



# ecology and environment engineering, p.c.

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BUFFALO CORPORATE CENTER  
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January 9, 2014

Mr. William Welling, Project Manager  
New York State Department of Environmental Conservation  
Division of Environmental Remediation  
625 Broadway, 12th Floor  
Albany, New York 12233 - 7013

Re: Mr. C's Dry Cleaners Site, Contract # D007617, Site # 9-15-157  
December 2013 Operations, Maintenance, and Monitoring Report

Dear Mr. Welling:

Ecology and Environment Engineering, P.C. (EEEPC) is pleased to provide the December 2013 Operations, Maintenance, and Monitoring (OM&M) Report for the Mr. C's Dry Cleaners Site, NYSDEC Site # 9-15-157, located in East Aurora, New York. Copies of bi-monthly inspection reports prepared by EEEPC's subcontractor, Iyer Environmental Group, PLLC (IEG), are provided in Attachment A. Selected pages from the individual analytical data packages prepared by Spectrum Analytical Inc. (SAI), Warwick, Rhode Island are provided as Attachments B. The full analytical reports along with QA/QC information will be retained by EEEPC.

In review of the on-site treatment system operations, monitoring and maintenance for December 2013, EEEPC offers the following comments and highlights:

## Operational Summary

### Mr. C's Site – Remedial Operations Information

- Checklists for system inspections from IEG are provided as Attachment A for 12/02/13, 12/16/13, and 12/31/13. Based on inspection reports prepared by IEG, the remedial treatment system for the period above had a 89.66% operational up-time (Table 1) and the treatment of contaminated groundwater during that period totaling of 263,743 gallons (Table 2) for December 2013.
- Compliance samples were taken on December 10, 2013 (Attachment B) and the analytical results received on December 13, 2013 from SAI. The results comply with the daily maximum effluent discharge criteria requirements in the site specific SPDES Equivalency Permit (Table 3). Methyl tert-butyl ether was not detected in this month's influent sample. Cis-1,2,-dichloroethene, trichloroethene, and tetrachloroethene were detected at above criteria concentrations in the influent sample.

- The analytical results of the sample revealed the total volatile organic contaminant concentrations of the influent to be 345.0 µg/L or 345.0 ppb. Treated effluent has no detectible concentrations for any of the contaminants of concern. The summary of influent and effluent contaminant concentrations for the December 2013 sampling is presented in Table 4.
- The Mr. C's treatment system based on the total monthly flows has effectively removed 0.76 lb. of targeted contaminants from the groundwater below the site in the month of December 2013 and the cleanup effectiveness was 100%. The calculations and data for the month are presented in Table 5.
- Other System Work performed –
  - Bag filters were changed on December 9, 2013;
  - Agway shed removal;
    - Agway shed equipment was dropped off at NYSDEC South Cairo (McKenna Landfill) site on December 4, 2013.
    - AS/SVE equipment dropped off at the American Thermostat site in NYSDEC Region 4 on December 6, 2013.
  - IEG provided snow removed from front of Treatment Room and responded to AutoAlarm on December 28, 2013.
  - The system was down from December 28, 2013 to December 30, 2013 due to power outage and local area electric line problems. The system was restarted on December 31, 2013.
  - Equipment procured for the installation of a subslab depressurization unit in the Mr. C's treatment building. Installation and operations to be completed in January 2014.

#### **Mr. C's Site – Property Information**

- Contact information regarding the property owner and party leasing the Mr. C's building was provided to the NYSDEC. The information provided is as follows: Property owner (586 Main Street) – DelTora LLC – Owner - Mr. Paul Bendrowski – 231-313-1954 (Traverse City, MI) – Local Point of Contact – Bob Kowal - . Property Lease – Intrepid Automotive Partners – Dave Kern – 716-481-5703 (East Aurora, NY).

#### **Agway Site Remedial Information**

- Agway SVE shed and ancillary equipment disassembled and removed during December 2013.

#### **Subslab Depressurization Systems (SSDS) – First Presbyterian Church and 27 Whaley Ave. sites**

- Site inspection of the church facility on February 20, 2013, revealed that the south SSDS unit was shut off. System was switched back on by field staff. EEEPC to review changing of the switch for this fan to provide uninterrupted operations.
- Property owners at 27 Whaley Ave. have not returned our calls for inspection of the SSDS unit. EEEPC will continue to contact to obtain access for inspection.

### **Bioaugmentation Direct Push Injection Work**

- Procurement for obtaining a direct push subcontractor was performed in March 2013. The successful bidder was Nature's Way Environmental, Alden, NY.
- Part 1 of the bio-augmentation direct push injection work was performed by Nature's Way from May 20, through 31, 2013. Part 1 of the program was the injection of the Regensis HRC primer and 3-D Microemulsion. Oversight of the first for program performance and quality assurance of the scope of work was provided by EEEPC.
- The 1<sup>st</sup> progress monitoring sampling of the groundwater wells associated with the "pilot" bioaugmentation program was performed on July 1-2, 2013.
- Pumping Wells PW-5 and PW-7 still remain temporarily turned off due to close proximity to the injection locations of the "pilot" bio-augmentation program.
- Monthly monitoring and analyses to be performed for eight months to evaluate the effectiveness of the "pilot" installation on the groundwater from the local area monitoring wells. Interim status reports to be performed and issued by EEEPC.
- The second phase of the bio-injections (BDI Plus) was completed July 15-19, 2013. It is estimated to take a week to complete.
- The 2<sup>nd</sup> progress monitoring sampling of the groundwater wells associated with the "pilot" bioaugmentation program was performed on August 8-9, 2013.
- Status report on the performance of the "pilot" bio-augmentation program was issued to NYSDEC on August 29, 2013. Report evaluated the baseline sampling plus the two rounds of monthly monitoring.
- The monthly status sampling was performed on September 9 & 10, 2013.
- The monthly status sampling was performed on October 22-23, 2013.
- The monthly status sampling was performed on November 20-21, 2013.
- The updated performance report regarding the bioaugmentation work was issued on December 5, 2013.
- December sampling could not be performed due to high snow and freezing weather conditions occurring around the site.

### **Mr. C's and Agway Energy Usage Information**

- A copy of the site utility costs from the Mr. C's remedial operations for January through December 2013 are provided as Attachment C.

### **Soil Vapor Intrusion Investigation Program**

- Soil vapor intrusion investigation, surveys, and sampling were performed at three out four properties surrounding the Mr. C's site on March 6, 7, and 20, 2013. The three properties included the Mr. C's Indoor Air (586 Main Street), The Brownschidle building (578-580 Main Street), and the Doeing Building (572-576 Main Street). The Pitt property (19 Whaley Avenue) would not allow access.
- Analytical results have been received for all three locations and a final validated report was delivered to NYSDEC and NYSDOH on May 7, 2013.
- Letters issued from NYSDOH (May 28, 2013) to the property owners at 578-580 Main Street and 572-576 Main Street regarding the need to install mitigation systems on the property. Further discussions regarding the installation of the mitigation system will be performed with the NYSDEC PM.

**Mr. William Welling, Project Manager**

**January 9, 2013**

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- Field measurements of the basements at 578 Main Street and 572 Main Street for the installation of the SSDS units were performed by EEEPC engineering personnel in July and August. Drawings under internal review for submission to NYSDEC and the installation of SSDS units by the NYSDEC's proposed callout contractor.
- Letters for Phase 2 – SVII issued by NYSDEC on December 18, 2013 to twelve properties around the Mr. C's site. EEEPC will begin contacting the property owners to schedule soil vapor intrusion investigation work and testing.

**Site Management Plan**

- Issued the draft Site Management Plan (SMP) on December 28, 2012 for review and comment. The SMP was revised to be consistent with the new NYSDEC template format.
- Issued the final Mr. C's SMP on December 4, 2013.

If you have questions regarding the December 2013 OM&M report summary, please do not hesitate to contact me at 716-684-8060.

Very Truly Yours,  
**Ecology and Environment Engineering, P. C.**



Michael G. Steffan  
Project Manager

cc: D. Szymanski, Region 9, NYSDEC - Buffalo w/ attachments  
D. Iyer, IEG – w/attachments  
CTF- EN-003229-0001-03TTO

**Table 1**  
**Mr. C's Dry Cleaners Site Remediation**  
**Site #9-15-157**  
**System Operational Time**

Month	Reporting Hours	Operational Up-time
<b>(Up-time from inception to 12/31/12)</b>	<b>87,871.50</b>	<b>96.63%</b>
January 7, 2013 - February 4, 2013	576	85.71%
February 4, 2013 - March 4, 2013	594	88.39%
March 4, 2013 - April 3, 2013	720	100.00%
April 3, 2013 - May 6, 2013	792	100.00%
May 6, 2013 - June 3, 2013	672	100.00%
June 3, 2013 - July 1, 2013	672	100.00%
July 1, 2013 - August 14, 2013	648	61.36%
August 14, 2013 - September 5, 2013	528	100.00%
September 5, 2013 - September 30, 2013	600	100.00%
September 30, 2013 - November 4, 2013	840	100.00%
November 4, 2013 - December 2, 2013	672	100.00%
December 2, 2013 - December 31, 2013	624	89.66%
<b>Total Hours from System Startup '2/02'</b>	<b>95,809.50</b>	
<b>Average Operational Up-time from startup =</b>		<b>96.26%</b>
<b>Average Operational Up-time for 2013 =</b>		<b>92.39%</b>

**NOTES:**

1. Up-time based as percentage of total reporting hours.
2. Treatment system operated by the Tyree Organization Ltd. from 9/02 - 9/03.
3. Treatment system operated by O&M Enterprises Inc. from 10/03 - 7/07.
4. Treatment system operated by Iyer Environmental Group from 7/07 to present.

**Table 2**  
**Mr. C's Dry Cleaners Site Remediation**  
**Site #9-15-157**  
**Monthly Process Water Volumes**

<b>Month</b>	<b>Actual Period</b>	<b>Gallons (Treated Effluent)</b>
<b>Total - Inception to December 2012</b>	<b>9/5/02 - 12/4/12</b>	<b>118,436,077</b>
January 2013 <sup>3</sup>	1/7/13 - 2/4/13	261,527
February 2013 <sup>3</sup>	2/4/13 - 3/4/13	242,509
March 2013 <sup>3</sup>	3/4/13 - 4/3/13	321,888
April 2013 <sup>3</sup>	4/3/13 - 5/6/13	398,999
May 2013	5/6/13 - 6/3/13	304,452
June 2013	6/3/13 - 7/1/13	238,715
July 2013	7/1/13 - 8/14/13	255,356
August 2013	8/14/13 - 9/5/13	188,701
September 2013	9/5/13 - 9/30/13	211,448
October 2013	9/30/13 - 11/4/13	317,639
November 2013	11/4/13 - 12/2/13	262,044
December 2013	12/2/2013 - 12/31/2013	263,743
<b>Total Gallons Treated in 2013</b>		<b>3,267,021</b>
<b>Total Gallons Treated To Date:</b>		<b>121,703,098</b>

NOTES:

1. System operated by Tyree Organization Ltd. From 9/02 - 9/03.
2. System operated by O&M Enterprises from 10/03 - 7/07.
3. System operated by IEG PLLC from 7/07 - present.

**Table 3**  
**Mr. C's Dry Cleaners Site Remediation**  
**Site #9-15-157**  
**Effluent Discharge Criteria & Analytical Compliance Results**

Parameter/Analyte	Daily Maximum <sup>1</sup>	Units	December 13, 2013 - Effluent Analytical Values Compliance
Flow	N/A	gpd	10,144
Ph	6.0 - 9.0	standard units	8.30
1,1 Dichloroethene	10	µg/L	ND(<1.0)
1,1 Dichloroethane	10	µg/L	ND(<1.0)
cis-1,2-dichloroethene	10	µg/L	ND(<1.0)
Trichloroethene	10	µg/L	ND(<1.0)
Tetrachloroethene	10	µg/L	ND(<1.0)
Vinyl Chloride	10	µg/L	ND(<1.0)
Benzene	5	µg/L	ND(<1.0)
Ethylbenzene	5	µg/L	ND(<1.0)
Methylene Chloride	10	µg/L	ND(<1.0)
1,1,1 Trichloroethane	10	µg/L	ND(<1.0)
Toluene	5	µg/L	ND(<1.0)
Methyl-t-Butyl Ether (MTBE)	NA	ug/L	ND(<1.0)
o-Xylene <sup>2</sup>	5	µg/L	NA
m, p-Xylene <sup>2</sup>	10	µg/L	NA
Total Xylenes	NA	ug/L	ND(<1.0)
Iron, total	600	µg/L	NA <sup>9</sup>
Aluminum	4,000	µg/L	NA <sup>9</sup>
Copper	48	µg/L	NA <sup>9</sup>
Lead	11	µg/L	NA <sup>9</sup>
Manganese	2,000	µg/L	NA <sup>9</sup>
Silver	100	µg/L	NA <sup>9</sup>
Vanadium	28	µg/L	NA <sup>9</sup>
Zinc	230	µg/L	NA <sup>9</sup>
Total Dissolved Solids	850	mg/L	NA <sup>9</sup>
Total Suspended Solids	20	mg/L	NA <sup>9</sup>
Hardness	N/A	mg/L	420
Cyanide, Free	10	µg/L	NA <sup>9</sup>

**NOTES:**

1. "Daily Maximum" excerpted from Attachment E of Addendum I to the Construction Contract Documents dated October 2000.
2. Analytical report did not differentiate between o-Xylene and m, p-Xylene. Total Xylene value reported is given in each line.
3. Shaded cells indicate that analytical value exceeds the "Daily Maximum."
4. "ND" indicates that the compound was not detected and lists the practical quantitation limit in parentheses.
5. "NA" indicates that analyses were not performed and data is unavailable.
6. Average flows based on effluent readings December 2nd, 2013 through December 31st, 2013. Total gallons: 263,743 divided by 29 operating days.
7. "I" indicates an estimated value below the detection limit.
8. "B" indicates analyte found in the associated blank.
9. Removed from the required analysis list by NYSDEC Region 9 in February 2005.

**40** Indicates non-compliance with the NYSDEC effluent discharge requirements  
**NR** Indicates Not Reported by Lab

**Table 4**  
**Mr. C's Dry Cleaners Site Remediation**  
**NYSDEC Site #9-15-157**  
**December 2013 VOC Analytical Summary**

Compound	Based on the 12/10/13 Effluent Sampling Results				
	Influent Concentration*		Effluent Concentration*		Cleanup Efficiency**
	(ug/L)		(ug/L)		(%)
Acetone	ND (<5.0)	U	ND (<1.0)	U	NA
Benzene	ND (<1.0)	U	ND (<1.0)	U	NA
2-Butanone	ND (<5.0)	U	ND (<5.0)	U	NA
cis-1, 2-Dichloroethene	30		ND (<1.0)	U	100.00%
Chloroform	ND (<1.0)	U	ND (<1.0)	U	NA
Methylene chloride	ND (<1.0)	U	ND (<1.0)	U	NA
Methyl tert-butyl ether (MTBE)	ND (<1.0)	U	ND (<1.0)	U	NA
Tetrachloroethene (PCE)	300.0		ND (<1.0)	U	100.00%
Toluene	ND (<1.0)	U	ND (<1.0)	U	NA
Trichloroethene (TCE)	15.0		ND (<1.0)	U	100.00%
Carbon Disulfide	ND (<1.0)	U	ND (<1.0)	U	NA
1,1,2 Trichloro-1,2,2-trifluoroethane	ND (<1.0)	U	ND (<1.0)	U	NA
Cyclohexane	ND (<1.0)	U	ND (<1.0)	U	NA
trans-1,2-dichloroethene	ND (<1.0)	U	ND (<1.0)	U	NA
Chlorobenzene	ND (<1.0)	U	ND (<1.0)	U	NA
Methylcyclohexane	ND (<1.0)	U	ND (<1.0)	U	NA
Methyl acetate	ND (<1.0)	U	ND (<1.0)	U	NA
Total Xylenes	ND (<1.0)	U	ND (<1.0)	U	NA

• The 1<sup>st</sup> progress monitoring sampling of the groundwater wells associated with the "pilot" bioaugmentation program was performed on July 1-2, 2013.

345.0

0.00

100.00%

Notes:

1. "NA" = Not applicable
2. "U" = Compound analyzed, but was not detected. Detection limit in parentheses.
3. "DJ" or "J" indicates an estimated value below the practical quantitation limit but above the method detection limit.
4. Non-detect values are assumed to be equal to zero for calculation of monthly average concentrations.
5. "D" indicates the compound concentration was obtained from a secondary dilution analysis.
6. Acetone was not detected in the influent sample but detected in the effluent sample below quantitation limits (J qualifier) due to laboratory contamination. It is not a contaminant of concern.

\* (<50) - Detection Limit

\*\* Contaminants of Concern only



**Table 5**  
**Mr. C's Dry Cleaners Site Remediation**  
**Site #9-15-157**  
**Monthly VOCs Removed From Groundwater**

Month	Actual Period	Influent VOCs (µg/L)	Effluent VOCs (µg/L)	VOCs Removed (lbs.)
<b>Total pounds of VOCs removed from inception to December 2012 =</b>				<b>1556.45</b>
January 2013	01/7/13 - 2/4/13	1094.9	0.91	2.39
February 2013	2/4/13 - 3/4/13	1112.2	12.44	2.23
March 2013	3/4/13 - 4/3/13	1306.0	23.65	3.44
April 2013	4/3/13 - 5/6/13	1744.0	5.80	5.79
May 2013	5/6/13 - 6/3/13	1097.0	10.00	2.76
June 2013	6/3/13 - 7/1/13	103.1	6.87	0.19
July 2013	7/1/13 - 8/14/13	144.6	1.50	0.30
August 2013	8/14/13 - 9/5/13	117.6	2.12	0.18
September 2013	9/5/13 - 9/30/13	233.0	0.00	0.41
October 2013	9/30/13 - 11/4/13	407.1	2.40	1.08
November 2013	11/4/13 - 12/2/13	363.0	0.00	0.79
December 2013	12/2/13 - 12/31/13	345.0	0.00	0.76
<b>Total pounds of VOCs removed from inception =</b>				<b>1,576.78</b>
<b>Total pounds of VOCs removed in 2013 =</b>				<b>20.33</b>

**HISTORICAL NOTES:**

1. Calculations are based on monthly water samples and assumes samples are representative of the entire reporting period.
2. Calculations assume that non-detect values = 0 µg/L.
3. Total VOCs summations include estimated "J" values.
4. Calculations are based on effluent totalizer readings.
5. "Influent VOCs" and "Effluent VOCs" values given above is the summation of values for individual compounds given in monthly analytical reports.
6. Treatment system operated by Tyree Organization, Ltd. from 9/02 to 9/03.
7. Treatment system operated by O&M Enterprises from 10/03 to 7/07.
8. Treatment system operated by IEG from 7/07 to present.

**CONVERSIONS:**

1 pound = 453.5924 grams  
1 gallon = 3.785 liters

**Based on the Analytical Results from Each Month:**

Pounds of VOCs removed calculated by the following formula:

$$(VOCs_{Influent} - VOCs_{Effluent})(\mu g/L) \cdot (1g/10^6 \mu g) \cdot (1 lb/453.5924 g) \cdot (Monthly\ process\ water)(gal) \cdot (3.785 L/gallon)$$

**Attachment A**  
**IEG Weekly Inspection Reports**  
**December 2013**

**Including:**

12/2/13

12/16/13

12/31/13

**MR. C's DRY CLEANERS SITE**  
**NYSDEC Site #9-15-157**  
**OM&M: SITE INSPECTION FORM**

DATE: 2-Dec-13 ACTIVITIES: Site Inspection

INSPECTION PERSONNEL: R. Allen OTHER PERSONNEL: Ramsey Renovations

WEATHER CONDITIONS: Cloudy, cool OUTSIDE TEMPERATURE (° F): 34

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ARE WELL PUMPS OPERATING IN AUTO: YES:  NO:  If "NO", provide explanation below

PW-6 is OFF due to maintenance problems.

PW-5 and PW-7 are OFF due to injection operation.

PROVIDE WATER LEVEL READINGS ON CONTROL PANEL

RW-1	ON: <input type="checkbox"/>	OFF: <input checked="" type="checkbox"/>	<u>7</u> ft	PW-5	ON: <input checked="" type="checkbox"/>	OFF: <input type="checkbox"/>	<u>12</u> ft
PW-2	ON: <input type="checkbox"/>	OFF: <input checked="" type="checkbox"/>	<u>5</u> ft	PW-6	ON: <input type="checkbox"/>	OFF: <input checked="" type="checkbox"/>	<u>65507</u> ft
PW-3	ON: <input type="checkbox"/>	OFF: <input checked="" type="checkbox"/>	<u>7</u> ft	PW-7	ON: <input checked="" type="checkbox"/>	OFF: <input type="checkbox"/>	<u>13</u> ft
PW-4	ON: <input checked="" type="checkbox"/>	OFF: <input type="checkbox"/>	<u>6</u> ft	PW-8	ON: <input type="checkbox"/>	OFF: <input checked="" type="checkbox"/>	<u>6</u> ft

EQUALIZATION TANK: 5 ft Last Alarm D/T/Condition: 11/27/13 Air Stripper Low Air

NOTES: \_\_\_\_\_

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INFLUENT FLOW RATE: 24 gpm INFLUENT TOTALIZER READING 1,133,409.0 gallons

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SEQUESTERING AGENT DRUM LEVEL: 24 inches (x 1.7=) AMOUNT OF AGENT REMAINING: 41 gallons

SEQUESTERING AGENT FEED RATE: 4.0 ml/min METERING PUMP PRESSURE: 3.0 psi

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		Top	Bottom		Top	Bottom
BAG FILTER PRESSURES:	LEFT:	<u>0</u>	<u>0</u> psi	RIGHT:	<u>11 - 7</u>	<u>0</u> psi

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INFLUENT FEED PUMP IN USE: #1  #2  INFLUENT PUMP PRESSURE: 13 psi

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AIR STRIPPER BLOWER IN USE: #1  #2  AIR STRIPPER PRESSURE: 31.0 in. H<sub>2</sub>O

AIR STRIPPER DIFFERENTIAL PRESSURE: 0.17 in. H<sub>2</sub>O DISCHARGE PRESSURE: 0.4 in. H<sub>2</sub>O

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EFFLUENT PUMP IN USE: #1  #2  EFFLUENT FEED PUMP PRESSURE: 4.0 psi

EFFLUENT FLOW RATE: 118 gpm EFFLUENT TOTALIZER READING: 73,018,585 544450 gallons

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ARE BUILDING HEATERS IN USE? YES:  NO:  INSIDE TEMPERATURE (° F): 60

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IS SUMP PUMP IN USE: YES:  NO:  ARE ANY LEAKS PRESENT? YES:  NO:

WATER LEVEL IN SUMP: 6.0 in. TREATMENT BUILDING CLEAN & ORGANIZED? YES:  NO:

**MR. C's DRY CLEANERS SITE**  
**NYSDEC Site #90150157**  
**SITE INSPECTION FORM**

2-Dec-13

SAMPLES COLLECTED? YES: \_\_\_\_\_ NO:   √  

Sample ID	Time of Sampling	pH	Turbidity	Temp.	Sp. Cond.
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AIR STRIPPER INFLUENT: \_\_\_\_\_

AIR STRIPPER EFFLUENT: \_\_\_\_\_

IS THERE EVIDENCE OF TAMPERING/VANDALISM OF WELLS: ? YES: \_\_\_\_\_ NO:   √  

WERE MANHOLES INSPECTED? YES:   √   NO: \_\_\_\_\_

WERE ELECTRICAL BOXES INSPECTED? YES:   √   NO: \_\_\_\_\_

IS WATER PRESENT IN ANY MANHOLES OR ELECTRICAL BOXES? YES:   √   NO: \_\_\_\_\_

If yes, provide manhole/electric box ID and description of any corrective measures below:

**INCLUDE REMARKS & DESCRIBE ANY OTHER SYSTEM MAINTENANCE PERFORMED ON MR. C's SITE**

Remarks: Ball valve near Equalizer Tank has slow leak.

Air Stripper exhaust leaks.

Other Actions:

**AGWAY**

SYSTEM VACUUM: \_\_\_\_\_ in. H<sub>2</sub>O

AIR PRESSURE: \_\_\_\_\_ psi

SP-1: \_\_\_\_\_ scfm \_\_\_\_\_ psi      SP-5 \_\_\_\_\_ scfm \_\_\_\_\_ psi

SP-2: \_\_\_\_\_ scfm \_\_\_\_\_ psi      SP-6 \_\_\_\_\_ scfm \_\_\_\_\_ psi

SP-3: \_\_\_\_\_ scfm \_\_\_\_\_ psi      SP-7 \_\_\_\_\_ scfm \_\_\_\_\_ psi

SP-4: \_\_\_\_\_ scfm \_\_\_\_\_ psi      SP-8 \_\_\_\_\_ scfm \_\_\_\_\_ psi

**INCLUDE REMARKS & DESCRIBE ANY OTHER SYSTEM MAINTENANCE PERFORMED ON AGWAY SITE**

Remarks: Agway Shed equipment is demobilized.

Other Actions: Delivered equipment inside shed to American Thermostat site in South Cairo, NY.

Prepared shed for transport. Transported shed to Waste Management of New York - Albion.

**MR. C's DRY CLEANERS SITE**  
**NYSDEC Site #9-15-157**  
**OM&M: SITE INSPECTION FORM**

DATE: 16-Dec-13 ACTIVITIES: Site Inspection

INSPECTION PERSONNEL: R. Allen OTHER PERSONNEL: \_\_\_\_\_

WEATHER CONDITIONS: Partly cloudy, cold OUTSIDE TEMPERATURE (°F): 20

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ARE WELL PUMPS OPERATING IN AUTO: YES: \_\_\_\_\_ NO:  If "NO", provide explanation below

PW-6 is OFF due to maintenance problems.

PW-5 and PW-7 are OFF due to Injection operation.

PROVIDE WATER LEVEL READINGS ON CONTROL PANEL

RW-1	ON: _____	OFF: <input checked="" type="checkbox"/>	<u>8</u> ft	PW-5	ON: <input checked="" type="checkbox"/>	OFF: _____	<u>12</u> ft
PW-2	ON: _____	OFF: <input checked="" type="checkbox"/>	<u>5</u> ft	PW-6	ON: _____	OFF: <input checked="" type="checkbox"/>	<u>65507</u> ft
PW-3	ON: _____	OFF: <input checked="" type="checkbox"/>	<u>4</u> ft	PW-7	ON: <input checked="" type="checkbox"/>	OFF: _____	<u>13</u> ft
PW-4	ON: <input checked="" type="checkbox"/>	OFF: _____	<u>7</u> ft	PW-8	ON: _____	OFF: <input checked="" type="checkbox"/>	<u>4</u> ft

EQUALIZATION TANK: 5 ft Last Alarm D/T/Condition: 12/10/13 Air Stripper Low Level

NOTES: \_\_\_\_\_

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INFLUENT FLOW RATE: 52 gpm INFLUENT TOTALIZER READING 1,342,311.0 gallons

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SEQUESTERING AGENT DRUM LEVEL: 15 Inches (x 1.7=) AMOUNT OF AGENT REMAINING: 25.5 gallons

SEQUESTERING AGENT FEED RATE: 4.0 ml/min METERING PUMP PRESSURE: 4.0 psi

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		Top	Bottom		Top	Bottom
BAG FILTER PRESSURES:	LEFT:	<u>0</u>	<u>0</u> psi	RIGHT:	<u>6</u>	<u>0</u> psi

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INFLUENT FEED PUMP IN USE: #1  #2 \_\_\_\_\_ INFLUENT PUMP PRESSURE: 13 psi

---

AIR STRIPPER BLOWER IN USE: #1  #2 \_\_\_\_\_ AIR STRIPPER PRESSURE: 32.0 in. H<sub>2</sub>O

AIR STRIPPER DIFFERENTIAL PRESSURE: 0.16 in. H<sub>2</sub>O DISCHARGE PRESSURE: 0.4 in. H<sub>2</sub>O

---

EFFLUENT PUMP IN USE: #1 \_\_\_\_\_ #2  EFFLUENT FEED PUMP PRESSURE: 4.0 psi

EFFLUENT FLOW RATE: 120 gpm EFFLUENT TOTALIZER READING: 731,504 677230 gallons

---

ARE BUILDING HEATERS IN USE? YES:  NO: \_\_\_\_\_ INSIDE TEMPERATURE (°F): 56

---

IS SUMP PUMP IN USE: YES:  NO: \_\_\_\_\_ ARE ANY LEAKS PRESENT? YES:  NO: \_\_\_\_\_

WATER LEVEL IN SUMP: 6.0 in. TREATMENT BUILDING CLEAN & ORGANIZED? YES:  NO: \_\_\_\_\_

**MR. C's DRY CLEANERS SITE**  
**NYSDEC Site #90150157**  
**SITE INSPECTION FORM**

16-Dec-13

SAMPLES COLLECTED? YES: \_\_\_\_\_ NO:   √  

	Sample ID	Time of Sampling	pH	Turbidity	Temp.	Sp. Cond.
AIR STRIPPER INFLUENT:	_____	_____	_____	_____	_____	_____
AIR STRIPPER EFFLUENT:	_____	_____	_____	_____	_____	_____

IS THERE EVIDENCE OF TAMPERING/VANDALISM OF WELLS? YES: \_\_\_\_\_ NO:   √  

WERE MANHOLES INSPECTED? YES:   √   NO: \_\_\_\_\_

WERE ELECTRICAL BOXES INSPECTED? YES:   √   NO: \_\_\_\_\_

IS WATER PRESENT IN ANY MANHOLES OR ELECTRICAL BOXES? YES: \_\_\_\_\_ NO:   √  

If yes, provide manhole/electric box ID and description of any corrective measures below:

Most MWs and UEs are covered with ice and snow.

**INCLUDE REMARKS & DESCRIBE ANY OTHER SYSTEM MAINTENANCE PERFORMED ON MR. C's SITE**

Remarks: Bail valve near Equalizer Tank has slow leak.

Air Stripper exhaust leaks.

Other Actions: Shoveled snow in front of Treatment Room.

**AGWAY**

SYSTEM VACUUM: _____ In. H <sub>2</sub> O			AIR PRESSURE: _____ psi		
SP-1: _____	scfm _____	psi _____	SP-5 _____	scfm _____	psi _____
SP-2: _____	scfm _____	psi _____	SP-6 _____	scfm _____	psi _____
SP-3: _____	scfm _____	psi _____	SP-7 _____	scfm _____	psi _____
SP-4: _____	scfm _____	psi _____	SP-8 _____	scfm _____	psi _____

**INCLUDE REMARKS & DESCRIBE ANY OTHER SYSTEM MAINTENANCE PERFORMED ON AGWAY SITE**

Remarks: Electric Panel, SVE pipes, SAS pipes and plywood enclosure remain on site.

Other Actions:

**MR. C's DRY CLEANERS SITE**  
**NYSDEC Site #9-15-157**  
**OM&M: SITE INSPECTION FORM**

DATE: 31-Dec-13 ACTIVITIES: Site Inspection

INSPECTION PERSONNEL: R. Allen OTHER PERSONNEL: \_\_\_\_\_

WEATHER CONDITIONS: Snow, cold OUTSIDE TEMPERATURE (°F): 20

---

ARE WELL PUMPS OPERATING IN AUTO: YES: \_\_\_\_\_ NO:  If "NO", provide explanation below

PW-6 is OFF due to maintenance problems.

PW-5 and PW-7 are OFF due to Injection operation.

**PROVIDE WATER LEVEL READINGS ON CONTROL PANEL**

RW-1	ON: _____	OFF: <input checked="" type="checkbox"/>	<u>6</u> ft	PW-5	ON: <input checked="" type="checkbox"/>	OFF: _____	<u>13</u> ft
PW-2	ON: _____	OFF: <input checked="" type="checkbox"/>	<u>7</u> ft	PW-6	ON: _____	OFF: <input checked="" type="checkbox"/>	<u>65507</u> ft
PW-3	ON: _____	OFF: <input checked="" type="checkbox"/>	<u>3</u> ft	PW-7	ON: <input checked="" type="checkbox"/>	OFF: _____	<u>14</u> ft
PW-4	ON: _____	OFF: <input checked="" type="checkbox"/>	<u>4</u> ft	PW-8	ON: _____	OFF: <input checked="" type="checkbox"/>	<u>5</u> ft

**EQUALIZATION TANK:** 5 ft      Last Alarm DT/Condition: 12/30/13 Air Stripper Influent #1 Overload

NOTES: \_\_\_\_\_

---

INFLUENT FLOW RATE: 13 gpm      INFLUENT TOTALIZER READING 1,549,981.0 gallons

---

SEQUESTERING AGENT DRUM LEVEL: 10 Inches      (x 1.7=)      AMOUNT OF AGENT REMAINING: 17 gallons

SEQUESTERING AGENT FEED RATE: 4.0 ml/min      METERING PUMP PRESSURE: 3.0 psi

---

		Top	Bottom		Top	Bottom
BAG FILTER PRESSURES:	LEFT:	<u>0</u>	<u>0</u> psi	RIGHT:	<u>14 - 7</u>	<u>0</u> psi

---

INFLUENT FEED PUMP IN USE: #1  #2 \_\_\_\_\_      INFLUENT PUMP PRESSURE: 13 psi

---

AIR STRIPPER BLOWER IN USE: #1  #2 \_\_\_\_\_      AIR STRIPPER PRESSURE: 30.0 in. H<sub>2</sub>O

AIR STRIPPER DIFFERENTIAL PRESSURE: 0.14 in. H<sub>2</sub>O      DISCHARGE PRESSURE: 0.4 in. H<sub>2</sub>O

---

EFFLUENT PUMP IN USE: #1 \_\_\_\_\_ #2       EFFLUENT FEED PUMP PRESSURE: 4.0 psi

EFFLUENT FLOW RATE: 0.14 gpm      EFFLUENT TOTALIZER READING: 73,282,328      810180 gallons

---

ARE BUILDING HEATERS IN USE? YES:  NO: \_\_\_\_\_      INSIDE TEMPERATURE (°F): 58

---

IS SUMP PUMP IN USE: YES:  NO: \_\_\_\_\_      ARE ANY LEAKS PRESENT? YES:  NO: \_\_\_\_\_

WATER LEVEL IN SUMP: 6.5 in.      TREATMENT BUILDING CLEAN & ORGANIZED? YES:  NO: \_\_\_\_\_

**MR. C's DRY CLEANERS SITE**  
**NYSDEC Site #90150157**  
**SITE INSPECTION FORM**

31-Dec-13

SAMPLES COLLECTED? YES: \_\_\_\_\_ NO:   √  

	Sample ID	Time of Sampling	pH	Turbidity	Temp.	Sp. Cond.
AIR STRIPPER INFLUENT:	_____	_____	_____	_____	_____	_____
AIR STRIPPER EFFLUENT:	_____	_____	_____	_____	_____	_____

IS THERE EVIDENCE OF TAMPERING/VANDALISM OF WELLS: ? YES: \_\_\_\_\_ NO:   √    
 WERE MANHOLES INSPECTED? YES:   √   NO: \_\_\_\_\_  
 WERE ELECTRICAL BOXES INSPECTED? YES:   √   NO: \_\_\_\_\_  
 IS WATER PRESENT IN ANY MANHOLES OR ELECTRICAL BOXES? YES: \_\_\_\_\_ NO:   √  

If yes, provide manhole/electric box ID and description of any corrective measures below:

Most MWs and UEs are covered with snow.

**INCLUDE REMARKS & DESCRIBE ANY OTHER SYSTEM MAINTENANCE PERFORMED ON MR. C's SITE**

Remarks: Ball valve near Equalizer Tank has slow leak.  
 Air Stripper exhaust leaks.

Other Actions:

**AGWAY**

SYSTEM VACUUM: _____ in. H <sub>2</sub> O			AIR PRESSURE: _____ psi		
SP-1:	_____ scfm	_____ psi	SP-5	_____ scfm	_____ psi
SP-2:	_____ scfm	_____ psi	SP-6	_____ scfm	_____ psi
SP-3:	_____ scfm	_____ psi	SP-7	_____ scfm	_____ psi
SP-4:	_____ scfm	_____ psi	SP-8	_____ scfm	_____ psi

**INCLUDE REMARKS & DESCRIBE ANY OTHER SYSTEM MAINTENANCE PERFORMED ON AGWAY SITE**

Remarks: Electric Panel, SVE pipes, SAS pipes and plywood enclosure remain on site.

Other Actions:



# Mr. C's CLEANERS OM&M

## SUMMARY OF FIELD ACTIVITIES BY IEG - 12/2013

DATE	ACTIVITY
2-Dec	OM&M Weekly Inspection and office work. Pickup NYSDEC filters at Niagara St site.
3-Dec	Load Niagara St site filters and Agway Shed equipment into rented cargo van. Drop off NYSDEC filters at Vestal, NY site. Drive to E. Durham, NY.
4-Dec	Drop off Agway Shed equipment at NYSDEC South Cairo site. Return cargo van to Orchard Park, NY.
5-Dec	Prepare Agway Shed for transport. End of month summaries.
6-Dec	Load Agway Shed onto rented trailer. Drop off shed at NYSDEC Albion site. Return rented pickup truck and trailer to Orchard Park, NY
9-Dec	OM&M Weekly Inspection. UM office work.
10-Dec	Sampling. Change bag filters. Instal vent cover over man door.
12-Dec	UM office work
15-Dec	Empty drip buckets. Shovel snow in front of Treatment Room.
16-Dec	OM&M Weekly Inspection.
18-Dec	OM&M office work.
19-Dec	Empty drip buckets. Shovel snow in front of Treatment Room. Get snow plowing information.
23-Dec	OM&M Weekly Inspection. Change bag filters. Shovel snow off of MWs. Get supplies.
24-Dec	OM&M office work.
27-Dec	Empty drip buckets. Shovel snow in front of Treatment Room. Install repaired wheel onto Dolly.
28-Dec	Respond to AutoAlarm.
30-Dec	Restart system
31-Dec	OM&M Weekly Inspection. Shovel snow off of MWs. End of month summaries.

**Mr. C's CLEANERS OM&M**  
**STATUS OF FIELD ACTIVITIES BY IEG - 12/2013**

ACTIVITY	DESCRIPTION	COMPLETION DATE/STATUS
PW-4 Well Repair and Level	Asphalt around PW-4 well has sunk, due to collapse of corroded inner ring. Replace inner ring and bring parking lot up to level with asphalt patch.	Aug-13
PW-4 UE Level	Asphalt around Underground Enclosure has sunk, leaving it vulnerable to damage. Bring parking lot up to level with asphalt patch.	in progress
Rebuild JAC Pump as needed	Jesco America Corp recommends rebuilding the Redux pump when needed. Purchased rebuild kit.	in progress
Brace Effluent Pipe	David Szymanski (NYSDEC) inspected Treatment Room and said that the effluent pipe should be braced in (3) places to the north wall.	in progress
Inspect and clean Manholes	Inspect manholes near operating pumps. Pump out water in manholes and clean out remaining sediment and other material.	in progress
Trim Broken Piezometers	Many of the piezometers are broken. Measuring water levels is not precise when a pipe is broken. Identify and trim all broken piezometers.	in progress
Cool Treatment Room	Temperature in Treatment Room is well above 90 degrees during the summer months. Need to increase outside air inflow to the room.	in progress
Replace Air Stripper Exhaust	Present Air Stripper exhaust is very heavy and leaks moisture. Replace with lighter system.	in progress
Demobilize Agway Shed	Remove all equipment from shed and deliver to owner/recycle/dispose as needed; dismantle electrical installations; disassemble/remove shed structure/base.	in progress
PW-7 pitless adapter	Pitless adapter does not seal well. Repair or replace pitless adapter	in progress
PW-8 pitless adapter	Pitless adapter feels broken/does not seal well. Repair/replace pitless adapter	in progress
Blower #2 makes loud noise	Fan seems to have slipped off of the motor shaft. Disassemble, inspect and repair.	in progress
PW-6 pumping into itself	Water enters well when well pump is running. Suspect faulty check valve. Test and repair as needed.	in progress
Dispose Open Top Sludge Drum	Plastic 55 gal drum with open top is almost full of sludge. Dispose of drum to free up space in the cramped Treatment Room.	in progress
Dispose used Bag Filters	There are (2) Metal 55 gal drums filled with used bag filters. Dispose of both drums and get new drum to store used bag filters.	in progress
Filter Housings are corroded	Flanges that seal filter baskets inside Rosedale Filter Housings are corroded. Sediment flows around filters instead of being trapped. Replace seals in existing housings (short term). Replace housings (long term).	in progress
Teardown Air Stripper and clean	Sediment bypass from corroded filter housings has plugged lower tray of Air Stripper. Tear down and clean.	Jul-13
Move Effluent Pipe	Effluent pipe blocks the access ports of Tray #2. Air Stripper cleaning through these access ports is compromised. Lower effluent pipe 8" to clear the ports.	Jul-13
Replace Air Stripper Latches	Around (6) latches on the Air Stripper trays are loose or broken. Reattach keepers with JB Weld. Replace broken latches and springs with new parts.	in progress
Repair new Air Stripper holes	After last teardown clean of Air Stripper, more corroded areas started to leak upon reassembly. Repatch old leaking patches as well as new corroded areas.	Aug-13
Repair Air Stripper exhaust pipe	Air Stripper exhaust pipe corroded through inside at the elbow near the ceiling and outside through the vertical pipe. Replace all corroded parts and seal. Add plastic tubes on support wires to prevent wear of flexible pipe.	Aug-13
Repair Leaking Ball Valve	Influent ball valve near EQ Tank drips. Inspect/clean and replace if necessary.	in progress
Install Sub Slab Vapor Extraction System	High levels of VOCs were found under the floor of the Treatment Room. Install a system to remove these vapors and discharge them into the air above the roof.	in progress
Retrieve Sampling Bailers	(2) bailers became stuck in PW-7 and PW-6 when E & E, Inc was doing sampling. Assist E & E, Inc personnel in retrieving bailers from the two wells.	Oct-13
Deliver filters to NYSDEC	Pickup filters from NYSDEC 1382 Niagara St, Buffalo site. Deliver filters to NYSDEC 23 Pumphouse Rd, Vestal site.	Dec-13

**Mr. C's CLEANERS OM&M  
SUMMARY OF WATER PUMP MAINTENANCE BY IEG - 2013**

as of Dec 2013

ID	CLEAN & INSPECT PUMP	REPLACED PUMP	REPAIR PUMP	PITLESS ADAPTER	INNER RING	HORIZONTAL PIPE	CHECK VALVE	CLEAN & INSPECT TRANSDUCER	REPLACE TRANSDUCER	REPAIR TRANSDUCER	PUMP OUT WELL	CLEAN OUT & INSPECT ELECTRICAL BOX	ELECTRICAL BOX REPAIR
RW - 1	Jan 08, May 10, Jan 12	Feb 08, Jan 12	May 10, Nov 08					May 10, Jan 12					
PW - 2	Jun 08, Aug 09, May 10, Apr 13	Jul 08, Apr 13						Nov 11, May 10, Apr 13	Sep 09, Dec 11		Aug-09	Nov-11	Sep-09
PW - 3	Jun 08, Aug 09, May 10	Jul 08, Dec 11		Repair adapter				Aug 09, Nov 11	Dec 11		Aug-09	Nov-11	
PW - 4	Dec 07, May 08, Sep 09, May 10, Jan 12	Dec 07, Jan 12	Sep-13		Aug 13			May 10, Nov 11	Dec 11, Mar 08, Sep 08	Sep-08	Jul 09, Sep 09	Sep 09, Nov 11	Sep-09
PW - 5	Jan 12, May 08	Jul 08, Jan 12						Mar-11	Jan 12, Sep 08	Sep-09		Jan-12	
PW - 6	Jun 08, Jul 09, Jul 12, Nov 12	Jun 08, Jul 09, Aug 12, Nov 12				Jul 12, Nov 12		Aug 09, Jul 12, Dec 12, Apr 13	Sep-09	Jun-08	Aug-09	Aug 09, Sep 09	Jul 09, Sep 09
PW - 7	Jun 08, Jul 09, May 10, Oct 10, Aug 11, Mar 12, Jul 12, Nov 12	Nov 07, Jul 09, Oct 10, Nov 12				Jul 12, Nov 12		Oct 10, Aug 11, Mar 12, Jul 12, Dec 12		Jun-08	Aug 09, May 10, Aug 11		
PW - 8	Jun 08, Aug 09, May 10, Aug 11, Jul 12, Dec 12	Jul 08, Sep 09, Aug 11, Dec 12				Pipe 809, Jul 12		May 10, Aug 11, Jul 12, Dec 12, Apr 13			Aug 09, May 10, Aug 11	Apr-13	Apr-13

# Mr. C's CLEANERS OM&M

## SUMMARY OF WATER PUMP STATUS - 2013

as of Dec 2013

ID	NEEDS CLEANING & INSPECTION	NEEDS NEW PUMP	NEEDS NEW INNER RING	NEEDS P.A. OR PIPE	NEEDS WELL CLEAN-OUT	PITLESS ADAPTER	NEEDS HORIZONTAL LINE PURGE	NEEDS CHECK VALVE INSPECTION	NEEDS TRANSDUCER INSPECTION	NEEDS NEW TRANSDUCER	NEEDS ANEROID BELLOWS	NEEDS U.E. CLEANED	NEEDS U.E. REPAIR
RW-1	DONE 1/12	NO	PZ-1B		YES				NO	NO	NO	NO	YES - bolts
PW-2	NO	NO	NO		YES				NO		NO	NO	YES - bolts
PW-3	NO	NO	NO	REPAIRED 8/09	DONE 8/09				NO		NO	NO	NO
PW-4	DONE 9/13	NO	Replaced 8/13		DONE 9/09				NO		NO	NO	YES - Asphalt patch
PW-5	DONE 1/12	NO	NO		YES				NO	DONE 1/12	DONE 1/12	NO	NO
PW-6	YES	YES	NO	Replaced pipe 8/09	DONE 8/09		NO	YES	NO	NO	DONE 9/09	NO	DONE
PW-7	NO	NO	NO	Replaced pipe 8/09	YES	YES	NO		NO	NO	DONE	NO	NO
PW-8	NO	DONE 8/11	NO	Replaced pipe 8/09	NO	YES	YES		NO	NO	YES	NO	NO

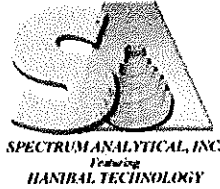
**Attachment B**  
**Analytical Report from**  
**Spectrum Analytical Laboratories**

**Analytical Data Package Work Order ID: M2410**

**Sampled: December 10, 2013**

**Received: December 13, 2013**

Report Date:  
17-Dec-13 15:12



- Final Report
- Re-Issued Report
- Revised Report

### Laboratory Report

Ecology and Environment Engineering P.C.  
368 Pleasant View Drive  
Lancaster, NY 14086

Work Order: M2410  
Project: Mr. C's Dry Cleaning  
Project #: 450000623/EN-003229-0001-03TTO

Attn: Michael Steffan

Laboratory ID	Client Sample ID	Matrix	Date Sampled	Date Received
M2410-01	INFLUENT	Aqueous	10-Dec-13 10:00	11-Dec-13 08:55
M2410-02	EFFLUENT	Aqueous	10-Dec-13 10:00	11-Dec-13 08:55

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. The results relate only to the samples(s) as received. This report may not be reproduced, except in full, without written approval from Spectrum Analytical.

All applicable NELAC or USEPA CLP requirements have been met.

Spectrum Analytical (Rhode Island) is accredited under the National Environmental Laboratory Approval Program (NELAP) and DoD Environmental Laboratory Accreditation Program (ELAP), holds Organic and Inorganic contracts under the USEPA CLP Program and is certified under several states. The current list of our laboratory approvals and certifications is available on the Certifications page on our web site at [www.spectrum-analytical.com](http://www.spectrum-analytical.com).

Please contact the Laboratory or Technical Director at 401-732-3400 with any questions regarding the data contained in the laboratory report.

Department of Defense	N/A
Connecticut	PH-0153
Delaware	N/A
Florida	E87664
Maine	2007037
Massachusetts	M-RJ907
New Hampshire	2631
New Jersey	RI001
New York	11522
North Carolina	581
Rhode Island	LA100301
USDA	P330-08-00023
USEPA - ISM	EP-W-09-039
USEPA - SOM	EP-W-11-033

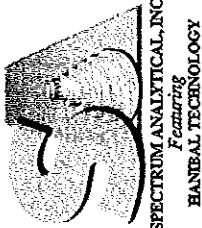


Certificate # L2247 Testing

Authorized by:

Yihai Ding  
Laboratory Director

## Sample Transmittal Documentation



Page 1 of 1

# CHAIN OF CUSTODY RECORD

11 A Imgren Drive  
Agawam, MA 01001  
(413) 789-9018

8405 Benjamin Road, Ste A  
N Kingstown, RI 02852  
(401) 732-3400

Special Handling:  
TAT- Ind icate Date Needed: Std  
· All TATs subject to laboratory approval.  
· Min. 24-hour notification needed for rushes.  
· Samples disposed of after 60 days unless otherwise instructed.

Report To: E & E, Inc  
368 Pleasantview Dr  
Lancaster, NY 14086

Telephone #: (716) 684-8060  
Project Mgr. Mike Steffan

Invoice To: E & E, Inc  
P.O. No.: \_\_\_\_\_ RQN: \_\_\_\_\_

Project No.: \_\_\_\_\_  
Site Name: MTCS O&M  
Location: East Aurora State: NY  
Sampler(s): R. Allen

1=Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> 2=HCl 3=H<sub>2</sub>SO<sub>4</sub> 4=HNO<sub>3</sub> 5=NaOH 6=Ascorbic Acid 7=CH<sub>3</sub>OH  
8= NaHSO<sub>4</sub> 9= Deionized Water 10=H<sub>2</sub>PO<sub>4</sub> 11=  
12=  
DW=Drinking Water GW=Groundwater WW=Wastewater  
O=Oil SW= Surface Water SO=Soil SL=Sludge A=Air  
X1= \_\_\_\_\_ X2= \_\_\_\_\_ X3= \_\_\_\_\_

List preservative code below:  
1 4 2

QA/QC Reporting Notes:  
QA/QC Reporting Level  
 Level I  Level II  
 Level III  Level IV  
 Other CHA  
State-specific reporting standards: \_\_\_\_\_

Lab Id.	Sample Id.	Date	Time	Type	Matrix	Containers:			Analyses:	QA/QC Reporting Level
						# of VOA Vials	# of Amber Glass	# of Clear Glass		
	INFLUENT	DEC 10 2013	10:00 am	G	GW	1	1	1	Hardness	Level II
	INFLUENT		10:00 am	G	GW	1	1	1	VOCs	Level II
	INFLUENT		10:00 am	G	GW	3	3	3		Level II
	EFFLUENT		10:00 am	G	GW	1	1	1		Level II
	EFFLUENT		10:00 am	G	GW	1	1	1		Level II
	EFFLUENT		10:00 am	G	GW	3	3	3		Level II

Relinquished by: Richard C. Albanese Jr Received by: [Signature]

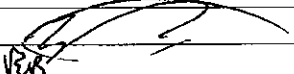

Date: 12/11/13 Time: 8:55 AM Temp °C: 41

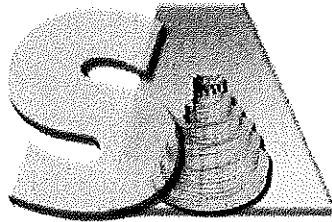
EDD Format: PDF  
E-mail to: msteffan@ene.com

Condition upon receipt:  Ambient  Refrigerated  D/VOA Frozen  Intact  Broken  Soil Jar Frozen



Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

Received By: 		Page 01 of 00							
Reviewed By: 		Log-in Date 12/11/2013							
Work Order: M2410		Client Name: Ecology and Environment Engineering P.C.							
Project Name/Event: Mr. C's Dry Cleaning. / 4500000623/EN-003229-0001-03TTO									
Remarks: (1/2) Please see associated sample/extract transfer logbook pages submitted with this data package.		Preservation (pH)			VOA Matrix	Soil HeadSpace or Air Bubble > or equal to 1/4"			
		Lab Sample ID	HNO3	H2SO4			HCl	NaOH	H3PO4
		M2410-01	<2						
1. Custody Seal(s)		Present / Absent							
		Intact / Broken							
2. Custody Seal Nos.		N/A							
3. Traffic Reports/ Chain of Custody Records (TR/COCs) or Packing Lists		Present / Absent							
4. Airbill		AirBill / Sticker							
		Present / Absent							
5. Airbill No.		FedEx 7973 5533 3625							
6. Sample Tags		Present / Absent							
Sample Tag Numbers		Listed /							
		Not Listed on Chain-of-Custody							
7. Sample Condition		Intact / Broken /							
		Leaking							
8. Cooler Temperature Indicator Bottle		Present / Absent							
9. Cooler Temperature		4.1 °C							
10. Does information on TR/COCs and sample tags agree?		Yes / No							
11. Date Received at Laboratory		12/11/2013							
12. Time Received		08:55							
Sample Transfer									
Fraction (1) TVOA/VOA		Fraction (2) SVOA/PEST/ARO							
Area #		Area #							
By		By							
On		On							
IR Temp Gun ID: MT-74		VOA Matrix Key: US = Unpreserved Soil      A = Air UA = Unpreserved Aqueous    H = HCl M = MeOH                            E = Encore N = NaHSO4                        F = Freeze							
Coolant Condition: ICE									
Preservative Name/Lot No.									
		See Sample Condition Notification/Corrective Action Form    Yes / No							
		Rad OK    Yes / No							



**SPECTRUM ANALYTICAL, INC.**  
*Featuring*  
**HANIBAL TECHNOLOGY**

**\* Volatiles \***

## REPORT NARRATIVE

Spectrum Analytical, Inc. Featuring Hanibal Technology, RI Division.

Client : Ecology and Environment Engineering P.C.

Project: Mr. C's Dry Cleaning

Laboratory Workorder / SDG #: M2410

SW846 8260C, VOC by GC-MS

### I. SAMPLE RECEIPT

No exceptions or unusual conditions were encountered unless a Sample Condition Notification Form, or other record of communication is included with the Sample Receipt Documentation.

### II. HOLDING TIMES

#### A. Sample Preparation:

All samples were prepared within the method-specified holding times.

#### B. Sample Analysis:

All samples were analyzed within the method-specified holding times.

### III. METHODS

Samples were analyzed following procedures in laboratory test code:  
SW846 8260C

### IV. PREPARATION

Aqueous Samples were prepared following procedures in laboratory test code: SW5030B

### V. INSTRUMENTATION

The following instrumentation was used

Instrument Code: V5  
Instrument Type: GCMS-VOA

Description: HP6890 / HP6890  
Manufacturer: Hewlett-Packard  
Model: 6890 / 6890

## VI. ANALYSIS

### A. Calibration:

Calibrations met the method/SOP acceptance criteria.

### B. Blanks:

All method blanks were within the acceptance criteria.

### C. Surrogates:

Surrogate standard percent recoveries were within the QC limits.

### D. Spikes:

#### 1. Laboratory Control Spikes (LCS):

Percent recoveries for lab control samples were within the QC limits.

#### 2. Matrix Spike / Matrix Spike Duplicate (MS/MSD):

No client-requested MS/MSD analyses were included in this SDG.

### E. Internal Standards:

Internal standard peak areas were within the QC limits.

### F. Dilutions:

The following samples were analyzed at dilution:

INFLUENT (M2410-01A) : Dilution Factor: 4

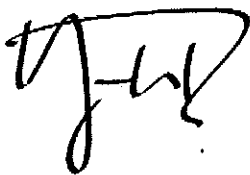
### G. Samples:

No other unusual occurrences were noted during sample analysis.

### H. Manual Integration

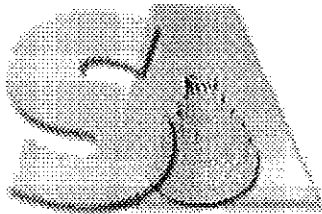
No manual integrations were performed on any sample or standard.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Spectrum, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

A handwritten signature in black ink, appearing to be 'JFW', written over a horizontal line.

Signed: \_\_\_\_\_

Date: \_\_\_\_\_ 12/17/2013 \_\_\_\_\_

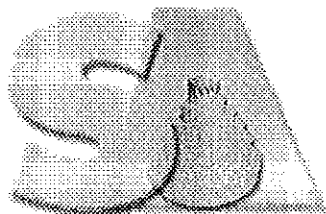


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**Data Flag/Qualifiers:**

- U** Not Detected. This compound was analyzed-for but not detected. For most analyses the reporting limit (lowest standard concentration) is the value listed. For Department of Defense programs, this is the Limit of Detection (LOD).
- J** This flag indicates an estimated value due to either
- the compound was detected below the reporting limit, or
  - estimated concentration for Tentatively Identified Compound
- B** This flag indicates the compound was also detected in the associated Method Blank. The B flag has an alternative meaning for Inorganics analyses reported using CLP ILM-type metals forms, indicating a "trace" concentration below the reporting limit and equal to or above the detection limit.
- D** For Organics analysis, this flag indicates the compound concentration was obtained from a secondary dilution analysis
- E** This flag indicates the compound concentration exceeded the Calibration Range. The E flag has an alternative meaning for Inorganics analyses reported using CLP metals forms, indicating an estimated concentration due to the presence of interferences, as determined by the serial dilution analysis.
- P** This flag is used for pesticides/PCB/herbicide compound when there is a greater than 40% difference for detected concentration between the two GC columns used for primary and confirmation analyses. This difference typically indicates an interference, causing one value to be unusually high. The lower of the two values is generally reported on the Form 1, and both values reported on the Form 10.
- A** Used to flag semivolatile organic Tentatively Identified Compound library search results for compounds identified as aldol condensation byproducts.
- N** Used to flag results for volatile and semivolatile Organics analysis Tentatively Identified Compounds where an analyte has passed the identification criteria, and is considered to be positively identified. For Inorganics analysis the N flag indicates the matrix spike recovery falls outside of the control limit.
- \*** For Inorganics analysis the \* flag indicates Relative Percent Difference for duplicate analyses is outside of the control limit.

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## **Sample ID Suffixes**

- DL** Diluted analysis. The sample was diluted and reanalyzed. The DL may be followed by a digit if more than one diluted reanalysis is provided. The DL suffix is not attached to an analysis initially performed at dilution, only to reanalyses performed at dilution
- RE** Reanalysis. Appended to the client sample ID to indicate a reextraction and reanalysis or a reanalysis of the original sample extract.
- RA** Reanalysis. Appended to the laboratory sample ID indicates a reanalysis of the original sample extract.
- RX** Reextraction. Appended to the laboratory sample ID indicates a reextraction of the sample.
- MS** Matrix Spike.
- MSD** Matrix Spike Duplicate
- DUP** Duplicate analysis
- SD** Serial Dilution
- PS** Post-digestion or Post-distillation spike. For metals or inorganic analyses

1A - FORM I VOA-1  
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

INFLUENT

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_  
 Lab Code: MITKEM Case No.: M2410 Mod. Ref No.: \_\_\_\_\_ SDG No.: SM2410  
 Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: M2410-01A  
 Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V508885.D  
 Level: (TRACE/LOW/MED) LOW Date Received: 12/11/2013  
 % Moisture: not dec. Date Analyzed: 12/11/2013  
 GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 4.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/L	
75-71-8	Dichlorodifluoromethane		4.0	U
74-87-3	Chloromethane		4.0	U
75-01-4	Vinyl chloride		4.0	U
74-83-9	Bromomethane		4.0	U
75-00-3	Chloroethane		4.0	U
75-69-4	Trichlorofluoromethane		4.0	U
75-35-4	1,1-Dichloroethene		4.0	U
67-64-1	Acetone		20	U
75-15-0	Carbon disulfide		4.0	U
75-09-2	Methylene chloride		4.0	U
156-60-5	trans-1,2-Dichloroethene		4.0	U
1634-04-4	Methyl tert-butyl ether		4.0	U
75-34-3	1,1-Dichloroethane		4.0	U
78-93-3	2-Butanone		20	U
156-59-2	cis-1,2-Dichloroethene		30	
67-66-3	Chloroform		4.0	U
71-55-6	1,1,1-Trichloroethane		4.0	U
56-23-5	Carbon tetrachloride		4.0	U
107-06-2	1,2-Dichloroethane		4.0	U
71-43-2	Benzene		4.0	U
79-01-6	Trichloroethene		15	
78-87-5	1,2-Dichloropropane		4.0	U
75-27-4	Bromodichloromethane		4.0	U
10061-01-5	cis-1,3-Dichloropropene		4.0	U
108-10-1	4-Methyl-2-pentanone		20	U
108-88-3	Toluene		4.0	U
10061-02-6	trans-1,3-Dichloropropene		4.0	U
79-00-5	1,1,2-Trichloroethane		4.0	U
127-18-4	Tetrachloroethene		300	
591-78-6	2-Hexanone		20	U
124-48-1	Dibromochloromethane		4.0	U
106-93-4	1,2-Dibromoethane		4.0	U
108-90-7	Chlorobenzene		4.0	U
100-41-4	Ethylbenzene		4.0	U
1330-20-7	Xylene (Total)		4.0	U



1B - FORM I VOA-2  
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

INFLUENT

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_  
 Lab Code: MITKEM Case No.: M2410 Mod. Ref No.: \_\_\_\_\_ SDG No.: SM2410  
 Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: M2410-01A  
 Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V508885.D  
 Level: (TRACE/LOW/MED) LOW Date Received: 12/11/2013  
 % Moisture: not dec. Date Analyzed: 12/11/2013  
 GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 4.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/L	
100-42-5	Styrene		4.0	U
75-25-2	Bromoform		4.0	U
98-82-8	Isopropylbenzene		4.0	U
79-34-5	1,1,2,2-Tetrachloroethane		4.0	U
541-73-1	1,3-Dichlorobenzene		4.0	U
106-46-7	1,4-Dichlorobenzene		4.0	U
95-50-1	1,2-Dichlorobenzene		4.0	U
96-12-8	1,2-Dibromo-3-chloropropane		4.0	U
120-82-1	1,2,4-Trichlorobenzene		4.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane		4.0	U
110-82-7	Cyclohexane		4.0	U
79-20-9	Methyl acetate		4.0	U
108-87-2	Methylcyclohexane		4.0	U

1A - FORM I VOA-1  
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EFFLUENT

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_  
 Lab Code: MITKEM Case No.: M2410 Mod. Ref No.: \_\_\_\_\_ SDG No.: SM2410  
 Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: M2410-02A  
 Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V508883.D  
 Level: (TRACE/LOW/MED) LOW Date Received: 12/11/2013  
 % Moisture: not dec. Date Analyzed: 12/11/2013  
 GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/L	
75-71-8	Dichlorodifluoromethane		1.0	U
74-87-3	Chloromethane		1.0	U
75-01-4	Vinyl chloride		1.0	U
74-83-9	Bromomethane		1.0	U
75-00-3	Chloroethane		1.0	U
75-69-4	Trichlorofluoromethane		1.0	U
75-35-4	1,1-Dichloroethene		1.0	U
67-64-1	Acetone		5.0	U
75-15-0	Carbon disulfide		1.0	U
75-09-2	Methylene chloride		1.0	U
156-60-5	trans-1,2-Dichloroethene		1.0	U
1634-04-4	Methyl tert-butyl ether		1.0	U
75-34-3	1,1-Dichloroethane		1.0	U
78-93-3	2-Butanone		5.0	U
156-59-2	cis-1,2-Dichloroethene		1.0	U
67-66-3	Chloroform		1.0	U
71-55-6	1,1,1-Trichloroethane		1.0	U
56-23-5	Carbon tetrachloride		1.0	U
107-06-2	1,2-Dichloroethane		1.0	U
71-43-2	Benzene		1.0	U
79-01-6	Trichloroethene		1.0	U
78-87-5	1,2-Dichloropropane		1.0	U
75-27-4	Bromodichloromethane		1.0	U
10061-01-5	cis-1,3-Dichloropropene		1.0	U
108-10-1	4-Methyl-2-pentanone		5.0	U
108-88-3	Toluene		1.0	U
10061-02-6	trans-1,3-Dichloropropene		1.0	U
79-00-5	1,1,2-Trichloroethane		1.0	U
127-18-4	Tetrachloroethene		1.0	U
591-78-6	2-Hexanone		5.0	U
124-48-1	Dibromochloromethane		1.0	U
106-93-4	1,2-Dibromoethane		1.0	U
108-90-7	Chlorobenzene		1.0	U
100-41-4	Ethylbenzene		1.0	U
1330-20-7	Xylene (Total)		1.0	U

son13.12.06.06.1059

SW846

M2410

Page 15 of 33

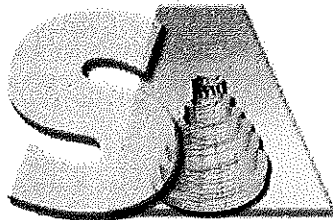
1B - FORM I VOA-2  
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EFFLUENT

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_  
 Lab Code: MITKEM Case No.: M2410 Mod. Ref No.: \_\_\_\_\_ SDG No.: SM2410  
 Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: M2410-02A  
 Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V508883.D  
 Level: (TRACE/LOW/MED) LOW Date Received: 12/11/2013  
 % Moisture: not dec. Date Analyzed: 12/11/2013  
 GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 5.0 (mL)

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75-25-2	Bromoform		1.0	U
98-82-8	Isopropylbenzene		1.0	U
79-34-5	1,1,2,2-Tetrachloroethane		1.0	U
541-73-1	1,3-Dichlorobenzene		1.0	U
106-46-7	1,4-Dichlorobenzene		1.0	U
95-50-1	1,2-Dichlorobenzene		1.0	U
96-12-8	1,2-Dibromo-3-chloropropane		1.0	U
120-82-1	1,2,4-Trichlorobenzene		1.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane		1.0	U
110-82-7	Cyclohexane		1.0	U
79-20-9	Methyl acetate		1.0	U
108-87-2	Methylcyclohexane		1.0	U



**SPECTRUM ANALYTICAL, INC.**  
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**HANIBAL TECHNOLOGY**

**\* Wet Chemistry \***

## REPORT NARRATIVE

Spectrum Analytical, Inc. Featuring Hanibal Technology, RI Division.

Client : Ecology and Environment Engineering P.C.

Project: Mr. C's Dry Cleaning

Laboratory Workorder / SDG #: M2410

SM 2340B, SM 4500 H+ B

### I. SAMPLE RECEIPT

No exceptions or unusual conditions were encountered unless a Sample Condition Notification Form, or other record of communication is included with the Sample Receipt Documentation.

### II. HOLDING TIMES

#### A. Sample Preparation:

All samples were prepared within the method-specified holding times.

#### B. Sample Analysis:

All samples were analyzed within the method-specified holding times.

### III. METHODS

Samples were analyzed following procedures in laboratory test code: SM 2340B, SM 4500 H+ B

### IV. PREPARATION

Aqueous Samples were prepared following procedures in laboratory test code: SW3005A

### V. INSTRUMENTATION

The following instrumentation was used:

Instrument Code: OPTIMA3

Instrument Type: ICP

Description: Optima ICP-OES  
Manufacturer: Perkin-Elmer  
Model: 4300 DV

Instrument Code: WC03  
Instrument Type: Probe  
Description: pH Meter  
Manufacturer: Oakton Instruments  
Model: Bench 2700 Series

## VI. ANALYSIS

### A. Calibration:

Calibrations met the method/SOP acceptance criteria.

### B. Blanks:

All method blanks were within the acceptance criteria.

### C. Spikes:

#### 1. Laboratory Control Spikes (LCS):

#### 2. Matrix spike (MS):

A matrix spike was not performed on any sample in this SDG.

### D. Post Digestion Spike (PDS):

A post-digestion spike was not performed on any sample in this SDG.

### E. Duplicate sample:

Duplicate analyses were performed on sample: INFLUENT  
(M2410-01BDUP).

Relative percent differences were within the QC limits.

### F. Serial Dilution (SD):

A serial dilution was not performed on any sample in this SDG.

### G. Samples:

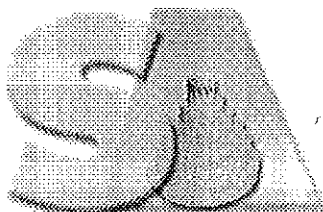
No other unusual occurrences were noted during sample analysis.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Spectrum, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

A handwritten signature in black ink, consisting of several loops and a long horizontal stroke at the end.

Signed: \_\_\_\_\_

Date: 12/13/2013



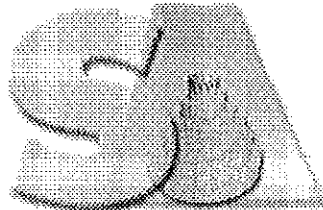
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**HANIBAL TECHNOLOGY**

### **Data Flag/Qualifiers:**

- U** Not Detected. This compound was analyzed-for but not detected. For most analyses the reporting limit (lowest standard concentration) is the value listed. For Department of Defense programs, this is the Limit of Detection (LOD).
- J** This flag indicates an estimated value due to either
- the compound was detected below the reporting limit, or
  - estimated concentration for Tentatively Identified Compound
- B** This flag indicates the compound was also detected in the associated Method Blank. The B flag has an alternative meaning for Inorganics analyses reported using CLP ILM-type metals forms, indicating a "trace" concentration below the reporting limit and equal to or above the detection limit.
- D** For Organics analysis, this flag indicates the compound concentration was obtained from a secondary dilution analysis
- E** This flag indicates the compound concentration exceeded the Calibration Range. The E flag has an alternative meaning for Inorganics analyses reported using CLP metals forms, indicating an estimated concentration due to the presence of interferences, as determined by the serial dilution analysis.
- P** This flag is used for pesticides/PCB/herbicide compound when there is a greater than 40% difference for detected concentration between the two GC columns used for primary and confirmation analyses. This difference typically indicates an interference, causing one value to be unusually high. The **lower** of the two values is generally reported on the Form 1, and both values reported on the Form 10.
- A** Used to flag semivolatile organic Tentatively Identified Compound library search results for compounds identified as aldol condensation byproducts.
- N** Used to flag results for volatile and semivolatile Organics analysis Tentatively Identified Compounds where an analyte has passed the identification criteria, and is considered to be positively identified. For Inorganics analysis the N flag indicates the matrix spike recovery falls outside of the control limit.
- \*** For Inorganics analysis the \* flag indicates Relative Percent Difference for duplicate analyses is outside of the control limit.

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## **Sample ID Suffixes**

- DL** Diluted analysis. The sample was diluted and reanalyzed. The DL may be followed by a digit if more than one diluted reanalysis is provided. The DL suffix is not attached to an analysis initially performed at dilution, only to reanalyses performed at dilution
- RE** Reanalysis. Appended to the client sample ID to indicate a reextraction and reanalysis or a reanalysis of the original sample extract.
- RA** Reanalysis. Appended to the laboratory sample ID indicates a reanalysis of the original sample extract.
- RX** Reextraction. Appended to the laboratory sample ID indicates a reextraction of the sample.
- MS** Matrix Spike.
- MSD** Matrix Spike Duplicate
- DUP** Duplicate analysis
- SD** Serial Dilution
- PS** Post-digestion or Post-distillation spike. For metals or inorganic analyses

**Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division**

12/13/2013

**Client:** Ecology and Environment Engineering P.C.  
**Client Sample ID:** INFLUENT  
**Lab ID:** M2410-01

**Project:** Mr. C's Dry Cleaning  
**Collection Date:** 12/10/13 10:00

Analyses	Result	Qual	RL Units	DF	Date Analyzed	Batch ID
<b>SM 2340B -- HARDNESS by Calculation</b>						<b>SM2340_W</b>
Hardness, Ca/Mg (As CaCO3)	410		4.0 mg/L CaCO3		1 12/12/2013 8:27	75186
<b>SM 4500 H+ B -- pH VALUE</b>						<b>SM4500_H+</b>
pH	7.4		1.0 S.U.		1 12/12/2013 14:45	R78652

**Qualifiers:** ND - Not Detected at the Reporting Limit  
 J - Analyte detected below quantitation limits  
 B - Analyte detected in the associated Method Blank  
 DF - Dilution Factor

S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits  
 E - Value above quantitation range  
 RL - Reporting Limit

**Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division**

12/13/2013

Client: Ecology and Environment Engineering P.C.

Client Sample ID: EFFLUENT

Lab ID: M2410-02

Project: Mr. C's Dry Cleaning

Collection Date: 12/10/13 10:00

Analyses	Result	Qual	RL Units	DF	Date Analyzed	Batch ID
<b>SM 2340B -- HARDNESS by Calculation</b>						<b>SM2340_W</b>
Hardness, Ca/Mg (As CaCO3)	420		4.0 mg/L CaCO3		112/12/2013 8:30	75186
<b>SM 4500 H+ B -- pH VALUE</b>						<b>SM4500_H+</b>
pH	8.3		1.0 S.U.		112/12/2013 14:45	R78652

**Qualifiers:** ND - Not Detected at the Reporting Limit  
 J - Analyte detected below quantitation limits  
 B - Analyte detected in the associated Method Blank  
 DF - Dilution Factor

S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits  
 E - Value above quantitation range  
 RL - Reporting Limit

**Attachment C**  
**Summary of Site Utility Costs and Projections**  
**January to December 2013**



**Mr. C's Dry Cleaners Site - Remedial Treatment Utility Costs**

**NYSDEC Work Assignment #DC13**

**12 Months of System Operation and Maintenance**

**December 2013 Report**

	Optimum Operating Hours	Actual Operating Hours	Up-time Percentage	Capacity	Comments:		Budget Remaining:	
January-13	672	576	85.71%	13.8%	Mild January		Electric:	\$2,143.73
February-13	672	594	88.39%	9.7%	Mild February		Telephone:	\$230.58
March-13	720	720	100.00%	9.6%	Cold March		Gas	\$246.81
April-13	762	762	100.00%	10.7%	Mild April		Total:	\$2,621.12
May-13	672	672	100.00%	9.8%	Normal May			
June-13	672	672	100.00%	7.5%	Wet June			
July-13	1056	648	61.36%	8.4%	Stripper tear down/new bag filter installed			
August-13	528	528	100.00%	7.6%	Normal August			
September-13	600	800	100.00%	7.5%	Dry September			
October-13	840	840	100.00%	8.0%	Ave October			
November-13	672	672	100.00%	8.3%	Rain			
December-13	636	624	89.66%	9.0%	Winter conditions wet snow			
<b>Totals to Date</b>	<b>8592</b>	<b>7938</b>	<b>92.39%</b>					

\* Percent Capacity is based on initial operating groundwater flows from the eight installed pumps from 9/02. Evaluated on total gallons discharged for monthly operating time. Maximum pump discharges calculated as an average of 78 gpm as the total for all 8 pumps at the site if all pumps operate 100%. With the exception of groundwater pump RW-1, all others run on a batch basis.

**Monthly Average Costs**

Mr. C's Electric	\$	123.03
Agway Electric	\$	-
Mr. C's Gas	\$	79.38
Mr. C's Telephone	\$	44.20
<b>Ave. Utility Cost Total</b>	\$	<b>246.61</b>
		<b>12 Month Estimate</b>
		<b>\$3,205.97</b>