

C₂G Environmental Consultants, LLC

Groundwater Investigation Report 32 Allen Boulevard Farmingdale, NY 11735 Site #1-52-030



Prepared For:

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October 5, 2016

C₂G Environmental Consultants, LLC

Groundwater Investigation Report

32 Allen Boulevard, Farmingdale, NY

EXECUTIVE SUMMARY

In September 2016, C₂G performed groundwater investigation activities at the subject site. The purpose of this investigation was to determine if recent elevated Cadmium and Chromium levels detected during October 2015 groundwater sampling activities were potentially associated with an off-site source. Please refer to the Groundwater Quality Sampling Report prepared by C₂G, dated December 11, 2015, for a complete description of October 2015 groundwater sampling activities and results. Based on the presumed southeasterly groundwater flow direction, documented in historic reports, the groundwater investigation activities were focused on the northern and western site boundaries.

On September 21, 2016, C₂G performed temporary groundwater monitoring well installation activities. A total of five (5) temporary one-inch (1") diameter PVC monitoring wells (TW-1 through TW-5) were installed utilizing a Geoprobe Model 6620DT direct push drill rig. Please refer to Figure 3 for a depiction of temporary monitoring well locations. The temporary monitoring wells were installed to depths between twenty-nine (29) and thirty (30) feet below grade. The wells were constructed of twenty (20) feet of 0.010-inch well screen with ten (10) feet of solid riser. A well sand pack was installed within the boreholes and the wells were left overnight to develop.

On September 22, 2016, C₂G performed temporary groundwater monitoring well sampling activities. The wells were gauged utilizing an interface meter and were purged a minimum of three (3) well volumes. Purged groundwater was placed into one (1) 55-gallon drum for proper off-site disposal. Groundwater purging and sampling was performed utilizing a low flow peristaltic pump with designated tubing for each well. Each groundwater sample was field tested for turbidity at the time of sample collection. Field data indicated all groundwater samples were well below the target turbidity of 50 NTU.

In order to determine/confirm groundwater flow direction, C₂G surveyed three (3) of the temporary monitoring wells installed on September 21, 2016 (TW-1, TW-2, and TW-3) as well as one (1) existing permanent on-site groundwater monitoring well (ERT-01). The top of the well casing of each monitoring well was surveyed to an arbitrary plane of one hundred (100) feet utilizing a laser level. Based on well casing elevation data and depth to groundwater measurements collected on September 22, 2016, groundwater flow direction is calculated to be to the south.

Laboratory analytical results of the groundwater samples collected from TW-1, TW-2, and TW-3 indicated Cadmium and Chromium concentrations below NYSDEC Guidance Values. Laboratory analytical results of the groundwater samples collected from TW-4 and TW-5 indicated Chromium concentrations below NYSDEC Guidance Values. However, Cadmium was detected above NYSDEC Guidance Values in TW-4 and TW-5.

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Based on the laboratory analytical results of the groundwater samples collected from the temporary monitoring wells on September 22, 2016, it does not appear that on-site Cadmium and Chromium levels are associated with an off-site source to the north; however, an off-site source to the west cannot currently be eliminated.

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REPORT SPECIFICATIONS

Report Date: October 5, 2016

Copies and circulation of this report are as follows:

One (1) Original report to:

Mr. Stephen Baxter
32 Allen Boulevard Corp.
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One (1) Original report to:

Mr. Jahan Reza – Environmental Engineer
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One (1) Original report to:

Confidential client file at C₂G Environmental Consultants, LLC.

This report is prepared for the exclusive use of parties noted above and is considered private and strictly confidential. C₂G Environmental Consultants, LLC shall not release this report or any of the findings of this report to any person or agency except with the authorization of the principal parties noted above.

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LIMITATIONS

The findings and conclusions set forth in this report are based upon information that was available during inspection/action of the property and after review of selected records and documents. If new information becomes available concerning the property after this date, or if the property is used in a manner other than that which is identified in this report, the findings and conclusions contained herein may have to be modified. Additionally, while this work was performed in accordance with good commercial and customary practice and generally accepted protocols within the consulting industry, C₂G cannot guarantee that the property is completely free of hazardous substances or other materials or conditions that could subject the owner and/or operator to potential liability. Future events and/or investigation could change the findings stated herein. Should additional investigations encounter differing conditions, sections of this report may require modification.

The ensuing Environmental Assessment is subject to the following conditions and to such other conditions and limiting conditions as are set forth in the report.

1. C₂G assumes no responsibility for hidden or latent conditions or misrepresentation by the property owner, his/her representatives, public information officials or any authority consulted in connection with the compilation of this report.
2. This report is prepared for the sole and explicit purpose for assessing the potential liability with respect to the presence of hazardous materials that may pose a potential health or environmental threat and for evaluating collateral risk associated with the same. This report is not intended to have any direct bearing on the value of the property.
3. The Environmental Assessment is for the sole use of the principal parties. No disclosure or reproduction shall be made of this report without the prior written consent of C₂G.
4. C₂G or any representative of C₂G is not required to give testimony with reference to the opinions expressed herein without prior written arrangement.

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DISCLAIMER

C₂G assumes no liability for the use of this report by any person or entity other than the client for whom it has been prepared.

The accuracy of presenting the findings of this remedial action was considered of paramount importance during the formulation of this report. The report's accuracy is limited to the information available from interviews, records, files and plans released by the property owner and/or his representatives and/or the respective regulatory agencies, their attorneys and information officers. The above mentioned parties' interest in issues presented herein is unknown to C₂G Environmental Consultants, LLC.

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1.0 INTRODUCTION

1.1 Background

On October 21, 2015, C₂G performed groundwater sampling activities at the above-mentioned site in order to assess groundwater conditions associated with former on-site operations. As per NYSDEC directives, six (6) groundwater monitoring wells were sampled in October 2015. All wells were sampled in accordance with NYSDEC DER-10 Guidelines. The groundwater samples were analyzed for RCRA 8 Metals, Hexavalent Chromium, Total Cyanide, and additional metals including Beryllium, Copper, Manganese, Nickel, and Zinc. Please refer to the previous Groundwater Quality Sampling Report prepared by C₂G, dated December 11, 2015, for a complete description of October 2015 groundwater sampling activities and results.

Laboratory analytical results of the October 21, 2015 groundwater sampling activities indicated exceedances of NYSDEC Guidance Values in five (5) of the six (6) sampled groundwater wells for Cadmium, Chromium, Copper, Hexavalent Chromium, and/or Total Cyanide. Please refer to Table 1 for a summary of analytical results from the October 21, 2015 groundwater sampling event.

C₂G reviewed the Five-Year Review Report prepared by the United States Environmental Protection Agency (EPA) Region 2, dated July 2012. C₂G compared Cadmium and Chromium levels observed during the October 2015 groundwater sampling event to those historic levels provided in the July 2012 Five-Year Review Report. Cadmium levels observed during the October 2015 sampling activities appeared consistent with historic levels with some minor decreases and some minor increases. However, Chromium levels appeared to have increased significantly during the October 2015 sampling activities. Please refer to Table 2 for a summary of historic Cadmium and Chromium groundwater levels.

Based on the results of the October 2015 groundwater sampling activities, C₂G prepared an Exploratory Groundwater Investigation Work Plan, dated March 18, 2016, in order to determine if elevated Cadmium and Chromium groundwater concentrations are potentially associated with an off-site source. Based on the presumed southeasterly groundwater flow direction, documented in historic reports, the groundwater investigation activities were conducted on the northern and western site boundaries. A total of five (5) temporary groundwater monitoring wells were installed and were sampled for target metals Cadmium and Chromium. This report documents temporary groundwater monitoring well installation, a groundwater flow direction survey, and groundwater sampling activities.

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2.0 SCOPE OF WORK

The objective of this investigation as well as the methods employed during the field activities are summarized as follows:

1. Installation of five (5) temporary one-inch (1") diameter PVC monitoring wells utilizing a Geoprobe Model 6620DT direct push drill rig.
2. Surveying of select groundwater wells in order to determine/confirm groundwater flow direction.
3. Sampling of temporary groundwater monitoring wells: including gauging, purging, and field testing for target turbidity.
4. The analysis of samples for target metals Cadmium and Chromium via EPA Method 6010 by Phoenix Environmental Laboratories which is certified by the National Environmental Laboratory Accreditation Conference, holds certification in New York State, and is in compliance with state, federal, and EPA quality control guidelines.
5. Generate a Groundwater Investigation Report based on site activities, observations, and analytical findings.

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3.0 SITE DESCRIPTION

3.1 Site Description

The subject site consists of one (1) multiuse commercial/industrial building. The surrounding area is mixed industrial, commercial, and residential properties. The subject property is located to the north of Allen Boulevard in Farmingdale, NY. A site location map is attached as Figure 1. A site diagram depicting the locations of permanent on-site groundwater monitoring wells is attached as Figure 2. A site diagram depicting the locations of September 2016 temporary groundwater monitoring wells is attached as Figure 3. A site diagram depicting September 22, 2016 groundwater elevation data is attached as Figure 4.

3.2 Site Topography

The local land surface of the subject site is relatively level throughout.

3.3 Sensitive Receptor Information

Sensitive receptors other than groundwater were not noted in the immediate vicinity of the subject property. The site is serviced by municipal water. Groundwater was encountered within the temporary monitoring wells at depths ranging from approximately twenty (20) to twenty-one (21) feet below grade. Please refer to Section 4.4 for calculated groundwater flow direction information.

3.4 Site Geology

According to the NYS Museum bedrock map for the Lower Hudson Valley, the subject property is located in an area dominated by coastal plain deposits consisting of silty clay, glauconitic sandy clay, sand, and gravel of the Monmouth Group, Matawan Group, and Magothy Formation. Refusal was not encountered during Geoprobe monitoring well installation activities to a maximum depth of approximately thirty (30) feet below grade.

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4.0 GROUNDWATER INVESTIGATION ACTIVITIES

Temporary groundwater monitoring well installation activities and well surveying activities were performed on September 21, 2016. Groundwater monitoring well gauging, purging, and sampling activities were performed on September 22, 2016. This section describes these activities, including measures to minimize health and safety risks.

4.1 Risk Minimization Practices

In order to minimize risk to the public, a C₂G technician monitored vapor hazards throughout on-site activities with a properly calibrated Mini Rae Photo Ionization Detector (PID). The PID was calibrated for benzene using a 100 parts per million (ppm) isobutylene standard according to the manufacturer's instructions and was fully charged prior to use. Fire extinguishing equipment was readily available at the site.

4.2 Temporary Groundwater Monitoring Well Installation

C₂G Environmental Consultants, LLC (C₂G) performed temporary groundwater monitoring well installation activities on September 21, 2016. A total of five (5) temporary one-inch (1") diameter PVC monitoring wells (TW-1 through TW-5) were installed utilizing a Geoprobe Model 6620DT direct push drill rig. Temporary monitoring wells TW-1, TW-2, and TW-3 were installed near the northern site boundary. Temporary monitoring wells TW-4 and TW-5 were installed near the western site boundary. Please refer to Figure 3 for a depiction of temporary monitoring well locations.

The temporary monitoring wells were installed to depths between twenty-nine (29) and thirty (30) feet below grade. The wells were constructed of twenty (20) feet of 0.010-inch well screen with ten (10) feet of solid riser. A well sand pack was installed within the boreholes and the wells were left overnight to develop.

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4.3 Groundwater Sampling Activities

C₂G Environmental Consultants, LLC (C₂G) performed temporary groundwater monitoring well sampling activities on September 22, 2016. The wells were gauged utilizing a Solinst Model 122 interface meter. The temporary monitoring wells were purged a minimum of three (3) well volumes. Purged groundwater was placed into one (1) 55-gallon drum for proper off-site disposal. Groundwater purging and sampling was performed utilizing a Geotech Geopump low flow peristaltic pump with designated tubing for each well. Each groundwater sample was field tested for turbidity at the time of sample collection utilizing a Lamotte Model 2020we turbidity meter for comparison to a target turbidity of less than 50 NTUs. Please refer to the table below for well gauging, purging, and sampling field data. Groundwater sample analytical results are outlined in Section 5.1 of this report.

Groundwater Sampling Field Data (September 22, 2016):

Well No.	Depth to Water from Casing (ft.)	Depth to Well Bottom from Casing (ft.)	Three (3) Well Water Volumes (gal.)	Amount Purged from Well (gal.)	Sample Turbidity
TW-1	20.27	29.88	1.182	1.5	7.49 NTU
TW-2	20.80	30.18	1.154	1.5	3.33 NTU
TW-3	20.94	30.14	1.132	1.5	11.3 NTU
TW-4	20.95	29.71	1.077	1.5	3.05 NTU
TW-5	21.03	29.91	1.092	1.5	9.39 NTU

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4.4 Groundwater Flow Direction Survey

In order to determine/confirm groundwater flow direction, C₂G Environmental Consultants, LLC (C₂G) surveyed three (3) of the temporary monitoring wells installed on September 21, 2016 (TW-1, TW-2, and TW-3) as well as one (1) existing permanent on-site groundwater monitoring well (ERT-01). The top of the well casing of each monitoring well was surveyed to an arbitrary plane of one hundred (100) feet utilizing a laser level. Please refer to the table below for groundwater elevation data in relation to an arbitrary plane of (100) feet. Please refer to Figure 4 for a depiction of groundwater elevation data. Based on the groundwater elevation data, groundwater flow direction is calculated to be to the south.

Groundwater Elevation Data – September 22, 2016 (Based on an arbitrary plane of 100 ft.):

Well No.	Groundwater Elevation (ft.)
TW-1	79.60
TW-2	79.63
TW-3	79.63
ERT-01	79.46

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5.0 SAMPLING AND ANALYSIS

5.1 Groundwater Sample Collection & Results

On September 22, 2016, a total of five (5) groundwater samples were collected from the temporary monitoring wells installed at the subject site. The groundwater samples were collected utilizing a low flow peristaltic pump with designated tubing for each well. Each groundwater sample was collected in one (1) – 250ml plastic sample bottle preserved in Nitric Acid and was delivered directly to Phoenix Labs of Manchester, CT for analysis. The samples were analyzed by EPA Method 6010C for target metals Cadmium and Chromium. Phoenix is certified by the National Environmental Laboratory Accreditation Conference, holds certification in New York State, and is in compliance with state, federal, and EPA quality control guidelines. The laboratory analysis and Chain of Custody documentation can be found in Appendix D. Please refer to Table 3 for a summary of analytical results from the September 22, 2016 groundwater sampling event.

Laboratory analytical results of the groundwater samples collected from TW-1, TW-2, and TW-3 indicated Cadmium and Chromium concentrations below NYSDEC Guidance Values.

Laboratory analytical results of the groundwater samples collected from TW-4 and TW-5 indicated Chromium concentrations below NYSDEC Guidance Values. However, Cadmium was detected above NYSDEC Guidance Values in TW-4 and TW-5.

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6.0 SUMMARY AND CONCLUSIONS

6.1 Summary

In September 2016, C₂G performed groundwater investigation activities at the subject site. The purpose of this investigation was to determine if recent elevated Cadmium and Chromium levels detected during October 2015 groundwater sampling activities were potentially associated with an off-site source. Please refer to the Groundwater Quality Sampling Report prepared by C₂G, dated December 11, 2015, for a complete description of October 2015 groundwater sampling activities and results. Based on the presumed southeasterly groundwater flow direction, documented in historic reports, the groundwater investigation activities were focused on the northern and western site boundaries.

On September 21, 2016, C₂G performed temporary groundwater monitoring well installation activities. A total of five (5) temporary one-inch (1") diameter PVC monitoring wells (TW-1 through TW-5) were installed utilizing a Geoprobe Model 6620DT direct push drill rig. Please refer to Figure 3 for a depiction of temporary monitoring well locations. The temporary monitoring wells were installed to depths between twenty-nine (29) and thirty (30) feet below grade. The wells were constructed of twenty (20) feet of 0.010-inch well screen with ten (10) feet of solid riser. A well sand pack was installed within the boreholes and the wells were left overnight to develop.

On September 22, 2016, C₂G performed temporary groundwater monitoring well sampling activities. The wells were gauged utilizing an interface meter and were purged a minimum of three (3) well volumes. Purged groundwater was placed into one (1) 55-gallon drum for proper off-site disposal. Groundwater purging and sampling was performed utilizing a low flow peristaltic pump with designated tubing for each well. Each groundwater sample was field tested for turbidity at the time of sample collection. Field data indicated all groundwater samples were well below the target turbidity of 50 NTU.

In order to determine/confirm groundwater flow direction, C₂G surveyed three (3) of the temporary monitoring wells installed on September 21, 2016 (TW-1, TW-2, and TW-3) as well as one (1) existing permanent on-site groundwater monitoring well (ERT-01). The top of the well casing of each monitoring well was surveyed to an arbitrary plane of one hundred (100) feet utilizing a laser level. Based on well casing elevation data and depth to groundwater measurements collected on September 22, 2016, groundwater flow direction is calculated to be to the south.

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Laboratory analytical results of the groundwater samples collected from TW-1, TW-2, and TW-3 indicated Cadmium and Chromium concentrations below NYSDEC Guidance Values. Laboratory analytical results of the groundwater samples collected from TW-4 and TW-5 indicated Chromium concentrations below NYSDEC Guidance Values. However, Cadmium was detected above NYSDEC Guidance Values in TW-4 and TW-5.

6.2 Conclusions

- Based on well casing elevation data and depth to groundwater measurements collected on September 22, 2016, groundwater flow direction is calculated to be to the south.
- Based on the laboratory analytical results of the groundwater samples collected from the temporary monitoring wells near the northern site boundary (TW-1, TW-2, and TW-3), it does not appear that on-site Cadmium and Chromium levels are associated with an off-site source to the north.
- Based on the southeasterly groundwater flow direction documented in historic reports and the laboratory analytical results of the groundwater samples collected from the temporary monitoring wells near the western site boundary (TW-4 and TW-5), an off-site source to the west cannot currently be eliminated.

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APPENDIX A: FIGURES

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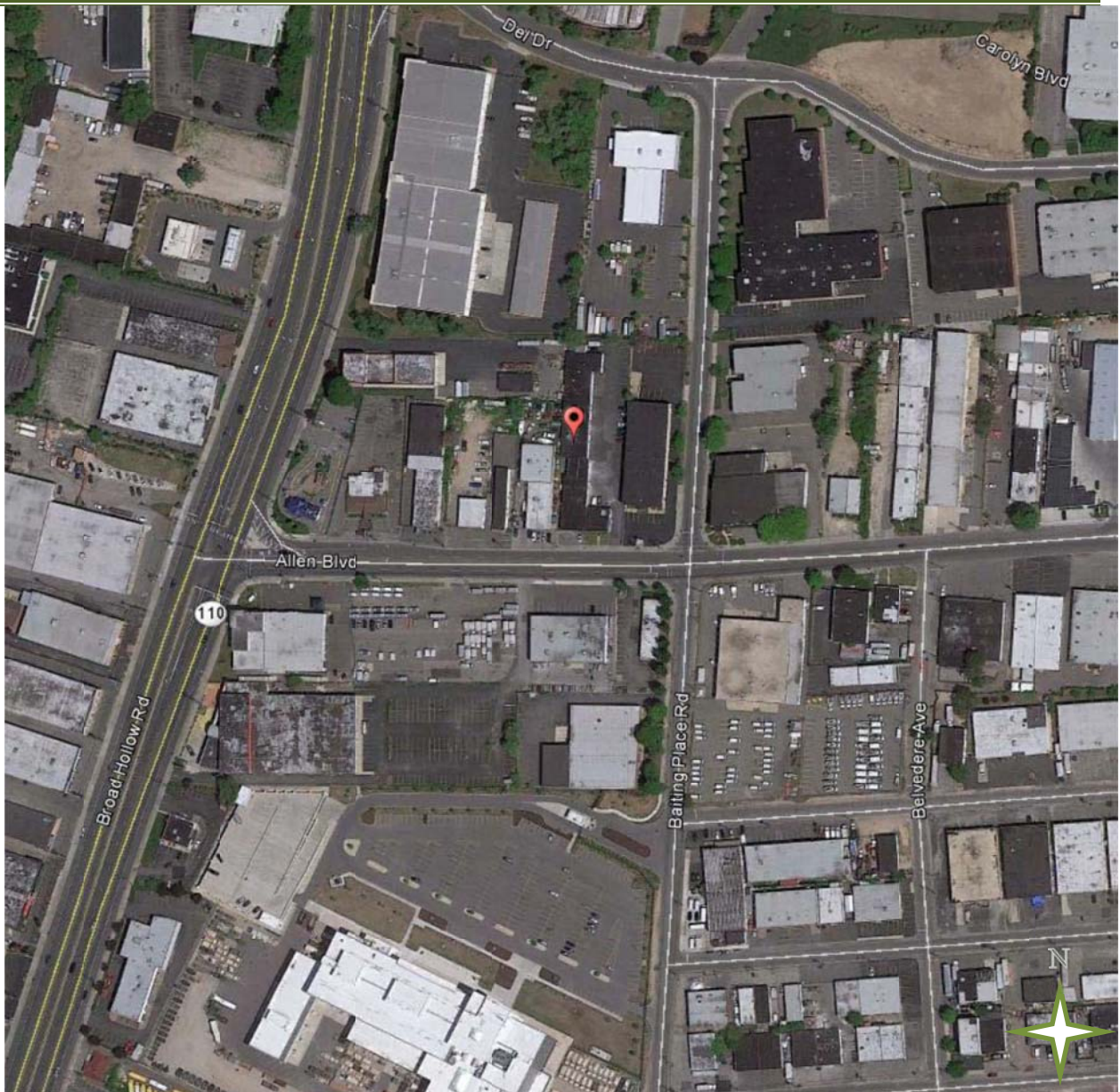


Figure 1: Site Location Map

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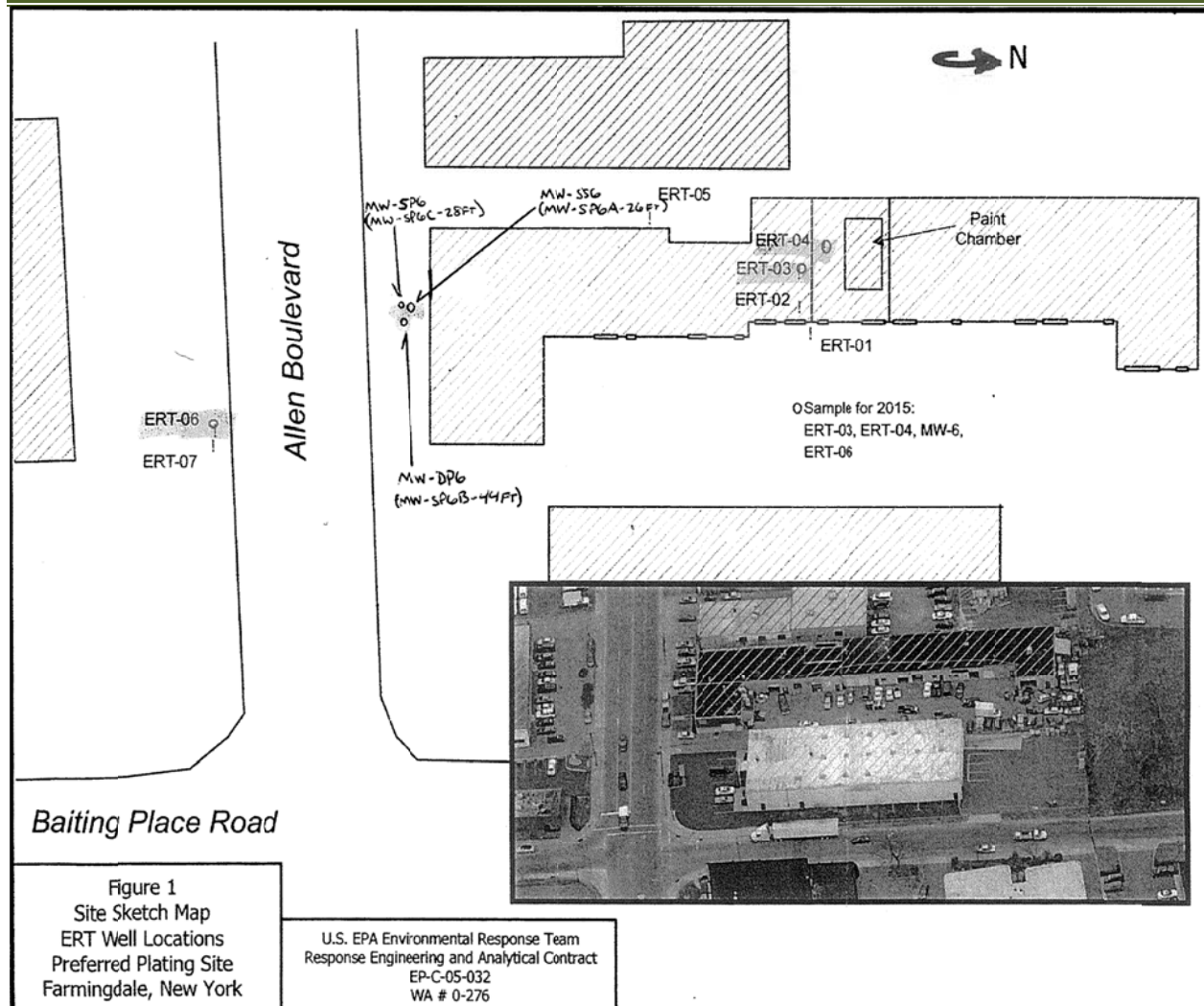


Figure 2: Permanent Groundwater Monitoring Well Location Map

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Figure 3: Temporary Groundwater Monitoring Well Location Map

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Figure 4: Groundwater Elevation/Flow Direction Map – September 2016

Note: Groundwater elevations based on an arbitrary plane of 100 feet and depth to groundwater measurements collected by C₂G on September 22, 2016.

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Groundwater Investigation Report

32 Allen Boulevard, Farmingdale, NY

APPENDIX B: TABLES

C2G Environmental Consultants, LLC
165 Sherwood Avenue
Farmingdale, NY 11735

TABLE 1 - Groundwater Results - October 2015
Laboratory Analytical Results of Water Quality Sampling VS
New York State Department of Environmental Conservation Guidance Values

Site Loc:

Allen Boulevard Corp
 32 Allen Boulevard
 Farmingdale, NY

Client:

Mr. Stephen Baxter
 388 Broadhollow Road
 Farmingdale, NY

Analyzed Compounds	Units	Guidance Value	Monitoring Well Sample Locations							
			Monitoring Well ERT-03 10/21/15	Monitoring Well ERT-04 10/21/15	Monitoring Well MW-SP6A-26FT 10/21/15	Monitoring Well MW-SP6B-44FT 10/21/15	Monitoring Well MW-SP6C-28FT 10/21/15	Monitoring Well ERT-06 10/21/15	Blind Duplicate 10/21/15	Field Blank 10/21/15
Heavy Metals		TOGS Guidance								
Silver	mg/L	0.05	0.003	0.001	BDL	BDL	BDL	BDL	BDL	BDL
Arsenic	mg/L	0.025	BDL	0.004	BDL	BDL	BDL	BDL	BDL	BDL
Barium	mg/L	1	0.064	0.071	0.009	0.073	0.034	0.056	0.067	BDL
Beryllium	mg/L	0.003	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Cadmium	mg/L	0.005	0.01	0.014	0.013	0.002	0.022	0.02	0.001	BDL
Chromium	mg/L	0.05	0.509	0.876	0.404	0.045	0.176	0.043	0.034	BDL
Copper	mg/L	0.2	0.089	0.317	0.022	0.019	0.021	0.012	0.002	BDL
Manganese	mg/L	35	0.075	0.139	0.052	0.164	0.017	0.013	0.082	BDL
Mercury	mg/L	0.0007	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Nickel	mg/L	1	0.007	0.008	0.009	BDL	0.024	0.005	BDL	BDL
Lead	mg/L	0.025	0.012	0.02	BDL	BDL	0.003	0.004	BDL	BDL
Selenium	mg/L	0.01	0.001	0.002	0.001	BDL	0.001	BDL	BDL	BDL
Zinc	mg/L	2	0.1	0.061	0.008	0.005	0.026	0.049	0.004	BDL
Hex. Chromium	mg/L	0.05	0.09	0.1	0.05	0.03	0.04	0.03	0.03	BDL
Total Cyanide	mg/L	0.2	0.253	0.423	0.18	0.0456	0.0628	0.0128	0.0418	BDL

- Notes: 1. All data/sample results are recorded in milligrams-per-liter (mg/l).
 2. Samples tested by EPA Total Metals - as per NYSDEC TOGS Guidance (groundwater)
 3. BDL = Below Detection Limits (Compound analyzed but not detected) Detection limits may vary
 4. Guidance values used were adopted by the NYSDEC Policy TOGS Guidance.
 5. Analytical results above NYSDEC TOGS Guidance Values are in **red bold** type
 6. N/A = No guidance value was listed for groundwater in the TOGS document

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Farmingdale, NY 11735

TABLE 2 - Historic Groundwater Results
 Laboratory Analytical Results of Water Quality Sampling VS
 New York State Department of Environmental Conservation Guidance Values

Site Loc:
 Allen Boulevard Corp
 32 Allen Boulevard
 Farmingdale, NY

Client:
 Mr. Stephen Baxter
 388 Broadhollow Road
 Farmingdale, NY

Date Sampled (MM / YYYY)	Monitoring Well Sample Locations											
	MW-SS6 (MW-SP6A-26FT)		MW-SP6 (MW-SP6C-28FT)		MW-DP6 (MW-SP6B-44FT)		ERT-03		ERT-04		ERT-06	
	Cadmium (ug/L)	Chromium (ug/L)	Cadmium (ug/L)	Chromium (ug/L)	Cadmium (ug/L)	Chromium (ug/L)	Cadmium (ug/L)	Chromium (ug/L)	Cadmium (ug/L)	Chromium (ug/L)	Cadmium (ug/L)	Chromium (ug/L)
TOGS Guidance:	5	50	5	50	5	50	5	50	5	50	5	50
08 / 1988	211	-	365	-	23.1	-	-	-	-	-	-	-
09 / 1988	224	-	180	-	-	-	-	-	-	-	-	-
08 / 1994	70	-	136	-	6	-	-	-	-	-	-	-
08 / 1999	20.1	-	30.2	-	BDL	-	-	-	-	-	-	-
07 / 2000	77.6	-	75.9	-	BDL	-	-	-	-	-	-	-
07 / 2001	58	-	77	-	BDL	-	-	-	-	-	-	-
02 / 2002	13.5	-	22	-	1.4	-	-	-	-	-	-	-
10 / 2002	17	-	36	-	BDL	-	-	-	-	-	-	-
12 / 2003	42.5	-	192	-	3.6	-	-	-	-	-	-	-
01 / 2005	14.9	-	67.1	-	0.78	-	-	-	-	-	-	-
07 / 2005	56.7	-	172 / 195 *	-	1.5	-	-	-	-	-	-	-
12 / 2005	38.4	-	161 / 133 *	-	4.1	-	-	-	-	-	-	-
01 / 2007	19	-	350	-	-	-	-	-	-	-	-	-
02 / 2008	21	73	140	67	BDL	43	11	110	3.2	45	11	27
03 / 2009	21	37	390	510	BDL	32	15	120	4.4	44	6.8	21
04 / 2012	10.4	23.9	83.3	108	1.87 / 5.48 *	35.3 / 21.5 *	12.8	56.1	10.7	23.3	9.59	6.59
10 / 2015	13	404	22	176	2 / 1 *	45 / 34 *	10	509	14	876	20	43

- Notes: 1. All data/sample results are recorded in micrograms-per-liter (ug/L).
 2. BDL = Below Detection Limits (compound analyzed but not detected) - Detection Limits may vary.
 3. Guidance values used were adopted by the NYSDEC Policy TOGS Guidance.
 4. Analytical results above NYSDEC TOGS Guidance Values are in **red bold** type.
 * Spilt / Duplicate Sample

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TABLE 3 - Groundwater Investigation Results - September 2016
Laboratory Analytical Results of Water Quality Sampling VS
New York State Department of Environmental Conservation Guidance Values

Site Loc:
 Allen Boulevard Corp.
 32 Allen Boulevard
 Farmingdale, NY

Client:
 Mr. Stephen Baxter
 388 Broadhollow Road
 Farmingdale, NY

<u>Analyzed Compounds</u>	<u>Units</u>	<u>Guidance Value</u>	<u>Temporary Monitoring Well Sample Locations</u>				
Target Metals		TOGS Guidance	Temporary Monitoring Well TW-1 9/22/16	Temporary Monitoring Well TW-2 9/22/16	Temporary Monitoring Well TW-3 9/22/16	Temporary Monitoring Well TW-4 9/22/16	Temporary Monitoring Well TW-5 9/22/16
Cadmium	mg/L	0.005	0.002	BDL	BDL	0.021	0.073
Chromium	mg/L	0.05	0.001	BDL	0.003	0.015	0.008

- Notes: 1. All data/sample results are recorded in milligrams-per-liter (mg/l).
 2. Samples tested by EPA Total Metals - as per NYSDEC TOGS Guidance (groundwater)
 3. BDL = Below Detection Limits (Compound analyzed but not detected) Detection limits may vary
 4. Guidance values used were adopted by the NYSDEC Policy TOGS Guidance.
 5. Analytical results above NYSDEC TOGS Guidance Values are in **red bold** type
 6. N/A = No guidance value was listed for groundwater in the TOGS document

C₂G Environmental Consultants, LLC

Groundwater Investigation Report

32 Allen Boulevard, Farmingdale, NY

APPENDIX C: SITE PHOTOS

C₂G Environmental Consultants, LLC

Groundwater Investigation Report

32 Allen Boulevard, Farmingdale, NY



Installation of TW-1



TW-1 Installed

C₂G Environmental Consultants, LLC

Groundwater Investigation Report

32 Allen Boulevard, Farmingdale, NY



Installation of TW-2



TW-2 Installed

C₂G Environmental Consultants, LLC

Groundwater Investigation Report

32 Allen Boulevard, Farmingdale, NY



Installation of TW-3



TW-3 Installed

C₂G Environmental Consultants, LLC

Groundwater Investigation Report

32 Allen Boulevard, Farmingdale, NY



Installation of TW-4



TW-4 Installed

C₂G Environmental Consultants, LLC

Groundwater Investigation Report

32 Allen Boulevard, Farmingdale, NY



Installation of TW-5



TW-5 Installed

C₂G Environmental Consultants, LLC

Groundwater Investigation Report

32 Allen Boulevard, Farmingdale, NY

APPENDIX D: LABORATORY ANALYTICAL DATA



Wednesday, October 05, 2016

Attn: Mr. Caleb Mall
C2G Environmental Consultants, LLC
165 Sherwood Avenue
Farmingdale, NY 11735

Project ID: 4868 32 ALLEN BLVD CORP
Sample ID#s: BV23744 - BV23748

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

If you have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext. 200.

Sincerely yours,

A handwritten signature in black ink that reads "Phyllis Shiller". The signature is written in a cursive style.

Phyllis Shiller
Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #MA-CT-007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B

NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
VT Lab Registration #VT11301



Environmental Laboratories, Inc.
 587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
 Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report
 October 05, 2016

FOR: Attn: Mr. Caleb Mall
 C2G Environmental Consultants, LLC
 165 Sherwood Avenue
 Farmingdale, NY 11735

Sample Information

Matrix: GROUND WATER
 Location Code: C2G-FARM
 Rush Request: Standard
 P.O.#: 1609-1965

Custody Information

Collected by:
 Received by: B
 Analyzed by: see "By" below

Date

09/22/16
 09/23/16

Time

11:15
 16:44

Laboratory Data

SDG ID: GBV23744
 Phoenix ID: BV23744

Project ID: 4868 32 ALLEN BLVD CORP
 Client ID: N2461-TW-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Cadmium	0.002	0.001	mg/L	1	09/26/16	LK	SW6010C
Chromium	0.001	0.001	mg/L	1	09/27/16	EK	SW6010C
Total Metals Digestion	Completed				09/23/16	AG/AG/BF	

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
 BRL=Below Reporting Level

Comments:

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.
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Phyllis Shiller, Laboratory Director

October 05, 2016

Reviewed and Released by: Bobbi Aloisa, Vice President



Environmental Laboratories, Inc.
 587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
 Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 05, 2016

FOR: Attn: Mr. Caleb Mall
 C2G Environmental Consultants, LLC
 165 Sherwood Avenue
 Farmingdale, NY 11735

Sample Information

Matrix: GROUND WATER
 Location Code: C2G-FARM
 Rush Request: Standard
 P.O.#: 1609-1965

Custody Information

Collected by:
 Received by: B
 Analyzed by: see "By" below

Date

09/22/16
 09/23/16

Time

11:25
 16:44

Laboratory Data

SDG ID: GBV23744
 Phoenix ID: BV23745

Project ID: 4868 32 ALLEN BLVD CORP
 Client ID: N2461-TW-2

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Cadmium	< 0.001	0.001	mg/L	1	09/26/16	LK	SW6010C
Chromium	< 0.001	0.001	mg/L	1	09/27/16	EK	SW6010C
Total Metals Digestion	Completed				09/23/16	AG/AG/BF	

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
 BRL=Below Reporting Level

Comments:

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Phyllis Shiller, Laboratory Director

October 05, 2016

Reviewed and Released by: Bobbi Aloisa, Vice President



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 Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report
 October 05, 2016

FOR: Attn: Mr. Caleb Mall
 C2G Environmental Consultants, LLC
 165 Sherwood Avenue
 Farmingdale, NY 11735

Sample Information

Matrix: GROUND WATER
 Location Code: C2G-FARM
 Rush Request: Standard
 P.O.#: 1609-1965

Custody Information

Collected by:
 Received by: B
 Analyzed by: see "By" below

Date

09/22/16
 09/23/16

Time

11:35
 16:44

Laboratory Data

SDG ID: GBV23744
 Phoenix ID: BV23746

Project ID: 4868 32 ALLEN BLVD CORP
 Client ID: N2461-TW-3

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Cadmium	< 0.001	0.001	mg/L	1	09/28/16	TH	SW6010C
Chromium	0.003	0.001	mg/L	1	10/05/16	EK	SW6010C
Total Metals Digestion	Completed				10/04/16	AG	

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
 BRL=Below Reporting Level

Comments:

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Phyllis Shiller, Laboratory Director

October 05, 2016

Reviewed and Released by: Bobbi Aloisa, Vice President



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 Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 05, 2016

FOR: Attn: Mr. Caleb Mall
 C2G Environmental Consultants, LLC
 165 Sherwood Avenue
 Farmingdale, NY 11735

Sample Information

Matrix: GROUND WATER
 Location Code: C2G-FARM
 Rush Request: Standard
 P.O.#: 1609-1965

Custody Information

Collected by:
 Received by: B
 Analyzed by: see "By" below

Date

09/22/16
 09/23/16

Time

11:55
 16:44

Laboratory Data

SDG ID: GBV23744
 Phoenix ID: BV23747

Project ID: 4868 32 ALLEN BLVD CORP
 Client ID: N2461-TW-4

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Cadmium	0.021	0.001	mg/L	1	09/28/16	LK	SW6010C
Chromium	0.015	0.001	mg/L	1	09/30/16	EK	SW6010C
Total Metals Digestion	Completed				09/26/16	AG	

B* = Present in blank, a bias is possible.

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
 BRL=Below Reporting Level

Comments:

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.
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Phyllis Shiller, Laboratory Director

October 05, 2016

Reviewed and Released by: Bobbi Aloisa, Vice President



Environmental Laboratories, Inc.
 587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
 Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 05, 2016

FOR: Attn: Mr. Caleb Mall
 C2G Environmental Consultants, LLC
 165 Sherwood Avenue
 Farmingdale, NY 11735

Sample Information

Matrix: GROUND WATER
 Location Code: C2G-FARM
 Rush Request: Standard
 P.O.#: 1609-1965

Custody Information

Collected by:
 Received by: B
 Analyzed by: see "By" below

Date

09/22/16
 09/23/16

Time

12:05
 16:44

Laboratory Data

SDG ID: GBV23744
 Phoenix ID: BV23748

Project ID: 4868 32 ALLEN BLVD CORP
 Client ID: N2461-TW-5

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Cadmium	0.073	0.001	mg/L	1	09/27/16	LK	SW6010C
Chromium	0.008	0.001	mg/L	1	09/27/16	LK	SW6010C
Total Metals Digestion	Completed				09/26/16	AG	

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
 BRL=Below Reporting Level

Comments:

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Phyllis Shiller, Laboratory Director

October 05, 2016

Reviewed and Released by: Bobbi Aloisa, Vice President



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 Tel. (860) 645-1102 Fax (860) 645-0823



QA/QC Report

October 05, 2016

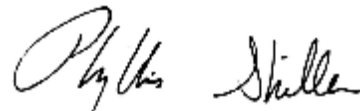
QA/QC Data

SDG I.D.: GBV23744

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 360074 (mg/L), QC Sample No: BV23142 (BV23744, BV23745)													
<u>ICP Metals - Aqueous</u>													
Cadmium	BRL	0.001	<0.001	<0.001	NC	98.5			91.8			75 - 125	20
Chromium	BRL	0.001	<0.001	<0.001	NC	98.0			94.5			75 - 125	20
QA/QC Batch 360260 (mg/L), QC Sample No: BV23747 (BV23747)													
<u>ICP Metals - Aqueous</u>													
Cadmium	BRL	0.001	0.021	0.021	0	107			103			75 - 125	20
Chromium	0.002	0.001	0.015	0.016	6.50	107			104			75 - 125	20
QA/QC Batch 360261 (mg/L), QC Sample No: BV24251 (BV23748)													
<u>ICP Metals - Aqueous</u>													
Cadmium	BRL	0.001	<0.001	<0.001	NC	98.6			101			75 - 125	20
Chromium	BRL	0.001	<0.001	<0.001	NC	103			105			75 - 125	20
QA/QC Batch 361375 (mg/L), QC Sample No: BV35740 (BV23746)													
<u>ICP Metals - Aqueous</u>													
Cadmium	BRL	0.001				114						75 - 125	20
Chromium	BRL	0.001				108						75 - 125	20

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

- RPD - Relative Percent Difference
- LCS - Laboratory Control Sample
- LCSD - Laboratory Control Sample Duplicate
- MS - Matrix Spike
- MS Dup - Matrix Spike Duplicate
- NC - No Criteria
- Intf - Interference


 Phyllis Shiller, Laboratory Director
 October 05, 2016

Sample Criteria Exceedences Report

GBV23744 - C2G-FARM

Criteria: None

State: NY

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
--------	-------	-----------------	----------	--------	----	----------	----------------	-------------------

*** No Data to Display ***

Phoenix Laboratories does not assume responsibility for the data contained in this report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823



NY Temperature Narration

October 05, 2016

SDG I.D.: GBV23744

The samples in this delivery group were received at 4°C.
(Note acceptance criteria is above freezing up to 6°C)

Coolant: IPK ICE No
 Temp °C °F of

Project P.O.: 1609-1965
 This section MUST be completed with Bottle Quantities.

Project: 4808-32 ALLEN BLVD CORP
 Report to: CAGS MAIL
 Invoice to: CAG

Customer: CAG ENV CONSULTANTS, LLC
 Address: 165 SHERWOOD AVE
 FARMINGTON, CT 06031

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
 Email: info@phoenixlabs.com Fax (860) 645-0823
 Client Services (860) 645-8726

PHOENIX
 Environmental Laboratories, Inc.
 Cooler: Yes No
 Contact Options: Fax: Phone: Email:

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	Analysis Request
23744	N2401-TW-1	GW	9/22/10	11:15	X
23745	N2401-TW-2	GW	9/22/10	11:25	X
23746	N2401-TW-3	GW	9/22/10	11:35	X
23747	N2401-TW-4	GW	9/22/10	11:55	X
23748	N2401-TW-5	GW	9/22/10	12:05	X

Client Sample - Information - Identification
 Sampler's Signature: [Signature] Date: 9/22/10
 Matrix Code:
 DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water
 RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe
 OIL=Oil B=Bulk L=Liquid

SOIL VOA Vials [Methanol] [H2O]	GL SOIL CONTAINER []	40 ml VOA Vial []	GL SOIL CONTAINER []	PL Amber 100ml [As is] [HCl]	PL H2SO4 [] 250ml [] 500ml [] 1000ml []	PL HNO3 250ml []	PL NaOH 250ml []	Bacteria Bottle

Relinquished by: [Signature] Accepted by: [Signature]
 Date: 9/23/10 12:00
 Turnaround: 1 Day* 2 Days* 3 Days* 5 Days 10 Days Other
 * SURCHARGE APPLIES
 NJ Res. Criteria Non-Res. Criteria Impact to GW Soil Cleanup Criteria GW Criteria
 NY TAGM 4046 GW TAGM 4046 SOIL NY375 Unrestricted Use Soil NY375 Residential Soil Restricted/Residential Commercial Industrial
 Data Format: Phoenix Std Report Excel PDF GIS/Key EQUIS NJ Hazsite EDD NY EZ EDD (ASP) Other
 Data Package: NJ Reduced Deliv. * NY Enhanced (ASP B) * Other
 State where samples were collected: NY