U	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	109	70-130	1/27/12 13:02	
Dibromofluoromethane	106	70-130	1/27/12 13:02	
Toluene-d8	105	70-130	1/27/12 13:02	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200368
Project:	Varian Beverly/143276-02000000	**Date Collected:**	1/18/12 1300
Sample Matrix:	Water	**Date Received:**	1/19/12
		Date Analyzed:	1/27/12 12:08
Sample Name:	BW-9 (12')	**Units:**	µg/L
Lab Code:	R1200368-022	**Basis:**	NA

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	277868
Data File Name:	star672.run	**Instrument Name:**	R-GC-02
		Dilution Factor:	25

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	**160**		25	
74-85-1	Ethene	**1100**		25	
74-82-8	Methane	**2200**		50	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200368
Project:	Varian Beverly/143276-02000000	**Date Collected:**	1/18/12 1300
Sample Matrix:	Water	**Date Received:**	1/19/12
		Date Analyzed:	1/25/12 10:52
Sample Name:	BW-9 (12')	**Units:**	mg/L
Lab Code:	R1200368-022	**Basis:**	NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analytical Method:	Organic Acids	**Analysis Lot:**	277581
Data File Name:	J:\ACQUDATA\HPLC05\DATA\012512\X0007339.D\	**Instrument Name:**	R-HPLC-05
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
127-17-3	Pyruvic Acid	0.50	U	0.50	
64-19-7	Acetic Acid	**32**		1.0	
107-92-6	Butanoic Acid (Butyric Acid)	2.0	U	2.0	
50-21-5	Lactic Acid	1.0	U	1.0	
79-09-4	Propionic Acid	**4.1**		1.0	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200368
Project:	Varian Beverly/143276-02000000	**Date Collected:**	1/18/12 1330
Sample Matrix:	Water	**Date Received:**	1/19/12
		Date Analyzed:	1/27/12 11:39
Sample Name:	STR-3	**Units:**	µg/L
Lab Code:	R1200368-023	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	277841
Data File Name:	J:\ACQUDATA\MSVOA8\DATA\012712\F2772.D\	**Instrument Name:**	R-MS-08
		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)	**11**		4.0	
79-01-6	Trichloroethene (TCE)	**20**		4.0	
75-69-4	Trichlorofluoromethane (CFC 11)	4.0	U	4.0	
75-01-4	Vinyl Chloride	**41**		4.0	
156-59-2	cis-1,2-Dichloroethene	**210**		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	105	70-130	1/27/12 11:39	
Dibromofluoromethane	103	70-130	1/27/12 11:39	
Toluene-d8	100	70-130	1/27/12 11:39	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200368
Project:	Varian Beverly/143276-02000000	**Date Collected:**	1/18/12 1330
Sample Matrix:	Water	**Date Received:**	1/19/12
		Date Analyzed:	1/27/12 12:18
Sample Name:	STR-3	**Units:**	µg/L
Lab Code:	R1200368-023	**Basis:**	NA

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	277868
Data File Name:	star673.run	**Instrument Name:**	R-GC-02
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	**10**		1.0	
74-85-1	Ethene	**36**		1.0	
74-82-8	Methane	**170**	E	2.0	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200368
Project:	Varian Beverly/143276-02000000	**Date Collected:**	1/18/12 1330
Sample Matrix:	Water	**Date Received:**	1/19/12
		Date Analyzed:	1/27/12 12:30
Sample Name:	STR-3	**Units:**	µg/L
Lab Code:	R1200368-023	**Basis:**	NA
Run Type:	Dilution		

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	277868
Data File Name:	star674.run	**Instrument Name:**	R-GC-02
		Dilution Factor:	2

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	**10**	D	2.0	
74-85-1	Ethene	**37**	D	2.0	
74-82-8	Methane	**170**	D	4.0	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200368
Project:	Varian Beverly/143276-02000000	**Date Collected:**	1/18/12 1330
Sample Matrix:	Water	**Date Received:**	1/19/12
		Date Analyzed:	1/25/12 12:15
Sample Name:	STR-3	**Units:**	mg/L
Lab Code:	R1200368-023	**Basis:**	NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analytical Method:	Organic Acids	**Analysis Lot:**	277581
Data File Name:	J:\ACQUDATA\HPLC05\DATA\012512\X0007341.D\	**Instrument Name:**	R-HPLC-05
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
127-17-3	Pyruvic Acid	0.50	U	0.50	
64-19-7	Acetic Acid	1.0	U	1.0	
107-92-6	Butanoic Acid (Butyric Acid)	2.0	U	2.0	
50-21-5	Lactic Acid	1.0	U	1.0	
79-09-4	Propionic Acid	1.0	U	1.0	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200368
Project:	Varian Beverly/143276-02000000	**Date Collected:**	1/18/12 1400
Sample Matrix:	Water	**Date Received:**	1/19/12
		Date Analyzed:	1/26/12 18:04
Sample Name:	OB10-S (29')	**Units:**	µg/L
Lab Code:	R1200368-024	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	277692
Data File Name:	J:\ACQUDATA\MSVOA8\DATA\012612\F2758.D\	**Instrument Name:**	R-MS-08
		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	106	70-130	1/26/12 18:04	
Dibromofluoromethane	103	70-130	1/26/12 18:04	
Toluene-d8	102	70-130	1/26/12 18:04	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200368
Project:	Varian Beverly/143276-02000000	**Date Collected:**	1/18/12 1430
Sample Matrix:	Water	**Date Received:**	1/19/12
		Date Analyzed:	1/26/12 18:32
Sample Name:	OB10-DO (46')	**Units:**	µg/L
Lab Code:	R1200368-025	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	277692
Data File Name:	J:\ACQUDATA\MSVOA8\DATA\012612\F2759.D\	**Instrument Name:**	R-MS-08
		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	**23**		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)	**13**		10	
79-01-6	Trichloroethene (TCE)	**920**		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	**380**		10	
10061-01-5	cis-1,3-Dichloropropene	10	U	10	
156-60-5	trans-1,2-Dichloroethene	**23**		10	
10061-02-6	trans-1,3-Dichloropropene	10	U	10	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	108	70-130	1/26/12 18:32	
Dibromofluoromethane	105	70-130	1/26/12 18:32	
Toluene-d8	103	70-130	1/26/12 18:32	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200368
Project:	Varian Beverly/143276-02000000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	1/24/12 11:05
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1200698-03	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	277364
Data File Name:	J:\ACQUDATA\MSVOA8\DATA\012412\F2698.D\	**Instrument Name:**	R-MS-08
		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	108	70-130	1/24/12 11:05	
Dibromofluoromethane	106	70-130	1/24/12 11:05	
Toluene-d8	104	70-130	1/24/12 11:05	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200368
Project:	Varian Beverly/143276-02000000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	1/25/12 11:03
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1200745-03	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	277543
Data File Name:	J:\ACQUDATA\MSVOA8\DATA\012512\F2715.D\	**Instrument Name:**	R-MS-08
		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	106	70-130	1/25/12 11:03	
Dibromofluoromethane	106	70-130	1/25/12 11:03	
Toluene-d8	104	70-130	1/25/12 11:03	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200368
Project:	Varian Beverly/143276-02000000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	1/26/12 11:07
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1200806-03	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	277692
Data File Name:	J:\ACQUDATA\MSVOA8\DATA\012612\F2743.D\	**Instrument Name:**	R-MS-08
		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	108	70-130	1/26/12 11:07	
Dibromofluoromethane	104	70-130	1/26/12 11:07	
Toluene-d8	103	70-130	1/26/12 11:07	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200368
Project:	Varian Beverly/143276-02000000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	1/27/12 11:11
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1200847-03	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	277841
Data File Name:	J:\ACQUDATA\MSVOA8\DATA\012712\F2771.D\	**Instrument Name:**	R-MS-08
		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	107	70-130	1/27/12 11:11	
Dibromofluoromethane	101	70-130	1/27/12 11:11	
Toluene-d8	102	70-130	1/27/12 11:11	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200368
Project:	Varian Beverly/143276-02000000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	1/31/12 10:41
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1200964-03	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	278170
Data File Name:	J:\ACQUDATA\MSVOA8\DATA\013112\F2798.D\	**Instrument Name:**	R-MS-08
		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	111	70-130	1/31/12 10:41	
Dibromofluoromethane	106	70-130	1/31/12 10:41	
Toluene-d8	103	70-130	1/31/12 10:41	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200368
Project:	Varian Beverly/143276-02000000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	1/26/12 08:58
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1200810-01	**Basis:**	NA

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	277703
Data File Name:	star636.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	2.0	U	2.0	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200368
Project:	Varian Beverly/143276-02000000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	1/27/12 09:17
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1200859-01	**Basis:**	NA

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	277868
Data File Name:	star659.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	2.0	U	2.0	

Client:	Shaw Environmental & Infrastructure, Inc.	**Service Request:**	R1200368
Project:	Varian Beverly/143276-02000000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	1/23/12 12:47
Sample Name:	Method Blank	**Units:**	mg/L
Lab Code:	RQ1200752-01	**Basis:**	NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analytical Method:	Organic Acids	**Analysis Lot:**	277581
Data File Name:	J:\ACQUDATA\HPLC05\DATA\012312\X0007293.D\	**Instrument Name:**	R-HPLC-05
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
127-17-3	Pyruvic Acid	0.50	U	0.50	
64-19-7	Acetic Acid	1.0	U	1.0	
107-92-6	Butanoic Acid (Butyric Acid)	2.0	U	2.0	
50-21-5	Lactic Acid	1.0	U	1.0	
79-09-4	Propionic Acid	1.0	U	1.0	

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian Beverly/143276-02000000
Sample Matrix: Water

Service Request: R1200368
Date Analyzed: 1/26/12

Lab Control Sample Summary
Dissolved Gases by GC/FID

Analytical Method: RSK 175

Units: µg/L
Basis: NA

Analysis Lot: 277703

Analyte Name	Lab Control Sample RQ1200810-02 Result	Spike Amount	% Rec	% Rec Limits
Ethane	26.1	26.0	100	56 - 148
Ethene	23.2	24.3	95	58 - 155
Methane	26.2	26.2	100	55 - 150

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.

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian Beverly/143276-02000000
Sample Matrix: Water

Service Request: R1200368
Date Analyzed: 1/27/12

Lab Control Sample Summary
Dissolved Gases by GC/FID

Analytical Method: RSK 175

Units: µg/L
Basis: NA

Analysis Lot: 277868

Lab Control Sample
RQ1200859-02

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Ethane	30.1	26.0	116	56 - 148
Ethene	26.9	24.3	110	58 - 155
Methane	30.5	26.2	116	55 - 150

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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Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian Beverly/143276-02000000
Sample Matrix: Water

Service Request: R1200368
Date Analyzed: 1/24/12

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260C

Units: µg/L
Basis: NA

Analysis Lot: 277364

Analyte Name	Lab Control Sample RQ1200698-04 Result	Spike Amount	% Rec	Duplicate Lab Control Sample RQ1200698-05 Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
1,1,1-Trichloroethane (TCA)	22.4	20.0	112	21.8	20.0	109	70 - 130	3	20
1,1,2,2-Tetrachloroethane	20.3	20.0	102	20.3	20.0	102	70 - 130	<1	20
1,1,2-Trichloroethane	21.3	20.0	106	20.8	20.0	104	70 - 130	2	20
1,1-Dichloroethane (1,1-DCA)	23.6	20.0	118	22.7	20.0	114	70 - 130	4	20
1,1-Dichloroethene (1,1-DCE)	21.5	20.0	108	21.2	20.0	106	70 - 130	2	20
1,2-Dichloroethane	22.1	20.0	110	21.6	20.0	108	70 - 130	2	20
1,2-Dichloropropane	22.4	20.0	112	22.5	20.0	112	70 - 130	<1	20
Acetone	25.7	20.0	128	24.4	20.0	122	40 - 160	5	20
Bromodichloromethane	21.5	20.0	108	21.3	20.0	106	70 - 130	1	20
Bromoform	21.1	20.0	105	21.5	20.0	108	70 - 130	2	20
Bromomethane	25.0	20.0	125	22.5	20.0	113	40 - 160	11	20
Carbon Tetrachloride	21.8	20.0	109	21.0	20.0	105	70 - 130	4	20
Chlorobenzene	20.8	20.0	104	20.4	20.0	102	70 - 130	2	20
Chloroethane	23.6	20.0	118	22.7	20.0	114	70 - 130	4	20
Chloroform	23.1	20.0	116	22.5	20.0	112	70 - 130	3	20
Chloromethane	26.7	20.0	134	25.8	20.0	129	40 - 160	4	20
Dibromochloromethane	22.0	20.0	110	21.2	20.0	106	70 - 130	3	20
Methylene Chloride	22.9	20.0	114	21.9	20.0	109	70 - 130	4	20
Tetrachloroethene (PCE)	20.2	20.0	101	19.6	20.0	98	70 - 130	3	20
Trichloroethene (TCE)	21.1	20.0	105	21.3	20.0	106	70 - 130	<1	20
Trichlorofluoromethane (CFC 11)	23.1	20.0	115	22.5	20.0	113	70 - 130	3	20
Vinyl Chloride	25.9	20.0	130	24.6	20.0	123	70 - 130	5	20
cis-1,2-Dichloroethene	24.3	20.0	121	23.2	20.0	116	70 - 130	4	20
cis-1,3-Dichloropropene	21.6	20.0	108	20.9	20.0	105	70 - 130	3	20
trans-1,2-Dichloroethene	23.3	20.0	116	22.1	20.0	111	70 - 130	5	20
trans-1,3-Dichloropropene	20.6	20.0	103	20.5	20.0	103	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, INC.
Now part of the ALS Group
QA/QC Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian Beverly/143276-02000000
Sample Matrix: Water

Service Request: R1200368
Date Analyzed: 1/25/12

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260C

Units: µg/L
Basis: NA

Analysis Lot: 277543

Analyte Name	Lab Control Sample RQ1200745-04 Result	Spike Amount	% Rec	Duplicate Lab Control Sample RQ1200745-05 Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
1,1,1-Trichloroethane (TCA)	21.5	20.0	107	22.7	20.0	114	70 - 130	6	20
1,1,2,2-Tetrachloroethane	18.4	20.0	92	18.6	20.0	93	70 - 130	1	20
1,1,2-Trichloroethane	19.8	20.0	99	19.9	20.0	99	70 - 130	<1	20
1,1-Dichloroethane (1,1-DCA)	22.9	20.0	115	23.9	20.0	119	70 - 130	4	20
1,1-Dichloroethene (1,1-DCE)	20.6	20.0	103	22.5	20.0	112	70 - 130	9	20
1,2-Dichloroethane	20.5	20.0	102	21.0	20.0	105	70 - 130	3	20
1,2-Dichloropropane	21.4	20.0	107	22.6	20.0	113	70 - 130	6	20
Acetone	20.4	20.0	102	20.4	20.0	102	40 - 160	<1	20
Bromodichloromethane	20.6	20.0	103	21.4	20.0	107	70 - 130	4	20
Bromoform	20.5	20.0	103	20.5	20.0	102	70 - 130	<1	20
Bromomethane	22.5	20.0	113	23.8	20.0	119	40 - 160	5	20
Carbon Tetrachloride	20.3	20.0	102	21.7	20.0	109	70 - 130	7	20
Chlorobenzene	20.0	20.0	100	21.0	20.0	105	70 - 130	5	20
Chloroethane	22.4	20.0	112	23.8	20.0	119	70 - 130	6	20
Chloroform	22.1	20.0	111	23.2	20.0	116	70 - 130	5	20
Chloromethane	25.2	20.0	126	26.8	20.0	134	40 - 160	6	20
Dibromochloromethane	20.5	20.0	102	21.2	20.0	106	70 - 130	4	20
Methylene Chloride	21.7	20.0	108	22.0	20.0	110	70 - 130	2	20
Tetrachloroethene (PCE)	19.5	20.0	97	21.1	20.0	106	70 - 130	8	20
Trichloroethene (TCE)	20.4	20.0	102	22.0	20.0	110	70 - 130	8	20
Trichlorofluoromethane (CFC 11)	21.7	20.0	108	23.4	20.0	117	70 - 130	8	20
Vinyl Chloride	24.2	20.0	121	25.6	20.0	128	70 - 130	6	20
cis-1,2-Dichloroethene	23.4	20.0	117	23.9	20.0	119	70 - 130	2	20
cis-1,3-Dichloropropene	20.0	20.0	100	20.9	20.0	104	70 - 130	4	20
trans-1,2-Dichloroethene	21.8	20.0	109	23.2	20.0	116	70 - 130	6	20
trans-1,3-Dichloropropene	19.5	20.0	97	20.1	20.0	100	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, INC.
Now part of the ALS Group
QA/QC Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian Beverly/143276-02000000
Sample Matrix: Water

Service Request: R1200368
Date Analyzed: 1/26/12

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260C

Units: µg/L
Basis: NA

Analysis Lot: 277692

	Lab Control Sample RQ1200806-04			Duplicate Lab Control Sample RQ1200806-05					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
1,1,1-Trichloroethane (TCA)	20.1	20.0	101	19.9	20.0	100	70 - 130	1	20
1,1,2,2-Tetrachloroethane	18.5	20.0	92	18.2	20.0	91	70 - 130	2	20
1,1,2-Trichloroethane	19.6	20.0	98	18.7	20.0	93	70 - 130	5	20
1,1-Dichloroethane (1,1-DCA)	21.2	20.0	106	20.8	20.0	104	70 - 130	2	20
1,1-Dichloroethene (1,1-DCE)	19.9	20.0	100	18.9	20.0	95	70 - 130	5	20
1,2-Dichloroethane	20.4	20.0	102	20.3	20.0	101	70 - 130	<1	20
1,2-Dichloropropane	21.1	20.0	106	21.0	20.0	105	70 - 130	<1	20
Acetone	19.2	20.0	96	18.0	20.0	90	40 - 160	6	20
Bromodichloromethane	20.2	20.0	101	19.8	20.0	99	70 - 130	2	20
Bromoform	19.6	20.0	98	19.6	20.0	98	70 - 130	<1	20
Bromomethane	20.8	20.0	104	19.7	20.0	99	40 - 160	5	20
Carbon Tetrachloride	20.4	20.0	102	20.0	20.0	100	70 - 130	2	20
Chlorobenzene	19.9	20.0	99	18.7	20.0	94	70 - 130	6	20
Chloroethane	21.1	20.0	106	20.5	20.0	102	70 - 130	3	20
Chloroform	20.7	20.0	103	20.7	20.0	103	70 - 130	<1	20
Chloromethane	23.7	20.0	119	23.0	20.0	115	40 - 160	3	20
Dibromochloromethane	20.2	20.0	101	19.1	20.0	95	70 - 130	6	20
Methylene Chloride	20.3	20.0	101	20.0	20.0	100	70 - 130	1	20
Tetrachloroethene (PCE)	19.6	20.0	98	18.2	20.0	91	70 - 130	7	20
Trichloroethene (TCE)	20.3	20.0	101	19.7	20.0	99	70 - 130	3	20
Trichlorofluoromethane (CFC 11)	20.7	20.0	104	20.2	20.0	101	70 - 130	2	20
Vinyl Chloride	22.8	20.0	114	21.7	20.0	108	70 - 130	5	20
cis-1,2-Dichloroethene	21.7	20.0	108	21.4	20.0	107	70 - 130	1	20
cis-1,3-Dichloropropene	20.0	20.0	100	19.5	20.0	98	70 - 130	2	20
trans-1,2-Dichloroethene	20.8	20.0	104	20.2	20.0	101	70 - 130	3	20
trans-1,3-Dichloropropene	18.9	20.0	94	18.2	20.0	91	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.

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian Beverly/143276-02000000
Sample Matrix: Water

Service Request: R1200368
Date Analyzed: 1/27/12

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260C

Units: µg/L
Basis: NA

Analysis Lot: 277841

Analyte Name	Lab Control Sample RQ1200847-04 Result	Spike Amount	% Rec	Duplicate Lab Control Sample RQ1200847-05 Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
1,1,1-Trichloroethane (TCA)	20.2	20.0	101	20.1	20.0	101	70 - 130	<1	20
1,1,2,2-Tetrachloroethane	18.9	20.0	95	17.8	20.0	89	70 - 130	6	20
1,1,2-Trichloroethane	19.7	20.0	99	20.2	20.0	101	70 - 130	2	20
1,1-Dichloroethane (1,1-DCA)	22.1	20.0	110	21.5	20.0	107	70 - 130	3	20
1,1-Dichloroethene (1,1-DCE)	20.5	20.0	103	19.6	20.0	98	70 - 130	5	20
1,2-Dichloroethane	21.0	20.0	105	20.6	20.0	103	70 - 130	2	20
1,2-Dichloropropane	21.8	20.0	109	21.0	20.0	105	70 - 130	4	20
Acetone	19.0	20.0	95	19.5	20.0	97	40 - 160	2	20
Bromodichloromethane	20.9	20.0	105	20.7	20.0	103	70 - 130	1	20
Bromoform	19.9	20.0	99	19.2	20.0	96	70 - 130	3	20
Bromomethane	21.0	20.0	105	20.6	20.0	103	40 - 160	2	20
Carbon Tetrachloride	20.6	20.0	103	20.3	20.0	102	70 - 130	1	20
Chlorobenzene	20.3	20.0	102	20.0	20.0	100	70 - 130	1	20
Chloroethane	21.3	20.0	106	21.5	20.0	107	70 - 130	<1	20
Chloroform	21.2	20.0	106	20.7	20.0	104	70 - 130	2	20
Chloromethane	24.3	20.0	121	23.9	20.0	119	40 - 160	2	20
Dibromochloromethane	20.7	20.0	104	20.0	20.0	100	70 - 130	3	20
Methylene Chloride	20.9	20.0	104	20.1	20.0	100	70 - 130	4	20
Tetrachloroethene (PCE)	20.1	20.0	100	19.7	20.0	98	70 - 130	2	20
Trichloroethene (TCE)	20.4	20.0	102	20.3	20.0	102	70 - 130	<1	20
Trichlorofluoromethane (CFC 11)	21.1	20.0	106	20.0	20.0	100	70 - 130	5	20
Vinyl Chloride	22.9	20.0	115	22.4	20.0	112	70 - 130	2	20
cis-1,2-Dichloroethene	22.4	20.0	112	21.8	20.0	109	70 - 130	3	20
cis-1,3-Dichloropropene	20.4	20.0	102	20.0	20.0	100	70 - 130	2	20
trans-1,2-Dichloroethene	21.6	20.0	108	21.2	20.0	106	70 - 130	2	20
trans-1,3-Dichloropropene	19.3	20.0	97	18.8	20.0	94	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, INC.
Now part of the ALS Group
QA/QC Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian Beverly/143276-02000000
Sample Matrix: Water

Service Request: R1200368
Date Analyzed: 1/31/12

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260C

Units: µg/L
Basis: NA

Analysis Lot: 278170

Analyte Name	Lab Control Sample RQ1200964-04 Result	Spike Amount	% Rec	Duplicate Lab Control Sample RQ1200964-05 Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
1,1,1-Trichloroethane (TCA)	20.2	20.0	101	19.9	20.0	99	70 - 130	1	20
1,1,2,2-Tetrachloroethane	18.0	20.0	90	17.9	20.0	90	70 - 130	<1	20
1,1,2-Trichloroethane	18.8	20.0	94	19.2	20.0	96	70 - 130	2	20
1,1-Dichloroethane (1,1-DCA)	21.9	20.0	110	21.6	20.0	108	70 - 130	2	20
1,1-Dichloroethene (1,1-DCE)	20.3	20.0	101	19.9	20.0	100	70 - 130	2	20
1,2-Dichloroethane	19.9	20.0	99	20.6	20.0	103	70 - 130	4	20
1,2-Dichloropropane	21.0	20.0	105	21.5	20.0	107	70 - 130	2	20
Acetone	20.0	20.0	100	19.1	20.0	96	40 - 160	5	20
Bromodichloromethane	20.1	20.0	100	20.7	20.0	103	70 - 130	3	20
Bromoform	19.3	20.0	97	18.0	20.0	90	70 - 130	7	20
Bromomethane	21.5	20.0	108	20.5	20.0	103	40 - 160	5	20
Carbon Tetrachloride	20.2	20.0	101	19.5	20.0	98	70 - 130	3	20
Chlorobenzene	19.2	20.0	96	19.3	20.0	96	70 - 130	<1	20
Chloroethane	21.0	20.0	105	21.6	20.0	108	70 - 130	3	20
Chloroform	21.0	20.0	105	21.7	20.0	108	70 - 130	3	20
Chloromethane	23.6	20.0	118	23.3	20.0	117	40 - 160	<1	20
Dibromochloromethane	19.4	20.0	97	19.6	20.0	98	70 - 130	<1	20
Methylene Chloride	20.4	20.0	102	21.2	20.0	106	70 - 130	4	20
Tetrachloroethene (PCE)	18.7	20.0	94	18.9	20.0	95	70 - 130	1	20
Trichloroethene (TCE)	20.2	20.0	101	19.9	20.0	99	70 - 130	2	20
Trichlorofluoromethane (CFC 11)	20.9	20.0	105	20.8	20.0	104	70 - 130	<1	20
Vinyl Chloride	22.4	20.0	112	22.6	20.0	113	70 - 130	<1	20
cis-1,2-Dichloroethene	21.2	20.0	106	22.3	20.0	112	70 - 130	5	20
cis-1,3-Dichloropropene	20.1	20.0	101	19.3	20.0	97	70 - 130	4	20
trans-1,2-Dichloroethene	20.9	20.0	105	21.2	20.0	106	70 - 130	1	20
trans-1,3-Dichloropropene	18.2	20.0	91	18.3	20.0	91	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, INC.
Now part of the ALS Group
QA/QC Report

Client: Shaw Environmental & Infrastructure, Inc.
Project: Varian Beverly/143276-02000000
Sample Matrix: Water

Service Request: R1200368
Date Analyzed: 1/23/12 - 1/25/12

Lab Control Sample Summary
Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analytical Method: Organic Acids

Units: mg/L
Basis: NA

Analysis Lot: 277581

	Lab Control Sample RQ1200752-02			Duplicate Lab Control Sample RQ1200752-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Pyruvic Acid	0.880	0.991	89	0.920	0.991	93	70 - 130	4	30
Acetic Acid	10.4	10.3	102	8.87	10.3	87	70 - 135	16	30
Butanoic Acid (Butyric Acid)	8.85	10.1	87	9.35	10.1	92	78 - 113	5	30
Lactic Acid	9.65	10.0	96	10.2	10.0	102	61 - 109	5	30
Propionic Acid	9.80	9.93	99	9.77	9.93	98	80 - 125	<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.

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: 143276-02000000
Project Manager: Raymond Cadorette	Report CC:
Company/Address: Shaw Environmental, Inc. 100 Technology Center Drive Stoughton, MA 02072	
Phone #: 617-589-6102	E-mail: raymond.Cadorette@shawgrp.com
Sampler's Signature: Daniel C Leahy	Sampler's Printed Name: Daniel C. Leahy

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)	Methane, Ethane, Ethene	Metabolic Acids						REMARKS/ ALTERNATE DESCRIPTION
PRESERVATIVE														1	8					
TB-1		1/17/12	0800	GW	3	3														
EB-1		1/17/12	0830	GW	3	3														
OB15-S (18.5')		1/17/12	0900	GW	7	3							3	1						
MW-9 (20')		1/17/12	0930		7	3							3	1						
UNNAMED STREAM		1/17/12	1000		7	3							3	1						
AP25-DO (46')		1/17/12	1030		3	3														
AP-13-DO (51')		1/17/12	1100		7	3							3	1						
AP-24-DO (16')		1/17/12	1130		7	3							3	1						
AP-23-DO (47.5')		1/17/12	1200		7	3							3	1						
OB-19-DO (56.5')		1/17/12	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 Phosphoric Acid

SPECIAL INSTRUCTIONS/COMMENTS
Metals

Site specific VOC list.
Massachusetts CAM analyses reporting and QA/QC.
Email GISKey formatted EDD and PDF of report to:
Catherine.Mainville@Shawgrp.com.

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 #: 709510-CO
BILL TO: Shaw Environmental

R1200368
Shaw Environmental & Infrastructure, Inc.
Varian Beverly

See QAPP ☐

STATE WHERE SAMPLES WERE COLLECTED:

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY
Signature: Daniel C Leahy	Signature: Lonthran	Signature: Lonthran	Signature: Tiffany LaFave	Signature:
Printed Name: Daniel C Leahy	Printed Name: Jessica Lonthran	Printed Name: Jessica Lonthran	Printed Name: Tiffany LaFave	Printed Name:
Firm: SHAW	Firm: SHAW	Firm: SHAW	Firm: ALS	Firm:
Date/Time: 1/17/12 1500	Date/Time: 1/18/12 1230	Date/Time: 1/18/12 1300	Date/Time: 1/19/12 0910	Date/Time:

Distribution: White - Lab Copy; Yellow - Return to Originator

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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 2 OF 2

Project Name: Varian Beverly	Project Number: 143276-02000000
Project Manager: Raymond Cadorette	Report CC:
Company/Address: Shaw Environmental, Inc. 100 Technology Center Drive Stoughton, MA 02072	
Phone #: 617-589-6102	E-mail: raymond.cadorette@Shawgrp.com
Sampler's Signature: [signature]	Sampler's Printed Name: Daniel C. Leahy

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)	Methane, Ethane, Ethene	Metabolic Acids						REMARKS/ ALTERNATE DESCRIPTION
PRESERVATIVE						1							1	8						
OB12-DO (48.5)		1/17/12	1330	GW	3	3														
OB12-S (26.5)		1/17/12	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 Phosphoric Acid

SPECIAL INSTRUCTIONS/COMMENTS
Metals N/A
Site specific VOC List.
Massachusetts CAM analyses reporting and QA/QC.
Email GISKey EDD and PDF of report to:
Catherine.Mainville@Shawgrp.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 #: 709510 -CO
BILL TO: Shaw Environmental

	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature	[signature]	[signature]	[signature]	[signature]		
Printed Name	Dan Leahy	Jessica Lanthan	Jessica Lanthan	Gregory LaFon		
Firm	SHAW	SHAW	SHAW	ALS		
Date/Time	1/17/12 1500	1/18/12 1230	1/18/12 1300	1/19/12 0910		

Distribution: White - Lab Copy; Yellow - Return To Originator

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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: 143276-02000000
Project Manager: Raymond Cadorette	Report CC:
Company/Address: Shaw Environmental, Inc. 100 Technology Center Drive Stoughton, MA 02072	
Phone #: 617-589-6102	E-mail: raymond.cadorette@shawgrp.com
Sampler's Signature: Daniel C Leahy	Sampler's Printed Name: Daniel C. Leahy

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)	Methane, Ethane, Ethene	Metabolic Acids						REMARKS/ ALTERNATE DESCRIPTION
PRESERVATIVE														1	8					
TB-2		1/18/12	0730	GW	3	3														
TB-3		1/10/12	1055	GW	3	3								3		BY LAB				
BW-4 (12.5')		1/18/12	0800	GW	7	3							3	1						
BW-5 (9.5')		1/18/12	0845		7	3							3	1						
BW-6 (13')		1/18/12	0930		7	3							3	1						
OB9-BR (121')		1/18/12	1030		7	3							3	1						
OB9-5 (23.5')		1/18/12	1130		7	3							3	1						
OB9-DO (92')		1/18/12	1200		7	3							3	1						
BW-8 (13.5')		1/18/12	1230		7	3							3	1						
BW-9 (12')		1/18/12	1300	✓	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 Phosphoric Acid

SPECIAL INSTRUCTIONS/COMMENTS

Metals

Site specific VOC List.
Massachusetts CAM analyses reporting and QA/QC.
Email GISKey formatted EDD and PDF of report to:
Catherine.Mainville@Shawgrp.com.

TB-3 BY LAB DL

☐ 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 #: 709510 -CO
BILL TO: Shaw Environmental

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature: Daniel C Leahy	Signature: Gregory LaFon	Signature	Signature	Signature	Signature
Printed Name: DANIEL LEAHY	Printed Name: Gregory LaFon	Printed Name	Printed Name	Printed Name	Printed Name
Firm: SHAW	Firm: ALC	Firm	Firm	Firm	Firm
Date/Time: 1/18/12 1500	Date/Time: 1/19/12 0910	Date/Time	Date/Time	Date/Time	Date/Time

Distribution: White - Lab Copy; Yellow - Return To Originator

Columbia Analytical Services™ CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

1565 Jefferson Rd., Bldg. 300, Suite 360, Rochester, NY 14623 | 585.288.5380 | 800.695.7222 | 585.288.8475 (fax)

Project Name: VARIAN BEVERLY	Project Number: 143276-0200000
Project Manager: RAY CADORETTE	Report CC:
Company/Address: SHAW ENVIRONMENTAL INC 100 TECHNOLOGY CENTER DRIVE STOUGHTON, MA 02072	
Phone #: 617-589-6102	E-mail: RAYMOND.CADORETTE@SHAWGRP.COM
Sampler's Signature: Daniel O'Leary	Sampler's Printed Name:

ANALYSIS REQUESTED *(Include Method Number and Container Preservative)*

PRESERVATIVE: 1 | 1 | 8

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)	MANGANESE, ARSENIC	MANGANESE, ARSENIC, NITRATE	NITRIC ACID					REMARKS/ ALTERNATE DESCRIPTION
STR-3		1/18/12	1330	GW	7	3							3	1						
OB10-S (29')		1/18/12	1400	GW	~~3~~	3							~~3~~	1 (DU)						
OB10-DO (46')		1/18/12	1430	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.
EMAIL GISKEY FORMATTED EDD AND PDF OF REPORT TO: CATHERINE.MANVILLE@SHAWGRP.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 #: 709510-CO
BILL TO:

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: DANIEL LEARY	Printed Name: Gregory DeFeo	Printed Name	Printed Name	Printed Name	Printed Name
Firm: SHAW	Firm: ALS	Firm	Firm	Firm	Firm
Date/Time: 1/18/12 1500	Date/Time: 1/19/12 0910	Date/Time	Date/Time	Date/Time	Date/Time

Distribution: White - Lab Copy; Yellow - Return To Originator

Cooler Receipt And Preservation Check Form

Project/Client Shaw Folder Number R12-368

Cooler received on 1/19/12 by: AD **COURIER:** CAS (UPS) FEDEX VELOCITY CLIENT

1.	Were custody seals on outside of cooler?	(YES)	NO			
2.	Were custody papers properly filled out (ink, signed, etc.)?	(YES)	NO			
3.	Did all bottles arrive in good condition (unbroken)?	(YES)	NO			
4.	Did VOA vials, Alkalinity, or Sulfide have significant* air bubbles?	YES	(NO)	N/A		
5.	Were **Ice** or **Ice packs** present?	(YES)	NO			
6.	Where did the bottles originate?	(CAS/ROC)	CLIENT			
7.	Temperature of cooler(s) upon receipt:	3.5°	1.5°			
	Is the temperature within 0° - 6° C?:	(Yes)	(Yes)	Yes	Yes	Yes
	If No, Explain Below	No	No	No	No	No

Date/Time Temperatures Taken: 1/19/12 0915

Thermometer ID: IR GUN#3 / (IR GUN#4) Reading From: (Temp Blank) / Sample Bottle

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

PC Secondary Review: mm 1/19/12

Cooler Breakdown: Date: 1/19/12 Time: 1152 by: AMM

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 TCN Phenol and 522			If present, contact PM to add ascorbic acid Or sodium sulfite (522)					
	$Na_2S_2O_3$	-	-						
	Zn Aceta	-	-						
	HCl	*	*	2111010	12/12				

*Not to be tested before analysis – pH tested and recorded by VOAs or GenChem on a separate worksheet

H_3PO_4 - WC1031016 exp 1/13

Yes = All samples OK

No = Samples were preserved at lab as listed

PM OK to Adjust: _____

Bottle lot numbers: 1-194-002, 051611-1T

Other Comments:

* TB-3 requested as met. acid TB & TB label says for met. acid in EPA, but bottle is for 8260. Logged in for 8260, not met. acid.

PC Secondary Review: mm 2/1/12

*significant air bubbles: VOA > 5-6 mm : WC >1 in. diameter

APPENDIX E

GROUNDWATER GAUGING RESULTS, PHYSICAL PARAMETER DATA

Appendix E
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	09/15/11	71.32	22.71	48.61	
AP-12-BR	09/29/11	71.32	22.76	48.56	
AP-12-BR	10/28/11	71.32	20.42	50.90	
AP-12-BR	10/28/11	71.32	20.45	50.87	
AP-12-DO	09/15/11	71.30	12.16	59.14	
AP-12-DO	09/29/11	71.30	12.19	59.11	
AP-12-DO	10/28/11	71.30	10.49	60.81	
AP-12-DO	10/28/11	71.30	10.73	60.57	
AP-12-S	09/15/11	71.44	8.77	62.67	
AP-12-S	09/29/11	71.44	8.54	62.90	
AP-12-S	10/28/11	71.44	7.73	63.71	
AP-13-DO	09/29/11	68.86	15.65	53.21	
AP-13-DO	10/25/11	68.86	14.12	54.74	
AP-13-DO	01/03/12	68.86	14.80	54.06	DTB = 52.15'
AP-13-DO	01/17/12	68.86	14.82	54.04	
AP-13-S	10/26/11	68.98	14.32	54.66	
AP-15-S	10/25/11	45.88	4.22	41.66	
AP-19	09/15/11	81.30	NM	NA	
AP-19	09/29/11	81.30	20.79	60.51	
AP-19	10/27/11	81.30	10.47	70.83	
AP-19	10/28/11	81.30	10.35	70.95	
AP-20	10/27/11	81.43	9.71	71.72	
AP-21	10/27/11	81.50	11.34	70.16	
AP-22	09/15/11	81.96	NM	NA	
AP-22	09/29/11	81.96	15.60	66.36	
AP-22	10/27/11	81.96	14.54	67.42	
AP-22	10/28/11	81.96	14.62	67.34	
AP-23-DO	09/29/11	69.46	12.74	56.72	
AP-23-DO	10/25/11	69.46	11.59	57.87	
AP-23-DO	01/03/12	69.46	12.28	57.18	DTB = 48.45'
AP-23-DO	01/17/12	69.46	12.28	57.18	
AP-24-DO	09/29/11	69.56	11.68	57.88	
AP-24-DO	10/25/11	69.56	10.68	58.88	
AP-24-DO	01/03/12	69.56	10.50	59.06	DTB = 17.01'
AP-24-DO	01/17/12	69.56	10.44	59.12	
AP-25-DO	09/29/11	65.58	6.64	58.94	
AP-25-DO	10/25/11	65.58	5.46	60.12	
AP-25-DO	01/03/12	65.58	6.50	59.08	DTB = 47.77'
AP-25-DO	01/17/12	65.58	6.35	59.23	

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

Appendix E
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-26-DO	09/15/11	73.99	13.96	60.03	
AP-26-DO	09/29/11	73.99	14.56	59.43	
AP-26-DO	10/26/11	73.99	12.77	61.22	
AP-26-DO	10/28/11	73.99	12.97	61.02	
AP-27-DO	09/15/11	77.34	15.81	61.53	
AP-27-DO	09/29/11	77.34	16.85	60.49	
AP-27-DO	10/26/11	77.34	14.79	62.55	
AP-27-DO	10/28/11	77.34	14.44	62.90	
AP-30R-DO	09/15/11	NA	28.98	NA	
AP-30R-DO	09/29/11	NA	27.07	NA	
AP-31-DO	09/15/11	NA	20.21	NA	
AP-31-DO	09/29/11	NA	20.35	NA	
AP-32-DO	09/15/11	NA	19.19	NA	
AP-32-DO	09/29/11	NA	19.80	NA	
B-2	10/26/11	80.40	2.24	78.16	
B-3	10/26/11	66.23	7.42	58.81	
BR-1_ZONE1	10/24/11	58.60	9.11	49.49	
BR-1_ZONE2	10/24/11	58.60	9.10	49.50	
BR-1_ZONE3	10/24/11	58.60	9.17	49.43	
BW-01	09/29/11	NA	6.21	NA	
BW-01	10/28/11	NA	5.83	NA	
BW-02	09/29/11	NA	6.80	NA	
BW-02	10/28/11	NA	6.03	NA	
BW-03	09/29/11	NA	7.19	NA	
BW-03	10/28/11	NA	6.30	NA	
BW-04	09/29/11	NA	7.11	NA	
BW-04	10/25/11	NA	6.71	NA	
BW-04	10/28/11	NA	6.57	NA	
BW-04	01/03/12	NA	7.07	NA	DTB = 13.33'
BW-04	01/18/12	NA	6.99	NA	
BW-05	09/29/11	NA	7.29	NA	
BW-05	10/25/11	NA	6.90	NA	
BW-05	10/28/11	NA	6.81	NA	
BW-05	01/03/12	NA	7.41	NA	DTB = 10.37'
BW-05	01/18/12	NA	7.20	NA	
BW-06	09/29/11	NA	7.64	NA	
BW-06	10/25/11	NA	7.28	NA	
BW-06	10/28/11	NA	7.21	NA	
BW-06	01/03/12	NA	7.58	NA	DTB = 14.23'
BW-06	01/18/12	NA	7.51	NA	

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

Appendix E
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
BW-08	09/29/11	NA	7.71	NA	
BW-08	10/25/11	NA	7.25	NA	
BW-08	10/28/11	NA	7.25	NA	
BW-08	01/03/12	NA	7.62	NA	DTB = 14.51'
BW-08	01/18/12	NA	7.60	NA	
BW-09	09/29/11	NA	7.59	NA	
BW-09	10/25/11	NA	7.26	NA	
BW-09	10/28/11	NA	7.78	NA	
BW-09	01/03/12	NA	7.55	NA	DTB = 13.18'
BW-09	01/18/12	NA	7.53	NA	
CL02-BR	09/15/11	62.79	6.69	56.10	
CL02-BR	09/29/11	62.79	7.04	55.75	
CL02-BR	10/24/11	62.79	5.54	57.25	
CL02-BR	10/28/11	62.79	5.56	57.23	
CL02-DO	09/15/11	62.91	6.85	56.06	
CL02-DO	09/29/11	62.91	7.21	55.70	
CL02-DO	10/28/11	62.91	3.50	59.41	
CL03-DO	10/27/11	50.40	8.40	42.00	
CL09-BR_ZONE1	10/24/11	47.65	0.00	47.65	
CL09-BR_ZONE2	10/24/11	47.65	0.39	47.26	
CL09-BR_ZONE3	10/24/11	47.65	NM	NA	Probe would not fit down port.
CL10-BR	09/15/11	72.10	4.93	67.17	
CL10-BR	09/29/11	72.10	5.42	66.68	
CL10-BR	10/25/11	72.10	4.12	67.98	
CL10-BR	10/28/11	72.10	4.30	67.80	
CL10-DO	09/15/11	72.40	4.55	67.85	
CL10-DO	09/29/11	72.40	4.80	67.60	
CL10-DO	10/27/11	72.40	3.65	68.75	
CL10-DO	10/28/11	72.40	3.58	68.82	
CL10-S	09/15/11	72.47	3.83	68.64	
CL10-S	09/29/11	72.47	4.12	68.35	
CL10-S	10/25/11	72.47	2.53	69.94	
CL10-S	10/28/11	72.47	2.59	69.88	
GZ-4	10/25/11	45.13	4.48	40.65	
MW-002R	09/15/11	62.59	4.46	58.13	
MW-002R	09/29/11	62.59	4.73	57.86	
MW-002R	10/24/11	62.59	3.45	59.14	
MW-002R	10/28/11	62.59	3.24	59.35	

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

Appendix E
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-004R	10/24/11	62.63	5.35	57.28	
MW-009	09/29/11	63.50	5.50	58.00	
MW-009	10/25/11	63.50	4.86	58.64	
MW-009	10/28/11	63.50	4.72	58.78	
MW-009	01/03/12	63.50	5.30	58.20	DTB = 21.20'
MW-009	01/17/12	63.50	5.23	58.27	
MW-009A	10/26/11	63.86	5.30	58.56	
MW-013	10/27/11	69.11	10.65	58.46	
MW-2_32-TOZER	09/15/11	NA	6.23	NA	
MW-2_32-TOZER	09/29/11	NA	6.43	NA	
MW-2_32-TOZER	10/28/11	NA	NM	NA	Well inaccessible.
MW-3_32-TOZER	09/15/11	NA	11.89	NA	
MW-3_32-TOZER	09/29/11	NA	11.80	NA	
MW-3_32-TOZER	10/28/11	NA	NM	NA	Well inaccessible.
OB-05-BR	10/24/11	49.01	6.86	42.15	
OB-05-DO	10/24/11	49.06	7.12	41.94	
OB-05-S	10/24/11	49.34	7.42	41.92	
OB-06-BR	10/24/11	48.70	6.51	42.19	
OB-06-DO	10/24/11	49.21	7.10	42.11	
OB-08-DO	10/25/11	38.29	-0.01	38.30	
OB-08-S	10/25/11	38.36	5.45	32.91	
OB-09-BR	10/25/11	65.25	8.21	57.04	
OB-09-BR	01/03/12	65.25	9.18	56.07	DTB = 122.00'
OB-09-BR	01/18/12	65.25	9.12	56.13	
OB-09-DO	09/29/11	65.11	9.47	55.64	
OB-09-DO	10/25/11	65.11	8.10	57.01	
OB-09-DO	01/03/12	65.11	9.03	56.08	DTB = 93.00'
OB-09-DO	01/18/12	65.11	9.02	56.09	
OB-09-S	09/29/11	65.21	7.53	57.68	
OB-09-S	10/25/11	65.21	7.10	58.11	
OB-09-S	01/03/12	65.21	7.25	57.96	DTB = 24.42'
OB-09-S	01/18/12	65.21	7.33	57.88	
OB-10-DO	10/26/11	71.00	11.19	59.81	
OB-10-DO	01/03/12	71.00	12.25	58.75	DTB = 46.90'
OB-10-DO	01/18/12	71.00	12.40	58.60	
OB-10-S	10/26/11	70.91	8.91	62.00	
OB-10-S	01/03/12	70.91	10.15	60.76	DTB = 30.10'
OB-10-S	01/18/12	70.91	10.37	60.54	

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

Appendix E
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-12-BR	09/15/11	73.67	19.84	53.83	
OB-12-BR	09/29/11	73.67	20.18	53.49	
OB-12-BR	10/28/11	73.67	19.04	54.63	
OB-12-DO	09/15/11	73.54	15.60	57.94	
OB-12-DO	09/29/11	73.54	15.69	57.85	
OB-12-DO	10/26/11	73.54	14.48	59.06	
OB-12-DO	10/28/11	73.54	14.61	58.93	
OB-12-DO	01/03/12	73.54	15.25	58.29	DTB = 49.71'
OB-12-DO	01/17/12	73.54	15.26	58.28	
OB-12-S	10/26/11	73.46	12.24	61.22	
OB-12-S	01/03/12	73.46	13.20	60.26	DTB = 27.41'
OB-12-S	01/17/12	73.46	13.28	60.18	
OB-15-S	09/29/11	63.27	5.29	57.98	
OB-15-S	10/25/11	63.27	4.45	58.82	
OB-15-S	10/28/11	63.27	4.24	59.03	
OB-15-S	01/03/12	63.27	5.03	58.24	DTB = 19.75'
OB-15-S	01/17/12	63.27	4.91	58.36	
OB-18-DO	10/25/11	45.10	3.23	41.87	
OB-18-S	10/25/11	44.98	3.38	41.60	
OB-19-BR	09/15/11	74.26	22.19	52.07	
OB-19-BR	09/29/11	74.26	22.46	51.80	
OB-19-BR	10/28/11	74.26	21.12	53.14	
OB-19-DO	09/15/11	74.28	16.36	57.92	
OB-19-DO	09/29/11	74.28	16.84	57.44	
OB-19-DO	10/26/11	74.28	15.23	59.05	
OB-19-DO	10/28/11	74.28	15.43	58.85	
OB-19-DO	01/03/12	74.28	16.50	57.78	DTB = 57.80'
OB-19-DO	01/17/12	74.28	16.59	57.69	
OB-20-BR	10/26/11	43.85	2.20	41.65	
OB-20-DO	10/26/11	43.98	2.30	41.68	
OB-20-S	10/26/11	43.79	2.07	41.72	
OB-21-BR	10/26/11	43.88	2.38	41.50	
OB-21-DO	10/26/11	43.28	1.79	41.49	
OB-22-DO	10/25/11	46.47	4.55	41.92	
OB-22-DO	10/28/11	46.47	11.31	35.16	
OB-25-BR	09/15/11	74.26	22.43	51.83	
OB-25-BR	09/29/11	74.26	22.68	51.58	
OB-25-BR	10/26/11	74.26	21.78	52.48	
OB-25-BR	10/28/11	74.26	21.72	52.54	

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

Appendix E
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	09/15/11	74.52	21.92	52.60	
OB-25-DO	09/29/11	74.52	22.19	52.33	
OB-25-DO	10/28/11	74.52	21.16	53.36	
OB-27-BR	10/28/11	71.68	25.52	46.16	
OB-32-DO	10/28/11	75.70	11.31	64.39	
OB-34-DO	09/15/11	75.10	16.41	58.69	
OB-34-DO	09/29/11	75.10	16.78	58.32	
OB-34-DO	10/28/11	75.10	17.00	58.10	
OB-34-DO	10/28/11	75.10	15.41	59.69	
OB-35-DO	09/15/11	81.41	10.11	71.30	
OB-35-DO	09/29/11	81.41	NM	NA	
OB-35-DO	10/27/11	81.41	10.07	71.34	
OB-35-DO	10/28/11	81.41	9.39	72.02	
OB-36-DO	09/15/11	75.92	15.80	60.12	
OB-36-DO	09/29/11	75.92	15.95	59.97	
OB-36-DO	10/28/11	75.92	14.92	61.00	
OB-36-DO	10/28/11	75.92	14.93	60.99	
OB-37-DO	09/15/11	75.86	19.65	56.21	
OB-37-DO	09/29/11	75.86	19.78	56.08	
OB-37-DO	10/28/11	75.86	18.82	57.04	
OB-37-DO	10/28/11	75.86	18.48	57.38	
OB-38-DO	09/15/11	77.45	7.92	69.53	
OB-38-DO	09/29/11	77.45	7.99	69.46	
OB-38-DO	10/26/11	77.45	7.11	70.34	
OB-38-DO	10/28/11	77.45	5.71	71.74	
OB-39-DO	09/15/11	79.01	18.31	60.70	
OB-39-DO	09/29/11	79.01	18.63	60.38	
OB-39-DO	10/28/11	79.01	16.38	62.63	
OB-41-S	10/25/11	NA	4.17	NA	
OB-42-S	10/24/11	NA	5.46	NA	
OB-43-S	10/24/11	NA	10.72	NA	
P-09R	10/24/11	37.86	3.61	34.25	
P-19A	10/24/11	47.51	6.90	40.61	
W-1	10/24/11	51.46	4.42	47.04	

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

Appendix E
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-12-BR	09/15/11	Dark Purple	--	--	--	--
AP-12-BR	09/29/11	Dark Purple	--	--	--	--
AP-12-BR	10/28/11	Dark Purple	--	--	--	--
AP-12-DO	09/15/11	Clear	415	7.41	0.847	0.67
AP-12-DO	09/29/11	Clear	-257	7.43	0.770	0.95
AP-12-DO	10/28/11	Clear	-44.3	7.69	0.330	1.14
AP-12-S	09/15/11	Light Purple	--	--	--	--
AP-12-S	09/29/11	Light Purple	--	--	--	--
AP-12-S	10/28/11	Dark Purple	--	--	--	--
AP-13-DO	09/29/11	Clear	--	--	--	--
AP-19	09/15/11	Dark Purple	--	--	--	--
AP-19	09/29/11	Dark Purple	--	--	--	--
AP-19	10/28/11	Light Purple	--	--	--	--
AP-22	09/15/11	Dark Purple	--	--	--	--
AP-22	09/29/11	Dark Purple	--	--	--	--
AP-22	10/28/11	Dark Purple	--	--	--	--
AP-23-DO	09/29/11	Clear	-253	6.89	27.80	0.52
AP-24-DO	09/29/11	Clear	-163	6.46	11.27	0.73
AP-25-DO	09/29/11	Clear	-192	7.86	0.385	0.41
AP-26-DO	09/15/11	Clear	437	7.07	0.245	4.05
AP-26-DO	09/29/11	Clear	46	6.99	0.284	2.42
AP-26-DO	10/28/11	Clear	-1.3	7.48	0.181	5.18
AP-27-DO	09/15/11	Clear	-92	9.61	0.595	0.14
AP-27-DO	09/29/11	Clear	-165	9.31	0.739	0.60
AP-27-DO	10/28/11	Clear	-21.9	11.33	0.807	0.98
AP-30R-DO	09/15/11	Dark Purple	--	--	--	--
AP-30R-DO	09/29/11	Dark Purple	--	--	--	--
AP-31-DO	09/15/11	Dark Purple	--	--	--	--
AP-31-DO	09/29/11	Dark Purple	--	--	--	--
AP-32-DO	09/15/11	Dark Purple	--	--	--	--
AP-32-DO	09/29/11	Dark Purple	--	--	--	--
BW-01	09/29/11	Clear	30	6.06	0.303	0.48
BW-01	10/28/11	Clear	-107.0	6.81	0.588	0.36
BW-02	09/29/11	Clear	65	5.99	0.206	3.76
BW-02	10/28/11	Clear	6.8	6.12	0.314	0.63
BW-03	09/29/11	Clear	-209	6.34	0.332	0.46
BW-03	10/28/11	Clear	8.8	6.19	0.268	0.39
BW-04	09/29/11	Clear	-219	6.81	0.599	0.46
BW-04	10/28/11	Clear	-141.0	7.10	0.567	0.43
BW-05	09/29/11	Clear	-202	7.22	0.466	0.49
BW-05	10/28/11	Clear	-145.5	7.36	0.640	0.66
BW-06	09/29/11	Clear	-166	6.90	0.576	0.45

NOTES: -- = Not Analyzed
mV=millivolts

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

Deg.C= Degrees Celcius

Appendix E
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)
BW-06	10/28/11	Clear	-87.9	7.29	0.508	0.92
BW-08	09/29/11	Clear	-154	7.35	0.667	0.45
BW-08	10/28/11	Clear	-116.7	7.43	0.565	0.82
BW-09	09/29/11	Clear	-137	7.25	0.923	0.46
BW-09	10/28/11	Clear	-113.6	7.17	0.636	0.55
CL02-BR	09/15/11	Clear	-161	9.50	0.470	0.11
CL02-BR	09/29/11	Clear	-208	9.50	0.471	0.66
CL02-BR	10/28/11	Clear	-102.9	9.49	0.478	1.02
CL02-DO	09/15/11	Clear	178	6.42	0.412	5.21
CL02-DO	09/29/11	Clear	121	4.74	0.416	4.72
CL02-DO	10/28/11	Clear	12.8	7.06	0.364	2.97
CL10-BR	09/15/11	Clear	-351	9.47	0.545	0.07
CL10-BR	09/29/11	Clear	-284	9.10	0.538	0.57
CL10-BR	10/28/11	Clear	-282.0	8.54	0.543	0.36
CL10-DO	09/15/11	Light Purple	--	--	--	--
CL10-DO	09/29/11	Light Purple	--	--	--	--
CL10-DO	10/28/11	Light Purple	--	--	--	--
CL10-S	09/15/11	Clear	62	6.26	0.202	0.18
CL10-S	09/29/11	Clear	-107	6.23	0.199	0.43
CL10-S	10/28/11	Clear	-101.8	6.91	0.231	0.51
MW-002R	09/15/11	Clear	208	5.59	0.690	0.28
MW-002R	09/29/11	Clear	120	5.49	0.952	0.56
MW-002R	10/28/11	Clear	94.4	5.91	1.055	0.41
MW-009	09/29/11	Clear	-164	7.02	3.749	0.62
MW-009	10/28/11	Clear	-128.4	7.05	2.545	0.39
MW-2_32-TOZER	09/15/11	Clear	-57	6.73	1.735	0.14
MW-2_32-TOZER	09/29/11	Clear	-59	6.64	1.721	0.51
MW-3_32-TOZER	09/15/11	Clear	88	6.38	0.863	0.29
MW-3_32-TOZER	09/29/11	Clear	37	6.20	0.860	0.64
OB-09-DO	09/29/11	Clear	-153	6.06	0.133	0.42
OB-09-S	09/29/11	Clear	-125	6.80	2.952	0.63
OB-12-BR	09/15/11	Clear	-62	10.49	0.123	0.17
OB-12-BR	09/29/11	Clear	-40	10.61	0.126	0.41
OB-12-BR	10/28/11	Clear	83.2	10.70	0.124	0.94
OB-12-DO	09/15/11	Dark Purple	--	--	--	--
OB-12-DO	09/29/11	Dark Purple	--	--	--	--
OB-12-DO	10/28/11	Dark Purple	--	--	--	--
OB-15-S	09/29/11	Clear	-188	6.35	5.559	0.60
OB-15-S	10/28/11	Clear	-94.2	6.52	3.543	0.41
OB-19-BR	09/15/11	Clear	-53	10.70	0.815	0.28
OB-19-BR	09/29/11	Clear	-107	10.70	0.821	0.53
OB-19-BR	10/28/11	Clear	42.0	10.87	0.848	1.15
OB-19-DO	09/15/11	Clear	67	7.14	0.619	0.27

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

Appendix E
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-19-DO	09/29/11	Clear	-82	7.11	0.586	0.55
OB-19-DO	10/28/11	Clear	-48.6	7.37	0.569	0.61
OB-25-BR	09/15/11	Clear	-25	9.66	2.405	0.11
OB-25-BR	09/29/11	Clear	-91	9.66	2.388	0.40
OB-25-BR	10/28/11	Clear	19.8	9.39	2.313	0.58
OB-25-DO	09/15/11	Clear	87	8.05	0.615	0.36
OB-25-DO	09/29/11	Clear	-21	8.03	0.607	0.65
OB-25-DO	10/28/11	Clear	20.0	8.00	0.611	1.24
OB-34-DO	09/15/11	Light Purple	--	--	--	--
OB-34-DO	09/29/11	Light Purple	--	--	--	--
OB-34-DO	10/28/11	Clear	177.0	8.91	0.176	6.38
OB-35-DO	09/15/11	Dark Purple	--	--	--	--
OB-35-DO	09/29/11	Dark Purple	--	--	--	--
OB-36-DO	09/15/11	Clear	35	8.45	0.158	5.76
OB-36-DO	10/28/11	Clear	149.6	8.60	0.159	6.80
OB-37-DO	09/15/11	Dark Purple	--	--	--	--
OB-37-DO	09/29/11	Dark Purple	--	--	--	--
OB-37-DO	10/28/11	Dark Purple	--	--	--	--
OB-38-DO	09/15/11	Clear	-27	7.61	2.419	0.15
OB-38-DO	09/29/11	Clear	-170	7.83	2.344	0.44
OB-38-DO	10/28/11	Clear	-89.5	8.07	2.390	0.32
OB-39-DO	09/15/11	Clear	89	7.77	0.307	0.22
OB-39-DO	09/29/11	Clear	12	7.81	0.307	0.63
OB-39-DO	10/28/11	Clear	-61.7	8.66	0.202	0.85
STR-03	09/29/11	Clear	--	--	--	2.51
STR-03	10/28/11	Clear	--	--	--	--
UNNAMED_STREAM	09/29/11	Clear	--	--	--	0.85
UNNAMED_STREAM	10/28/11	Clear	--	--	--	--

NOTES: -- = Not Analyzed
mV=millivolts

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

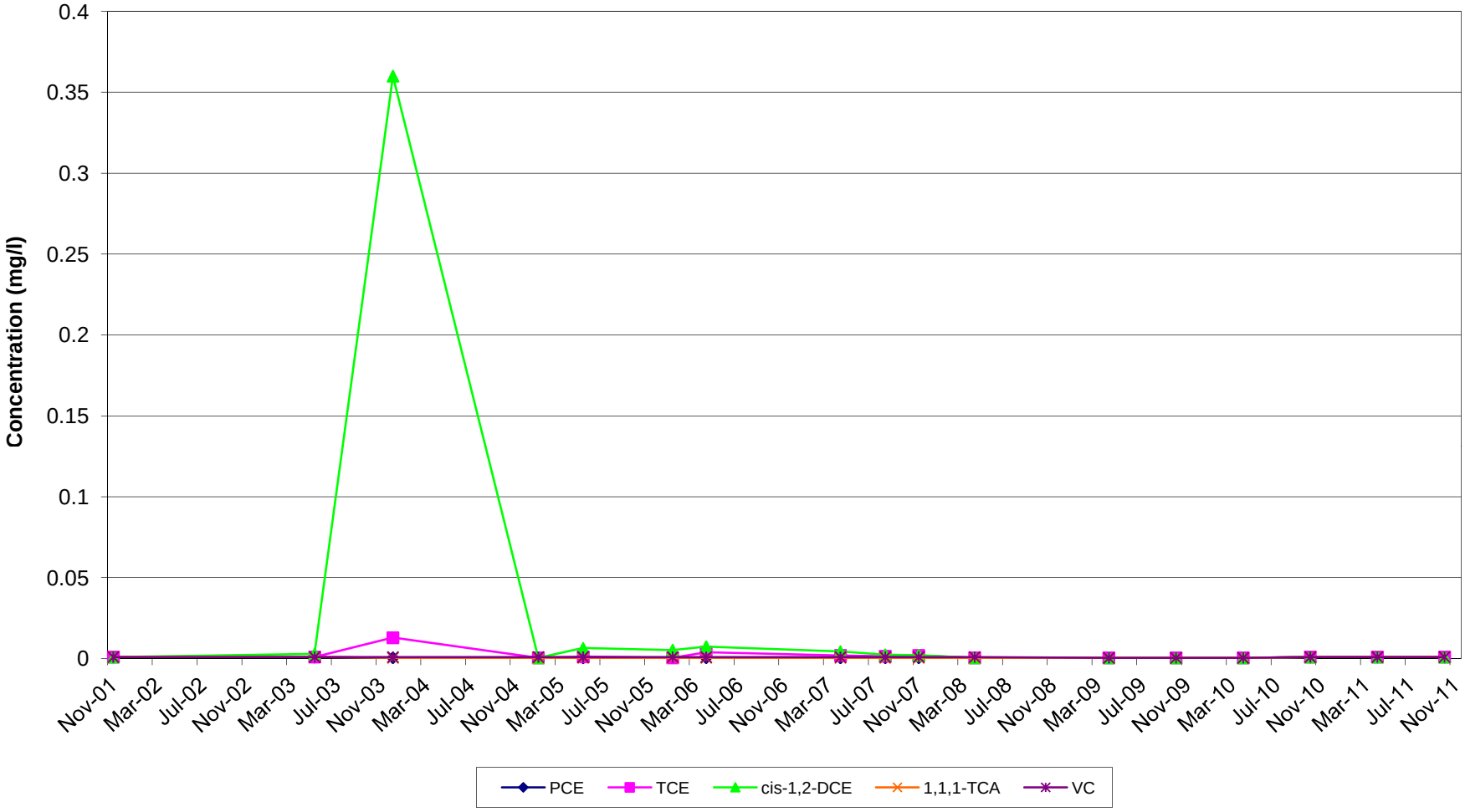
Deg.C= Degrees Celcius

APPENDIX F

VOC TREND GRAPHS

TOZER ROAD NORTH OF ROUTE 128

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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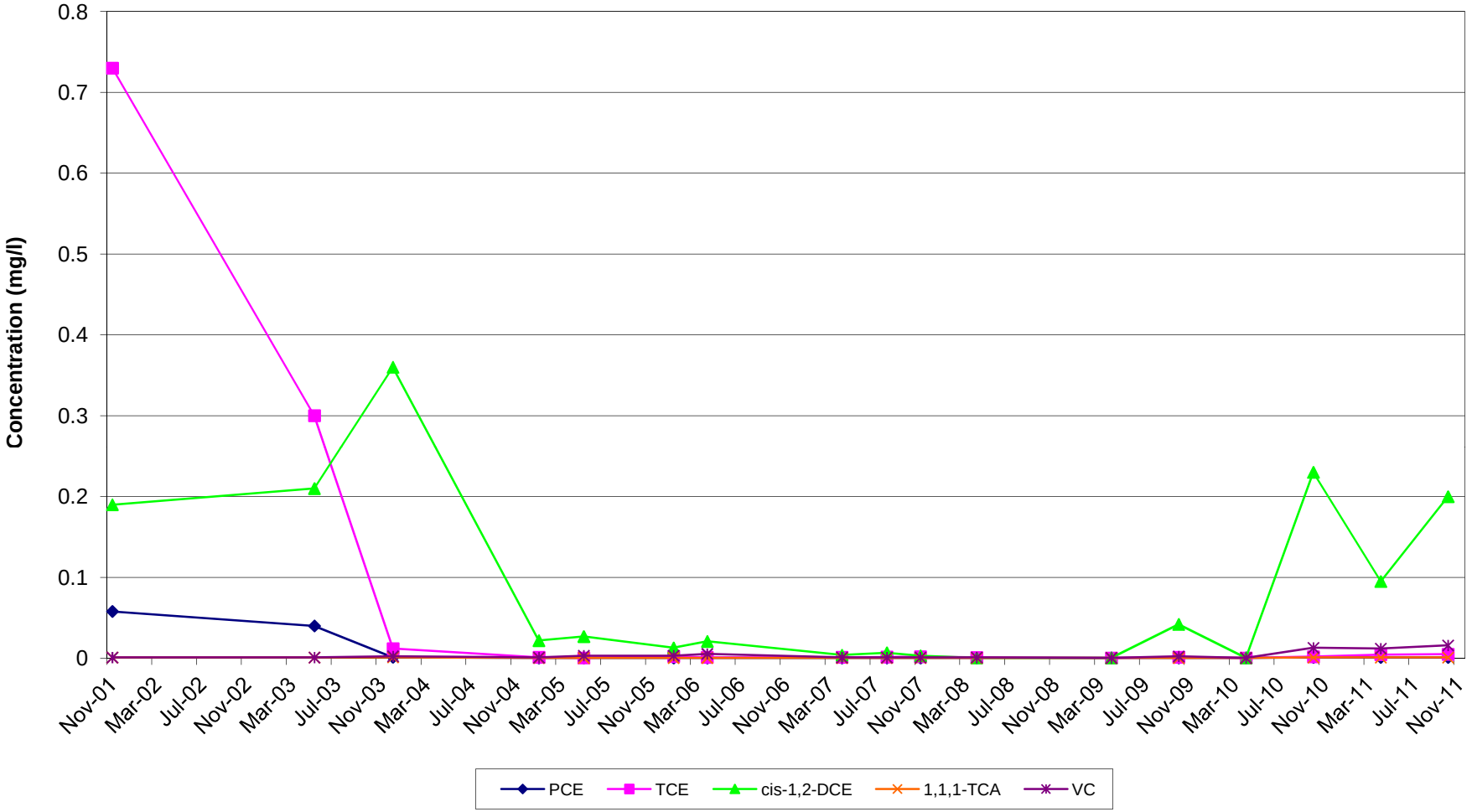
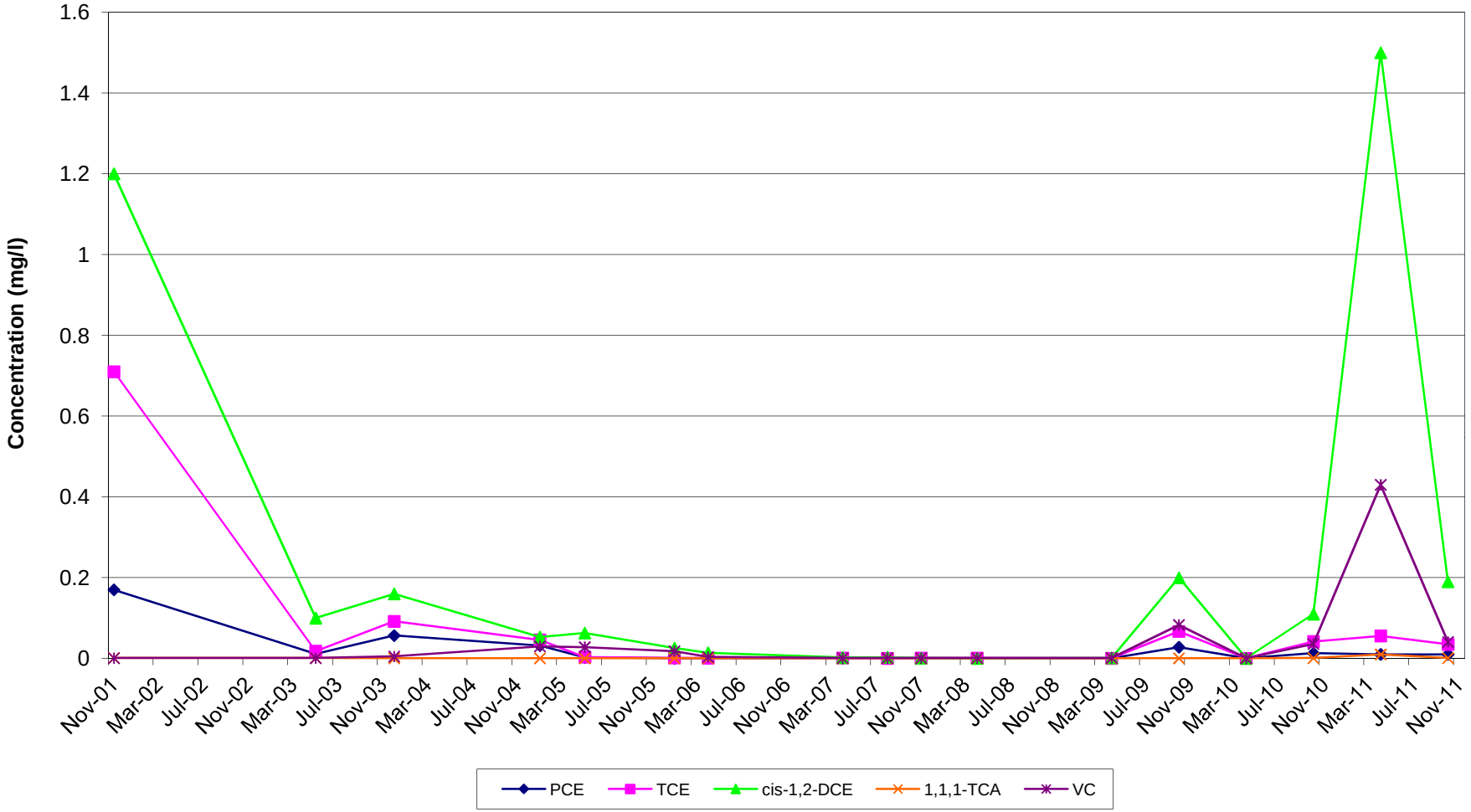
VOC Trends in Well BR-1_ZONE2
Former Varian Facility Site
Beverly, Massachusetts



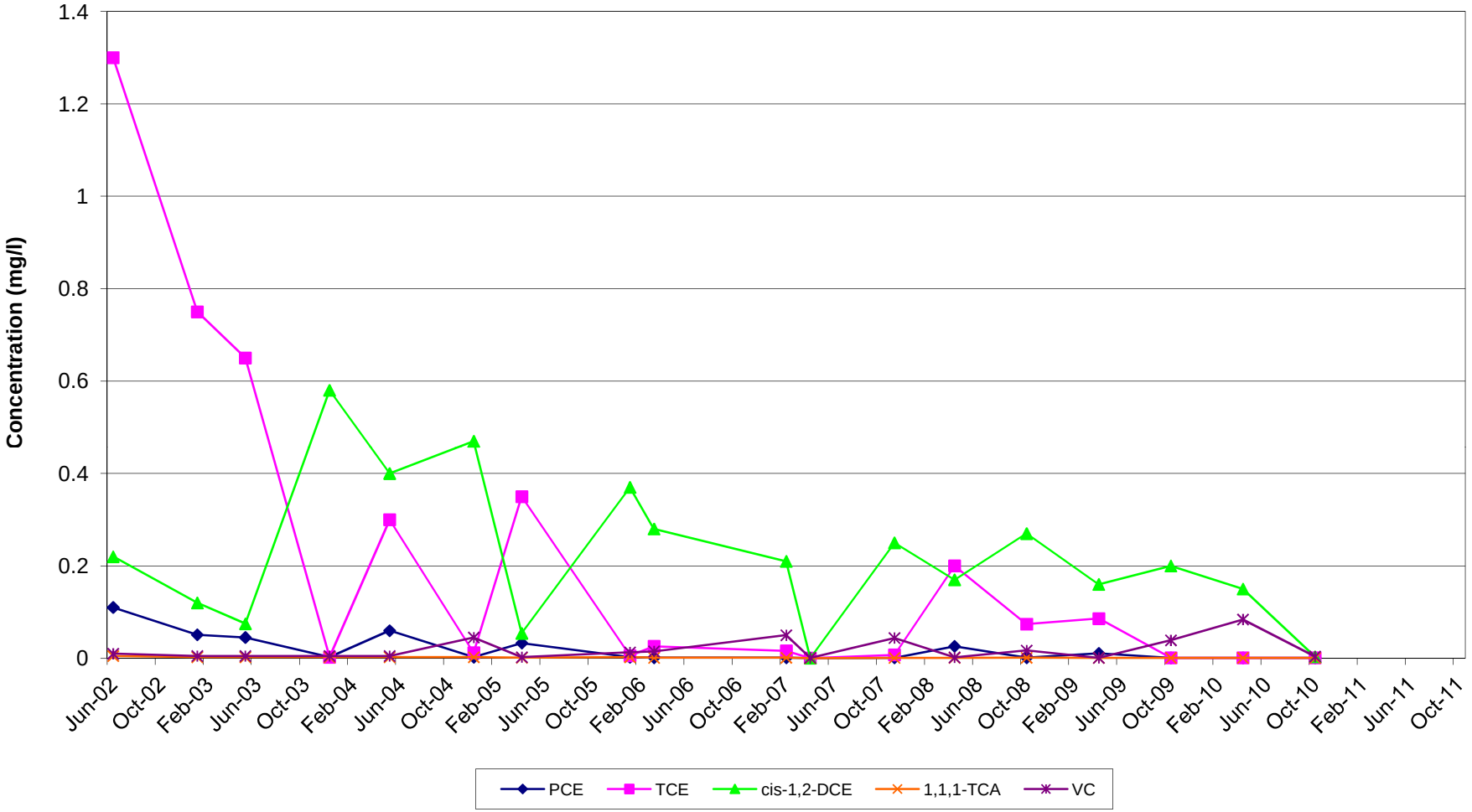
Notes: BR-1 ZONE2 is the middle depth zone of a bedrock well on Walden Street.
See end of appendix for additional notes.

VOC Trends in Well BR-1_ZONE1
Former Varian Facility Site
Beverly, Massachusetts



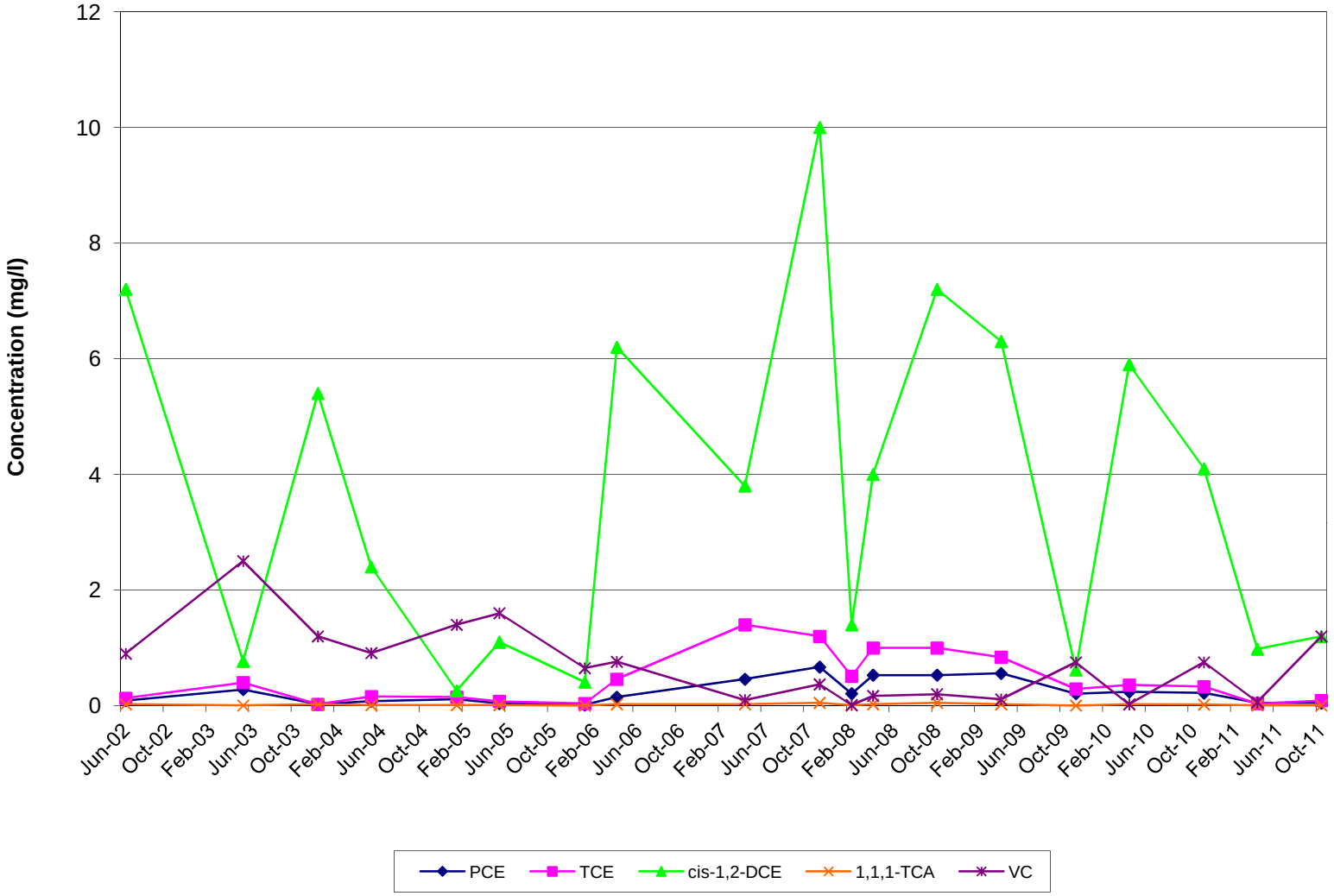
Notes: BR-1 ZONE1 is the deepest zone of a bedrock well on Walden Street.
See end of appendix for additional notes.

VOC Trends in Well CL02-BR
Former Varian Facility Site
Beverly, Massachusetts



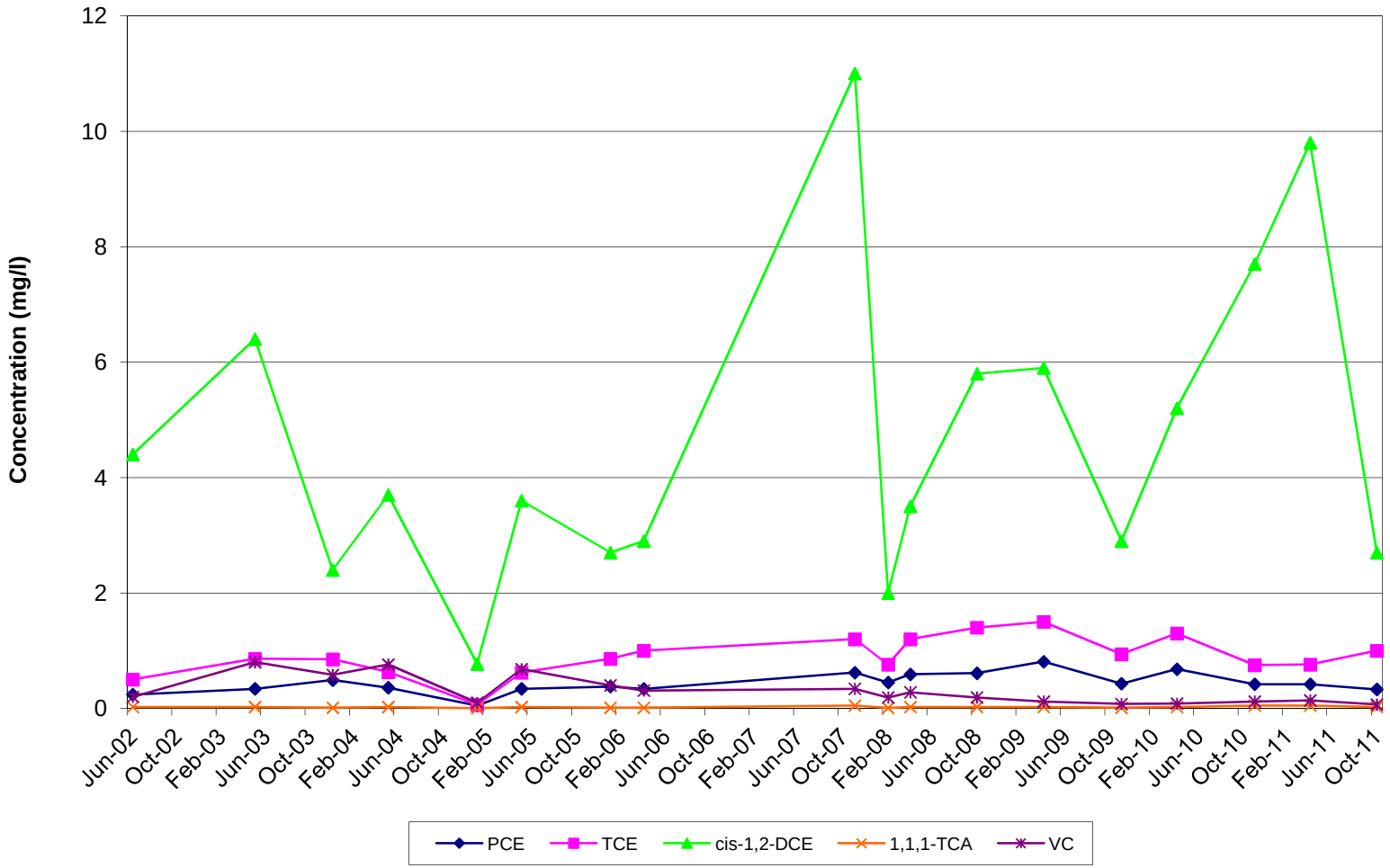
Notes: CL02-BR is a bedrock well north of Route 128 at 16 Tozer Road.
See end of appendix for additional notes.

VOC Trends in Well CL09-BR_ZONE3
Former Varian Facility Site
Beverly, Massachusetts



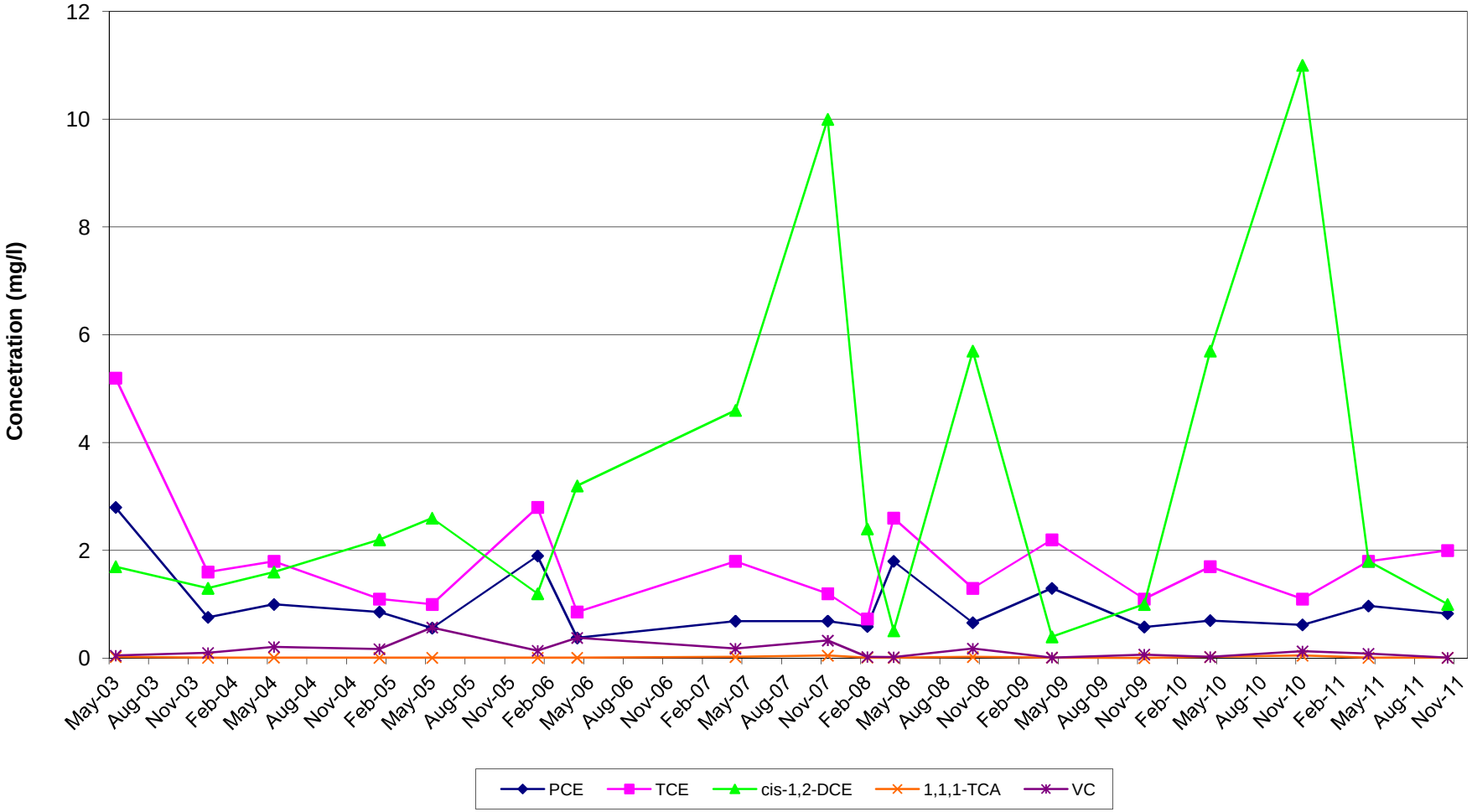
Notes: Notes: CL09-BR ZONE3 is the shallowest zone of a bedrock well north of Route 128, west of Tozer Road.
See end of appendix for additional notes.

VOC Trends in Well CL09-BR_ZONE2
Former Varian Facility Site
Beverly, Massachusetts

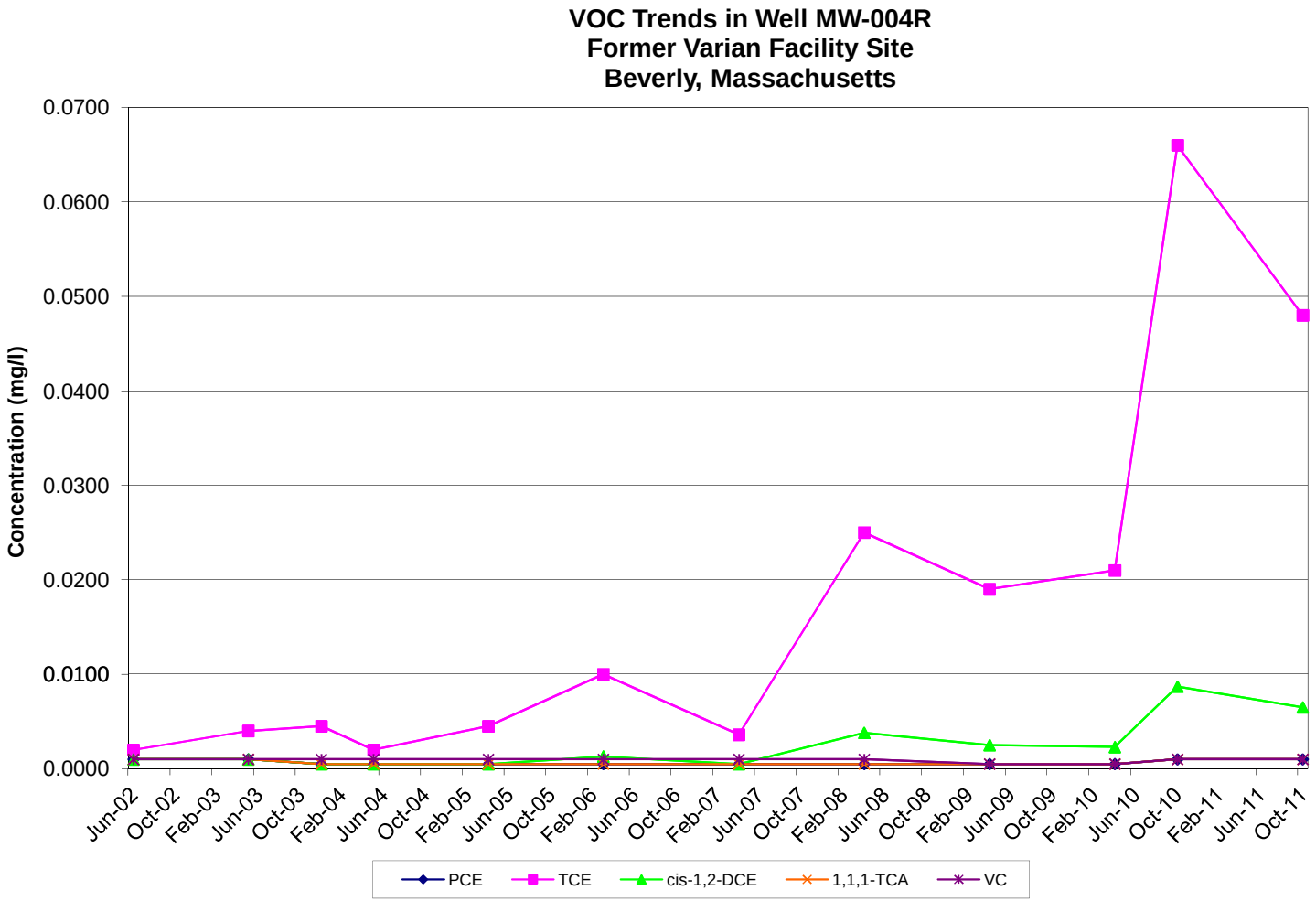


Notes: CL09-BR ZONE2 is the middle depth zone of a bedrock well north of Route 128, west of Tozer Road.
See end of appendix for additional notes.

VOCs in Well CL09-BR_ZONE1
Former Varian Facility Site
Beverly, Massachusetts



Notes: CL09-BR ZONE1 is the deepest zone of a bedrock well north of Route 128, west of Tozer Road.
See end of appendix for additional notes.



Notes: MW-4R is a deep overburden well north of Route 128 at 16 Tozer Road.
See end of Appendix E for additional notes.

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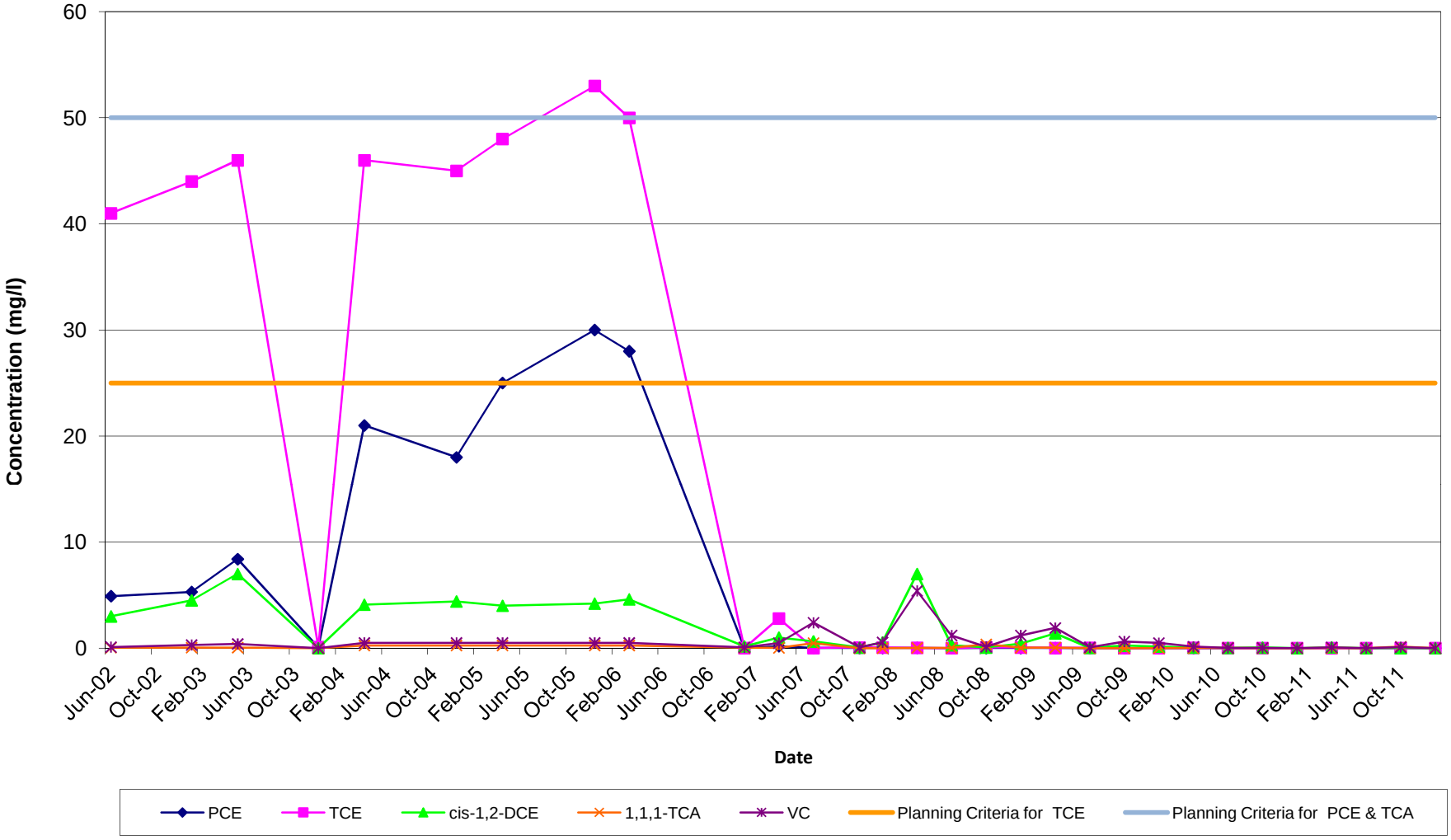
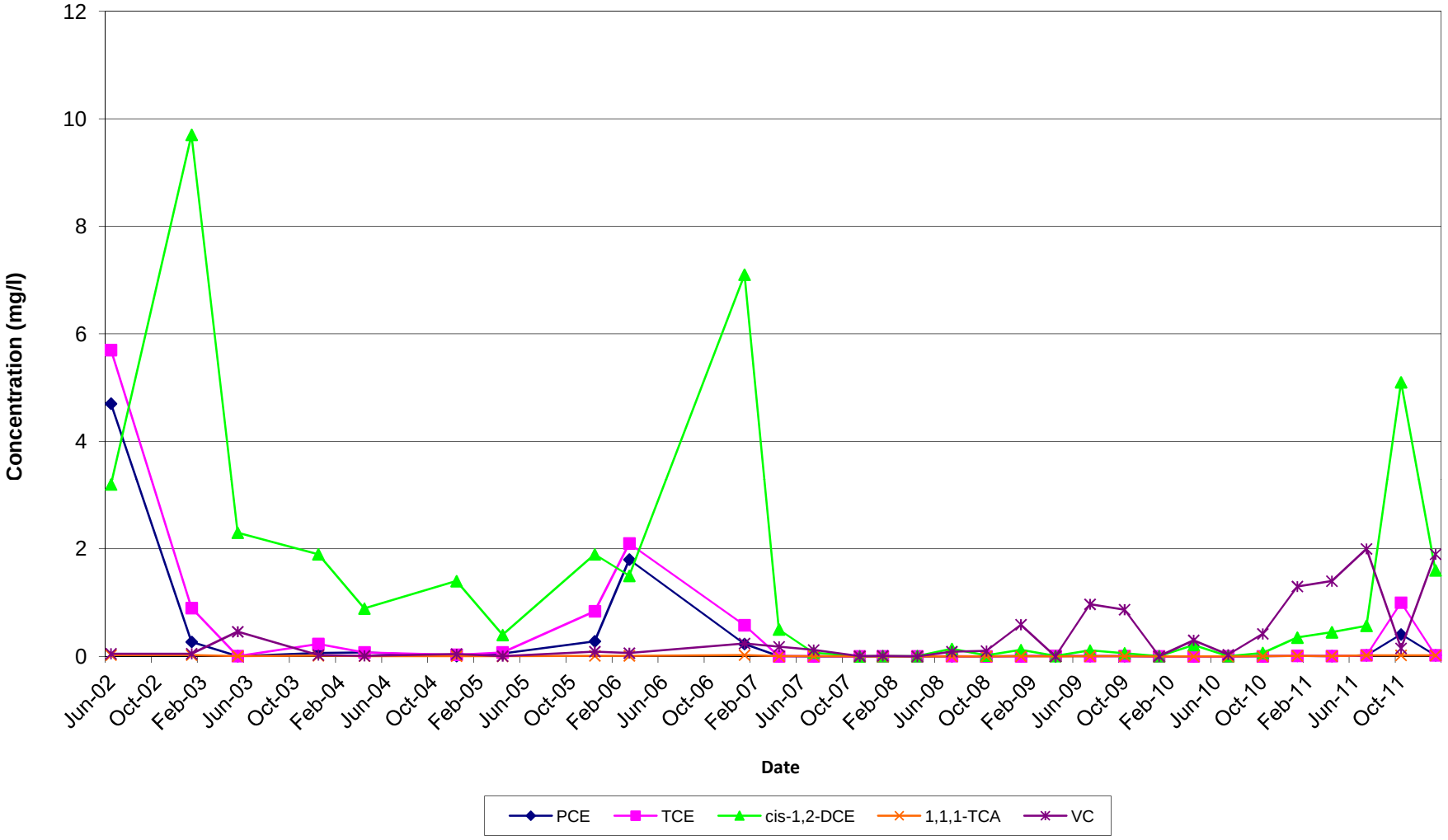
BUILDING 3/6 TREATMENT AREA

VOC Trends in Well OB-09-S
Former Varian Facility Site
Beverly, Massachusetts



Note: OB-9-S is a shallow well east of Building 9.
Bio-injection was completed from 2006 to 2011.
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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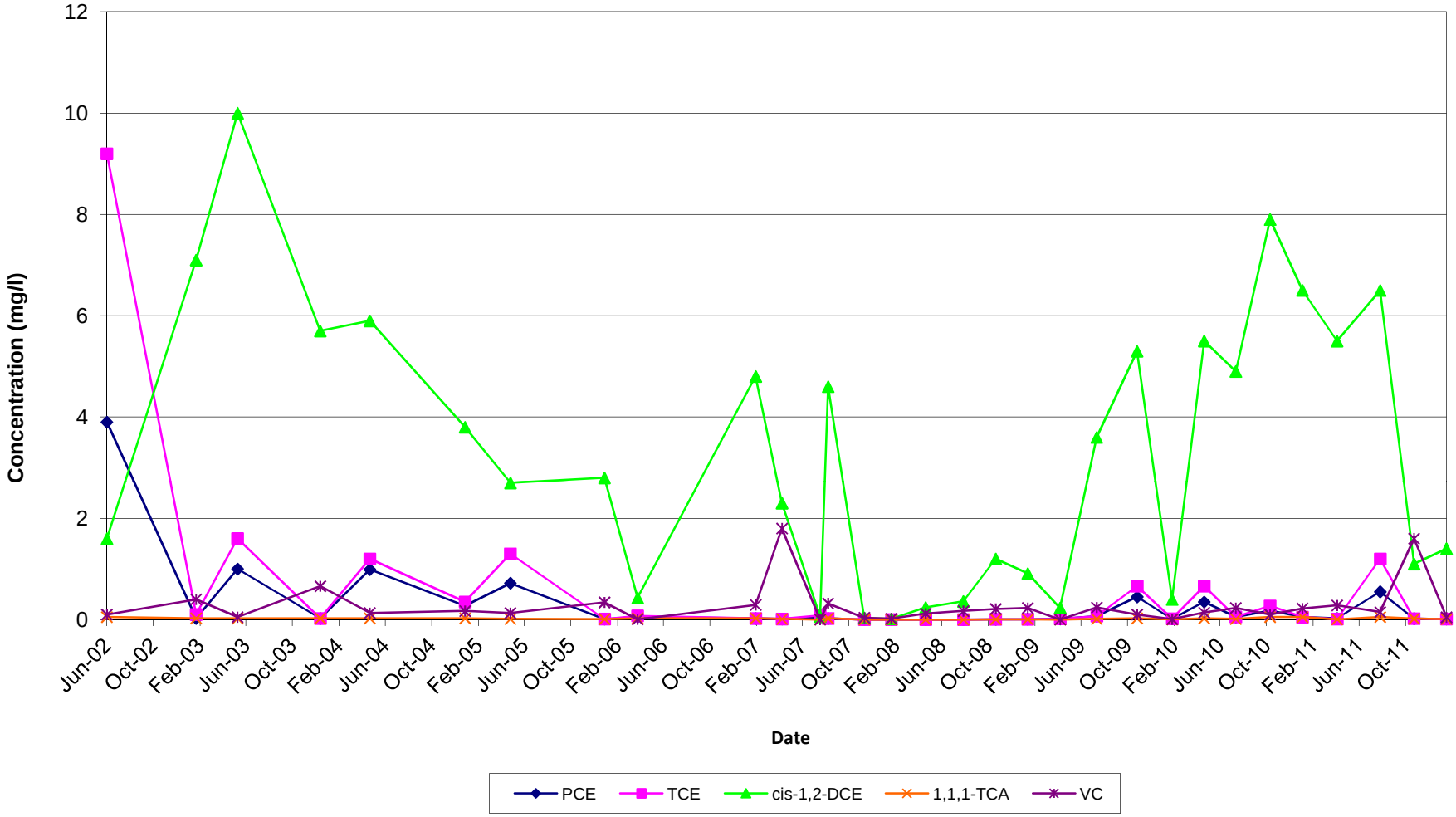
VOC Trends in Well OB-09-BR
Former Varian Facility Site
Beverly, Massachusetts



Note: OB-9-BR is a bedrock well east of Building 9.
See end of appendix for additional notes.

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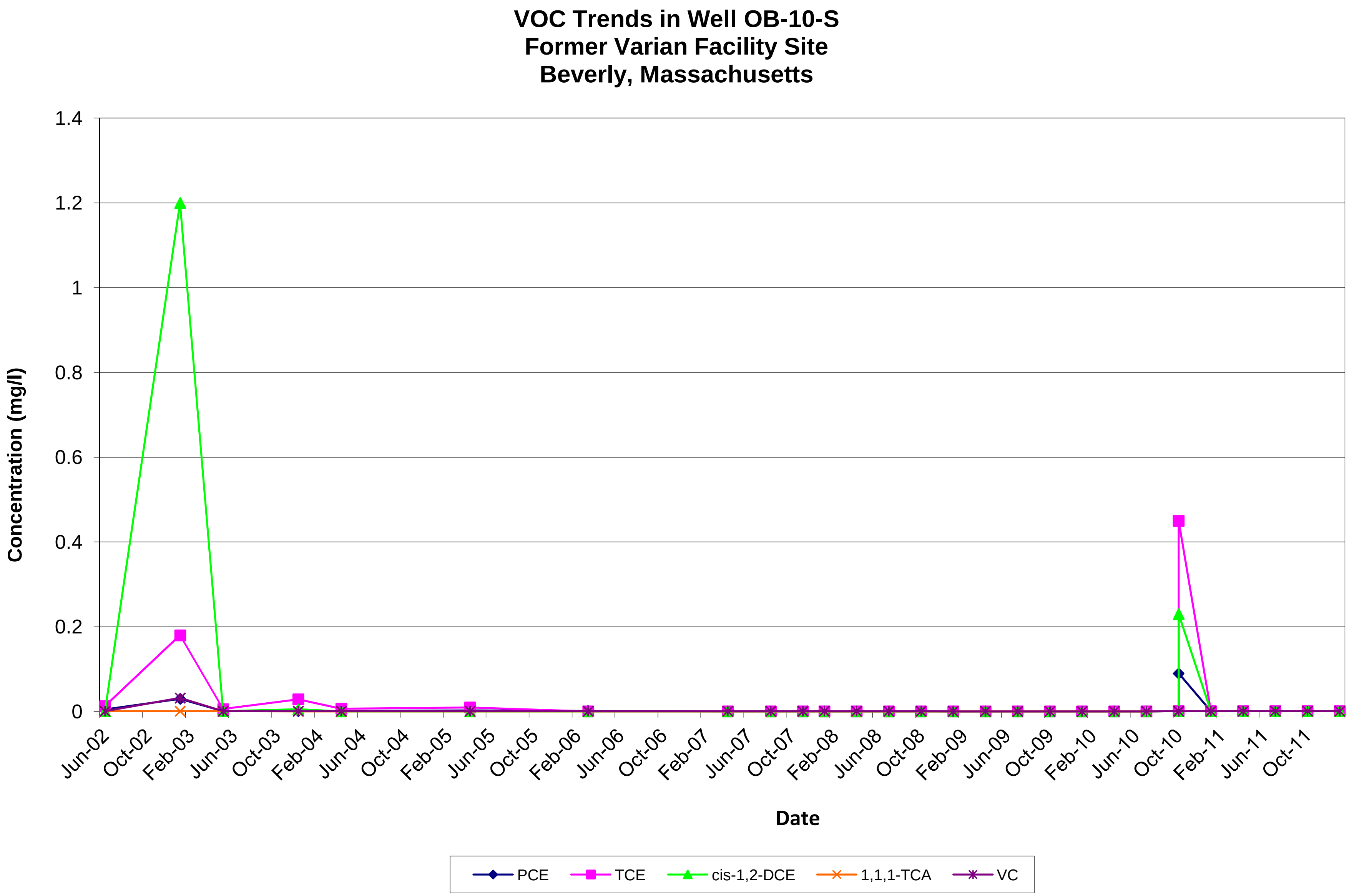

Note: OB-10-S is a shallow well adjacent to Building 4.
See end of appendix for additional notes.

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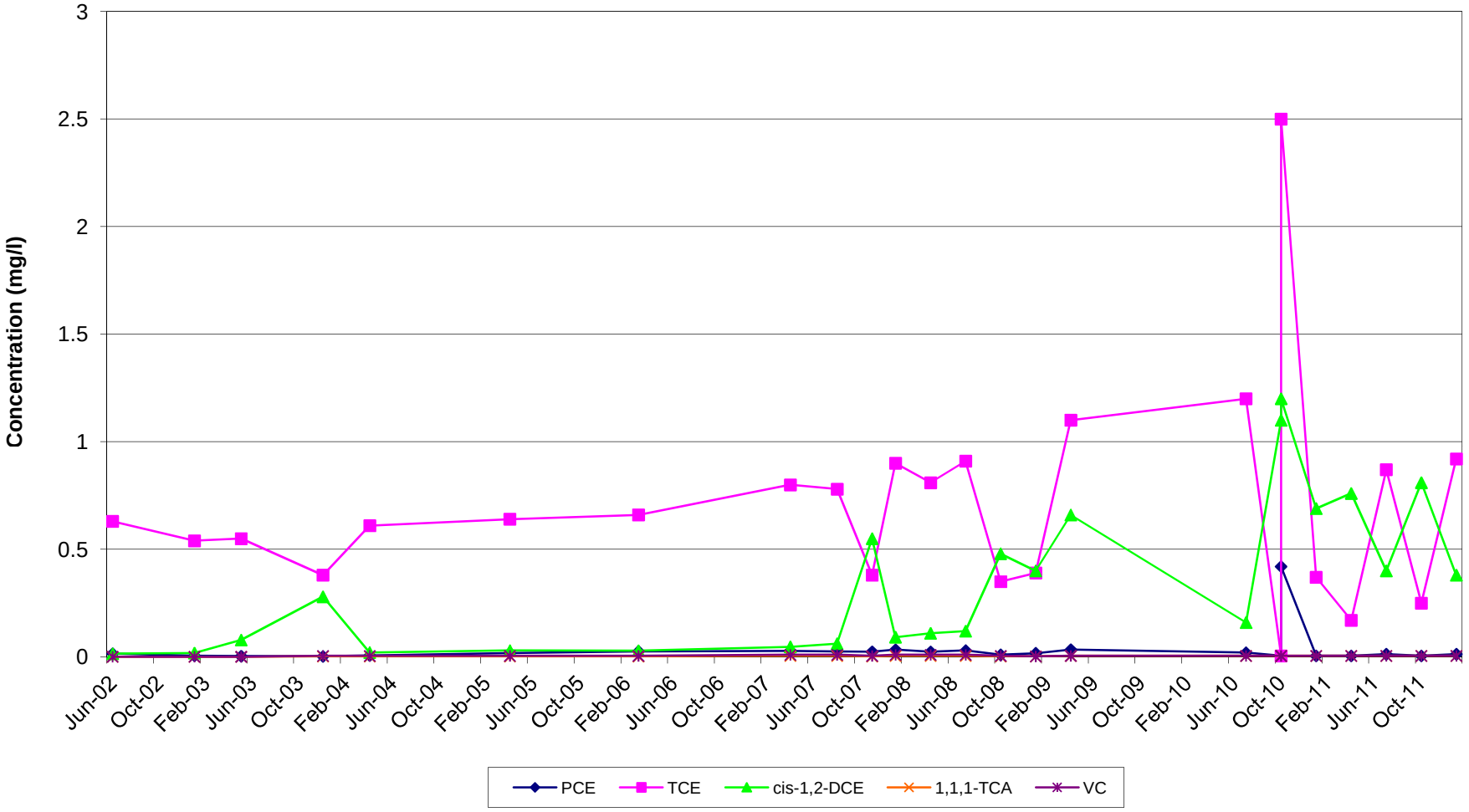
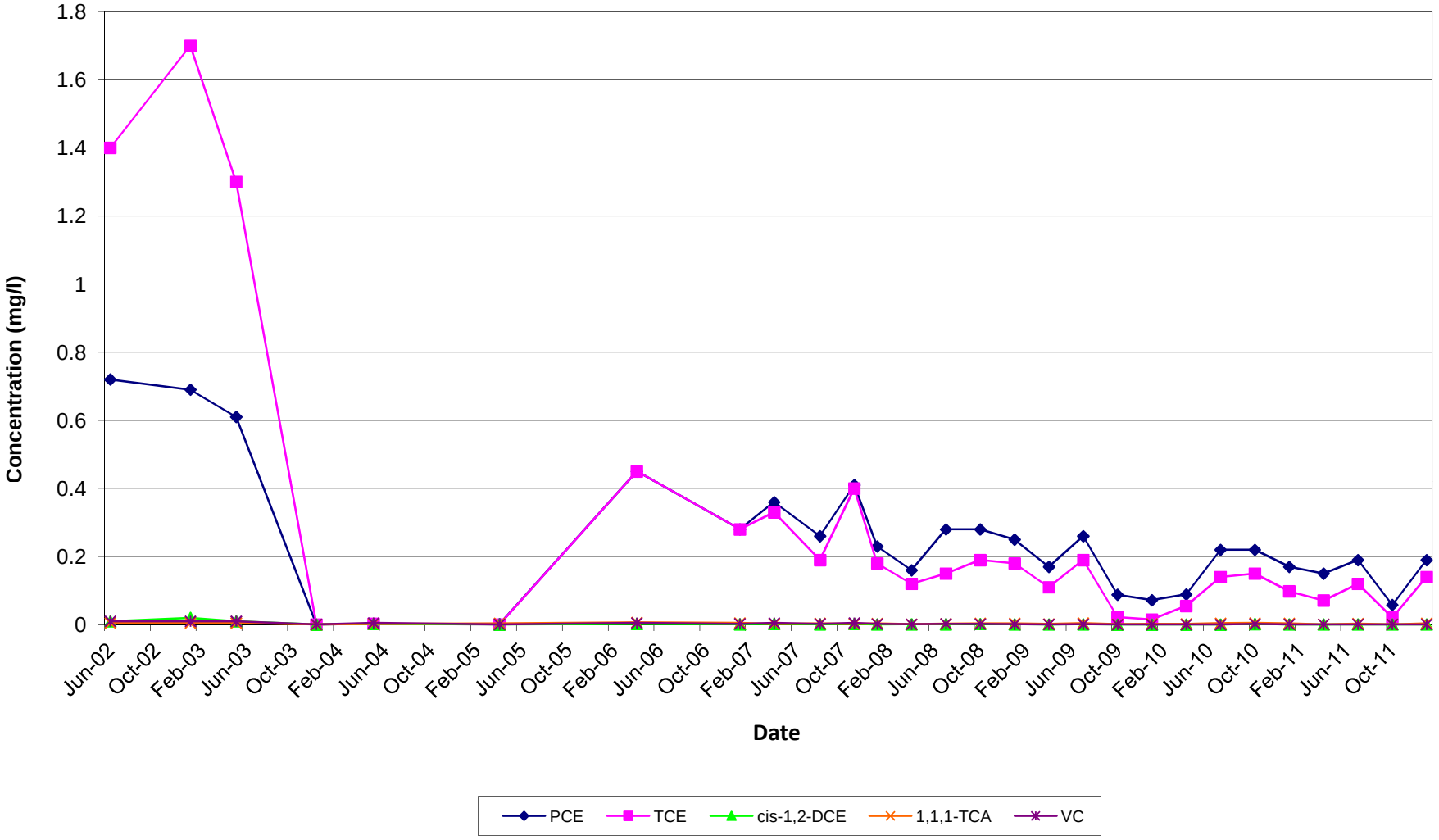
VOC Trends in Well OB-10-DO
Former Varian Facility Site
Beverly, Massachusetts



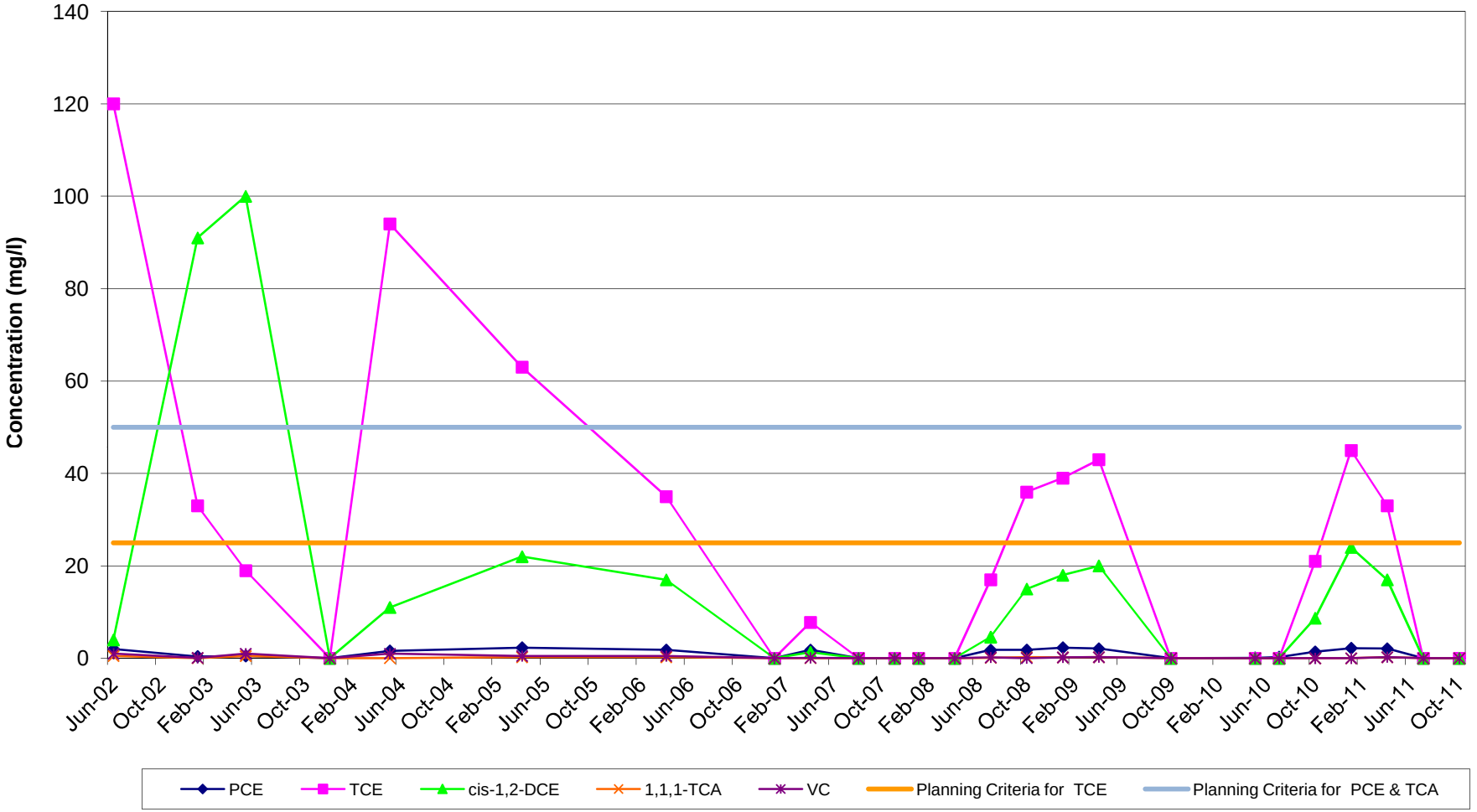
Note: OB-10-DO is a deep overburden well adjacent to Building 4.
See end of appendix for additional notes.

VOC Trends in Well OB-12-S
Former Varian Facility Site
Beverly, Massachusetts



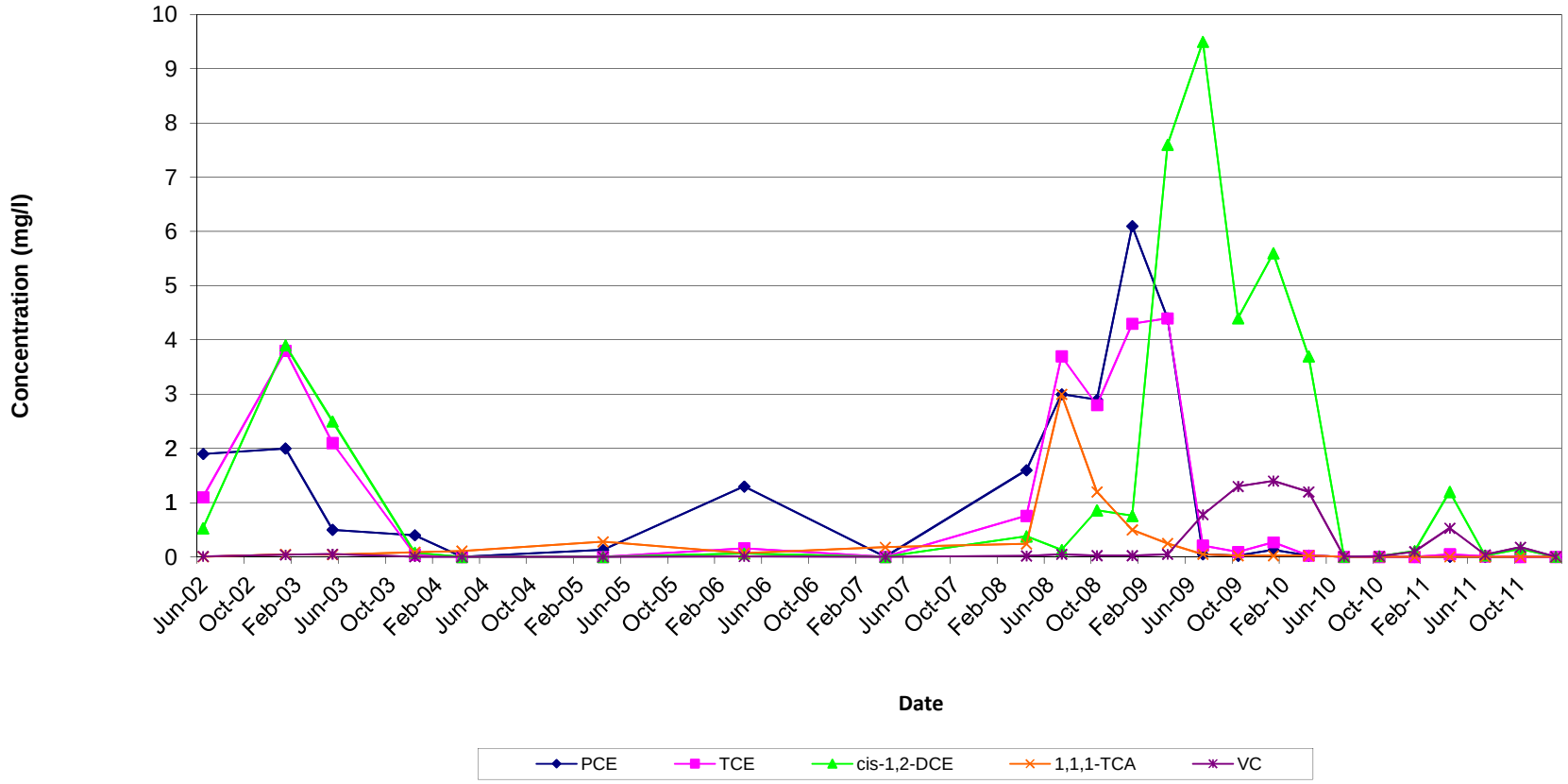
Note: OB-12-S is a shallow overburden well north of Building 3 where permanganate injection was completed in 2003.
See end of appendix for additional notes.

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.
Permanganate injection completed 2003-2007, 2009 and 2011.
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.
Bio-injection was conducted from 2009 to 2011.
See end of appendix for additional notes.

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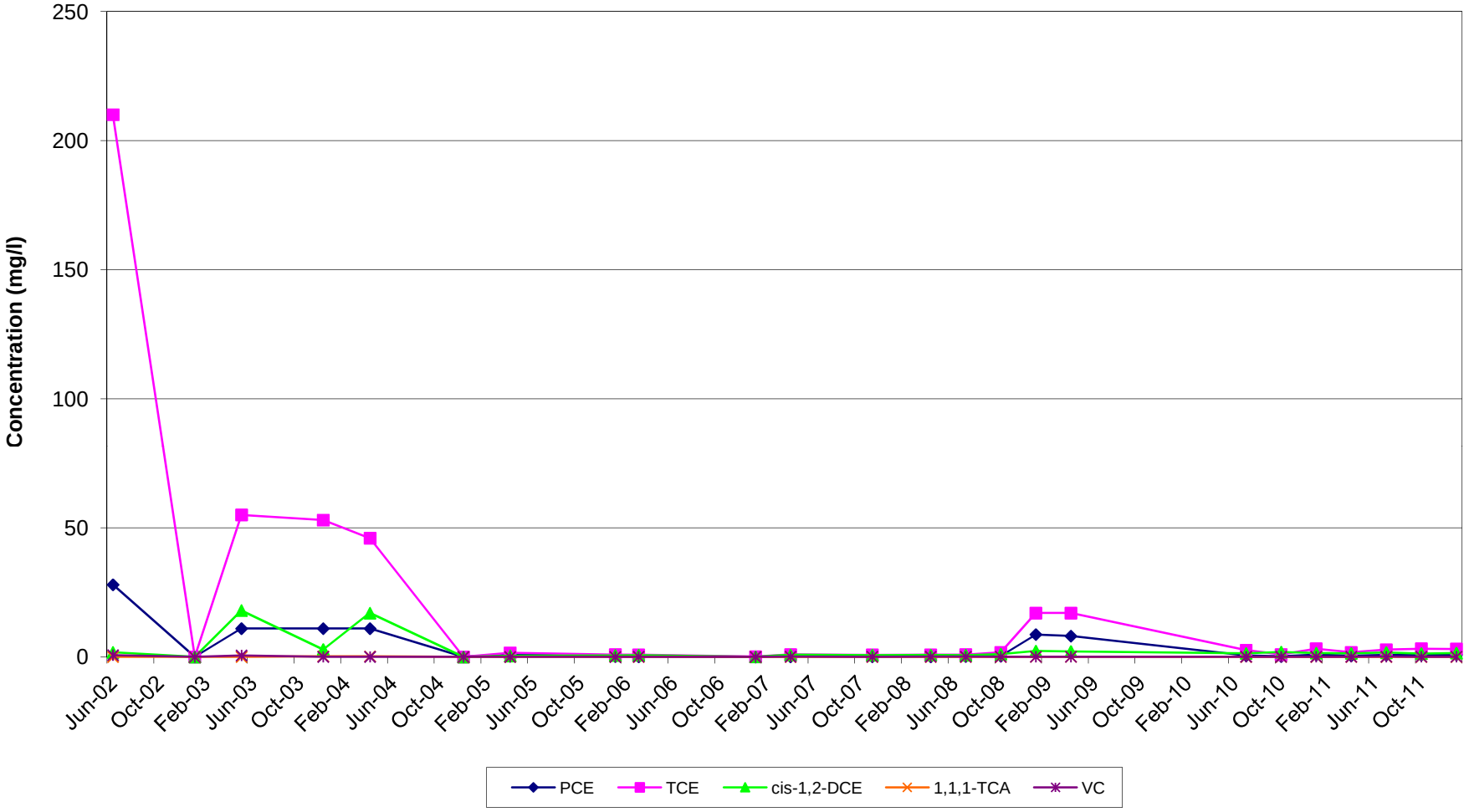
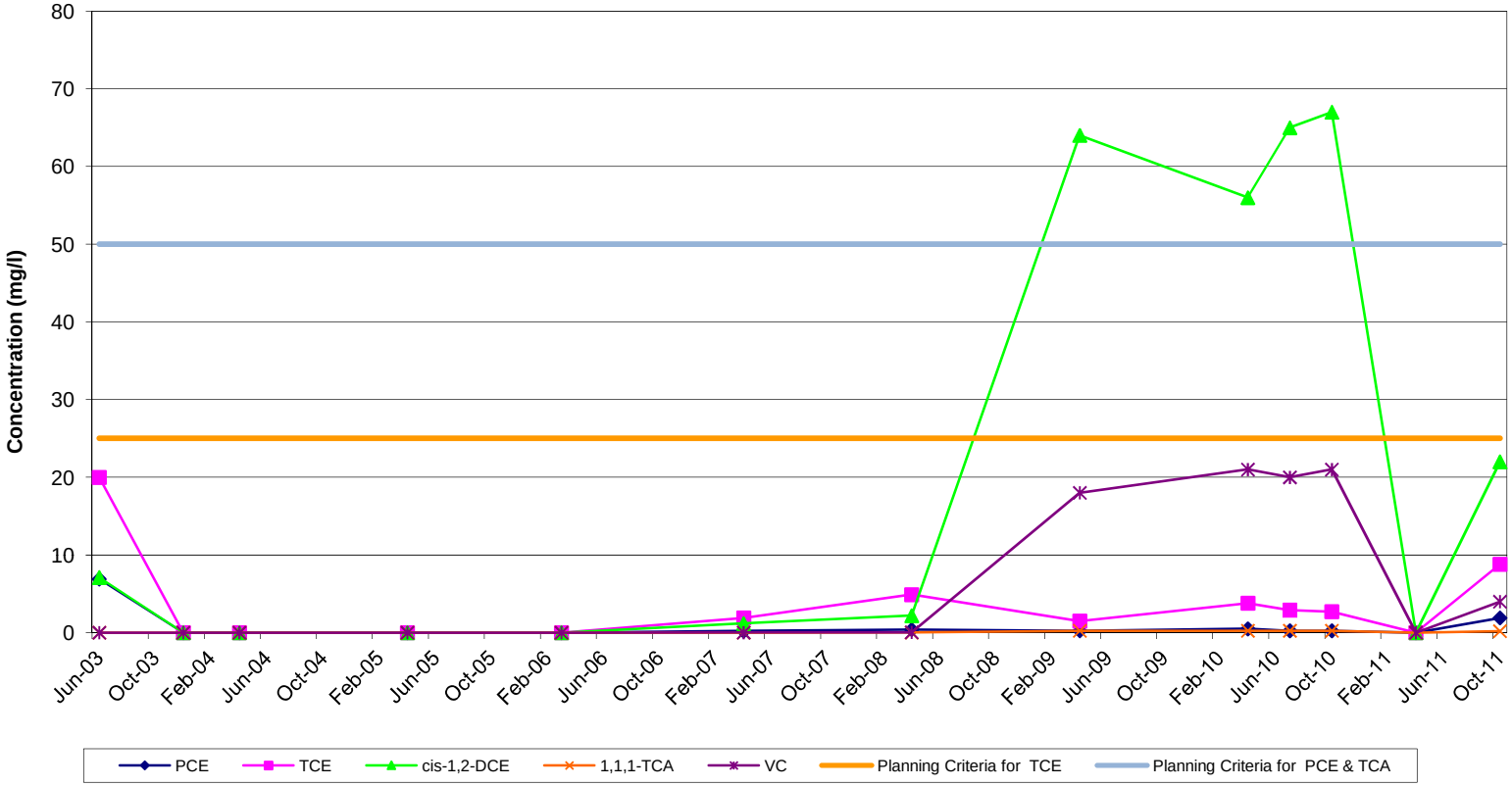
VOC Trends in Well OB-19-DO
Former Varian Facility Site
Beverly, Massachusetts

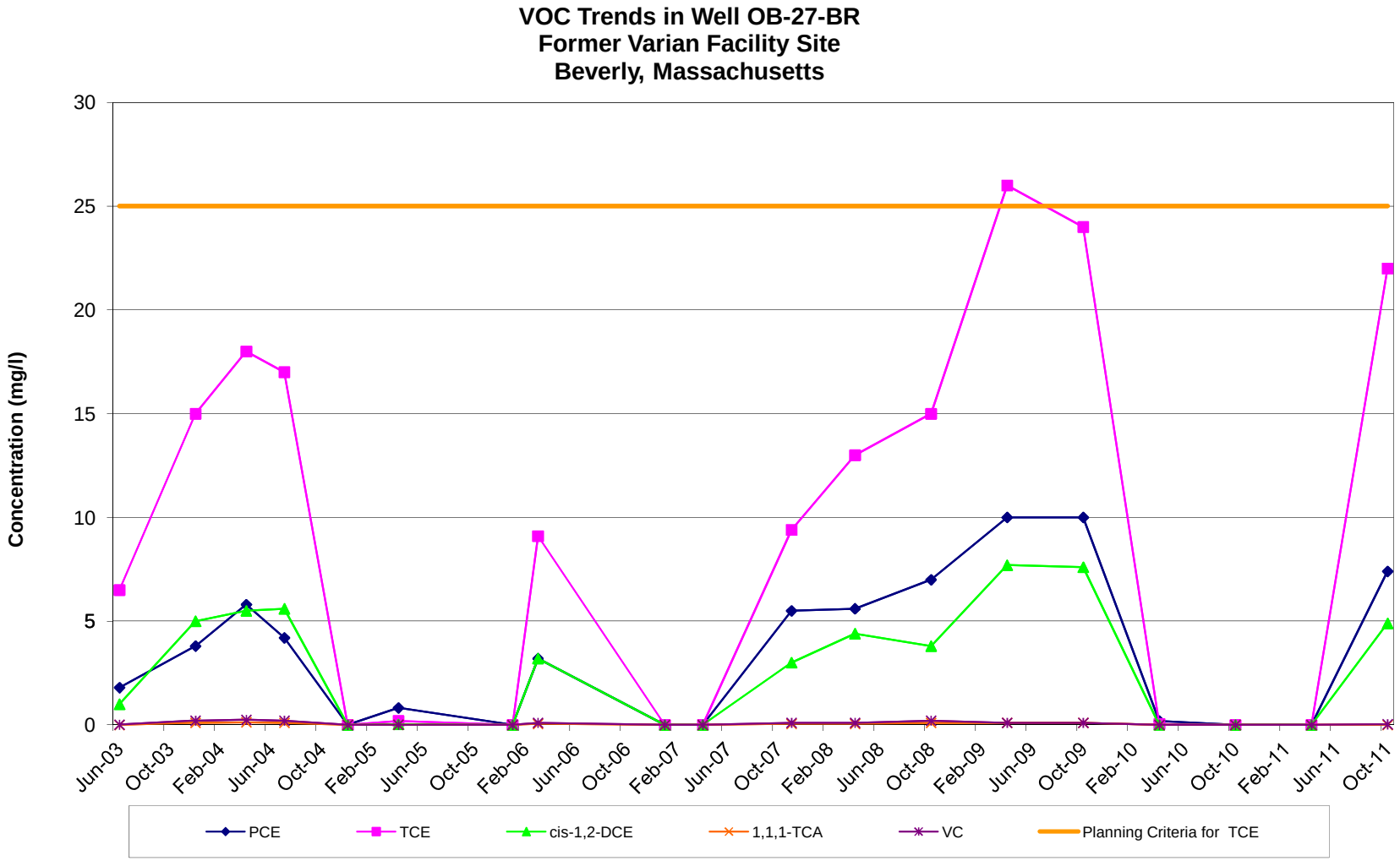


Note: OB-19-DO is a deep overburden well west of Building 2 where permanganate injection was conducted from 2002-2005. See end of appendix for additional notes.

VOC Trends in Well OB-25-BR
Former Varian Facility Site
Beverly, Massachusetts



Notes: OB-25-BR is a bedrock well located just west of Building 1 where permanganate injection was conducted in 2003 and 2010.
See end of appendix for additional notes.



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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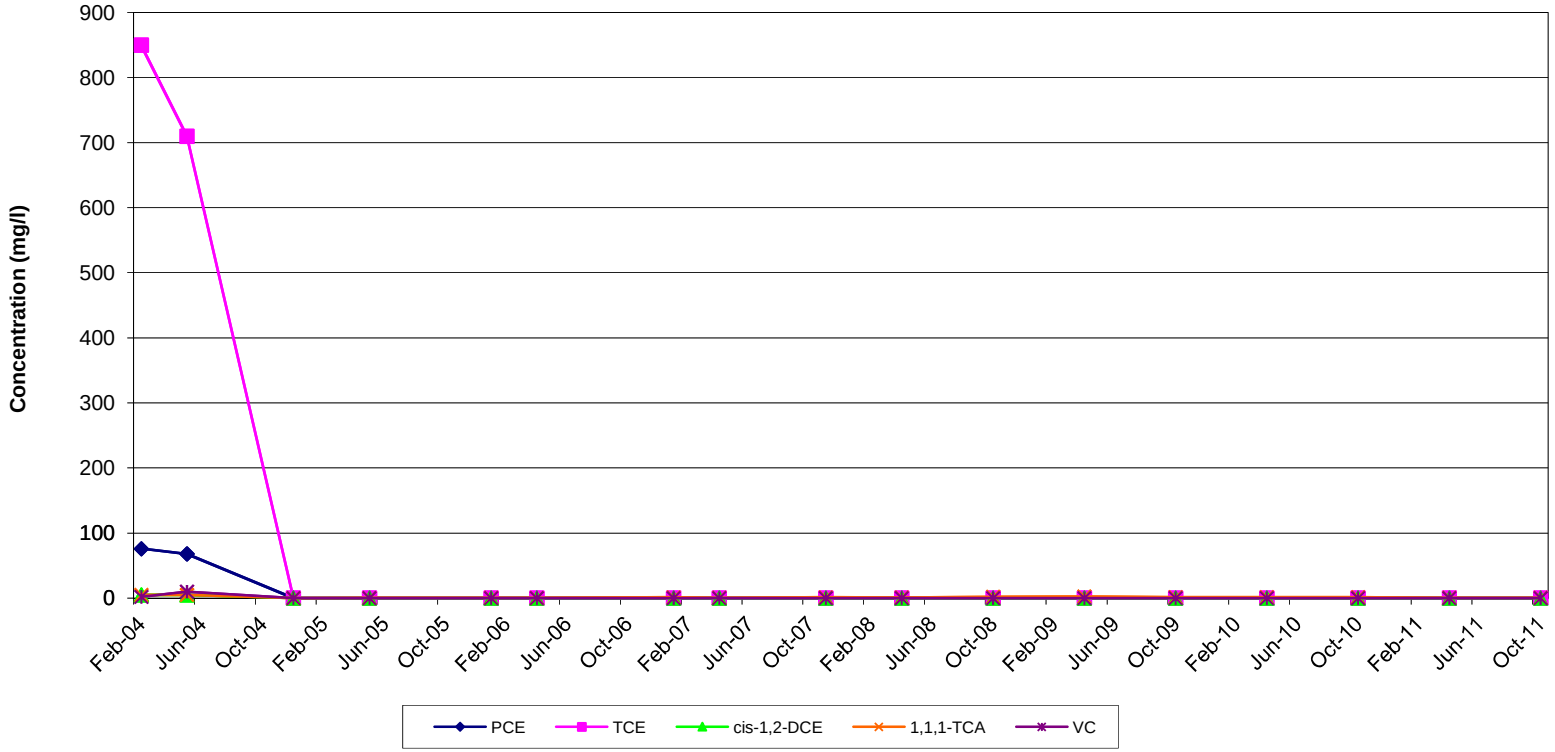
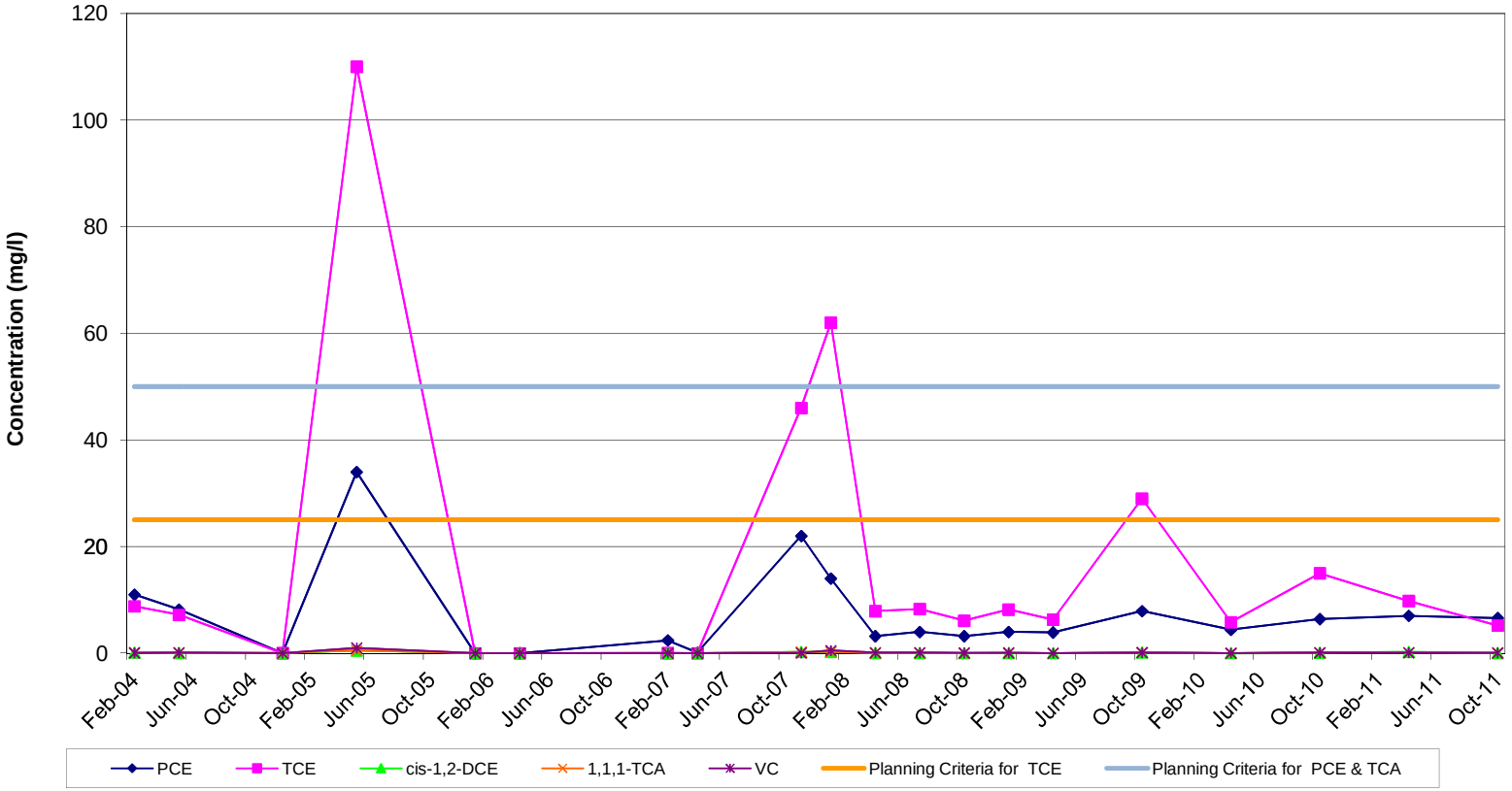
VOC Trends in Well OB-32-DO
Former Varian Facility Site
Beverly, Massachusetts



Notes: OB32-DO is a deep overburden well just north of Building 3
where injection was conducted in 2004.
See end of appendix for additional notes.

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.
See end of appendix for additional notes.

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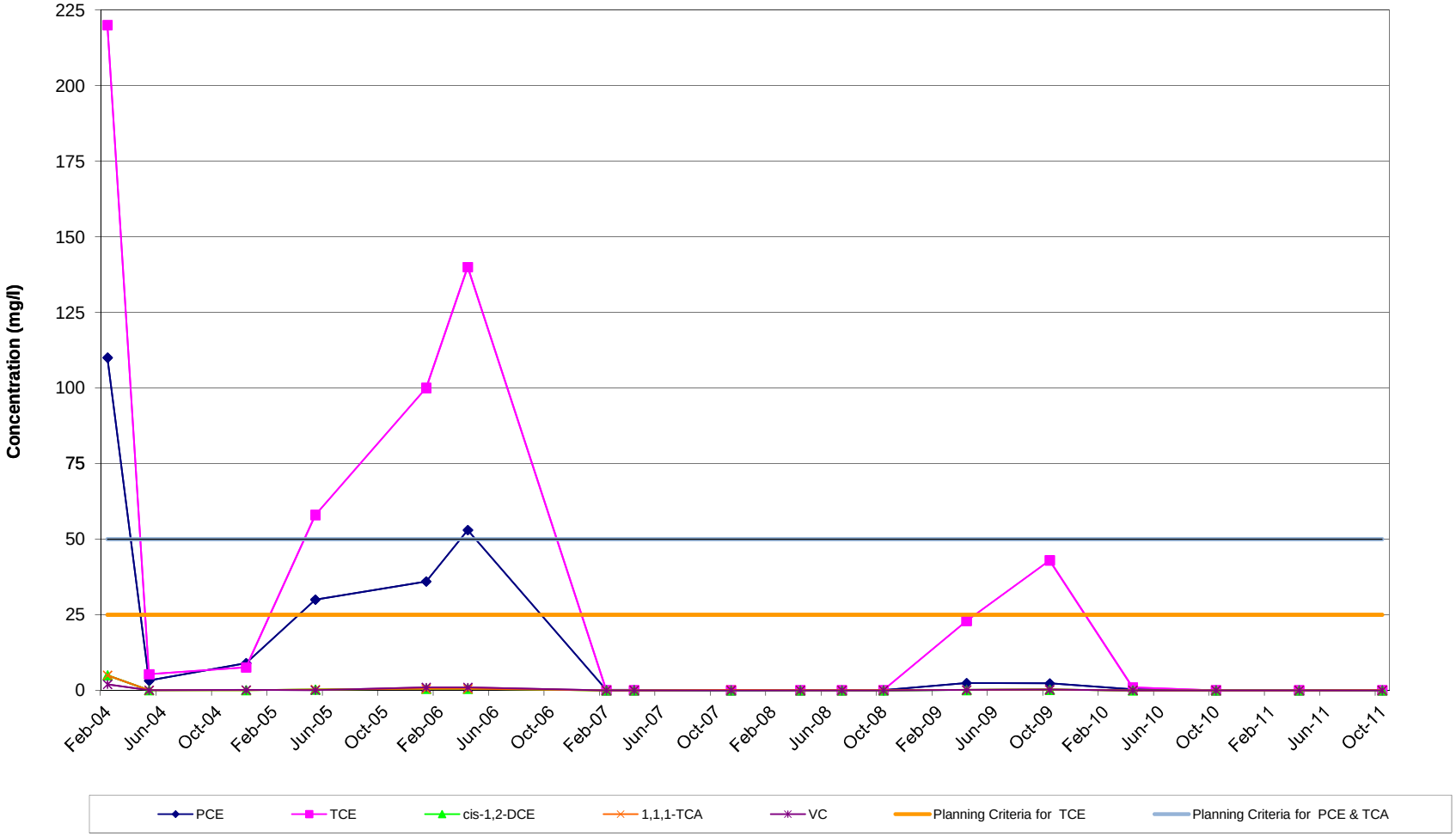
VOC Trends in Well OB-37-DO
Former Varian Facility Site
Beverly, Massachusetts



Notes: OB37-DO is a deep overburden well inside Building 6.
Permanganate injection conducted in 2006, 2007 and 2010-2011.
See end of appendix for additional notes.

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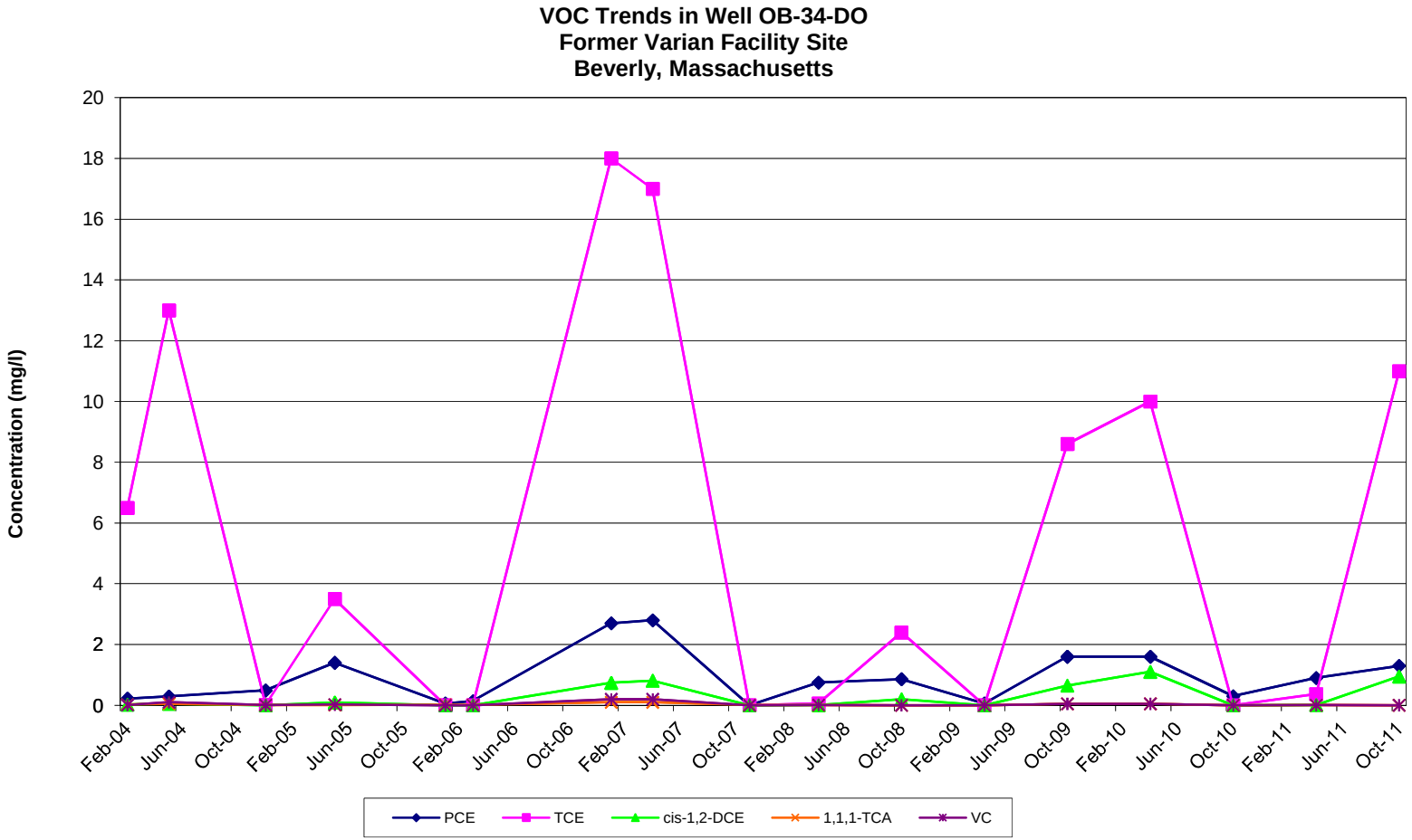
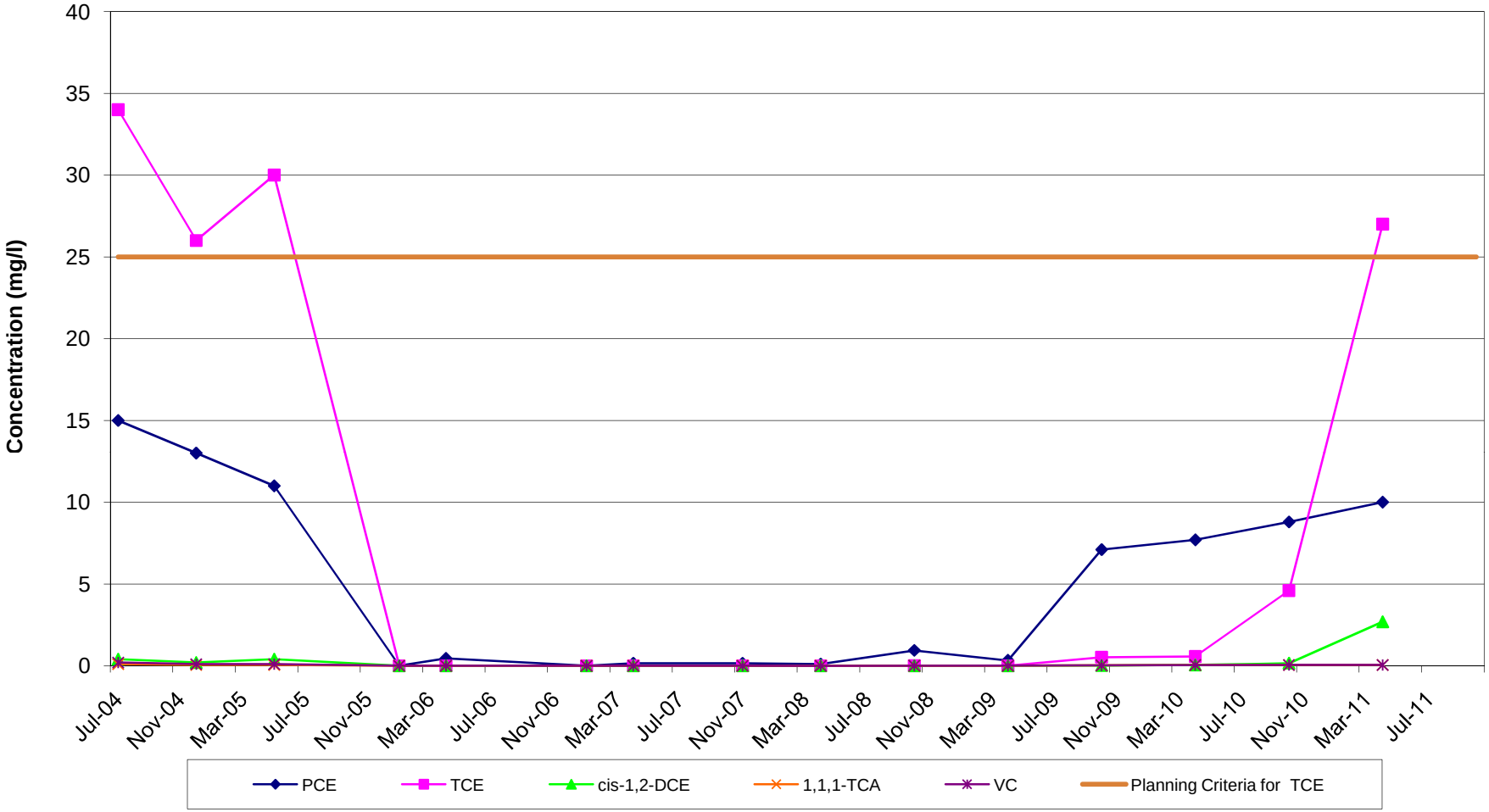


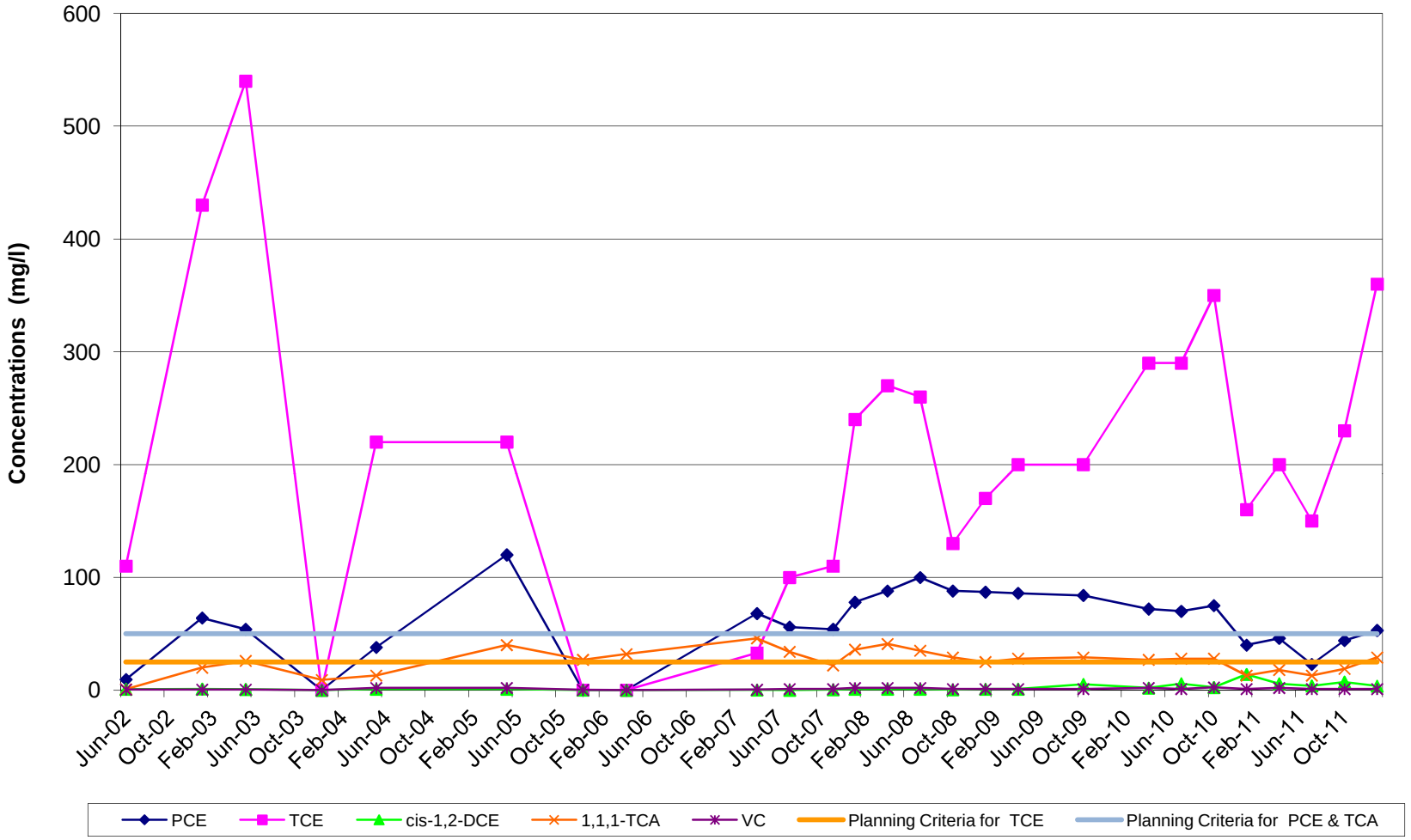
Notes: OB34-DO is a deep overburden well north of Building 3.
Permanganate injection was conducted in 2004, 2005, 2007 and 2009.
See end of appendix for additional notes.

VOC Trends in Well AP-12-DO
Former Varian Facility Site
Beverly, Massachusetts

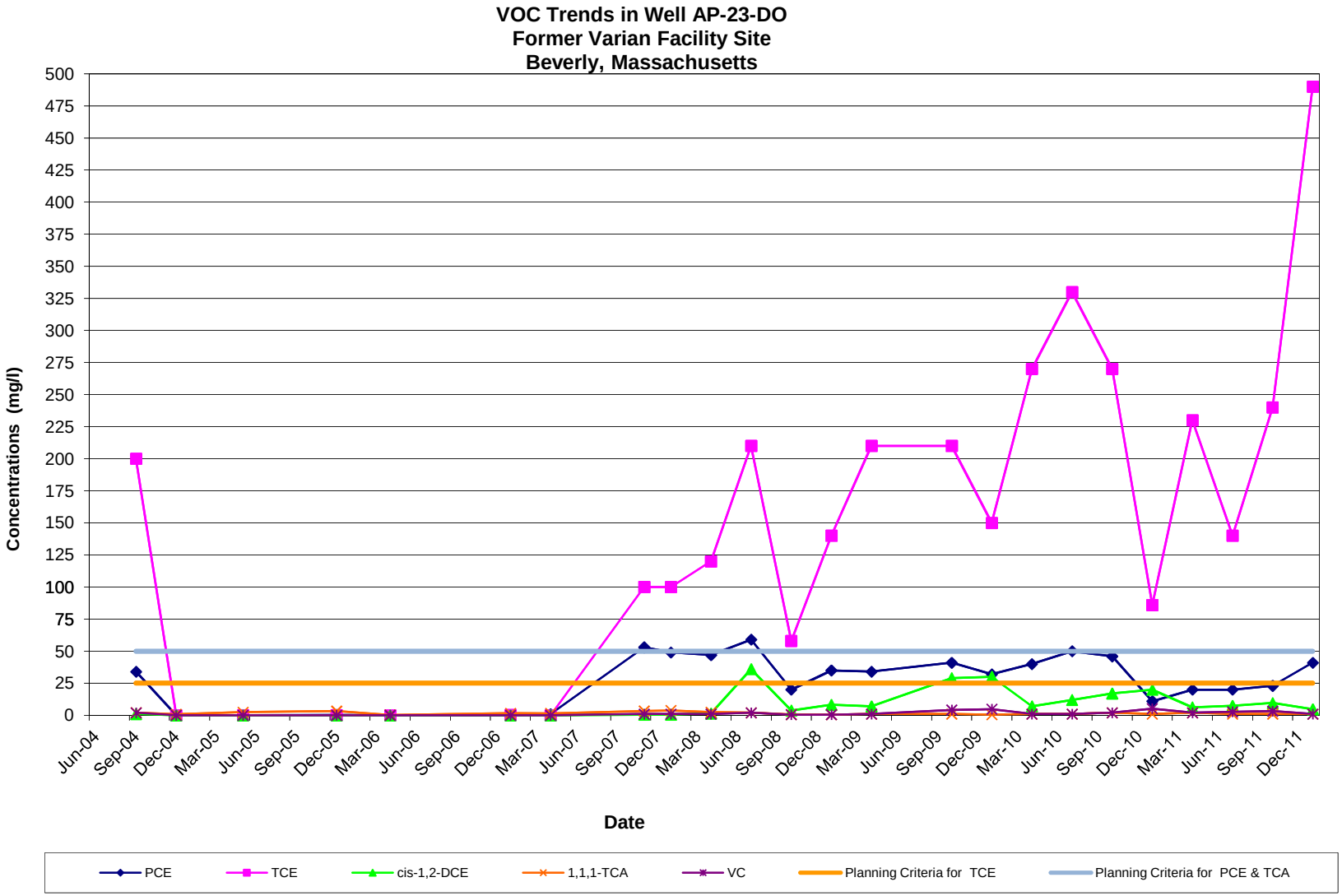


Notes: AP-12-DO is a deep overburden well adjacent to Building 6 where permanganate injection was conducted in 2002, 2003, and 2004.
See end of appendix for additional notes.

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 and 2010-2011. See end of appendix for additional notes.



Notes: AP23-DO is a deep overburden well northeast of Building 3.
Permanganate injection conducted in 2003-2004 and bio-injection performed in 2007-2008 and 2010-2011.
See end of appendix for additional notes.

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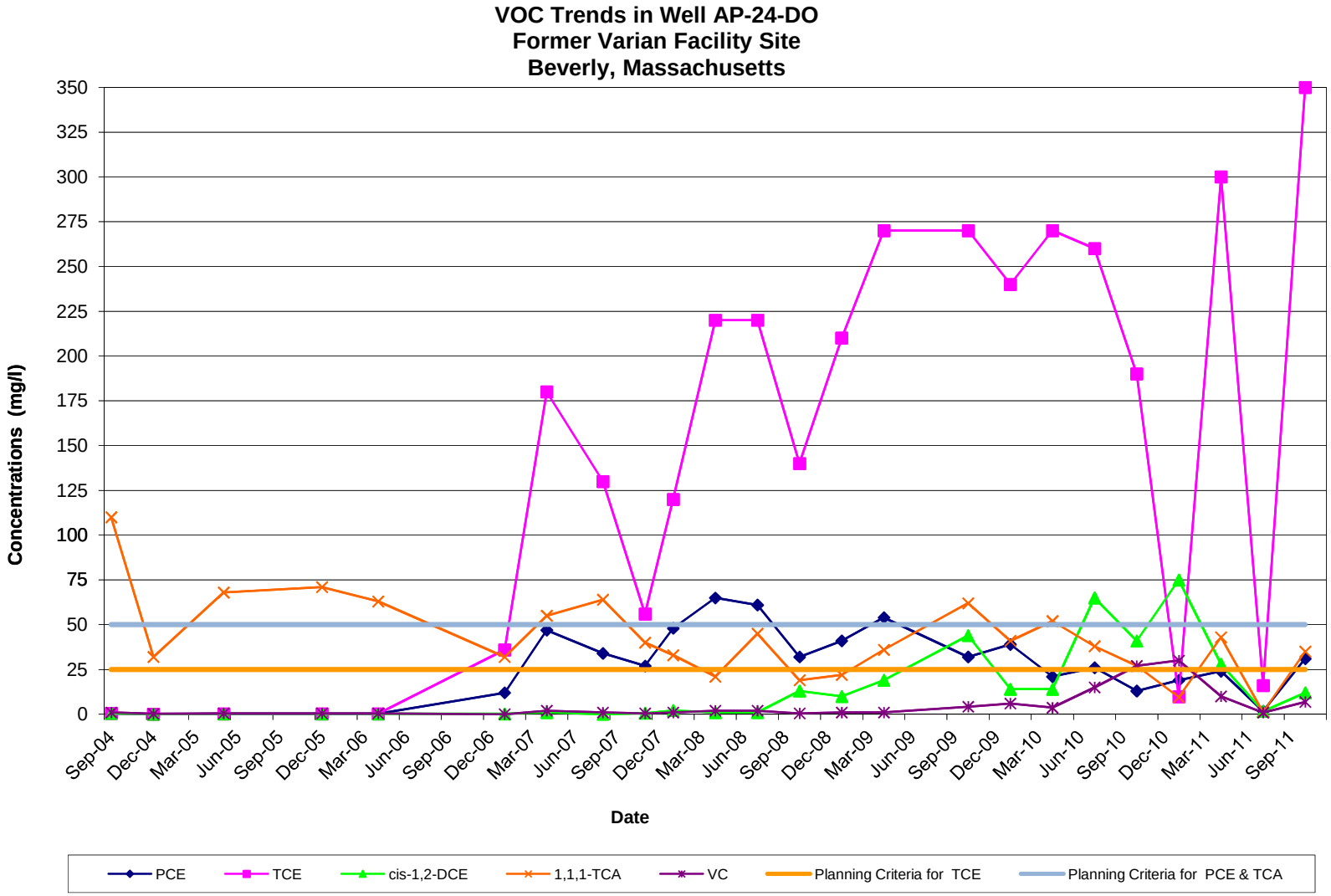

Notes: AP24-DO is a deep overburden well northeast of Building 3.
Permangante injection was conducted in 2003-2004 and bio-injection in 2006-2008 and 2010-2011.
See end of appendix for additional notes.

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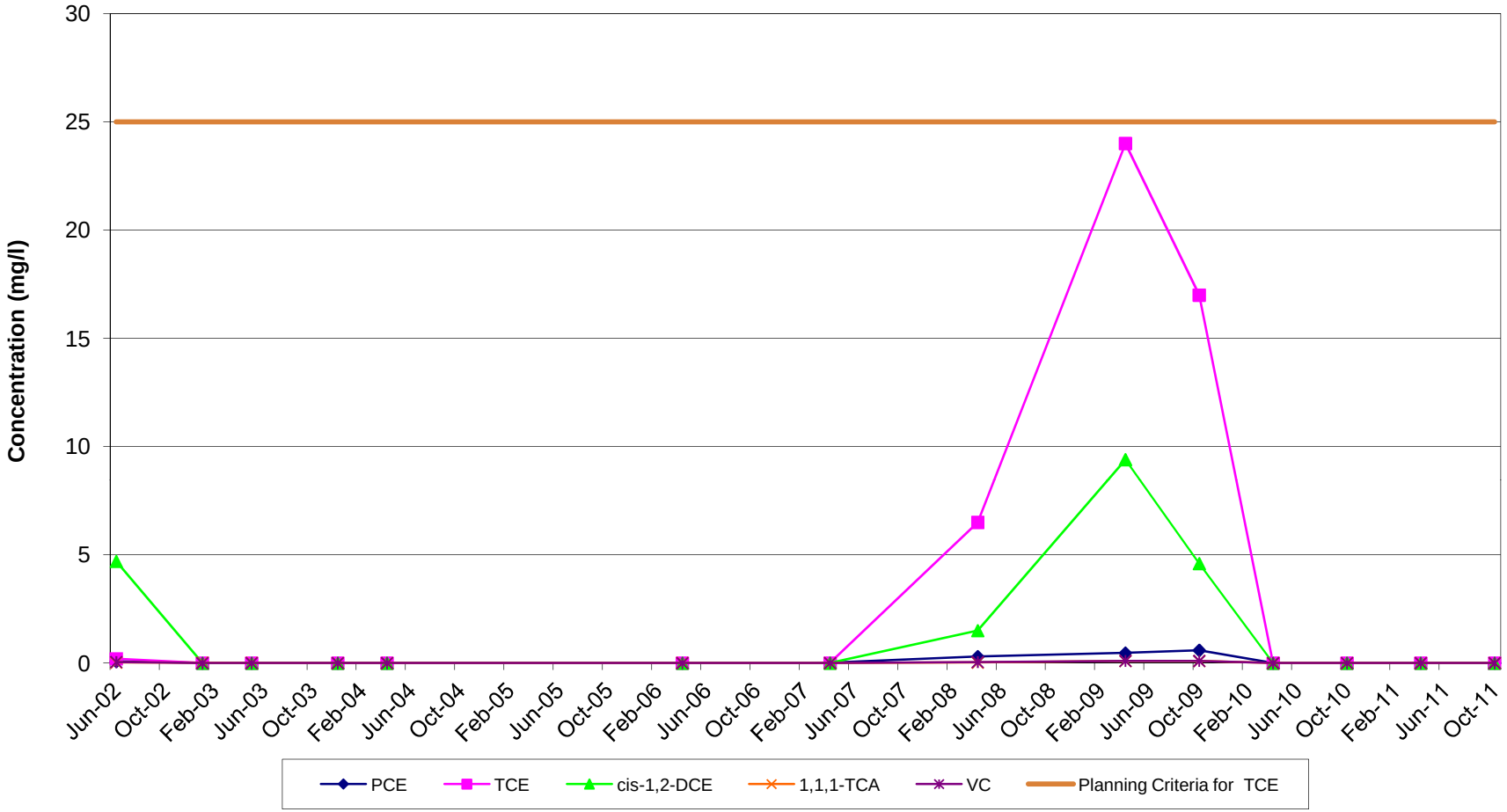
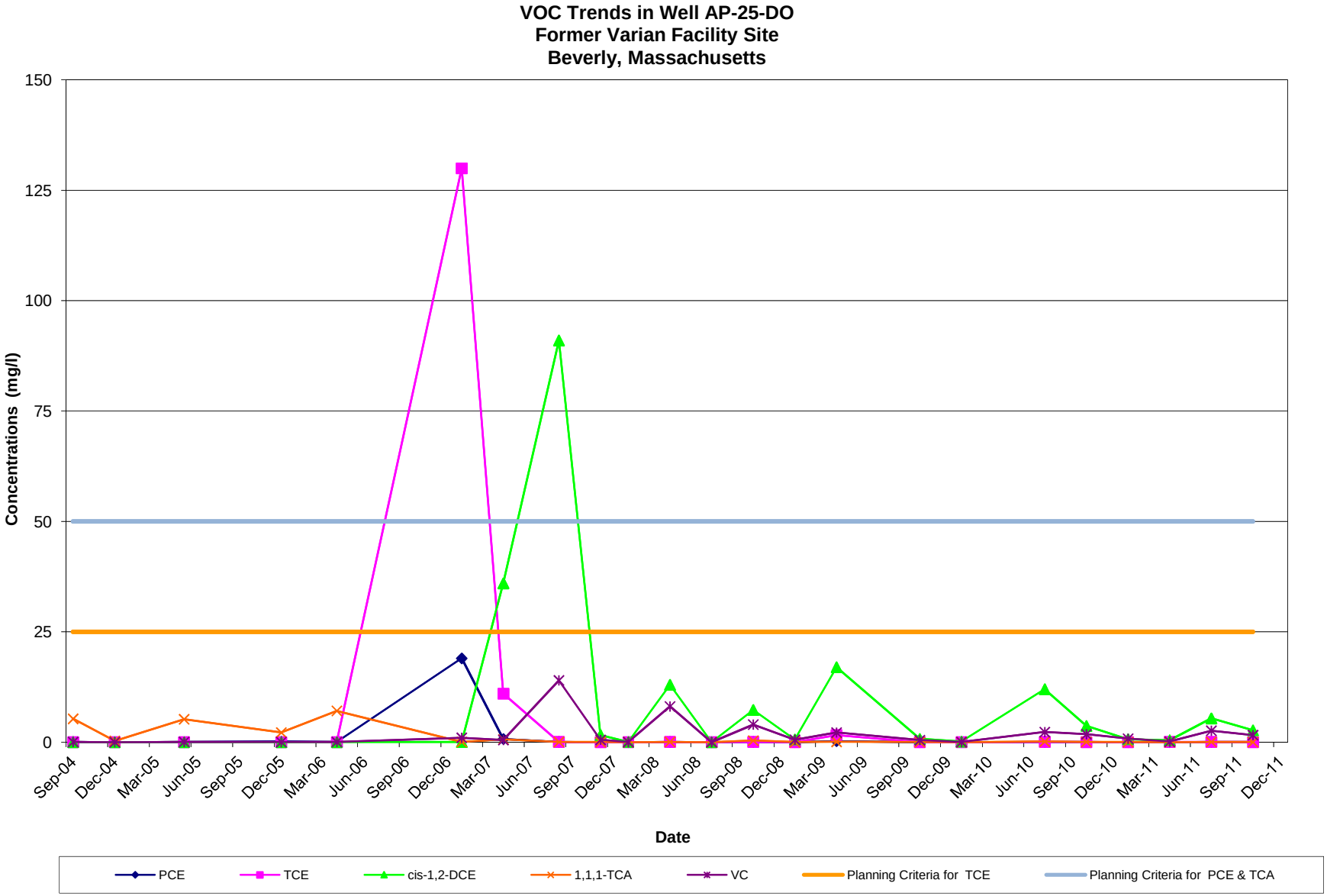
VOC Trends in Well AP-12-BR
Former Varian Facility Site
Beverly, Massachusetts



Notes: AP-12-DO is a deep overburden well adjacent to Building 6.
Permanganate injection conducted in 2002, 2003, 2004 and 2010.
See end of appendix for additional notes.



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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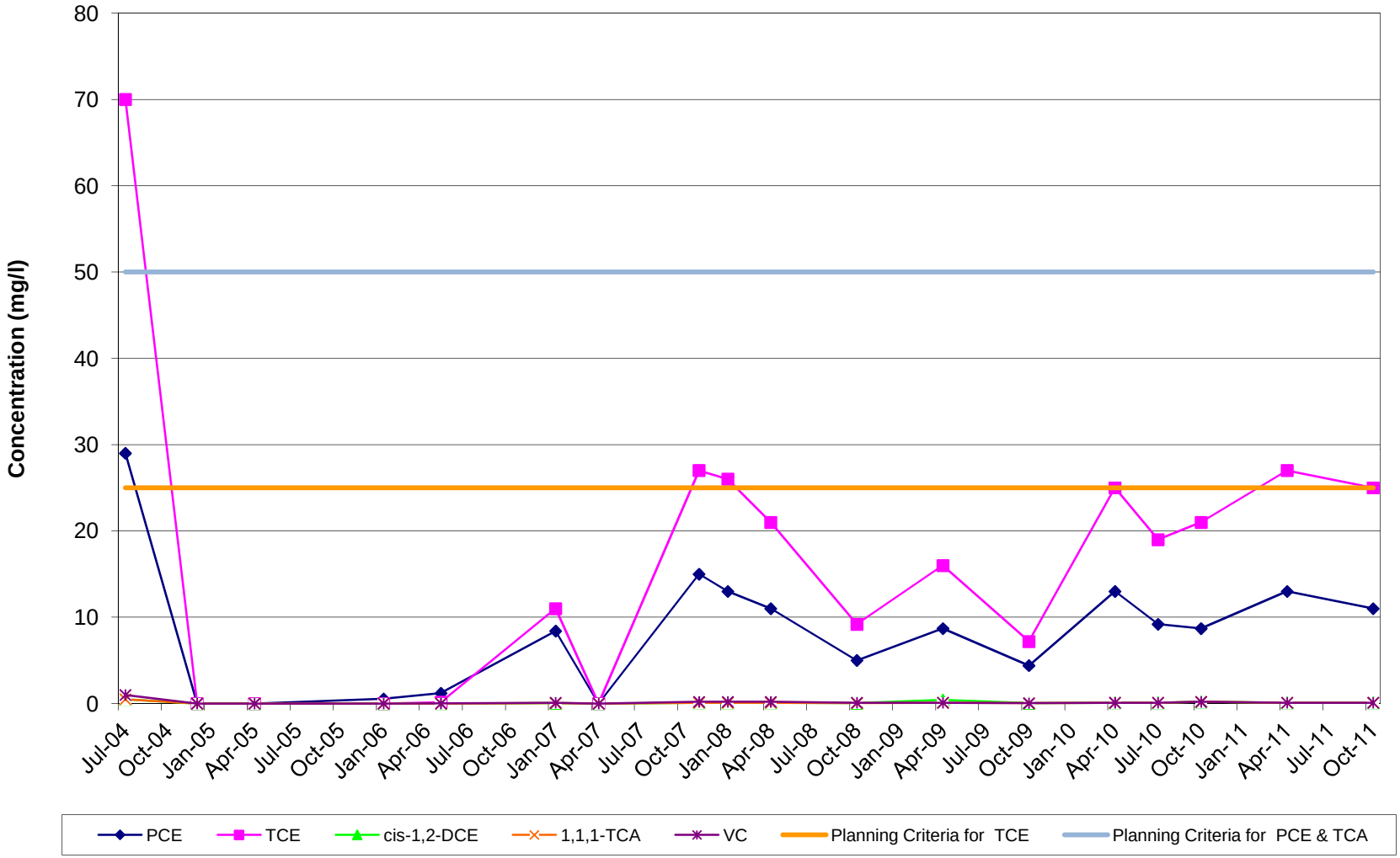
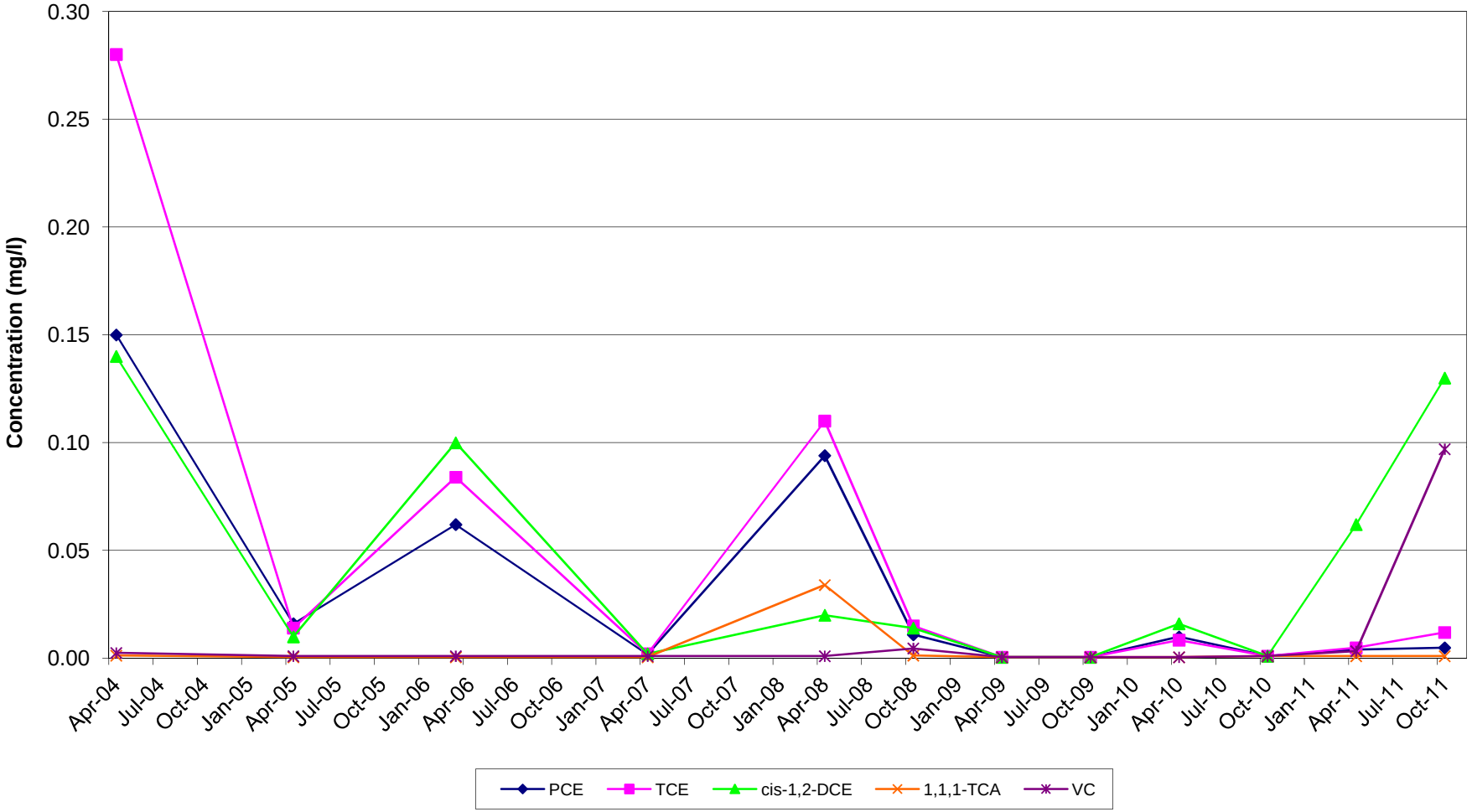
VOC Trends in Well AP-26-DO
Former Varian Facility Site
Beverly, Massachusetts



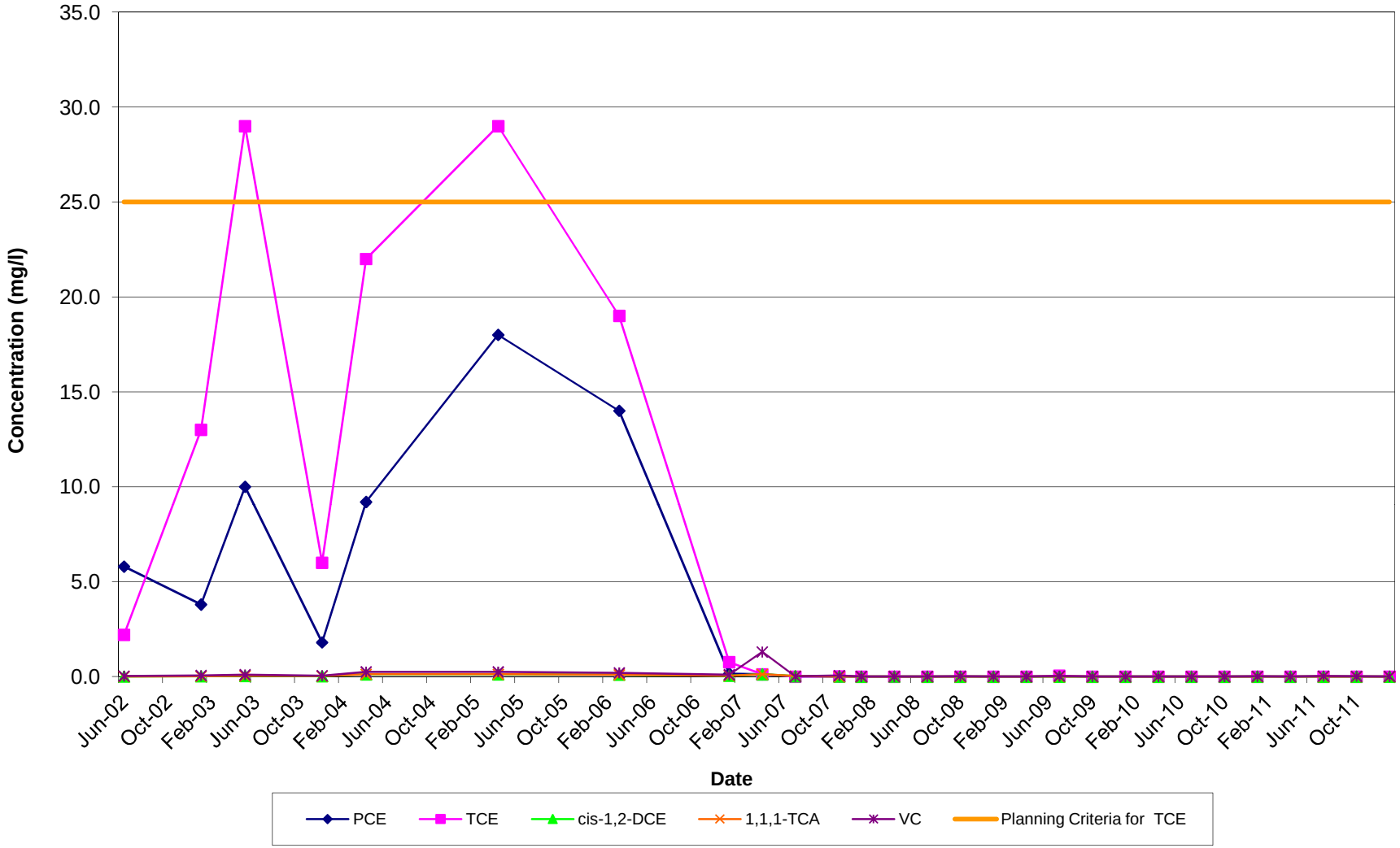
Notes: AP-26-DO is a deep overburden well just west of Building 1 where permanganate injection was conducted in 2004.
See end of appendix for additional notes.

VOC Trends in Well MW-009A
Former Varian Facility Site
Beverly, Massachusetts



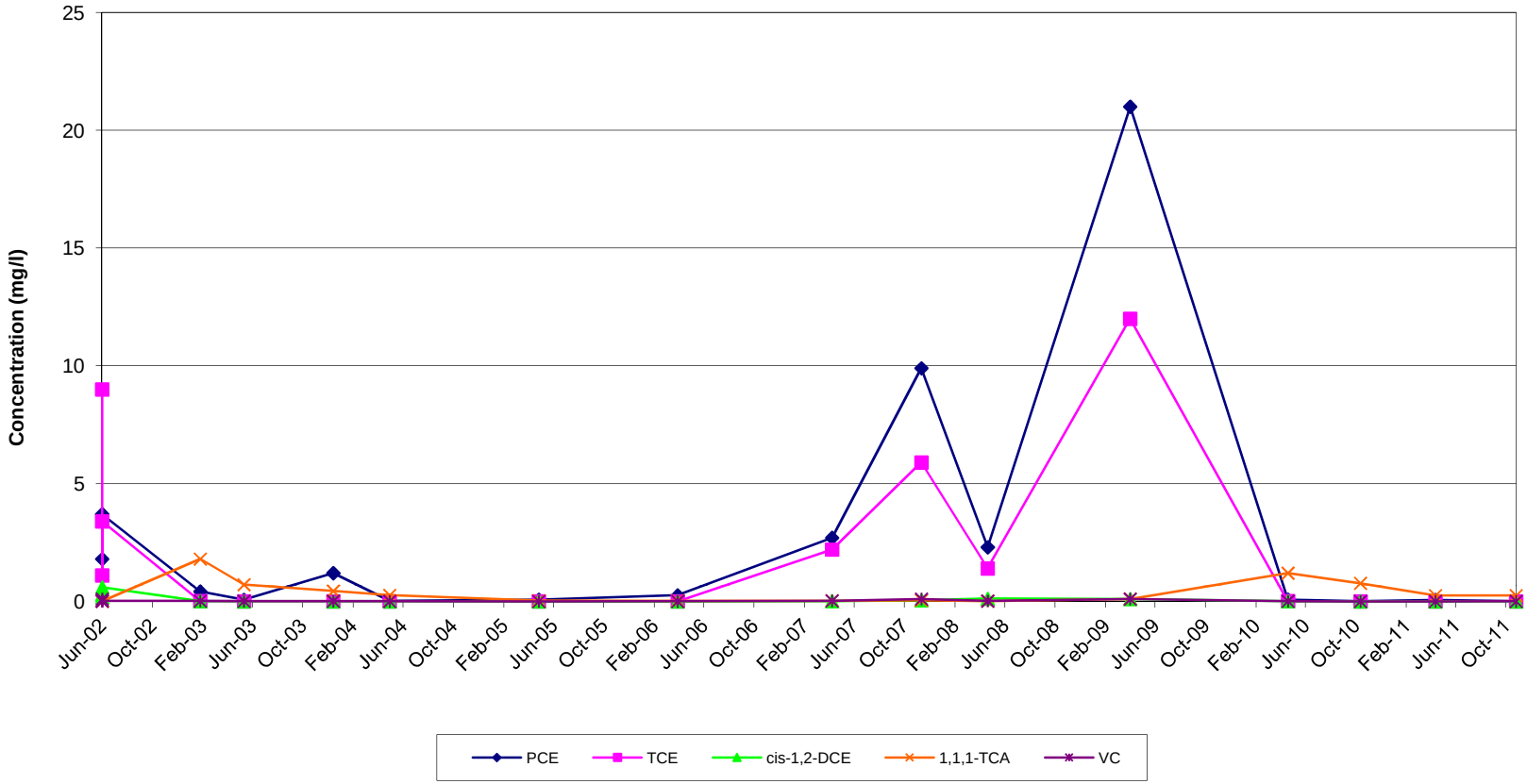
Notes: MW-9A is a shallow overburden well adjacent to Building 9.
See end of appendix for additional notes.

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 and 2009.
See end of appendix for additional notes.

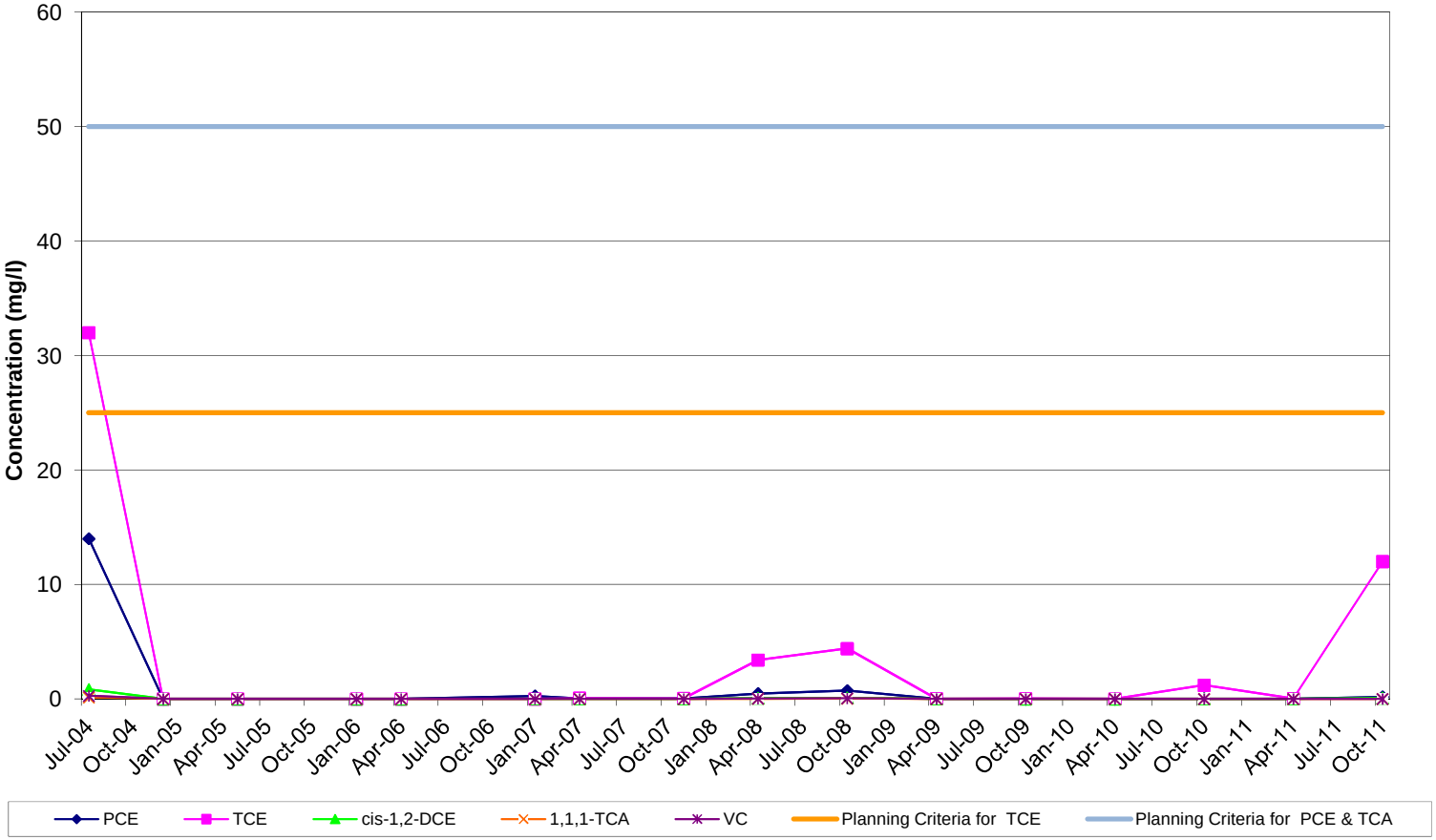
VOC Trends in Well MW-013
Former Varian Facility Site
Beverly, Massachusetts



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.

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 and 2005.
See end of appendix for additional notes.

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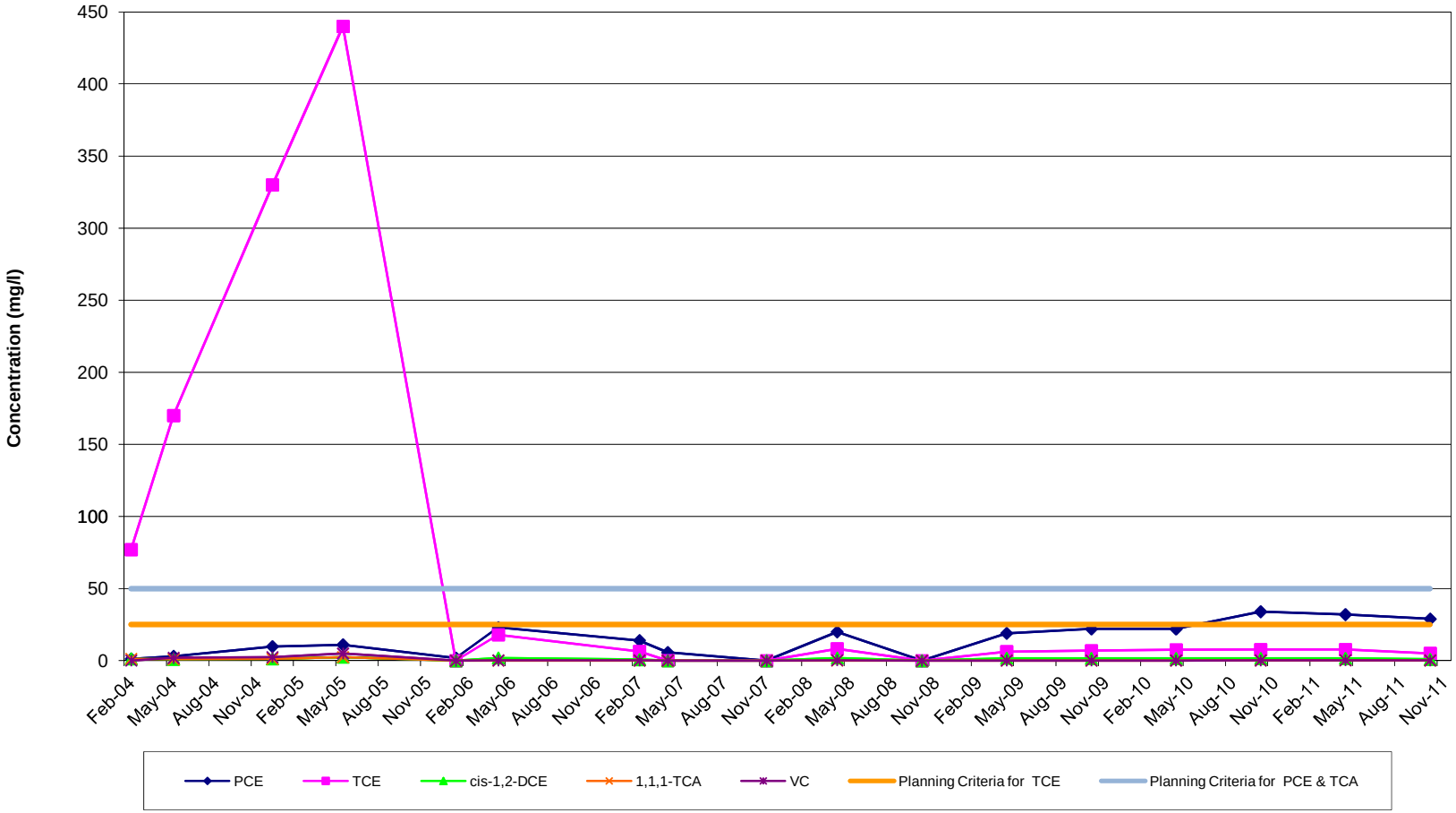
VOC Trends in Well OB-35-DO
Former Varian Facility Site
Beverly, Massachusetts



Notes: OB35-DO is a deep overburden well inside Building 5 where permanganate injection was conducted from 2005 to 2008.
See end of appendix for additional notes.

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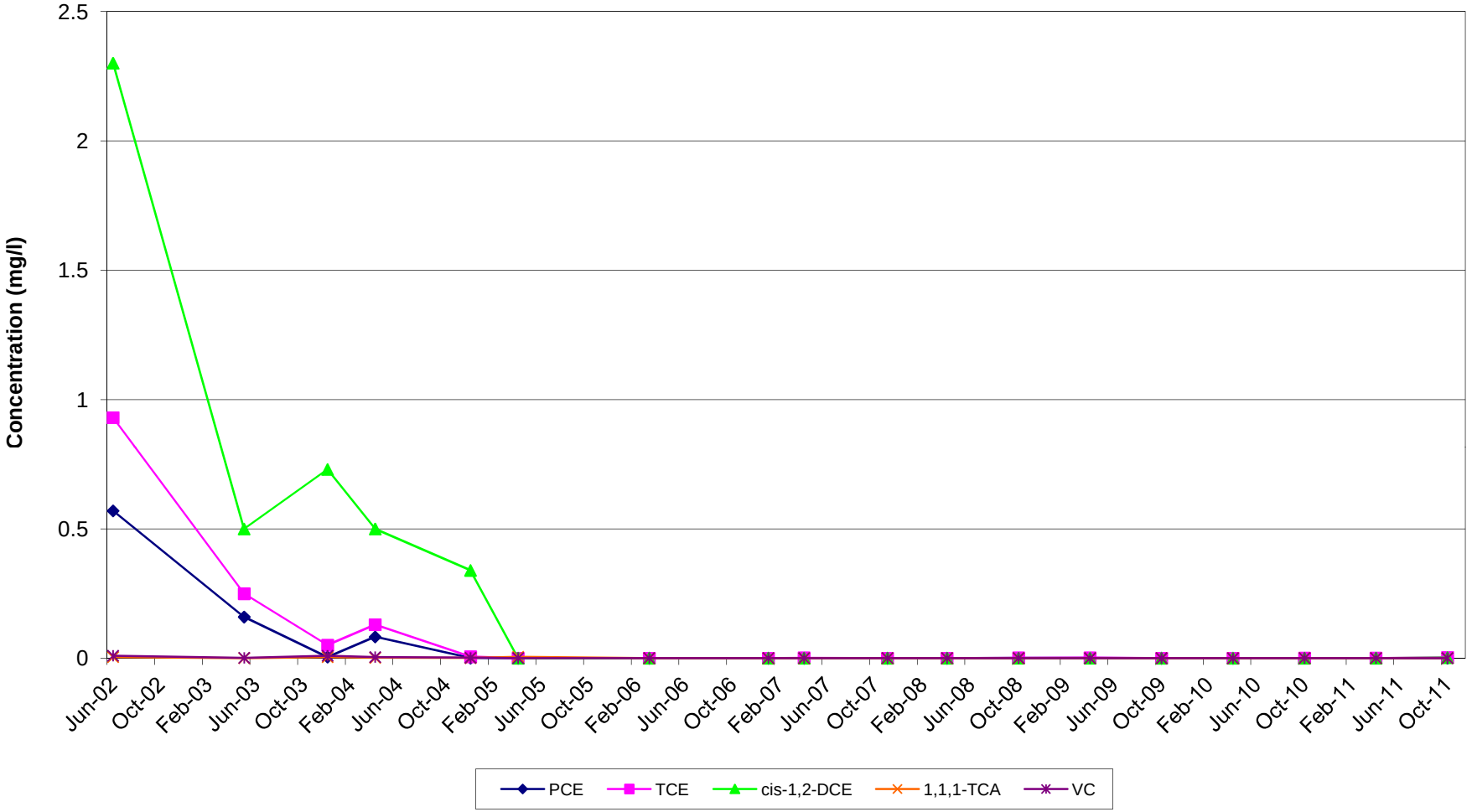
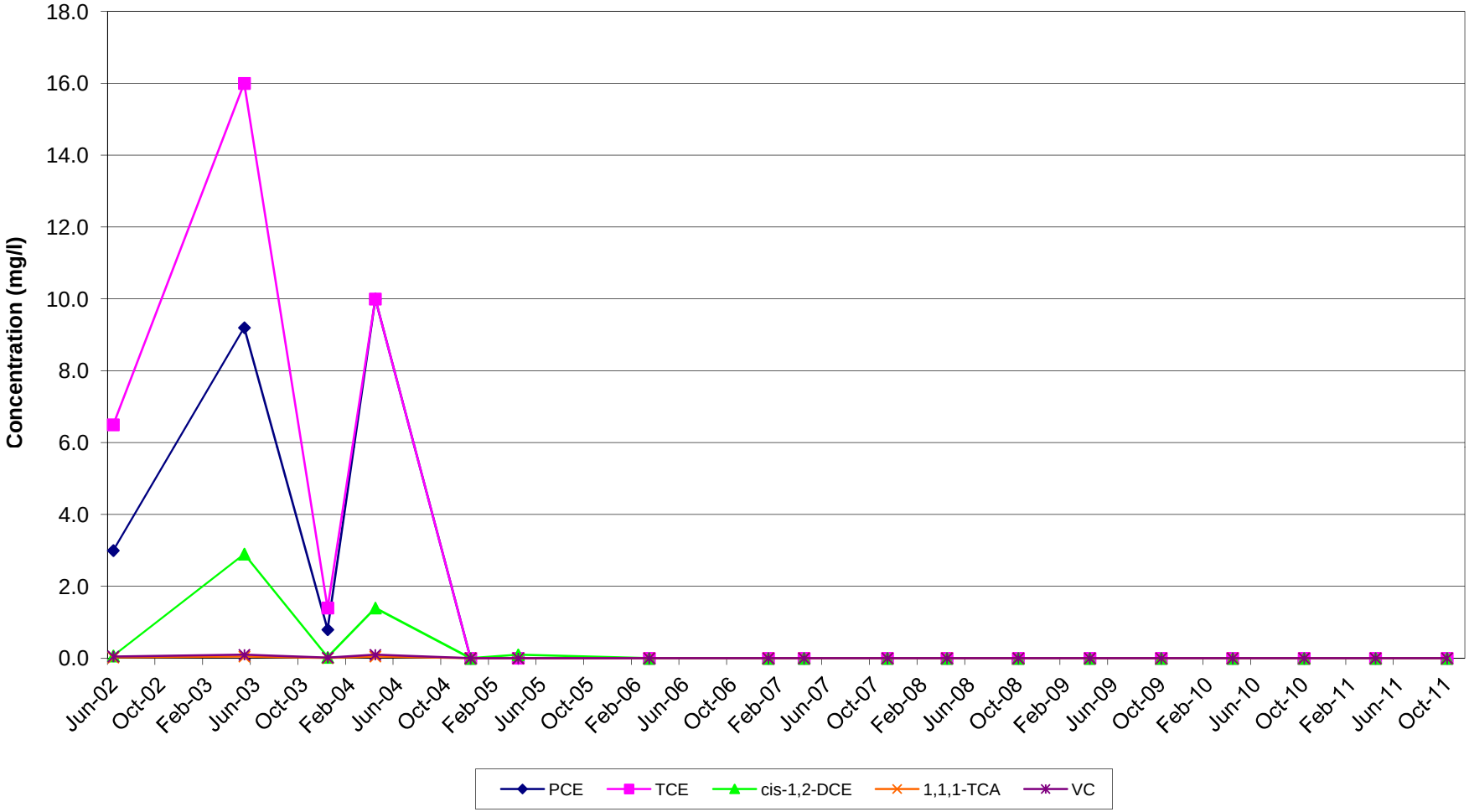
PSL-10 TREATMENT AREA

VOC Trends in Well CL10-BR
Former Varian Facility Site
Beverly, Massachusetts



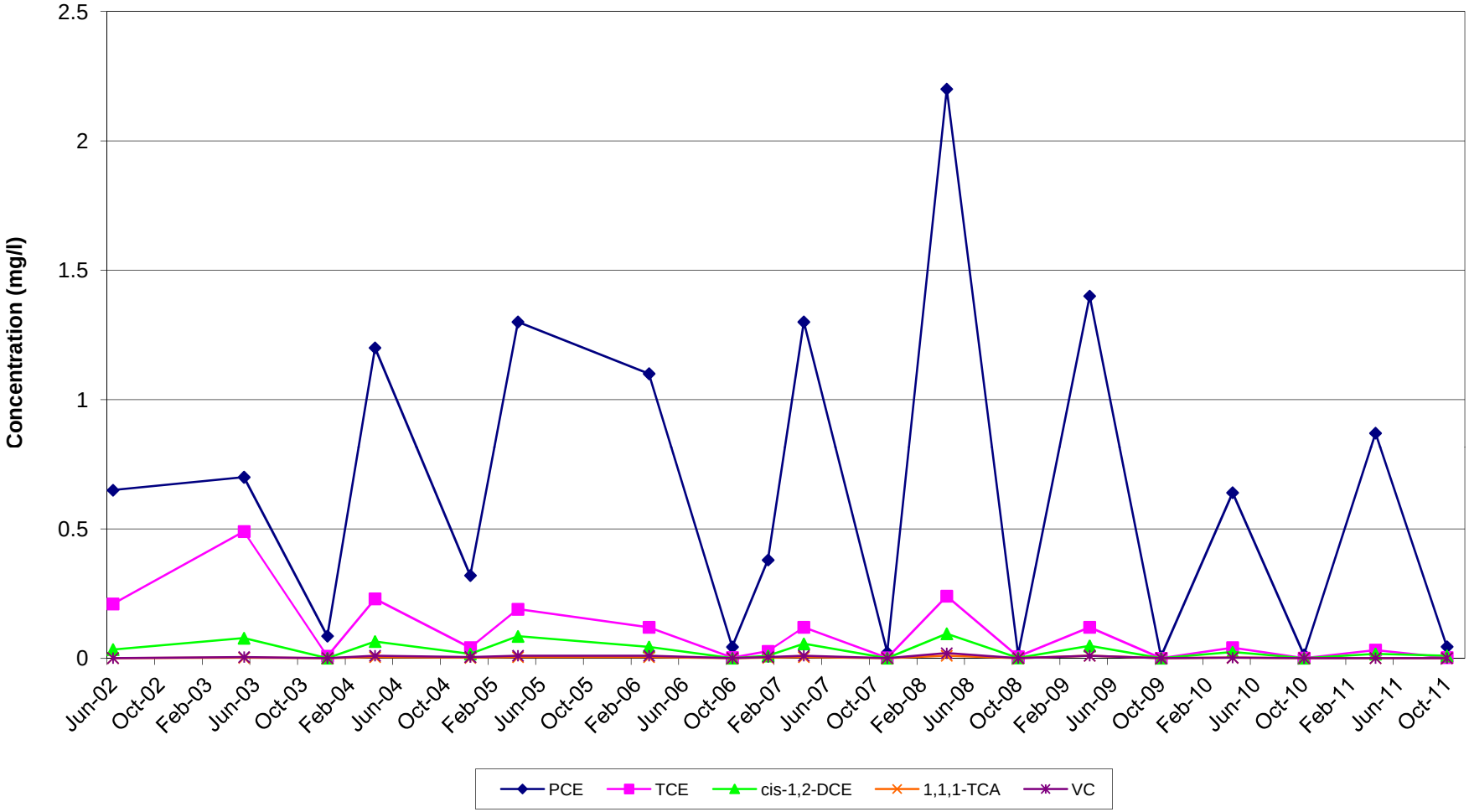
Notes: CL10-BR is a bedrock well located in the PSL10 treatment area, south of the facility. See end of appendix for additional notes.

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.

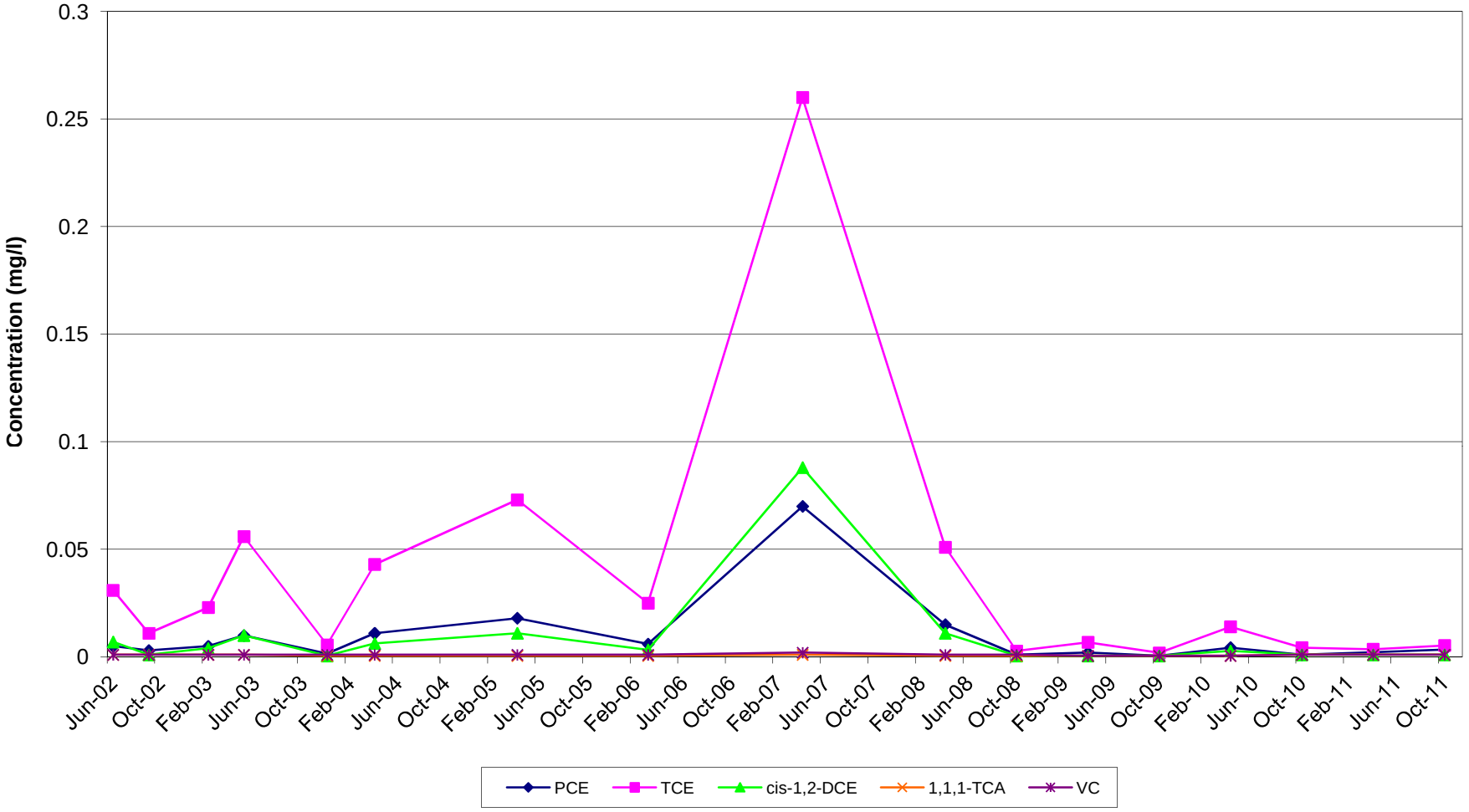
VOC Trends in Well CL10-S
Former Varian Facility Site
Beverly, Massachusetts



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.

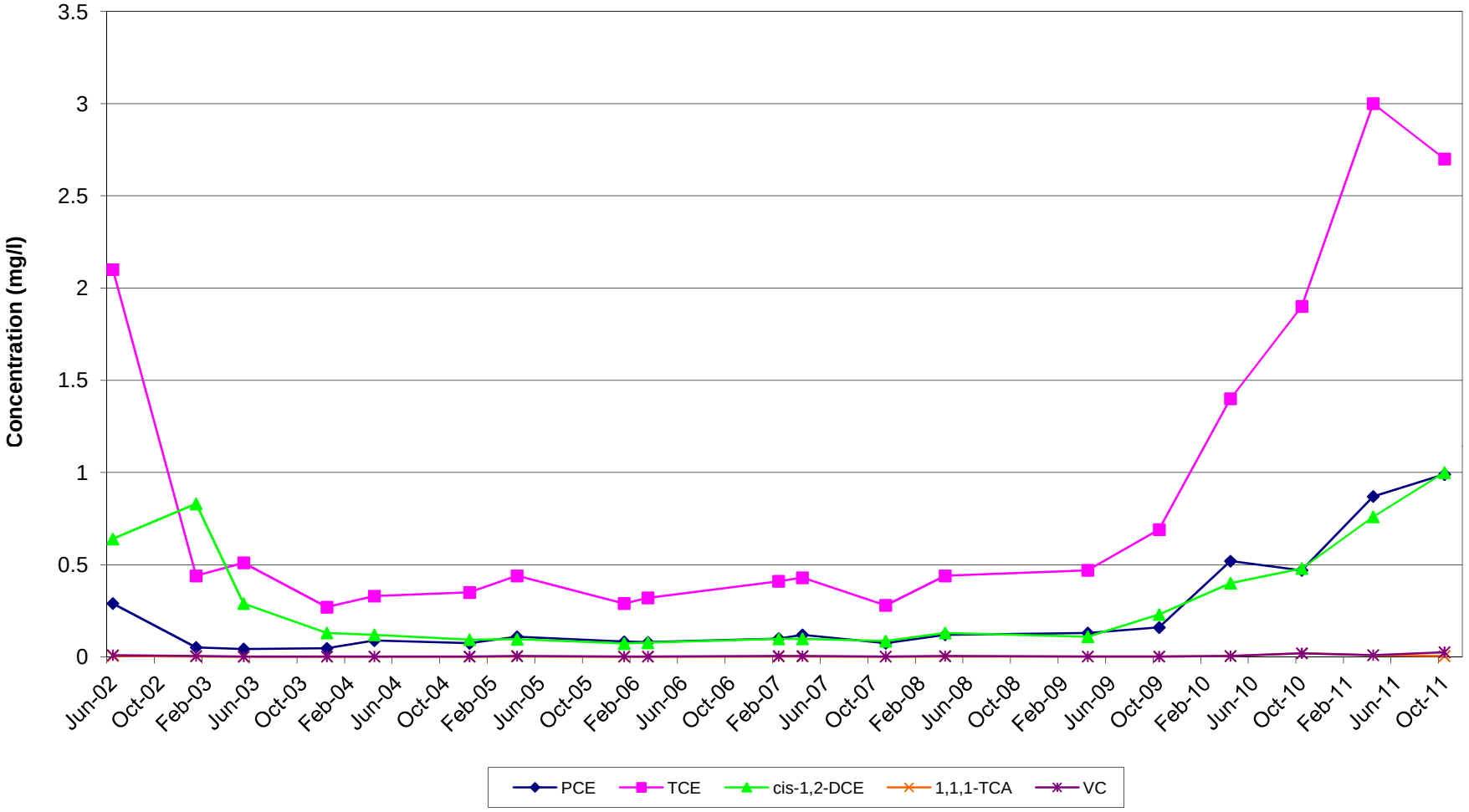
TOZER ROAD TREATMENT AREA SOUTH OF ROUTE 128

VOC Trends in Well OB-05-S
Former Varian Facility Site
Beverly, Massachusetts



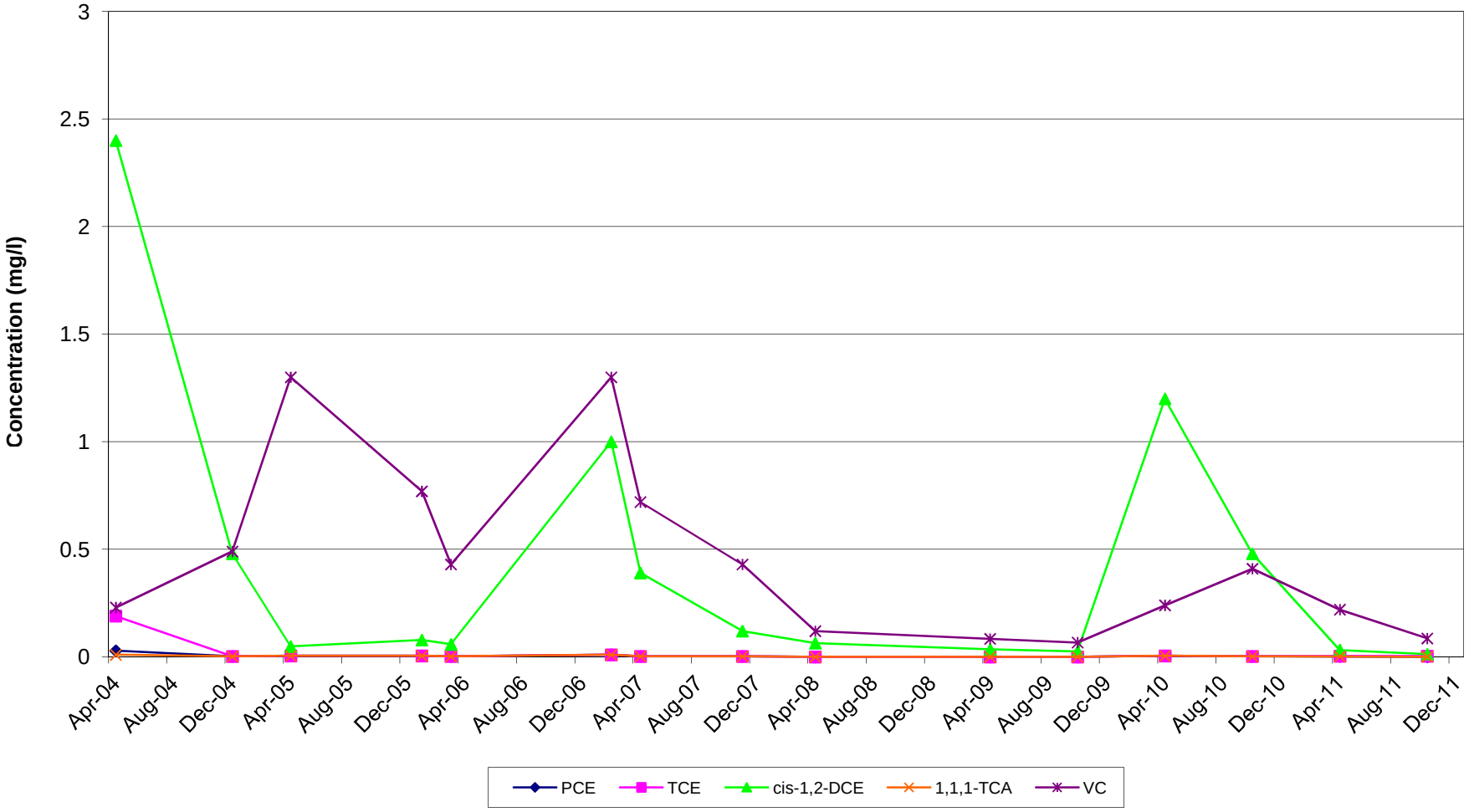
Note: OB-5-S is a shallow well south of the 28 Tozer Road treatment area.
See end of appendix for additional notes.

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.

VOC Trends in Well OB-05-BR
Former Varian Facility Site
Beverly, Massachusetts



Note: OB-5-BR is a bedrock well south of the 28 Tozer Road treatment area.
See end of appendix for additional notes.

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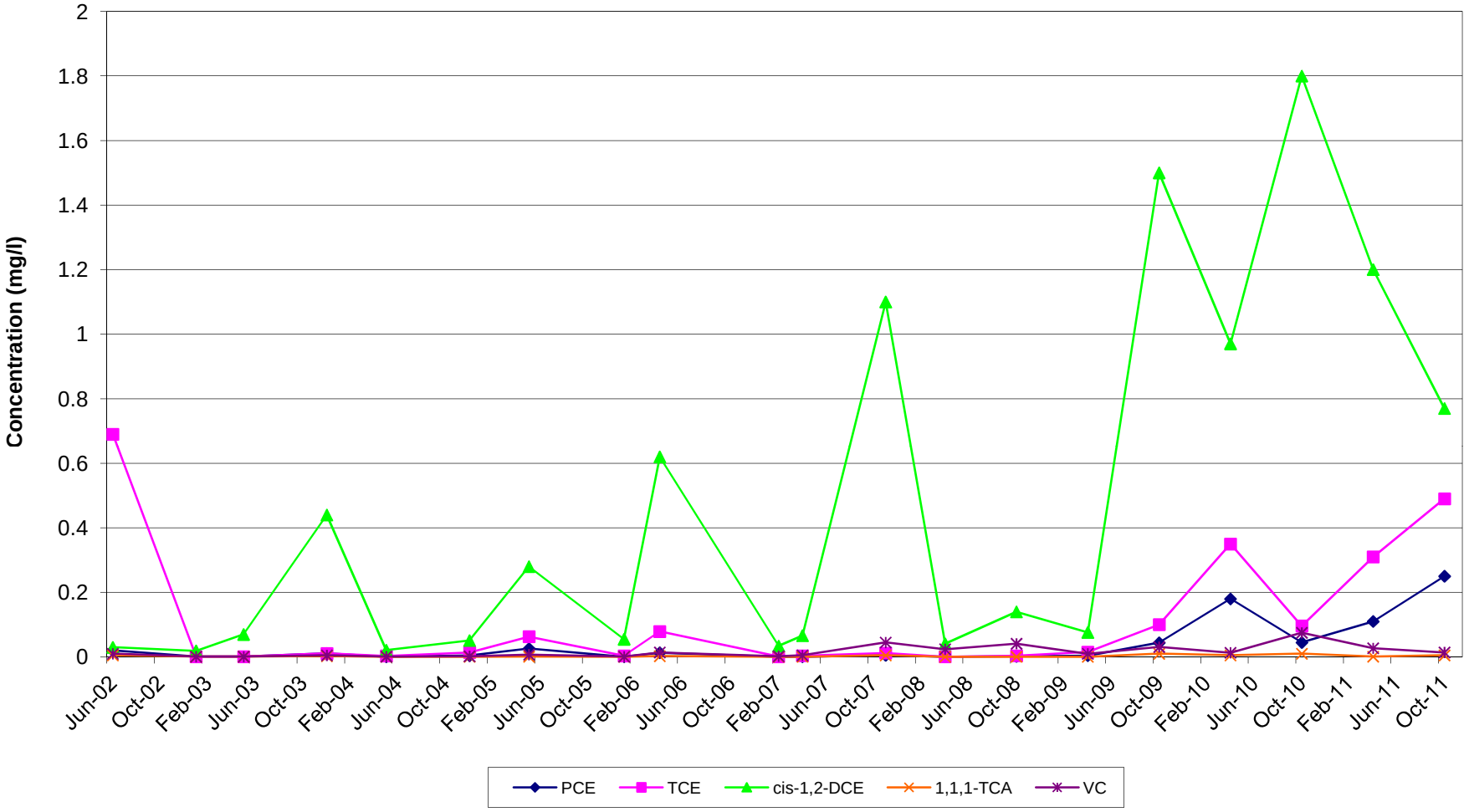
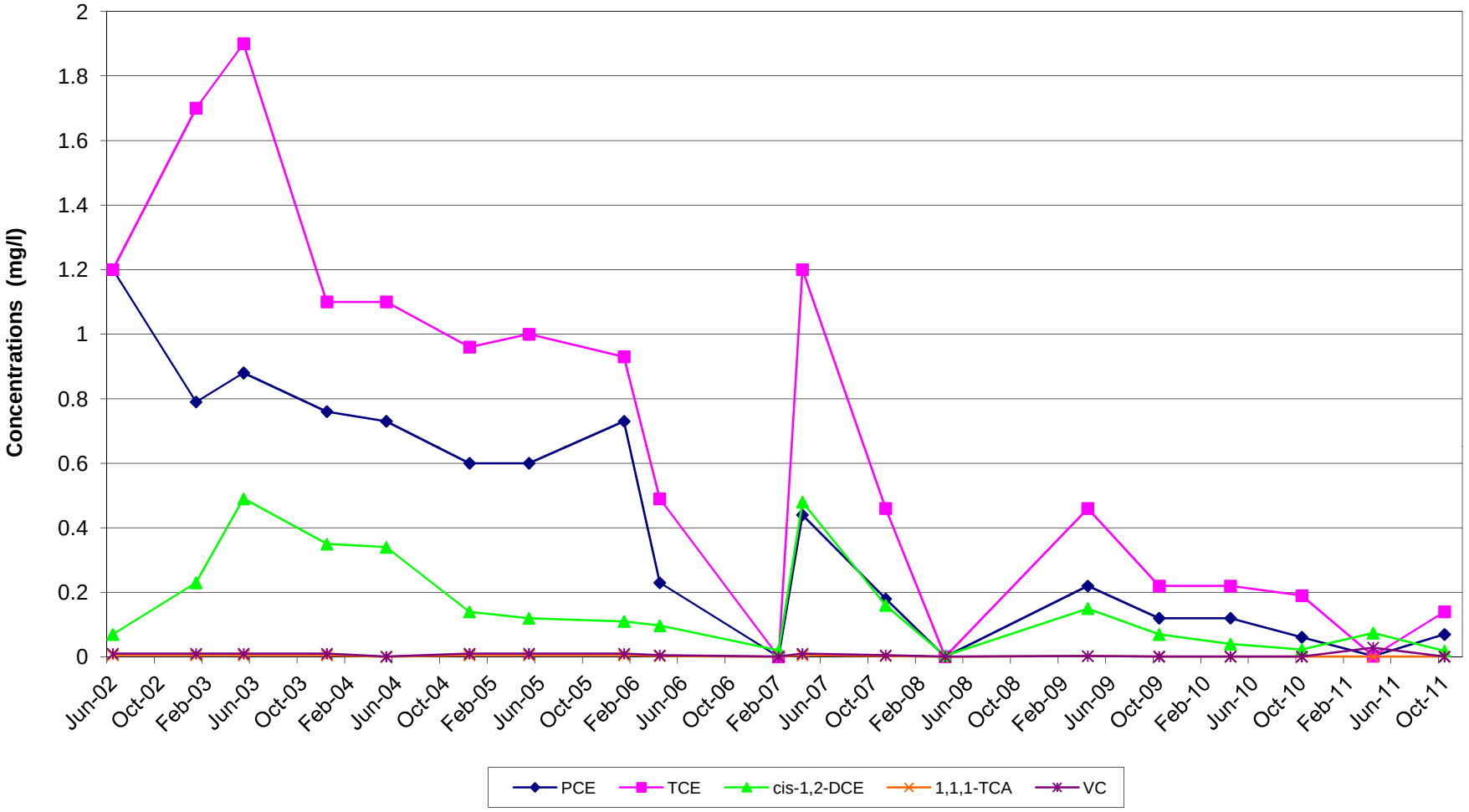
VOC Trends in Well OB-06-DO
Former Varian Facility Site
Beverly, Massachusetts



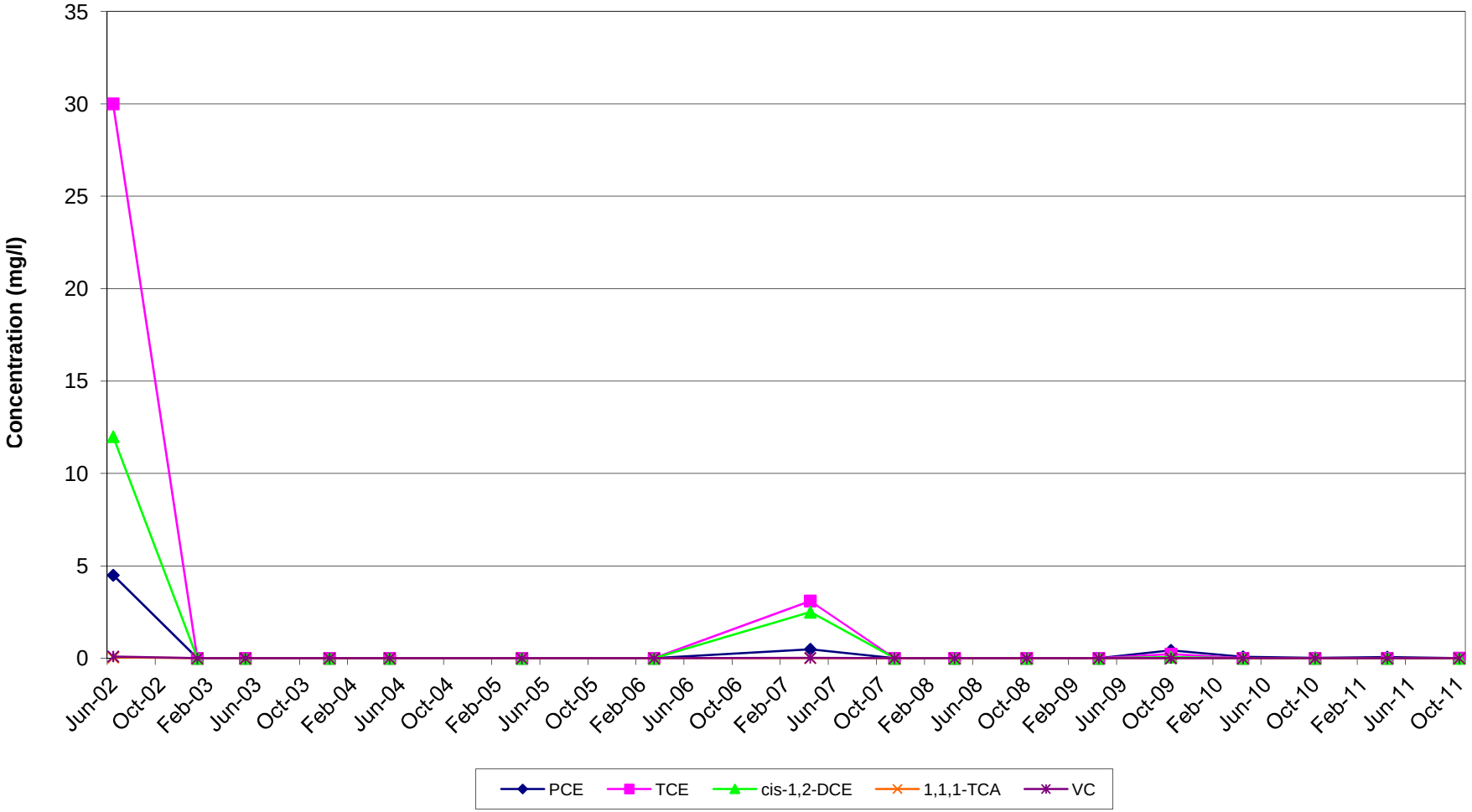
Note: OB-6-DO is a deep overburden well west of the 28 Tozer Road treatment area on Sonning Road.
See end of appendix for additional notes.

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.

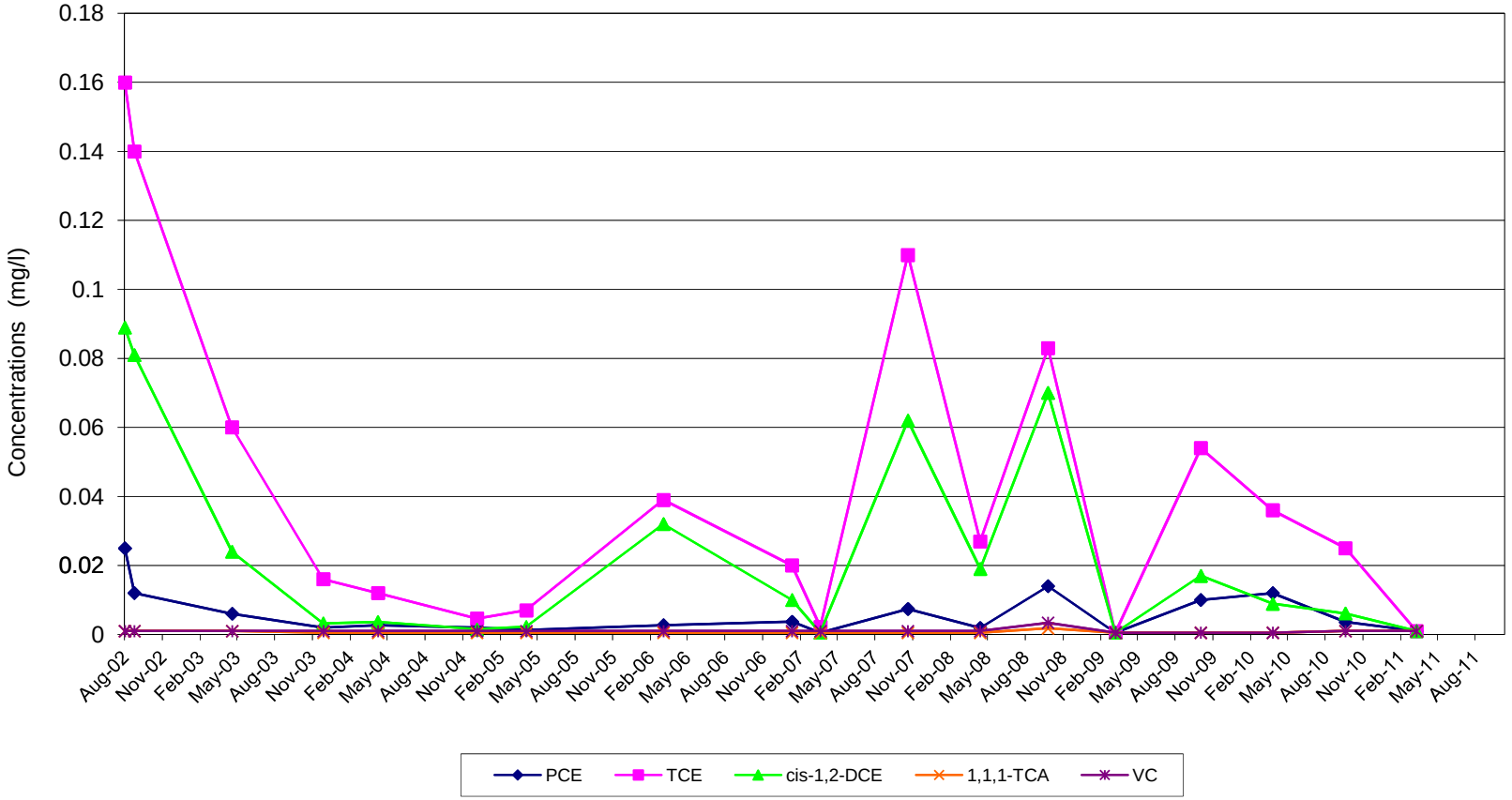
VOC Trends in Well CL03-DO
Former Varian Facility Site
Beverly, Massachusetts



Notes: CL3-DO is a deep overburden well located at 28 Tozer Road where permanganate injection was conducted 2002.
See end of appendix for additional notes.

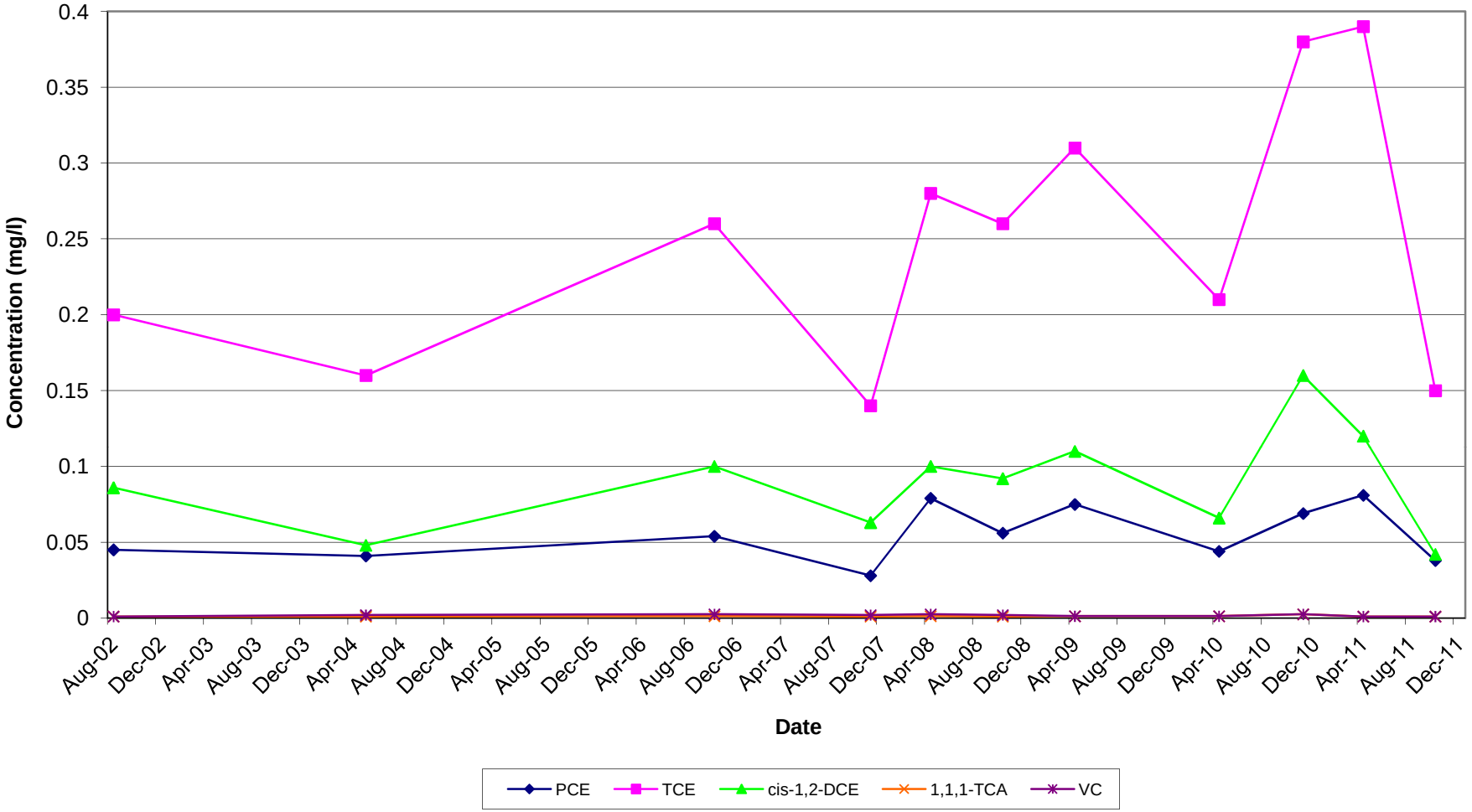
31 TOZER ROAD TREATMENT AREA

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.

VOC Trends in Well OB-08-S
Former Varian Facility Site
Beverly, Massachusetts



Note: OB-08-S is a shallow overburden well located south of 39 Tozer Road.
See end of appendix for additional notes.

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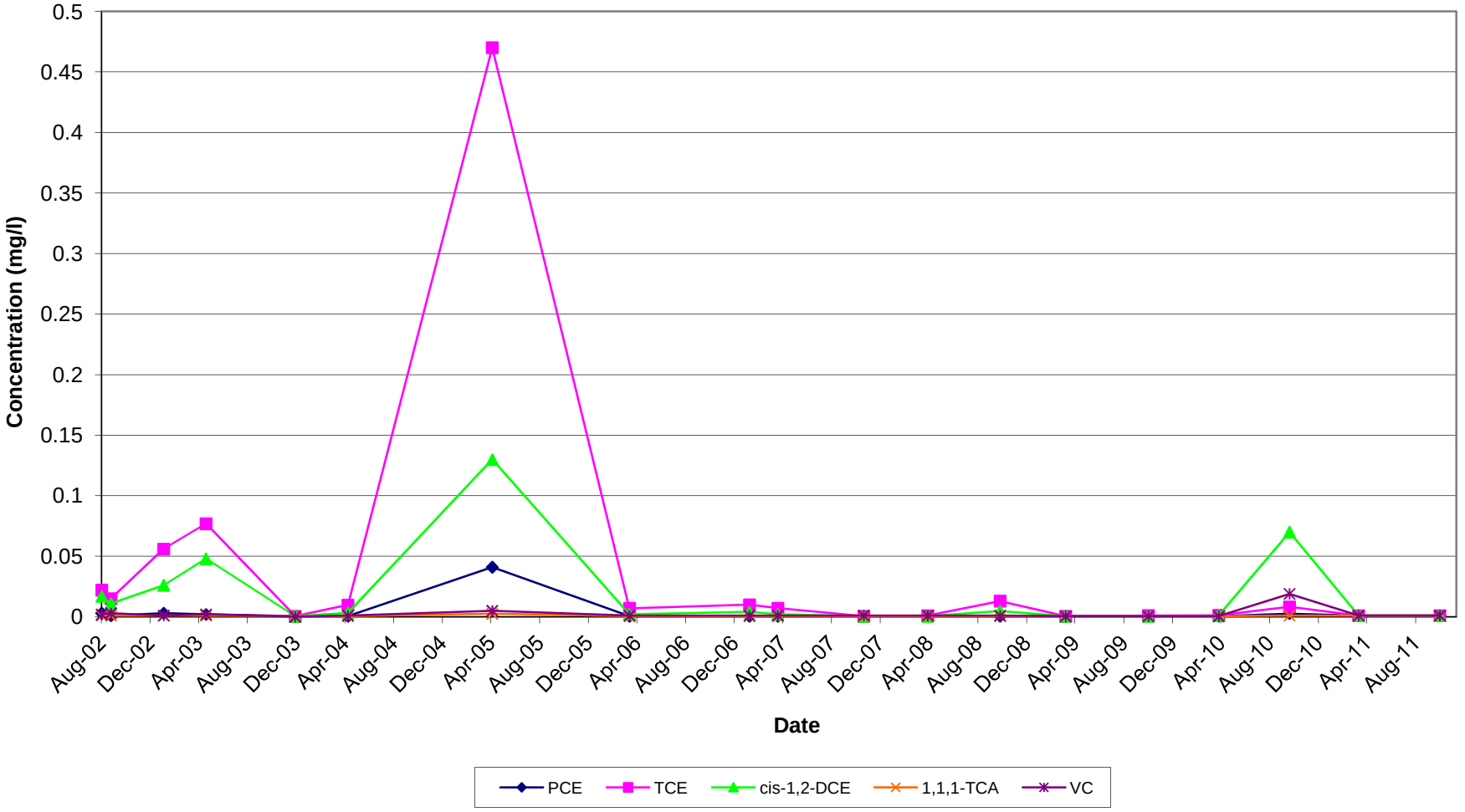
VOC Trends in Well OB-18-S
Former Varian Facility Site
Beverly, Massachusetts



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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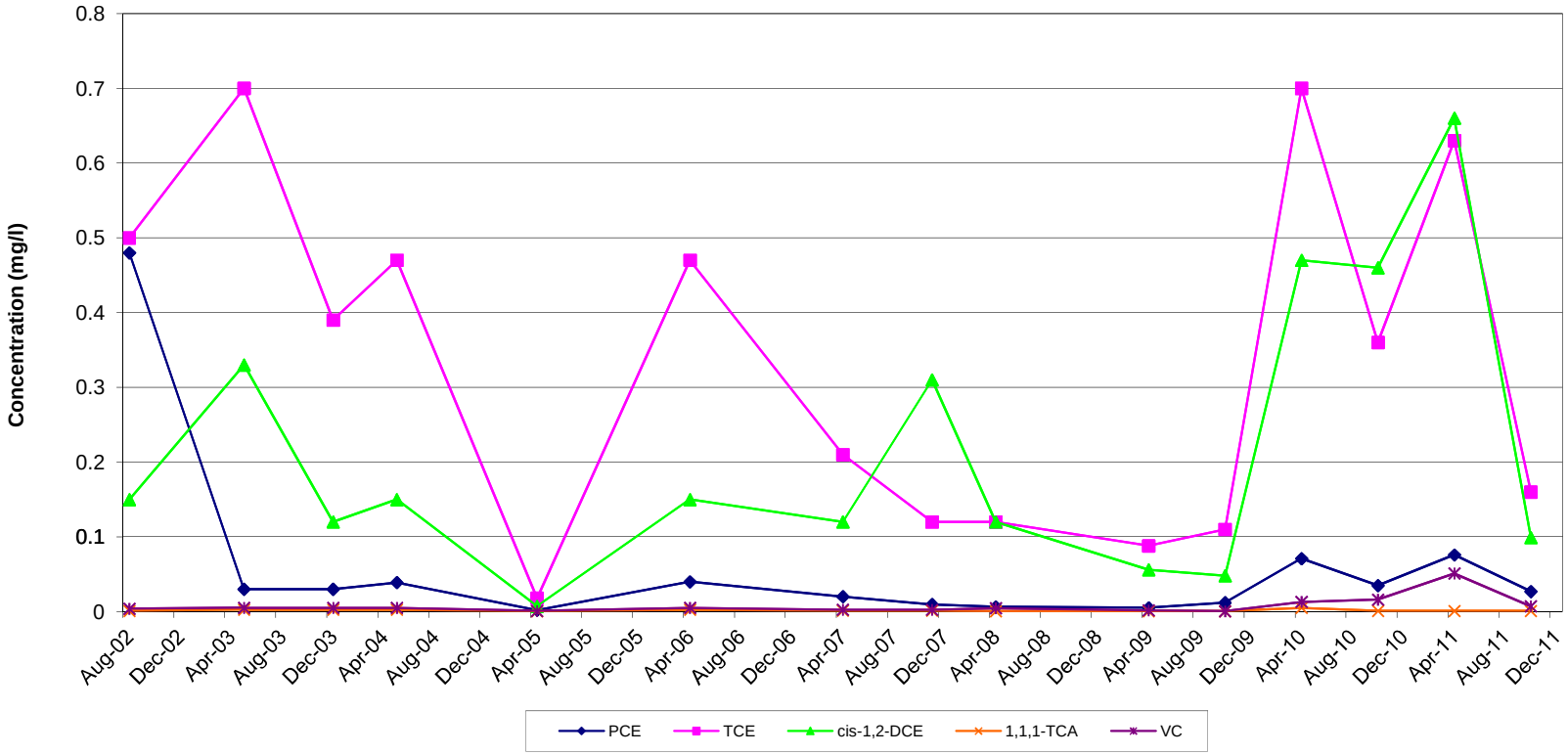
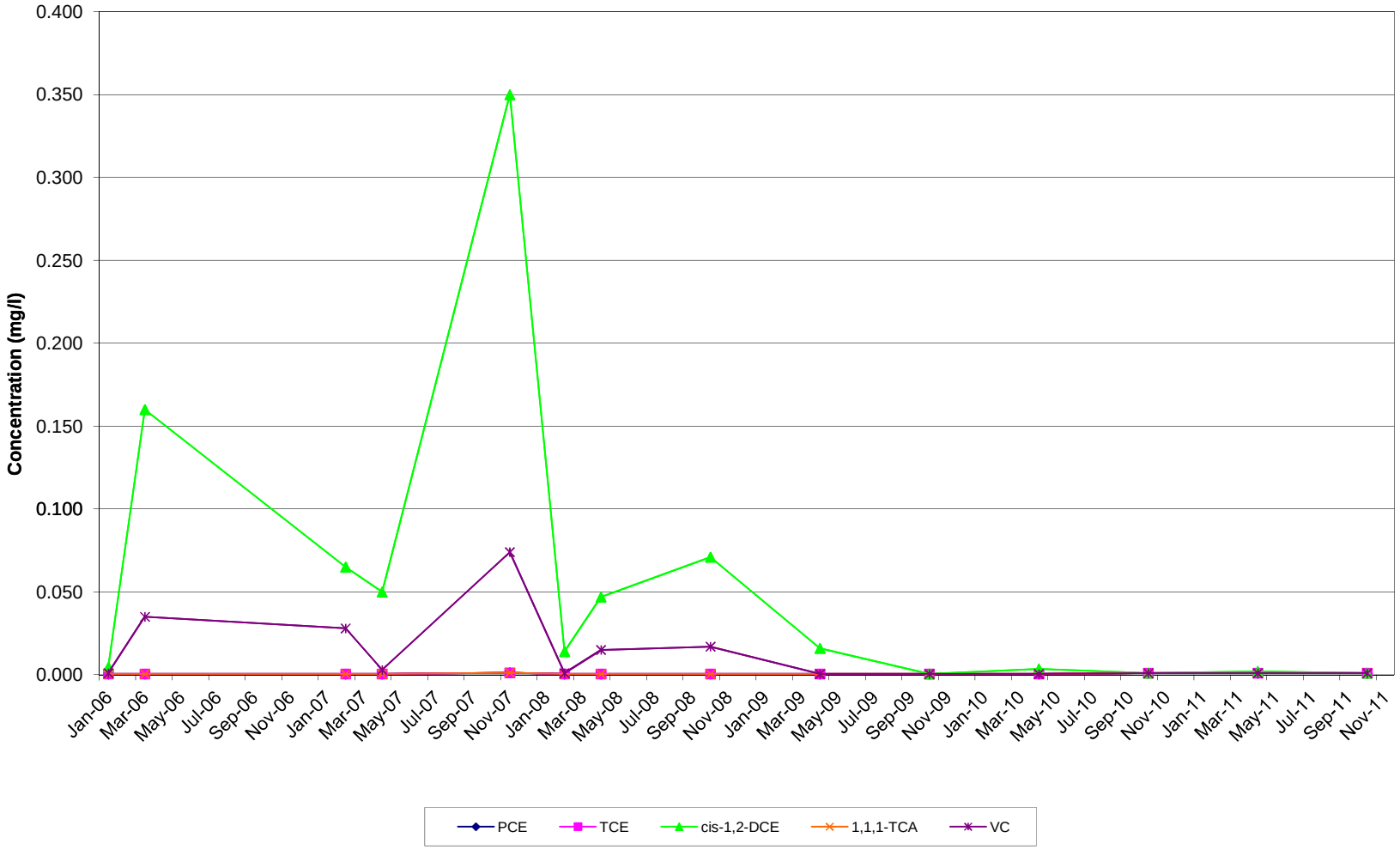
VOC Trends in Well OB-18-DO
Former Varian Facility Site
Beverly, Massachusetts



Notes: OB18-DO is a deep overburden well located at 31 Tozer Road.
See end of appendix for additional notes.

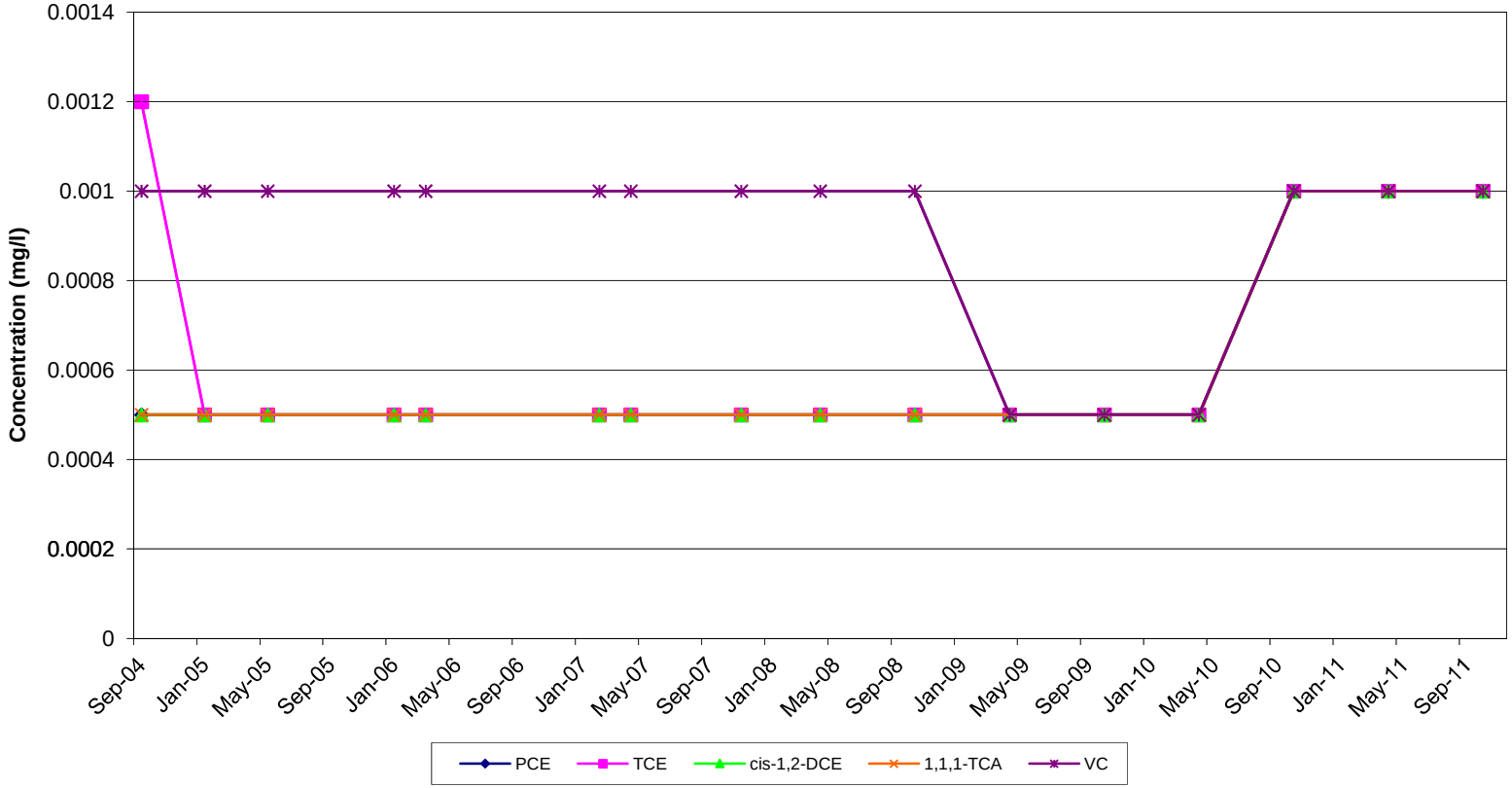
LONGVIEW/HILL STREET TREATMENT AREA

VOC Trends in Well P-9R
Former Varian Facility Site
Beverly, Massachusetts



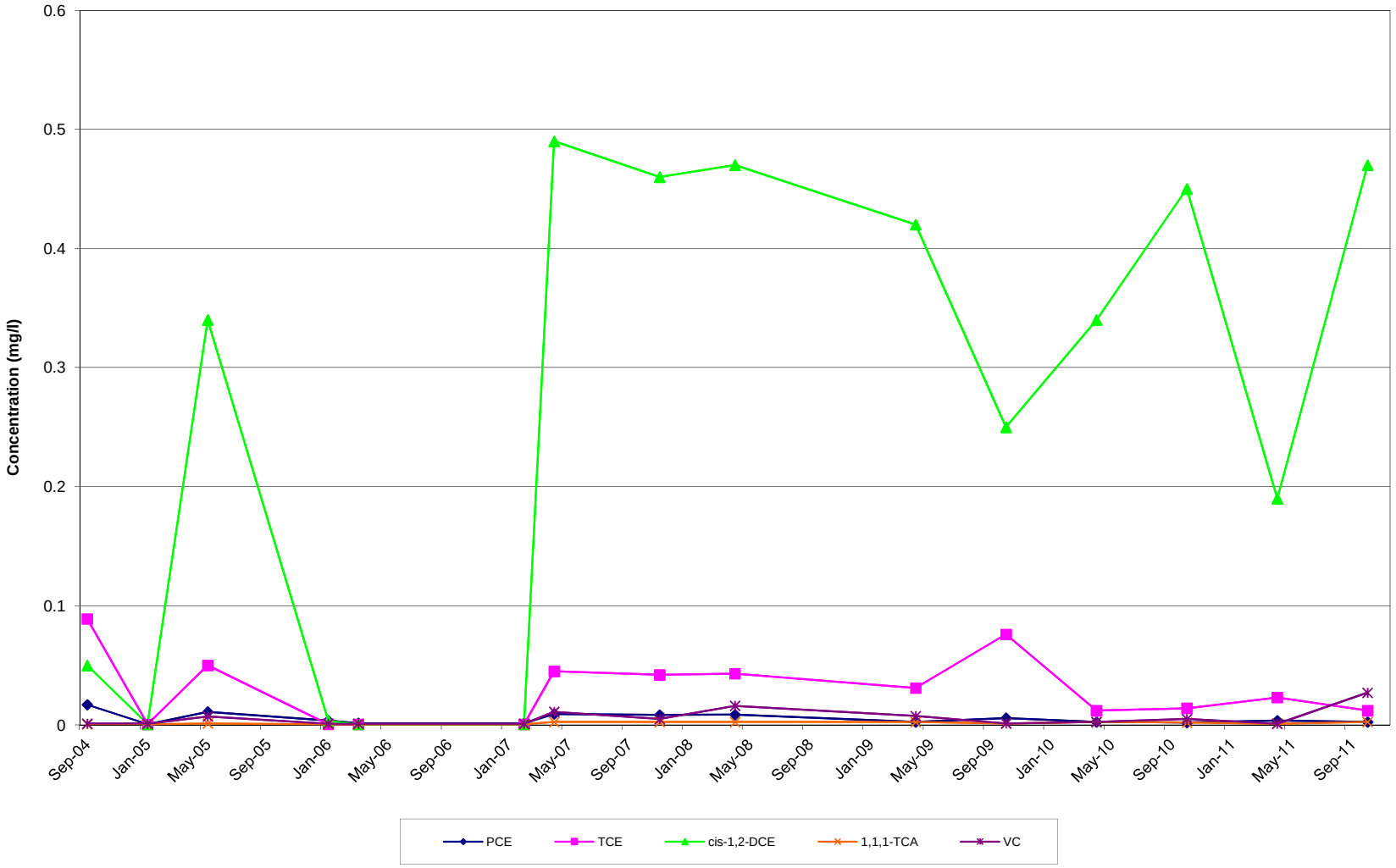
Notes: P-9R is a shallow
overburden well on Hill Street.
See end of appendix for additional notes.

VOC Trends in Well OB-20-S
Former Varian Facility Site
Beverly, Massachusetts



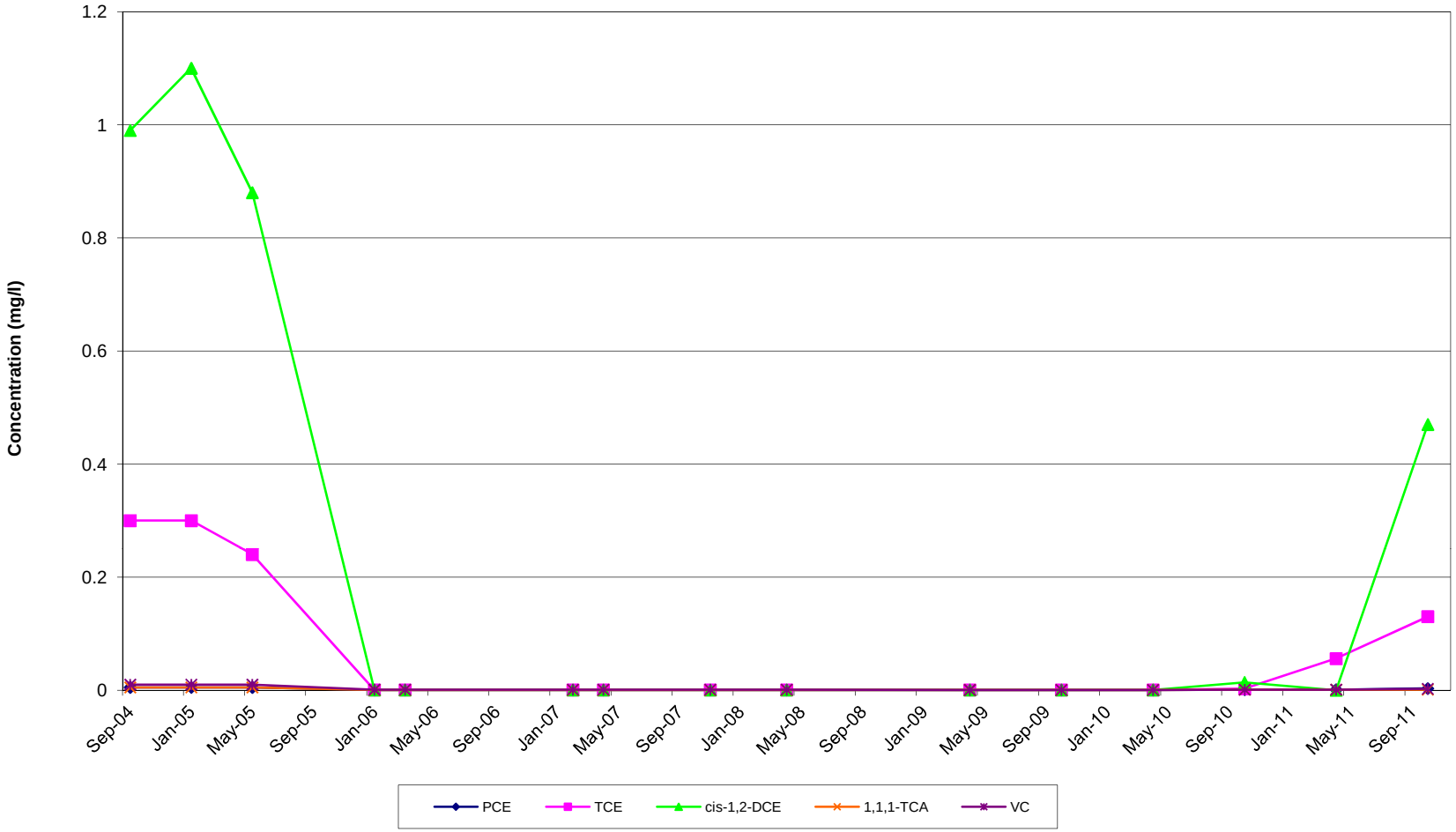
Notes: OB20-S is a shallow overburden well south of Sonning Road in the Longview/Hill Street treatment area.
See end of appendix for additional notes.

VOC Trends in Well OB-20-DO
Former Varian Facility Site
Beverly, Massachusetts



Notes: OB20-DO is a deep overburden well south of
Sonning Road in the Longview/Hill Street treatment area.
See end of appendix for additional notes.

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.

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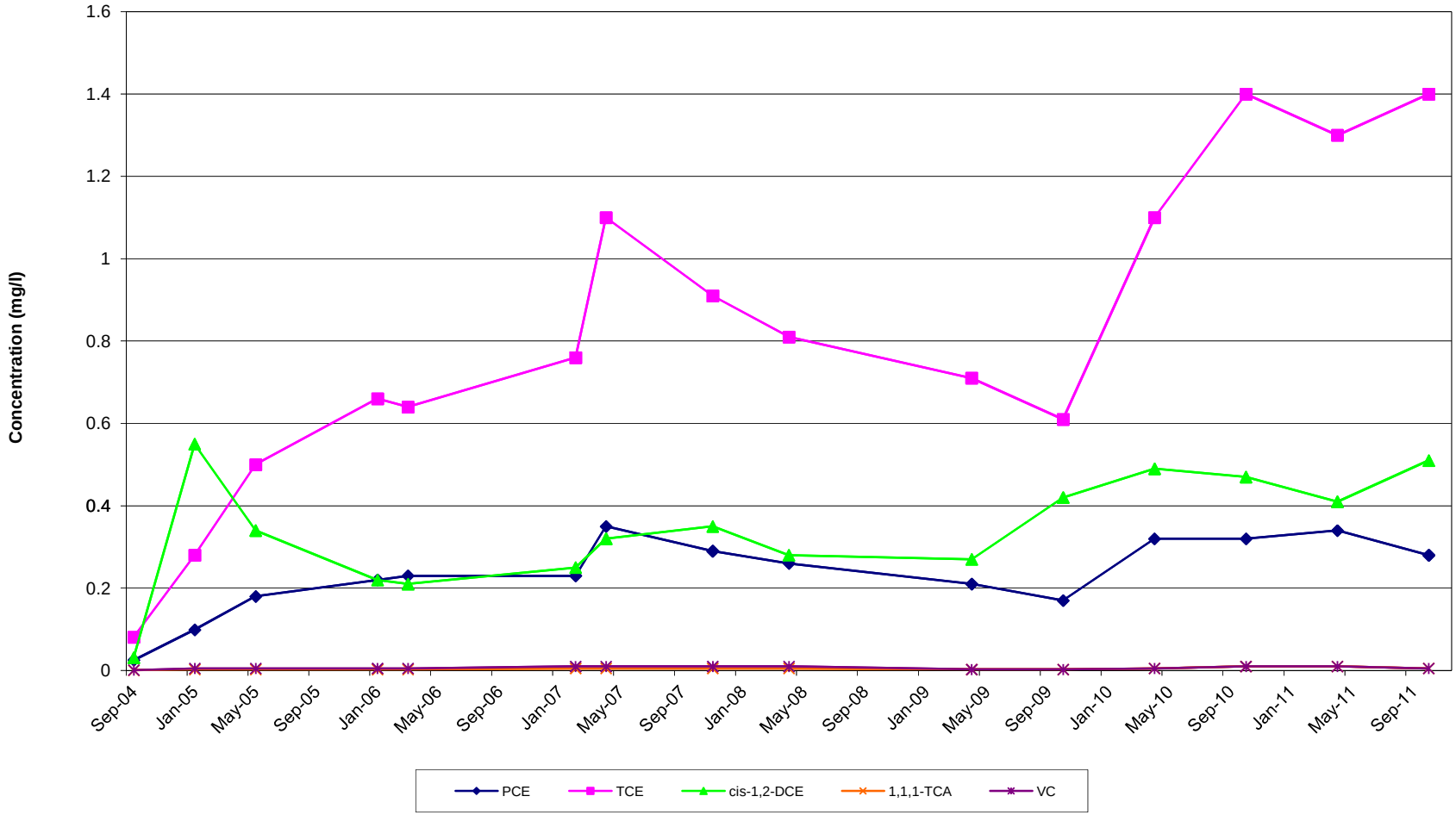
VOC Trends in Well OB-21-DO
Former Varian Facility Site
Beverly, Massachusetts



Notes: OB21-DO is a deep overburden well east of Longview Terrace.
See end of appendix for additional notes.

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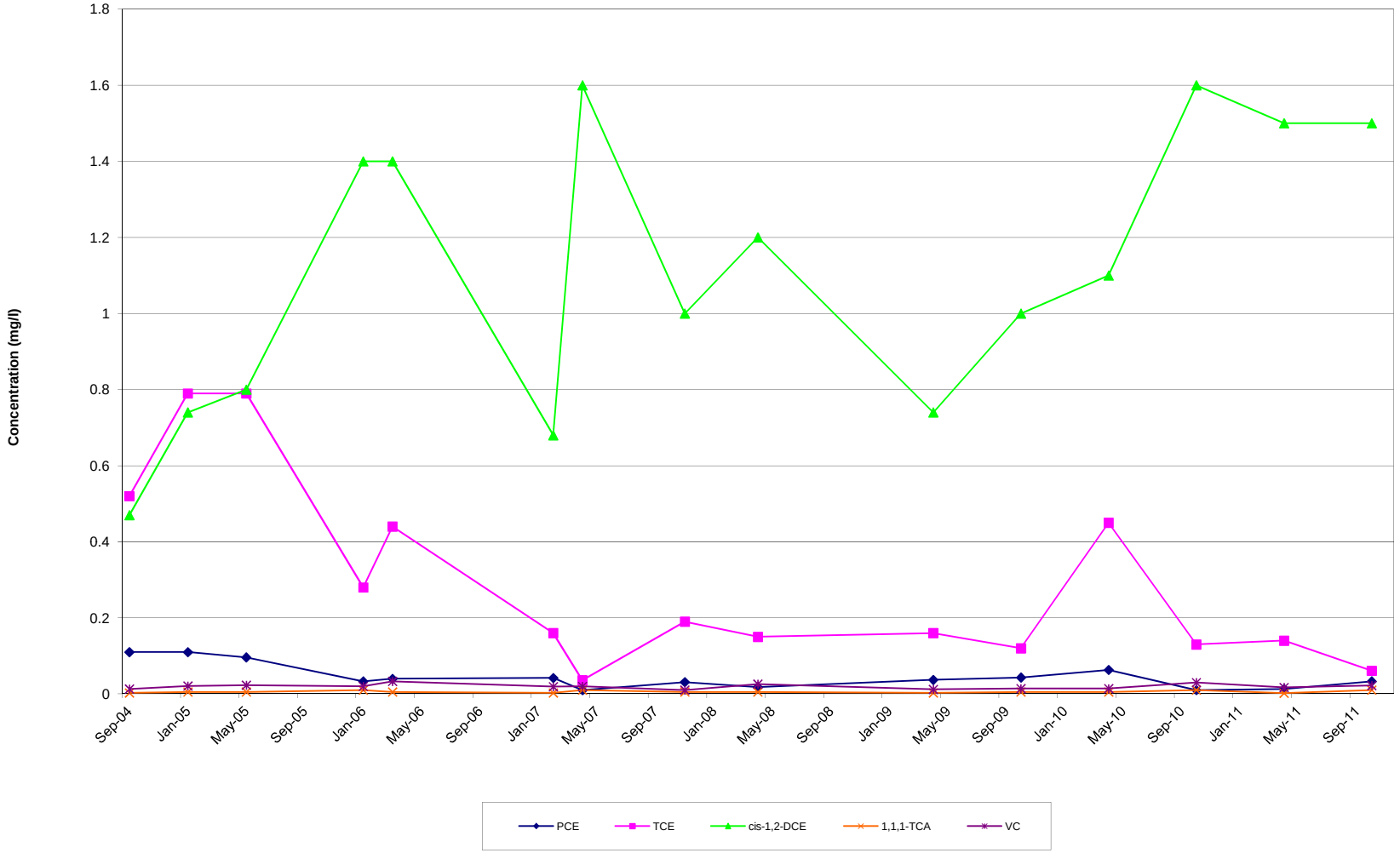
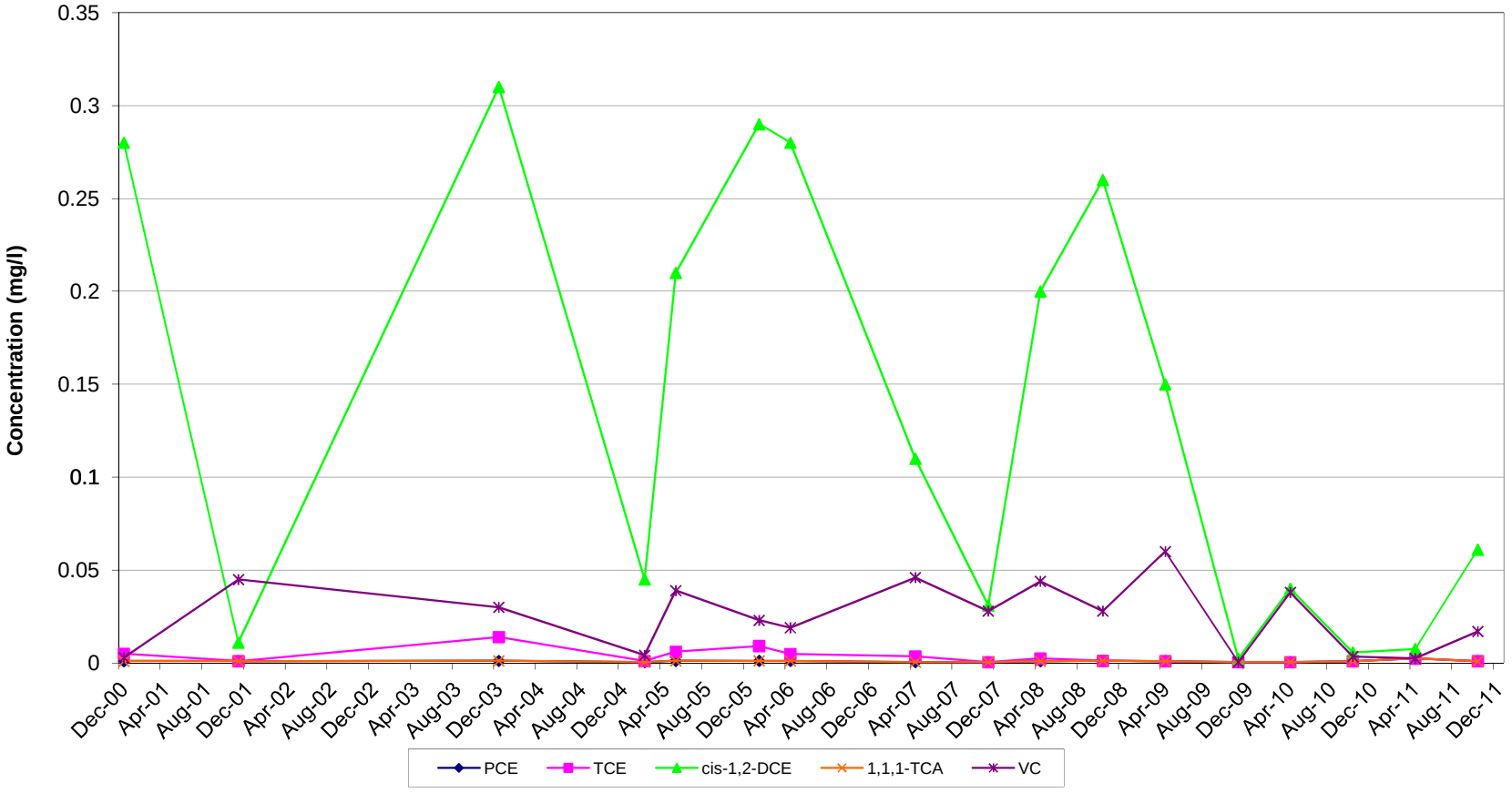
VOC Trends in Well OB-21-BR
Former Varian Facility Site
Beverly, Massachusetts



Notes: OB21-BR is a bedrock well east of Longview Terrace in the Longview/Hill Street treatment area.
See end of appendix for additional notes.

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.

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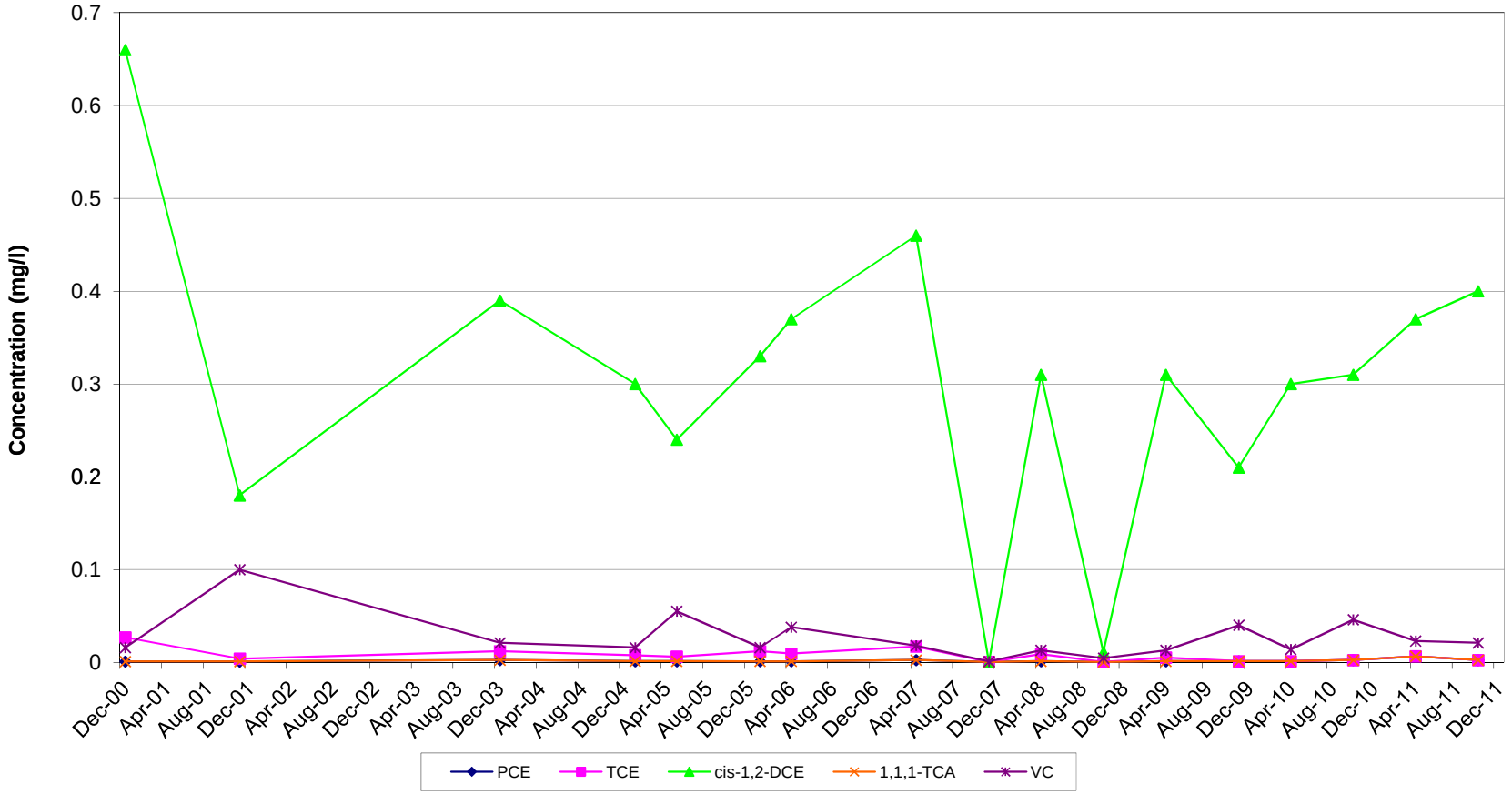
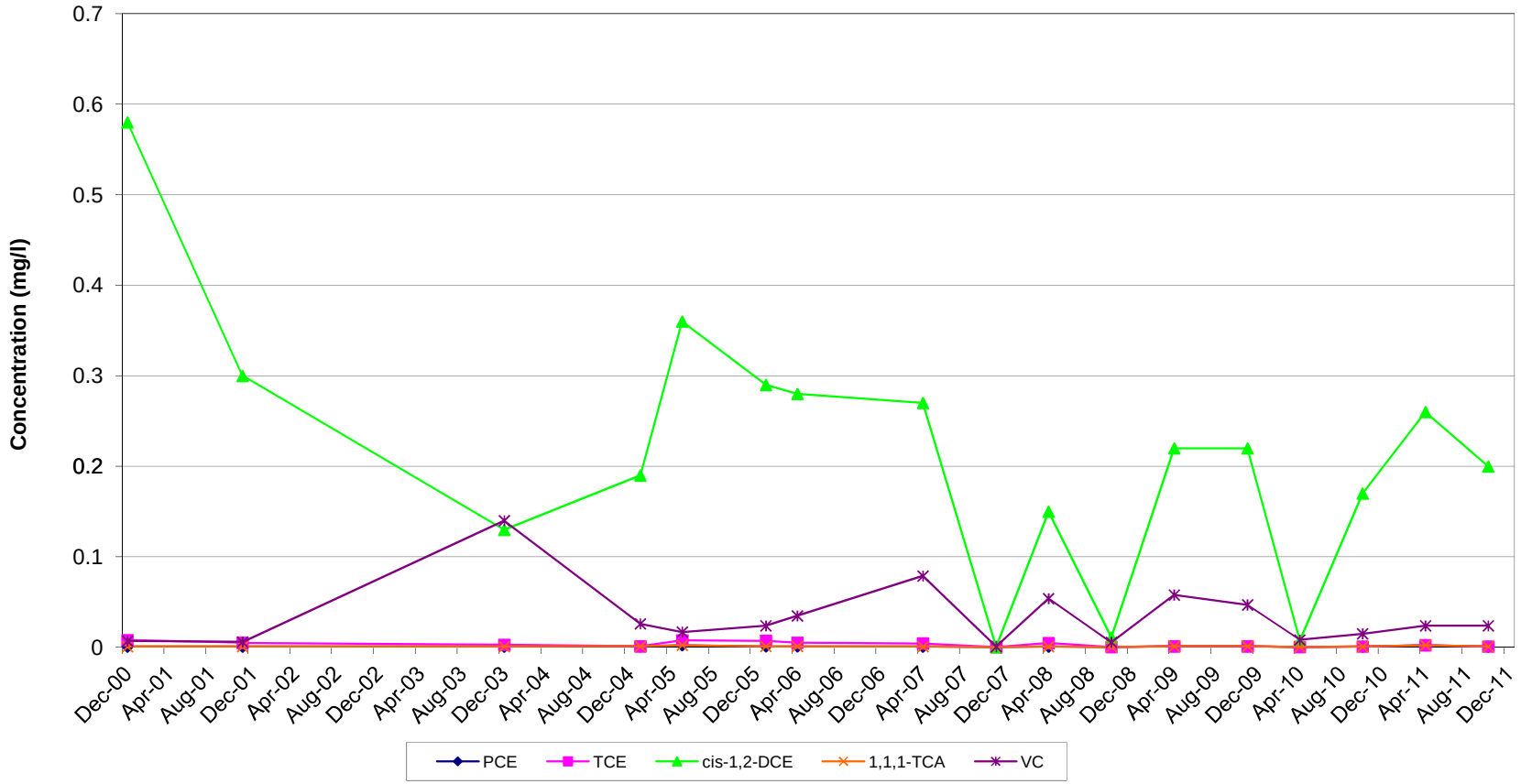
VOC Trends in Well BR-6_ZONE2
Former Varian Facility Site
Beverly, Massachusetts



Notes: BR-6 Zone 2 is the middle depth zone of a bedrock well on Hill Street.
See end of appendix for additional notes.

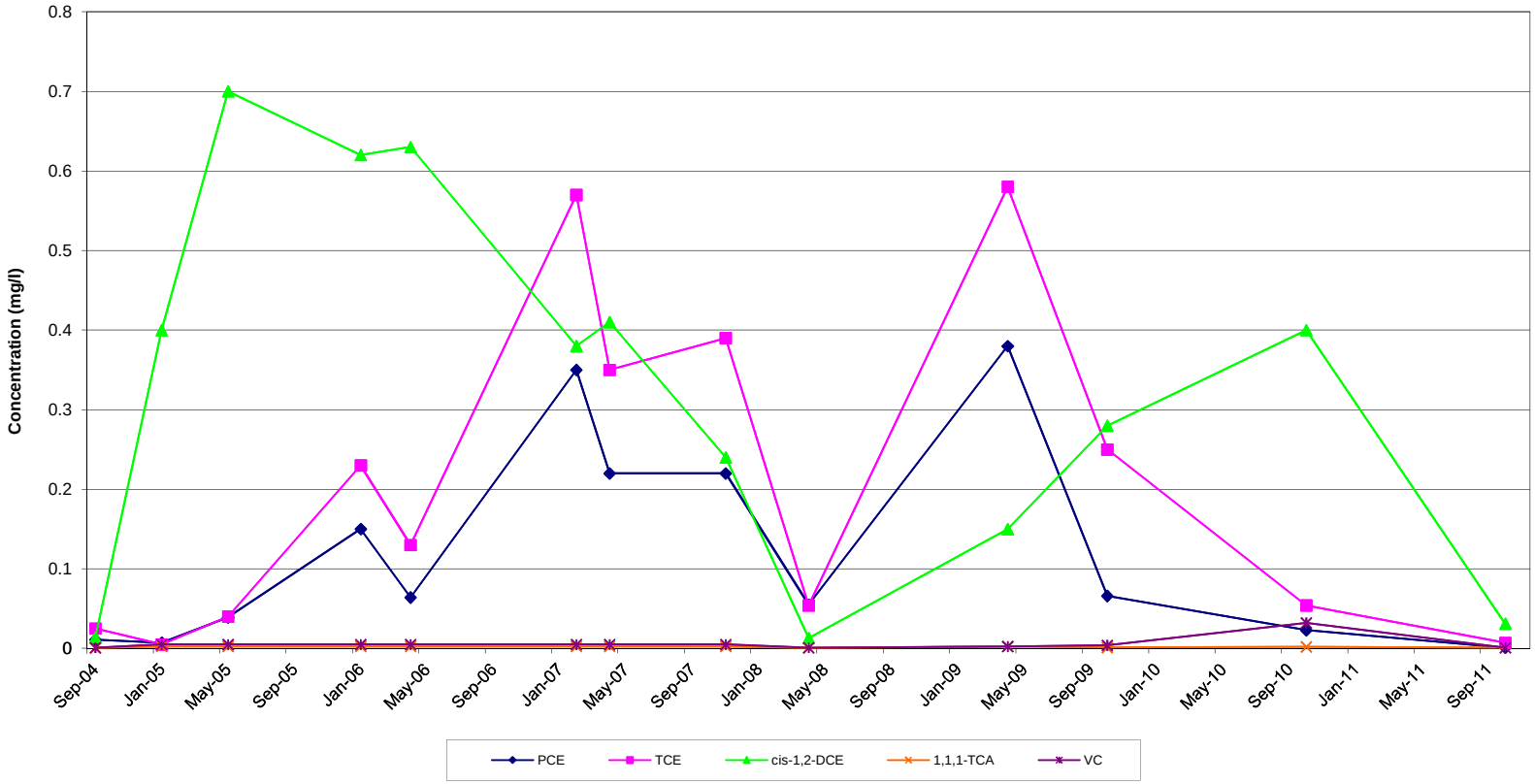
VOC Trends in Well BR-6_ZONE1
Former Varian Facility Site
Beverly, Massachusetts



Notes: BR-6 Zone 1 is the deepest zone of a bedrock well on Hill Street.
See end of appendix for additional notes.

P:\Varian\Draft\Reports\Status\ROS Status April 2012\Appendix F\Graphs VOC_MW Jan2012.xlsx

VOC Trends in Well OB-22-DO
Former Varian Facility Site
Beverly, Massachusetts



Note: OB-22-DO is a deep overburden well on Sonning Road near the Longview/Hill Street treatment area.
See end of Appendix E for additional notes.