

# Monthly Operations and Monitoring Report

## July 2005

*Site:*

Stanton Cleaners Area Groundwater Contamination Site Great Neck, New York

*Prepared for:*

Environmental Chemical Corporation 1293 Broad Street, Suite  
200 Bloomfield, New Jersey 07003

*Prepared by:*

Earth Tech, Inc.  
7870 Villa Park Drive, Suite 400  
Richmond, Virginia 23228

*August 31, 2005*

ET Project No. 70536.02.01.02

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Earth Tech, Inc.  
7870 Villa Park Drive, Suite 400  
Richmond, Virginia 23228

*Author:* James Kearns

*August 31, 2005*

*Title:* Environmental Scientist

ET Project No. 70536.02.01.02

*Date:* August 31, 2005

*Reviewer:* \_\_\_\_\_

*Title:* \_\_\_\_\_

*Date:* \_\_\_\_\_

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## **1.0 INTRODUCTION**

This Monthly Operations and Monitoring Report, July 2005 (Monthly Report) has been prepared by Earth Tech, Inc., as a subcontractor to Environmental Chemical Corporation (ECC), under Contract No.5442-001-001.

The Stanton Cleaners Area Groundwater Contamination (Stanton) site is located at 110 Cutter Mill Road in Great Neck, Nassau County, New York. The Stanton Cleaner Property (SCP) is approximately ¼ acre in size and includes a two-story building in which a dry-cleaning business operates and an adjacent one-story boiler/storage building as well as a two-story treatment building. The site is bordered by an indoor tennis facility, a synagogue and school facility.

Improper handling and disposal of spent dry cleaning solvents, including Tetrachloroethylene (PCE), resulted in the release of hazardous substances at the site. PCE migrated from the site's 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 PCE-contaminated soil was removed from behind the Stanton Cleaners property.

In 1989, a groundwater extraction and treatment system was installed by the original Site operator to address groundwater contamination which resulted from improper disposal of spent PCE behind the SCP building. This system is not currently operational.

In 1998, the New York State Department of Environmental Conservation (NYSDEC) funded the construction of a new air stripper treatment system for the WAGNN water supply wells, which are impacted by contamination from the Site. This treatment system is currently in operation. In October 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 ground water treatment (GWT) system on the SCP. Both the SVE and GWT systems are housed in the treatment building that was constructed on the SCP. The SVE 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 through the Site soils. Both systems are currently operating at the Site. The collected VOC-contaminated vapors and groundwater from both systems are treated through separate granular activated carbon (GAC) systems.

The site is presently under the jurisdiction of the Remedial Branch of the USEPA, Region II; USACE provides oversight to USEPA for the remedial action and the long-term remedial action programs. ECC provides oversight to the USACE to perform long-term remediation actions. Earth Tech, as a subcontractor to ECC, provides support on the following tasks as described in the Work Plan:

- Operation and maintenance (O&M) of the GWTS and SVE, including sampling and reporting;
- Sampling of monitoring wells associated with the site in order to track the migration of the contaminant plume, along with reporting.

- Sampling of indoor air quality of buildings adjacent to the site in order to identify all the adjacent buildings being impacted by site related contaminants and the effectiveness of the remedial actions being instituted at the site.

All work under this contract is performed in accordance with the following documents:

- Work Plan for Long-Term Remedial Action Support;
- Site-Specific Health and Safety Plan (HASP), dated July 23, 2001 and
- Sampling Quality Assurance Project Plan (SQAPP) dated August 22, 2000.

As required by the Scope of Work for this project, monthly summary reports are prepared to document and summarize the activities taking place. These reports provide a concise description of work performed during the reporting period and include pertinent deliverables as appendices. This monthly summary report covers the period between July 1 and July 31, 2005.

## **2.0 SUMMARY OF ACTIVITIES DURING JULY 2005**

The following list summarizes activities performed and milestone dates under this contract during the reporting period, July 2005:

- July 7– Weekly O&M Inspection
- July 7 – Monthly water level measurements
- July 7- Bi-weekly system air monitoring not performed as REAC was performing system air sampling
- July 12- Monthly P&T system sampling
- July 25 – Bi-weekly system air monitoring
- July 25 – Weekly O&M Inspection
- July 27 – Quarterly Indoor Air Quality Sampling

Details of system shutdowns and alarms during the month of July 2005 are discussed in section 3.1. Daily Quality Control Reports (DQCRs), which include projected work for the following two weeks, are completed for each day of site activities. Copies of these reports are included as Appendix A.

## **3.0 GROUNDWATER TREATMENT SYSTEM ACTIVITIES**

### **3.1 Operation and Maintenance**

The GWTS treated and discharged 2,668,422.6 gallons during the month of July 2005. The system was operational (recovery well pumps running) for approximately 740 of the 744 hours during the month, for an average operating flow of 60.1 gallons per minute (gpm). The system has treated a total of 100,856,696.4 gallons since the plant startup in November 2001.

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There are currently two recovery wells pumping water into the system (EPA-EXT-02 and EPA-EXT-4R). EPA-EXT-02 is located in the triangle, the corner of New Cutter Mill Road and Mirrielees Road. Extraction well MW-24 was also pumping from the triangle location until it was turned off and April 20, 2005. Extraction well EPA-EXT-4R was activated on April 20, 2005. This new extraction well is located in the parking lot directly in front of the Stanton Dry Cleaners building. The decision to turn off extraction well MW-24 and replace it with EPA-EXT-4R was made by the USEPA.

The facility is equipped with a remote monitoring and control system that was accessed a minimum of three times per week, by the lead engineer, during the reporting period to ensure proper system operation and notify response personnel if a problem or abnormal condition was observed. The system also provides remote notification of alarm conditions via automatic e-mail and text messaging.

The Treatment System Operation and Maintenance Checklist were completed during each O&M inspection event and the checklists for July 7 and 25, 2005 are provided in Appendix B. When the system is operational, any abnormal conditions or parameters outside of the normal operating range are addressed by the lead operator and/or monitoring/environmental technician on site (Jim Simmonds or James Kearns). If they require guidance or notes any serious conditions, the inspector notifies the task manager (Tom Williams). The checklists are completed on site and sent to the task manager for review and scheduling of additional work if needed. Abnormal conditions and/or parameters outside the operating range are addressed, including repairs, cleaning, and continued monitoring.

System operational and alarm conditions are automatically stored by the PLC. This data is downloaded every two weeks. The July 2005 operational data is included in Appendix C. While operational, the system data are within the normal ranges and are consistent with visual observations, with any exceptions as described above.

The effluent flow data table in Appendix C shows daily discharge flows from each day of system operation and cumulative treated water discharge for each day during the reporting period, as well as a summary of total monthly flow and average daily flow since the system was started up in October 2001.

### **3.2 Sampling and Analysis**

#### **3.2.1 Raw and Treated Groundwater**

In accordance with the SQAPP, GWTS sampling is conducted on a monthly basis to monitor plant efficiency, to determine whether liquid carbon breakthrough has occurred, and to verify that contract-specific discharge parameters (in accordance with National Pollutant Discharge Elimination System (NPDES) permit equivalency) are met. The combined GWTS influent, along with the GWTS effluent (discharge), will be sampled by the 15<sup>th</sup> of each month. Collected samples will be shipped to a designated EPA, CLP lab for analysis of TCL volatile organic compounds.

Earth Tech personnel conducted the GWTS influent and effluent sampling for this report period on July 23, 2005. The samples were shipped to the USEP Region II DESA Laboratory, located in Edison, NJ for analysis of low concentration TCL volatile organic compounds. A copy of the full sampling trip report containing the chain of custody forms and FedEx air bill is included in Appendix D. Laboratory analytical results for the GWTS sampling event during this reporting period will be forwarded to ECC under separate cover from the laboratory.

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Measurements of influent and effluent pH and turbidity, along with effluent conductivity, are automatically monitored and recorded by the GWTS PLC on a daily basis; this information is included with the downloaded data in Appendix C.

The next GWTS influent / effluent sampling event is scheduled for August 15, 2005.

### **3.2.2 Process Air Stream Monitoring**

Air monitoring of the SVE and Pump and Treat System is performed on a bi-weekly basis. It includes monitoring for VOCs, air velocity, temperature, humidity, dew point, vacuum pressure and other parameters, as specified in the O&M manual. Air monitoring is performed at the following locations within the system:

- Combined SVE - Influent (pre-treatment),
- Post groundwater Air-Stripper (pre-treatment),
- Post vapor phase carbon vessel 1 – Air Stripper air discharge (post-treatment).
- Post vapor phase carbon vessel 2 – SVE air discharge (post-treatment).
- Sub-slab monitoring points (pre-treatment)

Bi-weekly air monitoring activities were conducted on July 25, 2005. The bi-weekly air monitoring logs are included in Appendix F. Estimated PCE removal rates for the SVE system are presented in Table 1. A Graph showing the estimated PCE removal rate trend over time is presented in Figure 2. The next bi-weekly air-monitoring event is scheduled for August 3, 2005.

## **4.0 Monitoring Well Sampling**

Groundwater samples from select monitoring wells both on and off-site are collected on a quarterly basis and shipped to a designated EPA, CLP lab for analysis. Groundwater sampling activities are performed in accordance with the USEPA Groundwater Sampling SOP #2007 and the USEPA Low-Stress Purging and Sampling SOP provided in the SQAPP. Each quarterly sampling event is coordinated with the local water authority to schedule the event when local water supply drawdown conditions do not impact the measurements. The location and number of monitoring wells as well as analytical parameters will be determined before each event by the USPEA, USACE, and ECC.

The first semi-annual groundwater sampling event of 2005 was conducted by Earth Tech personnel on February 7 through 11, 2005. A total of 25 groundwater monitoring wells were sampled for analysis of the presence of TCL volatiles only. A copy of the full sampling trip report containing the chain of custody forms and FedEx air bills is included in Appendix D.

Laboratory analytical results for this quarterly groundwater sampling event will be forwarded to ECC under separate cover from the laboratory. The next quarterly groundwater sampling event is scheduled for the week of August 29, 2005. It will entail sampling 28 monitoring wells, 15 of which will have natural attenuation perimeter analysis.

## **5.0 PLUME PERIMETER MONITORING**

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Groundwater level measurements are obtained from both on-site and offsite wells once a month in order to evaluate capture zone(s) around the groundwater extraction wells. The event is coordinated with the local water authority so the event can be scheduled when the local water supply drawdown conditions will have minimal impact to the measurements.

Water level measurements were collected on July 7, 2005. The location and number of monitoring wells was determined by the USEPA based on the site Capture Zone Analysis Plan. Groundwater level measurements for July 2005 and historical groundwater level measurements are provided in Appendix H.

## **6.0 Indoor Air Quality Sampling**

Indoor air quality samples from select locations within the treatment building and buildings along the perimeter of the site are collected using summa canisters on a quarterly basis and shipped to a designated EPA, CLP lab for analysis. The location and number of indoor air quality samples to be collected as well as analytical parameters will be determined by the USEPA, USACE and ECC.

The last indoor air quality sampling event was conducted on July 27, 2005 by Earth Tech personnel. This sampling event was conducted to address air quality issues within the groundwater treatment building. The sampling report for this event is included in Appendix

## **7.0 FUTURE EVENTS PLANNED**

The following scheduled events are planned (or have since occurred) during the next three reporting periods:

- Continue to perform GWTS inspection and maintenance as required;
- Continue to perform bi-weekly system air monitoring;
- Collect system influent and effluent samples as directed by USACE/ECC/USEPA;
- Obtain groundwater level measurements as directed by USACE/ECC/USEPA;
- Collect groundwater samples from monitoring wells as directed by USACE/ECC/USEPA;
- Collect indoor air quality samples as directed by USACE/ECC/USEPA;
- HVAC Filter Change Out (Long Island Hebrew Academy Roof)
- Semi-Annual Groundwater Monitoring Well Sampling Event (August)

## **8.0 PROBLEM AREAS AND RECOMMENDED SOLUTIONS (OUTSTANDING ISSUES)**

An Action List of ongoing and completed items is provided in Appendix J to track work tasks that have been targeted as issues to be addressed.

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## **Tables**

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**TABLE 1**  
**ESTIMATED PCE RECOVERY RATES**  
**STANTON CLEANERS AREA GROUNDWATER CONTAMINATION SITE**  
**250 CFM SVE SYSTEM**  
**September 2003 - July 2005**

Date	Flow Rate		VOC				
	# of Days	(cfm)	Avg (cfm)	Concentration (ppm)	Average (ppm)	Discharge Rate (lbs/day)	Total Discharge (lbs)
9/11/2003	1	225	225	4.2	4.20	0.6	0.6
9/25/2003	13	210	217.5	4.7	4.45	0.6	7.8
10/8/2003	13	213	211.5	5	4.85	0.6	8.2
10/23/2003	15	210	210	12.2	8.6	1.1	16.7
11/5/2003	13	215	212.5	6.8	9.5	1.2	16.2
11/22/2003	17	211	213	6	6.4	0.8	14.3
12/4/2003	12	205	208	5.9	5.95	0.8	9.2
12/17/2003	13	200	202.5	4	4.95	0.6	8.0
12/30/2003	13	210	205	4	4.95	0.6	8.1
1/15/2004	16	205	207.5	4.1	4.05	0.5	8.3
2/5/2004	SVE System Manually Shutdown Since 1/16/04						
2/12/2004	8	200	200	3.5	3.5	0.4	3.5
2/26/2004	14	205	202.5	5.3	4.4	0.6	7.7
3/10/2004	12	200	202.5	5	5.15	0.6	7.7
3/25/2004	15	199	199.5	5.1	5.05	0.6	9.3
4/13/2004	19	175	187	6.3	5.7	0.7	12.5
4/29/2004	16	170	172.5	6	6.15	0.7	10.5

Notes:

VOC readings taken before vapor phase carbon off-gas treatment.

Deep SVE Wells Closed on 12/10/03 Per OSC's Request

Formula provided by EPA in the "Elements for Effective Management of Operating Pump and Treatment Systems" publication.

$$M_{air} = Q_{air} \times C_{air} \times \frac{0.0283 \text{ m}^3}{\text{ft}^3} \times \frac{1440 \text{ min}}{\text{day}} \times \frac{2.2 \text{ lbs}}{1000000 \text{ mg}}$$

$$C_{air} (\text{mg/m}^3) = \frac{\text{Conc (ppmv)} \times 1 \text{ mole air} \times 1000 \text{ L}}{1E+06} \times \frac{1000 \text{ mg}}{24.1 \text{ L}} \times \frac{MW_x}{\text{m}^3} \times \frac{g}{g}$$

Notes:

Mair = mass loading, removal rate in air (lbs/day)

Qair = flow rate in air (cfm)

Cair = contaminant concentration (mg/m3)

MWx = molecular weight in grams/mole, for PCE is 166

Note: The conversion factor (1 mole air)/(24.1 L) varies with both temperature and pressure. At a pressure of 1 atmosphere and a temperature of 32 degrees Farenheit

(0 degrees Celcius), the conversion is (1 mole air)/(22.4 L).

**TABLE 1 (continued)**  
**ESTIMATED PCE RECOVERY RATES**  
**STANTON CLEANERS AREA GROUNDWATER CONTAMINATION SITE**  
**250 CFM SVE SYSTEM**  
**September 2003 - July 2005**

Date	# of Days	Flow Rate		VOC			Total Discharge (lbs)
		(cfm)	Avg (cfm)	Concentration (ppm)	Average (ppm)	Discharge Rate (lbs/day)	
5/13/2004	14	150	160	6	6	0.6	8.3
5/30/2004	17	147	148.5	5.9	5.95	0.5	9.3
6/10/2004	11	150	148.5	4.4	5.15	0.5	5.2
6/30/2004	20	145	147.5	5.6	5	0.5	9.1
7/8/2004	8	140	142.5	4.9	5.25	0.5	3.7
7/22/2004	14	139	139.5	4.8	4.85	0.4	5.8
8/9/2004	18	140	139.5	3.1	3.95	0.3	6.1
8/31/2004	1	135	137.5	3	3.05	0.3	0.3
9/8/2004	8	120	127.5	2.9	2.95	0.2	1.9
9/30/2004	22	121	120.5	3.1	3	0.2	4.9
10/4/2004	5	121	121	2.9	3	0.2	1.1
10/20/2004	15	120	120.5	2.8	2.85	0.2	3.2
11/1/2004	12	121	120.5	3	2.9	0.2	2.6
11/17/2004	16	125	123	4.1	3.55	0.3	4.3
11/29/2004	12	120	122.5	4.2	4.15	0.3	3.8
12/7/2004	8	121	120.5	4.2	4.2	0.3	2.5
12/16/2004	9	120	120.5	4.1	4.15	0.3	2.8
1/12/2005	27	120	120	4.5	4.3	0.3	8.6
1/17/2005	5	120	120	4.5	4.5	0.3	1.7
2/9/2005	23	120	120	3.9	4.2	0.3	7.2
2/23/2005	14	120	120	3.5	3.7	0.3	3.8
3/2/2005	7	120	120	3.2	3.35	0.2	1.7
3/16/2005	14	120	120	3.5	3.35	0.2	3.5
4/4/2005	19	120	120	3	3.25	0.2	4.6
4/20/2005	16	120	120	2.9	2.95	0.2	3.5
5/3/2005	13	120	120	3.1	3.00	0.2	2.9
5/19/2005	16	120	120	2.9	3.00	0.2	3.6
6/15/2005	26	120	120	1	1.95	0.1	3.8
6/22/2005	7	270	120	8.3	5.60	0.4	2.9
7/25/2005	33	280	275	8.3	8.30	1.4	46.5
						Total	317.7

Notes:

SVE system turned off from 8/24/2004 through 8/31/2004 during tennis court demolition activites.

New SVE well EPA-EXT-04 on-line 11/04/2004

VOC readings taken before vapor phase carbon off-gas treatment.

Deep SVE Wells Closed on 12/10/03 Per OSC's Request

Formula provided by EPA in the "Elements for Effective Management of Operating Pump and Treatment Systems" publication.

$$\text{Mair} = \text{Qair} \times \text{Cair} \times 0.0283 \text{ m}^3 \times 1440 \text{ min.} \times 2.2 \text{ lbs.}$$

ft.3	day	1000000 mg	
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$$\text{Cair (mg/m}^3\text{)} = \text{Conc (ppmv)} \times 1 \text{ mole air} \times 1000 \text{ L} \times 1000 \text{ mg} \times \text{MWx}$$

1E+06	24.1 L	m3	g
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Notes:

Mair = mass loading, removal rate in air (lbs/day)

Qair = flow rate in air (cfm)

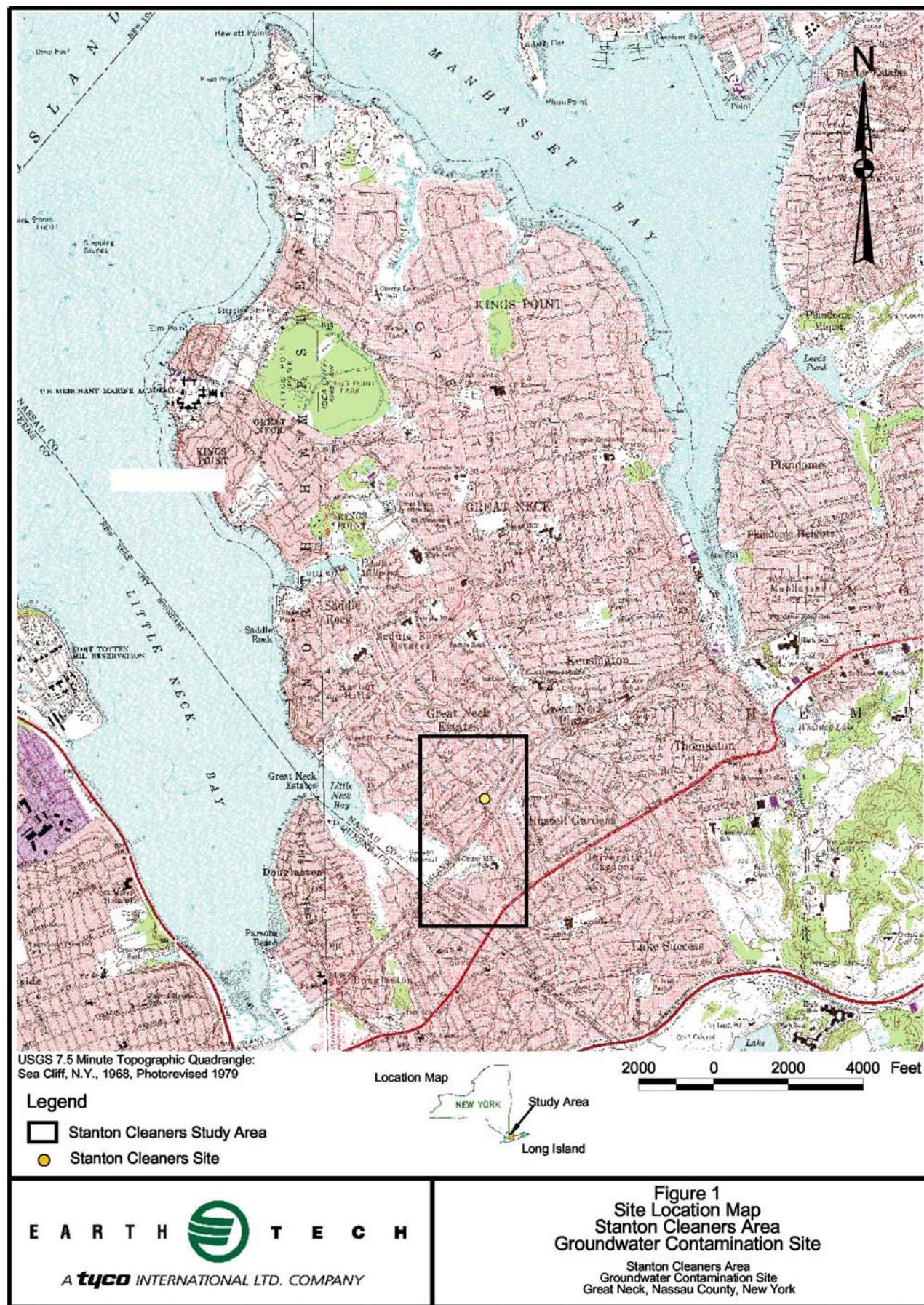
Cair = contaminant concentration (mg/m3)

MWx = molecular weight in grams/mole, for PCE is 166

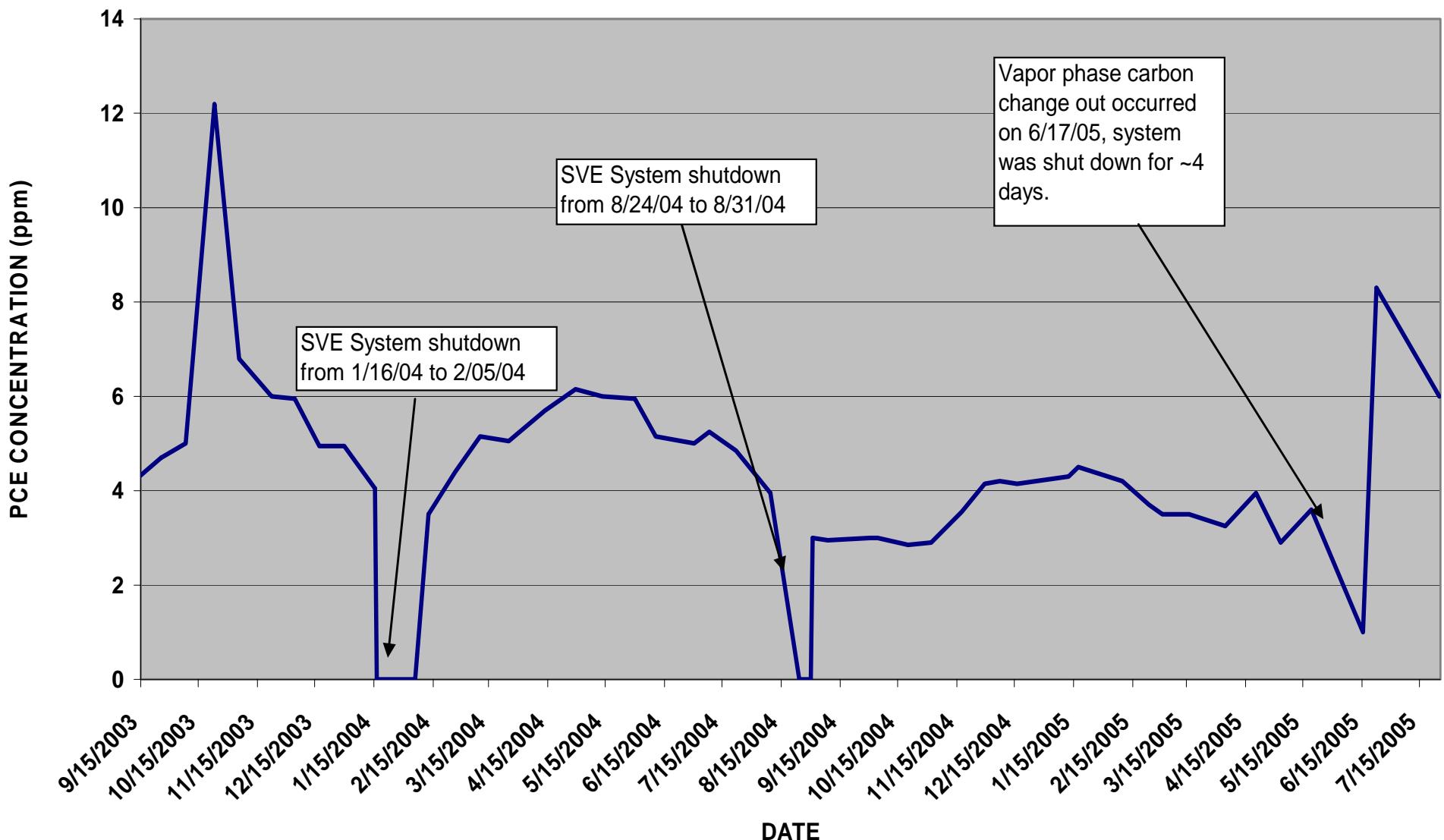
Note: The conversion factor (1 mole air)/(24.1 L) varies with both temperature and pressure. At a pressure of 1 atmosphere and a temperature of 32 degrees Farenheit (0 degrees Celcius), the conversion is (1 mole air)/(22.4 L).

## **Figures**

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**Figure 2**  
**STANTON CLEANERS AREA GOUNDWATER CONTAMINATION SITE**  
**AVERAGE PCE CONCENTRATIONS (ppm)**  
**250 CFM FINAL SVE SYSTEM**  
**September 2003 - July 2005**



**Appendix A**

**Daily Quality Control Reports (DQCRs)**

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## DAILY QUALITY CONTROL REPORT

Site Name and Location: Stanton Cleaners Site (LTRA) – Great Neck, NY

Client: ECC Contract No: 5442-001-001

Contractor: Earth Tech, Inc.

Address: 7870 Villa Park Drive, Suite 400  
Richmond, Virginia 23228

Phone No.: (804) 515-8300

Date: 7/07/05

**Earth Tech Project No.: 70536**

Day	S	M	T	W	T	F	S
Weather					<b>OVERCAST</b>		
Temp.					<b>72°</b>		
Wind					<b>STILL</b>		
Humidity					<b>75%</b>		

Earth Tech Personnel On-Site: **Jim Kearns, Rob Derrick**

Subcontractor (include names & responsibilities): **N/A—REAC, ERT, Damian Duda**

**On site for air sampling activities. ECC on site completing punch list.**

Contract Materials and Equipment on site: **Ford Explorer, Chevy Blazer**

Work Performed (include sampling; list by NAS number if applicable):

**Monthly gauging of monitoring wells**

**Weekly O&M Inspection**

Quality Control Activities (including field calibrations):

Health and Safety Levels and Activities: **Level D**

Problems Encountered/Correction Action Taken: **N/A**

Explain Developments Leading to Change in SOW or Finding of Fact: **N/A**

Preparatory Inspection (list all inspections by subject and specification location; attach minutes of meeting and list of all attendees): **N/A**

Have all required submittals and samples of construction been approved? **Yes**

Do the materials and equipment to be used conform to the submittals? **Yes**

Has all preliminary work been inspected, tested, and completed? **Yes**

## **DAILY QUALITY CONTROL REPORT**

Site Name and Location: Stanton Cleaners Site (LTRA) – Great Neck, NY	
Client: ECC	Contract No: 5442-001-001
Contractor: Earth Tech, Inc.	
Address: 7870 Villa Park Drive, Suite 400	
	Richmond, Virginia 23228
Phone No.: (804) 515-8300	
Date: 7/07/05	<b>Earth Tech Project No.: 70536</b>

Test required and inspection techniques to be executed to prove contract compliance (include both expected and actual results): **N/A**

Has a phase hazard analysis been performed? **Included in the Site Specific Health & Safety Plan**

Comments and deficiencies noted and corrective actions taken: **Explained in work performed section.**

Initial Inspection: List all inspections by subject and specification location. Comment and/or deficiencies noted and corrective actions taken.

**Explained in work performed section.**

Follow-up Inspection: List all inspections by subject and specification location. Comment and/or deficiencies noted and corrective actions taken.

Special Notes: **Bi-weekly air monitoring not performed as ERT/REAC were performing air sampling activities.**

Tomorrow's Expectations:

**Weekly O&M Inspection**

By: James Kearns

Title: Environmental Scientist

Signature:

(Quality Control Representative/Manager)

The above report is complete and correct. All materials and equipment used and all work performed during this reporting period are in compliance with the contract specifications and submittals, except as noted above.

Signature:

(Contractor's Authorized Representative)

## DAILY QUALITY CONTROL REPORT

Site Name and Location: Stanton Cleaners Site (LTRA) – Great Neck, NY

Client: ECC Contract No: 5442-001-001

Contractor: Earth Tech, Inc.

Address: 7870 Villa Park Drive, Suite 400  
Richmond, Virginia 23228

Phone No.: (804) 515-8300

Date: 7/25/05

**Earth Tech Project No.: 70536**

Day	S	M	T	W	T	F	S
Weather		<b>CLOUDY</b>					
Temp.		<b>78°F</b>					
Wind		<b>LOW</b>					
Humidity		<b>71.5</b>					

Earth Tech Personnel On-Site: **Jimmy Kearns, Rob Derrick, Frank Mahalski**

Subcontractor (include names & responsibilities): **N/A**

Contract Materials and Equipment on site: **Ford Explorer, Veloci-Calc, PID and general hand tools.**

Work Performed (include sampling; list by NAS number if applicable): **Used PID&Veloci-Calc for air monitoring of sub-slabs(except D), AS, influent, SVE-EXT-4R**

**Weekly O&M Inspection**

**Bi-weekly Air Monitoring**

Quality Control Activities (including field calibrations): **Calibrated PID**

Health and Safety Levels and Activities: **Level D**

Problems Encountered/Correction Action Taken: **N/A**

Explain Developments Leading to Change in SOW or Finding of Fact: **N/A**

Preparatory Inspection (list all inspections by subject and specification location; attach minutes of meeting and list of all attendees): **N/A**

Have all required submittals and samples of construction been approved? **Yes**

Do the materials and equipment to be used conform to the submittals? **Yes**

## **DAILY QUALITY CONTROL REPORT**

Site Name and Location: Stanton Cleaners Site (LTRA) – Great Neck, NY	
Client: ECC	Contract No: 5442-001-001
Contractor: Earth Tech, Inc.	
Address: 7870 Villa Park Drive, Suite 400	
Richmond, Virginia 23228	
Phone No.: (804) 515-8300	
Date: 7/25/05	<b>Earth Tech Project No.: 70536</b>
Has all preliminary work been inspected, tested, and completed? <b>Yes</b>	
Test required and inspection techniques to be executed to prove contract compliance (include both expected and actual results): <b>N/A</b>	
Has a phase hazard analysis been performed? <b>Included in the Site Specific Health &amp; Safety Plan</b>	
Comments and deficiencies noted and corrective actions taken: <b>Explained in work performed section.</b>	
Initial Inspection: List all inspections by subject and specification location. Comment and/or deficiencies noted and corrective actions taken. <b>Explained in work performed section.</b>	
Follow-up Inspection: List all inspections by subject and specification location. Comment and/or deficiencies noted and corrective actions taken.	
Special Notes: <b>Air monitoring not done for Sub-slab D (blocked by vehicle)</b>	
Tomorrow's Expectations: <b>Weekly O&amp;M Inspection</b>	
By: James Kearns Signature:	Title: Environmental Scientist (Quality Control Representative/Manager)
The above report is complete and correct. All materials and equipment used and all work performed during this reporting period are in compliance with the contract specifications and submittals, except as noted above.	
Signature: (Contractor's Authorized Representative)	

## **Appendix B**

### **Groundwater Treatment System Operation & Maintenance Checklists**

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## STANTON CLEANERS AREA GROUNDWATER CONTAMINATION SITE OPERATION AND MAINTENANCE

1. A. Is any part of the system leaking? YES  NO  
If so, list where. \_\_\_\_\_
- B. Is there water on the floor? YES  NO  
If so, list where.
- C. Are all three (3) floor sump level switches in place?  YES NO
- D. Is there any evidence of water in any of these floor sumps? YES  NO  
Note: If water is present, remove with shop vac or paper towels.
2. A. Display screen on computer will either show system or screen saver. If screen saver is on, tap screen with finger to show screen. If only the desktop is showing with no system screen, click the *Lookout – (Stanton)* icon on the taskbar at the bottom of the screen.
- B. From the site display, monitor and record the following.
1. Recovery Well EPA-EXT-02 flow \_\_\_\_\_ 19 \_\_\_\_\_ GPM
  2. Recovery Well EPA-EXT-02 valve open \_\_\_\_\_ 100 \_\_\_\_\_ %
  3. Recovery Well EPA-EXT-4R flow \_\_\_\_\_ 37 \_\_\_\_\_ GPM
  4. Recovery Well EPA-EXT-4R valve open \_\_\_\_\_ 40 \_\_\_\_\_ %
  5. Recovery Well EPA-EXT-04 flow \_\_\_\_\_ NA \_\_\_\_\_ GPM
  6. Recovery Well EPA-EXT-04 valve open \_\_\_\_\_ NA \_\_\_\_\_ %
  7. Recovery Well pH \_\_\_\_\_ 6.8 \_\_\_\_\_ pH
  8. Recovery Well conductivity \_\_\_\_\_ 54 \_\_\_\_\_ cond
  9. Air Stripper pH \_\_\_\_\_ 7.8 \_\_\_\_\_ pH
  10. Air Stripper temperature \_\_\_\_\_ 156 \_\_\_\_\_ deg. F
  11. Air Stripper air flow \_\_\_\_\_ 184 \_\_\_\_\_ CFM
  12. Pre-vapor carbon pressure \_\_\_\_\_ 0 \_\_\_\_\_ "wc (inches of water)
  13. Post carbon air flow \_\_\_\_\_ 1561 \_\_\_\_\_ CFM
  14. Discharge conductivity \_\_\_\_\_ 117 \_\_\_\_\_ micromhos
  15. Discharge pH \_\_\_\_\_ 8.1 \_\_\_\_\_ pH
  16. Discharge flow \_\_\_\_\_ 67 \_\_\_\_\_ GPM

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<sup>1</sup> Wells EPA-EXT-02 and MW-24 wells are manifolded together in the field and are piped into the treatment building together. The EPA-EXT-02 water flow meter is therefore actually displaying and totalizing the output of both wells.

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17. Discharge total gallons \_\_\_\_\_ 100,299,583 \_\_\_\_\_ Gal  
18. SVE inlet vacuum \_\_\_\_\_ 4 \_\_\_\_\_ "Hg  
19. SVE air flow \_\_\_\_\_ 82 \_\_\_\_\_ CFM

C. From the treatment room, monitor and record the following.

1. Recovery Well EPA-EXT-02 total flow \_\_\_\_\_ 9,832,900 \_\_\_\_\_ Gal  
2. Recovery Well EXT-04 total flow \_\_\_\_\_ NA \_\_\_\_\_ Gal  
3. Recovery Well EPA-EXT-4R total flow \_\_\_\_\_ 5,741,100 \_\_\_\_\_ Gal  
5. Recovery Well pH \_\_\_\_\_ 6.79 \_\_\_\_\_ Ph  
6. Recovery Well conductivity \_\_\_\_\_ 0.57 \_\_\_\_\_ cond  
7. Air Stripper pH \_\_\_\_\_ 7.85 \_\_\_\_\_ pH  
8. Air Stripper temperature \_\_\_\_\_ 15.6 \_\_\_\_\_ deg. F  
9. Air Stripper Pump water flow \_\_\_\_\_ 6.5 \_\_\_\_\_ GPM  
10. Air Stripper Pump pressure \_\_\_\_\_ 44 \_\_\_\_\_ PSI  
11. Discharge conductivity \_\_\_\_\_ 1.11 \_\_\_\_\_ cond  
12. Discharge pH \_\_\_\_\_ 8.11 \_\_\_\_\_ pH  
13. Discharge total gallons \_\_\_\_\_ 100,299,583 \_\_\_\_\_ Gal  
14. SVE inlet vacuum (digital readout) \_\_\_\_\_ 4 \_\_\_\_\_ "Hg  
15. SVE inlet vacuum \_\_\_\_\_ -4 \_\_\_\_\_ "Hg  
16. SVE post knockout vacuum \_\_\_\_\_ -6 \_\_\_\_\_ "Hg

3. A. If time allows, check to see that the treatment system is cycling properly as described in [STANTON CLEANERS AREA GROUNDWATER CONTAMINATION SITE O&M Manual.](#)

Notes:

STANTON CLEANERS AREA GROUNDWATER CONTAMINATION SITE OPERATION AND MAINTENANCE

1. A. Is any part of the system leaking? YES  NO  
If so, list where. \_\_\_\_\_

B. Is there water on the floor?  YES NO  
If so, list where. Vapor phase carbon vessels on pipes are sweating

C. Are all three (3) floor sump level switches in place?  YES NO

D. Is there any evidence of water in any of these floor sumps? YES  NO  
Note: If water is present, remove with shop vac or paper towels.

2. A. Display screen on computer will either show system or screen saver. If screen saver is on, tap screen with finger to show screen. If only the desktop is showing with no system screen, click the *Lookout – (Stanton)* icon on the taskbar at the bottom of the screen.

B. From the site display, monitor and record the following.

1. Recovery Well EPA-EXT-02 flow \_\_\_\_\_ 19 \_\_\_\_\_ GPM
2. Recovery Well EPA-EXT-02 valve open \_\_\_\_\_ 100 \_\_\_\_\_ %
3. Recovery Well IW-01 flow \_\_\_\_\_ NA \_\_\_\_\_ GPM
4. Recovery Well IW-01 valve open \_\_\_\_\_ NA \_\_\_\_\_ %
5. Recovery Well EPA-EXT-04 flow \_\_\_\_\_ 38 \_\_\_\_\_ GPM
6. Recovery Well EPA-EXT-04 valve open \_\_\_\_\_ 40 \_\_\_\_\_ %
7. Recovery Well pH \_\_\_\_\_ 6.8 \_\_\_\_\_ pH
8. Recovery Well conductivity \_\_\_\_\_ 55 \_\_\_\_\_ cond
9. Air Stripper pH \_\_\_\_\_ 7.9 \_\_\_\_\_ pH
10. Air Stripper temperature \_\_\_\_\_ 156 \_\_\_\_\_ deg. F
11. Air Stripper air flow \_\_\_\_\_ 410 \_\_\_\_\_ CFM
12. Pre-vapor carbon pressure \_\_\_\_\_ .20 \_\_\_\_\_ "wc (inches of water)
13. Post carbon air flow \_\_\_\_\_ faulty valve \_\_\_\_\_ CFM
14. Discharge conductivity \_\_\_\_\_ 117 \_\_\_\_\_ micromhos
15. Discharge pH \_\_\_\_\_ 8.3 \_\_\_\_\_ pH
16. Discharge flow \_\_\_\_\_ 70 \_\_\_\_\_ GPM

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<sup>1</sup> Wells EPA-EXT-02 and MW-24 wells are manifolded together in the field and are piped into the treatment building together. The EPA-EXT-02 water flow meter is therefore actually displaying and totalizing the output of both wells.

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17. Discharge total gallons \_\_\_\_\_ 98,758,232 \_\_\_\_\_ Gal  
18. SVE inlet vacuum \_\_\_\_\_ not working \_\_\_\_\_ "Hg  
19. SVE air flow \_\_\_\_\_ 100 \_\_\_\_\_ CFM

C. From the treatment room, monitor and record the following.

1. Recovery Well EPA-EXT-02 total flow \_\_\_\_\_ 88,957,791 \_\_\_\_\_ Gal
2. Recovery Well EXT-04 total flow \_\_\_\_\_ cant read meter \_\_\_\_\_ Gal
3. Recovery Well EPA-EXT-03 total flow \_\_\_\_\_ NA \_\_\_\_\_ Gal
5. Recovery Well pH \_\_\_\_\_ 6.80 \_\_\_\_\_ pH
6. Air Stripper pH \_\_\_\_\_ 8.00 \_\_\_\_\_ pH
7. Air Stripper temperature \_\_\_\_\_ 15.6 \_\_\_\_\_ deg. F
8. Air Stripper Pump water flow \_\_\_\_\_ 65 \_\_\_\_\_ GPM
9. Air Stripper Pump pressure \_\_\_\_\_ 43 \_\_\_\_\_ PSI
10. Discharge conductivity \_\_\_\_\_ 1.11 \_\_\_\_\_ cond
11. Discharge pH \_\_\_\_\_ 8.35 \_\_\_\_\_
12. Discharge total gallons \_\_\_\_\_ 98,758,232 \_\_\_\_\_ Gal
13. SVE inlet vacuum (digital readout) \_\_\_\_\_ 2.2 \_\_\_\_\_ PSID
14. SVE post knockout vacuum \_\_\_\_\_ "Hg

3. A. If time allows, check to see that the treatment system is cycling properly as described in [STANTON CLEANERS AREA GROUNDWATER CONTAMINATION SITE O&M Manual](#).

Notes:

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## **Appendix C**

### **Groundwater Treatment System Downloaded Operational Data**

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Stanton Cleaners Groundwater Contamination Site - July 2005 - Site Operation Data															
	Recovery Well 1	Recovery Well 2	Recovery Well 3	Discharge	Discharge	Influent water	Influent conductivity	Effluent conductivity	Influent water	Air Stripper water	Discharge water	Total gallons discharged	Air Stripper Air Flow	Combined Discharge Air Flow	SVE Air Flow
	Flow (GPM)	Flow (GPM)	Flow (GPM)	Flow (GPM)	Flow (CFM)	Temperature (deg F)			pH	pH	pH				
7/1/2005 0:00	19	0	38	71	2601	157	55	120	6.8	7.9	8.2	98202737.5	428	2601	77
7/1/2005 4:00	19	0	36	71	2447	157	55	119	6.8	7.9	8.2	98217109.6	465	2447	82
7/1/2005 8:00	19	0	37	69	2599	157	56	120	6.8	7.9	8.2	98231483	476	2599	75
7/1/2005 12:00	19	0	36	70	2553	158	55	121	6.8	8	8.2	98245869.7	396	2553	71
7/1/2005 16:00	19	0	38	70	2396	158	55	122	6.8	8	8.2	98260210.6	457	2396	75
7/1/2005 20:00	19	0	37	69	2447	158	55	120	6.8	7.9	8.2	98274562.3	418	2447	71
7/2/2005 0:00	19	0	35	72	2341	158	55	120	6.8	7.9	8.2	98288935	445	2341	75
7/2/2005 4:00	19	0	38	73	2553	158	55	120	6.8	7.9	8.2	98303309.9	372	2553	77
7/2/2005 8:00	19	0	36	69	2298	157	56	120	6.8	7.9	8.2	98317695.7	342	2298	71
7/2/2005 12:00	19	0	38	68	2396	157	55	118	6.8	8	8.2	98332060.4	378	2396	85
7/2/2005 16:00	19	0	38	0	2394	157	55	119	6.8	8	8.2	98346528	315	2394	75
7/2/2005 20:00	19	0	40	68	2472	156	55	119	6.8	8	8.3	98361075.4	403	2472	74
7/3/2005 0:00	19	0	38	70	2447	156	55	118	6.8	7.9	8.2	98375438.4	356	2447	87
7/3/2005 4:00	19	0	35	72	2601	155	55	117	6.8	7.9	8.2	9838908.2	384	2601	77
7/3/2005 8:00	19	0	39	72	2544	156	55	117	6.8	7.9	8.2	98404167.6	444	2544	82
7/3/2005 12:00	19	0	38	69	2447	156	55	118	6.8	8	8.2	98418509	408	2447	75
7/3/2005 16:00	19	0	35	71	2505	156	55	118	6.8	8	8.2	98432874.1	387	2505	76
7/3/2005 20:00	19	0	36	72	2555	156	55	118	6.8	8	8.3	98447209.6	444	2555	81
7/4/2005 0:00	19	0	36	72	2748	155	55	117	6.8	8	8.2	98461553.1	432	2748	75
7/4/2005 4:00	19	0	35	70	2551	155	56	117	6.8	7.9	8.2	98475910.3	432	2551	78
7/4/2005 8:00	19	0	35	7	2691	156	55	117	6.8	7.9	8.2	9849023.8	435	2691	71
7/4/2005 12:00	19	0	36	69	2601	157	54	119	6.8	8	8.2	98504925.1	428	2601	85
7/4/2005 16:00	19	0	38	70	2507	156	55	118	6.8	8	8.3	98519281.5	406	2507	81
7/4/2005 20:00	19	0	37	69	2546	156	55	119	6.8	8	8.3	98533632	382	2546	75
7/5/2005 0:00	19	0	36	70	2553	156	55	118	6.8	7.9	8.2	98547995.6	420	2553	76
7/5/2005 4:00	19	0	36	72	2396	157	56	119	6.8	8	8.2	98562568.2	445	2396	77
7/5/2005 8:00	19	0	35	0	2447	157	55	119	6.8	7.9	8.2	98576844.7	438	2447	79
7/5/2005 12:00	19	0	39	72	2396	158	55	121	6.8	8	8.3	98591380.5	386	2396	75
7/5/2005 16:00	19	0	39	69	2507	158	55	121	6.8	8	8.3	98605725.1	430	2507	75
7/5/2005 20:00	19	0	36	71	2426	158	55	120	6.8	8	8.3	98620095	398	2426	76
7/6/2005 0:00	19	0	37	71	2548	158	55	120	6.8	7.9	8.3	98634273.3	406	2548	76
7/6/2005 4:00	19	0	37	70	2548	158	56	119	6.8	8	8.3	98648454.1	308	2548	70
7/6/2005 8:00	19	0	36	72	2553	158	55	120	6.8	8	8.3	98662921.1	397	2553	76
7/6/2005 12:00	19	0	39	69	2553	158	55	121	6.8	8	8.3	98677276.5	387	2553	80
7/6/2005 16:00	19	0	38	70	2341	158	54	122	6.8	8	8.3	98691639.8	277	2341	69
7/6/2005 20:00	19	0	36	70	2341	158	55	120	6.8	8	8.3	98705976.6	423	2341	75
7/7/2005 0:00	19	0	35	68	2447	157	55	119	6.8	8	8.3	98720612.8	377	2447	80
7/7/2005 4:00	19	0	38	69	2746	156	55	118	6.8	7.9	8.3	98734953.8	382	2746	82
7/7/2005 8:00	19	0	38	68	2601	156	55	117	6.8	7.9	8.3	98749297.2	418	2601	71
7/7/2005 12:00	19	0	37	71	2551	156	55	117	6.8	7.9	8.3	98763882.6	404	2551	70
7/7/2005 16:00	19	0	37	69	2748	157	55	118	6.8	7.9	8.3	98778200	353	2748	76
7/7/2005 20:00	19	0	39	73	2546	156	55	119	6.8	8	8.3	98792527.2	393	2546	82
7/8/2005 0:00	19	0	36	69	2553	157	55	118	6.8	7.9	8.3	98806847.4	414	2553	82
7/8/2005 4:00	19	0	36	72	2544	156	55	117	6.8	7.9	8.3	98821463.7	407	2544	74
7/8/2005 8:00	19	0	36	68	2551	156	54	116	6.8	7.9	8.3	98835782.3	290	2551	82
7/8/2005 12:00	19	0	40	69	2553	156	55	117	6.8	7.9	8.3	98850101.5	330	2553	78
7/8/2005 16:00	19	0	36	68	2341	156	56	117	6.8	7.9	8.3	98864684.6	275	2341	76
7/8/2005 20:00	19	0	38	70	2498	156	54	117	6.8	7.9	8.3	98879026.2	377	2498	77
7/9/2005 0:00	19	0	39	9	2500	155	55	116	6.8	7.9	8.2	98893600.5	356	2500	71
7/9/2005 4:00	19	0	37	72	2601	156	54	116	6.8	7.9	8.3	98907976.4	340	2601	82
7/9/2005 8:00	19	0	36	69	2544	156	55	117	6.8	7.9	8.2	989850101.5	330	2544	78
7/9/2005 12:00	19	0	37	71	2746	157	55	118	6.8	7.9	8.2	98992326.2	367	2746	79
7/9/2005 16:00	19	0	36	68	2341	156	56	117	6.8	7.9	8.3	98994515.9	413	2341	83
7/9/2005 20:00	19	0	38	70	2447	156	56	118	6.8	7.9	8.2	99000929.3	480	2256	76
7/10/2005 0:00	19	0	36	72	2502	157	55	118	6.8	8	8.2	99023330	387	2502	81
7/10/2005 4:00	19	0	36	69	2447	157	56	119	6.8	8	8.3	99037879.8	372	2447	81
7/10/2005 8:00	19	0	37	73	2509	157	55	122	6.8	8	8.3	99052174.9	366	2509	75
7/10/2005 12:00	19	0	38	0	2544	156	55	117	6.8	7.9	8.2	99066594.3	361	2544	75
7/10/2005 16:00	19	0	41	72	2553	156	55	117	6.8	7.9	8.2	99081004.7	382	2553	86
7/11/2005 0:00	19	0	37	69	2447	156	55	118	6.8	7.9	8.2	99095276.4	392	2447	76
7/11/2005 4:00	19	0	36	72	2396	158	55	120	6.8	8	8.2	99109801.4	432	2396	75
7/11/2005 8:00	19	0	36	72	2396	158	56	120	6.8	8	8.2	99124073.3	396	2396	74
7/11/2005 12:00	19	0	37	71	2509	159	55	122	6.8	8	8.2	99138606.4	383	2396	74
7/11/2005 16:00	19	0	37	69	2396	158	55	122	6.8	8	8.2	99152876	328	2544	75
7/12/2005 0:00	19	0	37	68	2544	158	55	121	6.8	8	8.2	99167442.3	378	2502	77
7/12/2005 4:00	19	0	40	69	2502	158	55	120	6.8	7.9	8.2	99181724.4	409	2449	75

7/16/2005 8:00	19	0	35	71	2396	158	55	120	6.8	8	8.2	99524406.5	397	2396	75
7/16/2005 12:00	19	0	36	69	2300	159	55	121	6.8	8	8.2	99538946.6	367	2300	74
7/16/2005 16:00	19	0	38	68	2396	159	55	122	6.8	8	8.2	99553407	349	2396	79
7/16/2005 20:00	19	0	36	68	2505	158	55	122	6.8	8	8.2	99567900.5	357	2505	76
7/17/2005 0:00	19	0	36	0	2183	158	55	121	6.8	8	8.2	99582204.7	316	2183	70
7/17/2005 4:00	19	0	37	69	2502	158	55	121	6.8	8	8.2	99565394.4	346	2502	75
7/17/2005 8:00	19	0	37	72	2327	158	54	121	6.8	8	8.2	99611003.6	331	2327	71
7/17/2005 12:00	19	0	39	68	2396	159	55	121	6.8	8	8.2	99625473.1	386	2396	75
7/17/2005 16:00	19	0	35	68	2507	159	55	122	6.8	8	8.2	99639946.5	333	2507	69
7/17/2005 20:00	19	0	37	0	2447	159	55	122	6.8	8	8.2	99654304.5	354	2447	69
7/18/2005 0:00	19	0	39	0	2157	159	55	121	6.8	8	8.2	99668695.3	357	2157	86
7/18/2005 4:00	19	0	38	69	2502	159	55	122	6.8	8	8.2	99683170.6	298	2502	75
7/18/2005 8:00	19	0	38	68	2141	159	55	122	6.8	7.9	8.2	9969762.6	325	2141	73
7/18/2005 12:00	19	0	36	72	2254	160	56	124	6.8	7.9	8.2	99712112.7	321	2254	73
7/18/2005 16:00	19	0	39	70	2183	160	56	123	6.8	8	8.2	99726649.7	308	2183	74
7/18/2005 20:00	19	0	37	70	2183	159	55	123	6.8	8	8.2	99741120.4	300	2183	76
7/19/2005 0:00	19	0	36	68	2300	159	56	122	6.8	7.9	8.2	99755566.9	302	2300	76
7/19/2005 4:00	19	0	37	67	2100	159	55	122	6.8	7.9	8.2	99770028.8	337	2100	75
7/19/2005 8:00	19	0	35	71	2254	160	56	123	6.8	7.9	8.1	99784439.2	264	2254	75
7/19/2005 12:00	19	0	36	70	2178	160	56	124	6.8	8	8.2	99798878.4	280	2178	69
7/19/2005 16:00	19	0	36	69	2100	160	55	124	6.8	8	8.2	99813323.4	331	2100	80
7/19/2005 20:00	19	0	37	67	2304	159	55	122	6.8	8	8.2	99827751.9	341	2304	72
7/20/2005 0:00	19	0	36	68	2100	159	56	122	6.8	7.9	8.2	99842163.8	295	2100	75
7/20/2005 4:00	19	0	36	71	2302	159	55	122	6.8	7.9	8.2	99856566.3	352	2302	75
7/20/2005 8:00	19	0	39	67	2178	158	55	121	6.8	7.9	8.2	99870955.2	269	2178	77
7/20/2005 12:00	19	0	38	68	2038	158	55	120	6.8	8	8.2	99885310	317	2038	74
7/20/2005 16:00	19	0	37	67	2134	158	55	121	6.8	8	8.2	99899672.1	302	2134	75
7/20/2005 20:00	19	0	38	68	2304	157	56	120	6.8	8	8.2	99914056.8	310	2304	64
7/21/2005 0:00	19	0	37	67	2254	157	55	119	6.8	7.9	8.2	99928453.9	351	2254	75
7/21/2005 4:00	19	0	37	69	2155	157	55	118	6.8	7.9	8.2	99942859.9	302	2155	75
7/21/2005 8:00	19	0	37	0	2183	157	55	118	6.8	7.9	8.2	99957317	354	2183	76
7/21/2005 12:00	19	0	38	10	2254	157	55	119	6.8	8	8.2	99971782.3	376	2254	69
7/21/2005 16:00	19	0	37	67	2183	157	56	120	6.8	8	8.2	99986121.1	338	2183	68
7/21/2005 20:00	19	0	35	67	2183	158	55	121	6.8	8	8.2	100000090.6	308	2183	74
7/22/2005 0:00	19	0	36	69	2254	158	55	120	6.8	7.9	8.2	100014734.6	288	2254	70
7/22/2005 4:00	19	0	38	69	2155	157	56	119	6.8	7.9	8.2	100029104.1	302	2155	75
7/22/2005 8:00	19	0	36	68	2104	158	55	120	6.8	7.9	8.1	100034378.6	308	2104	76
7/22/2005 12:00	19	0	37	8	2178	157	55	119	6.8	8	8.2	100058063.3	359	2178	70
7/22/2005 16:00	19	0	36	68	2180	158	55	121	6.8	8	8.2	100072401.6	306	2180	74
7/22/2005 20:00	19	0	39	67	2183	158	55	120	6.8	8	8.2	100086706.9	322	2183	74
7/23/2005 0:00	19	0	37	68	2100	158	55	120	6.8	7.9	8.2	100101032.8	297	2100	74
7/23/2005 4:00	19	0	35	0	2173	157	55	119	6.8	7.9	8.2	100115427.6	292	2173	75
7/23/2005 8:00	19	0	37	71	2035	157	54	118	6.8	7.9	8.2	100129924	280	2035	75
7/23/2005 12:00	19	0	39	71	1727	156	55	118	6.8	8	8.2	100144210.5	252	1727	75
7/23/2005 16:00	19	0	36	69	1803	156	55	117	6.8	8	8.2	100158480.1	199	1803	70
7/23/2005 20:00	19	0	39	67	1693	156	55	119	6.8	7.9	8.2	100170132.2	215	1693	69
7/24/2005 0:00	19	0	36	69	1686	156	55	116	6.8	7.9	8.2	100187299.4	190	1686	75
7/24/2005 4:00	19	0	36	0	1502	155	55	116	6.8	7.9	8.1	100201956.9	139	1502	77
7/24/2005 8:00	19	0	39	67	1686	156	55	117	6.8	7.9	8.1	100216126.7	174	1686	82
7/24/2005 12:00	19	0	37	67	1354	156	55	117	6.8	7.9	8.1	100230426.3	181	1354	80

7/24/2005 16:00	19	0	37	68	1502	156	55	118	6.8	7.9	8.1	100244970	138	1502	77
7/24/2005 20:00	19	0	38	66	1354	157	55	118	6.8	7.8	8.1	100259272.6	144	1354	75
7/25/2005 0:00	19	0	36	7	1410	156	55	117	6.8	7.8	8.1	100273582.2	144	1410	87
7/25/2005 4:00	19	0	35	68	1555	156	55	116	6.8	7.8	8.1	100288108.9	154	1555	82
7/25/2005 8:00	19	0	36	66	1412	157	54	118	6.8	7.8	8.1	100302392.5	146	1412	75
7/25/2005 12:00	19	0	37	68	1313	157	55	119	6.8	7.8	8.1	100316948.8	154	1313	71
7/25/2005 16:00	19	0	38	69	1318	158	55	121	6.8	7.8	8.1	100331242.9	161	1318	69
7/25/2005 20:00	19	0	37	67	1285	158	55	120	6.8	7.7	8.1	100345819	145	1285	71
7/26/2005 0:00	19	0	39	68	1207	158	55	120	6.8	7.7	8	100360109	144	1207	75
7/26/2005 4:00	19	0	38	68	1354	157	54	119	6.8	7.7	8	100374667.1	198	1354	75
7/26/2005 8:00	19	0	37	72	1352	158	55	120	6.8	7.7	8	100388946.7	145	1352	72
7/26/2005 12:00	19	0	36	68	1285	157	55	119	6.8	7.7	8	100403455.6	114	1285	80
7/26/2005 16:00	19	0	37	0	1320	159	56	124	6.8	7.7	8	100417719.3	160	1320	70
7/26/2005 20:00	19	0	36	67	1209	158	56	121	6.8	7.7	8	100432162.9	170	1209	70
7/27/2005 0:00	19	0	37	67	1256	158	56	121	6.8	7.7	8	100446632.5	149	1256	75
7/27/2005 4:00	19	0	36	0	1147	158	55	120	6.8	7.7	8	100460960.7	148	1147	77
7/27/2005 8:00	19	0	36	70	1315	158	55	121	6.8	7.6	8	100475309.8	151	1315	75
7/27/2005 12:00	19	0	38	66	1143	159	55	122	6.8	7.6	8	100489780.6	135	1143	70
7/27/2005 16:00	19	0	39	67	1143	159	56	123	6.8	7.6	8	100504249.5	169	1143	74
7/27/2005 20:00	19	0	36	70	1147	157	55	119	6.8	7.6	8	100518417.8	127	1147	71
7/28/2005 0:00	19	0	37	68	1313	156	54	119	6.8	7.6	8	100532661.8	166	1313	66
7/28/2005 4:00	19	0	36	69	1311	156	55	118	6.8	7.6	7.9	100547304.8	165	1311	75
7/28/2005 8:00	19	0	36	71	1308	156	55	117	6.8	7.6	7.9	100561763.2	148	1308	75
7/28/2005 12:00	0	0	0	18	156	55	121	6.8	7.6	7.9	100574581.8	44	18	24	
7/28/2005 16:00	19	0	37	0	1313	156	55	118	6.8	7.6	7.9	100583047.7	114	1313	73
7/28/2005 20:00	19	0	38	67	1138	156	56	117	6.8	7.6	7.9	100597589.5	114	1138	82
7/29/2005 0:00	19	0	36	66	1138	156	55	117	6.8	7.6	7.9	100612015	141	1138	77
7/29/2005 4:00	20	0	36	69	1256	156	55	117	6.8	7.6	7.9	100626448.7	145	1256	76
7/29/2005 8:00	19	0	37	69	1147	156	54	117	6.8	7.5	7.9	100640848.3	117	1147	70
7/29/2005 12:00	19	0	37	66	1065	156	55	119	6.8	7.5	7.9	100655260.3	135	1065	77
7/29/2005 16:00	19	0	36	67	1062	157	55	119	6.8	7.5	7.9	100669650.3	127	1062	72
7/29/2005 20:00	19	0	38	68	1138	157	55	119	6.8	7.5	7.9	100684045.7	103	1138	75
7/30/2005 0:00	19	0	39	69	1311	157	55	119	6.8	7.5	7.9	100698467.8	139	1311	77
7/30/2005 4:00	19	0	40	0	1138	157	55	119	6.8	7.5	7.9	100712892.8	124	1138	82
7/30/2005 8:00	19	0	37	67	1138	157	55	118	6.8	7.5	7.9	100727521.3	123	1138	76
7/30/2005 12:00	19	0	36	70	1094	157	55	118	6.8	7.5	7.9	100741906.3	143	1094	82
7/30/2005 16:00	19	0	37	67	991	157	56	119	6.8	7.5	7.9	100756266	161	991	80
7/30/2005 20:00	19	0	38	66	1104	156	55	118	6.8	7.5	7.9	100770586	134	1104	76
7/31/2005 0:00	19	0	36	0	1062	156	54	118	6.8	7.5	7.9	100785014.3	109	1062	72
7/31/2005 4:00	19	0	35	66	1147	156	55	117	6.8	7.5	7.8	100799533.6	117	1147	82
7/31/2005 8:00	19	0	36	65	1062	157	55	118	6.8	7.5	7.8	100813880.5	128	1062	69
7/31/2005 12:00	19	0	37	65	1104	157	55	119	6.8	7.5	7.9	100827789.1	127	1104	76
7/31/2005 16:00	19	0	36	65	1138	157	55	118	6.8	7.5	7.8	100842387.4	87	1138	78
7/31/2005 20:00	19	0	36	67	1138	156	55	117	6.8	7.5	7.8	100856696.4	100	1138	76

**Appendix D**

**Sampling Trip Reports**

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## SAMPLING TRIP REPORT

**Site Name:** STANTON CLEANERS AREA GROUNDWATER CONTAMINATION SITE **CERCLIS ID Number:** NYD047650197 **Sampling Dates:** July 12, 2005 **CLP Case Number:** N/A **Site Location:** 110 Cutter Mill Road, Great Neck, New York, 11021 **Sample Descriptions:** Groundwater Treatment System Influent / Effluent.

### Laboratories Receiving Samples (Table 1):

Case Number	Sample Type	Name and Address of Laboratory
N/A	TCL-VOAs OLC03.2	USEPA Region II (USEPA) Building 209 MS-230 2890 Woodbridge Avenue Edison, N.J. 08837

### Sample Dispatch Data (Table 2):

On July 12, 2005, six (6) groundwater samples, including one (1) duplicate sample and one (1) trip blank were shipped to the U.S. Environmental Protection Agency Region II Lab (USEPA) for TCL-VOAs analysis.

FedEx Airbill No.	Number of Coolers	Number and Type of Samples	Time and Date of Shipping
851611551538	1	6 Aqueous Samples including 1 duplicate sample, and 1 Trip Blank for TCL-VOAs.	7/12/04 @ 11:00 TO: USEPA

### Sampling Personnel (Table 3):

Name	Organization	Site Duties
Tom Williams	Earth Tech, Inc.	Task Manager
John Huisman	Earth Tech, Inc.	Health & Safety/Sampler
Robert Derrick	Earth Tech, Inc.	Sampling Assistant
Todd Nash	Earth Tech, Inc.	Sampling Assistant

**Sample Numbers and Collection Points (Table 4):**

Laboratory	Analyses	Sample Type	CLP Sample #	Sample Collection Point(SCP)
USEPA	TCL-VOAs	Aqueous Groundwater	EPA-EXT-02	EPA-EXT-02
			EPA-EXT-4R	EPA-EXT-4R
			INFLUENT	Influent
			EFFLUENT	Effluent
			TB	Trip Blank
			EFFLUENT-A	Duplicate of Effluent

**Additional Comments:**

All groundwater samples were collected after a five gallon purge from the sample ports located within the treatment system. Volumes were collected from the influent (INFLUENT), effluent (EFFLUENT), extraction wells EPA-EXT-02 and EPA-EXT-4R, of the treatment system for the following analysis: Target Compound List (TCL) Volatile Organic Compounds. In addition, one duplicate sample (EFFLUENT-A) was collected from the effluent of the groundwater treatment process and was a duplicate sample of sample EFFLUENT. One trip blank (TB) was also included in the shipment. Copies of the Chain of Custody forms and a copy of the FedEx airbill are included in Appendix A and B, respectively.

Earth Tech personnel also collected real time water quality parameters from the raw water for all the sampling locations (Influent, Effluent, EPA-EXT-02 and EPA-EXT-4R) and the results are included in Appendix C.

**Appendix A**  
**Chain of Custody (July 12, 2005 System Sampling Event)**

---

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

Chain of Custody Record				Sampler Signature:	Date / Time
		Relinquished By	Received By		
1: Part Code:	2	Date Shipped: 7/12/2005	Carrier Name: FedEx		
Part Code:		Airbill: 851611551538			
LIS ID:	NYD047650197	Shipped to: USEPA REGION II DESA LAB	Building 209 MS 230 2890 Woodbridge Avenue Edison NJ 08837 (732) 906-6886		
Name/State:	Stanton Cleaners Site/NY				
Project Leader:	James Kearns				
Co.:	Operations and Maintenance				
Sampling Co.:	Earth Tech, Inc.				
ANIC	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION
ENT	Ground Water/ James Kearns	L/G	VOA (14)	(HCL) (3)	Effluent
ENT-A	Ground Water/ James Kearns	L/G	VOA (14)	(HCL) (3)	Effluent-A
KT-02	Ground Water/ James Kearns	L/G	VOA (14)	(HCL) (3)	EPA-EXT-02
KT-4R	Ground Water/ James Kearns	L/G	VOA (14)	(HCL) (3)	EPA-EXT-4R
ENT	Ground Water/ James Kearns	L/G	VOA (14)	(HCL) (3)	Influent
	Ground Water/ James Kearns	L/G	VOA (14)	(HCL) (3)	TB
INORGANIC SAMPLE NO.				QC Type	
					--
					Field Duplicate
					--
					--
					--
					Trip Blank

R  
Case No:  
DAS No:

number: 2-525300610-071205-0001

**Number:** 2-525300610-071205-0001  
**Address:** Requests for preliminary results will increase analytical costs.  
**Phone:** 3400 Edmund Halley Dr. Reston, VA 20191-3400 Phone 703/264-9348 Fax 703/264-9222

REGION COPY



**Appendix B**  
**FedEx Airbill (July 12, 2005 System Sampling Event)**

---



FedEx  
Tracking  
Number

851611551538

1 From Please print and press hard.

Date 7-12-05

Sender's FedEx  
Account Number

2374-4259-8

Sender's Name James Kearns

Phone 1516) 352-4214

Company Earth Tech, Inc

Address 277 Kalb Avenue

Dept./Floor/Suite/Room

City Franklin Square

State NY

ZIP 11010

2 Your Internal Billing Reference

First 24 characters will appear on invoice.

3 To Recipient's Name

Sample Custodian

Phone 1732 906-6886

Company USEPA Region II Desa Lab

Building 209 MS 230

We cannot deliver to P.O. boxes or P.O. ZIP codes.

Address 2890 Woodbridge Avenue

Dept./Floor/Suite/Room

City Edison

State NJ

ZIP 08837

Try online shipping at [fedex.com](http://fedex.com)

By using this Airbill you agree to the service conditions on the back of this Airbill  
and in our current Service Guide, including terms that limit our liability.

Questions? Visit our Web site at [fedex.com](http://fedex.com)  
or call 1.800.GoFedEx 1.800.463.3339.

Form  
ID No.

0200

24Y13X15  
Sender's Copy

4a Express Package Service

FedEx Priority Overnight  
Next business morning\*

FedEx Standard Overnight  
Next business afternoon\*

Packages up to 150 lbs.  
\* To most locations

FedEx 2Day  
Second business day\*

FedEx Express Saver  
Third business day\*

FedEx First Overnight  
Earliest next business morning  
delivery to select locations\*

4b Express Freight Service

FedEx 1Day Freight\*\*  
Next business day\*\*

FedEx 2Day Freight  
Second business day\*\*

Packages over 150 lbs.  
\*\* To most locations

\* Call for confirmation:

\* Declared value limit \$500

5 Packaging

FedEx Envelope\*

FedEx Pak\*  
Includes FedEx Small Pak,  
FedEx Large Pak, and FedEx Sturdy Pak

FedEx Box

FedEx Tube

Other

6 Special Handling

SATURDAY Delivery

Available ONLY for  
FedEx Priority Overnight, FedEx 2Day,  
FedEx 1Day Freight, and FedEx 2Day  
Freight to selected ZIP codes

Include FedEx address in Section 3.

HOLD Saturday  
at FedEx Location  
Available ONLY for  
FedEx Priority Overnight and  
FedEx 2Day to select locations

Does this shipment contain dangerous goods?

One box must be checked.

No

Yes As per attached  
Shipper's Declaration

Yes Shipper's Declaration  
not required

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging.

Dry Ice  
Dry Ice, 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

FedEx Acct. No.  
Credit Card No.

Exp.  
Date

Total Packages

Total Weight

Total Declared Value

\$ .00

Your liability is limited to \$100 unless you declare a higher value. See back for details.

FedEx Use Only

8 Sign to Authorize Delivery Without a Signature

By signing you authorize us to deliver this shipment without obtaining a signature  
and agree to indemnify and hold us harmless from any resulting claims.

Fax Date 11/03 Part #156281 ©1994-2003 FedEx PRINTED IN U.S.A. MWA 04 \*\*\*

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**Appendix C**  
**Water Quality Parameters (July 12, 2005 System Sampling Event)**

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**STANTON CLEANERS SITE LTRA**  
Groundwater Pump and Treatment System  
Water Quality Parameters Log

Date: 7/12/05  
Project # 70536

	PH	COND	TURB	DO	TEMP	SALINITY
EPA-EXT-04	6.43	0.693	0	11.5	17.7	1
EPA-EXT-4R	6.88	0.510	0	11.8	16.9	1
Discharge	7.34	0.556	0	10.7	19.2	1

Total Gallons pumped: 99,190,022 gallons  
Flow rate: 70 gpm

Equipment Calibrated by: James Kearns  
Water samples collected by: James Kearns  
Water monitoring performed by: James Kearns/Robert Derrick/ Todd Nash

Comments: EPA-EXT-04 and EPA-EXT-4R were operating  
TEMP. - Temperature measured in degrees Fahrenheit.  
COND. - Conductivity measured in millisiemens per centimeter (mS/cm).  
TURB. - Turbidity measure in nephelometric turbidity units (NTU).  
DO - Dissolved Oxygen measured in milligrams per liter (mg/L).  
SALINITY - Salinity in percentage.

## SAMPLING TRIP REPORT

**Site Name:** STANTON CLEANERS AREA GROUNDWATER CONTAMINATION SITE

**CERCLIS ID Number:** NYD047650197

**Sampling Dates:** July 26-27, 2005

**CLP Case Number:** N/A

**Site Location:** 110 Cutter Mill Road, Great Neck, New York, 11021

**Sample Descriptions:** Semi-Annual 24-hour Indoor Air Sampling

**Sample Procedures:** Nine air samples were collected for analysis of volatile organic compounds (VOCs) Via EPA method TO-15. Sampling was performed following guidelines in the modified U.S. EPA Method TO-15, *Determination of VOCs in Ambient Air using Summa® Passivated Canister Sampling and Gas Chromatographic Analysis*. At the end of the sampling period, the canister valve was closed/ capped, and the sampling times and final canister pressures were recorded on the identification tag that had been attached to the Summa® canisters prior to sampling. Sample documentation was completed and chains of custody records were prepared.

### Laboratories Receiving Samples:

Case Number	Sample Type	Name and Address of Laboratory
N/A	EPA-TO-15	Data Chem Laboratories (DCL) 960 W. Levoy Drive Salt Lake City, Utah 84123

### Sample Dispatch Data:

On July 27, 2005, nine Summa® Canister air samples (including two duplicate samples and three outdoor air samples) were shipped to Data Chem Laboratories (DCL) in Salt Lake City, UT for analysis via EPA method TO-15. Indoor air samples were collected at the Long Island Hebrew Academy, Silvertstein Hebrew Academy, and the Stanton Cleaners Area Groundwater Contamination Site Remediation Plant.

FedEx Airbill No.	Number of Boxes	Number and Type of Samples	Time and Date of Shipping
851611551571	2	9 Air samples, including 1 duplicate sample, for analysis EPA Method TO-15.	07/27/05 @ 14:00 TO: DCL
851611551582			

### Sampling Personnel:

Name	Organization	Site Duties
Tom Williams	Earth Tech, Inc.	Project Manager
James Kearns	Earth Tech, Inc.	Task Manager/Health & Safety/Sampler

Frank Mahalski	Earth Tech, Inc.	Sampler
Robert Derrick	Earth Tech, Inc.	Sampler

**Sample Numbers and Collection Points:**

Appendix A includes a table with a list of all Summa® Canister collection points and their assigned sample numbers. The Chain of Custody Forms and the Analytical Request Form are included in Appendix B. The FedEx Airbills are included in Appendix C. Appendix D contains a map that depicts the locations of the samples collected during this event.

**Additional Comments:**

Eight of the nine SUMMA Canister samples collected and submitted to the laboratory were collected over a 24-hour period from July 26 to July 27, 2005. One sample, LIHA-Basement A (initially intended to be a duplicate sample of LIHA-Basement), collected at the Long Island Hebrew Academy was observed to be complete at 14:30 p.m. on July 26, 2005, with an estimated total sampling duration of 5 hours and 18 minutes. Although the sample will not be representative of a 24 hour period, it was determined that the data obtained from this short sampling duration may be of use. Therefore, the sample was included in the sample shipment to Data Chem Laboratories and will be analyzed. All nine air samples were requested to be analyzed for volatile organic compounds via EPA Method TO-15.

One duplicate sample was collected during this event. Sample SHA-Ground Floor A is a duplicate sample of SHA-Ground Floor.

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## **Appendix A**

### **Table Containing Sample Numbers and Collection Points**

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Stanton Cleaners Groundwater Contamination Site  
 Indoor Air Quality Sampling (Summa Canister)  
 July 2005

Sample ID	Analytical Method	Location	Start Date / Time	End Date / Time	Total Time	Initial and Final Pressure	Summa Number	Valve Number
LIHA-Roof Top	EPA-TO-15	LIHA Roof Top	7/26/05 9:08 a.m.	7/27/05 8:30 a.m.	23 hrs 22 min	Initial: 29" Hg Final: 4" Hg	108861	108556
LIHA-Basement	EPA-TO-15	LIHA-Basement	7/26/05 9:13 a.m.	7/27/05 9:11a.m.	23 hrs 58 min	Initial: 30" Hg Final: 0.1" Hg	108019	108947
LIHA-Basement A	EPA-TO-15	LIHA Basement Duplicate	7/26/05 9:12 a.m.	7/26/05 2:30p.m.	5 hrs 18 min	Initial: 30" Hg Final: 0" Hg	108890	108827
SHA-Parking Lot S wind 0-5mph	EPA-TO-15	SHA Parking Lot (Ambient,~5ft.Off ground, Stanton Cleaners Side of Building)	7/26/05 7:50 a.m.	7/27/05 9:00 a.m.	25 hrs 10 min	Initial: 30" Hg Final: 13" Hg	108980	108877
Stanton-Parking Lot	EPA-TO-15	Stanton Parking Lot (Ambient,~5ft.Off ground, Stanton Cleaners Side of Building)	7/26/05 7:36 a.m.	7/27/05 7:19 a.m.	23 hrs 43 min	Initial: 32" Hg Final: 3" Hg	108814	108990
SHA-Ground Floor*	EPA-TO-15	SHA Ground Floor	7/26/05 11:50 a.m.	7/27/05 11:44 a.m.	23 hrs 54 min	Initial: 30" Hg Final: 2" Hg	108680	108619
SHA-Ground Floor A*	EPA-TO-15	SHA Ground Floor (Duplicate)	7/26/05 11:49 a.m.	7/27/05 11:45 a.m.	23 hrs 56 min	Initial: 30" Hg Final: 1" Hg	108856	108616
Stanton Treatment Building 2nd Floor	EPA-TO-15	Stanton EPA Treatment Building- 2nd Floor	7/26/05 7:44 a.m.	7/27/05 7:21 a.m.	23 hrs 37 min	Initial: 32" Hg Final: 1.5" Hg	107007	108944
Stanton Treatment Building Catwalk	EPA-TO-15	EPA Treatment Building (Catwalk)	7/26/05 7:40 a.m.	7/27/05 7:21 a.m.	23 hrs 41 min	Initial: 30" Hg Final: 0.5" Hg	108689	108557

Notes: LIHA - Long Island Hebrew Academy

SHA - Sonia & Max Silverstein Hebrew Academy

\*Classroom 102 on South side of building

**Appendix B**

**Chain of Custody and Analytical Request Form**

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## DataChem Laboratories, Inc.

## CANISTER CHAIN-OF-CUSTODY AND FIELD DATA RECORD

Earthtec

Project/Job/Task:

Station - Indoor Air Sampling

No.:

07003

do not apply adhesive labels directly on Canisters  
 All tags are provided, attached to Canisters for your convenience, to apply adhesive labels

Serial No.:	Date Cleared	Initial Vacuum (inches of Hg vacuum)	VFR flow rate (ml/min)	Field Sampling (inches of Hg vacuum)	Final Vacuum after sampling (inches of Hg vacuum)	Client Sample Identification		Other Client Information	DataChem Labs use only
						Client Sample Identification	Other Client Information		
180	6/30/05	>250	not	30	13"	SHA-BECKNO LOT	SURFACE, 0-Snap		
007	7-5-05			32	1.5"	STANTON- FLOOR			
089	7-5-05			30	0.5"	STANTON- CATWALK			
050	7-5-05			30	1" <del>20.4</del>	SHA-BECKNO FLOR A	DUPPLICATE OF SHA-BECKNO FLOR		
014	7-8-05			32	3"	STANTON- CATWALK			
554	7-21-05		~3.0	not					
3619									
3947									
1827									
944									
Original Field Sample Chain-of-Custody									
Published By: (Signature)	Date/Time	Received By: (Signature)	Reason for Transfer/Storage Location						
John Hoyer	7-21-05 16:00	John Hoyer	Sampling						
Shipped by:	Date/Time	Received By: (Signature)	Reason for Transfer/Storage Location						
John Hoyer	7-21-05 14:00	John Hoyer	Sampling						

do not apply adhesive labels directly on Canisters  
 All tags are provided, attached to Canisters for your convenience, to apply adhesive labels

Return to:  
 DataChem Laboratories, Inc.  
 960 W. LeVoy Drive  
 Salt Lake City, UT 84123  
 800-356-9135

**DataChem Laboratories, Inc.**  
**CANISTER CHAIN-OF-CUSTODY AND FIELD DATA RECORD**

Client: Earthtec

Account No.: 02-0003

Project/Job/Task: Stanley - Idaho - A: Sampling

Please do not apply adhesive labels directly on Canisters  
 Manilla tags are provided, attached to Canisters for your convenience, to apply adhesive labels

Canister Serial No.:	Date Cleaned	Initial Vacuum (inches of Hg vacuum)	VFR flow rate (ml/min)	Initials:	Field Vacuum before sampling (inches of Hg vacuum)	Final Vacuum after sampling (inches of Hg vacuum)	Client Sample Identification	Other Client Information	DataChem Labs use only	
									Canister	Location
108019	7.5.05	>25.0	~3.0	10/05	30	~0.1	LIMA-BASEMENT	Rm 102 - Classification		
108080	6.30.05		~3.0		30	~2"	SIDE CABINETS	REAR FLANK AND BACK SIDE		
108090	7.5.05		~3.0		0	"	LEFT-SEGMENT A	DOWNSLOPE OF		
108090	7.14.05		~2.9		4	"	LIMA-SEGMENT A	LIMA-BASEMENT		
							LIMA-POOF TOP			
VFR Serial No.:										
108077	7.21.05		~3.0	10/05						
108014										
108057										
108990										
Original Field Sample Chain-of-Custody										
Relinquished By: (Signature)	Date/Time	Received By: (Signature)	Reason for Transfer/Storage Location							
Andrea Hough	7.21.05 / 16:00	John Doe	Sampling							
for Me										

Please do not apply adhesive labels directly on Canisters





**DATA  
CHEM**  
LABORATORIES, INC.

## ANALYTICAL REQUEST FORM

1.  REGULAR Status

RUSH Status Requested - ADDITIONAL CHARGE  
RESULTS REQUIRED BY \_\_\_\_\_

DATE

CONTACT DATACHEM LABS PRIOR TO SENDING SAMPLES

2. Date <u>7/26/05</u>	Purchase Order No. _____	4 ECC	4. Quote No. _____
3. Company Name <u>Earth Tech, Inc.</u>	Address <u>1243 Broad St., Suite 200</u>	DCL Project Manager _____	5. Sample Collection
Person to Contact <u>Dave Miller</u>	Telephone (732) <u>328-7011</u>	Sampling Site <u>Stanton - LTRA</u>	Industrial Process _____
Fax Telephone ( )	E-mail Address <u>d.miller@ECC.NET</u>	Date of Collection <u>7/26/05</u>	Time Collected _____
Billing Address (if different from above) <u>E.I.V. Environmental Chemical Corp.</u> <u>1243 Broad St., Suite 200</u> <u>Newark, NJ</u>	Date of Shipment <u>7/27/05</u>	Chain of Custody No. <u>1 of 1</u>	

### 6. REQUEST FOR ANALYSES

Laboratory Use Only	Client Sample Number	Matrix*	Sample Volume	ANALYSES REQUESTED - Use method number if known	Units**
	LIHA - Roof Top	Air	6 L Summa	EPA - TO - 15	ug/m <sup>3</sup>
	LIHA - Basement	Air	6 L Summa	EPA - TO - 15	ug/m <sup>3</sup>
	LIHA - Basement A	Air	6 L Summa	EPA - TO - 15	ug/m <sup>3</sup>
	SHA - Parking Lot	Air	6 L Summa	EPA - TO - 15	ug/m <sup>3</sup>
	Stanton - Parking Lot	Air	6 L Summa	EPA - TO - 15	ug/m <sup>3</sup>
	SHA - Ground Flr	Air	6 L Summa	EPA - TO - 15	ug/m <sup>3</sup>
	SHA - Ground Flr A	Air	7.1 L Summa	EPA - TO - 15	ug/m <sup>3</sup>
	Stanton - Front Blk. Flr	Air	6 L Summa	EPA - TO - 15	ug/m <sup>3</sup>
	Stanton - Front - Ctr	Air	6 L Summa	EPA - TO - 15	ug/m <sup>3</sup>

\* Specify: Solid sorbent tube, e.g. Charcoal; Filter type; Impinger solution; Bulk sample; Blood; Urine; Tissue; Soil; Water; Other

\*\* 1. ug/sample 2. mg/m<sup>3</sup> 3. ppm 4. % 5. (other) Please indicate one or more units in the column entitled Units\*\*

Comments Report in units ug/m<sup>3</sup>

LIHA - Basement A value #108827 only tested against 2 hrs (duplicata) Sampler shipped in two separate boxes.

Possible Contamination and/or Chemical Hazards \_\_\_\_\_

### 7. Chain of Custody (Optional)

Relinquished by	<u>James Mann</u>	Shipped to Lab	Date/Time	<u>7/16/05</u>	<u>14:00</u>
Received by			Date/Time		
Relinquished by			Date/Time		
Received by			Date/Time		
Relinquished by			Date/Time		
Received by			Date/Time		

## **Appendix C**

### **FedEx Airbills**

---



FedEx  
Tracking  
Number

851611551582

**1 From** Please print and press hard.  
**Date** 7-27-05 **Sender's FedEx Account Number** 237-442548  
**Sender's Name** James Kearns **Phone** (804) 283-5981  
**Company** Earth Tech Inc  
**Address** 110 Cottrell Mill Road  
**City** Great Neck **State** NY **ZIP** 11021  
**Dept./Floor/Suite/Room**

**2 Your Internal Billing Reference** 5442001  
First 24 characters will appear on invoice.

**3 To** **Recipient's Name** Sample Custodian **Phone** (800) 356-9135  
**Company** Data Chem Laboratories  
**Recipient's Address** 960 W. Levey Drive  
We cannot deliver to P.O. boxes or P.O. ZIP codes.  
**Address** To request a package be held at a specific FedEx location, print FedEx address here.  
**City** Salt Lake City **State** utah **ZIP** 84123  
**Dept./Floor/Suite/Room**

Try online shipping at [fedex.com](http://fedex.com)

By using this Airbill you agree to the service conditions on the back of this Airbill and in our current Service Guide, including terms that limit our liability.  
**Questions? Visit our Web site at [fedex.com](http://fedex.com)**  
or call 1.800.GoFedEx 1.800.463.3339.

RETAIN THIS COPY FOR YOUR RECORDS.

**Form ID No.** 0200

**4a Express Package Service**

<input checked="" type="checkbox"/> FedEx Priority Overnight Next business morning*	<input type="checkbox"/> FedEx Standard Overnight Next business afternoon*	<input type="checkbox"/> FedEx First Overnight Earliest next business morning delivery to select locations*
<input type="checkbox"/> FedEx 2Day Second business day*	<input type="checkbox"/> FedEx Express Saver Third business day*	<input type="checkbox"/> FedEx Envelope rate not available. Minimum charge: One-pound rate

**Packages up to 150 lbs.** \* To most locations

**4b Express Freight Service**

<input type="checkbox"/> FedEx 1Day Freight* Next business day**	<input type="checkbox"/> FedEx 2Day Freight Second business day**	<input type="checkbox"/> FedEx 3Day Freight Third business day**
---	--	---

**Packages over 150 lbs.** \* To most locations

**5 Packaging**

<input type="checkbox"/> FedEx Envelope*	<input type="checkbox"/> FedEx Pak* Includes FedEx Small Pak, FedEx Large Pak, and FedEx Sturdy Pak	<input type="checkbox"/> FedEx Box	<input type="checkbox"/> FedEx Tube	<input checked="" type="checkbox"/> Other
--	---	------------------------------------	-------------------------------------	---

\* Declared value limit \$300

**6 Special Handling**

<input type="checkbox"/> SATURDAY Delivery Available ONLY for FedEx Priority Overnight, FedEx 2Day, FedEx 1Day Freight, and FedEx 2Day Freight to select ZIP codes	<input type="checkbox"/> HOLD Weeklyday at FedEx Location NOT Available for FedEx First Overnight	<input type="checkbox"/> HOLD Saturday at FedEx Location Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations
--	--	---

**Does this shipment contain dangerous goods?**

<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes As per attached Shipper's Declaration	<input type="checkbox"/> Yes Shipper's Declaration not required	<input type="checkbox"/> Dry Ice Dry Ice, 9, UN 1845	<input type="checkbox"/> Cargo Aircraft Only
--	--	---	---	--

Dangerous goods (including Dry Ice) cannot be shipped in FedEx packaging.

**7 Payment Bill to:** Enter FedEx Acct. No. or Credit Card No. below.

<input checked="" type="checkbox"/> Sender Acct. No. in Section I will be billed.	<input type="checkbox"/> Recipient	<input type="checkbox"/> Third Party	<input type="checkbox"/> Credit Card	<input type="checkbox"/> Cash/Check
--	------------------------------------	--------------------------------------	--------------------------------------	-------------------------------------

**FedEx Acct. No.** Credit Card No.

**Total Packages** **Total Weight** **Total Declared Value\*** **Exp. Date**

**\$ .00**

\* Our liability is limited to \$100 unless you declare a higher value. See back for details.

**8 Sign to Authorize Delivery Without a Signature**

By signing you authorize us to deliver this shipment without obtaining a signature and agree to indemnify and hold us harmless from any resulting claims.

**467**

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**FedEx Use Only**

RETAIN THIS COPY FOR YOUR RECORDS.

**FedEx Express USAirbill**

**Tracking Number** 851611551571

**1 From** Please print and press hard.  
**Date** 7-27-05 **Sender's FedEx Account Number** 237-442548

**Sender's Name** James Kearns **Phone** (804) 283-5981

**Company** Earth Tech Inc

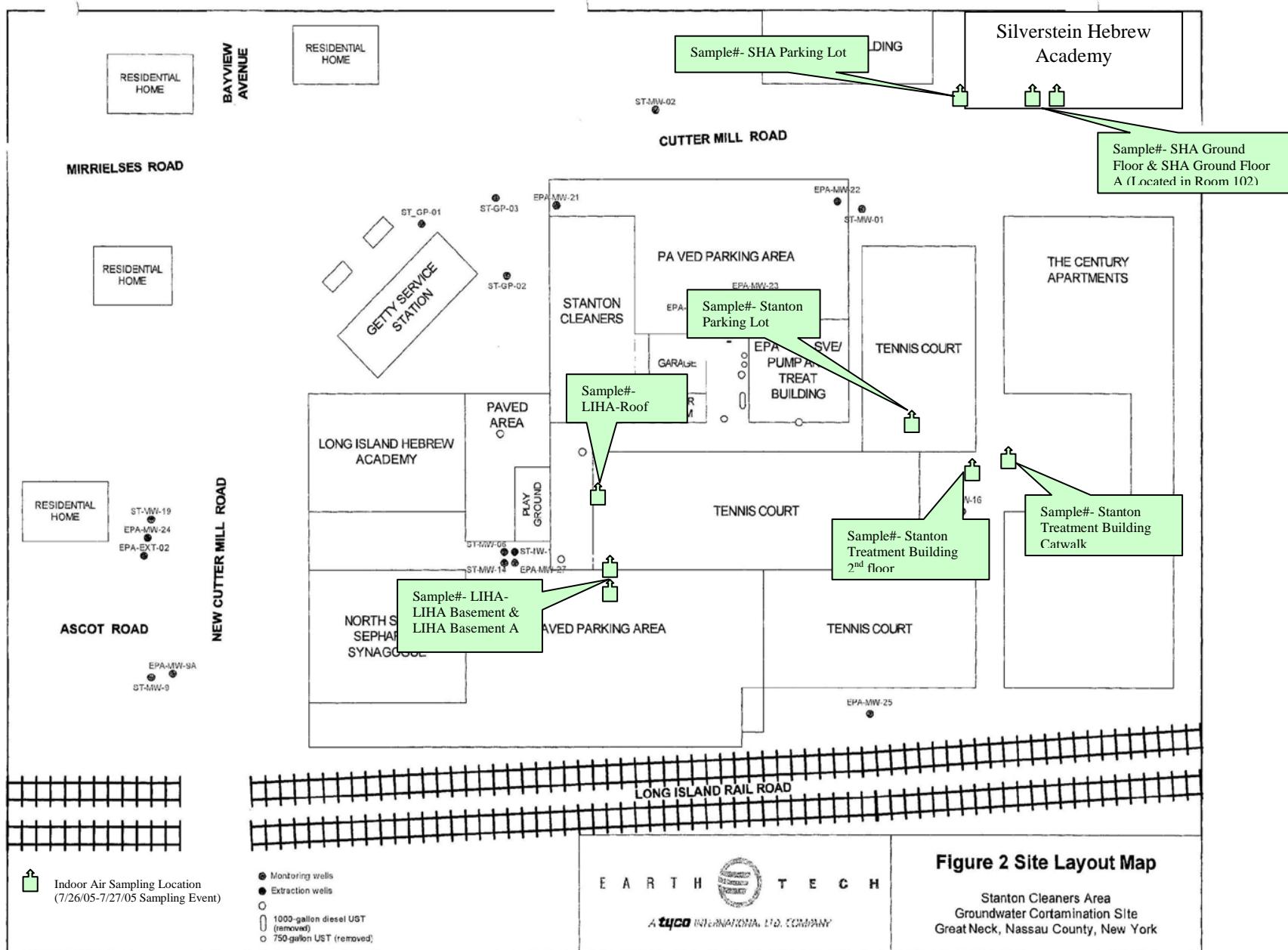
**Address** 110 Cottrell Mill Road  
**Dept./Floor/Suite/Room**

**City** Great Neck **State** NY **ZIP** 11021

**2 Your Internal Billing Reference** 5442001  
First 24 characters will appear on invoice.

**3 To** **Recipient's Name** Sample Custodian **Phone** (800) 356-9135  
**Company** Data Chem Laboratories

**Appendix D**  
**Indoor Air Sampling Location Map**



**Figure 2 Site Layout Map**

## **Appendix E**

### **Groundwater Treatment System Raw and Treated Analytical Data**

**Stanton Cleaners Analytical Tracking Table**  
**Influent and Effluent Groundwater Data**

Sample Location	ECC ID*	EPA ID	Date Collected	Compounds Detected	Result ( $\mu\text{g/L}$ )	Qualifier**
Influent	SC-01	B0001	10/27/2003	MTBE	2	J
				cis -1,2-Dichloroethene	2	J
				Trichloroethene (TCE)	3	J
				Toluene	3	J
				Tetrachloroethene	350 (D)	
Effluent	SC-04	B0002	10/27/2003	None		
Trip Blank	SC-TB	B0003	10/27/2003	Acetone	61	J
				Methylene chloride	2	J
Influent	SC-01	B0177	11/12/2003	Tetrachloroethene (PCE)	240	
				Chlorodifluoromethane	8.6	NJ
				1,2-Dichloroethene	3.3	NJ
Effluent	SC-04	B0178	11/12/2003	Chlorodifluoromethane	22	NJ
Influent Dup	SC-60	B0179	11/12/2003	Tetrachloroethene	250	
				Chlorodifluoromethane	29	NJ
				1,2-Dichloroethene	3.4	NJ
Trip Blank	SC-TB	B0180	11/12/2003	Tetrachloroethene	9.4	
				Chlorodifluoromethane	4.3	NJ
Influent	SC-01	B17J3	12/10/2003	Tetrachloroethene	290 (D)	
				cis -1,2-Dichloroethene	2	J
				Trichloroethene	3	J
Effluent	SC-04	B17J4	12/10/2003	None		
Influent Dup	SC-61	B17J5	12/10/2003	Tetrachloroethene	280 (D)	
				cis -1,2-Dichloroethene	2	J
				Trichloroethene	3	J
Trip Blank	SC-TB	B17J6	12/10/2003	MTBE	5	J
				Toluene	2	J
				Ethylbenzene	2	J
Influent	SC-01	B1000	1/12/2004	MTBE	2.7	
				cis -1,2-Dichloroethene	1.5	
				Trichloroethene	2.5	
				Tetrachloroethene	280	
Effluent	SC-04	B1001	1/12/2004	None		
Influent Dup	SC-62	B1002	1/12/2004	MTBE	2.6	
				cis -1,2-Dichloroethene	1.5	
				Trichloroethene	2.5	
				Tetrachloroethene	300	
Trip Blank	SC-TB	B1003	1/12/2004	Methylene chloride	0.6	K
				MTBE	3.7	
				Tetrachloroethene	7.9	
				m&p-Xylene	0.7	
Influent	SC-01	B17Z0	2/12/2004	cis -1,2-Dichloroethene	1.7	
				Trichloroethene	3.0	
				Tetrachloroethene	610 (D)	
				Unknown TIC	0.53	J
Effluent	SC-04	B17Z1	2/12/2004	Acetone	3.8	J
Influent Dup	SC-63	B17Z2	2/12/2004	Acetone	25	J
				cis -1,2-Dichloroethene	1.7	
				Trichloroethene	2.8	
				Tetrachloroethene	440 (D)	

**Stanton Cleaners Analytical Tracking Table**  
**Influent and Effluent Groundwater Data**

Sample Location	ECC ID*	EPA ID	Date Collected	Compounds Detected	Result (µg/L)	Qualifier**
Trip Blank	SC-TB	B17Z3	2/12/2004	Methylene chloride	0.16	J
				MTBE	4.7	
				Chloroform	0.26	J
				Tetrachloroethene	7.1	
				Xylene (total)	0.56	
				1,3-Dichlorobenzene	0.40	J
				1,4-Dichlorobenzene	0.38	J
				Unknown TIC	0.58	J
				Benzene, 1-ethyl-3-methyl-	0.72	JN
Influent	SC-01	B17Z6	3/10/2004	MTBE	2.7	
				cis-1,2-Dichloroethene	1.2	
				Trichloroethene	2.3	
				Tetrachloroethene	260	
Effluent	SC-04	B17Z7	3/10/2004	Tetrachloroethene	0.70	
Influent Dup	SC-64	B17Z8	3/10/2004	MTBE	2.8	
				cis-1,2-Dichloroethene	1.2	
				Trichloroethene	2.3	
				Tetrachloroethene	260	
Trip Blank	SC-TB	B17Z9	3/10/2004	Acetone	1.8	
				Toluene	0.50	
				Isobutane	41	NJ
Influent	SC-01	B1BS2	4/14/2004	MTBE	1.9	
				cis-1,2-Dichloroethene	0.83	
				Trichloroethene	1.5	
				Tetrachloroethene	380 (D)	
Effluent	SC-04	B1BS3	4/14/2004	Tetrachloroethene	1.9	
Influent Dup	SC-65	B1BS4	4/14/2004	Acetone	1.2	J
				MTBE	1.5	
				cis-1,2-Dichloroethene	0.67	J
				Trichloroethene	1.1	
				Tetrachloroethene	260 (D)	
Trip Blank	SC-TB	B1BS5	4/14/2004	Methylene chloride	0.17	J
				Chloroform	2.8	
				Bromodichloromethane	0.80	
Influent	SC-01	B1BS6	5/20/2004	MTBE	2.1	
				cis-1,2-Dichloroethene	1.0	
				Trichloroethene	1.8	
				Tetrachloroethene	190	
Effluent	SC-04	B1BS7	5/20/2004	Acetone	1.2	
Influent Dup	SC-66	B1BS8	5/20/2004	Acetone	0	
				MTBE	2.1	
				cis-1,2-Dichloroethene	0.9	
				Trichloroethene	1.6	
				Tetrachloroethene	200	
Trip Blank	SC-TB	B1BS9	5/20/2004	Acetone	1	
				Chloroform	0	
				Bromodichloromethane	0	
Influent	SC-01	B1BS6	6/15/2004	Carbon Disulfide	1.1	
				MTBE	2.7	
				cis-1,2-Dichloroethene	1.3	
				Trichloroethene	2.4	
				Tetrachloroethene	320	

**Stanton Cleaners Analytical Tracking Table**  
**Influent and Effluent Groundwater Data**

Sample Location	ECC ID*	EPA ID	Date Collected	Compounds Detected	Result ( $\mu\text{g/L}$ )	Qualifier**
Effluent	SC-04	B1BS7	6/15/2004	Tetrachloroethene	2.1	
Influent Dup	SC-67	B1BS8	6/15/2004	MTBE	2.3	
				cis-1,2-Dichloroethene	1.2	
				Trichloroethene	2.2	
				Tetrachloroethene	330	
Trip Blank	SC-TB	B1BS9	6/15/2004	None		
Influent	SC-01	B1FJ2	7/13/2004	Acetone	0.8	
				MTBE	2.3	
				cis-1,2-Dichloroethene	1.1	
				Trichloroethene	1.7	
				Tetrachloroethene	170	
Effluent	SC-04	B1FJ3	7/13/2004	Acetone	0.72	
				Tetrachloroethene	2	
Influent Dup	SC-67	B1FJ4	7/13/2004	MTBE	2.4	
				cis-1,2-Dichloroethene	1.1	
				Trichloroethene	1.8	
				Tetrachloroethene	160	
Trip Blank	SC-TB	B1FJ5	7/13/2004	Acetone	0.73	
				Acetic Acid, Ethyl Ester	2.5	NJ
Influent	SC-01	B1GH2	8/16/2004	MTBE	1.9	
				cis-1,2-Dichloroethene	0.7	
				Trichloroethene	1.5	
				Tetrachloroethene	200	
				Acetone	2	
Effluent	SC-04	B1GH3	8/16/2004	Tetrachloroethene	5.4	
				Acetone	1.6	
Influent Dup	SC-69	B1GH4	8/16/2004	Acetone	1.2	
				MTBE	2	
				cis-1,2-Dichloroethene	0.7	
				Trichloroethene	1.5	
				Tetrachloroethene	210	
Influent	SC-01			Chloromethane	0.80	
				Acetone	1.0	
				MTBE	1.5	
				cis-1,2-Dichloroethene	0.70	
				Trichloroethene	1.4	
				Tetrachloroethene	200	
Effluent	SC-04			Chloromethane	0.80	
				Acetone	2.1	
				Tetrachloroethene	1.7	
Influent Dup	SC-70			Acetone	1.0	
				MTBE	1.3	
				cis-1,2-Dichloroethene	0.60	
				Trichloroethene	1.4	
				Tetrachloroethene	210	
Trip Blank	SC-TB			Acetone	2.2	
				2-Butanone	1.5	
Influent	SC-01	B1LZ2	10/21/2004	Acetone	5	J
				Methylene chloride	0.2	J
				MTBE	0.82	
				cis-1,2-Dichloroethene	0.5	
				Trichloroethene	1.2	
				Tetrachloroethene	220	

**Stanton Cleaners Analytical Tracking Table**  
**Influent and Effluent Groundwater Data**

Sample Location	ECC ID*	EPA ID	Date Collected	Compounds Detected	Result (µg/L)	Qualifier**
Effluent	SC-04	B1LZ3	10/21/2004	Acetone	5	J
				Methylene chloride	0.5	UJ
				Tetrachloroethene	0.2	J
Influent Dup	SC-71	B1LZ4	10/21/2004	Acetone	5	J
				Methylene chloride	1.1	
				MTBE	1.1	
				cis-1,2-Dichloroethene	0.64	
				Trichloroethene	1.1	
				Tetrachloroethene	210	(D)
Trip Blank	SC-TB	B1LZ5	10/21/2004	Acetone	5.7	
				Methylene chloride	0.68	
				Toluene	0.39	J
Influent	SC-01	B1T22	11/17/2004	Acetone	3	J
				Methylene chloride	1.3	U
				MTBE	1.3	
				cis-1,2-Dichloroethene	0.64	
				Trichloroethene	1.2	
				Tetrachloroethene	170	(D)
Effluent	SC-04	B1T23	11/17/2004	Methyl Acetate	0.5	UJ
				Methylene chloride	0.5	U
Influent Dup	SC-72	B1T24	11/17/2004	Methylene chloride	0.85	U
				MTBE	1.3	
				cis-1,2-Dichloroethene	0.5	
				Trichloroethene	0.83	
				Tetrachloroethene	160	(D)
				Acetone	3	J
Trip Blank	SC-TB	B1T25	11/17/2004	Methyl Acetate	0.5	UJ
				Methylene chloride	0.46	J
				2-Butanone	2.4	J
				Tetrachloroethene	9.6	
				1,2,3-Trichlorobenzene	0.5	UJ
				MTBE	1.6	
Influent	SC-01	B1T79	12/15/2004	cis-1,2-Dichloroethene	0.45	J
				Trichloroethene (TCE)	1.0	J
				Tetrachloroethene	100	(D)
				Methylcyclohexane	1	UJ
				Bromomethane	1	UJ
				Bromodichloromethane	1	UJ
				Chloromethane	1	UJ
				1,2-Dichloroethene	1	UJ
				1,2-Dichloropropane	1	UJ
				2-Hexanone	10	R
				4-Methyl-2-pentanone	10	R
				Benzene	0.5	JB
Effluent	SC-04	B1T81	12/15/2004	1,2,4-Trichlorobenzene	0.5	JB
				1,2,3-Trichlorobenzene	0.5	JB
				Methyl tert-Butyl Ether	1.6	
Influent Dup	SC-73	B1T80	12/15/2004	cis-1,2-Dichloroethene	0.48	J
				Trichloroethene	0.98	J
				4-Methyl-2-pentanone	10	R
				Tetrachloroethene	98	(D)
				2-Hexanone	10	R

**Stanton Cleaners Analytical Tracking Table**  
**Influent and Effluent Groundwater Data**

Sample Location	ECC ID*	EPA ID	Date Collected	Compounds Detected	Result ( $\mu\text{g/L}$ )	Qualifier**
Trip Blank	SC-TB	B1T82	12/15/2004	Chloroform	0.1	J
				Cyclohexane	0.15	J
				Benzene	0.5	JB
				Toluene	0.21	J
Influent	SC-01	B1W00	1/21/2005	MTBE	1.5	
				cis-1,2-Dichloroethene	0.7	
				Trichloroethene (TCE)	1.4	
				Tetrachloroethene	160	
Effluent	SC-04	B1W02	1/21/2005	Acetone	1.8	
Influent Dup	SC-74	B1W01	1/21/2005	Methyl tert-Butyl Ether	1.4	
				cis-1,2-Dichloroethene	0.7	
				Trichloroethene	1.4	
				Tetrachloroethene	150	
				Acetone	10	
Trip Blank	SC-TB	B1W03	1/21/2005	Acetone	3.5	
Influent	SC-01	AG00197	2/3/2005	MTBE	1.4	
				cis-1,2-Dichloroethene	0.5	
				Trichloroethene (TCE)	1.1	
				Tetrachloroethene	140	
Effluent	SC-04	AG00198	2/3/2005	Acetone	1.2	
Influent Dup	SC-75	AG00199	2/3/2005	Methyl tert-Butyl Ether	1.5	
				cis-1,2-Dichloroethene	0.54	
				Trichloroethene	1.1	
				Tetrachloroethene	140	
				Acetone	1.1	
Trip Blank	SC-TB	AG00200	2/3/2005	Acetone	4.3	
				4-Methyl-2-pentanone	1.2	
Influent	SC-01	AG00468	3/9/2005	MTBE	1.4	
				Acetone	2.5	
				Trichloroethene (TCE)	1.1	
				Tetrachloroethene	130	
Effluent	SC-04	AG00469	3/9/2005	Acetone	1.8	
Influent Dup	SC-76	AG00470	3/9/2005	MTBE	1.4	
				Acetone	1.2	
				Trichloroethene	1.1	
				Tetrachloroethene	130	
				Acetone	1.7	
Trip Blank	SC-TB	AG00471	3/9/2005	Chloroform	1.6	
Influent (EPA-EXT-02)	SC-01	AG00825	4/22/2005	MTBE	1.7	
				2-Butanone	2.2	
				Acetone	2.4	
				Trichloroethene (TCE)	1.1	
				Tetrachloroethene	65	
Influent (EPA-EXT-4R)	SC-02	AG00826	4/22/2005	2-Butanone	2.5	
				Acetone	5.1	
				Trichloroethene (TCE)	1.3	
				Tetrachloroethene	9.5	
Effluent	SC-04	AG00827	4/22/2005	None		
Influent Dup (EPA-EXT-02) (EPA-EXT-4R)	SC-77	AG00828	4/22/2005	2-Butanone	2.8	
				Acetone	4.9	
				Trichloroethene	1.3	
				Tetrachloroethene	9	

**Stanton Cleaners Analytical Tracking Table**  
**Influent and Effluent Groundwater Data**

Sample Location	ECC ID*	EPA ID	Date Collected	Compounds Detected	Result ( $\mu\text{g/L}$ )	Qualifier**
Trip Blank	SC-TB	AG00829	4/22/2005	Acetone	1	
				Chloroform	1.7	
				Trichloroethene (TCE)	0.84	
Influent (EPA-EXT-02)	SC-01	AG01320	5/24/2005	MTBE	1.1	
				Trichloroethene (TCE)	1.0	
				Tetrachloroethene	100	
Influent (EPA-EXT-4R)	SC-02	AG01321	5/24/2005	Tetrachloroethene	8.8	
Effluent	SC-04	AG01322	5/24/2005	Acetone	1.3	
Influent Dup (EPA-EXT-02) (EPA-EXT-4R)	SC-78	AG01323	5/24/2005	Tetrachloroethene	8.6	
Trip Blank	SC-TB	AG01324	5/24/2005	Acetone	1.3	
				Chloroform	13	
				Bromodichloromethane	2.5	

**Notes:**

\* = Unless otherwise noted, samples collected from ECC ID SC-04 were used as the matrix spike / matrix spike duplicate sample.

\*\* = 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.

(D) = Detection from a dilution of the sample.

J = qualified as estimated

JN = Presumptive evidence for the presence of the material at an estimated value.

K = The reported value may be biased high.

$\mu\text{g/L}$  = micrograms per liter

MTBE = Tert-butyl-methyl-ether

NJ = TIC. The reported value is estimated.

TIC = Tentatively Identified Compound.

## **Appendix F**

### **Soil Vapor Extraction and Pump and Treat System Bi-weekly Air Monitoring Logs**

**STANTON CLEANERS AREA GROUNDWATER  
CONTAMINATION SITE  
Soil-Vapor Extraction and Pump and Treat System  
Bi-Weekly Air Monitoring Log**

Date: 7/25/05

Project # 70536

70536

	MultiRAE Plus PGM-50					VelociCalc Plus				
	VOC	CO	Oxygen	LEL	H2S	Temp.	Vac. Pre.	%RH	Dew pt.	Flow
Influent SVE	8.1	0	19.70%	0%	0	116.3	-0.01	23.30%	69.40	280
Post Air Stripper	0.0	0	20.90%	0%	0	60.2	N/A	92.80%	57.60	3.5
Post SVE Carbon	0.0	0	19.70%	0%	0	97.7	-0.009	36.50%	67.00	N/A
Post AS Carbon	0.0	0	20.90%	0%	0	64.2	-0.013	85.20%	59.00	135
Sub-Slab A	0.8	0	20.90%	0%	0	81.8	-0.002	68.00%	69.70	17
Sub-Slab B	1.1	0	20.90%	0%	0	82.4	-0.011	70.60%	71.20	3.5
Sub-Slab C	0.5	0	20.90%	0%	0	90.7	-0.01	70.10%	79.40	11.25
Background	0.0	0	20.90%	0%	0	78.1	N/A	71.50%	67.10	N/A
SVE-EXT-4R	1.2	0	20.90%	0%	0	85.9	-0.01	60.10%	70.30	1.85
Sub-Slab D										

**Equipment calibrated by:** R. Derrick, F. Mahalski

**Air monitoring collected by:** R. Derrick, F. Mahalski

**Air sample readings performed by:** R. Derrick, F. Mahalski

**Comments:**

- 1) Sub-Slab identifications altered during this event. What had previously been called Sub-Slab C is now SVE-EXT-4R as this sample portmonitored SVE-EXT-4R. Further details of the sub-slab monitoring points are included on the attached map.
- 2) Sub-slab sample ports online since 3/22/05
- 3) Sub-slab D blocked by vehicle therefore monitoring was not performed during this event.
- 4) New SVE well EPA-EXT-04 online since 11/4/04

VOC: Volatile Organic Compounds

CO: Carbon Monoxide

LEL: Lower Explosive Limit

ppm: parts per million

temperature: measured in degrees Fahrenheit

pressure: measured in inches of water (in/H<sub>2</sub>O), inches of mercury (in/Hg), or pounds per square inch (psi).

Flow: measured in cubic feet per minute (cfm)

%RH: relative humidity

Dew Pt.: dew point in degrees Farenheit

AS: Air Stripper

SVE: Soil Vapor Extraction System

N/A: not available/applicable

## **Appendix G**

### **Semi-Annual Groundwater Sampling Analytical Data**

## **Appendix H**

### **Historical Groundwater Level Monitoring Results (Ongoing)**

**HISTORICAL GROUNDWATER ELEVATIONS**  
**STANTON CLEANERS AREA GROUNDWATER CONTAMINATION SITE**  
**GREAT NECK, NASSAU COUNTY, NEW YORK**

Well ID	Top of PVC Elevation (ft msl)	10/29/2003		10/31/2003		11/22/03 - 11/23/03	
		DTW (ft BTOC)	Elevation (ft msl)	DTW (ft BTOC)	Elevation (ft msl)	DTW (ft BTOC)	Elevation (ft msl)
EPA-MW-11D	74.63	57.74	16.89	57.94	16.69	60.07	14.56
EPA-MW-21	84.13	66.70	17.43	66.14	17.99	66.86	17.27
EPA-MW-22	82.20	64.51	17.69	64.08	18.12	65.09	17.11
EPA-MW-23	82.83	64.97	17.86	64.54	18.29	78.61	4.22
EPA-MW-27	69.32	51.74	17.58	51.12	18.20	52.85	16.47
ST-MW-02	82.03	64.19	17.84	63.78	18.25	64.40	17.63
ST-MW-06	69.83	63.43	6.40	44.82	25.01	44.92	24.91
ST-MW-09	78.13	61.39	16.74	60.67	17.46	62.52	15.61
ST-MW-11	75.25	58.67	16.58	58.06	17.19	60.59	14.66
ST-MW-12	87.20	73.84	13.36	70.18	17.02	72.01	15.19
ST-MW-14	69.73	50.94	18.79	50.76	18.97	56.40	13.33
ST-MW-16	75.78	55.51	20.27	55.53	20.25	65.51	10
ST-MW-17	86.53	69.95	16.58	69.27	17.26	71.55	14.98
ST-MW-19	82.50	67.01	15.49	64.93	17.57	68.04	14.46
ST-MW-20	84.53	65.99	18.54	65.83	18.70	73.45	11.08

**Notes:**

ft msl - feet mean sea level

ft BTOC - feet below top of casing

-- - Not measured

**HISTORICAL GROUNDWATER ELEVATIONS**  
**STANTON CLEANERS AREA GROUNDWATER CONTAMINATION SITE**  
**GREAT NECK, NASSAU COUNTY, NEW YORK**

Well ID	Top of PVC Elevation (ft msl)	12/17/03 - 12/18/03		1/12/2004		2/26/2004	
		DTW (ft BTOC)	Elevation (ft msl)	DTW (ft BTOC)	Elevation (ft msl)	DTW (ft BTOC)	Elevation (ft msl)
EPA-MW-11D	74.63	59.00	15.63	57.52	17.11	56.50	18.13
EPA-MW-21	84.13	64.99	19.14	66.17	17.96	64.30	19.83
EPA-MW-22	82.20	63.03	19.17	63.99	18.21	61.90	20.30
EPA-MW-23	82.83	77.05	5.78	64.45	18.38	63.00	19.83
EPA-MW-27	69.32	51.75	17.57	51.22	18.10	50.50	18.82
ST-MW-02	82.03	63.25	18.78	64.03	18.00	62.03	20.00
ST-MW-06	69.83	43.10	26.73	45.74	24.09	44.40	25.43
ST-MW-09	78.13	61.50	16.63	--	--	60.00	18.13
ST-MW-11	75.25	59.23	16.02	62.10	13.15	60.90	14.35
ST-MW-12	87.20	72.00	15.20	70.27	16.93	60.50	26.70
ST-MW-14	69.73	55.05	14.68	NA	NA	48.70	21.03
ST-MW-16	75.78	64.18	11.60	54.99	20.79	53.00	22.78
ST-MW-17	86.53	69.99	16.54	69.40	17.13	67.25	19.28
ST-MW-19	82.50	67.21	15.29	--	--	65.25	17.25
ST-MW-20	84.53	71.56	12.97	63.51	21.02	61.75	22.78

**Notes:**

ft msl - feet mean sea level

ft BTOC - feet below top of casing

-- - Not measured

**HISTORICAL GROUNDWATER ELEVATIONS**  
**STANTON CLEANERS AREA GROUNDWATER CONTAMINATION SITE**  
**GREAT NECK, NASSAU COUNTY, NEW YORK**

Well ID	Top of PVC Elevation (ft msl)	3/29/2004		4/5/2004		5/19/2004	
		DTW (ft BTOC)	Elevation (ft msl)	DTW (ft BTOC)	Elevation (ft msl)	DTW (ft BTOC)	Elevation (ft msl)
EPA-MW-11D	74.63	60.00	14.63	60.36	14.27	60.30	14.33
EPA-MW-21	84.13	66.99	17.14	67.38	16.75	67.10	17.03
EPA-MW-22	82.20	61.90	20.30	65.00	17.20	64.98	17.22
EPA-MW-23	82.83	65.10	17.73	65.59	17.24	65.25	17.58
EPA-MW-27	69.32	52.08	17.24	52.84	16.48	53.10	16.22
ST-MW-02	82.03	63.99	18.04	64.90	17.13	64.87	17.16
ST-MW-06	69.83	45.60	24.23	46.24	23.59	46.25	23.58
ST-MW-09	78.13	62.80	15.33	--	--	62.00	16.13
ST-MW-11	75.25	60.00	15.25	60.85	14.40	60.46	14.79
ST-MW-12	87.20	72.22	14.98	72.22	14.98	72.12	15.08
ST-MW-14	69.73	56.99	12.74	57.87	11.86	58.13	11.60
ST-MW-16	75.78	54.68	21.10	55.48	20.30	55.09	20.69
ST-MW-17	86.53	70.25	16.28	71.76	14.77	71.80	14.73
ST-MW-19	82.50	66.00	16.50	--	--	65.78	16.72
ST-MW-20	84.53	71.45	13.08	73.78	10.75	73.65	10.88

**Notes:**

ft msl - feet mean sea level

ft BTOC - feet below top of casing

-- - Not measured

**HISTORICAL GROUNDWATER ELEVATIONS**  
**STANTON CLEANERS AREA GROUNDWATER CONTAMINATION SITE**

**GREAT NECK, NASSAU COUNTY, NEW YORK**

Well ID	Top of PVC Elevation (ft msl)	6/14/2004		7/21/04 - 7/22/04		8/2/2004	
		DTW (ft BTOC)	Elevation (ft msl)	DTW (ft BTOC)	Elevation (ft msl)	DTW (ft BTOC)	Elevation (ft msl)
EPA-MW-11D	74.63	59.97	14.66	59.75	14.88	59.75	14.88
EPA-MW-21	84.13	67.00	17.13	66.99	17.14	66.11	18.02
EPA-MW-22	82.20	64.78	17.42	64.50	17.70	64.33	17.87
EPA-MW-23	82.83	66.21	16.62	66.10	16.73	65.16	17.67
EPA-MW-27	69.32	53.05	16.27	52.98	16.34	54.86	14.46
ST-MW-02	82.03	65.11	16.92	65.00	17.03	59.85	22.18
ST-MW-06	69.83	45.99	23.84	45.66	24.17	44.11	25.72
ST-MW-09	78.13	62.00	16.13	61.79	16.34	--	--
ST-MW-11	75.25	60.40	14.85	60.39	14.86	60.50	14.75
ST-MW-12	87.20	72.29	14.91	72.20	15.00	71.36	15.84
ST-MW-14	69.73	58.55	11.18	58.34	11.39	55.56	14.17
ST-MW-16	75.78	55.09	20.69	55.01	20.77	54.85	20.93
ST-MW-17	86.53	71.52	15.01	71.46	15.07	70.80	15.73
ST-MW-19	82.50	65.00	17.50	64.77	17.73	--	--
ST-MW-20	84.53	73.44	11.09	73.25	11.28	71.66	12.87

**Notes:**

ft msl - feet mean sea level

ft BTOC - feet below top of casing

-- - Not measured

**HISTORICAL GROUNDWATER ELEVATIONS**  
**STANTON CLEANERS AREA GROUNDWATER CONTAMINATION SITE**  
**GREAT NECK, NASSAU COUNTY, NEW YORK**

Well ID	Top of PVC Elevation (ft msl)	9/28/04 - 9/29/04		10/12/04 -10/13/04		11/3/2004	
		DTW (ft BTOC)	Elevation (ft msl)	DTW (ft BTOC)	Elevation (ft msl)	DTW (ft BTOC)	Elevation (ft msl)
EPA-MW-11D	74.63	59.70	14.93	58.97	15.66	58.95	15.68
EPA-MW-21	84.13	66.75	17.38	66.50	17.63	66.41	17.72
EPA-MW-22	82.20	64.41	17.79	64.34	17.86	64.32	17.88
EPA-MW-23	82.83	65.11	17.72	65.00	17.83	64.87	17.96
EPA-MW-27	69.32	52.31	17.01	52.25	17.07	52.26	17.06
ST-MW-02	82.03	65.00	17.03	65.03	17.00	65.00	17.03
ST-MW-06	69.83	44.55	25.28	55.34	14.49	55.29	14.54
ST-MW-09	78.13	62.00	16.13	62.12	16.01	62.15	15.98
ST-MW-11	75.25	60.41	14.84	60.50	14.75	60.34	14.91
ST-MW-12	87.20	72.00	15.20	72.21	14.99	72.22	14.98
ST-MW-14	69.73	56.71	13.02	56.50	13.23	56.49	13.24
ST-MW-16	75.78	55.10	20.68	57.00	18.78	57.01	18.77
ST-MW-17	86.53	70.99	15.54	70.98	15.55	70.95	15.58
ST-MW-19	82.50	64.84	17.66	64.80	17.70	64.79	17.71
ST-MW-20	84.53	71.97	12.56	72.00	12.53	72.55	11.98

**Notes:**

ft msl - feet mean sea level

ft BTOC - feet below top of casing

-- - Not measured

**HISTORICAL GROUNDWATER ELEVATIONS**  
**STANTON CLEANERS AREA GROUNDWATER CONTAMINATION SITE**  
**GREAT NECK, NASSAU COUNTY, NEW YORK**

Well ID	Top of PVC Elevation (ft msl)	12/8/2004		1/3/2005		2/7/2005	
		DTW (ft BTOC)	Elevation (ft msl)	DTW (ft BTOC)	Elevation (ft msl)	DTW (ft BTOC)	Elevation (ft msl)
EPA-MW-11D	74.63	59.75	14.88	59.10	15.53	57.63	17.00
EPA-MW-21	84.13	66.61	17.52	65.67	18.46	65.80	18.33
EPA-MW-22	82.20	64.33	17.87	64.44	17.76	65.32	16.88
EPA-MW-23	82.83	65.16	17.67	65.10	17.73	64.44	18.39
EPA-MW-27	69.32	52.24	17.08	51.87	17.45	50.85	18.47
ST-MW-02	82.03	64.54	17.49	64.78	17.25	63.90	18.13
ST-MW-06	69.83	44.11	25.72	55.41	14.42	47.32	22.51
ST-MW-09	78.13	59.98	18.15	62.31	15.82	63.44	14.69
ST-MW-11	75.25	60.50	14.75	59.99	15.26	58.64	16.61
ST-MW-12	87.20	71.36	15.84	71.98	15.22	70.45	16.75
ST-MW-14	69.73	55.56	14.17	56.51	13.22	50.15	19.58
ST-MW-16	75.78	54.85	20.93	57.08	18.70	55.15	20.63
ST-MW-17	86.53	70.80	15.73	71.03	15.50	70.75	15.78
ST-MW-19	82.50	64.32	18.18	64.76	17.74	65.01	17.49
ST-MW-20	84.53	71.66	12.87	72.43	12.10	65.09	19.44

**Notes:**

ft msl - feet mean sea level

ft BTOC - feet below top of casing

-- - Not measured

**HISTORICAL GROUNDWATER ELEVATIONS**  
**STANTON CLEANERS AREA GROUNDWATER CONTAMINATION SITE**  
**GREAT NECK, NASSAU COUNTY, NEW YORK**

Well ID	Top of PVC	3/22/2005	4/11/2005	5/19/2005
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	Elevation (ft msl)	DTW (ft BTOC)	Elevation (ft msl)	DTW (ft BTOC)	Elevation (ft msl)	DTW (ft BTOC)	Elevation (ft msl)
EPA-MW-11D	74.63	60.00	14.63	60.99	13.64	61.00	13.63
EPA-MW-21	84.13	64.50	19.63	64.00	20.13	63.21	20.92
EPA-MW-22	82.20	64.55	17.65	65.12	17.08	65.43	16.77
EPA-MW-23	82.83	65.00	17.83	65.10	17.73	65.00	17.83
EPA-MW-27	69.32	51.67	17.65	51.60	17.72	51.33	17.99
ST-MW-02	82.03	63.99	18.04	63.89	18.14	63.40	18.63
ST-MW-06	69.83	55.40	14.43	55.42	14.41	55.32	14.51
ST-MW-09	78.13	61.20	16.93	61.78	16.35	61.72	16.41
ST-MW-11	75.25	60.10	15.15	60.00	15.25	59.99	15.26
ST-MW-12	87.20	72.00	15.20	71.21	15.99	71.12	16.08
ST-MW-14	69.73	56.20	13.53	56.33	13.40	56.34	13.39
ST-MW-16	75.78	57.00	18.78	57.10	18.68	57.30	18.48
ST-MW-17	86.53	70.78	15.75	70.00	16.53	59.90	26.63
ST-MW-19	82.50	63.23	19.27	63.00	19.50	63.00	19.50
ST-MW-20	84.53	71.32	13.21	71.21	13.32	71.71	12.82

**Notes:**

ft msl - feet mean sea level

ft BTOC - feet below top of casing

-- - Not measured

**HISTORICAL GROUNDWATER ELEVATIONS**  
**STANTON CLEANERS AREA GROUNDWATER CONTAMINATION SITE**  
**GREAT NECK, NASSAU COUNTY, NEW YORK**

Well ID	Top of PVC Elevation (ft msl)	6/15/2005		7/7/2005	
		DTW (ft BTOC)	Elevation (ft msl)	DTW (ft BTOC)	Elevation (ft msl)
EPA-MW-11D	74.63	58.70	15.93	58.51	16.12
EPA-MW-21	84.13	66.35	17.78	66.27	17.83
EPA-MW-22	82.20	63.83	18.37	63.78	18.42
EPA-MW-23	82.83	64.32	18.51	64.29	18.54
EPA-MW-27	69.32	51.45	17.87	51.35	17.97
ST-MW-02	82.03	--	--	--	--
ST-MW-06	69.83	45.70	24.13	45.90	23.93
ST-MW-09	78.13	63.45	14.68	63.29	14.84
ST-MW-11	75.25	--	--	--	--
ST-MW-12	87.20	71.02	16.18	70.71	16.49
ST-MW-14	69.73	55.08	14.65	54.99	14.74
ST-MW-16	75.78	54.54	21.24	54.71	21.07
ST-MW-17	86.53	70.35	16.18	70.17	16.36
ST-MW-19	82.50	66.82	15.68	66.89	15.61
ST-MW-20	84.53	71.20	13.33	71.07	13.46

**Notes:**

ft msl - feet mean sea level

ft BTOC - feet below top of casing

-- - Not measured

**Appendix I**

**Indoor Air Quality Analytical Data**

## **Appendix J**

### **Action List Dated July 2005**



A Tyco Infrastructure Services Company

## July 2005 ACTION LIST SUMMARY

PROJECT:	Stanton Cleaners	JOB NUMBER:	70536
LOCATION:	Great Neck, NY	DATE:	July 2005
CLIENT:	USACE / USEPA		
COMPLETED ITEMS		DATE PERFORMED	
IAQ sampling event		7/26/2005	
OUTSTANDING ITEMS		RECOMMENDED SOLUTION	
Upcoming MWs to be sampled week of August 29. MW sampling to include 28 locations for VOCs, and 15 locations for MNA monitoring (list per OSC) Replacement of circuit breaker panel. Installation of cage around radon blower at the Long Island Jewish Academy			