

GROUNDWATER MONITORING SUMMARY REPORT 2011 ANNUAL SAMPLING EVENT

**Stanton Cleaners Area Groundwater Contamination Site
Great Neck, New York**

Prepared for

**United States Army Corps of Engineers
Kansas City District**

**Long Term Operations/Long Term Monitoring
Contract No. DACW41-03-D-0004**

October 2011

Prepared by



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GROUNDWATER MONITORING SUMMARY REPORT 2011 ANNUAL SAMPLING EVENT

Stanton Cleaners Area Groundwater Contamination Site Great Neck, New York

October 2011

I hereby certify that the enclosed *Groundwater Monitoring Summary Report, 2011 Annual Sampling Event*, shown and marked in this submittal, is that proposed to be incorporated with the Contract Number DACW41-03-D-0004, Stanton Cleaners Area Groundwater Contamination Site, Great Neck, New York. This report is in compliance with the contract drawings and specifications, and is submitted for government approval.

Reviewed by:

Project Manager	Date
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Quality Control System Manager	Date
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Accepted By:

USACE Contracting Officer	Date
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TABLE OF CONTENTS

1.0	INTRODUCTION.....	1
2.0	BACKGROUND	1
3.0	SAMPLE COLLECTION ACTIVITIES	3
4.0	ANALYTICAL RESULTS	4
4.1	Shallow Upper Glacial Wells.....	4
4.2	Intermediate Upper Glacial Wells	7
4.3	Deep Upper Glacial Wells	8
5.0	DATA QUALITY EVALUATION	9
6.0	CONCLUSION	10
7.0	REFERENCES.....	11

LIST OF TABLES

Table 1	Sample Collection Summary
Table 2	Static Water Level Measurements
Table 3	Analytical Results – VOCs
Table 4	Analytical Results – Natural Attenuation Parameters

LIST OF FIGURES

Figure 1	Site Location Map
Figure 2	Site Layout with Monitoring Well Network
Figure 3	Potentiometric Surface, Shallow Groundwater, May 2011
Figure 4	Potentiometric Surface, Intermediate Wells, May 2011
Figure 5	Potentiometric Surface, Deep Groundwater, May 2011
Figure 6	VOC Detections, May 2011
Figure 7	PCE Isoconcentration Map, Shallow Monitoring Wells, May 200

LIST OF APPENDICES

Appendix A	Field Trip Reports (Attachments A through E)
Appendix B	Laboratory Data Packages

LIST OF ACRONYMS AND ABBREVIATIONS

1,1-DCE	1,1-dichloroethene
BTEX	benzene, toluene, ethylbenzene, and xylene (total)
<i>cis</i>-1,2-DCE	<i>cis</i> -1,2-dichloroethene
CLP	Contract Laboratory Program
DESA	Division of Environmental Science and Assessment
EB	equipment blank
EPA	United States Environmental Protection Agency
ft/mi	feet/mile
GWT	groundwater treatment
ID	identification
J	the reported value is estimated
K	the reported value may be biased high
LTRA	Long-Term Remedial Action
MCL	maximum contaminant level
MEE	methane, ethane, and ethene
MNA	monitored natural attenuation
MTBE	methyl <i>tert</i> butyl ether
µg/L	micrograms per liter
mg/L	milligrams per liter
NYSDEC	New York State Department of Environmental Conservation
O&M	operation and maintenance
PCE	tetrachloroethene
PW	public well
QC	quality control
SDG	sample delivery group
The Site	Stanton Cleaners Area Groundwater Contamination Site
SOP	Standard Operating Procedure
SVE	soil vapor extraction
SWL	static water level
RL	reporting limit
TB	trip blank
TCE	trichloroethene
TOC	total organic carbon
U	not detected at or above the RL
USACE	United States Army Corps of Engineers
VOC	volatile organic compound
WAGNN	Water Authority of Great Neck North

1.0 INTRODUCTION

ECC was contracted by the United States Army Corps of Engineers (USACE), Kansas City District in support of the United States Environmental Protection Agency (EPA), Region II to perform groundwater sampling, analyses, and reporting for the Stanton Cleaners Area Groundwater Contamination Site (the Site) at Great Neck, New York.

Figure 1 is the site location map and Figure 2 shows the site layout and groundwater well network developed to monitor the Site. The groundwater sampling, analyses, and reporting is being performed under the USACE Long-Term Remedial Action (LTRA) contract (Contract # DACW41-03-D-0004).

The operation and maintenance (O&M) work at the Site includes:

- monthly sample collection from the groundwater treatment (GWT) plant for analysis of volatile organic compounds (VOCs);
- annual monitoring, including sampling and analysis for the on-site groundwater monitoring well network for VOCs and monitored natural attenuation (MNA) parameters; and
- annual indoor air monitoring, including sampling and analysis for VOCs from six building locations at or adjacent to the Site.

This report is a summary of the 2011 annual groundwater monitoring well sampling event (May 2011). Results for GWT plant performance and regulatory compliance are reported separately in O&M Monthly Activity Reports. Results for annual indoor air sampling are reported in Annual Indoor Air Sampling Reports.

2.0 BACKGROUND

The Stanton Cleaners Property is approximately ¼-acre in size and includes a two-story building in which a dry-cleaning business operates, an adjacent one-story boiler/storage building, and a two-story GWT plant building. The property is bordered by a vacant lot (previously an indoor tennis facility), a synagogue, and a school.

Improper handling and disposal of spent dry cleaning solvents behind the property, primarily tetrachloroethene (PCE), resulted in the release of hazardous substances at the property. PCE migrated from subsurface soils into the indoor air environments of the surrounding buildings and into groundwater beneath the Site, resulting in a significant threat to human health.

In 1983, approximately 20 cubic yards of VOC-contaminated (specifically PCE) soil were removed from behind the Stanton Cleaners Property. In 1989, a groundwater extraction and treatment system was installed by the original Stanton Cleaners operator to address groundwater contamination. This system is not currently operating and was replaced with the current GWT system (built in 2001).

In 1998, the New York State Department of Environmental Conservation (NYSDEC) funded the construction of a new air stripper treatment system for the Water Authority of Great Neck

North (WAGNN) water supply wells which are impacted by contamination from the Site. This treatment system is currently in operation. In September 1998, as an immediate response action, the EPA installed a temporary soil vapor interceptor system adjacent to the tennis club, to mitigate impacts from PCE vapors to the indoor air of this facility.

In 2001, the EPA completed the construction and installation of a soil vapor extraction (SVE) system and a GWT system on the Stanton Cleaners Property. Both the SVE and GWT systems are housed in the treatment building that was constructed on the Stanton Cleaners Property. The SVE system was installed to remediate the VOC-contaminated soils, thus reducing the indoor air contamination in the adjacent affected buildings to safe levels. The GWT system was installed to remediate the VOC-contaminated groundwater and to remove the threat of vapors from the groundwater moving through the soils. The collected VOC-contaminated vapors and groundwater from both systems are treated through separate granular activated carbon systems.

The Site is presently under the jurisdiction of the Remedial Branch of the EPA, Region II; USACE provides oversight to EPA for the remedial action and the long-term remedial action programs. ECC is the LTRA prime contractor for the USACE, and performs O&M of the long-term remediation actions at the Site. ECC and its subcontractors perform the following tasks:

- O&M of the GWT plant and SVE system, including sampling, analysis, and reporting;
- Measuring static water levels (SWLs) at site wells prior to annual sampling;
- Sampling of groundwater monitoring wells associated with the site, laboratory analysis of the groundwater samples, and reporting of the results in order to track the migration of the contaminant plume; and
- Sampling and analysis of the indoor air quality of buildings adjacent to the site in order to identify and monitor the adjacent buildings being impacted by site-related contaminants, and to monitor the effectiveness of the remedial actions.

As required by the scope of work for this project, annual summary reports are prepared to document and summarize the LTRA groundwater monitoring. This report provides a description of work performed and the summary of results for the 2011 annual sampling event. The field documents and laboratory data are included as appendices.

3.0 SAMPLE COLLECTION ACTIVITIES

Groundwater samples from select monitoring wells on- and off-site are collected on an annual basis and shipped to a designated EPA Contract Laboratory Program (CLP) laboratory for analysis. Groundwater sampling activities are performed in accordance with EPA Groundwater Sampling Standard Operating Procedure (SOP) number 2007 and the EPA Low-Stress Purging and Sampling SOP provided in the Field Sampling Plan (Part I of Sampling and Analysis Plan). Each sampling event is coordinated with WAGNN in an effort to schedule the event when local water supply drawdown conditions do not impact the water levels. The location and number of monitoring wells, as well as analytical parameters, are determined by the EPA and ECC.

All 2011 monitoring and sampling activities were conducted by ECC between May 9 and May 10, 2011. Appendix A presents the field trip reports including Monitoring Well Collection Points, Chain-of-Custody Records, FedEx Airbills, and Groundwater Sampling Logs for the 2011 annual groundwater sampling event.

During this annual groundwater sampling event, seven monitoring wells were sampled for target compound list VOCs, alkalinity, nitrate, sulfide, total organic carbon (TOC), and chloride. These wells were also sampled for MNA parameters methane, ethane, and ethene (MEE). Samples from two wells, ST-MW19 and EPA-MW21R were collected using a bailer in addition to low flow groundwater sampling procedures. The identification numbers of these samples include the suffix "B". In addition, two duplicate samples, two trip blank (TB) samples and one equipment blank (EB) sample were collected and analyzed. One matrix spike/matrix spike duplicate pair was collected for this sampling event.

Table 1 is a sample collection summary and provides the following information:

- Quality Control (QC) split samples (field duplicate pairs);
- TB and EB samples;
- A cross-reference between laboratory sample identification (ID) numbers; and monitoring well IDs;
- Dates of sample collection; and
- Requested analyses.

SWLs were measured on May 9, 2011; May 2011 SWLs are listed in Table 2. Figures 3, 4, and 5 are potentiometric surface maps constructed for the shallow, intermediate, and deep unconfined aquifer located in the upper glacial formation, respectively, using the May 2011 SWLs.

Based on the May 2011 SWLs, the general direction of shallow groundwater flow was west-southwest. A representative May 2011 hydraulic gradient in the area between wells ST-MW-06 and ST-MW-15 was approximately 0.016 (84.48 feet/mile [ft/mi]), which is higher compared to the hydraulic gradient measured in April 2010 between ST-MW-16 and ST-MW-12 (0.009 [47.52 ft/mi]).

The limited SWL information for intermediate wells (three of eight intermediate groundwater wells were measured) indicates that the general flow direction was southwest towards public wells PW-09 and PW-2A. A representative May 2011 hydraulic gradient in the area between wells EPA-MW-27 and EPA-MW-11D was approximately 0.005 (26.28 ft/mi), which is similar to that measured in April 2010 (0.0048 [25.15 ft/mi]).

The general direction of the deep groundwater flow was also south-southwest towards public wells PW-09 and PW-2A during the May 2011 groundwater sampling event. A representative hydraulic gradient in the area between ST-MW-14 and ST-MW-20 was approximately 0.003 (15.84 ft/mi), which was much lower compared to the hydraulic gradient measured in April 2010 between ST-MW-14 and CL-1D (0.0075 [39.79 ft/mi]).

4.0 ANALYTICAL RESULTS

VOC and wet chemistry analyses were performed by EPA Region II Division of Environmental Science and Assessment (DESA) Laboratory. MEE analyses were performed by Chemtech, of Mountainside, New Jersey. The detected results are discussed according to monitoring well depth classification (shallow, intermediate, and deep). For wells where duplicates of any kind were collected, the highest result is discussed. All detections are tabulated.

Table 3 presents the VOC results for samples collected during the 2011 annual sampling event. Only samples with at least one reported detection are listed in the table. Table 3 is organized by monitoring well depths. Table 4 presents MNA parameter results. Figure 6 shows the detections for VOCs at the Site, and Figure 7 is an iso-concentration map for PCE (shallow wells only) at the Site during the 2011 annual sampling event. Appendix B presents the laboratory data packages by sample delivery group (SDG) for the sampling event.

4.1 Shallow Upper Glacial Wells

The following four shallow upper glacial wells were sampled for VOCs and MNA parameters during the 2011 annual sampling event (Table 1):

- ST-MW-15,
- ST-MW-19 (bailer and low-flow samples),
- EPA-MW-21R (bailer and low-flow samples), and
- EPA-MW-26.

Tetrachloroethene and Degradation Products

The primary chemical of concern, PCE, was detected in the following shallow monitoring wells:

- ST-MW-15 (88 micrograms per liter [$\mu\text{g/L}$]),
- ST-MW-19 (190 $\mu\text{g/L}$), and
- EPA-MW-26 (2.3 $\mu\text{g/L}$).

PCE increased in the following shallow monitoring wells compared to the 2010 annual sampling event:

- ST-MW-15 (from 29 to 88 µg/L)
- ST-MW-19 (from 120 biased high [K] µg/L to 190 µg/L),

PCE decreased in the following shallow monitoring wells compared to the 2010 annual sampling event:

- ST-MW-21R (from 57 K µg/L to ND) and
- ST-MW-26 (from 5.3 µg/L to 2.3 µg/L)

PCE concentrations in shallow wells ST-MW-15 and ST-MW-19 exceeded both the Federal Maximum Contamination Level (MCL) and the NYSDEC regulation (6 NYCRR [Official Compilation of Codes, Rules and Regulations of the State of New York] Part 703, Surface Water and Groundwater Quality Standards and Groundwater Effluent Limitations) (both 5 µg/L) for PCE.

Trichloroethene (TCE), a degradation product of PCE, was detected in shallow monitoring well ST-MW-19 (1.1 µg/L) during the 2011 annual sampling event. TCE was also detected at this well (1.0 µg/L) during the 2010 annual sampling event.

cis-1,2-Dichloroethene (*cis*-1,2-DCE), also a degradation product of PCE, was not detected in any of the shallow monitoring wells during the 2011 annual sampling event.

Benzene, Toluene, Ethylbenzene, and Total Xylenes

No benzene, toluene, ethylbenzene, or total xylenes (BTEX) were detected in any of the shallow monitoring wells during the 2011 annual sampling event.

Other VOCs

No other VOCs were detected in the shallow wells during the 2011 sampling event.

Natural Attenuation Parameters

This section presents the analytical results for the MNA parameters in the shallow upper glacial wells.

Alkalinity results in shallow wells are as follows:

- ST-MW-15 (110 milligrams per liter [mg/L]),
- ST-MW-19 (140 mg/L),
- EPA-MW-21R (88 mg/L), and
- EPA-MW-26 (91 mg/L).

Alkalinity results were similar to the levels from the annual 2010 sampling event. There are no Federal MCLs or NYSDEC regulations for alkalinity.

Nitrate was detected in all shallow wells as follows:

- ST-MW-15 (3.9 mg/L),
- ST-MW-19 (6.1 estimated [J] mg/L),
- EPA-MW-21R (8.4 mg/L), and
- EPA-MW-26 (2.7 mg/L).

The nitrate concentrations were similar to the levels from the annual 2010 sampling event. None of the concentrations exceeded the Federal MCL or NYSDEC regulations (both 10 mg/L) for nitrate.

Sulfate was detected in all shallow wells at the following concentrations:

- ST-MW-15 (49 mg/L),
- ST-MW-19 (100 mg/L),
- EPA-MW-21R (110 mg/L), and
- EPA-MW-26 (48 mg/L).

The sulfate concentrations were similar to the levels from the annual 2010 sampling event. None of the concentrations exceeded the Federal secondary MCL or NYSDEC regulations (250 mg/L and 250 mg/L, respectively) for sulfate.

Chloride was detected in all the following shallow wells at the following concentrations:

- ST-MW-15 (52 mg/L),
- ST-MW-19 (73 mg/L),
- EPA-MW-21R (76 mg/L), and
- EPA-MW-26 (210 mg/L).

The chloride concentrations decreased in shallow wells EPA-MW-26 (from 360 mg/L to 210 mg/L) and ST-MW-21R (from 96 mg/L to 76 mg/L) and increased in ST-MW-19 (from 50 mg/L to 73 mg/L) compared to the 2010 annual sampling event.

None of the chloride concentrations exceeded the NYSDEC regulations (250 mg/L) for chloride. There is no Federal MCL for chloride.

TOC was detected in the following shallow wells during 2011 sampling event:

- ST-MW-19 (2.8 mg/L), and
- EPA-MW-21R (2.7 mg/L).

These TOC concentration increased in EPA-MW-21R (from 1.8 to 2.7 mg/L) compared to the 2010 annual sampling event. However, the sample collected by the low-flow sampling method in 2011 (1.9 mg/L) was comparable to the results from the 2010 sampling event. There is no Federal MCL or NYSDEC Regulation for TOC.

Sulfide was not detected in any of the sampled shallow wells during 2011. Sulfide was also not detected in these wells during the 2010 sampling event.

MEE were not detected in any of the shallow monitoring well samples during the 2011 annual sampling event, consistent with 2010 sampling event.

4.2 Intermediate Upper Glacial Wells

One intermediate upper glacial well (ST-MW-17) was sampled for VOCs and MNA parameters during the 2011 annual sampling event. A field duplicate sample was collected at this monitoring well. This section presents the analytical results for constituents detected in the intermediate monitoring wells.

Tetrachloroethene and Degradation Products

The primary chemical of concern, PCE, was detected in intermediate upper glacial well ST-MW-17 (0.92 µg/L) during the 2011 annual sampling event. The PCE concentration decreased from the 2010 annual sampling event (10 µg/L).

No PCE degradation products were detected in the intermediate well during the 2011 annual sampling event. TCE, a PCE degradation product, was detected in well ST-MW-17 (1.9 µg/L) in 2010.

Benzene, Toluene, Ethylbenzene, and Total Xylenes

BTEX compounds were not detected in the intermediate well during the 2010 annual sampling event.

Other VOCs

No other VOCs were detected in the intermediate upper glacial well. During the 2010 sampling event, 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) was detected in ST-MW-17 (2.4 µg/L).

Natural Attenuation Parameters

This section presents the analytical results for the MNA parameters in the intermediate upper glacial well. No wet chemistry parameters exceeded the Federal MCL or NYSDEC regulations.

The alkalinity result in well ST-MW-17 (51 mg/L) decreased from the 2010 concentration (80 mg/L).

Nitrate was detected in well ST-MW-17 (3.3 mg/L) which is relatively consistent with the 2010 result (2.6 mg/L).

Sulfate was detected in well ST-MW-17 (40 mg/L) which is relatively consistent with the 2010 result (50 mg/L).

Chloride was detected in well ST-MW-17 (100 mg/L) which is an increase from 2010 concentration (77 mg/L).

Sulfide was not detected in well EPA-MW-17 which is consistent with the 2010 sampling event.

TOC was not detected in well EPA-MW-17A which is consistent with the 2010 sampling event.

MEE were not detected in the intermediate well during the 2011 annual sampling event which is consistent with 2010 sampling event.

4.3 Deep Upper Glacial Wells

Two deep upper glacial wells (ST-MW-14 and ST-MW-20) were sampled for VOCs and MNA parameters during the 2011 annual groundwater sampling event. This section presents the analytical results for these constituents detected in the deep monitoring wells.

Tetrachloroethene and Degradation Products

The primary chemical of concern, PCE, was detected in the deep upper glacial monitoring wells ST-MW-14 (4.1 µg/L) and ST-MW-20 (6.7 µg/L). PCE concentrations were comparable to the 2010 sampling event (6.1 µg/L and 5.7 µg/L, respectively). PCE concentration exceeded the Federal MCL and NYSDEC regulations (both 5 µg/L) in well ST-MW-20.

TCE, a PCE degradation product, was detected in deep wells ST-MW-14 (1.5 µg/L), and ST-MW-20 (1.4 µg/L). TCE concentrations were similar to the 2010 results.

cis-1,2-DCE was detected in deep wells ST-MW-14 (0.96 µg/L) and ST-MW-20 (0.61 µg/L) during the 2011 annual groundwater sampling event. These results were similar to the 2010 results.

1,1-Dichloroethene (1,1-DCE) was detected in deep wells ST-MW-14 (5.1 µg/L) and ST-MW-20 (1.4 µg/L) during the 2011 annual sampling event. The 1,1-DCE concentration in ST-MW-14 exceeded NYSDEC regulation (5 µg/L) but was below the Federal MCL (7 µg/L). The 1,1-DCE concentration in ST-MW-14 for the 2011 sampling event was a decrease compared to the 2010 concentration (8 µg/L). The result for ST-MW-20 was consistent with the 2010 result.

1,2-Dichloroethane was detected in deep well ST-MW-14 (1.9 µg/L) and ST-MW-20 (0.59 µg/L). These results are comparable to the 2010 results.

1,1,1-Trichloroethane was detected in deep monitoring well ST-MW-14 (1.2 µg/L) and not detected in ST-MW-20, which is consistent with the 2010 results.

Benzene, Toluene, Ethylbenzene, and Total Xylenes

BTEX compounds were not detected in any of the deep upper glacial wells during the 2011 annual sampling event.

Other VOCs

No other VOCs were detected in any of the deep upper glacial wells during the 2011 annual sampling event.

Natural Attenuation Parameters

This section presents the analytical results of the MNA parameters in the deep upper glacial wells. No wet chemistry parameters exceeded either Federal MCL or NYSDEC regulations.

Alkalinity results during 2011 sampling event in deep wells were as follows: ST-MW-14 (49 mg/L) and ST-MW-20 (57 mg/L). Alkalinity concentrations for the deep wells were consistent with the results from the 2010 sampling event.

Nitrate was detected in deep wells ST-MW-14 (2.6 J mg/L), and ST-MW-20 (3.0 mg/L) during the 2011 sampling event. Nitrate concentrations remain stable as compared to the 2010 sampling events in the deep wells.

Sulfate was detected in deep wells ST-MW-14 (42 mg/L), and ST-MW-20 (49 mg/L) during the 2011 sampling event. Sulfate concentrations were consistent with the results from the 2010 sampling event.

Chloride was detected in deep wells ST-MW-14 (56 mg/L), and ST-MW-20 (110 mg/L) during the 2011 sampling event. Chloride concentrations were consistent with the 2010 sampling event.

Sulfide was not detected in the deep wells during 2011 sampling event which is consistent with the 2010 sampling event.

TOC was not detected in any of the deep monitoring wells sampled during the 2011 annual sampling event which is consistent with the 2010 sampling event.

MEE were not detected in any of the deep upper glacial well samples during the 2011 annual sampling event which is consistent with the 2010 sampling event.

5.0 DATA QUALITY EVALUATION

Data results from the analyses performed by DESA laboratory and Chemtech have been validated by EPA Region II. ECC carried over assigned laboratory qualifiers and did not perform a separate review or validation of the data. No data were noted as rejected.

6.0 CONCLUSION

Data results are valid for use, as qualified. Overall, the concentration of PCE has continued to decrease since September 1999; however, increases in PCE concentrations were noted at two of the sampled Shallow Upper Glacial Wells during the annual 2011 sampling event. Conclusions for the aquifers are as follows:

Shallow Upper Glacial Wells

Four shallow upper glacial wells were sampled in 2011. PCE increased in the following shallow monitoring wells compared to the 2010 annual sampling event:

- ST-MW-15 (from 29 to 88 µg/L)
- ST-MW-19 (from 120 biased high [K] µg/L to 190 µg/L),

PCE decreased in the following shallow monitoring wells compared to the 2010 annual sampling event:

- ST-MW-21R (from 57 K µg/L to ND) and
- ST-MW-26 (from 5.3 µg/L to 2.3 µg/L)

PCE concentrations in shallow wells ST-MW-15 and ST-MW-19 exceeded both the MCL and the NYSDEC regulation (both 5 µg/L) for PCE. PCE degradation products were present at low levels in the aquifer.

The chloride concentrations decreased in shallow wells EPA-MW-26 (from 360 mg/L to 210 mg/L) and ST-MW-21R (from 96 mg/L to 76 mg/L) and increased in ST-MW-19 (from 50 mg/L to 73 mg/L) compared to the 2010 annual sampling event. Otherwise, MNA parameters were stable. Although the TOC concentration increased in EPA-MW-21R (from 1.8 to 2.7 mg/L) compared to the 2010 annual sampling event, the sample collected by the low-flow sampling method in 2011 (1.9 mg/L) was comparable to the results from the 2010 sampling event.

Intermediate Upper Glacial Wells

One intermediate upper glacial well was sampled in 2011. The PCE concentration decreased in intermediate upper glacial well ST-MW-17 (0.92 µg/L) as compared to the 2010 annual sampling event (10 µg/L). No PCE degradation products were detected in the intermediate well during the 2011 annual sampling event.

The alkalinity result in well ST-MW-17 (51 mg/L) decreased from the 2010 concentration (80 mg/L). Chloride was detected in well ST-MW-17 (100 mg/L) which is an increase from 2010 concentration (77 mg/L). All other MNA parameters were stable.

Deep Upper Glacial Wells

Two deep upper glacial wells (ST-MW-14 and ST-MW-20) were sampled in 2011. All results were reasonably consistent with 2010 results, with PCE degradation products continuing to be present at relatively low levels. MNA parameters were stable as compared to 2010 result.

7.0 REFERENCES

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Tables

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Table 1
Sample Collection Summary
2011 Annual Groundwater Monitoring Sampling Event
Stanton Cleaners Area Groundwater Contamination Site
Great Neck, New York

					Analyses ^{1,2}							
Monitoring Well ID	CLP Sample ID	QC Sample	MS/MSD	Date Sampled	TOC	Sulfide	Alkalinity	VOCs	Nitrate	Sulfate	Chloride	MEE
Shallow Upper Glacial Wells												
ST-MW-15	AN01944			5/9/2011	•	•	•	•	•	•	•	•
ST-MW-19	AN01981			5/10/2011	•	•	•	•	•	•	•	•
ST-MW-19-B	AN01982			5/10/2011	•	•	•	•	•	•	•	•
EPA-MW-21R	AN01978			5/10/2011	•	•	•	•	•	•	•	•
EPA-MW-21R-B	AN01943			5/9/2011	•	•	•	•	•	•	•	•
EPA-MW-26	AN01979			5/10/2011	•	•	•	•	•	•	•	•
Intermediate Upper Glacial Wells												
ST-MW-17	AN01945			5/9/2011	•	•	•	•	•	•	•	•
	AN01946	ST-MW-17A		5/9/2011	•	•	•	•	•	•	•	•
Deep Upper Glacial Wells												
ST-MW-14	AN01980			5/10/2011	•	•	•	•	•	•	•	•
ST-MW-20	AN01947		x	5/9/2011	•	•	•	•	•	•	•	•
Trip Blanks												
TB-01	AN01951			5/9/2011				•				
TB-02	AN01984			5/10/2011				•				
Equipment Blanks												
EB-01	AN01983			5/10/2011				•				

Notes:

¹ = VOC, TOC, sulfide, alkalinity, nitrate/nitrite, sulfate, chloride, analyses were performed by a CLP laboratory.

² = MEE analyses performed by Chemtech.

* = EPA wells

• = Planned sample was collected.

CLP = Contract Laboratory Program

ID = Identification

MEE = Methane, Ethane, Ethene
MS/MSD = Matrix Spike/Matrix Spike Duplicate

NA = Not Applicable

QC = Quality Control

SDG = Sample Delivery Group

TOC = Total Organic Carbon

VOCs = Volatile Organic Compounds

x = Sampled for MS/MSD

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Table 2
Static Water Level Measurements
2011 Annual Groundwater Monitoring Sampling Event
Stanton Cleaners Area Groundwater Contamination Site
Great Neck, New York

Well ID	Top of Casing Elevation (ft AMSL)	Ground Elevation (ft AMSL)	Total Well Depth (ft BTOC)	Bottom of Screen Elevation (ft AMSL)	Static Water Level (May 2011) (ft BTOC)	Static Water Level (May 2011) (ft bgs)	Static Water Level (May 2011) (ft AMSL)	Comment(s)
Shallow Upper Glacial								
ST-MW-06	69.83	N/A	N/A	N/A	44.17	N/A	25.66	LIHA PL 4"
ST-MW-09	78.13	N/A	N/A	N/A	61.84	N/A	16.29	PL across from Triange Park
ST-MW-11	75.25	N/A	N/A	N/A	57.66	N/A	17.59	NR Triange Lab- nr dumpster
ST-MW-12	87.2	87.62	87.00	0.62	69.00	69.42	18.20	In front of apartment bldg
ST-MW-15	90.13	87.62	87.00	0.62	71.55	69.04	18.58	Mirreless Rd
ST-MW-16	75.78	76.15	70.00	6.15	52.44	52.81	23.34	Other side of treatment bldg near fence
ST-MW-19	82.5	83.18	89.00	-5.82	64.72	65.40	17.78	Triange Park
EPA-MW-21-R	84.13	N/A	N/A	N/A	64.38	N/A	19.75	Getty replacement well
EPA-MW-22	82.2	82.58	96.00	-13.42	61.81	62.19	20.39	Under clothing bin
EPA-MW-23	82.83	83.33	96.00	-12.67	62.35	62.85	20.48	In front of treatment bldg
EPA-MW-26	78.37	78.90	96.00	-17.10	57.25	57.78	21.12	Ipswich Ave
Intermediate Upper Glacial								
EPA-MW-11D	74.63	75.04	135.00	-59.96	57.19	57.60	17.44	Near Triangle lab (4")
ST-MW-17	86.53	87.00	145.00	-58	68.64	69.11	17.89	In front of apartment bldg
EPA-MW-27	69.32	69.83	125.00	-55.17	49.62	50.13	19.70	LIHA PL
Deep Upper Glacial								
(EPA)-CL-1D*	27.63	27.87	145	-117.13	NM	N/A	N/A	Not measured
(EPA)-CL-4D*	N/A	21.08	145	-123.92	NM	N/A	N/A	Not measured
ST-MW-14	69.73	70.03	200.00	-129.97	54.28	54.58	15.45	LIHA PL
ST-MW-20	84.53	84.95	215.00	-130.05	70.13	70.55	14.40	In front of apartment bldg

N/A =Not Available
 AMSL = Above Mean Sea Level
 bgs = Below Ground Surface
 BTOC = Below Top of Casing
 ft = feet
 ID = Identification
 NM = Not Measured
 Sources: = O&M Manual, Stanton Cleaners Groundwater Contamination Site, April 2004 and New England Industrial Engineering Groundwater sampling log
 * = EPA wells
 Water treatment system was pumping at approximately 55 GPM

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Table 3
Analytical Results - VOCs
2011 Annual Groundwater Monitoring Sampling Event
Stanton Cleaners Area Groundwater Contamination Site
Great Neck, New York

			Shallow Upper Glacial Wells					
Monitoring Well ID:	Federal MCL	NYSDEC Regulations ²	ST-MW-15	ST-MW-19	ST-MW-19-B	EPA-MW-21R	EPA-MW-21R-B	EPA-MW-26
CLP Sample ID:			AN01944	AN01981	AN01982	AN01978	AN01943	AN01979
Date Sampled:			5/9/2011	5/10/2011	5/10/2011	5/10/2011	5/9/2011	5/10/2011
Sample Type:								
Volatile Organic Compounds ¹ (µg/L)								
1,1-Dichloroethene	7	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis -1,2-Dichloroethene	70	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	5	0.6	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	5	5	88	180	190	0.5 U	0.5 U	2.3
1,1,1-Trichloroethane	200	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	5	5	0.5 U	1.1	1.1	0.5 U	0.5 U	0.5 U

Table 3
Analytical Results - VOCs
2011 Annual Groundwater Monitoring Sampling Event
Stanton Cleaners Area Groundwater Contamination Site
Great Neck, New York

			Intermediate Upper Glacial Wells		Deep Upper Glacial Wells		Blanks		
Monitoring Well ID:	Federal MCL	NYSDEC Regulations ²	ST-MW-17	ST-MW-17A	ST-MW-14	ST-MW-20	TB-01	TB-02	EB-01
CLP Sample ID:			AN01945	AN01946	AN01980	AN01947	AN01951	AN01984	AN01983
Date Sampled:			5/9/2011	5/9/2011	5/10/2011	5/9/2011	5/9/2011	5/10/2011	5/10/2011
Sample Type:				Field Duplicate			TB	TB	EB
Volatile Organic Compounds ¹ (µg/L)									
1,1-Dichloroethene	7	5	0.5 U	0.5 U	5.1	1.4	0.5 U	0.5 U	0.5 U
cis -1,2-Dichloroethene	70	5	0.5 U	0.5 U	0.96	0.61	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	5	0.6	0.5 U	0.5 U	1.9	0.59	0.5 U	0.5 U	0.5 U
Tetrachloroethene	5	5	0.92	0.92	4.1	6.7	0.5 U	0.5 U	0.5 U
1,1,1-Trichloroethane	200	5	0.5 U	0.5 U	1.2	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	5	5	0.5 U	0.5 U	1.5	1.4	0.5 U	0.5 U	0.5 U

Notes:

¹ VOCs were analyzed by a CLP laboratory and data validation was performed by EPA Region II. ECC carried over assigned qualifiers and did not perform a separate review or validation of the data.

² = New York City Rules and Regulations Part 703, Surface Water and Groundwater Quality Standards and Groundwater Effluent Limitations

* = EPA wells

Bold value indicates a detection.

	value above Federal MCL
	value above NYSDEC Regulations
	value above both Federal MCL & NYSDEC Regi

CLP = Contract Laboratory Program

ID = Identification

EPA = Environmental Protection Agency

NYSDEC = New York State Department of Environment Conservation

MCL = Maximum Contaminant Level

µg/L = micrograms per Liter

NA = Not available

VOCs = Volatile Organic Compounds

TB = Trip Blank

EB = Equipment Blank

U = Undetected value

Table 4
Analytical Results - Natural Attenuation Parameters
2011 Annual Groundwater Monitoring Sampling Event
Stanton Cleaners Area Groundwater Contamination Site
Great Neck, New York

			Shallow Upper Glacial Wells					
Monitoring Well ID:	Federal MCL	NYSDEC Regulations ²	ST-MW-15	ST-MW-19	ST-MW-19-B	EPA-MW-21R	EPA-MW-21R-B	EPA-MW-26
CLP Sample IDs:			AN01944	AN01981	AN01982	AN01978	AN01943	AN01979
Date Sampled:			5/9/2011	5/10/2011	5/10/2011	5/10/2011	5/9/2011	5/10/2011
Sample Type								
Wet Chemistry ¹ (mg/L)								
Total Alkalinity	NA	NA	110	120	140	88	77	91
Sulfide	NA	NA	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Total Organic Carbon	NA	NA	1.0 U	1.8	2.8	1.9	2.7	1.0 U
Chloride	250 ³	250	52	73	60	71	76	210
Sulfate	250 ³	250	49	100	98	110	98	48
Nitrate (as N)	10	10	3.9	6.1 J	4.1 J	7.2 J	8.4	2.7 J

Table 4
Analytical Results - Natural Attenuation Parameters
2011 Annual Groundwater Monitoring Sampling Event
Stanton Cleaners Area Groundwater Contamination Site
Great Neck, New York

			Intermediate Upper Glacial Wells		Deep Upper Glacial Wells	
Monitoring Well ID:	Federal MCL	NYSDEC Regulations ²	ST-MW-17	EPA-MW-17A	ST-MW-14	ST-MW-20
CLP Sample IDs:			AN01945	AN01946	AN01980	AN01947
Date Sampled:			5/9/2011	5/9/2011	5/10/2011	5/9/2011
Sample Type				Field Duplicate		
Wet Chemistry ¹ (mg/L)						
Total Alkalinity	NA	NA	51	51	49	57
Sulfide	NA	NA	0.01 U	0.01 U	0.01 U	0.01 U
Total Organic Carbon	NA	NA	1.0 U	1.0 U	1.0 U	1.0 U
Chloride	250 ³	250	100	100	56	110
Sulfate	250 ³	250	40	40	42	49
Nitrate (as N)	10	10	3.3	3.3	2.6 J	3.0

Notes:

¹ Wet chemistry parameters listed in this table were analyzed by a CLP laboratory and data validation was performed by EPA Region II.

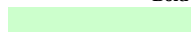
ECC carried over assigned qualifiers and did not perform a separate review or validation of the data.

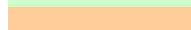
MEE is non-detected in all the wells

² = New York City Rules and Regulations Part 703, Surface Water and Groundwater Quality Standards and Groundwater Effluent Limitations.

³ = EPA Secondary Drinking Water Regulation (not enforceable)

Bold value indicates a detection.

 value above Federal MCL

 value above NYSDEC Regulations

 value above both Federal MCL and NYSDEC Regulations

CLP = Contract Laboratory Program

ID = Identification

MCL = Maximum Contaminant Level

mg/L = milligrams per Liter

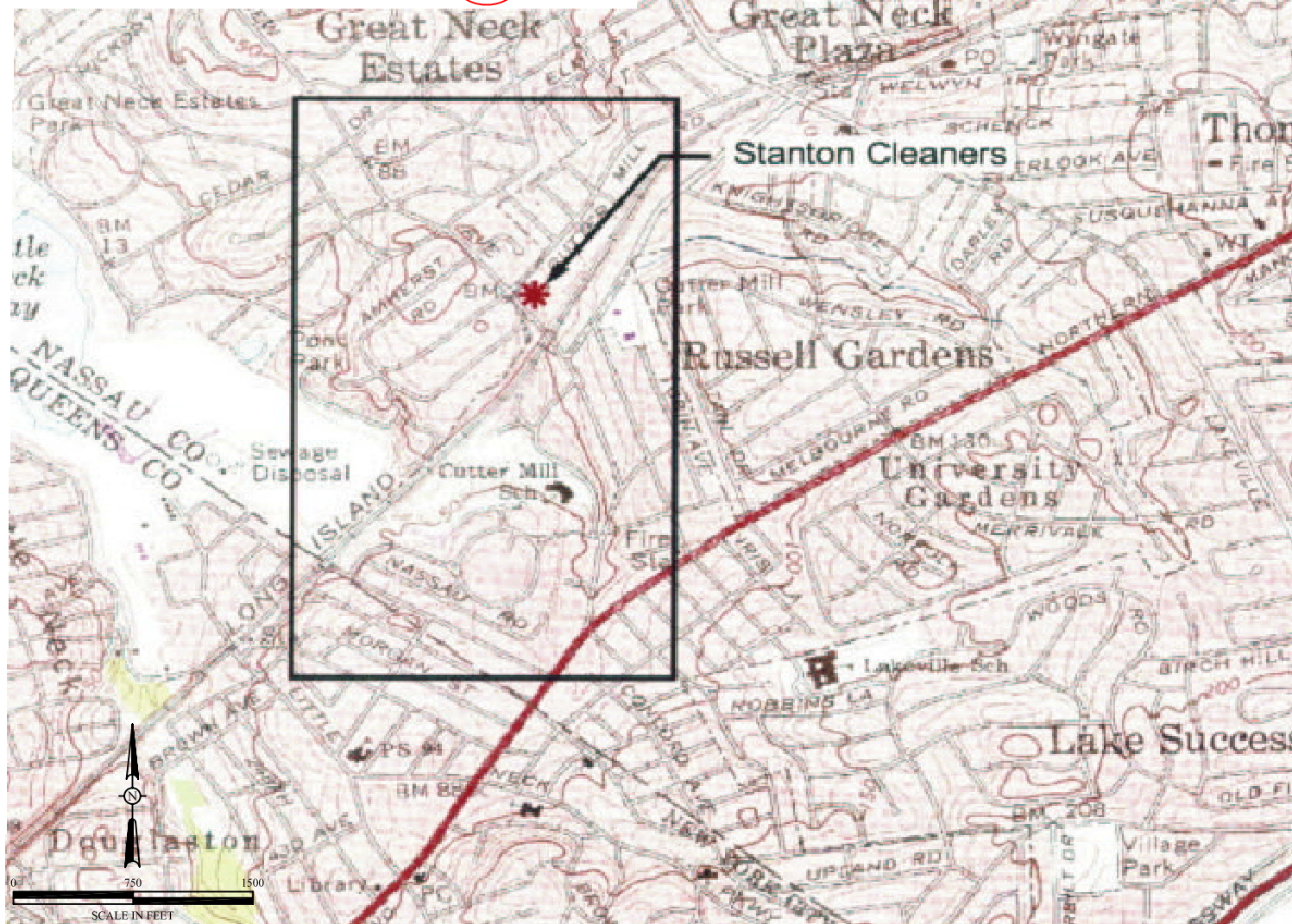
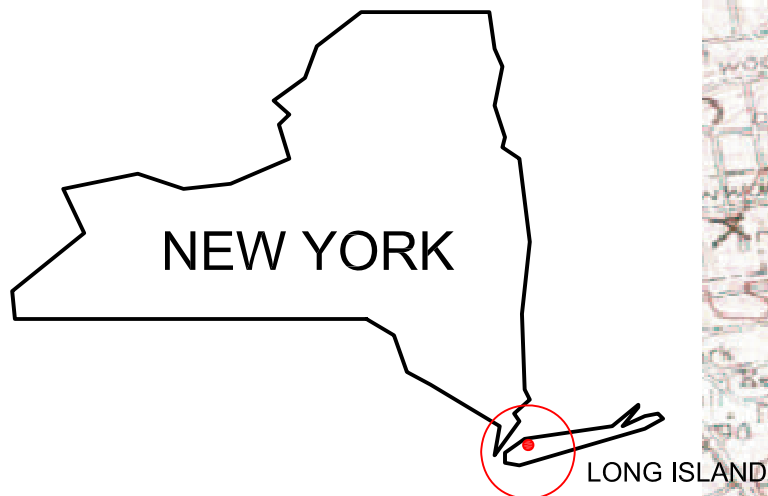
NA = Not available

NYSDEC = NY State Department of Environment Conservation

U = Not detected

Figures

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ECC
1293 BROAD STREET, SUITE 200
BLOOMFIELD, NJ 07003

DRAWN BY:
NW

APPROVED BY:
DM

DATE:
12-Nov-04

SIZE:
A

STANTON CLEANERS, GREAT NECK, NEW YORK

FIGURE 1 SITE LOCATION MAP

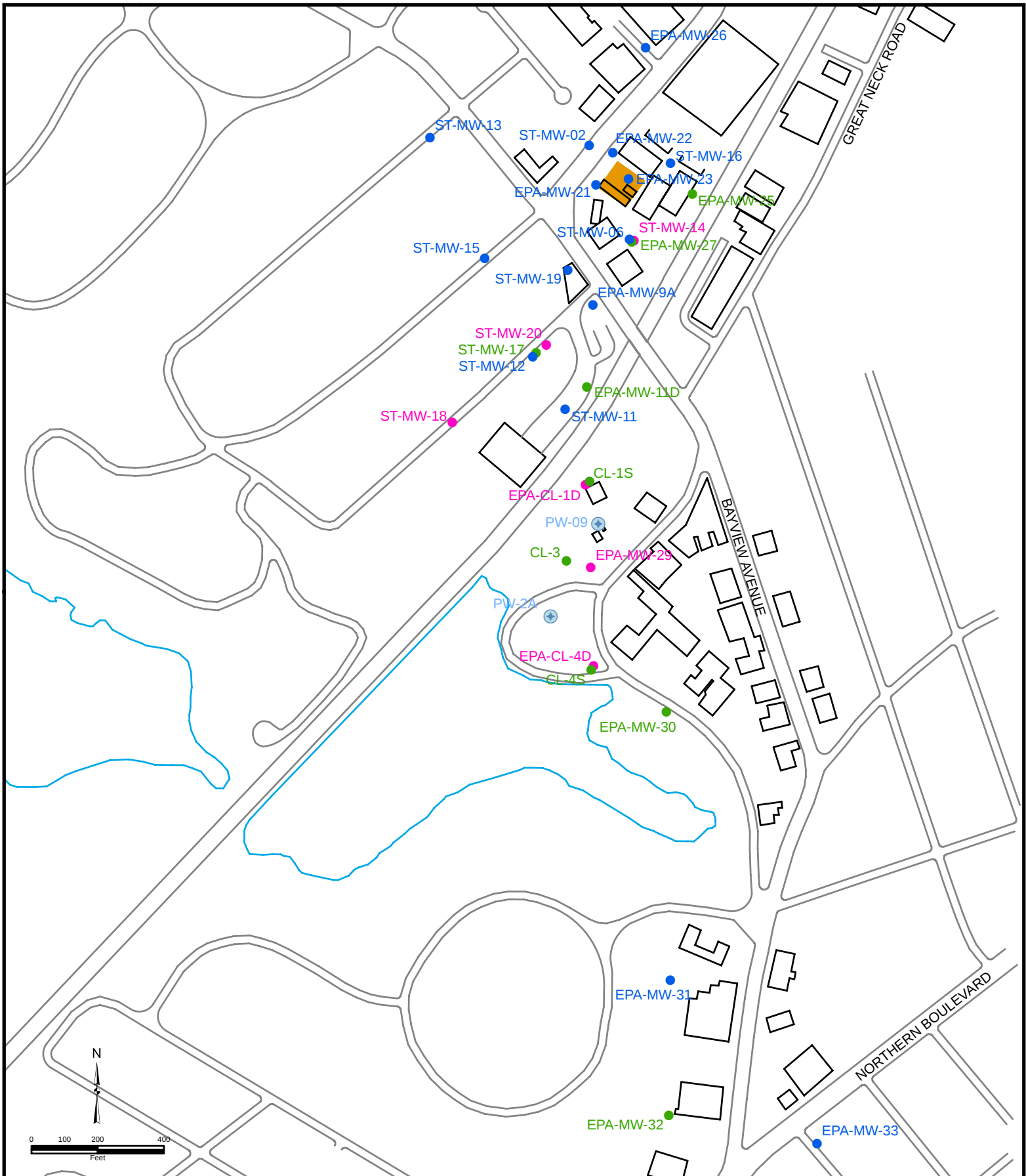
PROJECT CODE: 5442 001

CONTRACT CODE:

FILENAME: FIGURE 1-1.DWG

SHEET: 1 OF 1

REV: -



Legend

- Shallow Monitoring Well
- Intermediate Monitoring Well
- Deep Monitoring Well
- ⊕ Public Supply Well
- Water
- Roads
- Buildings
- Stanton Cleaners Property



ECC
1125 Route 22 West
Bridgewater, NJ 08807

STANTON CLEANERS, GREAT NECK, NEW YORK

FIGURE 2 SITE LAYOUT WITH MONITORING WELL NETWORK

Drawn by: M Johanson

Date: 7/28/2011

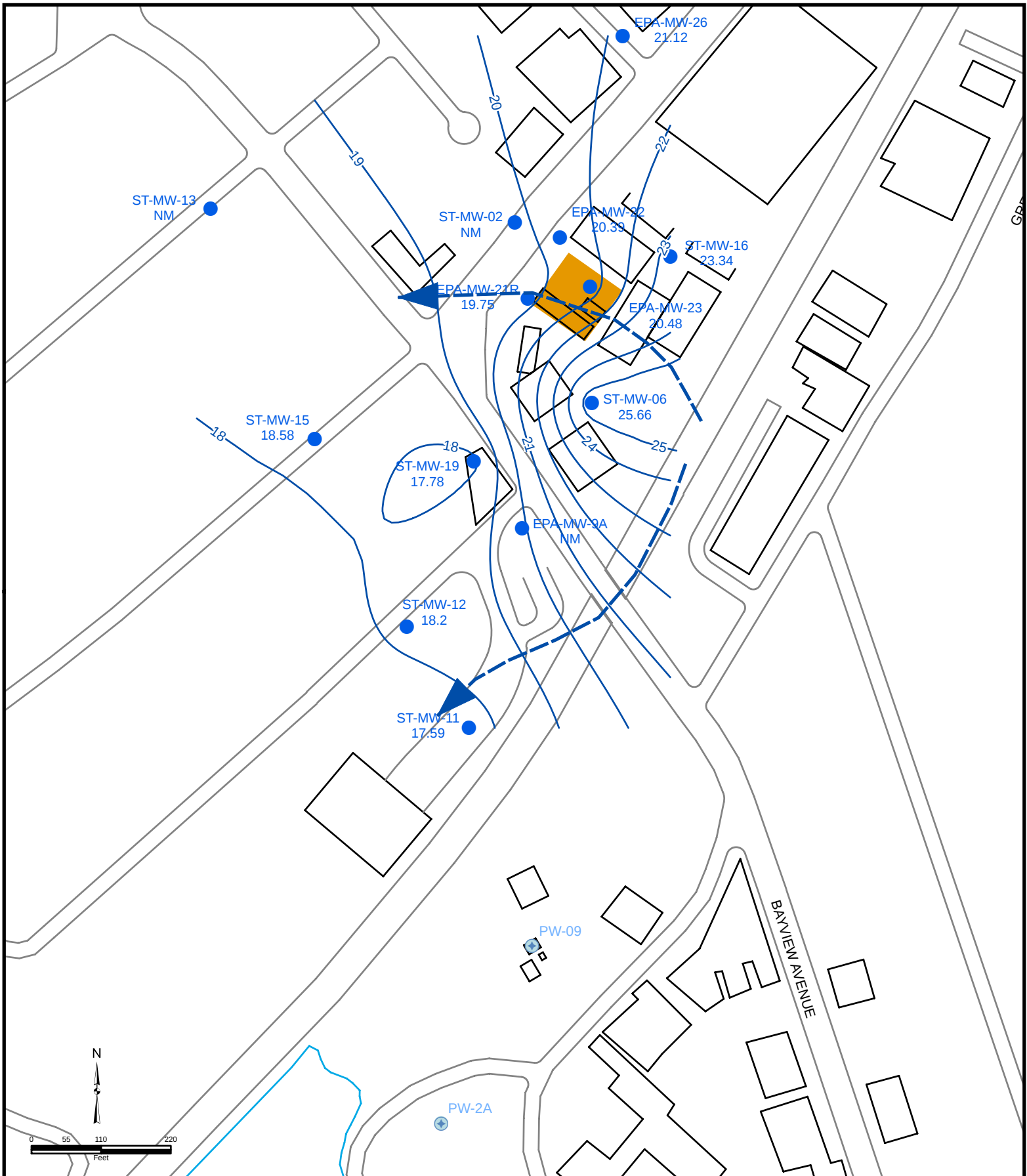
Version:

Reviewed by:

Date:

Revision Date / Initials:

Projection:
North American Datum 1983
State Plane New York
Long Island, FIPS 3104
Units: Feet



Legend

- Shallow Monitoring Well
- ⊕ Public Supply Well
- Potentiometric Surface for Shallow Zone (ft AMSL)
- ➡ Direction of Groundwater Flow
- Water
- Roads
- Buildings
- Stanton Cleaners Property



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Bridgewater, NJ 08807

STANTON CLEANERS, GREAT NECK, NEW YORK

FIGURE 3 POTENTIOMETRIC SURFACE SHALLOW GROUNDWATER MAY 2011

Drawn by: M Johanson

Date: 7/28/2011

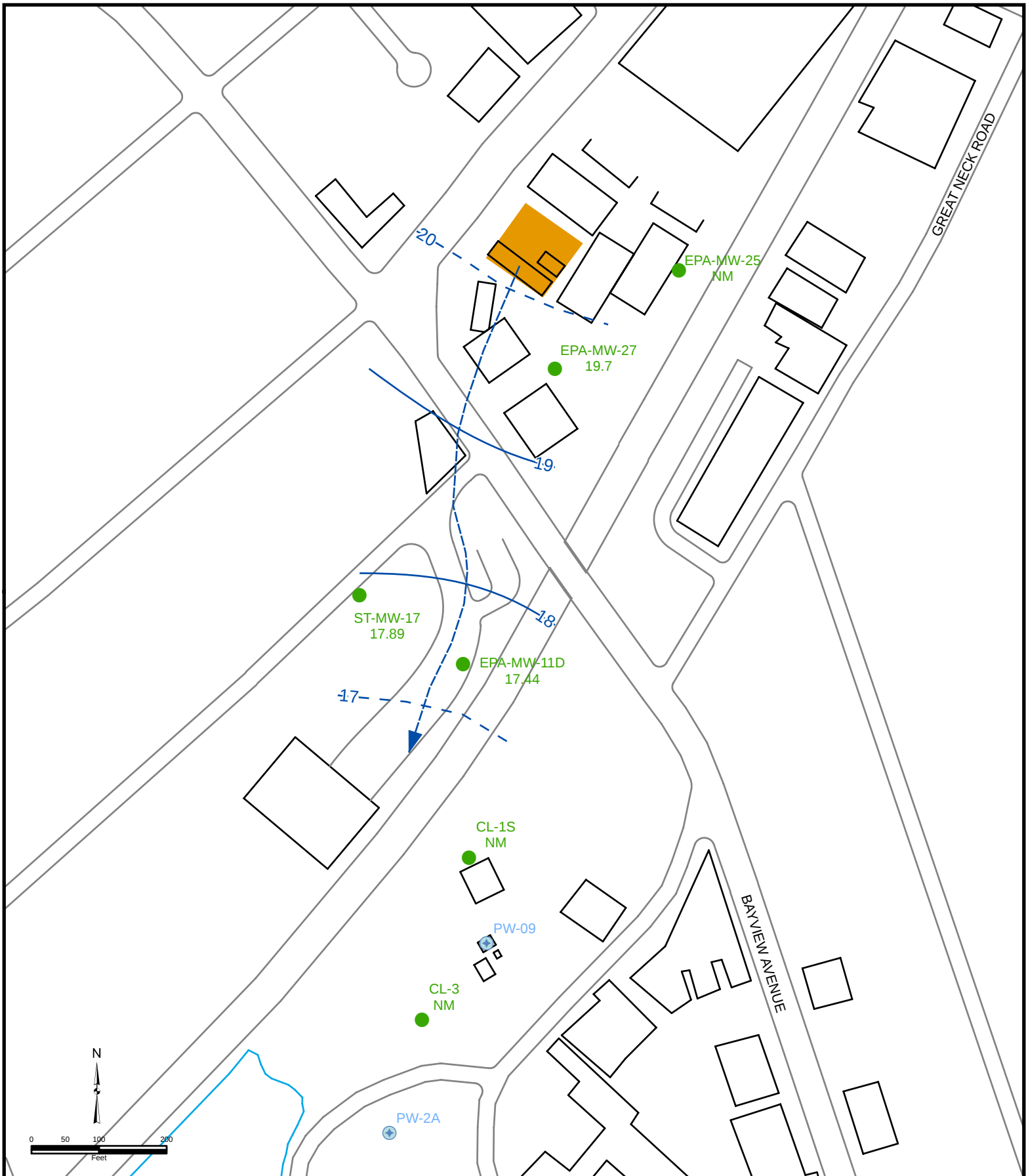
Version:

Reviewed by:

Date:

Revision Date / Initials:

Projection:
North American Datum 1983
State Plane New York
Long Island, FIPS 3104
Units: Feet



Legend

- Intermediate Monitoring Well
- ⊕ Public Supply Well
- Potentiometric Surface for Intermediate Zone (ft AMSL)
- > Direction of Groundwater Flow
- Water
- Roads
- Buildings
- Stanton Cleaners Property

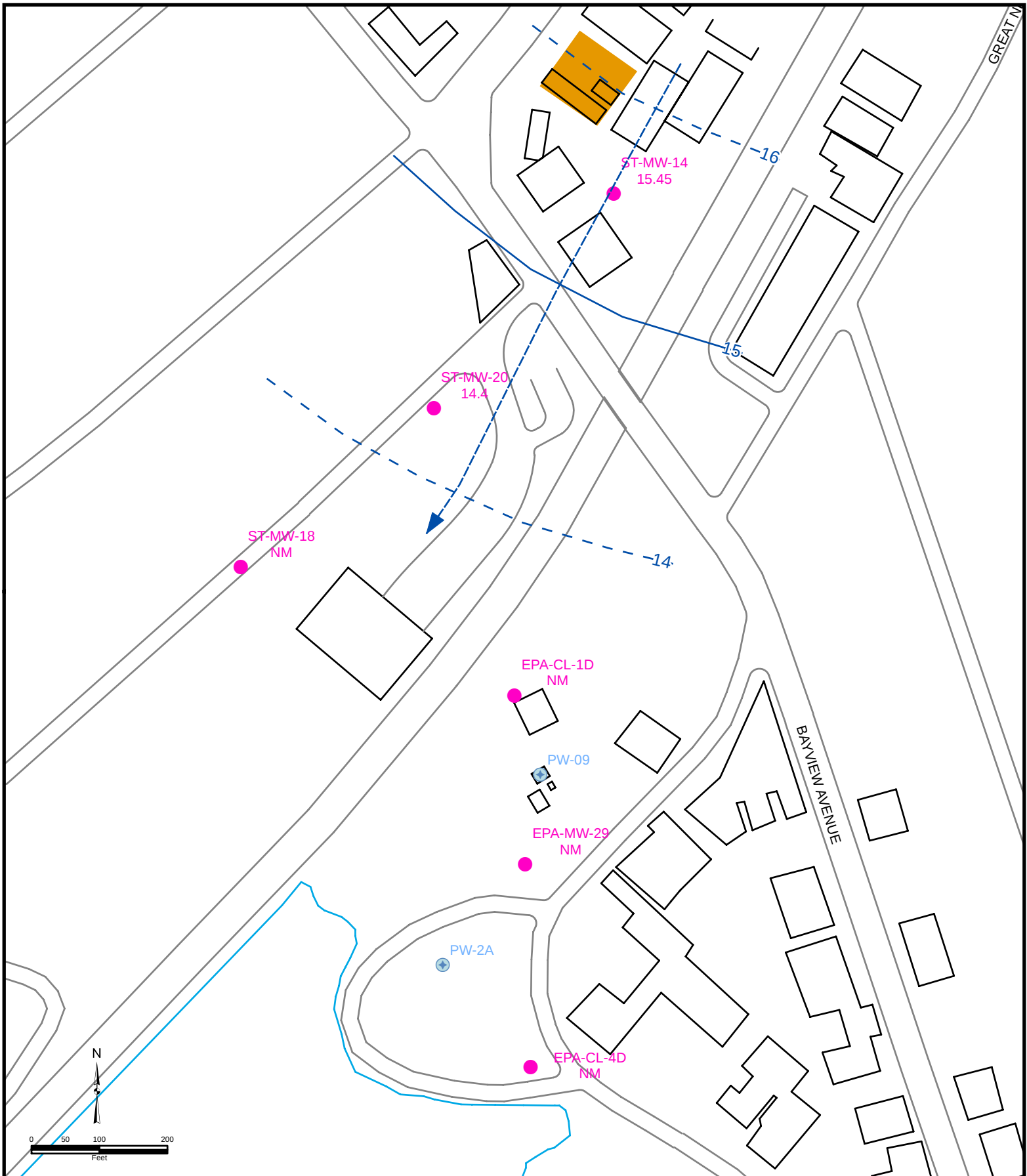


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STANTON CLEANERS, GREAT NECK, NEW YORK

FIGURE 4 POTENTIOMETRIC SURFACE INTERMEDIATE WELLS MAY 2011

Drawn by: M Johanson	Reviewed by:	Projection: North American Datum 1983
Date: 7/28/2011	Date:	State Plane New York
Version:	Revision Date / Initials:	Long Island, FIPS 3104
		Units: Feet



Legend

- Deep Monitoring Well
- ⊕ Public Supply Well
- Potentiometric Surface for Deep Zone (ft AMSL)
- ➡ Direction of Groundwater Flow
- Water
- Roads
- Buildings
- Stanton Cleaners Property

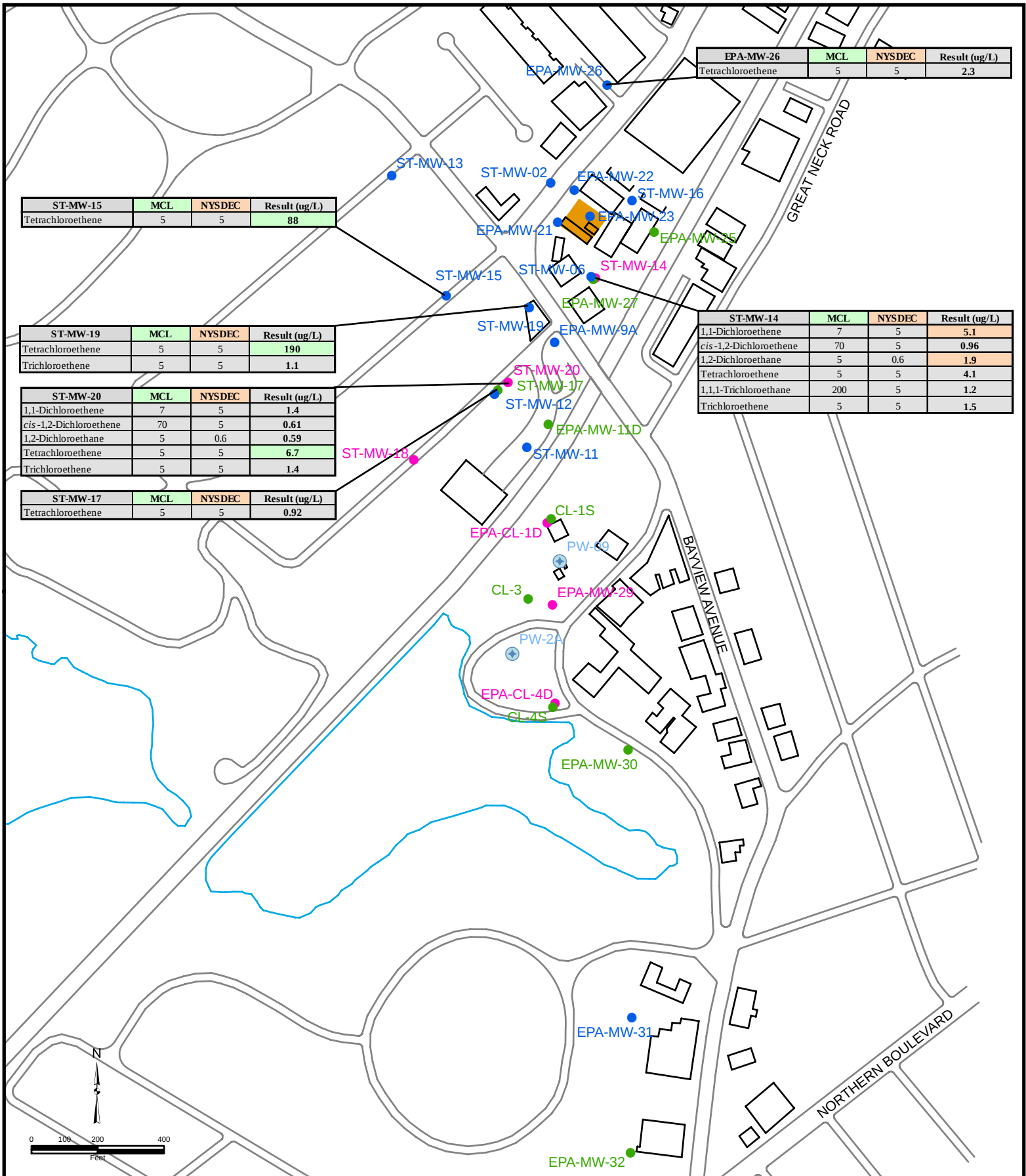


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STANTON CLEANERS, GREAT NECK, NEW YORK

FIGURE 5 POTENTIOMETRIC SURFACE DEEP GROUNDWATER MAY 2011

Drawn by: M Johanson	Reviewed by:	Projection: North American Datum 1983
Date: 7/28/2011	Date:	State Plane New York
Version:	Revision Date / Initials:	Long Island, FIPS 3104
		Units: Feet



Legend

- Shallow Monitoring Well
- Intermediate Monitoring Well
- Deep Monitoring Well
- Detection Exceeds
NYSDEC Regulations
- Detection Exceeds Federal MCL
and NYSDEC Regulations

- ⊕ Public Supply Well
- Water
- Roads
- Buildings
- Stanton Cleaners
Property

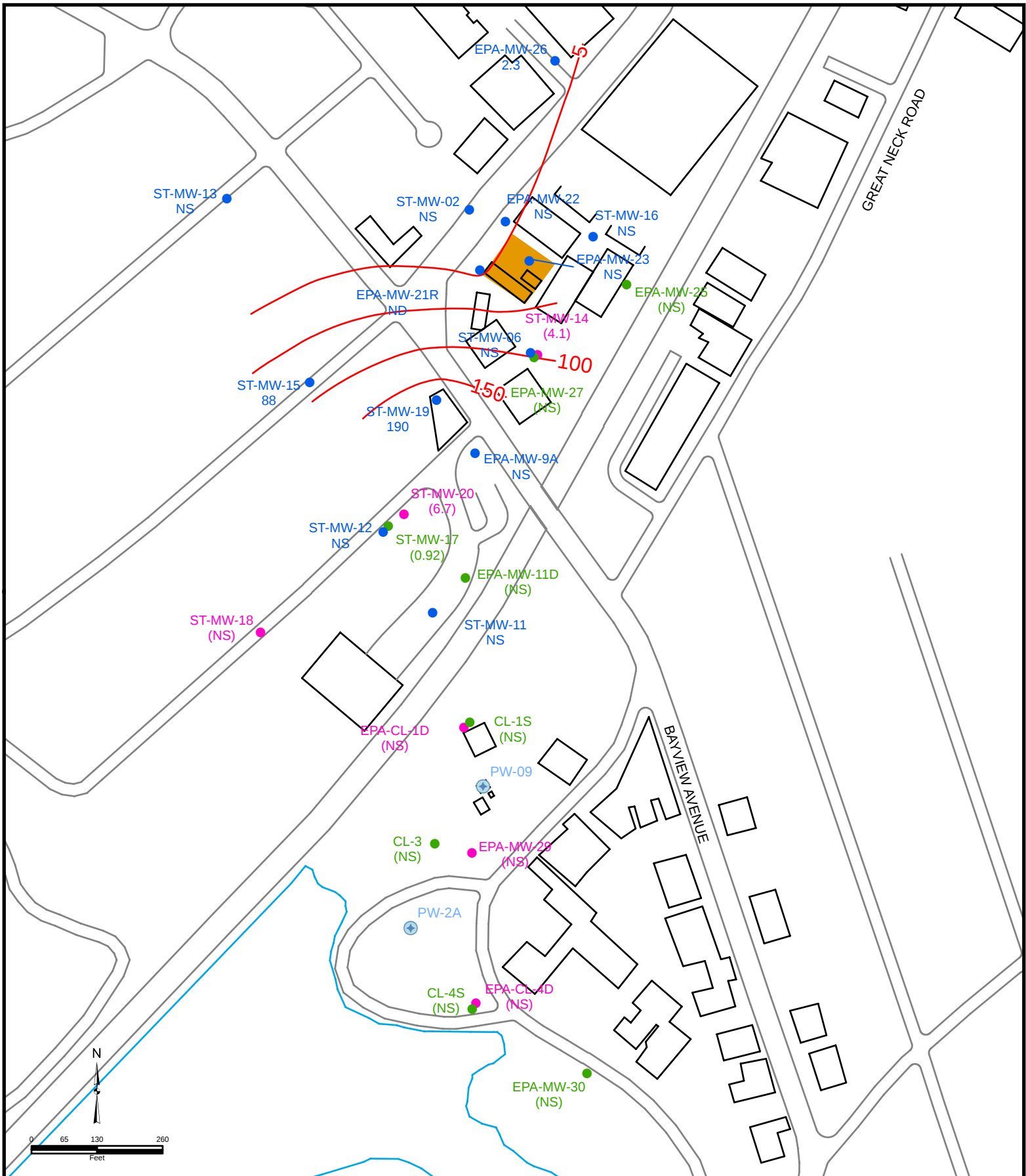


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Bridgewater, NJ 08807

STANTON CLEANERS, GREAT NECK, NEW YORK

FIGURE 6 VOC DETECTIONS MAY 2011

Drawn by: M Johanson	Reviewed by:	Projection: North American Datum 1983
Date: 7/28/2011	Date:	State Plane New York
Version:	Revision Date / Initials:	Long Island, FIPS 3104
		Units: Feet



Legend

- Shallow Monitoring Well with PCE Concentration
- Intermediate Monitoring Well (with PCE concentration)
- Deep Monitoring Well (with PCE Concentration)
- PCE Isoconcentration Line
- ⊕ Public Supply Well
- Water
- Roads
- Buildings
- Stanton Cleaners Property



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Bridgewater, NJ 08807

STANTON CLEANERS, GREAT NECK, NEW YORK

FIGURE 7 PCE ISOCONCENTRATION MAP SHALLOW MONITORING WELLS

Drawn by: M Johanson	Reviewed by:	Projection: North American Datum 1983
Date: 7/28/2011	Date:	State Plane New York
Version:	Revision Date / Initials:	Long Island, FIPS 3104
		Units: Feet

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Appendix A

Field Trip Reports

Attachment A – Monitoring Well Collection Points

Attachment B – Water level measurements

Attachment C – Chain of Custody

Attachment D – FedEx Airbills

Attachment E – Groundwater Monitoring Logs

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SAMPLING TRIP REPORT

Site Name: Stanton Cleaners Area Groundwater Contamination Site

CERCLIS ID Number: NYD047650196

Sampling Dates: May 9-10, 2011

CLP Case Number: N/A

Site Location: 110 Cutter Mill Road, Great Neck, NY 11021

Sample Descriptions: Annual Monitoring Well Sampling Event

Laboratories Receiving Samples:

Case Number	Sample Type	Name and Address of Laboratory
N/A	CLP TCL-VOAs Nitrate, Total Organic Carbon (TOC), Alkalinity, Sulfate, Chloride, and Sulfide	USEPA Region II DESA Lab (DESA) Building 209, MS-230 2890 Woodbridge Avenue Edison, NJ 08837 Tel (732) 906-6886
N/A	Methane, Ethane, Ethene	Chemtech 284 Sheffield St. Mountainside, NJ 07092 Tel (908) 789-8900

Sample Dispatch Data: On May 9, 2011 samples from four monitoring wells (ST-MW17, ST-MW20, ST-MW15, EPA-MW21R-B) were shipped to DESA for analysis of TCL Volatiles (TCL-VOA), TOC, alkalinity, nitrate, sulfate, sulfide, and chloride. Samples from the same wells were shipped to Chemtech for analysis of methane, ethane and ethene.

Extra volume was collected from ST-MW20 for matrix spike/matrix spike duplicate (MS/MSD) analysis and one field duplicate sample (ST-MW-17A) was collected from monitoring well ST-MW-17. One trip blank (TB-01), submitted for VOA analysis only, was included in the May 9 shipment.

FedEx Air bill No.	Number of Coolers	Number and Type of Samples	Time and Date of Shipping
873583288332	2	Four monitoring well samples (one with additional volume for MS/MSD analysis) and one field duplicate for TCL VOA; Alkalinity; Sulfide; TOC; Chloride; Nitrate; and Sulfate analysis. One trip blank for TCL VOA only.	5/9/2011 @ 18:30 TO: DESA

873583288354	1	Four monitoring well samples for the following analyses: methane; ethane; and ethene. One sample with additional volume for MS/MSD. One field duplicate.	5/9/2011 @ 18:30 TO: Chemtech
--------------	---	--	----------------------------------

On May 10, 2011 samples from four monitoring wells (ST-MW19, EPA-MW-21R, EPA-MW-26, and ST-MW14) were shipped to DESA for analysis of TCL Volatiles and TOC, Alkalinity, Nitrate, Sulfate, Sulfide, and Chloride. Also on May 10, 2011, samples from the same monitoring wells were shipped to Chemtech for analysis of methane, ethane, and ethene.

One equipment rinsate (EB-01) and one trip blank (TB-02) were included in the May 10, 2011 shipment. The equipment rinsate and trip blank were submitted to DESA for VOA analysis only.

FedEx Airbill No.	Number of Coolers	Number and Type of Samples	Time and Date of Shipping
873583288387	2	Four monitoring well samples and one field duplicate for TCL VOA; Alkalinity; Sulfide; TOC; Chloride; Nitrate; and Sulfate analysis. One trip blank and equipment rinsate for TCL VOA only.	5/10/2011 @ 17:30 TO: DESA
873583288398	1	Four monitoring well samples for the following analyses: methane; ethane; and ethene. One field duplicate.	5/10/2011 @ 17:30 TO: Chemtech

Sampling Personnel:

Name	Organization	Site Duties
Dave Miller	ECC	Project Manager
Carol DiGuardia	ECC	Sampler/Sample Management
Frank Mahalski	Environmental Restoration (ER)	Sampler
Todd Jennings	ER	Sampler

Sample Numbers and Collection Points:

Attachment A includes a table with a list of all the groundwater monitoring well collection points.

Additional Comments:

During the groundwater sampling event that occurred May 9-10, 2011, a total of seven (7) groundwater monitoring wells were sampled. Sample from two wells, ST-MW19 and EPA-MW21R were collected using a bailer in addition to low flow groundwater sampling procedures. The identification number of these samples include the suffix "B". Prior to sampling on May 9, groundwater level measurements were taken at each well. The Water Authority of Great Neck North (WAGGN) was contacted and public water supply wells pumping were noted. One field duplicate sample was collected at ST-MW-17. Extra volume for MS/MSD analyses was collected and shipped to DESA and Chemtech for ST-MW20. A total of two trip blanks and one equipment rinsate blank were also collected and shipped to DESA for TCL VOA analysis.

This groundwater sampling event was conducted in accordance with the USEPA Region II Groundwater Sampling Low Flow (Minimal Drawdown) Groundwater Sampling Procedures (dated March 16, 1998); Contract Laboratory Program Guidance for Field Samplers (dated April 2003); Groundwater Sampling Guidelines for Superfund and RCRA Project Managers from the USEPA Office of Solid Waste and Emergency Response (dated May 2002); the USEPA Technical Protocol for Evaluating Natural Attenuation of Chlorinated Solvents in Groundwater (dated September 1998); the Stanton Cleaners Area Groundwater Contamination Site Long Term Response Action (LTRA) Sampling and Analysis Plan-Part 1 Field Sampling Plan and Part 2 Quality Assurance Project Plan (dated November 2004); the UFP-QAPP for Stanton Cleaners Area Groundwater Contamination (7/13/2010); and the site Operations and Maintenance Manual (dated April 2004). Water level measurements collected on May 9 are included as Attachment B. Copies of the Chain of Custody Records are included in Attachment C. Copies of FedEx Airbills are included in Attachment D. Copies of the Groundwater Sampling Logs are included as Attachment E. Water quality parameters measured before sampling wells with a bailer (EPA-MW21R and ST-MW19) are included as Attachment F.

Attachment A

Monitoring Well Collection Points

Stanton Cleaners Area Groundwater Contamination Site

**Sample Numbers and Collection Points for Annual Monitoring Well Sampling
Event
May 9-10, 2011**

SAMPLE ID	DATE COLLECTED	COMMENTS
ST-MW15	5/9/2011	
ST-MW17	5/9/2011	
ST-MW17A	5/9/2011	Field duplicate of ST-MW17
ST-MW20	5/9/2011	Matrix spike/matrix spike duplicate (MS/MSD)
EPA-MW21R-B	5/9/2011	Bailer sample at EPA-MW21R
TB-01	5/9/2011	Trip blank
EPA-MW21R	5/10/2011	
EPA-MW26	5/10/2011	
ST-MW14	5/10/2011	
ST-MW19	5/10/2011	
ST-MW19-B	5/10/2011	Bailer sample at ST-MW19
EB-01	5/10/2011	Equipment rinsate blank
TB-02	5/10/2011	Trip blank

Attachment B

Water level measurements

WATER LEVEL DATA SUMMARY

PROJECT: <u>Stanton Cleaners</u>			JOB NUMBER: _____		
LOCATION: <u>Great Neck, NY</u>			DATE: <u>5/9/2011</u>		
CLIENT: <u>USACE / USEPA</u>			MEASURED BY: <u>Frank Mahalski</u>		
SURVEY DATUM: <u>ft msl</u>			<u>Todd Jennings</u>		
MEASURING DEVICE: <u>Solinst Water Level Indicator S/N# 34407</u>					

WELL NUMBER	MEASURING POINT		DEPTH TO WATER (FT)	ELEVATION OF WATER (FT)	COMMENTS
	Description	Elevation (FT)			
EPA-MW-11D	ft BTOC	74.63	57.19	17.44	Nr Triangle lab (4")
EPA-MW-21-R	ft BTOC	84.13	64.38	19.75	Getty replacement well
EPA-MW-22	ft BTOC	82.20	61.81	20.39	Under Clothing Bin
EPA-MW-23	ft BTOC	82.83	62.35	20.48	In front Treatment bldg.
EPA-MW-27	ft BTOC	69.32	49.62	19.70	LIHA PL
ST-MW-02	ft BTOC	82.03	N/A	N/A	Abandoned
ST-MW-06	ft BTOC	69.83	44.17	25.66	LIHA PL 4"
ST-MW-09	ft BTOC	78.13	61.84	16.29	PL across from Triangle Park
ST-MW-11	ft BTOC	75.25	57.66	17.59	NR Triangle lab- nr dumpster
ST-MW-12	ft BTOC	87.20	69.00	18.20	In front apartment bldg.
ST-MW-14	ft BTOC	69.73	54.28	15.45	LIHA PL
ST-MW-16	ft BTOC	75.78	52.44	23.34	other side treatment bldg nr fence
ST-MW-17	ft BTOC	86.53	68.64	17.89	In front apartment bldg.
ST-MW-19	ft BTOC	82.50	64.72	17.78	Triangle Park
ST-MW-20	ft BTOC	84.53	70.13	14.40	In front apartment bldg.
EPA-MW-26	ft BTOC	78.37	57.25	21.12	Ipswich Ave.
ST-MW-15	ft BTOC	90.13	71.55	18.58	Mirreless Rd.

Notes: WAGGN wells pumping:

#13- 1284 gpm

#9 - 882 gpm

#10A- 954 gpm

N/A- Data not available

Attachment C

Chain of Custody



USEPA Contract Laboratory Program
Organic Traffic Report & Chain of Custody Record

Case No:

DAS No:

SDG No:

L

Date Shipped: 5/9/2011 Carrier Name: FedEx Airbill: 873583288332 Shipped to: USEPA Region 2 Lab 2890 Woodbridge Ave. Bldg. 209, MS-230 Edison NJ 08837 (732) 906-6886	Chain of Custody Record		Sampler Signature: <i>Carol DiGuardia</i>	For Lab Use Only Lab Contract No: _____ Unit Price: _____ Transfer To: _____ Lab Contract No: _____ Unit Price: _____	
	Relinquished By	(Date / Time)	Received By		(Date / Time)
	<i>Carol DiGuardia</i>	<i>5/9/2011 18:30</i>	<i>Ship to lab via FedEx</i>		
	2				
	3				
4					

ORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	INORGANIC SAMPLE No.	FOR LAB USE ONLY Sample Condition On Receipt.
EFFLUENT	Ground Water/ Carol DiGuardia	L/G	VOA (28)	(HCL) (3)	EFFLUENT	S: 5/9/2011 8:30		
EFFLUENT-A	Ground Water/ Carol DiGuardia	L/G	VOA (28)	(HCL) (3)	EFFLUENT-A	S: 5/9/2011 8:35		
EPA-MW21R-B	Ground Water/ Todd Jennings	L/G	VOA (28)	(HCL) (3)	EPA-MW21R-B	S: 5/9/2011 11:15		
INFLUENT	Ground Water/ Carol DiGuardia	L/G	VOA (28)	(HCL) (3)	INFLUENT	S: 5/9/2011 8:45		
ST-MW15	Ground Water/ Todd Jennings	L/G	VOA (28)	(HCL) (3)	ST-MW15	S: 5/9/2011 16:45		
ST-MW17	Ground Water/ Carol DiGuardia	L/G	VOA (28)	(HCL) (3)	ST-MW17	S: 5/9/2011 14:55		
ST-MW17A	Ground Water/ Carol DiGuardia	L/G	VOA (28)	(HCL) (3)	ST-MW17A	S: 5/9/2011 15:00		
ST-MW20	Ground Water/ Todd Jennings	L/G	VOA (28)	(HCL) (9)	ST-MW20	S: 5/9/2011 14:15		
TB-01	Field QC/ Carol DiGuardia	L/G	VOA (28)	(HCL) (3)	TB-01	S: 5/9/2011 8:00		

Shipment for Case Complete? ☐	Sample(s) to be used for laboratory QC: ST-MW20	Additional Sampler Signature(s): <i>[Signature]</i>	Cooler Temperature Upon Receipt:	Chain of Custody Seal Number:
Analysis Key: VOA = CLP TCL Volatiles	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Custody Seal Intact? ☐	Shipment Iced? ☐

TR Number: 2-043013577-050911-0002

LABORATORY COPY

PR provides preliminary results. Requests for preliminary results will increase analytical costs.

Send Copy to: Sample Management Office, Attn: Heather Bauer, CSC, 15000 Conference Center Dr., Chantilly, VA 20151-3819; Phone 703/818-4200; Fax 703/818-4602

EPA USEPA Contract Laboratory Program Organic Traffic Report & Chain of Custody Record

Case No:
DAS No:

R

Region: Project Code: Account Code: CERCLIS ID: Spill ID: Site Name/State: Project Leader: Action: Sampling Co:	2 NYD047650196 Stanton Cleaners/NY Carol DiGuardia ECC	Date Shipped: 5/9/2011 Carrier Name: FedEx Airbill: 873583288332 Shipped to: USEPA Region 2 Lab 2890 Woodbridge Ave. Bldg. 209, MS-230 Edison NJ 08837 (732) 906-6886	Chain of Custody Record Relinquished By: <i>Carol DiGuardia</i> 5/18/2011 Received By: <i>Ship to Lab via FedEx</i>	Sampler Signature: <i>Carol DiGuardia</i> (Date / Time)
---	--	--	---	--

ORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	INORGANIC SAMPLE No.	QC Type
EFFLUENT	Ground Water/ Carol DiGuardia	L/G	VOA (28)	(HCL) (3)	EFFLUENT	S: 5/9/2011 8:30		
EFFLUENT-A	Ground Water/ Carol DiGuardia	L/G	VOA (28)	(HCL) (3)	EFFLUENT-A	S: 5/9/2011 8:35		Field Duplicate
EPA-MW21R-B	Ground Water/ Todd Jennings	L/G	VOA (28)	(HCL) (3)	EPA-MW21R-B	S: 5/9/2011 11:15		
INFLUENT	Ground Water/ Carol DiGuardia	L/G	VOA (28)	(HCL) (3)	INFLUENT	S: 5/9/2011 8:45		
ST-MW15	Ground Water/ Todd Jennings	L/G	VOA (28)	(HCL) (3)	ST-MW15	S: 5/9/2011 16:45		
ST-MW17	Ground Water/ Carol DiGuardia	L/G	VOA (28)	(HCL) (3)	ST-MW17	S: 5/9/2011 14:55		
ST-MW17A	Ground Water/ Carol DiGuardia	L/G	VOA (28)	(HCL) (3)	ST-MW17A	S: 5/9/2011 15:00		Field Duplicate
ST-MW20	Ground Water/ Todd Jennings	L/G	VOA (28)	(HCL) (9)	ST-MW20	S: 5/9/2011 14:15		
TB-01	Field QC/ Carol DiGuardia	L/G	VOA (28)	(HCL) (3)	TB-01	S: 5/9/2011 8:00		Trip Blank

Shipment for Case Complete? N	Sample(s) to be used for laboratory QC: ST-MW20	Additional Sampler Signature(s): <i>[Signature]</i>	Chain of Custody Seal Number:
Analysis Key: VOA = CLP TCL Volatiles	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Shipment Iced?

TR Number: 2-043013577-050911-0002

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Send Copy to: Sample Management Office, Attn: Heather Bauer, CSC, 15000 Conference Center Dr., Chantilly, VA 20151-3819; Phone 703/818-4200; Fax 703/818-4602

REGION COPY



**USEPA Contract Laboratory Program
Generic Chain of Custody**

Reference Case

Client No:

SDG No:

L

Date Shipped: 5/9/2011 Carrier Name: FedEx Airbill: 873583288332 Shipped to: USEPA Region 2 Lab 2890 Woodbridge Ave. Bldg. 209, MS-230 Edison NJ 08837 (732) 906-6886	Chain of Custody Record	Sampler Signature: <i>Carol DiGuardia</i>	For Lab Use Only Lab Contract No: _____ Unit Price: _____ Transfer To: _____ Lab Contract No: _____ Unit Price: _____
	Relinquished By (Date / Time)	Received By (Date / Time)	
	1 <i>Carol DiGuardia 5/9/11 18:30</i>	<i>Ship to lab via FedEx</i>	
	2		
	3		
4			

SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		FOR LAB USE ONLY Sample Condition On Receipt
EPA-MW21R-B	Ground Water/ Todd Jennings	L/G	Alk, NOs, (28), S- (28), TOC (28)	(H2SO4), (Ice Only), (NaOH, Zn. Acetate) (3)	EPA-MW21R-B	S: 5/9/2011	11:15	
ST-MW15	Ground Water/ Todd Jennings	L/G	Alk, NOs, (28), S- (28), TOC (28)	(H2SO4), (Ice Only), (NaOH, Zn. Acetate) (3)	ST-MW15	S: 5/9/2011	16:45	
ST-MW17	Ground Water/ Carol DiGuardia	L/G	Alk, NOs, (28), S- (28), TOC (28)	(H2SO4), (Ice Only), (NaOH, Zn. Acetate) (3)	ST-MW17	S: 5/9/2011	14:55	
ST-MW17A	Ground Water/ Carol DiGuardia	L/G	Alk, NOs, (28), S- (28), TOC (28)	(H2SO4), (Ice Only), (NaOH, Zn. Acetate) (3)	ST-MW17A	S: 5/9/2011	15:00	
ST-MW20	Ground Water/ Todd Jennings	L/G	Alk, NOs, (28), S- (28), TOC (28)	(H2SO4), (Ice Only), (NaOH, Zn. Acetate) (3)	ST-MW20	S: 5/9/2011	14:15	

Shipment for Case Complete? N	Sample(s) to be used for laboratory QC: ST-MW20	Additional Sampler Signature(s): <i>[Signature]</i>	Cooler Temperature Upon Receipt:	Chain of Custody Seal Number:
Analysis Key: Alk, NOs, = Alk., Nitrate, Sulfate, Chloride, S- = Sulfide, TOC = Total Organic Carbon	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Custody Seal Intact? ☐	Shipment Iced? ☐

TR Number: 2-043013577-050911-0001

LABORATORY COPY

PR provides preliminary results. Requests for preliminary results will increase analytical costs.

Send Copy to: Sample Management Office, Attn: Heather Bauer, CSC, 15000 Conference Center Dr., Chantilly, VA 20151-3819; Phone 703/818-4200; Fax 703/818-4602



**USEPA Contract Laboratory Program
Generic Chain of Custody**

Reference Case:

R

Client No:

Region: 2	Date Shipped: 5/9/2011	Chain of Custody Record	Sampler Signature: <i>Carol DiGuardia</i>	
Project Code:	Carrier Name: FedEx		Relinquished By (Date / Time)	Received By (Date / Time)
Account Code:	Airbill: 873583288332		1 <i>Carol DiGuardia</i> 5/9/11 18:30	Ship to Lab via FedEx
CERCLIS ID: NYD047650196	Shipped to: USEPA Region 2 Lab 2890 Woodbridge Ave. Bldg. 209, MS-230 Edison NJ 08837 (732) 906-6886		2	
Spill ID:			3	
Site Name/State: Stanton Cleaners/NY		4		
Project Leader: Carol DiGuardia				
Action:				
Sampling Co: ECC				

SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		QC Type
EPA-MW21R-B	Ground Water/ Todd Jennings	L/G	Alk, NOs, (28), S- (28), TOC (28)	(H2SO4), (Ice Only), (NaOH, Zn. Acetate) (3)	EPA-MW21R-B	S: 5/9/2011	11:15	--
ST-MW15	Ground Water/ Todd Jennings	L/G	Alk, NOs, (28), S- (28), TOC (28)	(H2SO4), (Ice Only), (NaOH, Zn. Acetate) (3)	ST-MW15	S: 5/9/2011	16:45	--
ST-MW17	Ground Water/ Carol DiGuardia	L/G	Alk, NOs, (28), S- (28), TOC (28)	(H2SO4), (Ice Only), (NaOH, Zn. Acetate) (3)	ST-MW17	S: 5/9/2011	14:55	--
ST-MW17A	Ground Water/ Carol DiGuardia	L/G	Alk, NOs, (28), S- (28), TOC (28)	(H2SO4), (Ice Only), (NaOH, Zn Acetate) (3)	ST-MW17A	S: 5/9/2011	15:00	Field Duplicate
ST-MW20	Ground Water/ Todd Jennings	L/G	Alk, NOs, (28), S- (28), TOC (28)	(H2SO4), (Ice Only), (NaOH, Zn Acetate) (3)	ST-MW20	S: 5/9/2011	14:15	--

Shipment for Case Complete? N	Sample(s) to be used for laboratory QC: ST-MW20	Additional Sampler Signature(s): <i>[Signature]</i>	Chain of Custody Seal Number:
Analysis Key: Alk, NOs, = Alk., Nitrate, Sulfate, Chloride, S- = Sulfide, TOC = Total Organic Carbon	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Shipment Iced? _____

TR Number: **2-043013577-050911-0001**

PR provides preliminary results. Requests for preliminary results will increase analytical costs.

Send Copy to: Sample Management Office, Attn: Heather Bauer, CSC, 15000 Conference Center Dr., Chantilly, VA 20151-3819; Phone 703/818-4200; Fax 703/818-4602

REGION COPY



CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 Fax (908) 789-8922
www.chemtech.net

CHEMTECH PROJECT NO.

QUOTE NO.

COC Number 082858

CLIENT INFORMATION

REPORT TO BE SENT TO:

COMPANY: ECC
ADDRESS: 1125 Rt. 22 West
CITY: Coldwater STATE: NJ ZIP: 08207
ATTENTION: Dave Miller
PHONE: (908) 595-1777 FAX: (908) 595-1776

CLIENT PROJECT INFORMATION

PROJECT NAME: Stanton Cleaners
PROJECT NO.: 5447.001 LOCATION: Great Neck NY
PROJECT MANAGER: Dave Miller
e-mail: dmiller@eccnet.net
PHONE: (732) 735-4642 FAX:

CLIENT BILLING INFORMATION

BILL TO: ECC PO#: 5447.001
ADDRESS: 1125 Rt. 22 West
CITY: Coldwater STATE: NJ ZIP: 08207
ATTENTION: Dave Miller PHONE: (732) 735-4642

ANALYSIS

DATA TURNAROUND INFORMATION

FAX: 10 DAYS
HARD COPY: 10 DAYS
EDD: 10 DAYS
PREAPPROVED TAT: ☐ YES ☒ NO
STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

☐ RESULTS ONLY ☒ USEPA CLP
☐ RESULTS + QC ☐ New York State ASP "B"
☐ New Jersey REDUCED ☐ New York State ASP "A"
☐ New Jersey CLP ☐ Other
☒ EDD FORMAT EXCEL CSV

PRESERVATIVES

COMMENTS

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE		SAMPLE COLLECTION		# OF BOTTLES	PRESERVATIVES									COMMENTS		
			COMP	GRAB	DATE	TIME		A										← Specify Preservatives A-HCl B-HNO ₃ C-H ₂ SO ₄ D-NaOH E-ICE F-Other	
								1	2	3	4	5	6	7	8	9			
1.	ST-mw17	AQ		X	5/9/11	14:55	2	X											
2.	ST-mw20	AQ		X	5/9/11	14:15	6	X											msl/msd
3.	ST-mw15	AQ		X	5/9/11	16:45	2	X											
4.	ST-mw17A	AQ		X	5/9/11	15:00	2	X											
5.	EPA-mw21R-B	AQ		X	5/9/11	11:15	2	X											
6.																			
7.	Group all samples from this client																		
8.	in same SDA																		
9.																			
10.																			

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER: 1. Carol O'Leary	DATE/TIME: 5/9/11 18:30	RECEIVED BY: 1. Ship via FedEx to Lab	Conditions of bottles or coolers at receipt: ☐ Compliant ☐ Non Compliant MeOH extraction requires an additional 4 oz jar for percent solid. Comments:	Cooler Temp. _____ Ice in Cooler?: _____
RELINQUISHED BY: 2.	DATE/TIME:	RECEIVED BY: 2.		
RELINQUISHED BY: 3.	DATE/TIME:	RECEIVED FOR LAB BY: 3.	Page 1 of 1	SHIPPED VIA: CLIENT: ☐ HAND DELIVERED ☒ OVERNIGHT CHEMTECH: ☐ PICKED UP ☐ OVERNIGHT Shipment Complete: ☐ YES ☒ NO

Organic Traffic Report & Chain of Custody Record

Case No.
DAS No:
SDG No:

L

Date Shipped: 5/10/2011 Carrier Name: FedEx Airbill: 873583288387 Shipped to: USEPA Region 2 Lab 2890 Woodbridge Ave. Bldg. 209, MS-230 Edison NJ 08837 (732) 906-6886	Chain of Custody Record		Sampler Signature: <i>Carol DiGuardia</i>		For Lab Use Only	
	Relinquished By	(Date / Time)	Received By	(Date / Time)	Lab Contract No: _____	
	<i>Carol DiGuardia</i>	5/10/2011 17:30	Fed Ex ship to lab		Unit Price: _____	
	2				Transfer To: _____	
	3				Lab Contract No: _____	
4				Unit Price: _____		

ORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	INORGANIC SAMPLE No.	FOR LAB USE ONLY Sample Condition On Receipt
EB-01	Field QC/ Carol DiGuardia	L/G	VOA (28)	(HCL) (3)	EB-01	S: 5/10/2011 7:45		
EPA-MW21R	Ground Water/ Carol DiGuardia	L/G	VOA (28)	(HCL) (3)	EPA-MW21R	S: 5/10/2011 10:45		
EPA-MW26	Ground Water/ Todd Jennings	L/G	VOA (28)	(HCL) (3)	EPA-MW26	S: 5/10/2011 15:15		
ST-MW14	Ground Water/ Carol DiGuardia	L/G	VOA (28)	(HCL) (3)	ST-MW14	S: 5/10/2011 13:35		
ST-MW19	Ground Water/ Todd Jennings	L/G	VOA (28)	(HCL) (3)	ST-MW19	S: 5/10/2011 13:15		
ST-MW19-B	Ground Water/ Todd Jennings	L/G	VOA (28)	(HCL) (3)	ST-MW19-B	S: 5/10/2011 10:15		
TB-02	Field QC/ Carol DiGuardia	L/G	VOA (28)	(HCL) (3)	TB-02	S: 5/10/2011 7:40		

See analysis key for complete list of parameters.

Shipment for Case Complete? ☒	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Cooler Temperature Upon Receipt:	Chain of Custody Seal Number:
Analysis Key:	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Custody Seal Intact? ☐	Shipment Iced? ☐
VOA = CLP TCL Volatiles				

TR Number: 2-043013577-051011-0002

PR provides preliminary results. Requests for preliminary results will increase analytical costs.
 Send Copy to: Sample Management Office, Attn: Heather Bauer, CSC, 15000 Conference Center Dr., Chantilly, VA 20151-3819; Phone 703/818-4200; Fax 703/818-4602

LABORATORY COPY



USEPA Contract Laboratory Program
Organic Traffic Report & Chain of Custody Record

Case No:

DAS No:

R

Region: 2	Date Shipped: 5/10/2011	Chain of Custody Record	Sampler Signature: <i>Carol DiGuardia</i>
Project Code:	Carrier Name: FedEx		Relinquished By (Date / Time)
Account Code:	Airbill: 873583288387	1 <i>Carol DiGuardia</i> 5/10/2011 12:36	<i>Fed ex ship to lab</i>
CERCLIS ID: NYD047650196	Shipped to: USEPA Region 2 Lab 2890 Woodbridge Ave. Bldg. 209, MS-230 Edison NJ 08837 (732) 906-6886	2	
Spill ID:		3	
Site Name/State: Stanton Cleaners/NY		4	
Project Leader: Carol DiGuardia			
Action:			
Sampling Co: ECC			

ORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No/ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		INORGANIC SAMPLE No.	QC Type
EB-01	Field QC/ Carol DiGuardia	L/G	VOA (28)	(HCL) (3)	EB-01	S: 5/10/2011	7:45		Rinsate
EPA-MW21R	Ground Water/ Carol DiGuardia	L/G	VOA (28)	(HCL) (3)	EPA-MW21R	S: 5/10/2011	10:45		--
EPA-MW26	Ground Water/ Todd Jennings	L/G	VOA (28)	(HCL) (3)	EPA-MW26	S: 5/10/2011	15:15		--
ST-MW14	Ground Water/ Carol DiGuardia	L/G	VOA (28)	(HCL) (3)	ST-MW14	S: 5/10/2011	13:35		--
ST-MW19	Ground Water/ Todd Jennings	L/G	VOA (28)	(HCL) (3)	ST-MW19	S: 5/10/2011	13:15		--
ST-MW19-B	Ground Water/ Todd Jennings	L/G	VOA (28)	(HCL) (3)	ST-MW19-B	S: 5/10/2011	10:15		--
TB-02	Field QC/ Carol DiGuardia	L/G	VOA (28)	(HCL) (3)	TB-02	S: 5/10/2011	7:40		Trip Blank

See analysis key for complete list of parameters.

Shipment for Case Complete? N	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s): <i>[Signature]</i>	Chain of Custody Seal Number:
Analysis Key: VOA = CLP TCL Volatiles	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Shipment Iced? _____

TR Number: 2-043013577-051011-0002

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REGION COPY



**USEPA Contract Laboratory Program
Generic Chain of Custody**

Reference Case

Client No:

SDG No:

L

Date Shipped: 5/10/2011 Carrier Name: FedEx Airbill: 873583288387 Shipped to: USEPA Region 2 Lab 2890 Woodbridge Ave. Bldg. 209, MS-230 Edison NJ 08837 (732) 906-6886	Chain of Custody Record	Sampler Signature: <i>Carol DiGuardia</i>	For Lab Use Only Lab Contract No: _____ Unit Price: _____ Transfer To: _____ Lab Contract No: _____ Unit Price: _____
	Relinquished By (Date / Time)	Received By (Date / Time)	
	1 <i>Carol DiGuardia</i> 5/10/2011 17:30		
	2		
	3		
4			

SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		FOR LAB USE ONLY Sample Condition On Receipt
EPA-MW21R	Ground Water/ Carol DiGuardia	L/G	Alk, NOs, (28), S- (28), TOC (28)	(H2SO4), (Ice Only), (NaOH, Zn. Acetate) (3)	EPA-MW21R	S: 5/10/2011	10:45	
EPA-MW26	Ground Water/ Todd Jennings	L/G	Alk, NOs, (28), S- (28), TOC (28)	(H2SO4), (Ice Only), (NaOH, Zn. Acetate) (3)	EPA-MW26	S: 5/10/2011	15:15	
ST-MW14	Ground Water/ Carol DiGuardia	L/G	Alk, NOs, (28), S- (28), TOC (28)	(H2SO4), (Ice Only), (NaOH, Zn. Acetate) (3)	ST-MW14	S: 5/10/2011	13:35	
ST-MW19	Ground Water/ Todd Jennings	L/G	Alk, NOs, (28), S- (28), TOC (28)	(H2SO4), (Ice Only), (NaOH, Zn. Acetate) (3)	ST-MW19	S: 5/10/2011	13:15	
ST-MW19-B	Ground Water/ Todd Jennings	L/G	Alk, NOs, (28), S- (28), TOC (28)	(H2SO4), (Ice Only), (NaOH, Zn. Acetate) (3)	ST-MW19-B	S: 5/10/2011	10:15	

See Analysis Key for complete list of parameters

Shipment for Case Complete? N	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s): <i>[Signature]</i>	Cooler Temperature Upon Receipt:	Chain of Custody Seal Number:
Analysis Key: Alk, NOs, = Alk., Nitrate, Sulfate, Chloride, S- = Sulfide, TOC = Total Organic Carbon	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Custody Seal Intact? ☐	Shipment Iced? ☐

TR Number: 2-043013577-051011-0001

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PR provides preliminary results. Requests for preliminary results will increase analytical costs.

Send Copy to: Sample Management Office, Attn: Heather Bauer, CSC, 15000 Conference Center Dr., Chantilly, VA 20151-3819; Phone 703/818-4200; Fax 703/818-4602

Region: 2 Project Code: Account Code: CERCLIS ID: NYD047650196 Spill ID: Site Name/State: Stanton Cleaners/NY Project Leader: Carol DiGuardia Action: Sampling Co: ECC	Date Shipped: 5/10/2011 Carrier Name: FedEx Airbill: 873583288387 Shipped to: USEPA Region 2 Lab 2890 Woodbridge Ave. Bldg. 209, MS-230 Edison NJ 08837 (732) 906-6886	Chain of Custody Record Relinquished By (Date / Time) <i>Carol DiGuardia 5/10/2011 17:30</i> 2 3 4	Sampler Signature: <i>Carol DiGuardia</i> Received By (Date / Time) <i>Fed ex ship to lab</i>
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SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		QC Type
EPA-MW21R	Ground Water/ Carol DiGuardia	L/G	Alk, NOs, (28), S- (28), TOC (28)	(H2SO4), (Ice Only), (NaOH, Zn. Acetate) (3)	EPA-MW21R	S: 5/10/2011	10:45	--
EPA-MW26	Ground Water/ Todd Jennings	L/G	Alk, NOs, (28), S- (28), TOC (28)	(H2SO4), (Ice Only), (NaOH, Zn. Acetate) (3)	EPA-MW26	S: 5/10/2011	15:15	--
ST-MW14	Ground Water/ Carol DiGuardia	L/G	Alk, NOs, (28), S- (28), TOC (28)	(H2SO4), (Ice Only), (NaOH, Zn. Acetate) (3)	ST-MW14	S: 5/10/2011	13:35	--
ST-MW19	Ground Water/ Todd Jennings	L/G	Alk, NOs, (28), S- (28), TOC (28)	(H2SO4), (Ice Only), (NaOH, Zn. Acetate) (3)	ST-MW19	S: 5/10/2011	13:15	--
ST-MW19-B	Ground Water/ Todd Jennings	L/G	Alk, NOs, (28), S- (28), TOC (28)	(H2SO4), (Ice Only), (NaOH, Zn. Acetate) (3)	ST-MW19-B	S: 5/10/2011	10:15	--

See analysis key for complete list of parameters

Shipment for Case Complete? N	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s): <i>[Signature]</i>	Chain of Custody Seal Number:
Analysis Key: Alk, NOs, = Alk., Nitrate, Sulfate, Chloride, S- = Sulfide, TOC = Total Organic Carbon	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Shipment Iced? _____

TR Number: 2-043013577-051011-0001

REGION COPY

PR provides preliminary results. Requests for preliminary results will increase analytical costs.

Send Copy to: Sample Management Office, Attn: Heather Bauer, CSC, 15000 Conference Center Dr., Chantilly, VA 20151-3819; Phone 703/818-4200; Fax 703/818-4602

CHEMTECH

CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 Fax (908) 789-8922
www.chemtech.net

CHEMTECH PROJECT NO.

QUOTE NO.

COC Number 082859

CLIENT INFORMATION

REPORT TO BE SENT TO:

COMPANY: ECC
ADDRESS: 1125 Route 24 West
CITY: Bridgewater STATE: NJ ZIP: 08807
ATTENTION: Dave Miller
PHONE: (908) 595-1777 FAX: (908) 595-1776

CLIENT PROJECT INFORMATION

PROJECT NAME: Station cleaners
PROJECT NO.: 5447.001 LOCATION: Great Neck NJ
PROJECT MANAGER: Dave Miller
e-mail: dmiller@ecc.net
PHONE: (732) 735-4642 FAX:

CLIENT BILLING INFORMATION

BILL TO: ECC PO#: 5447.001
ADDRESS: 1125 Rt 24 West
CITY: Bridgewater STATE: NJ ZIP: 08807
ATTENTION: Dave Miller PHONE: (732) 735-4642

ANALYSIS

DATA TURNAROUND INFORMATION

FAX: 10 DAYS *
HARD COPY: 10 DAYS *
EDD: 10 DAYS *
PREAPPROVED TAT: ☐ YES ☒ NO
STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

☐ RESULTS ONLY ☒ USEPA CLP
☐ RESULTS + QC ☐ New York State ASP "B"
☐ New Jersey REDUCED ☐ New York State ASP "A"
☐ New Jersey CLP ☐ Other
☒ EDD FORMAT

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE		SAMPLE COLLECTION		# OF BOTTLES	PRESERVATIVES									COMMENTS	
			COMP	GRAB	DATE	TIME		A	1	2	3	4	5	6	7	8	9	Specify Preservatives A-HCl B-HNO ₃ C-H ₂ SO ₄ D-NaOH E-ICE F-Other
1.	ST-mw19-B	AG		✓	5/10/2011	10:15	2	X										
2.	EPA-mw21R	AG		✓	5/10/2011	10:45	2	X										
3.	ST-mw19	AG		✓	5/10/2011	13:15	2	X										
4.	ST-mw14	AG		✓	5/10/2011	13:35	2	X										
5.	EPA-mw26	AG		✓	5/10/2011	15:15	2	X										
6.																		
7.																		
8.																		
9.																		
10.																		

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER: 1. Carl DeLuca	DATE/TIME: 17:30 5/10/2011	RECEIVED BY: 1. Fed Ex ship to lab	Conditions of bottles or coolers at receipt: ☐ Compliant ☐ Non Compliant MeOH extraction requires an additional 4 oz jar for percent solid. Comments:	Cooler Temp. _____ Ice in Cooler?: _____
RELINQUISHED BY: 2.	DATE/TIME:	RECEIVED BY: 2.		
RELINQUISHED BY: 3.	DATE/TIME:	RECEIVED FOR LAB BY: 3.	Page _____ of _____	SHIPPED VIA: CLIENT: ☐ HAND DELIVERED ☐ OVERNIGHT CHEMTECH: ☐ PICKED UP ☐ OVERNIGHT Shipment Complete: ☐ YES ☐ NO

Attachment D

Fed Ex airbills

From Please print and press hard.
Date 5/9/2011 **Sender's FedEx Account Number** 2374-4259-8
Sender's Name C. DiGuardia **Phone** (908) 399-3717
Company ECC
Address 110 Cutter Mill Road
City Great Neck **State** NY **ZIP** 11021
Your Internal Billing Reference Stanton Cleaners
To Recipient's Name John Birri **Phone** (732) 906-6886
Company US EPA Region 2 DESA Lab
Address 2890 Woodbridge Ave
City Edison **State** NJ **ZIP** 08837



From Please print and press hard.
Date 5/9/2011 **Sender's FedEx Account Number** 2374-4259-8
Sender's Name C. DiGuardia **Phone** (908) 399-3717
Company ECC
Address 110 Cutter Mill Rd.
City Great Neck **State** NY **ZIP** 11021
Your Internal Billing Reference Stanton Cleaners
To Recipient's Name Sample Custodian **Phone** ()
Company Chemtech
Address 284 Sheffield St.
City Mountainside **State** NJ **ZIP** 07092



4a Express Package Service * To most locations. Packages up to 150 lbs.
☒ **FedEx Priority Overnight** Next business morning. * Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
☐ **FedEx Standard Overnight** Next business afternoon. * Saturday Delivery NOT available.
☐ **FedEx First Overnight** Earliest next business morning delivery to select locations.
☐ **FedEx 2Day** Second business day. * Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
☐ **FedEx Express Saver** Third business day. * Saturday Delivery NOT available.
4b Express Freight Service ** To most locations. Packages over 150 lbs.
☐ **FedEx 1Day Freight** Next business day. * Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
☐ **FedEx 2Day Freight** Second business day. * Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
☐ **FedEx 3Day Freight** Third business day. * Saturday Delivery NOT available.
5 Packaging * Declared value limit \$500.
☐ **FedEx Envelope*** ☐ **FedEx Pak*** Includes FedEx Small Pak and FedEx Large Pak. ☐ **FedEx Box** ☐ **FedEx Tube** ☒ **Other**
6 Special Handling and Delivery Signature Options
☐ **SATURDAY Delivery** NOT available for FedEx Standard Overnight, FedEx Express Saver, or FedEx 3Day Freight.
☒ **No Signature Required** Package may be left without obtaining a signature for delivery.
☐ **Direct Signature** Someone at recipient's address may sign for delivery. Fee applies.
☐ **Indirect Signature** If no one is available at recipient's address, someone at a neighboring address may sign for delivery. For residential deliveries only. Fee applies.
Does this shipment contain dangerous goods?
☒ **No** ☐ **Yes** As per attached Shipper's Declaration. ☐ **Yes** Shipper's Declaration not required. ☐ **Dry Ice** Dry Ice, 9 UN 1845 x kg
Dangereous goods (including dry ice) cannot be shipped in FedEx packaging or placed in a FedEx Express Drop Box. ☐ **Cargo Aircraft Only**
7 Payment Bill to:
☒ **Sender** Enter FedEx Acct. No. or Credit Card No. below.
☐ **Recipient** ☐ **Third Party** ☐ **Credit Card** ☐ **Cash/Check**
Total Packages 2 **Total Weight** 40 lbs. **Total Declared Value** \$1.00
606

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4a Express Package Service * To most locations. Packages up to 150 lbs.
☒ **FedEx Priority Overnight** Next business morning. * Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
☐ **FedEx Standard Overnight** Next business afternoon. * Saturday Delivery NOT available.
☐ **FedEx First Overnight** Earliest next business morning delivery to select locations.
☐ **FedEx 2Day** Second business day. * Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
☐ **FedEx Express Saver** Third business day. * Saturday Delivery NOT available.
4b Express Freight Service ** To most locations. Packages over 150 lbs.
☐ **FedEx 1Day Freight** Next business day. * Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
☐ **FedEx 2Day Freight** Second business day. * Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
☐ **FedEx 3Day Freight** Third business day. * Saturday Delivery NOT available.
5 Packaging * Declared value limit \$500.
☐ **FedEx Envelope*** ☐ **FedEx Pak*** Includes FedEx Small Pak and FedEx Large Pak. ☐ **FedEx Box** ☐ **FedEx Tube** ☒ **Other**
6 Special Handling and Delivery Signature Options
☐ **SATURDAY Delivery** NOT available for FedEx Standard Overnight, FedEx Express Saver, or FedEx 3Day Freight.
☒ **No Signature Required** Package may be left without obtaining a signature for delivery.
☐ **Direct Signature** Someone at recipient's address may sign for delivery. Fee applies.
☐ **Indirect Signature** If no one is available at recipient's address, someone at a neighboring address may sign for delivery. For residential deliveries only. Fee applies.
Does this shipment contain dangerous goods?
☒ **No** ☐ **Yes** As per attached Shipper's Declaration. ☐ **Yes** Shipper's Declaration not required. ☐ **Dry Ice** Dry Ice, 9 UN 1845 x kg
Dangereous goods (including dry ice) cannot be shipped in FedEx packaging or placed in a FedEx Express Drop Box. ☐ **Cargo Aircraft Only**
7 Payment Bill to:
☒ **Sender** Enter FedEx Acct. No. or Credit Card No. below.
☐ **Recipient** ☐ **Third Party** ☐ **Credit Card** ☐ **Cash/Check**
Total Packages 1 **Total Weight** 9 lbs. **Total Declared Value** \$1.00
606

Your liability is limited to \$100 unless you declare a higher value. See back for details. By using this Airbill you agree to the service conditions on the back of this Airbill and in the current FedEx Service Guide, including terms that limit our liability.

RETAIN THIS COPY FOR YOUR RECORDS.

RETAIN THIS COPY FOR YOUR RECORDS.

From Please print and press hard.

Date 5/10/2011 Sender's FedEx Account Number 2374 4259-8

Sender's Name Carol DiGuardia Phone (908) 399-3717

Company ECC

Address 110 Cutter Mill Rd.

City Great Neck State NY ZIP 11021

Your Internal Billing Reference Stanton Cleaners

To Recipient's Name John Birri Phone (732) 906-6886

Company US EPA Region 2 DESA Lab

Address 2890 Woodbridge Ave

Address Bldg. 209, ms 230

City Edison State NJ ZIP 08837



Ship on the go at mobile.fedex.com
Tap into all our FedEx® shipping tools with FedEx® Mobile.

4a Express Package Service

- ☒ **FedEx Priority Overnight**
Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- ☐ **FedEx Standard Overnight**
Next business afternoon.* Saturday Delivery NOT available.
- ☐ **FedEx 2Day**
Second business day.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- ☐ **FedEx Express Saver**
Third business day.* Saturday Delivery NOT available.

4b Express Freight Service

- ☐ **FedEx 1Day Freight**
Next business day.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- ☐ **FedEx 2Day Freight**
Second business day.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- ☐ **FedEx 3Day Freight**
Third business day.* Saturday Delivery NOT available.

5 Packaging

- ☐ **FedEx Envelope***
- ☐ **FedEx Pak***
Includes FedEx Small Pak and FedEx Large Pak.
- ☐ **FedEx Box**
- ☐ **FedEx Tube**
- ☒ **Other**

6 Special Handling and Delivery Signature Options

- ☐ **SATURDAY Delivery**
NOT available for FedEx Standard Overnight, FedEx Express Saver, or FedEx 3Day Freight.
- ☐ **No Signature Required**
Package may be left without obtaining a signature for delivery.
- ☐ **Direct Signature**
Someone at recipient's address may sign for delivery. *Fee applies.*
- ☐ **Indirect Signature**
If no one is available at recipient's address, someone at a neighboring address may sign for delivery. For residential deliveries only. *Fee applies.*
- Does this shipment contain dangerous goods?**
- ☒ **No**
- ☐ **Yes**
As per attached Shipper's Declaration.
- ☐ **Yes**
Shipper's Declaration not required.
- ☐ **Dry Ice**
Dry Ice, 9 UN 1845 x kg
- ☐ **Cargo Aircraft Only**

7 Payment Bill to:

- ☒ **Sender**
Acct. No. in Section 1 will be billed.
- ☐ **Recipient**
- ☐ **Third Party**
- ☐ **Credit Card**
- ☐ **Cash/Check**
- Total Packages 2 Total Weight 10 lbs. Total Declared Value \$ 606

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From Please print and press hard.

Date 5/10/2011 Sender's FedEx Account Number 2374 4259-8

Sender's Name Carol DiGuardia Phone (908) 399-3717

Company ECC

Address 110 Cutter Mill Rd.

City Great Neck State NY ZIP 11021

Your Internal Billing Reference Stanton Cleaners

To Recipient's Name Sample Custodian Phone (908) 789-8900

Company Chemtech

Address 284 Sheffield St.

Address Mountainside

City Mountainside State NJ ZIP 07092

4a Express Package Service

- ☒ **FedEx Priority Overnight**
Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- ☐ **FedEx Standard Overnight**
Next business afternoon.* Saturday Delivery NOT available.
- ☐ **FedEx 2Day**
Second business day.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- ☐ **FedEx Express Saver**
Third business day.* Saturday Delivery NOT available.

4b Express Freight Service

- ☐ **FedEx 1Day Freight**
Next business day.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- ☐ **FedEx 2Day Freight**
Second business day.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- ☐ **FedEx 3Day Freight**
Third business day.* Saturday Delivery NOT available.

5 Packaging

- ☐ **FedEx Envelope***
- ☐ **FedEx Pak***
Includes FedEx Small Pak and FedEx Large Pak.
- ☐ **FedEx Box**
- ☐ **FedEx Tube**
- ☒ **Other**

6 Special Handling and Delivery Signature Options

- ☐ **SATURDAY Delivery**
NOT available for FedEx Standard Overnight, FedEx Express Saver, or FedEx 3Day Freight.
- ☐ **No Signature Required**
Package may be left without obtaining a signature for delivery.
- ☐ **Direct Signature**
Someone at recipient's address may sign for delivery. *Fee applies.*
- ☐ **Indirect Signature**
If no one is available at recipient's address, someone at a neighboring address may sign for delivery. For residential deliveries only. *Fee applies.*
- Does this shipment contain dangerous goods?**
- ☒ **No**
- ☐ **Yes**
As per attached Shipper's Declaration.
- ☐ **Yes**
Shipper's Declaration not required.
- ☐ **Dry Ice**
Dry Ice, 9 UN 1845 x kg
- ☐ **Cargo Aircraft Only**

7 Payment Bill to:

- ☒ **Sender**
Acct. No. in Section 1 will be billed.
- ☐ **Recipient**
- ☐ **Third Party**
- ☐ **Credit Card**
- ☐ **Cash/Check**
- Total Packages 1 Total Weight 9 lbs. Total Declared Value \$ 606

*Our liability is limited to \$100 unless you declare a higher value. See back for details. By using this Airbill you agree to the service conditions on the back of this Airbill and in the current FedEx Service Guide, including terms that limit our liability.



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Or let our pros pack for you with FedEx Office® Pack & Ship.

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Attachment E

Groundwater Monitoring logs

Figure 7-8 Field Groundwater Sampling Data Sheets

FIELD GROUND-WATER SAMPLING REPORT

DATE: 5-10-11 SITE: Stanton Cleaners PID READING at WELL HEAD (ppm): _____

PROJECT NUMBER: _____ WEATHER: _____

WELL NUMBER _____ DEPTH TO WATER (ft): _____

EPA-MW-21R

TOTAL DEPTH (ft): _____ WELL DIAMETER (inches): _____

PURGING

CASING VOLUME CALCULATION: _____ ft of water in casing X _____ gallons/foot = _____ total gallons/casing volume

Equipment Used: Dedicated Bladder Pump Nondedicated Bladder Pump Bailer Other _____

Time (24 hr)	Amount Purged (gals)	Flow Rate (ml/min)	pH	Temp (C)	Conductivity (mmhos/cm)	Turbidity (NTUs)	ORP (mV)	D.O. (mg/L)	Depth to Water (ft TOC)
0835	0	300 ml/min	7.31	16.42	0.482	303.0	100	14.14	64.53
0840	.25	300 ml/min	7.77	19.29	0.486	338.0	100	13.61	63.49
0845	1	350 ml/min	7.88	21.00	0.498	354.0	97	13.41	63.49
0850	2	350 ml/min	7.89	21.03	0.496	352.0	97	14.12	63.49
0855	2.5	350 ml/min	7.88	20.78	0.493	334.0	98	14.32	63.50
0900	3	350 ml/min	7.87	20.78	0.492	598.0	98	14.08	63.51
0905	3.5	350 ml/min	7.87	20.78	0.498	572.0	98	14.16	63.50
0910	4.0	375 ml/min	7.87	20.82	0.487	567.0	98	14.33	63.49
0915	4.5	375 ml/min	7.87	20.77	0.479	612.0	96	14.33	63.49
0920	5.0	450	7.87	20.28	0.484	406.0	98	14.75	64.50
0925	5.5	450	7.86	21.20	0.481	475.0	98	14.99	64.45
0930	6.0	450	7.88	20.79	0.474	511.0	96	15.03	64.45
0935	6.5	450	7.87	20.70	0.442	477.0	95	14.76	64.45
0940	7.0	450	7.88	20.67	0.456	522.0	92	14.66	64.45

Continued on back (circle one) yes / no

SAMPLING

Equipment Used: Same as above Other _____

Sample Time (24 hr)	Total Purged (gals)	pH	Temp (C)	Conductivity (mmhos/cm)	Turbidity (NTUs)	ORP (mV)	D.O. (mg/L)	Depth to Water (ft TOC)	Obs.

FINAL DO READING USING HACH METER (mg/L): _____ FERROUS IRON (mg/L): _____

FINAL DEPTH TO WATER (ft TOC): _____ TIME FINAL DEPTH TAKEN: _____

SAMPLE ID: EPA-MW21R SAMPLE ID FOR QC: 1 liter 500ml 500ml

PARAMETERS REQUESTED FOR ANALYSIS: VOCs, MEE, Chloride, Sulfate, Nitrate, Sulfide, TOC,

VOC pH: _____ IDW TOTAL: _____ DO METER MODEL No.: _____ ORP METER MODEL No.: _____

DO CHECK IN AIR: Before: _____ After: _____

CHECKED FLOW THROUGH CELL FOR LEAKS: ☐ COMMENTS: _____

NAME

SIGNATURE

DATE

PREPARED: _____

REVIEWED: _____

COMMENTS

Well stabilized for all parameters but turbidity was still over 50. Sample was taken at 10:45 because turbidity kept fluctuating and generator was running out of gas.

Figure 7-8 Field Groundwater Sampling Data Sheets

FIELD GROUND-WATER SAMPLING REPORT

DATE: 5-10-11 SITE: Stanton Cleaners PID READING at WELL HEAD (ppm): _____

PROJECT NUMBER: _____ WEATHER: _____

WELL NUMBER _____ DEPTH TO WATER (ft): 57.08

EPA-MW-26

TOTAL DEPTH (ft): _____ WELL DIAMETER (inches): _____

PURGING

CASING VOLUME CALCULATION: _____ ft of water in casing X _____ gallons/foot = _____ total gallons/casing volume

Equipment Used: Dedicated Bladder Pump Nondedicated Bladder Pump Bailer Other _____

Time (24 hr)	Amount Purged (gals)	Flow Rate (ml/min)	pH	Temp (C)	Conductivity (mmhos/cm)	Turbidity (NTUs)	ORP (mV)	D.O. (mg/L)	Depth to Water (ft TOC)
14:47	Initial	450 ml/min	7.22	16.6	0.713	247	167	8.16	57.08
14:52	0.5	350 ml/min	7.19	16.7	0.867	320.0	149	6.96	57.05
14:57	1.0	350 ml/min	7.06	17.5	0.844	210.0	142	6.72	57.05
15:02	1.5	350 ml/min	6.98	18.4	0.823	121.0	141	6.72	57.06
15:07	2.0	350 ml/min	7.04	18.6	0.824	109.0	139	6.72	57.06
15:12	2.5	350 ml/min	7.10	18.8	0.830	117.0	139	6.55	57.05
15:17	3.0	350 ml/min	7.18	19.0	0.838	138.0	139	6.42	57.06
15:22	3.5	350 ml/min	7.27	19.0	0.837	156.0	140	6.38	57.05
15:27	4.0	350 ml/min	7.40	19.1	0.834	164.0	141	6.44	57.04
15:32	4.5	350 ml/min	7.44	19.1	0.833	148.0	142	6.48	57.04
15:37	5.0	350 ml/min	7.54	19.4	0.828	148.0	142	6.47	57.03

Continued on back (circle one) yes / no

SAMPLING

Equipment Used: Same as above Other _____

Sample Time (24 hr)	Total Purged (gals)	pH	Temp (C)	Conductivity (mmhos/cm)	Turbidity (NTUs)	ORP (mV)	D.O. (mg/L)	Depth to Water (ft TOC)	Obs.

FINAL DO READING USING HACH METER (mg/L): _____ FERROUS IRON (mg/L): _____

FINAL DEPTH TO WATER (ft TOC): _____ TIME FINAL DEPTH TAKEN: _____

SAMPLE ID: _____ SAMPLE ID FOR QC: 1 Liter 500ml 500ml

PARAMETERS REQUESTED FOR ANALYSIS: VOC's MEE Chloride Sulfate Nitrate Sulfide TOC
(H2S) (H2S) Alkalinity Impres. NO3 Zn As H2SO4

VOC pH: _____ IDW TOTAL: _____ DO METER MODEL No.: _____ ORP METER MODEL No.: _____

DO CHECK IN AIR: Before: _____ After: _____

CHECKED FLOW THROUGH CELL FOR LEAKS: ☐ COMMENTS: _____

NAME

SIGNATURE

DATE

PREPARED: _____

REVIEWED: _____

Figure 7-8 Field Groundwater Sampling Data Sheets

FIELD GROUND-WATER SAMPLING REPORT

LOC Screen
SPID Enter
Shift Rset
Shift E yter
Reset

DATE: 5-12-11 SITE: Stanton Cleaners SPID READING at WELL HEAD (ppm): _____

PROJECT NUMBER: _____ WEATHER: _____

WELL NUMBER _____ DEPTH TO WATER (ft): 52.12

ST-MW-14

TOTAL DEPTH (ft): _____ WELL DIAMETER (inches): 2"

PURGING

CASING VOLUME CALCULATION: _____ ft of water in casing X _____ gallons/foot = _____ total gallons/casing volume

Equipment Used: Dedicated Bladder Pump Nondedicated Bladder Pump Bailer Other _____

Time (24 hr)	Amount Purged (gals)	Flow Rate (ml/min)	pH	Temp (C)	Conductivity (mmhos/cm)	Turbidity (NTUs)	ORP (mV)	D.O. (mg/L)	Depth to Water (ft TOC)
11:25	Final	375	6.96	14.99	0.276	264	165	8.80	52.12
11:30			7.91	15.09	0.277	842	195	8.42	
12:08			6.07	15.07	0.267	400	184	11.74	
12:14	400	400	6.02	15.33	0.266	230	165	8.90	52.34
12:19	5.0	500	6.20	15.32	0.265	202	149	8.63	52.48
12:24	6.0	500	6.38	15.32	0.263	115.0	140	8.34	52.63
12:29	7.0	450	6.48	15.36	0.262	106.0	135	8.22	52.85
12:34			6.52	15.45	0.262	91.1	132	8.27	
12:35	8.0		5.86	16.78	0.277	150	178	8.64	
13:00	9.00	500	5.90	18.88	0.283	117.0	173	8.53	52.20
13:05			6.50		0.291	133.0	165	9.36	
13:20	9.5	450	5.92	15.82	0.279	127.0	167	9.38	52.62
13:25	10.0		5.84	16.39	0.282	55.0	167	8.53	52.38
13:30	11	450	5.84	16.30	0.281	34.3	167	8.38	

Continued on back (circle one) yes / no

SAMPLING

Equipment Used: Same as above Other _____

Sample Time (24 hr)	Total Purged (gals)	pH	Temp (C)	Conductivity (mmhos/cm)	Turbidity (NTUs)	ORP (mV)	D.O. (mg/L)	Depth to Water (ft TOC)	Obs.
13:25									

FINAL DO READING USING HACH METER (mg/L): _____ FERROUS IRON (mg/L): _____

FINAL DEPTH TO WATER (ft TOC): _____ TIME FINAL DEPTH TAKEN: _____

SAMPLE ID: _____ SAMPLE ID FOR QC: 1 liter 500ml 500ml

PARAMETERS REQUESTED FOR ANALYSIS: VOC, MEE, Chloride, Sulfate, Nitrate, Sulfide, TOC

VOC pH: _____ IDW TOTAL: _____ DO METER MODEL No.: _____ ORP METER MODEL No.: _____

DO CHECK IN AIR: Before: _____ After: _____

CHECKED FLOW THROUGH CELL FOR LEAKS: ☐ COMMENTS: _____

NAME

SIGNATURE

DATE

PREPARED: _____

REVIEWED: _____

Comments: Four ground faults occurred in control box but parameters stabilized by 13:30 and sample was taken at 13:35.

Figure 7-8 Field Groundwater Sampling Data Sheets

FIELD GROUND-WATER SAMPLING REPORT

DATE: 5-9-11 SITE: _____ PID READING at WELL HEAD (ppm): _____

PROJECT NUMBER: _____ WEATHER: _____

WELL NUMBER _____ DEPTH TO WATER (ft): 73.21

ST-MW-15

TOTAL DEPTH (ft): _____ WELL DIAMETER (inches): 2

PURGING

CASING VOLUME CALCULATION: _____ ft of water in casing X _____ gallons/foot = _____ total gallons/casing volume

Equipment Used: Dedicated Bladder Pump _____ Nondedicated Bladder Pump _____ Bailer _____ Other _____

Time (24 hr)	Amount Purged (gals)	Flow Rate (ml/min)	pH	Temp (C)	Conductivity (mmhos/cm)	Turbidity (NTUs)	ORP (mV)	D.O. (mg/L)	Depth to Water (ft TOC)
15:45	Initial	150 ml/min	6.65	15.6	0.474	22.7	176	4.77	73.21
15:50	0.5		6.61	15.7	0.471	20.5	152	3.75	
15:55	2.0		6.64	17.0	0.493	118.0	144	5.28	
16:00	3.0	300 ml/min	6.68	17.6	0.546	-5	137	5.56	
16:05	5.0		6.70	17.5	0.647	-5	136	5.35	
16:10	6.0		6.74	18.5	0.638	256.0	122	6.79	71.94
16:15	7.0		6.75	18.6	0.645	245	123	5.98	
16:20	9.0	480	6.75	16.7	0.610	290	132	6.13	
16:25	10.0		6.60	15.5	0.687	167	145	5.52	
16:30	12.0		6.76	15.5	0.700	58.7	151	5.61	
16:35	15.0		6.89	15.5	0.703	42.6	156	5.27	
16:40	17.5		6.92	15.4	0.698	45.5	155	5.09	
16:45	20.0		6.89	15.5	0.699	53.5	157	5.02	

Continued on back (circle one) yes / no

SAMPLING

Equipment Used: Same as above _____ Other _____

Sample Time (24 hr)	Total Purged (gals)	pH	Temp (C)	Conductivity (mmhos/cm)	Turbidity (NTUs)	ORP (mV)	D.O. (mg/L)	Depth to Water (ft TOC)	Obs.

FINAL DO READING USING HACH METER (mg/L): _____ FERROUS IRON (mg/L): _____

FINAL DEPTH TO WATER (ft TOC): _____ TIME FINAL DEPTH TAKEN: _____

SAMPLE ID: _____ SAMPLE ID FOR QC: 1 liter 500ml 500ml

PARAMETERS REQUESTED FOR ANALYSIS: VOC, MEE, Chloride, Sulfate, Nitrate, Sulfide, TOC
(GC) (HPLC) Alkalinity Amphes. Nach 2nd Acid #2504

VOC pH: _____ IDW TOTAL: _____ DO METER MODEL No.: _____ ORP METER MODEL No.: _____

DO CHECK IN AIR: Before: _____ After: _____

CHECKED FLOW THROUGH CELL FOR LEAKS: ☐ COMMENTS: _____

NAME

SIGNATURE

DATE

PREPARED: _____

REVIEWED: _____

Figure 7-8 Field Groundwater Sampling Data Sheets

220
150
370

FIELD GROUND-WATER SAMPLING REPORT

DATE: 5/9/2011 SITE: S.C. PID READING at WELL HEAD (ppm): 2

PROJECT NUMBER: _____ WEATHER: _____

WELL NUMBER

DEPTH TO WATER (ft): 68.57

ST-mw 17

TOTAL DEPTH (ft): 140 ft WELL DIAMETER (inches): _____

PURGING

CASING VOLUME CALCULATION: _____ ft of water in casing X _____ gallons/foot = _____ total gallons/casing volume

Equipment Used: Dedicated Bladder Pump Nondedicated Bladder Pump Bailor Other _____

Time (24 hr)	Amount Purged (gals)	Flow Rate (ml/min)	pH	Temp (C)	Conductivity (mmhos/cm)	Turbidity (NTUs)	ORP (mV)	D.O. (mg/L)	Depth to Water (ft TOC)
13:12	0	360	6.13	15.50	0.359	605	176	4.99	68.63
13:17	0.5	500	5.78	15.80	0.363	685.0	174	7.69	68.74
13:22	1	500	5.76	16.89	0.375	5.0	144	7.41	69.19
13:27	2	500	5.80	17.93	0.384	505	152	8.02	69.09
13:32	3	500	5.93	17.76	0.381	559	152	8.10	69.09
13:37	4	500	6.11	17.85	0.381	613	149	7.89	68.90
13:42	5	500	6.21	17.81	0.380	597	145	7.77	68.75
13:47	6	400	6.30	17.56	0.379	543	136	7.80	68.79
13:52	7	400	6.35	18.10	0.381	488	134	7.84	68.82
13:57	8	400	6.39	18.28	0.381	435	132	7.81	68.82
14:02	8.5	400	6.38	18.52	0.381	348	132	8.00	68.85
14:07	9	400	6.37	18.34	0.374	313	133	8.00	68.89
14:12	10	400	6.38	18.46	0.378	279	133	7.92	68.92
14:17	11	400	6.35	18.31	0.375	219	135	8.10	68.92

Continued on back (circle one) yes / no

SAMPLING

Equipment Used: Same as above Other _____

Sample Time (24 hr)	Total Purged (gals)	pH	Temp (C)	Conductivity (mmhos/cm)	Turbidity (NTUs)	ORP (mV)	D.O. (mg/L)	Depth to Water (ft TOC)	Obs.
14:55									

FINAL DO READING USING HACH METER (mg/L): _____ FERROUS IRON (mg/L): _____

FINAL DEPTH TO WATER (ft TOC): _____ TIME FINAL DEPTH TAKEN: _____

SAMPLE ID: _____ SAMPLE ID FOR QC: 1 liter 500ml 500mlPARAMETERS REQUESTED FOR ANALYSIS: VOC³ MEE² Chloride Sulfate Nitrate Sulfide TOC
(1A) (1C) Alkalinity-Inpres. NaOH 2N Acetic H2SO4

VOC pH: _____ IDW TOTAL: _____ DO METER MODEL No.: _____ ORP METER MODEL No.: _____

DO CHECK IN AIR: Before: _____ After: _____

CHECKED FLOW THROUGH CELL FOR LEAKS: ☐ COMMENTS: _____

NAME

SIGNATURE

DATE

PREPARED: _____

REVIEWED: _____

WELL NUMBER

ST-mw-67

[illegible]

COMMENTS

~~518-722-3742~~
~~518-361-4438~~ Dan J

Figure 7-8 Field Groundwater Sampling Data Sheets

FIELD GROUND-WATER SAMPLING REPORT

DATE: 5-10-11 SITE: _____ PID READING at WELL HEAD (ppm): _____

PROJECT NUMBER: _____ WEATHER: _____

WELL NUMBER _____ DEPTH TO WATER (ft): 66.94

ST-MW-19

TOTAL DEPTH (ft): _____ WELL DIAMETER (inches): _____

PURGING

CASING VOLUME CALCULATION: _____ ft of water in casing X _____ gallons/foot = _____ total gallons/casing volume

Equipment Used: Dedicated Bladder Pump Nondedicated Bladder Pump Bailer Other Sampled @ 12:15

Time (24 hr)	Amount Purged (gals)	Flow Rate (ml/min)	pH	Temp (C)	Conductivity (mmhos/cm)	Turbidity (NTUs)	ORP (mV)	D.O. (mg/L)	Depth to Water (ft TOC)
11:58	Initial	600 ml/min	7.1	15.8	0.623	349	168	4.74	65.91
12:03	1.5	400 ml/min	6.92	16.6	0.625	478.0	166	3.97	65.57
12:08	2.5	400 ml/min	6.93	17.4	0.629	371.0	161	3.75	65.34
12:13	3	400 ml/min	6.86	17.8	0.628	301.0	146	3.60	65.33
12:18	3.5	400 ml/min	6.89	18.3	0.632	257.0	131	3.48	65.25
12:23	4.5	400 ml/min	6.93	18.5	0.637	424.0	129	3.43	65.26
12:28	5	400 ml/min	6.93	18.8	0.638	523.0	133	3.43	65.35
12:33	6	400 ml/min	6.94	18.8	0.639	527.0	139	3.43	65.32
12:38	6.5	400 ml/min	6.94	18.7	0.640	447.0	141	3.41	65.39
12:43	7	400 ml/min	6.94	18.7	0.639	316.0	144	3.44	65.42
12:48	7.5	400 ml/min	6.94	18.7	0.639	273.0	146	3.48	65.42
12:53	8	400 ml/min	6.93	18.7	0.635	223.0	145	3.49	65.44
12:58	9	400 ml/min	6.93	18.7	0.635	179.0	145	3.64	65.45
13:03	10	400	6.93	18.6	0.633	145	146	3.62	65.94
13:08	Continued on back (circle one) yes / no								3.67

13:13 11
SAMPLING

Equipment Used: Same as above Other _____

Sample Time (24 hr)	Total Purged (gals)	pH	Temp (C)	Conductivity (mmhos/cm)	Turbidity (NTUs)	ORP (mV)	D.O. (mg/L)	Depth to Water (ft TOC)	Obs.

FINAL DO READING USING HACH METER (mg/L): _____ FERROUS IRON (mg/L): _____

FINAL DEPTH TO WATER (ft TOC): _____ TIME FINAL DEPTH TAKEN: _____

SAMPLE ID: _____ SAMPLE ID FOR QC: 1 liter 500ml 500ml

PARAMETERS REQUESTED FOR ANALYSIS: VOC's MEE's Chloride Sulfate Nitrate Sulfide TOC

VOC pH: _____ IDW TOTAL: _____ DO METER MODEL No.: _____ ORP METER MODEL No.: _____

DO CHECK IN AIR: Before: _____ After: _____

CHECKED FLOW THROUGH CELL FOR LEAKS: ☐ COMMENTS: _____

NAME

SIGNATURE

DATE

PREPARED: _____

REVIEWED: _____

Figure 7-8 Field Groundwater Sampling Data Sheets

FIELD GROUND-WATER SAMPLING REPORT

DATE: 5/9/2011 SITE: Stanton Cleaners S PID READING at WELL HEAD (ppm): _____PROJECT NUMBER: _____ WEATHER: sunny 69°WELL NUMBER _____ DEPTH TO WATER (ft): 70.22ST-mw20TOTAL DEPTH (ft): 215 ft WELL DIAMETER (inches): _____

PURGING

CASING VOLUME CALCULATION: _____ ft of water in casing X _____ gallons/foot = _____ total gallons/casing volume

Equipment Used: Dedicated Bladder Pump Nondedicated Bladder Pump Bailer Other _____

Time (24 hr)	Amount Purged (gals)	Flow Rate (ml/min)	pH	Temp (C)	Conductivity (mmhos/cm)	Turbidity (NTUs)	ORP (mV)	D.O. (mg/L)	Depth to Water (ft TOC)
<u>13:25</u>	<u>2.0</u>	<u>350 ml/min</u>	<u>6.07</u>	<u>14.1</u>	<u>0.530</u>	<u>>999</u>	<u>165</u>	<u>8.33</u>	<u>70.33</u>
<u>13:30</u>	<u>4.0</u>	<u>375 ml/min</u>	<u>6.22</u>	<u>14.7</u>	<u>0.521</u>	<u>—</u>	<u>138</u>	<u>7.85</u>	<u>70.38</u>
<u>13:35</u>	<u>5.5</u>	<u>375 ml/min</u>	<u>6.30</u>	<u>14.9</u>	<u>0.519</u>	<u>865.0</u>	<u>137</u>	<u>7.61</u>	<u>70.33</u>
<u>13:40</u>	<u>6.5</u>	<u>375 ml/min</u>	<u>6.34</u>	<u>14.8</u>	<u>0.519</u>	<u>814.0</u>	<u>130</u>	<u>7.58</u>	<u>70.32</u>
<u>13:45</u>	<u>7.5</u>	<u>375 ml/min</u>	<u>6.34</u>	<u>14.8</u>	<u>0.519</u>	<u>530.0</u>	<u>130</u>	<u>7.59</u>	<u>70.32</u>
<u>13:50</u>	<u>8.0</u>	<u>375 ml/min</u>	<u>6.36</u>	<u>14.9</u>	<u>0.518</u>	<u>344.0</u>	<u>130</u>	<u>7.52</u>	<u>70.32</u>
<u>13:55</u>	<u>8.5</u>	<u>375 ml/min</u>	<u>6.36</u>	<u>14.9</u>	<u>0.519</u>	<u>246.0</u>	<u>131</u>	<u>7.48</u>	<u>70.35</u>
<u>14:00</u>	<u>9.0</u>	<u>375 ml/min</u>	<u>6.35</u>	<u>14.9</u>	<u>0.519</u>	<u>173.0</u>	<u>130</u>	<u>7.46</u>	<u>70.32</u>
<u>14:05</u>	<u>9.5</u>	<u>375 ml/min</u>	<u>6.35</u>	<u>15.0</u>	<u>0.519</u>	<u>147.0</u>	<u>133</u>	<u>7.42</u>	<u>70.33</u>
<u>14:10</u>	<u>10.0</u>	<u>375 ml/min</u>	<u>6.35</u>	<u>14.9</u>	<u>0.520</u>	<u>120.0</u>	<u>133</u>	<u>7.41</u>	<u>70.32</u>
<u>14:15</u>	<u>10.5</u>	<u>375 ml/min</u>	<u>6.35</u>	<u>14.9</u>	<u>0.520</u>	<u>101.0</u>	<u>138</u>	<u>7.40</u>	<u>70.31</u>

Continued on back (circle one) yes / no

SAMPLING

Equipment Used: Same as above Other _____

Sample Time (24 hr)	Total Purged (gals)	pH	Temp (C)	Conductivity (mmhos/cm)	Turbidity (NTUs)	ORP (mV)	D.O. (mg/L)	Depth to Water (ft TOC)	Obs.

FINAL DO READING USING HACH METER (mg/L): _____ FERROUS IRON (mg/L): _____

FINAL DEPTH TO WATER (ft TOC): _____ TIME FINAL DEPTH TAKEN: _____

SAMPLE ID: _____

SAMPLE ID FOR QC: _____

PARAMETERS REQUESTED FOR ANALYSIS: VOC, MEE, Chloride, Sulfate, Nitrate, Sulfide, TOC

VOC pH: _____ IDW TOTAL: _____ DO METER MODEL No.: _____ ORP METER MODEL No.: _____

DO CHECK IN AIR: Before: _____ After: _____

CHECKED FLOW THROUGH CELL FOR LEAKS: ☐ COMMENTS: _____

NAME

SIGNATURE

DATE

PREPARED: _____

REVIEWED: _____

Attachment F

Water Quality Parameters- Bailer Sampled Wells

Stanton Cleaners Groundwater Contamination Site
Annual Monitoring Well Sampling Event
5/9-5/11/2011
Bailer Sampled Wells

Monitoring Well/ Sample ID	Date	pH (s.u.)	Conductivity (mmhos/cm)	Turbidity (NTUs)	Dissolved Oxygen (DO) (mg/l)	Temperature (deg. C.)	Reduction Potential (ORP)(mV)	Depth to Water (ft. TOC)
EPA-MW21R-B	5/9/2011	6.54	0.723	N/A*	N/A*	15.46	160	64.38
ST-MW19-B	5/10/2011	6.3	0.733	169.8	10.33	15.6	171	64.93

Notes:

Three volumes of water bailed from well prior to sampling. Parameters measured before sampling.

N/A- Data not available

* Horiba would not calibrate for turbidity and DO 5/9/2011.

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Appendix B

Laboratory Data Packages

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