Prepared for:
Bulova Corporation
New York, New York

Prepared By:
Ramboll Environ US Corporation
Princeton, New Jersey

Date
May 2017

Project Number
02-1961B

ADDITIONAL SAMPLING RESULTS SEPTEMBER 2016 AND MARCH 2017

101 GREEN ACRES ROAD SITE

VALLEY STREAM, NEW YORK

NYSDEC SITE NO. 1-30-084

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1. SITE OVERVIEW

Ramboll Environ US Corporation (Ramboll Environ), on behalf of Bulova Corporation (Bulova), has prepared this report to document the findings of additional sampling activities conducted at the 101 Green Acres Road Site in Valley Stream, New York (the Site). The Site location is depicted on Figure 1. The scope of the sampling activities was based on the New York State Department of Environmental Conservation's (NYSDEC) review of the *Annual Sampling Results* report (Ramboll Environ, June 2014) and detailed in the correspondence from NYSDEC dated June 19, 2014 and August 13, 2014. In the August 2014 correspondence, NYSDEC and the New York State Department of Health (NYSDOH) agreed to allow Bulova to discontinue indoor air sampling at the Site. As such, this report provides results of groundwater monitoring conducted in September 2016 and March 2017.

The following sections provide relevant background information, summarize the additional groundwater sampling completed at the Site, and present conclusions based on the results of the additional sampling activities. Detailed information regarding the Site history and the results of the prior investigation activities were previously provided to NYSDEC in reports prepared by Ramboll Environ and Weston Solutions, Inc. (Weston).

1.1 Site Description

1.1.1 Location and Physical Setting

The Site is located in the Town of Hempstead, Nassau County, New York, in a mixed-use urban area with residential, commercial, and light industrial properties. The Site is included in the Lynbrook, New York USGS topographic quadrangle and the Site location is depicted on Figure 1. The Site covers approximately 7.2 acres and is bordered to the northwest and northeast by retail stores and paved parking areas. The Green Acres shopping mall is immediately northeast of the Site. The northern limits of the retail stores and parking areas are bordered by Sunrise Highway and the Far Rockaway branch of the Long Island Rail Road. A residential area is adjacent to the eastern property boundary. Light industrial facilities, including distribution and shipping companies, are located to the south of the Site at the Airport Industrial Office Park (AIOP). John F. Kennedy International Airport is approximately 2 miles southwest of the Site.

Hook Creek, an intermittent stream, is located beyond the western edge of the Site. The creek receives storm water drainage from the Site as well as from upgradient areas including paved parking areas, Sunrise Highway, and the Long Island Rail Road adjacent to Sunrise Highway. Hook Creek flows south, merges with Valley Stream approximately 0.5 miles south of the Site, and then flows to the west, discharging to Jamaica Bay. Clear Stream, located approximately 0.3 miles southeast of the Site, flows to the south and joins Valley Stream approximately 0.2 miles upstream of Hook Creek. In the vicinity of the Site, the Nassau/Queens County line roughly follows Hook Creek.

1.1.2 Geology

The Site is located within Long Island's glacial outwash plain, which extends 10 miles southward from the Ronkonkoma and Harbor Hill terminal moraines to the south shore. Surface topography at the Site is flat, with surface elevations ranging from approximately 8 to 10 feet above mean sea level (amsl). Topography in the vicinity of the Site is also

generally flat and gently slopes toward the south and southeast in the direction of Hook Creek and Valley Stream. The Site is underlain by upper Pleistocene deposits, which form the upper glacial aquifer. The upper Pleistocene deposits consist mainly of stratified beds of fine to coarse sand and of sand and gravel. Thin beds of silt and clay are often interbedded with the coarse-grained material. The upper glacial aquifer is underlain by the "20-foot" clay and the Gardiners Clay. The "20-foot" clay is lithologically similar to the underlying Gardiners Clay and the two units are distinguished primarily by stratigraphic position. In some portions of southern Nassau County, the "20-foot" clay is separated from the Gardiners Clay by a layer of upper Pleistocene deposits. The "20-foot" clay and the Gardiners Clay represent the major confining layers within the upper portion of the groundwater reservoir beneath Nassau County. Additional information related to the regional geology is detailed in the Geologic Review and Well Record Search Results letter report (ENVIRON, April 16, 1998).

Based on observations during the prior site investigations, geologic conditions at and in the vicinity of the Site are consistent with the findings of regional geologic investigations. The Site is underlain by fine to medium sands. Groundwater is located approximately 5 feet below ground surface (bgs). Regional geologic investigation reports indicate that the northern boundary of the "20-foot" clay is present in the vicinity of the Site, and the site investigation results indicate that the "20-foot" clay is discontinuous beneath the Site. Where the "20-foot" clay is present, a thin layer of upper Pleistocene deposits appear to be positioned between the "20-foot" clay and the Gardiners Clay. The top of the "20-foot" clay has been encountered at depths of 38 – 45 feet bgs and the top of the Gardiners Clay has been encountered at depths of 45 – 52 feet bgs.

1.1.3 Site History

Industrial operations at the Site are believed to have started in the late 1920s with the construction of the Curtiss-Wright Airport in 1929.[1] Airport related structures at the Site included airplane hangars and a portion of the runway. Although Curtiss Flying Service abandoned the airfield in approximately 1938, several other air service companies continued to operate the airfield. Occupants included the Columbia Aircraft Corporation, which built airplanes for military and private concerns between 1940 and 1948. The Bulova Watch Company leased the property from 1948 until 1960, when Bulova took title of the property.

When Bulova took occupancy of the Site in 1948, two airplane hangars existed on the eastern portion of the Site. Based on discussions with Bulova personnel, it is believed that Bulova connected the airplane hangars in 1952, creating Building No. 1. Building No. 2 was erected west of Building No. 1 in 1967. During Bulova's occupancy, the eastern and northern portions of the Site were paved; a portion of the paved area incorporated the original concrete airfield runway, which traversed the eastern portion of the property from north to south. Bulova ceased operations at the Site during 1990 and title of the property was transferred to Home Depot in April 1993.

The Site was redeveloped during 1993. Redevelopment included demolition of all existing Site structures and construction of a Home Depot retail store. The entire Site is currently covered by the Home Depot building and the associated paved parking areas. Potable water

[1] Information related to prior site operations was obtained from a Phase I environmental assessment performed by Certified Engineering and Testing Company during 1990.

and sanitary service at the Site are provided by the local municipal authority. Storm water drainage from the building roof and paved parking areas is collected in a series of catch basins and directed via reinforced concrete piping beyond the eastern property boundary.

1.2 Prior Investigation/Interim Action Activities

Numerous phases of investigation and remediation have been completed at the Site, under the oversight of NYSDEC. Details of investigation and interim action results completed at the Site have been provided to NYSDEC in prior report submittals.

Based on the results of prior investigations and remedial actions at the Site, NYSDEC determined that no further remedial actions are warranted at the Site. As detailed in the Record of Decision (NYSDEC; March 2000), NYSDEC determined that actual or threatened releases of hazardous waste constituents at the Site had been addressed through the implementation of interim response actions and that the response actions had significantly reduced the threat to public health and the environment. Accordingly, NYSDEC selected in the Record of Decision "No Further Action, other than monitoring, as the final remedial alternative for the Site." The Record of Decision provides that "if contamination continues to decrease and does not migrate off-site," the Site will be removed from the New York State Registry of Inactive Hazardous Waste Disposal Sites.

2. ADDITIONAL SAMPLING RESULTS

2.1 Overview

Pursuant to NYSDEC's June 19, 2014 and August 13, 2014 correspondence, the additional monitoring for the Site consisted of groundwater sampling in September 2014, March 2015, September 2015, March 2016, September 2016 and March 2017. Results of the September 2014/March 2015 and September 2015/March 2016 sampling activities were provided to NYSDEC in an annual monitoring report dated May 2015 and June 2016, respectively. This report presents the results of the sampling activities completed in September 2016 and March 2017.

The primary objective of the monitoring program is to evaluate potential changes of conditions in groundwater on-site. The groundwater sampling activities in September 2016 and March 2017 were completed in accordance with the revised *Operations and Maintenance Plan* (O&M Plan) which was provided to NYSDEC on April 19, 2012. Results of the additional monitoring activities are summarized below.

2.2 Institutional Control and Environmental Covenant

Pursuant to the Record of Decision (March 2000), a Declaration of Covenants and Restrictions was placed on the property prohibiting the installation of potable water wells on-site and providing that non-potable wells may be installed only with approval of the Nassau County Department of Health and NYSDEC. As described in prior reports, water is provided to the Site by the municipal water supply and therefore groundwater is not used at the Site. Other than monitoring wells, no other non-potable or potable groundwater use wells have been installed at the property.

The Site Declaration of Covenants and Restrictions was amended to include reference to the revised OM&M Plan. It was recorded on April 24, 2013, and was provided to NYSDEC on April 29, 2013. Pursuant to the Declaration of Covenants and Restrictions, an Institutional and Engineering Controls (IC/EC) Certification Form was provided to NYSDEC as part of the Periodic Review Report (PRR) and was included in the 2013 Annual Sampling Results Report. NYSDEC approved the PRR and the IC/EC Certification Form in correspondence dated August 29, 2013. A copy of the August 29, 2013 approval letter is provided as Appendix A-1. A subsequent IC/EC Certification Form, covering the period between 2013 and 2016, was provided to NYSDEC in the 2016 Additional Sampling Results report submitted to NYSDEC on June 21, 2016, and approved by NYSDEC on August 23, 2016. A copy of the August 23, 2016 approval letter is provided as Appendix A-2. The next PRR and IC/EC Certification submittal is due to NYSDEC by May 29, 2017. A copy of the 2017 IC/EC Certification Form is provided as Appendix B.

2.3 Groundwater Monitoring

2.3.1 Water Level Measurements and Sampling Procedures

Synoptic groundwater level measurements were collected during the September 2016 and March 2017 groundwater sampling events. Monitoring well locations are depicted on Figure 2. The depth-to-water measurements were collected at each monitoring well using an electronic interface probe. Depth-to-water measurements and corresponding groundwater elevation data derived from the measurements are presented in Table 1. Potentiometric

surface maps associated with the September 2016 and March 2017 gauging/monitoring events are provided as Figures 3 and 4, respectively. Consistent with the results of prior groundwater monitoring events at the Site, water level data collected during the gauging/monitoring events indicate that groundwater flow is directed toward the southeast and generally coincides with local topography.

Groundwater samples were collected from monitoring wells MW-HD4, MW-HD6, and MW-HD7 during the September 2016 and March 2017 sampling events. In addition, one field duplicate, one matrix spike and one matrix spike duplicate groundwater sample was also collected from monitoring well MW-HD6 during each sampling event. The groundwater sampling activities were conducted using a stainless steel submersible pump equipped with dedicated discharge tubing. Initial water quality indicator measurements were collected prior to purging each well. The indicator parameters include pH, water temperature, specific conductance, dissolved oxygen, turbidity and oxidation/reduction potential. Water quality indicators were measured during purging and purging continued until indicator values had stabilized or until three well volumes had been purged from the well. Groundwater field parameters are provided in Appendix C.

Each groundwater sample was analyzed for the six primary constituents of concern identified in NYSDEC's March 2000 Record of Decision associated with the Site (i.e., tetrachloroethene [PCE]; trichloroethene [TCE]; 1,1,1-trichloroethane [TCA]; 1,1-Dichloroethane [1,1-DCA]; 1,1,-Dichloroethene [1,1-DCE]; and Freon 113). In addition, per NYSDEC request, groundwater samples collected during the March 2017 event were also analyzed for 1,4-dioxane. As approved by NYSDEC, the samples were analyzed for 1,4-dioxane via USEPA Method SW846 8270D SIM. Laboratory services were provided by SGS Accutest Laboratories of Dayton, New Jersey, an Environmental Laboratory Approval Program (ELAP)-certified laboratory. Laboratory deliverables are provided in Attachment A.

2.3.2 Groundwater Sampling Results

Analytical results from the September 2016 and March 2017 groundwater sampling events are summarized in Table 2. Consistent with prior sampling events, slightly elevated VOC concentrations were detected in the monitoring well at the southeast portion of the Site (i.e. MW-HD4) in both September 2016 and March of 2017. TCE was detected in groundwater samples collected at monitoring well MW-HD6 slightly above the Ambient Water Quality Criteria during the September 2016 sampling event; however, the samples collected during the March 2017 sampling event are below the Ambient Groundwater Quality Criteria. Analytical results associated with the off-site monitoring well MW-HD7 were below the laboratory method detection limits and well below the Ambient Water Quality Criteria during both sampling events.

While the reported concentrations of certain VOCs in groundwater samples collected from MW-HD4 are above the NYSDEC Ambient Water Quality Criteria, concentrations show an overall decrease since the interim response actions were completed at the Site. In addition, the reported VOC concentrations at MW-HD4 during both recent monitoring events were significantly lower than peak concentrations encountered during 2012/2013 and are among the lowest constituent concentrations ever detected in samples collected from MW-HD4.

Graphs depicting constituent concentrations in groundwater at the southeast portion of the Site (i.e., MW-HD4) are provided in Appendix D.[2]

As summarized in Table 2, 1,4-dioxane was not detected in the samples collected from MW-HD6 or MW-HD7. 1,4-dioxane was detected in the sample collected from MW-HD4 at a concentration of 0.173 µg/L, only slightly above the laboratory detection limit of 0.1 µg/L. New York State has not established a water quality standard for 1,4-dioxane. However, the reported 1,4-dioxane concentration at MW-HD4 was less than USEPA's Regional Screening Level (RSL) for tap water of 0.46 µg/L. The RSLs are generic screening levels that are based on default exposure parameters and factors that represent Reasonable Maximum Exposure (RME) conditions for long-term/chronic exposures and are based on the methods outlined in USEPA's Risk Assessment Guidance for Superfund, Part B Manual and Soil Screening Guidance documents.

2.3.3 Quality Assurance / Quality Control Analytical Results

During the groundwater sampling activities, field and trip blanks were collected to evaluate equipment decontamination procedures and potential cross contamination during sample container storage and shipment. QA/QC samples were analyzed for the same constituents as described above and are reported in Table 3. VOCs were not detected above laboratory method detection limits in field or trip blank samples from the September 2016 and March 2017 groundwater sampling events.

2.4 Vapor Intrusion Evaluation

In a letter dated August 13, 2014, NYSDEC allowed Bulova to discontinue indoor air sampling at the Site. Accordingly, Ramboll Environ did not collect indoor air samples during the March 2017 sampling event.

2.4.1 Annual Inspection of Building Conditions

The current Site owner maintains the building condition and performs periodic maintenance of the building HVAC system. It is Ramboll Environ's understanding that no maintenance was required for the building slab (i.e., no cracks requiring sealing were present). Ramboll Environ completed visual inspections of the building's floor during the September 2016 and March 2017 sampling events. The inspections did not identify any alterations to the floor or any cracks that required sealing.

2.5 Data Usability

In accordance with Section 2.1 and Appendix 2B of the *Technical Guidance for Site Investigation and Remediation* (DER-10; NYSDEC, May 2010), Ramboll Environ has included a Data Usability Summary Report associated with each sampling event described above. The Data Usability Summary Reports are included as Appendix E. As presented in Appendix E, the data usability review determined that the data deliverables associated with each sampling event were complete and that the data quality was acceptable.

[2] The graphs provided in Appendix D also include updated versions of trend graphs provided by NYSDEC during a July 28, 2014 meeting.

3. CONCLUSIONS

As detailed above, Ramboll Environ completed additional sampling activities at the 101 Green Acres Road Site in Valley Stream, New York in 2016 and 2017. The sampling activities included the collection and analysis of groundwater samples from two on-site monitoring wells and one off-site monitoring well.

The results were consistent with those of prior groundwater sampling events at the Site, showing a sustained downward trend of VOC concentrations at the southeast portion of the Site, and indicating that VOCs are not migrating off-site.

At MW-HD4 (located at the southeast corner of the building), reported VOC concentrations have decreased since 1995, which is after the interim response actions were completed at the Site, and are now at levels that are at the far low end of the historic detection ranges. Both in September 2016 and in March 2017, concentrations of four of the six VOCs were at or below the corresponding Ambient Water Quality Standards, while concentrations of the other two VOCs were only slightly above the corresponding Ambient Water Quality Standards.

At MW-HD6 (located at the southeast boundary of the Site), all six VOCs were either below their laboratory method detection limits, or had concentrations that were below the corresponding Ambient Water Quality Standards, both in September 2016 and in March 2017 (with one minor exception in September 2016, when the TCE concentration of 6.2 ppb barely exceeded the Ambient Water Quality Standard of 5.0 ppb).

At MW-HD7 (located off-site), all six VOCs were below the laboratory method detection limits both in September 2016 and in March 2017.

In the Record of Decision associated with the Site, NYSDEC selected “No Further Action, other than monitoring, as the final remedial alternative for the Site.” The Record of Decision provides that “if contamination continues to decrease and does not migrate off-site,” the Site will be removed from the New York State Registry of Inactive Hazardous Waste Disposal Sites.

Bulova respectfully submits that the conditions in the Record of Decision have been met and that the monitoring program should therefore be terminated. The recent groundwater monitoring results confirm that VOC concentrations in groundwater have significantly decreased to the point of meeting, or being very close to meeting, Ambient Water Quality Standards, and also confirm that off-site groundwater has not been impacted.

Accordingly, Bulova respectfully requests that the Site be removed from the New York State Registry of Inactive Hazardous Waste Disposal Sites; that Bulova be released from its monitoring obligations under Order on Consent Index # W1-0793-97-07; and that Ramboll Environ be authorized to properly abandon and seal all monitoring wells and sub-slab soil vapor sampling points associated with the sampling activities at the Site.

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TABLES

TABLE 1
Groundwater Elevation Data
101 Green Acres Road Site
Valley Stream, New York

Monitoring Well	Top of Casing Elevation (Feet AMSL)	September 22, 2016		March 17, 2017	
		Depth-to-Water (Feet)	Groundwater Elevation (Feet AMSL)	Depth-to-Water (Feet)	Groundwater Elevation (Feet AMSL)
MW-HD1	9.93	5.75	4.18	N/A	--
MW-HD2	9.45	N/A	--	N/A	--
MW-HD3	9.93	N/A	--	N/A	--
MW-HD4	10.09	6.16	3.93	5.64	4.45
MW-HD5	9.45	5.43	4.02	4.82	4.63
MW-HD6	9.97	6.09	3.88	5.60	4.37
MW-HD7	9.33	5.15	4.18	4.85	4.48

Abbreviation:
AMSL: Above mean sea level
N/A: Not Accessible
Notes:
1. MW-HD2 and MW-HD3 were destroyed during resurfacing of the parking lot in 2012.
2. MW-HD1 was covered with snow and ice during the March 17, 2017 sampling event.

TABLE 2
Summary of Groundwater Analytical Results
101 Green Acres Site
Valley Stream, New York

Location		HD04	HD04	HD06	HD06	HD06
Ramboll Environ Sample ID	Ambient Water Quality Criteria	MWHD4-160922	MWHD4-170317	MWHD6-160922	MWHD6-160922D	MWHD6-170317
Sample Method		Submersible Pump	Submersible Pump	Submersible Pump	Submersible Pump	Submersible Pump
Sample Date		9/22/2016	3/17/2017	9/22/2016	9/22/2016	3/17/2017
Comments					Field Duplicate	
Volatile Organic Compounds						
1,1-Dichloroethane	5	1.2 (1)	0.82 J (1)	ND (1)	ND (1)	0.51 J (1)
1,1-Dichloroethene	5	**9.5 (1)**	**12.9 (1)**	ND (1)	ND (1)	0.70 J (1)
Tetrachloroethene	5	1.5 (1)	0.85 J (1)	4.5 (1)	4.4 (1)	2.6 (1)
1,1,1-Trichloroethane	5	3.0 (1)	5.0 (1)	ND (1)	ND (1)	ND (1)
Trichloroethene	5	**5.6 (1)**	**10 (1)**	**6.2 (1)**	**6.3 (1)**	3.4 (1)
Freon 113	5	ND (5)	1.4 J (5)	ND (5)	ND (5)	ND (5)
Semi-Volatile Organic Compounds						
1,4-Dioxane	--	NA	0.173 (0.1)	NA	NA	ND (0.1)

Notes:

1 All concentrations are presented in ug/L (ppb). Detection limits are in parentheses.

2 Only compounds with at least one detection are shown.

3 Bold concentrations exceed the Ambient Water Quality Criteria.

Abbreviations:

J -- Estimated Concentration.

NA -- Not Analyzed.

ND -- Not Detected.

TABLE 2
Summary of Groundwater Analytical Results
101 Green Acres Site
Valley Stream, New York

Location	Ambient Water Quality Criteria	HD06	HD07	HD07
Ramboll Environ Sample ID		MWHD6-170317D	MWHD7-160922	MWHD7-170317
Sample Method		Submersible Pump	Submersible Pump	Submersible Pump
Sample Date		3/17/2017	9/22/2016	3/17/2017
Comments		Field Duplicate		
Volatile Organic Compounds				
1,1-Dichloroethane	5	0.59 J (1)	ND (1)	ND (1)
1,1-Dichloroethene	5	0.65 J (1)	ND (1)	ND (1)
Tetrachloroethene	5	2.7 (1)	ND (1)	ND (1)
1,1,1-Trichloroethane	5	ND (1)	ND (1)	ND (1)
Trichloroethene	5	3.2 (1)	ND (1)	ND (1)
Freon 113	5	ND (5)	ND (5)	ND (5)
Semi-Volatile Organic Compounds				
1,4-Dioxane	--	ND (0.1)	NA	ND (0.1)

Notes:

1 All concentrations are presented in ug/L (ppb). Detection limits are in parentheses.

2 Only compounds with at least one detection are shown.

3 Bold concentrations exceed the Ambient Water Quality Criteria.

Abbreviations:

J -- Estimated Concentration.

NA -- Not Analyzed.

ND -- Not Detected.

TABLE 3
Summary of QAQC Sampling Results
101 Green Acres Site
Valley Stream, New York

Location	QAQC	QAQC	QAQC	QAQC
Ramboll Environ Sample ID	FB-160922	TB-160922	FB-170317	TB-170317
Sample Method	Submersible Pump	Submersible Pump	Submersible Pump	Submersible Pump
Sample Date	9/22/2016	9/22/2016	3/17/2017	3/17/2017
Comments	Field Blank	Trip Blank	Field Blank	Trip Blank
Volatile Organic Compounds	**ND**	**ND**	**ND**	**ND**

Notes:

1 None of the analyzed compounds were detected.

Abbreviations:

ND -- Not Detected.

FIGURES

LEGEND:

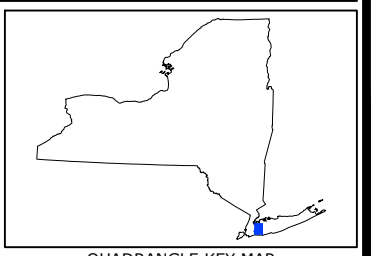
PROPERTY BOUNDARY (APPROXIMATE)

0 1/2 1
SCALE IN MILES

2000 0 2000 4000
SCALE IN FEET

NOTES:
CONTOUR INTERVAL 10 FEET

SOURCE:
USGS 7.5 MINUTE SERIES TOPOGRAPHIC QUADRANGLE, LYNBROOK, NY-MARCH 22, 2013.
MAP SCALE; 1:24,000. SITE LOCATION; N: 40.65972° W: 73.72444° WGS84



QUADRANGLE KEY MAP

RAMBOLL ENVIRON

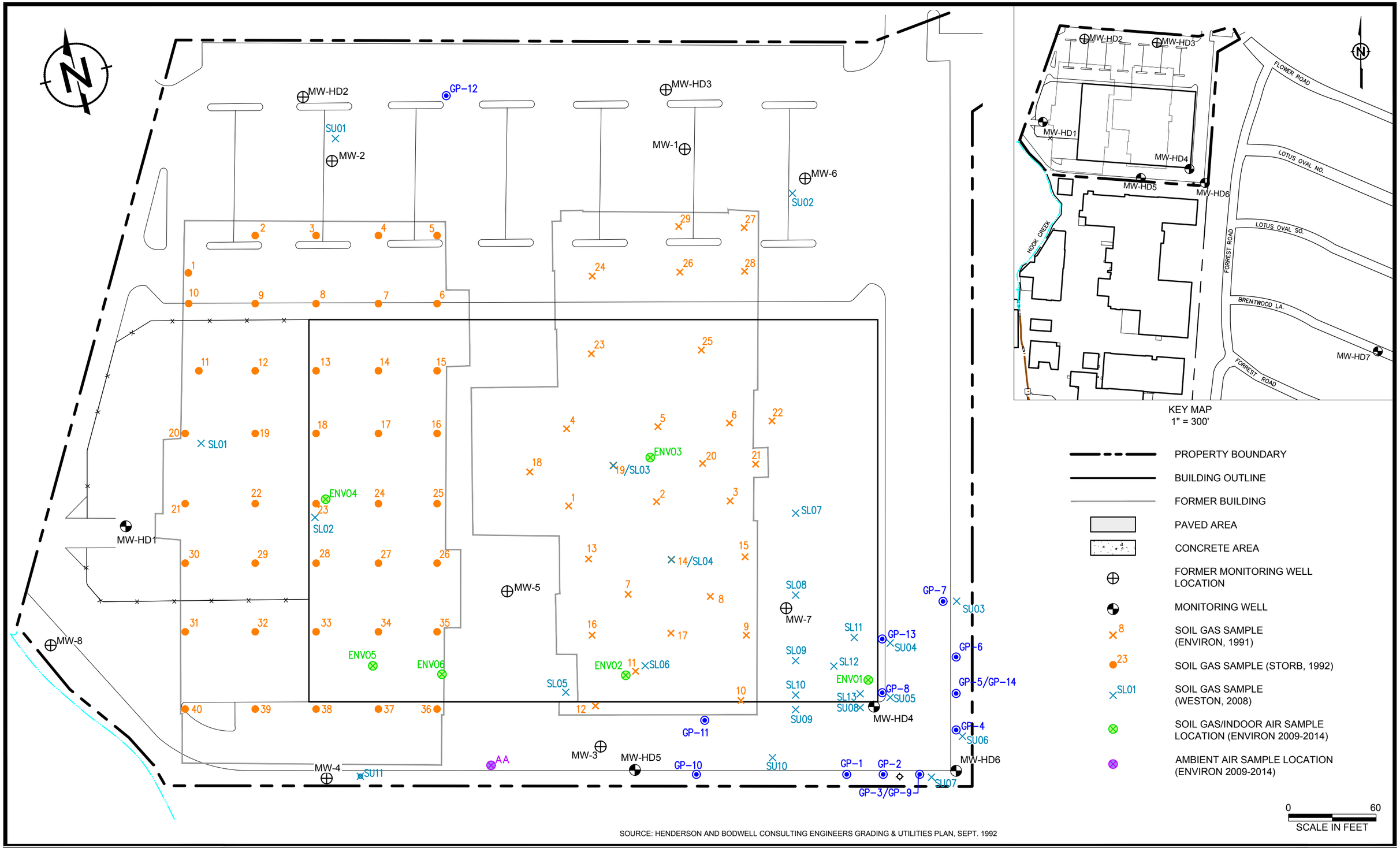
SITE LOCATION MAP

101 GREEN ACRES ROAD SITE
VALLEY STREAM, NEW YORK

FIGURE 1

DRAFTED BY: DLB | DATE: 03/31/2016 | PROJECT: 021961B

DBLANCHARD 3/31/16 F:\021961_BULOVA_ANNUAL REPORT < SITE LOC_021961 >



SOURCE: HENDERSON AND BODWELL CONSULTING ENGINEERS GRADING & UTILITIES PLAN, SEPT. 1992

RAMBOLL ENVIRON

DRAFTED BY: TSP/KM/DLB | DATE: 03/31/2016

SITE LAYOUT AND SAMPLE LOCATION MAP

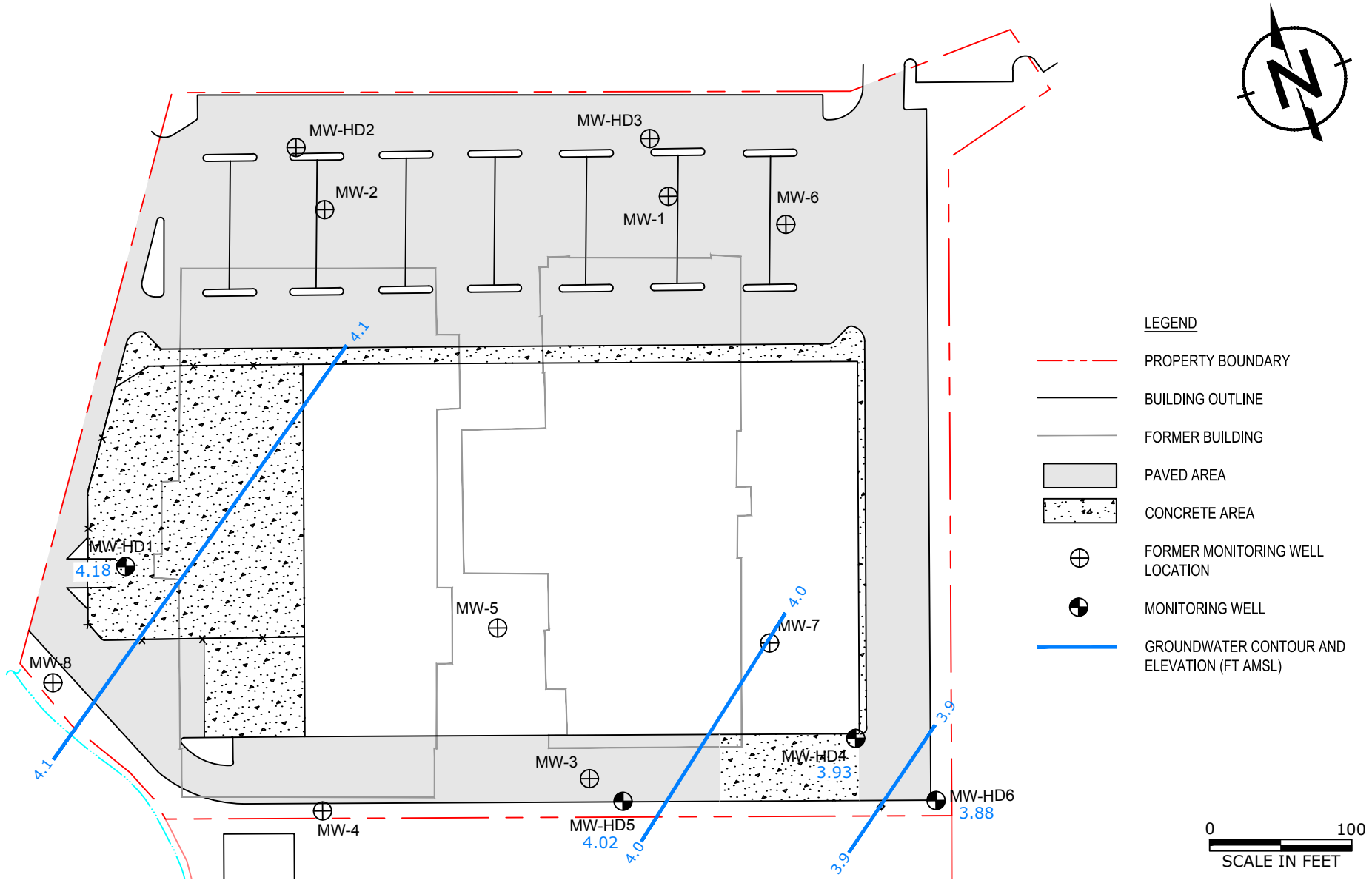
101 GREEN ACRES ROAD SITE
VALLEY STREAM, NEW YORK

FIGURE
2

021961B

DBLANCHARD 3/31/16 [SL AND SMPL_021961] F:\021961_BULOVA_ANNUAL REPORT

DBLANCHARD 4/19/17 [GW-SEPTEMBER 2016_021961] F:\021961_BULOVA_SEMIANNUAL REPORT



RAMBOLL ENVIRON

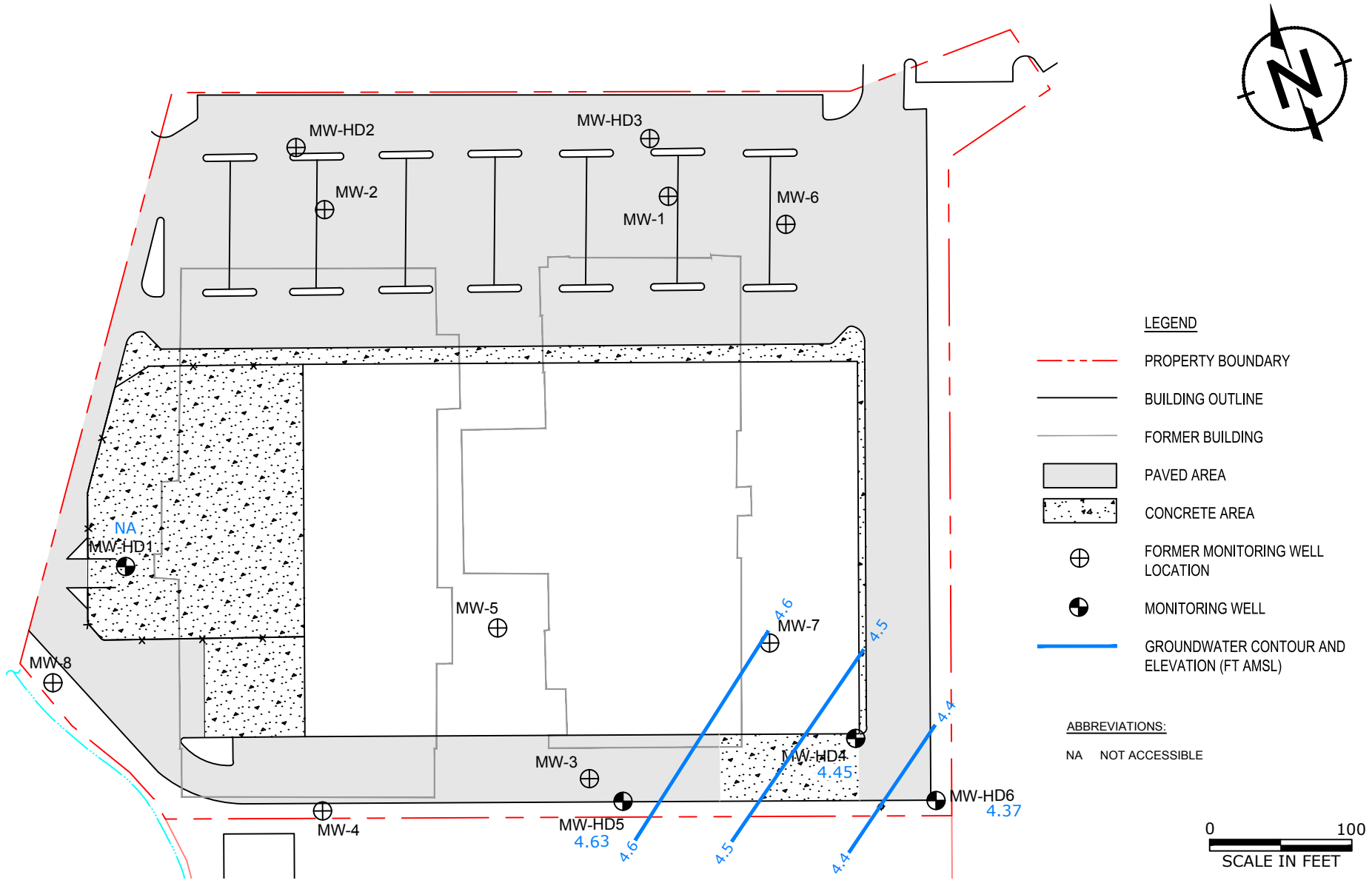
GROUNDWATER POTENTIOMETRIC SURFACE - SEPTEMBER 22, 2016

101 GREEN ACRES ROAD SITE
VALLEY STREAM, NEW YORK

FIGURE
3

DRAFTED BY: TSP/DLB | DATE: 03/27/2017 | 021961B

DBLANCHARD 4/19/17 [GW-MARCH 2017_021961] F:\021961_BULOVA_SEMIANNUAL REPORT



RAMBOLL ENVIRON

GROUNDWATER POTENTIOMETRIC SURFACE - MARCH 17, 2017

101 GREEN ACRES ROAD SITE
VALLEY STREAM, NEW YORK

FIGURE
4

DRAFTED BY: TSP/DLB | DATE: 03/27/2017 | 021961B

APPENDIX A-1
INSTITUTIONAL AND ENGINEERING CONTROLS CERTIFICATION APPROVAL

New York State Department of Environmental Conservation
Division of Environmental Remediation, 12th Floor
625 Broadway, Albany, New York 12233
Phone: (518) 402-9625
Fax: 518-402-9627
Website: www.dec.ny.gov

Joe Martens
Commissioner

AUG 29 2013

Bulova Technologies, Inc.
Bob Weber
1 Bulova Way
Woodside, NY 11377

Re: Site Management (SM) Periodic Review Report (PRR) Response Letter

101 Green Acres Road Site, Valley Stream
Nassau County, Site No.: 130084

Dear Bob Weber:

The Department has reviewed your Periodic Review Report (PRR) and IC/EC Certification for following period: May 30, 2012 to May 31, 2013.

The Department hereby accepts the PRR and associated Certification. The frequency of Periodic Reviews for this site is 3 year(s), your next PRR is due on May 30, 2016. You will receive a reminder letter and updated certification form 75-days prior to the due date.

If you have any questions, or need additional forms, please contact me at 518-402-9626 or e-mail: bfjankau@gw.dec.state.ny.us

Sincerely,

Brian Jankauskas
Project Manager

ec:
Brian Jankauskas, Project Manager
Steve Karpinski, DOH Project Manager
Walter Parish, RHWRE

cc:
Thomas Fusillo, Environ, 214 Carnegie Center, Princeton, NJ 08540-6284
Michael Potts, Environ, 214 Carnegie Center, Princeton, NJ 08540-6284
Mitchell Bernstein, Van Ness Feldman, P.C.
Mike Maddocks, 2455 Paces Ferry Road, Atlanta, GA 30339
Brett Soloway, 2455 Paces Ferry Road, Atlanta, GA 30339
Christine Leas; Sive, Paget & Riesel, P.C.

APPENDIX A-2
ADDITIONAL SAMPLING RESULTS REPORT APPROVAL

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Remediation, Remedial Bureau A
625 Broadway, 12th Floor, Albany, NY 12233-7015
P: (518) 402-9625 I F: (518) 402-9627
www.dec.ny.gov

AUG 2 3 2016

Mr. Michael Potts
Ramboll Environ US Corporation
214 Carnegie Center
Princeton, NJ 08540

RE: 101 Green Acres Road Site (Valley Stream Home Depot)
Valley Stream, New York
Site No. 1-30-084

Dear Mr. Potts,

The Additional Sampling Results report, dated June 2016, for the 101 Green Acres Road site located in Valley Stream, New York has been reviewed by the New York State Departments of Environmental Conservation and Health (Departments). The Departments agree with the recommendation to complete another round of semi-annual sampling in September 2016 and March 2017. Please contact me at 518-402-9620 if you have any questions or comments.

Sincerely,

Brian Jankauskas
Environmental Engineer 2
Division of Environmental Remediation

cc: John Swartwout, NYSDEC
Rosalie Rusinko, NYSDEC
Steven Karpinski, NYSDOH
Robert Weber, Bulova Corporation
Mitchell Bernstein, Van Ness Feldman, P.C.
Christine Leas, Sive, Paget & Riesel, P.C.
Tom Drew, Weston Solutions, Inc.

APPENDIX B
INSTITUTIONAL AND ENGINEERING CONTROLS CERTIFICATION FORM

Enclosure 2

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

Site Details **Box 1**

Site No. **130084**

Site Name 101 Green Acres Road Site

Site Address: 101 Green Acres Road Zip Code: 11581
City/Town: Valley Stream
County: Nassau
Site Acreage: 7.2

Reporting Period: April 29, 2016 to April 29, 2017

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

Box 2

	YES	NO
6. Is the current site use consistent with the use(s) listed below? Unrestricted, Residential, Restricted-Residential, Commercial, and Industrial	☑	☐
7. Are all ICs/ECs in place and functioning as designed?	☑	☐

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

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

N/A
Signature of Owner, Remedial Party or Designated Representative

Date

SITE NO. 130084 **Box 3**

Description of Institutional Controls

Parcel	Owner	Institutional Control
39-553-001	The Home Depot	Monitoring Plan O&M Plan Ground Water Use Restriction

Deed Restriction - groundwater use restriction and reference to Operation and Maintenance Plan. Groundwater monitoring onsite and offsite. ~~Indoor air monitoring onsite~~.

Box 4

Description of Engineering Controls

Parcel	Engineering Control
39-553-001	Cover System

The concrete floor of the onsite building and the heating and cooling system are mitigating vapors detected beneath the building.

Box 5

Periodic Review Report (PRR) Certification Statements

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

Annual Sampling Results

a) the ~~Periodic Review report~~ and all attachments were prepared under the direction of, and reviewed by, the ~~party making the certification~~;

Remedial Party, Bulova

b) to the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and the information presented is accurate and compete.

YES	NO
☑	☐

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

(a) the Institutional Control and/or Engineering Control(s) employed at this site is unchanged since the date that the Control was put in-place, or was last approved by the Department;

(b) nothing has occurred that would impair the ability of such Control, to protect public health and the environment;

(c) access to the site will continue to be provided to the Department, to evaluate the remedy, including access to evaluate the continued maintenance of this Control;

(d) nothing has occurred that would constitute a violation or failure to comply with the ~~Site Management Plan for this Control~~; and

Operation and Maintenance Plan

(e) if a financial assurance mechanism is required by the oversight document for the site, the mechanism remains valid and sufficient for its intended purpose established in the document.

YES	NO
☑	☐

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

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

N/A

Signature of Owner, Remedial Party or Designated Representative

Date

IC CERTIFICATIONS
SITE NO. 130084

Box 6

SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

I certify that all information and statements in Boxes 1,2, and 3 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I Jessica Borgert, Sr. Corporate Counsel (print name) at 2455 Paces Ferry Road Atlanta, GA 30339 (print business address)

am certifying as HOME DEPOT U.S.A, INC. (Owner or Remedial Party)

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

HOME DEPOT U.S.A, INC.

By: _____ 5-25-17

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

Jessica Borgert
Senior Corporate Counsel

IC/EC CERTIFICATIONS

Box 7

Qualified Environmental Professional Signature

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

I Thomas V. Fusillo (print name) at 101 Carnegie Center, Suite 200, Princeton NJ 08540 (print business address)

am certifying as a Qualified Environmental Professional for the Bulova Corporation (Owner or Remedial Party)

Thomas V. Fusillo

May 26, 2017

Signature of Qualified Environmental Professional, for the Owner or Remedial Party, Rendering Certification	Stamp (Required for PE)	Date

APPENDIX C
GROUNDWATER FIELD PARAMETERS

Appendix C
Groundwater Field Parameters
September 2016
101 Green Acres Road Site
Valley Stream, New York

Sample Point ID	MWHD4	MWHD6	MWHD7
Date	9/22/2016	9/22/2016	9/22/2016
Weather Conditions	75°F, Sunny	75°F, Sunny	75°F, Sunny
PID Reading (ppm)	ND	ND	ND
Free Product Thickness	ND	ND	ND
Total Depth (ft)	14.60	14.15	40.00
Depth to Water (ft)	6.16	6.09	5.15
Height Water Column (ft)	8.44	8.06	34.85
One Casing Volume (gal.)	5.51	1.31	5.68
Three Volumes (gal.)	16.6	3.9	16.9
Actual Purge Volume (gal.)	17.0	4.3	17.5
Purge Start Time	12:48	12:19	10:59
Purge End Time	13:15	12:34	11:35
Flow Rate (gpm)	0.76	0.40	0.74
Date Sampled	9/22/2016	9/22/2016	9/22/2016
Time Sampled	13:13	12:34	11:33
Purge Method	SP	SP	SP
Sampling Method	SP	SP	SP
Depth to Water After Purge (ft)	6.20	6.09	5.17
Depth to Water Before Sampling (ft)	6.32	6.10	5.21

SAMPLING/PURGE METHOD
ND = not detected
SP = submersible pump

FIELD PARAMETERS	MWHD4	MWHD6	MWHD7
Initial			
pH	5.94	5.90	5.88
Specific Conductivity (µs/cm)	0.830	1.030	0.592
Turbidity (NTU)	49.7	>1000	>1000
Dissolved Oxygen (ppm)	7.18	3.75	6.01
Temperature (°C)	22.18	20.06	17.05
Oxygen Reduction Potential (mV)	103	68.0	0.0
During Purging			
pH	5.83	5.69	5.63
Specific Conductivity (µs/cm)	0.777	1.020	0.363
Turbidity (NTU)	0.0	71.6	154
Dissolved Oxygen (ppm)	2.94	5.53	3.77
Temperature (°C)	22.25	20.65	16.06
Oxygen Reduction Potential (mV)	109	87.0	-12.0
After Purging / At Sampling			
pH	5.80	5.68	5.62
Specific Conductivity (µs/cm)	0.776	1.020	0.359
Turbidity (NTU)	0.0	68.3	86.3
Dissolved Oxygen (ppm)	2.95	5.52	3.73
Temperature (°C)	22.25	20.44	16.23
Oxygen Reduction Potential (mV)	109	87.0	-19.0

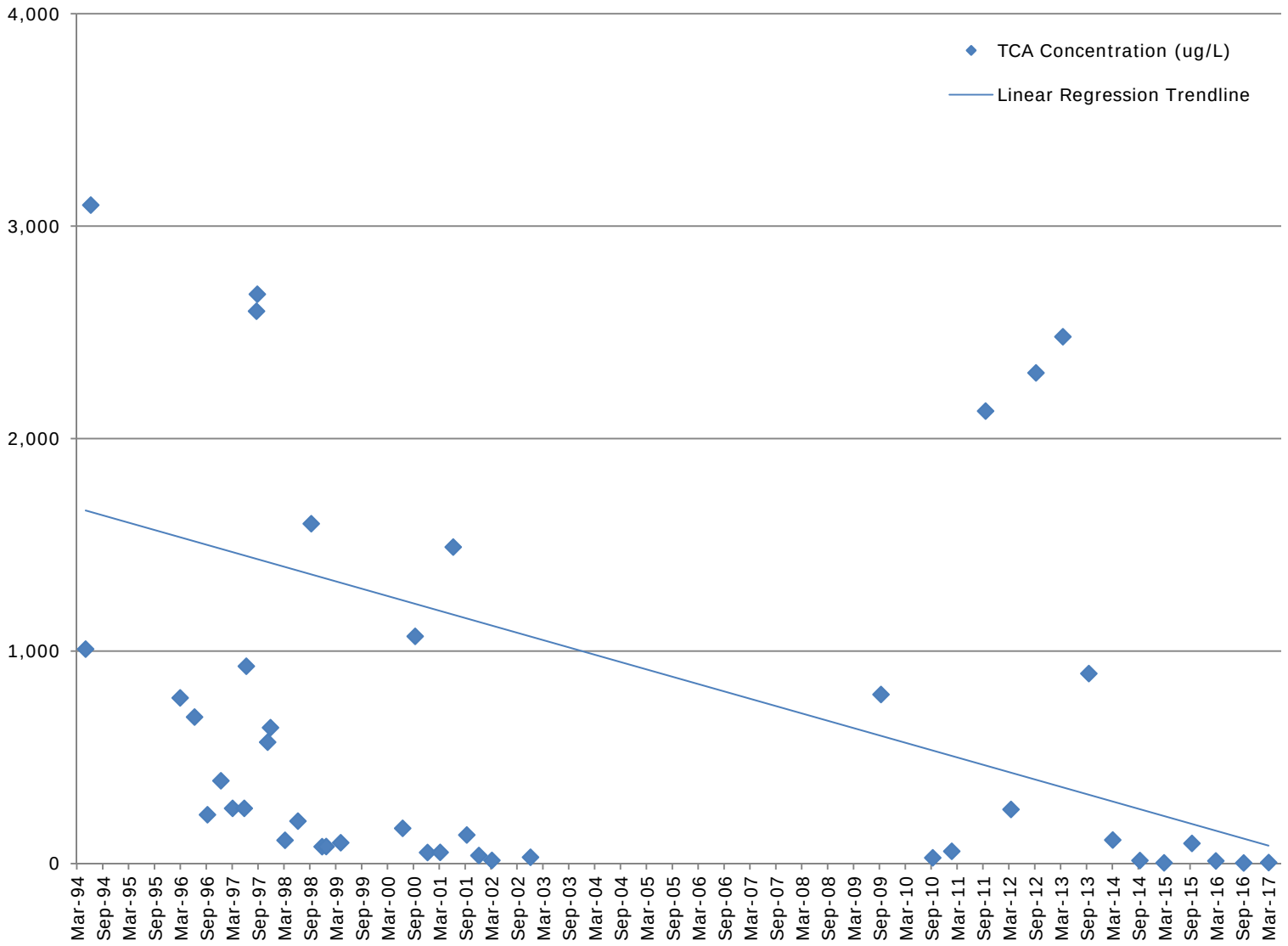
SAMPLING/PURGE METHOD
ND = not detected
SP = submersible pump

Appendix C
Groundwater Field Parameters
March 2017
101 Green Acres Road Site
Valley Stream, New York

Sample Point ID	MWHD4	MWHD6	MWHD7
Date	3/17/2017	3/17/2017	3/17/2017
Weather Conditions	35°F, Sunny	35°F, Sunny	35°F, Sunny
PID Reading (ppm)	ND	ND	ND
Free Product Thickness	ND	ND	ND
Total Depth (ft)	14.60	14.15	40.00
Depth to Water (ft)	5.64	5.50	4.85
Height Water Column (ft)	8.96	8.65	35.15
One Casing Volume (gal.)	5.85	1.41	5.73
Three Volumes (gal.)	17.55	4.23	17.19
Actual Purge Volume (gal.)	18.0	4.5	17.5
Purge Start Time	10:20	11:00	9:00
Purge End Time	10:50	11:20	9:40
Flow Rate (gpm)	0.60	0.23	0.43
Date Sampled	3/17/2017	3/17/2017	3/17/2017
Time Sampled	10:47	11:10	9:30
Purge Method	SP	SP	SP
Sampling Method	SP	SP	SP
Depth to Water After Purge (ft)	5.71	5.50	4.86
Depth to Water Before Sampling (ft)	5.75	5.61	4.95
SAMPLING/PURGE METHOD			
ND = not detected			
SP = submersible pump			
FIELD PARAMETERS			
Initial			
pH	6.07	6.22	5.31
Specific Conductivity (µs/cm)	0.797	4.000	0.530
Turbidity (NTU)	10.2	>1000	>1000
Dissolved Oxygen (ppm)	5.10	1.93	5.40
Temperature (°C)	15.33	9.60	11.82
Oxygen Reduction Potential (mV)	170	43	152
During Purging			
pH	6.03	6.40	5.72
Specific Conductivity (µs/cm)	0.791	4.370	0.416
Turbidity (NTU)	1.50	3.06	73.90
Dissolved Oxygen (ppm)	0.68	0.98	0.69
Temperature (°C)	15.40	10.48	14.78
Oxygen Reduction Potential (mV)	172	81	66
After Purging / At Sampling			
pH	6.03	6.38	5.72
Specific Conductivity (µs/cm)	0.790	4.420	0.417
Turbidity (NTU)	0.6	22.9	34.8
Dissolved Oxygen (ppm)	0.94	0.95	0.63
Temperature (°C)	15.51	10.62	14.80
Oxygen Reduction Potential (mV)	166	85	64
SAMPLING/PURGE METHOD			
ND = not detected			
SP = submersible pump			

APPENDIX D
MW-HD4 GROUNDWATER CONTAMINANT CONCENTRATION TRENDS

APPENDIX D1
RAMBOLL ENVIRON GRAPHS



RAMBOLL ENVIRON

DRAFTED BY: LBD

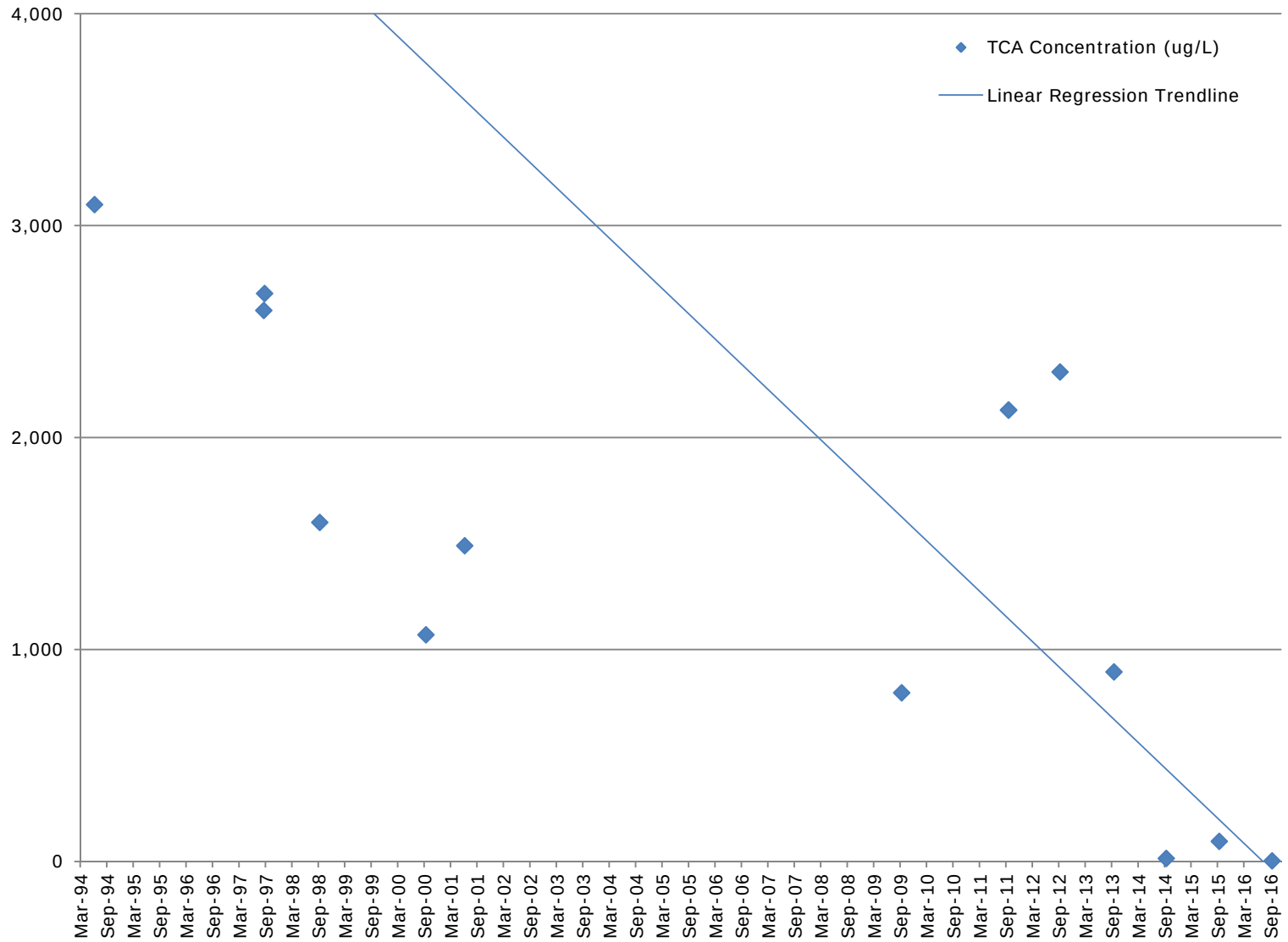
DATE: 3/29/2017

Historical 1,1,1-TCA Concentrations – MW-HD4

101 Green Acres Road Site – Valley Stream, NY

FIGURE
D-1

02-1961B



RAMBOLL ENVIRON

DRAFTED BY: LBD

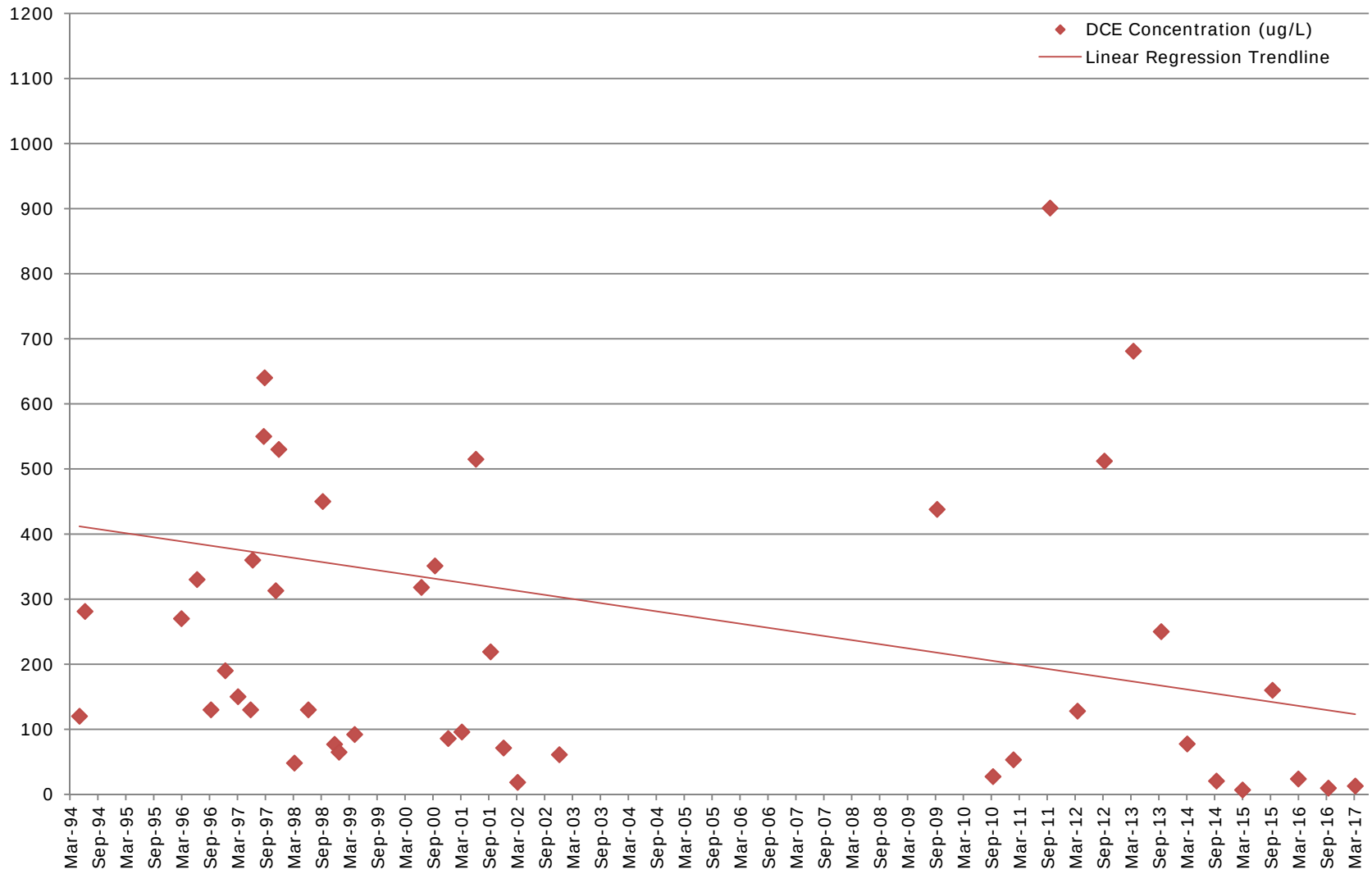
DATE: 3/29/2017

Historical June / September Peak 1,1,1-TCA Concentrations – MD-HD4

101 Green Acres Road – Valley Stream, NY

FIGURE
D-2

02-1961B



RAMBOLL ENVIRON

DRAFTED BY: LBD

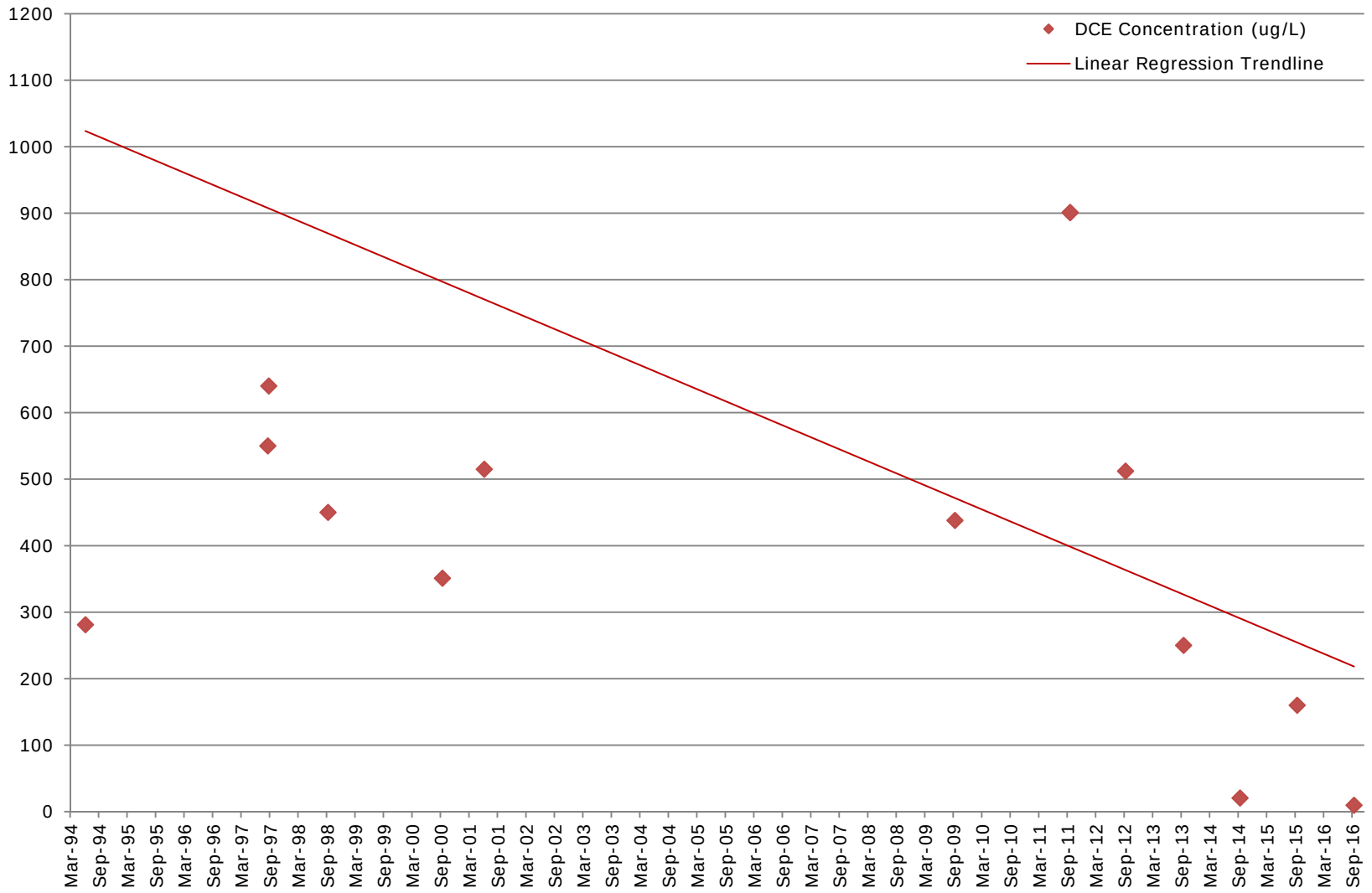
DATE: 3/29/2017

Historical 1,1-DCE Concentrations – MW-HD4

101 Green Acres Road – Valley Stream, NY

FIGURE
D-3

02-1961B



RAMBOLL ENVIRON

DRAFTED BY: LBD

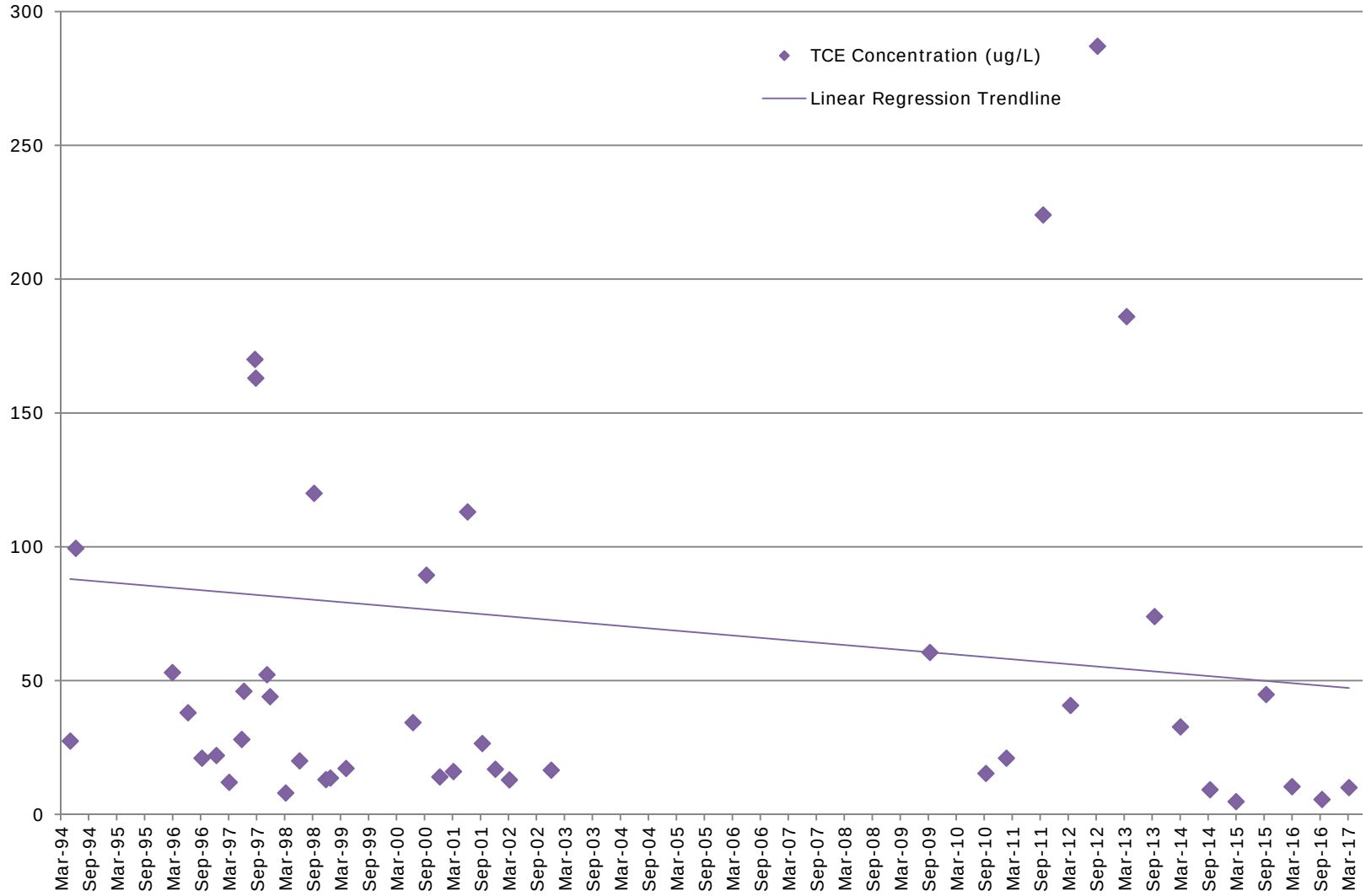
DATE: 3/29/2017

Historical June / September Peak 1,1-DCE Concentrations – MW-HD4

101 Green Acres Road – Valley Stream, NY

FIGURE
D-4

02-1961B



RAMBOLL ENVIRON

DRAFTED BY: LBD

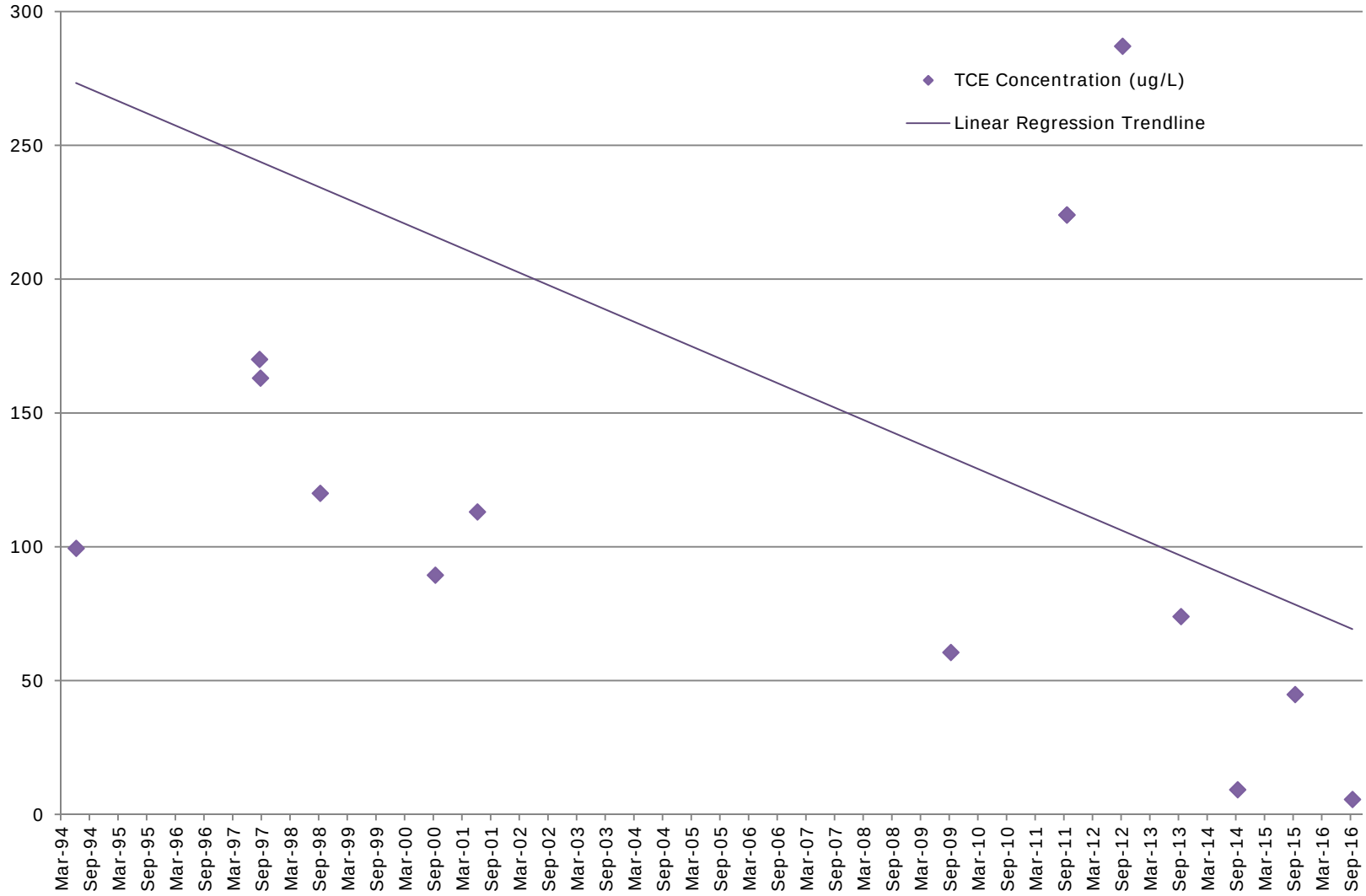
DATE: 3/29/2017

Historical TCE Concentrations – MW-HD4

101 Green Acres Road – Valley Stream, NY

FIGURE
D-5

02-1961B



RAMBOLL ENVIRON

DRAFTED BY: LBD

DATE: 3/29/2017

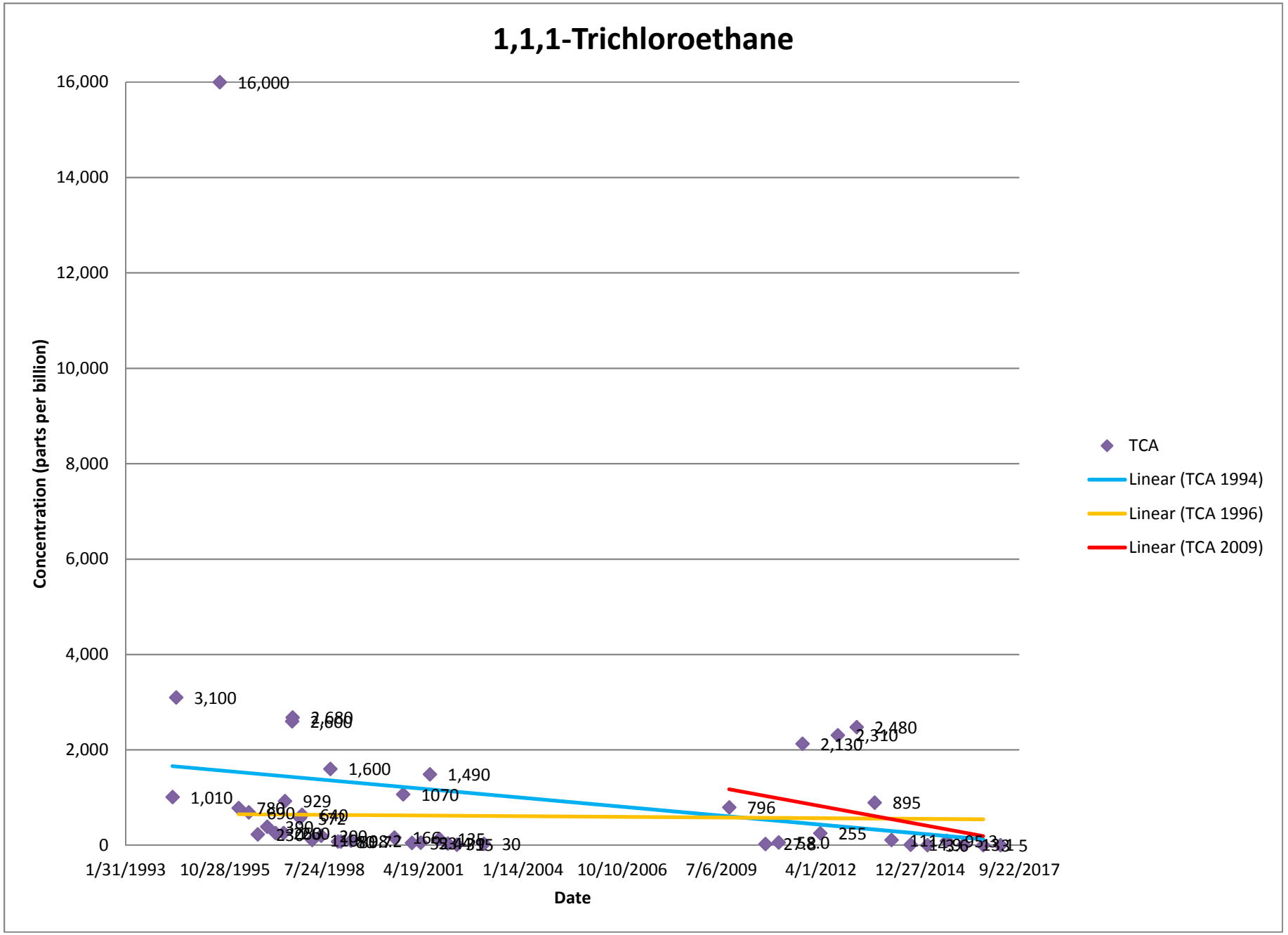
Historical June / September Peak TCE Concentrations – MW-HD4

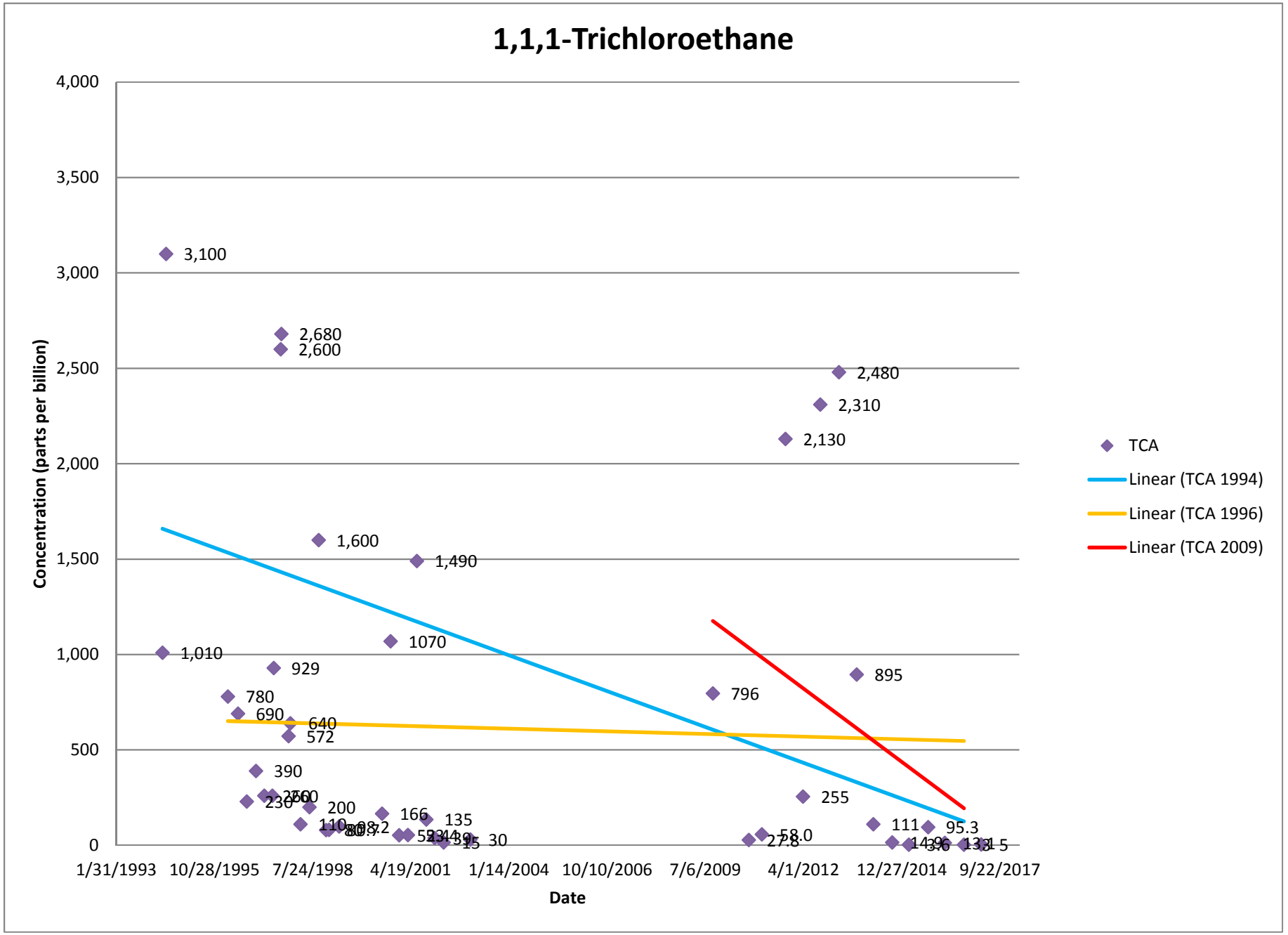
101 Green Acres Road – Valley Stream, NY

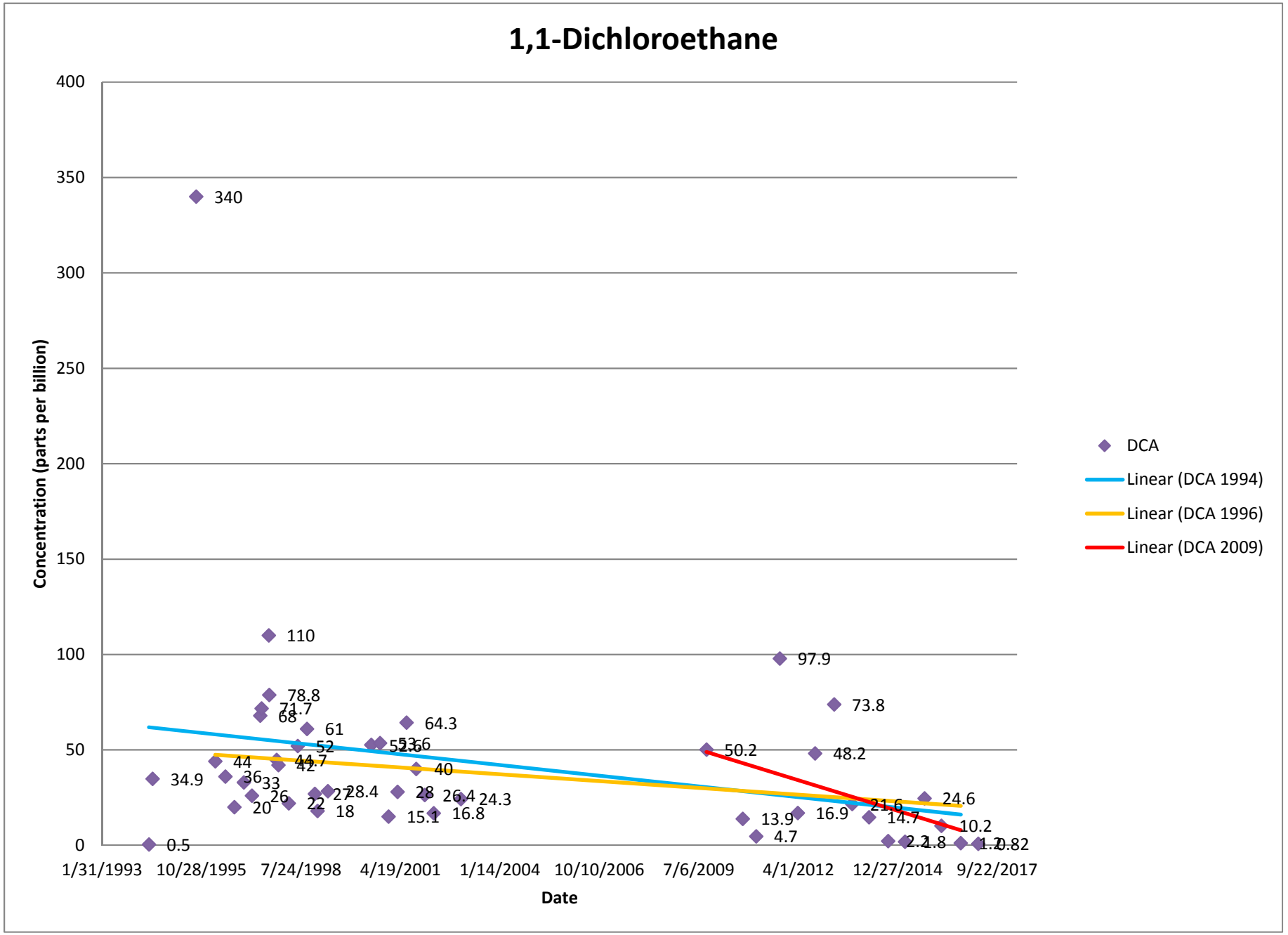
FIGURE
D-6

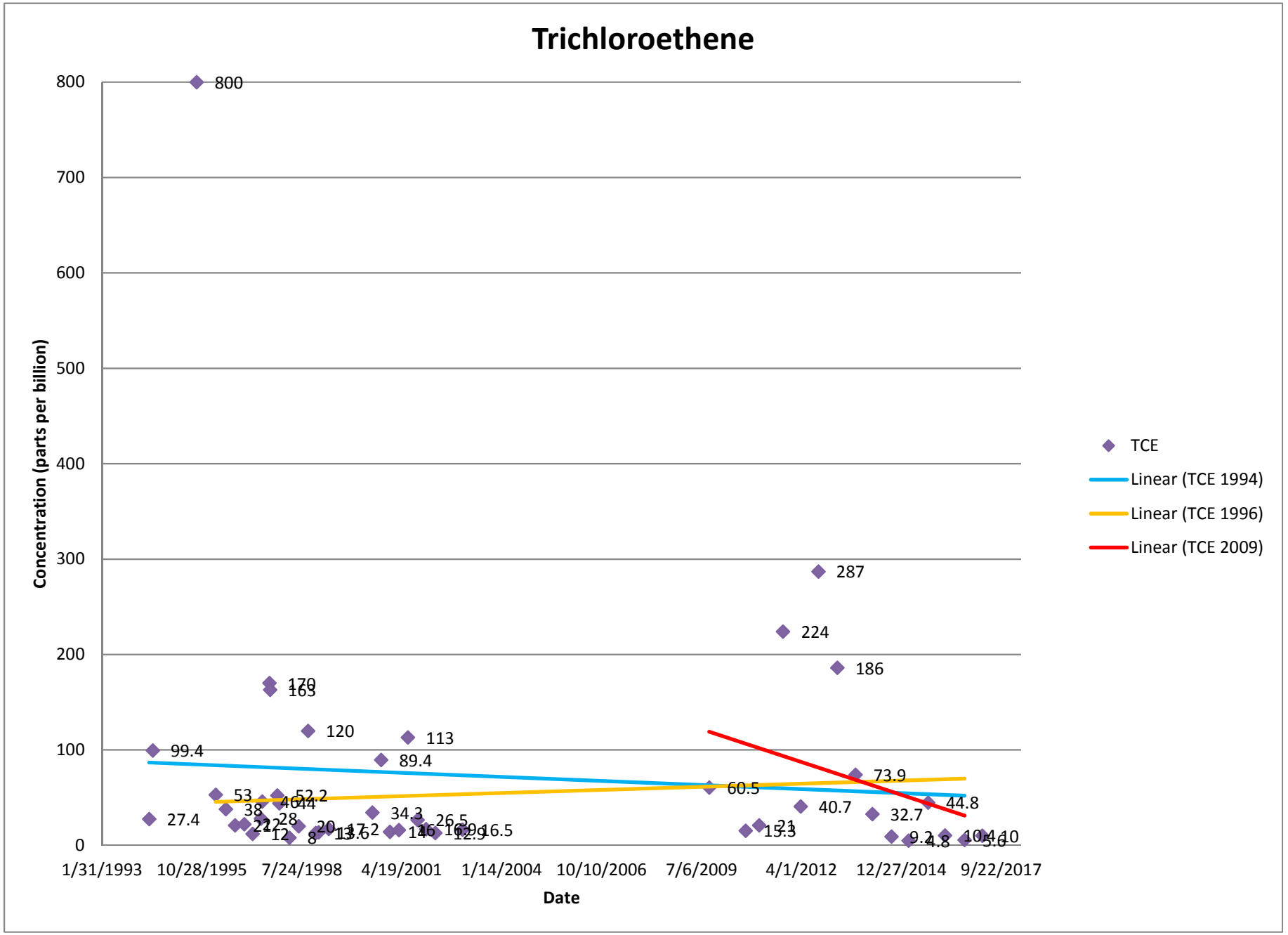
02-1961B

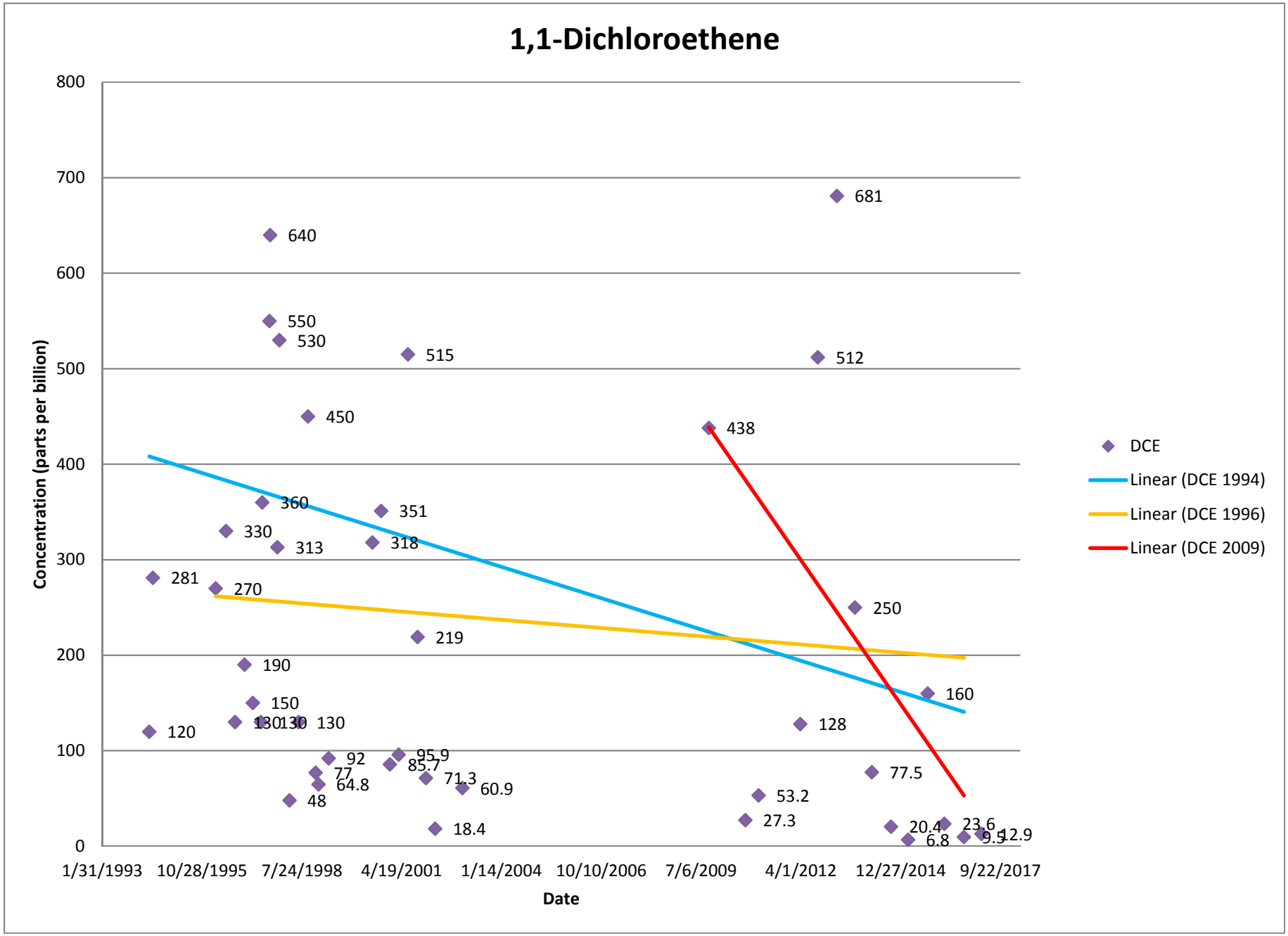
APPENDIX D2
NYSDEC GRAPHS


1,1,1-Trichloroethane
16,000
14,000
12,000
10,000
8,000
6,000
4,000
2,000
0
Concentration (parts per billion)
1/31/1993
10/28/1995
7/24/1998
4/19/2001
1/14/2004
10/10/2006
7/6/2009
4/1/2012
12/27/2014
9/22/2017
Date
16,000
3,100
2,680
2,000
1,600
1,490
1,010
929
1070
780
640
796
2,480
2,310
2,130
895
255
30
TCA
Linear (TCA 1994)
Linear (TCA 1996)
Linear (TCA 2009)


1,1,1-Trichloroethane
Concentration (parts per billion)
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
1/31/1993
10/28/1995
7/24/1998
4/19/2001
1/14/2004
10/10/2006
7/6/2009
4/1/2012
12/27/2014
9/22/2017
Date
3,100
2,680
2,600
2,480
2,310
2,130
1,600
1,490
1,070
1,010
929
895
796
780
690
640
572
390
255
230
200
166
135
111
95.3
58.0
30
TCA
Linear (TCA 1994)
Linear (TCA 1996)
Linear (TCA 2009)


1,1-Dichloroethane
Concentration (parts per billion)
400
350
300
250
200
150
100
50
0
1/31/1993
10/28/1995
7/24/1998
4/19/2001
1/14/2004
10/10/2006
7/6/2009
4/1/2012
12/27/2014
9/22/2017
Date
340
110
78.8
71.7
68
61
64.3
52
44
42
40
34.9
36
33
26
20
22
27
28.4
18
28
26.4
24.3
15.1
16.8
0.5
97.9
73.8
50.2
48.2
24.6
21.6
16.9
14.7
13.9
4.7
10.2
DCA
Linear (DCA 1994)
Linear (DCA 1996)
Linear (DCA 2009)


Trichloroethene
800
700
600
500
400
300
200
100
0
Concentration (parts per billion)
1/31/1993
10/28/1995
7/24/1998
4/19/2001
1/14/2004
10/10/2006
7/6/2009
4/1/2012
12/27/2014
9/22/2017
Date
800
287
224
186
170
163
120
113
99.4
89.4
73.9
60.5
53
52.2
46
44
40.7
44.8
38
34.3
32.7
27.4
28
26.5
22
21
20
17.2
16.5
15.3
13.6
12.9
12
9.2
8
4.8
5.6
TCE
Linear (TCE 1994)
Linear (TCE 1996)
Linear (TCE 2009)


1,1-Dichloroethene
Concentration (parts per billion)
800
700
600
500
400
300
200
100
0
1/31/1993
10/28/1995
7/24/1998
4/19/2001
1/14/2004
10/10/2006
7/6/2009
4/1/2012
12/27/2014
9/22/2017
Date
681
640
550
530
515
512
450
438
360
351
330
313
318
281
270
250
219
190
160
150
130
130
130
120
128
92
95.9
85.7
77
64.8
71.3
60.9
48
77.5
53.2
27.3
18.4
20.4
23.6
6.8
9.5
12.9
DCE
Linear (DCE 1994)
Linear (DCE 1996)
Linear (DCE 2009)

APPENDIX E
DATA USABILITY SUMMARY REPORTS

December 02, 2016

Ramboll Environ US Corporation

Att: Ms. Lily Diehl, Sr. Associate
101 Carnegie Center, Suite 200
Princeton, New Jersey 08540

Re: Bulova Corporation / Valley Stream, NY Site Data Deliverables; Laboratory Job No. JC28232

Dear Ms. Diehl,

Enclosed with this cover letter are the results of our data review of the laboratory deliverables pertaining to the referenced site. The review was conducted according to the guidelines established by NYSDEC's Data Usability Summary Review[1] (DUSR) process; any data flags (qualifiers) were assigned to samples based on guidance contained in EPA Region II's data validation guidelines[2].

Site Name: Bulova Corporation, Valley Stream, NY

Fractions	Laboratory:	SGS Accutest Laboratories
Volatile Organics	Matrix:	Aqueous

Reviewer: Chris Taylor
Prepared By: Environmental Quality Associates, Inc.

SECTION A
Sample Information

The above-referenced analytical job number / samples were analyzed by SGS Accutest Laboratories, Dayton, NJ ('Accutest'). Samples were analyzed for volatile organics by USEPA SW-846 Method 8260C. Six aqueous samples, including one trip blank (TB) and one field blank (FB), plus matrix QC samples (MS/MSD), were collected on 09/22/2016 and received at the laboratory under intact custody seal on 09/22/2016 at a recorded temperature of 3.7°C (4.6°C corrected), on ice, in good condition. The chain-of-custody indicated that all samples were (pH) unpreserved.

SECTION B
General Comments

Summary of data completeness and overall quality of data deliverables package
Data deliverables were complete , as received.

Overall data quality
Data quality was acceptable, incorporating any applied data qualifiers as detailed in the accompanying QC and calibration summary forms and as discussed in the applicable narrative sections below.

Six target compounds were specified for analysis for these samples, as follow: 1,1-dichloroethane (1,1-dca); 1,1-dichloroethene (1,1-dce); Freon-113; tetrachloroethene (pce); 1,1,1-trichloroethane (1,1,1-tca); trichloroethene (tce).

SECTION C
Volatile Organic Fraction

NYSDEC-ASP holding times from lab receipt to analysis were met for all samples, as were EPA method technical holding times from sample collection to analysis. As noted above, all samples were pH unpreserved; all samples were analyzed within seven days of collection, which obviates the need for acid preservation.

Surrogate recoveries, blank spike recoveries, matrix spike (MS) and matrix spike duplicate (MSD) recoveries, instrument tune parameters and internal standard recoveries and retention times were all within acceptable limits.

The batch method blank and the trip and field blanks were all reported free of contamination.

Initial calibration (ICAL) %RSD values and relative response factors (RRF) for all target compounds were within method limits, as were ICV recoveries. Continuing calibration verification (CCV) performance metrics for target compounds were within method limits.

Target compounds reported as positive hits were qualitatively verified from chromatograms and associated mass spectra against standard materials. A reported positive value for trichloroethene was recalculated and verified from the raw data and is shown in the QC/Cal summary attached.

SECTION D
Overall Recommendations

The results of the review process for the above analytical fraction(s) and associated samples are summarized on the attached QC and Calibration summary tables, in order to facilitate the end-user's review of these data. No data qualifiers were necessary as a result of the data review performed.

Very truly yours,
Environmental Quality Associates, Inc.

Chris W. Taylor

Chris W. Taylor
Vice President

/cwt
Attachments

[1] NYSDEC Final DER-10, Technical Guidance for Site Investigations and Remediation, Appendix 2B, "Guidance for the Development of Data Usability Summary Reports", May 2010

[2] EPA Region II, SOP HW-24, Rev. #2, "Validating Organic Compounds by SW-846 Method 8260B", October, 2006 (*Note: with updates for Method 8260C modifications*)

SUMMARY of CALIBRATION and QC PROCEDURES
EPA SW-846 METHOD 8260C, GC-MS VOLATILES

Calibration or QC Check	Minimum Frequency	Acceptance Criteria	QC Non-Compliance Description	Data Qualification Action
Sample Preservation	All samples	Water: 4°C, $Na_2S_2O_3$, HCl to pH<2 Soil & Other: 4°C	None found (*Note: all samples were pH unpreserved)*	*n/a; all samples analyzed <7 days from collection*
Holding Times	All samples	Water: 14 days (7 days max. if not pH preserved) Soil & Other: 14 days (if samples kept at 4°C)	None found	
MS Tuning	Every 12 hours, prior to calibration	Method 8260C Table 3 criteria	None found	
Initial Calibration (ICAL)	Prior to sample analysis and whenever CCV fail to meet acceptance criteria Minimum 5 levels, one of which should be at RL	RSD <20%, or calibrate w/ regression curve; r>0.99; RRF values must meet Method Table 4 minimum values	None found *Note: samples were analyzed only for project-specific COPCs: 1,1-diCl-ethane; 1,1-diClethene; Freon113; tetraClethene; 1,1,1-triClethane and trichloroethene.*	
Initial Calibration Verification (ICV)	Immediately following ICAL (use 2nd-source standard)	Recovery of target compounds 70-130%	None found	
Continuing Calibration Verification (CCV)	Daily, prior to sample analysis and every 12 hours	%Dev for average RRF or %Diff for regression curve True Values must be ≤+20%; RRF values must meet Method Table 4 minimum values	None found	

Calibration or QC Check	Minimum Frequency	Acceptance Criteria	QC Non-Compliance Description	Data Qualification Action
Method Blank (MB) / Trip Blank (TB)	After ICV and CCV, before sample analysis Min. 1 MB per batch; min. 1 TB per cooler	No analytes detected >RL for MB Document positive analytes in both MB and TB in narrative	V3B5824-MB (Method Blank) FB-160922 (Field Blank) TB-160922 (Trip Blank) None found	
Surrogate Compound Spike	Every sample, spiked sample, blank and standard	All surrogate compounds recovered within lab-derived recovery ranges (see SW846 Method 8000B, Sect. 8.7)	None found	
Internal Standards (IS)	Every sample, spiked sample, blank and standard	IS area: -50% to +100% of respective area in ICAL mid-point standard	None found	
		Ret.Time (RT): max.±30 sec. from resp. ICAL midpt. RT	None found	
Laboratory Control Sample (LCS)	Once per each analytical batch (should include all reported analytes) and should be prepared from the same source as the ICAL standards	All analytes recovered within 70 - 130% of True Value (TV) or recoveries within laboratory derived limits (whichever is more stringent)	V3B5824-BS None found	
Matrix Spike / Matrix Spike Duplicate (MS/MSD)	Once per each analytical batch (should include all reported analytes) and should be prepared from the same source as the ICAL standards	All analytes recovered within laboratory-derived limits for each matrix type, and %RPD between MS/MSD below lab-derived maximum	JC28232-2(MS/MSD) None found	
Compound Identification	Each sample analyzed	a) spectral match with standard spectrum from ICAL b) Relative retention time (RRT) within ±0.06 RRT units of standard compound c) ion ratios of target compound are within ±30% of relative m/z in reference (standard) spectrum	None found	

Initial Calibration

Calibration Date:	9/6/2016	
Lab File IDs:	3B129959-968.D	
RRFs ≥ Table 4 values ?	yes	
Target RSDs ≤20% ?	yes	
ICV recoveries 70 - 130% ?	yes	
If No, regression used ?	n/a	
If regression used, r>0.99 ?	n/a	
Qualification action:	n/a	
Affected samples:	all SDG samples	

Continuing Calibrations

Calibration Date:	9/27/2016	
Lab File ID:	3B130662.D	
RRFs ≥ Table 4 values ?	yes	
Target %Ds ≤20% ?	yes	
If No, list targets >20%D:	n/a	
Analytical Bias ?	n/a	
Qualification action:	n/a	
Affected samples:	all SDG samples	

Sample Result Verification

Sample ID:	JC28232-2	(MWHD6-160922)	
Compound:	trichloroethene		IS: 1,4-difluorobenzene
Reported Concentration:	6.2	ug/L	
File ID:	3B130667.D		

	Ax	IS	Df
Concentration, ug/L=	11522	50	1.0
	278120	0.336	
	Ais	RRF	

Concentration, ug/L= 6.16

Result verified ? yes

Reviewer comments: calcs are based on 5.0 mL initial sample purge volume

where:

Ax =	area response of target quant ion
IS =	mass of internal standard injected, ng
DF =	dilution factor
Ais =	area response of internal standard quant ion
RRF =	ICAL average relative response factor

April 17, 2017

Ramboll Environ US Corporation

Att: Mr. Albert Broody, Associate
101 Carnegie Center, Suite 200
Princeton, New Jersey 08540

Re: Bulova Corporation / Valley Stream, NY Site Data Deliverables; Laboratory Job No. JC39128

Dear Mr. Broody,

Enclosed with this cover letter are the results of our data review of the laboratory deliverables pertaining to the referenced site. The review was conducted according to the guidelines established by NYSDEC's Data Usability Summary Review[1] (DUSR) process; any data flags (qualifiers) were assigned to samples based on guidance contained in EPA Region II's data validation guidelines[2].

Site Name: Bulova Corporation, Valley Stream, NY

Fractions	Laboratory:	SGS Accutest Laboratories
Volatile Organics	Matrix:	Aqueous

Reviewer: Chris Taylor
Prepared By: Environmental Quality Associates, Inc.

SECTION A
Sample Information

The above-referenced analytical job number / samples were analyzed by SGS Accutest Laboratories, Dayton, NJ ('Accutest'). Samples were analyzed for volatile organics by USEPA SW-846 Method 8260C. Six aqueous samples, including one trip blank (TB) and one field blank (FB), plus matrix QC samples (MS/MSD), were collected on 03/17/2017 and received at the laboratory under intact custody seal on 03/17/2017 at recorded temperatures of 1.2 and 2.0^{o}C (2.6 and 3.4^{o}C corrected), on ice, in good condition.

SECTION B
General Comments

Summary of data completeness and overall quality of data deliverables package
Data deliverables were complete , as received.

Overall data quality
Data quality was acceptable, incorporating any applied data qualifiers as detailed in the accompanying QC and calibration summary forms and as discussed in the applicable narrative sections below.

Six target compounds were specified for analysis for these samples, as follow: 1,1-dichloroethane (1,1-dca); 1,1-dichloroethene (1,1-dce); Freon-113; tetrachloroethene (pce); 1,1,1-trichloroethane (1,1,1-tca); trichloroethene (tce).

SECTION C
Volatile Organic Fraction

NYSDEC-ASP holding times from lab receipt to analysis were met for all samples, as were EPA method technical holding times from sample collection to analysis. As noted above, all samples were pH unpreserved; all samples were analyzed within seven days of collection, which obviates the need for acid preservation.

Surrogate recoveries, blank spike recoveries, matrix spike (MS) and matrix spike duplicate (MSD) recoveries, instrument tune parameters and internal standard recoveries and retention times were all within acceptable limits.

The batch method blank and the trip and field blanks were all reported free of contamination.

Initial calibration (ICAL) %RSD values and relative response factors (RRF) for all target compounds were within method limits, as were ICV recoveries. Continuing calibration verification (CCV) performance metrics for target compounds were within method limits.

Target compounds reported as positive hits were qualitatively verified from chromatograms and associated mass spectra against standard materials. A reported positive value for trichloroethene was recalculated and verified from the raw data and is shown in the QC/Cal summary attached.

SECTION D
Overall Recommendations

The results of the review process for the above analytical fraction(s) and associated samples are summarized on the attached QC and Calibration summary tables, in order to facilitate the end-user's review of these data. No data qualifiers were necessary as a result of the data review performed.

Very truly yours,
Environmental Quality Associates, Inc.

Chris W. Taylor

Chris W. Taylor
Vice President

/cwt
Attachments

[1] NYSDEC Final DER-10, Technical Guidance for Site Investigations and Remediation, Appendix 2B, "Guidance for the Development of Data Usability Summary Reports", May 2010

[2] EPA Region II, SOP HW-24, Rev. #2, "Validating Organic Compounds by SW-846 Method 8260B", October, 2006 (*Note: with updates for Method 8260C modifications*)

SUMMARY of CALIBRATION and QC PROCEDURES
EPA SW-846 METHOD 8260C, GC-MS VOLATILES

Calibration or QC Check	Minimum Frequency	Acceptance Criteria	QC Non-Compliance Description	Data Qualification Action
Sample Preservation	All samples	Water: 4°C, $Na_2S_2O_3$, HCl to pH<2 Soil & Other: 4°C	None found (*Note: all samples were pH unpreserved)*	*n/a; all samples analyzed <7 days from collection*
Holding Times	All samples	Water: 14 days (7 days max. if not pH preserved) Soil & Other: 14 days (if samples kept at 4°C)	None found	
MS Tuning	Every 12 hours, prior to calibration	Method 8260C Table 3 criteria	None found	
Initial Calibration (ICAL)	Prior to sample analysis and whenever CCV fail to meet acceptance criteria Minimum 5 levels, one of which should be at RL	RSD <20%, or calibrate w/ regression curve; r>0.99; RRF values must meet Method Table 4 minimum values	None found *Note: samples were analyzed only for project-specific COPCs: 1,1-diCl-ethane; 1,1-diClethene; Freon113; tetraClethene; 1,1,1-triClethane and trichloroethene.*	
Initial Calibration Verification (ICV)	Immediately following ICAL (use 2nd-source standard)	Recovery of target compounds 70-130%	None found	
Continuing Calibration Verification (CCV)	Daily, prior to sample analysis and every 12 hours	%Dev for average RRF or %Diff for regression curve True Values must be ≤+20%; RRF values must meet Method Table 4 minimum values	None found	

Calibration or QC Check	Minimum Frequency	Acceptance Criteria	QC Non-Compliance Description	Data Qualification Action
Method Blank (MB) / Trip Blank (TB)	After ICV and CCV, before sample analysis Min. 1 MB per batch	No analytes detected >RL for MB Document positive analytes in both MB and TB in narrative	VA8741-MB (Method Blank) FB01-170317 (Field Blank) TB01-170317 (Trip Blank) None found	
Surrogate Compound Spike	Every sample, spiked sample, blank and standard	All surrogate compounds recovered within lab-derived recovery ranges (see SW846 Method 8000B, Sect. 8.7)	None found	
Internal Standards (IS)	Every sample, spiked sample, blank and standard	IS area: -50% to +100% of respective area in ICAL mid-point standard	None found	
		Ret.Time (RT): max.±30 sec. from resp. ICAL midpt. RT	None found	
Laboratory Control Sample (LCS)	Once per each analytical batch (should include all reported analytes) and should be prepared from the same source as the ICAL standards	All analytes recovered within 70 - 130% of True Value (TV) or recoveries within laboratory derived limits (whichever is more stringent)	VA8741-BS None found	
Matrix Spike / Matrix Spike Duplicate (MS/MSD)	Once per each analytical batch (should include all reported analytes) and should be prepared from the same source as the ICAL standards	All analytes recovered within laboratory-derived limits for each matrix type, and %RPD between MS/MSD below lab-derived maximum	JC39128-3(MS/MSD) None found None found	
Compound Identification	Each sample analyzed	a) spectral match with standard spectrum from ICAL b) Relative retention time (RRT) within ±0.06 RRT units of standard compound c) ion ratios of target compound are within ±30% of relative m/z in reference (standard) spectrum	None found	

Initial Calibration **GCMSA**

Calibration Date:	3/8/2017	
Lab File IDs:	A230765-774.D	
RRFs ≥ Table 4 values ?	yes	
Target RSDs ≤20% ?	yes	
ICV recoveries 70 - 130% ?	yes	
If No, regression used ?	n/a	
If regression used, r>0.99 ?	n/a	
Qualification action:	n/a	
Affected samples:	all SDG samples	

Continuing Calibrations

Calibration Date:	3/22/2017	3/23/2017
Lab File ID:	A231204.D	A231233.D
RRFs ≥ Table 4 values ?	yes	yes
Target %Ds ≤20% ?	yes	yes
If No, list targets >20%D:	n/a	n/a
Analytical Bias ?	n/a	n/a
Qualification action:	n/a	n/a
Affected samples:	all SDG field samples	JC39128-3(MS/MSD)

Sample Result Verification

Sample ID: JC39128-2 (MWHD4-170317)
Compound: trichloroethene IS: 1,4-difluorobenzene
Reported Concentration: 10 ug/L
File ID: A231215.D

	Ax	IS	Df
Concentration, ug/L=	22020	50	1.0
	297693	0.371	
	Ais	RRF	

Concentration, ug/L= 9.97

Result verified ? yes

Reviewer comments: calcs are based on 5.0 mL initial sample purge volume

where:
Ax = area response of target quant ion
IS = mass of internal standard injected, ng
DF = dilution factor

Ais = area response of internal standard quant ion
RRF = ICAL average relative response factor

ATTACHMENT A
LABORATORY DELIVERABLES

e-Hardcopy 2.0
Automated Report

Technical Report for

Ramboll Environ US Corporation

Bulova, Valley Stream, NY

02-1961B

SGS Accutest Job Number: JC28232

Sampling Date: 09/22/16

Report to:

Ramboll Environ US Corporation

EDDPrinceton@environcorp.com

ATTN: Mary Cottingham

Total number of pages in report: 15

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Nancy Cole
Laboratory Director

Client Service contact: Marty Vitanza 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, DE, FL, IL, IN, KS, KY, LA, MA, MD, MI, MT, NC, OH VAP (CL0056), AK (UST-103), AZ (AZ0786), PA, RI, SC, TN, TX, VA, WV, DoD ELAP (L-A-B L2248)

Sections:

1 2 3 4 5

Table of Contents

Sample Summary

Ramboll Environ US Corporation

Job No: JC28232

Bulova, Valley Stream, NY
Project No: 02-1961B

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JC28232-1	09/22/16	11:33	RE	09/22/16	AQ	Ground Water	MWHD7-160922
JC28232-2	09/22/16	12:34	RE	09/22/16	AQ	Ground Water	MWHD6-160922
JC28232-2D	09/22/16	12:34	RE	09/22/16	AQ	Water Dup/MSD	MWHD6-160922MSD
JC28232-2S	09/22/16	12:34	RE	09/22/16	AQ	Water Matrix Spike	MWHD6-160922MS
JC28232-3	09/22/16	12:34	RE	09/22/16	AQ	Ground Water	MWHD6-160922D
JC28232-4	09/22/16	13:13	RE	09/22/16	AQ	Ground Water	MWHD4-160922
JC28232-5	09/22/16	13:19	RE	09/22/16	AQ	Field Blank Water	FB-160922
JC28232-6	09/22/16	13:19	RE	09/22/16	AQ	Trip Blank Water	TB-160922

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	Ramboll Environ US Corporation	**Job No**	JC28232
Site:	Bulova, Valley Stream, NY	**Report Date**	10/3/2016 4:03:18 PM

On 09/22/2016, 4 Sample(s), 1 Trip Blank(s) and 1 Field Blank(s) were received at SGS Accutest at a maximum corrected temperature of 4.6 C. Samples were intact and chemically preserved, unless noted below. A SGS Accutest Job Number of JC28232 was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Volatiles by GCMS By Method SW846 8260C

Matrix: AQ **Batch ID:** V3B5824

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC28232-2MS, JC28232-2MSD were used as the QC samples indicated.
- JC28232-6: (pH=5) Sample is not acid preserved per method/client criteria. Sample analyzed within 7 days holding time.
- JC28232-5: (pH=5) Sample is not acid preserved per method/client criteria. Sample analyzed within 7 days holding time.
- JC28232-4: (pH=5) Sample is not acid preserved per method/client criteria. Sample analyzed within 7 days holding time.
- JC28232-3: (pH=6) Sample is not acid preserved per method/client criteria. Sample analyzed within 7 days holding time.
- JC28232-2MSD: (pH=6) Sample is not acid preserved per method/client criteria. Sample analyzed within 7 days holding time.
- JC28232-2MS: (pH=6) Sample is not acid preserved per method/client criteria. Sample analyzed within 7 days holding time.
- JC28232-2: (pH=6) Sample is not acid preserved per method/client criteria. Sample analyzed within 7 days holding time.
- JC28232-1: (pH=5) Sample is not acid preserved per method/client criteria. Sample analyzed within 7 days holding time.

SGS Accutest certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting the Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

SGS Accutest is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by SGS Accutest indicated via signature on the report cover

Summary of Hits

Job Number: JC28232
Account: Ramboll Environ US Corporation
Project: Bulova, Valley Stream, NY
Collected: 09/22/16

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JC28232-1	**MWHD7-160922**					
No hits reported in this sample.						
JC28232-2	**MWHD6-160922**					
Tetrachloroethene [a]		4.5	1.0	0.23	ug/l	SW846 8260C
Trichloroethene [a]		6.2	1.0	0.26	ug/l	SW846 8260C
JC28232-3	**MWHD6-160922D**					
Tetrachloroethene [a]		4.4	1.0	0.23	ug/l	SW846 8260C
Trichloroethene [a]		6.3	1.0	0.26	ug/l	SW846 8260C
JC28232-4	**MWHD4-160922**					
1,1-Dichloroethane [b]		1.2	1.0	0.21	ug/l	SW846 8260C
1,1-Dichloroethene [b]		9.5	1.0	0.20	ug/l	SW846 8260C
Tetrachloroethene [b]		1.5	1.0	0.23	ug/l	SW846 8260C
1,1,1-Trichloroethane [b]		3.0	1.0	0.22	ug/l	SW846 8260C
Trichloroethene [b]		5.6	1.0	0.26	ug/l	SW846 8260C
JC28232-5	**FB-160922**					
No hits reported in this sample.						
JC28232-6	**TB-160922**					
No hits reported in this sample.						

(a) (pH= 6) Sample is not acid preserved per method/client criteria. Sample analyzed within 7 days holding time.
(b) (pH= 5) Sample is not acid preserved per method/client criteria. Sample analyzed within 7 days holding time.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	MWHD7-160922		
Lab Sample ID:	JC28232-1	**Date Sampled:**	09/22/16
Matrix:	AQ - Ground Water	**Date Received:**	09/22/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Bulova, Valley Stream, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	3B130681.D	1	09/27/16	HA	n/a	n/a	V3B5824
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.26	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%		76-120%
17060-07-0	1,2-Dichloroethane-D4	113%		73-122%
2037-26-5	Toluene-D8	100%		84-119%
460-00-4	4-Bromofluorobenzene	102%		78-117%

(a) (pH= 5) Sample is not acid preserved per method/client criteria. Sample analyzed within 7 days holding time.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MWHD6-160922		
Lab Sample ID:	JC28232-2	**Date Sampled:**	09/22/16
Matrix:	AQ - Ground Water	**Date Received:**	09/22/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Bulova, Valley Stream, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	3B130667.D	1	09/27/16	HA	n/a	n/a	V3B5824
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
127-18-4	Tetrachloroethene	4.5	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-01-6	Trichloroethene	6.2	1.0	0.26	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		76-120%
17060-07-0	1,2-Dichloroethane-D4	108%		73-122%
2037-26-5	Toluene-D8	99%		84-119%
460-00-4	4-Bromofluorobenzene	102%		78-117%

(a) (pH= 6) Sample is not acid preserved per method/client criteria. Sample analyzed within 7 days holding time.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MWHD6-160922D		
Lab Sample ID:	JC28232-3	**Date Sampled:**	09/22/16
Matrix:	AQ - Ground Water	**Date Received:**	09/22/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Bulova, Valley Stream, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	3B130682.D	1	09/27/16	HA	n/a	n/a	V3B5824
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
127-18-4	Tetrachloroethene	4.4	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-01-6	Trichloroethene	6.3	1.0	0.26	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	107%		76-120%
17060-07-0	1,2-Dichloroethane-D4	111%		73-122%
2037-26-5	Toluene-D8	100%		84-119%
460-00-4	4-Bromofluorobenzene	101%		78-117%

(a) (pH= 6) Sample is not acid preserved per method/client criteria. Sample analyzed within 7 days holding time.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MWHD4-160922		
Lab Sample ID:	JC28232-4	**Date Sampled:**	09/22/16
Matrix:	AQ - Ground Water	**Date Received:**	09/22/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Bulova, Valley Stream, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	3B130683.D	1	09/27/16	HA	n/a	n/a	V3B5824
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	1.2	1.0	0.21	ug/l	
75-35-4	1,1-Dichloroethene	9.5	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
127-18-4	Tetrachloroethene	1.5	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	3.0	1.0	0.22	ug/l	
79-01-6	Trichloroethene	5.6	1.0	0.26	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		76-120%
17060-07-0	1,2-Dichloroethane-D4	111%		73-122%
2037-26-5	Toluene-D8	98%		84-119%
460-00-4	4-Bromofluorobenzene	100%		78-117%

(a) (pH= 5) Sample is not acid preserved per method/client criteria. Sample analyzed within 7 days holding time.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	FB-160922		
Lab Sample ID:	JC28232-5	**Date Sampled:**	09/22/16
Matrix:	AQ - Field Blank Water	**Date Received:**	09/22/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Bulova, Valley Stream, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	3B130679.D	1	09/27/16	HA	n/a	n/a	V3B5824
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.26	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		76-120%
17060-07-0	1,2-Dichloroethane-D4	111%		73-122%
2037-26-5	Toluene-D8	99%		84-119%
460-00-4	4-Bromofluorobenzene	101%		78-117%

(a) (pH= 5) Sample is not acid preserved per method/client criteria. Sample analyzed within 7 days holding time.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TB-160922		
Lab Sample ID:	JC28232-6	**Date Sampled:**	09/22/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	09/22/16
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Bulova, Valley Stream, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	3B130680.D	1	09/27/16	HA	n/a	n/a	V3B5824
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.26	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	108%		76-120%
17060-07-0	1,2-Dichloroethane-D4	113%		73-122%
2037-26-5	Toluene-D8	99%		84-119%
460-00-4	4-Bromofluorobenzene	101%		78-117%

(a) (pH= 5) Sample is not acid preserved per method/client criteria. Sample analyzed within 7 days holding time.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

5

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

SGS ACCUTEST GW FB W TB

CHAIN OF CUSTODY

SGS Accutest - Dayton
2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.accutest.com

UP

PAGE 1 OF 1

FED-EX Tracking #	Bottle Order Control #
SGS Accutest Quote #	SGS Accutest Job # JC28232

Client / Reporting Information

Company Name: Ramboll Environ
Street Address: 101 Carnegie Center
City: Princeton State: NJ Zip: 08540
Project Contact: Nicola E-mail: @ramboll.com
Phone #: 609 452 9000 Fax #:
Sampler(s) Name(s): A Brody / S. Weaver Phone #:

Project Information

Project Name: Bulova
Street:
City: Valley Stream State: NY
Project #: 02-19618
Client Purchase Order #:
Project Manager:

[redacted]

Billing Information (if different from Report to)
Company Name:
Street Address:
City: State: Zip:
Attention:

Requested Analysis (see TEST CODE sheet): PCE, TCE / 111-TCA, 111-DCA / 111-DCE / Freon 113

SGS Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Date	Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	PCE, TCE	111-TCA, 111-DCA	111-DCE	Freon 113	LAB USE ONLY
1	MW-H07-160922	•	9/22/16	1133	RE	GW	3					X				X	X	X	X	V26
2	MW-H06-160922			1234																
3	MW-H06-160922D			1234																
2	MW-H06-160922MS			1234																
	MW-H06-160922MSD			1234																
4	MW-H04-160922			1313		↓	↓													
5	FB-160922			1319		DI	3													
6	TB-160922	•	↓	1319	↓	DI	2					↓				↓	↓	↓	↓	

Matrix Codes
DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL- Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB-Field Blank
EB-Equipment Blank
RB- Rinse Blank
TB-Trip Blank

Turnaround Time (Business days)

- [x] Std. 10 Business Days
- [ ] 5 Day RUSH
- [ ] 3 Day RUSH
- [ ] 2 Day RUSH
- [ ] 1 Day RUSH
- [ ] other

Approved By (SGS Accutest PM): / Date:

Emergency & Rush T/A data available VIA Lablink

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] FULLT1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] NYASP Category A
- [x] NYASP Category B
- [ ] State Forms
- [ ] EDD Format
- [ ] Other

NJ Data of Known Quality Protocol Reporting
Commercial "A" = Results Only, Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

INITIAL ASESSMENT 3 4B Don
LABEL VERIFICATION DO
• UP7 9/22/16

Sample inventory is verified upon receipt in the Laboratory

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1 [signature]	9/22/16 / 1842	1 James Ames	2		2
Relinquished by Sampler: 3	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal #	☐ Intact ☐ Not intact	Preserved where applicable ☐ On Ice ✓ Cooler Temp. 3.7°C

5.1

5

JC28232: Chain of Custody
Page 1 of 2

SGS Accutest Sample Receipt Summary

Job Number: JC28232 **Client:** _____ **Project:** _____

Date / Time Received: 9/22/2016 6:47:00 PM **Delivery Method:** _____ **Airbill #'s:** _____

Cooler Temps (Raw Measured) °C: Cooler 1: (3.7);

Cooler Temps (Corrected) °C: Cooler 1: (4.6);

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	IR Gun		
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	1		

Quality Control _Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☑		☐	☐
2. Trip Blank listed on COC:	☑		☐	☐
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☑		☐	☐

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Comments

e-Hardcopy 2.0
Automated Report

Technical Report for

Ramboll Environ US Corporation

Bulova, Valley Stream, NY

02-1961B

SGS Accutest Job Number: JC39128

Sampling Date: 03/17/17

Report to:

Ramboll Environ US Corporation

EDDPrinceton@ramboll.com

ATTN: Mary Cottingham

Total number of pages in report: **20**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Nancy Cole
Laboratory Director

Client Service contact: Marty Vitanza 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, FL, IL, IN, KS, KY, LA, MA, MD, ME, MN, NC, OH VAP (CL0056), AK (UST-103), AZ (AZ0786), PA, RI, SC, TX, UT, VA, WV, DoD ELAP (L-A-B L2248)

Sections: 1 2 3 4 5

Table of Contents

Sample Summary

Ramboll Environ US Corporation

Job No: JC39128

Bulova, Valley Stream, NY
Project No: 02-1961B

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JC39128-1	03/17/17	09:30	AB/SW	03/17/17	AQ	Ground Water	MWHD7-170317
JC39128-2	03/17/17	10:47	AB/SW	03/17/17	AQ	Ground Water	MWHD4-170317
JC39128-3	03/17/17	11:10	AB/SW	03/17/17	AQ	Ground Water	MWHD6-170317
JC39128-3D	03/17/17	11:10	AB/SW	03/17/17	AQ	Water Dup/MSD	MWHD6-170317 MSD
JC39128-3S	03/17/17	11:10	AB/SW	03/17/17	AQ	Water Matrix Spike	MWHD6-170317 MS
JC39128-4	03/17/17	11:10	AB/SW	03/17/17	AQ	Ground Water	MWHD6-170317D
JC39128-5	03/17/17	11:25	AB/SW	03/17/17	AQ	Field Blank Water	FB01-170317
JC39128-6	03/17/17	11:25	AB/SW	03/17/17	AQ	Trip Blank Water	TB01-170317

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	Ramboll Environ US Corporation	**Job No**	JC39128
Site:	Bulova, Valley Stream, NY	**Report Date**	3/30/2017 10:27:23 A

On 03/17/2017, 4 Sample(s), 1 Trip Blank(s) and 1 Field Blank(s) were received at SGS Accutest at a maximum corrected temperature of 3.4 C. Samples were intact and chemically preserved, unless noted below. A SGS Accutest Job Number of JC39128 was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Volatiles by GCMS By Method SW846 8260C

Matrix: AQ **Batch ID:** VA8741

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC39128-3MS, JC39128-3MSD were used as the QC samples indicated.
- JC39128-6: (pH=5) Sample is not acid preserved per method/client criteria. Sample analyzed within 7 days holding time.
- JC39128-5: (pH=5) Sample is not acid preserved per method/client criteria. Sample analyzed within 7 days holding time.
- JC39128-4: (pH=6) Sample is not acid preserved per method/client criteria. Sample analyzed within 7 days holding time.
- JC39128-3MS/MSD: (pH=7) Sample is not acid preserved per method/client criteria. Sample analyzed within 7 days holding time.
- JC39128-3: (pH=7) Sample is not acid preserved per method/client criteria. Sample analyzed within 7 days holding time.
- JC39128-2: (pH=5) Sample is not acid preserved per method/client criteria. Sample analyzed within 7 days holding time.
- JC39128-1: (pH=5) Sample is not acid preserved per method/client criteria. Sample analyzed within 7 days holding time.

Extractables by GCMS By Method SW846 8270D BY SIM

Matrix: AQ **Batch ID:** OP1334A

- All samples were extracted within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC39128-1MS, JC39128-1MSD were used as the QC samples indicated.

SGS Accutest certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting the Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

SGS Accutest is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by SGS Accutest indicated via signature on the report cover

Summary of Hits

Job Number: JC39128
Account: Ramboll Environ US Corporation
Project: Bulova, Valley Stream, NY
Collected: 03/17/17

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JC39128-1	**MWHD7-170317**					
No hits reported in this sample.						
JC39128-2	**MWHD4-170317**					
1,1-Dichloroethane [a]		0.82 J	1.0	0.21	ug/l	SW846 8260C
1,1-Dichloroethene [a]		12.9	1.0	0.20	ug/l	SW846 8260C
Freon 113 [a]		1.4 J	5.0	1.2	ug/l	SW846 8260C
Tetrachloroethene [a]		0.85 J	1.0	0.23	ug/l	SW846 8260C
1,1,1-Trichloroethane [a]		5.0	1.0	0.22	ug/l	SW846 8260C
Trichloroethene [a]		10	1.0	0.26	ug/l	SW846 8260C
1,4-Dioxane		0.173	0.10	0.049	ug/l	SW846 8270D BY SIM
JC39128-3	**MWHD6-170317**					
1,1-Dichloroethane [b]		0.51 J	1.0	0.21	ug/l	SW846 8260C
1,1-Dichloroethene [b]		0.70 J	1.0	0.20	ug/l	SW846 8260C
Tetrachloroethene [b]		2.6	1.0	0.23	ug/l	SW846 8260C
Trichloroethene [b]		3.4	1.0	0.26	ug/l	SW846 8260C
JC39128-4	**MWHD6-170317D**					
1,1-Dichloroethane [c]		0.59 J	1.0	0.21	ug/l	SW846 8260C
1,1-Dichloroethene [c]		0.65 J	1.0	0.20	ug/l	SW846 8260C
Tetrachloroethene [c]		2.7	1.0	0.23	ug/l	SW846 8260C
Trichloroethene [c]		3.2	1.0	0.26	ug/l	SW846 8260C
JC39128-5	**FB01-170317**					
No hits reported in this sample.						
JC39128-6	**TB01-170317**					
No hits reported in this sample.						

(a) (pH= 5) Sample is not acid preserved per method/client criteria. Sample analyzed within 7 days holding time.
(b) (pH= 7) Sample is not acid preserved per method/client criteria. Sample analyzed within 7 days holding time.
(c) (pH= 6) Sample is not acid preserved per method/client criteria. Sample analyzed within 7 days holding time.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	MWHD7-170317		
Lab Sample ID:	JC39128-1	**Date Sampled:**	03/17/17
Matrix:	AQ - Ground Water	**Date Received:**	03/17/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Bulova, Valley Stream, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	A231214.D	1	03/23/17	GA	n/a	n/a	VA8741
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.26	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		76-120%
17060-07-0	1,2-Dichloroethane-D4	104%		73-122%
2037-26-5	Toluene-D8	100%		84-119%
460-00-4	4-Bromofluorobenzene	99%		78-117%

(a) (pH= 5) Sample is not acid preserved per method/client criteria. Sample analyzed within 7 days holding time.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MWHD7-170317		
Lab Sample ID:	JC39128-1	**Date Sampled:**	03/17/17
Matrix:	AQ - Ground Water	**Date Received:**	03/17/17
Method:	SW846 8270D BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	Bulova, Valley Stream, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4P21687.D	1	03/28/17	KM	03/23/17	OP1334A	E4P1197
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.10	0.049	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	80%		29-124%
321-60-8	2-Fluorobiphenyl	75%		23-122%
1718-51-0	Terphenyl-d14	81%		22-130%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MWHD4-170317		
Lab Sample ID:	JC39128-2	**Date Sampled:**	03/17/17
Matrix:	AQ - Ground Water	**Date Received:**	03/17/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Bulova, Valley Stream, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	A231215.D	1	03/23/17	GA	n/a	n/a	VA8741
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	0.82	1.0	0.21	ug/l	J
75-35-4	1,1-Dichloroethene	12.9	1.0	0.20	ug/l	
76-13-1	Freon 113	1.4	5.0	1.2	ug/l	J
127-18-4	Tetrachloroethene	0.85	1.0	0.23	ug/l	J
71-55-6	1,1,1-Trichloroethane	5.0	1.0	0.22	ug/l	
79-01-6	Trichloroethene	10	1.0	0.26	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		76-120%
17060-07-0	1,2-Dichloroethane-D4	106%		73-122%
2037-26-5	Toluene-D8	100%		84-119%
460-00-4	4-Bromofluorobenzene	100%		78-117%

(a) (pH= 5) Sample is not acid preserved per method/client criteria. Sample analyzed within 7 days holding time.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MWHD4-170317		
Lab Sample ID:	JC39128-2	**Date Sampled:**	03/17/17
Matrix:	AQ - Ground Water	**Date Received:**	03/17/17
Method:	SW846 8270D BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	Bulova, Valley Stream, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4M70331.D	1	03/24/17	JJ	03/23/17	OP1334A	E4M3245
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	0.173	0.10	0.049	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	76%		29-124%
321-60-8	2-Fluorobiphenyl	81%		23-122%
1718-51-0	Terphenyl-d14	90%		22-130%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MWHD6-170317		
Lab Sample ID:	JC39128-3	**Date Sampled:**	03/17/17
Matrix:	AQ - Ground Water	**Date Received:**	03/17/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Bulova, Valley Stream, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	A231213.D	1	03/23/17	GA	n/a	n/a	VA8741
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	0.51	1.0	0.21	ug/l	J
75-35-4	1,1-Dichloroethene	0.70	1.0	0.20	ug/l	J
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
127-18-4	Tetrachloroethene	2.6	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-01-6	Trichloroethene	3.4	1.0	0.26	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		76-120%
17060-07-0	1,2-Dichloroethane-D4	103%		73-122%
2037-26-5	Toluene-D8	100%		84-119%
460-00-4	4-Bromofluorobenzene	100%		78-117%

(a) (pH= 7) Sample is not acid preserved per method/client criteria. Sample analyzed within 7 days holding time.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MWHD6-170317		
Lab Sample ID:	JC39128-3	**Date Sampled:**	03/17/17
Matrix:	AQ - Ground Water	**Date Received:**	03/17/17
Method:	SW846 8270D BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	Bulova, Valley Stream, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4M70332.D	1	03/24/17	JJ	03/23/17	OP1334A	E4M3245
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.10	0.049	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	85%		29-124%
321-60-8	2-Fluorobiphenyl	89%		23-122%
1718-51-0	Terphenyl-d14	95%		22-130%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MWHD6-170317D		
Lab Sample ID:	JC39128-4	**Date Sampled:**	03/17/17
Matrix:	AQ - Ground Water	**Date Received:**	03/17/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Bulova, Valley Stream, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	A231216.D	1	03/23/17	GA	n/a	n/a	VA8741
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	0.59	1.0	0.21	ug/l	J
75-35-4	1,1-Dichloroethene	0.65	1.0	0.20	ug/l	J
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
127-18-4	Tetrachloroethene	2.7	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-01-6	Trichloroethene	3.2	1.0	0.26	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		76-120%
17060-07-0	1,2-Dichloroethane-D4	103%		73-122%
2037-26-5	Toluene-D8	100%		84-119%
460-00-4	4-Bromofluorobenzene	97%		78-117%

(a) (pH= 6) Sample is not acid preserved per method/client criteria. Sample analyzed within 7 days holding time.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MWHD6-170317D		
Lab Sample ID:	JC39128-4	**Date Sampled:**	03/17/17
Matrix:	AQ - Ground Water	**Date Received:**	03/17/17
Method:	SW846 8270D BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	Bulova, Valley Stream, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4M70333.D	1	03/24/17	JJ	03/23/17	OP1334A	E4M3245
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.10	0.049	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	81%		29-124%
321-60-8	2-Fluorobiphenyl	87%		23-122%
1718-51-0	Terphenyl-d14	73%		22-130%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	FB01-170317		
Lab Sample ID:	JC39128-5	**Date Sampled:**	03/17/17
Matrix:	AQ - Field Blank Water	**Date Received:**	03/17/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Bulova, Valley Stream, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	A231212.D	1	03/23/17	GA	n/a	n/a	VA8741
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.26	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%		76-120%
17060-07-0	1,2-Dichloroethane-D4	103%		73-122%
2037-26-5	Toluene-D8	101%		84-119%
460-00-4	4-Bromofluorobenzene	98%		78-117%

(a) (pH= 5) Sample is not acid preserved per method/client criteria. Sample analyzed within 7 days holding time.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TB01-170317		
Lab Sample ID:	JC39128-6	**Date Sampled:**	03/17/17
Matrix:	AQ - Trip Blank Water	**Date Received:**	03/17/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Bulova, Valley Stream, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	A231211.D	1	03/23/17	GA	n/a	n/a	VA8741
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
76-13-1	Freon 113	ND	5.0	1.2	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.26	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		76-120%
17060-07-0	1,2-Dichloroethane-D4	100%		73-122%
2037-26-5	Toluene-D8	99%		84-119%
460-00-4	4-Bromofluorobenzene	97%		78-117%

(a) (pH= 5) Sample is not acid preserved per method/client criteria. Sample analyzed within 7 days holding time.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

SGS ACCUTEST

GW FB WTB

CHAIN OF CUSTODY

SGS Accutest - Dayton
2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.accutest.com

UP

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PN

FED-EX Tracking #: | Bottle Order Control #:
SGS Accutest Quote #: | SGS Accutest Job #: JC39128

Client / Reporting Information
Company Name: Ramboll Environ
Street Address: 101 Carnegie Cntr
City: Princeton State: NJ Zip: 08540
Project Contact: 609 452-9000 E-mail:
Phone #: Nscala@ramboll.com Fax #:
Sampler(s) Name(s): A. Bloody / S. Weaver Phone #:

Project Information
Project Name: Bulova
Street:
City: Valley Stream State: NY
Project #: 02 1961B
Client Purchase Order #:
Project Manager:

Billing Information (if different from Report to)
Company Name:
Street Address:
City: State: Zip:
Attention:

Requested Analysis (see TEST CODE sheet): PCE, TCE; 1,1,1-TCA, 1,1-DCA; 1,1-DCE; Freon 113; 1,4 Dioxane

SGS Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Date	Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	PCE, TCE	1,1,1-TCA, 1,1-DCA	1,1-DCE	Freon 113	1,4 Dioxane	LAB USE ONLY
1	MWHD7-170317		3/17/17	0930		GW										X	X	X	X	X	E27
2	MWHD4-170317		3/17/17	1047		GW										↓	↓	↓	↓	↓	V337
3	MWHD6-170317		3/17/17	1110		GW										↓	↓	↓	↓	↓	
4	MWHD6-170317D		3/17/17	1110		GW										↓	↓	↓	↓	↓	
3	MWHD6-170317MS		3/17/17	1110		GW										↓	↓	↓	↓	↓	
3	MWHD6-170317MSD		3/17/17	1110		GW										↓	↓	↓	↓	↓	
5	FB01-170317		3/17/17	1125		FB										↓	↓	↓	↓	↓	
6	TB01-170317		3/17/17	1127		TB										↓	↓	↓	↓	↓	

Matrix Codes: DW - Drinking Water, GW - Ground Water, WW - Water, SW - Surface Water, SO - Soil, SL- Sludge, SED-Sediment, OI - Oil, LIQ - Other Liquid, AIR - Air, SOL - Other Solid, WP - Wipe, FB-Field Blank, EB-Equipment Blank, RB- Rinse Blank, TB-Trip Blank

Turnaround Time (Business days)
- [x] Std. 10 Business Days
- [ ] 5 Day RUSH
- [ ] 3 Day RUSH
- [ ] 2 Day RUSH
- [ ] 1 Day RUSH
- [ ] other

Approved by (SGS Accutest PM): / Date:

Emergency & Rush T/A data available VIA Lablink

Data Deliverable Information
- [ ] Commercial "a" (Level 1)
- [ ] Commercial "b" *Level 2)
- [ ] FULLT1 (Level 3+4)
- [x] NJ Reduced
- [ ] Commercial "C"
- [ ] NJ Data of Known Quality Protocol Reporting
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [x] EDD Format EQUIS
- [ ] Other

Commercial "A" = Results Only, Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions
0 UPT 3/17

INITIAL ASSESSMENT Am 2B

LABEL VERIFICATION

Sample inventory is verified upon receipt in the Laboratory

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1 [signature]	3/17/17 1742	1 [signature]	2		2
3		3	4		4
5		5	Custody Seal #	☐ Intact ☐ Not intact	Preserved where applicable ☐ / On Ice ☐ / Cooler Temp. 1.2, 2.0 °C IR

SM088-01C Rev. Date: 9/13/16

5.1

5

JC39128: Chain of Custody
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SGS Accutest Sample Receipt Summary

Job Number: JC39128 **Client:** Ramboll Environ **Project:** Bulova

Date / Time Received: 3/17/2017 5:42:00 PM **Delivery Method:** Client **Airbill #'s:**

Cooler Temps (Raw Measured) °C: Cooler 1: (1.2); Cooler 2: (2.0);

Cooler Temps (Corrected) °C: Cooler 1: (2.6); Cooler 2: (3.4);

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	IR Gun		
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	2		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☑		☐	☐
2. Trip Blank listed on COC:	☑		☐	☐
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☑		☐	☐

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Comments -3 Rec'd MS/MSD volume for VOC only.
-5 & -6 All analyses are marked off for FB and TB, Only rec'd 2 VOC vials.

SM089-02
Rev. Date 12/1/16

Responded to by: MV

Response Date: 3/22

Response:

Per Al Broody, proceed as noted MS/MSD , FB and TB wil not be logged in for 1,4 Dioxane.

JC39128: Chain of Custody
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