# PERIODIC REVIEW REPORT

## ACTIVE INDUSTRIAL UNIFORM SITE
## 63 WEST MONTAUK HIGHWAY
## LINDENHURST, NEW YORK

*Prepared for:*

**NEW YORK STATE**
**DEPARTMENT OF ENVIRONMENTAL CONSERVATION**
**ALBANY, NEW YORK**

*Prepared by:*

**DVIRKA AND BARTILUCCI CONSULTING ENGINEERS**
**WOODBURY, NEW YORK**

**DECEMBER 2011**

**PERIODIC REVIEW REPORT**
**ACTIVE INDUSTRIAL UNIFORM SITE**
**73 WEST MONTAUK HIGHWAY**
**LINDENHURST, NEW YORK**

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## EXECUTIVE SUMMARY

The Active Industrial Uniform Site (the Site) groundwater extraction and treatment system (GWE&TS) is located in the Village of Lindenhurst, Suffolk County, New York. The GWE&TS was designed to recover and treat a chlorinated solvent-contaminated groundwater contamination plume emanating from the Site and discharge the treated groundwater to Little Neck Creek in accordance with all applicable discharge standards.

Based on evaluation of the performance, effectiveness and protectiveness of the remedy throughout this reporting period (February 2005 through December 2010), the following conclusions and associated recommendations are briefly summarized:

- O&M Plan – The Operation and Maintenance (O&M) scope of services was performed in accordance with the requirements outlined in the site-specific Operations and Maintenance Manual (OMM), dated April 2002. The following O&M recommendations have been proposed in order to enhance the performance, effectiveness and protectiveness of the GWE&TS:
  - Installation of additional heat tracing on the stripper tower pressure transducers;
  - Maintain yield of extraction well RW-1 at a rate of greater than 100 gpm; and
  - Maintain spare parts on-site to minimize system downtime.
- Monitoring Plan – System monitoring requirements were maintained throughout this reporting period in accordance with the requirements outlined in the site-specific OMM, dated April 2002. The following monitoring recommendations have been proposed in order to enhance the performance, effectiveness and protectiveness of the GWE&TS:
  - Further investigation of the potential/suspected "source" area in the southeastern area of the site in the vicinity of MW-106;
  - Installation of downgradient temporary wells in order to optimize the GWE&TS and verify the plume location; and
  - Reduce the frequency of groundwater monitoring in targeted groundwater monitoring wells.
- Institutional Control/Engineering Control (IC/EC) Plan – Institutional Controls, as listed on the IC/EC Certification Form, are not currently recorded with the Suffolk County Clerk or the Village of Lindenhurst. The Engineering Controls for the site are currently in place and operating in accordance with the requirements of the

March 1997 Record of Decision. Based on this information, the following recommendations are provided:

- The GWE&TS EC should remain in place until remedial objectives have been obtained;
- Groundwater use and land use restrictions should be filed with the Suffolk County Clerk and the Village of Lindenhurst for the Site; and
- The IC/EC form provided by the NYSDEC should be revised to include the GWE&TS as an EC for the Site.

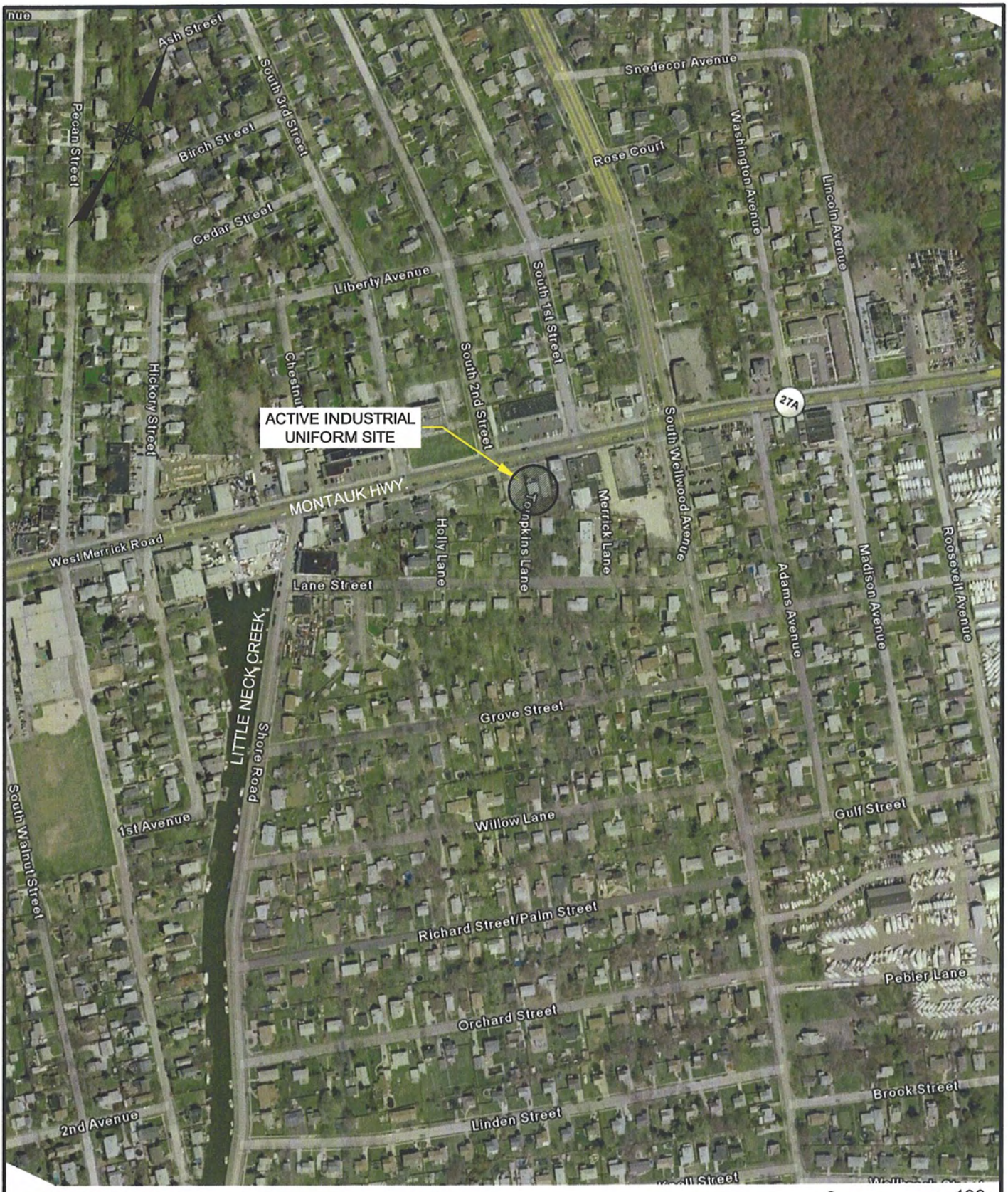
## 1.0 INTRODUCTION

The purpose of this Periodic Review Report (PRR) is to summarize and evaluate the performance of the groundwater extraction and treatment system (GWE&TS) at the Active Industrial Uniform Site (the Site). The Site is located at 63 Montauk Highway in the Village of Lindenhurst, Suffolk County, New York (see Figure 1-1). The information provided in this report covers the period from February 2005 through December 2010. However, portions of the report incorporate pertinent historical site background information and monitoring data, as appropriate.

The GWE&TS consists of two 4-inch diameter extraction wells, with one located on-site in the southwest portion of the Site (RW-1), and one located off-site, approximately 1,500 feet southwest of the Site (RW-2). Note that extraction well RW-2 was shut-down in April 2010, as directed by the NYSDEC, due to low historical concentrations of site-specific VOCs and a continued decline in total VOC concentrations. Extracted groundwater is conveyed to the GWE&TS building via underground piping to two series-configured packed-tower air strippers. The treated groundwater is subsequently pumped via underground piping to a storm water basin located approximately 1,000 feet west of the Site, which then discharges the treated water into Little Neck Creek, in accordance with all applicable discharge standards.

Exhaust gas from each air stripper was treated utilizing two granular activated carbon (GAC) vessels in series during this reporting period. However, based on low historic contaminant concentrations detected in the air stripper exhaust gas, the air stripper exhaust piping was reconfigured to bypass the GAC vessels and discharge directly to the atmosphere in June 2011, per the direction of the NYSDEC. The GWE&TS is equipped with instrumentation and controls which allow for automated startup and operation, and an autodial alarm notification system.

The GWE&TS was put into operation in 2001 and was operated by others until Dvirka & Bartilucci Consulting Engineers (D&B) assumed site management activities in February 2005.




**SOURCE: GOOGLE EARTH 2005**

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A DIVISION OF WILLIAM F. COSULICH ASSOCIATES, P.C.

**ACTIVE INDUSTRIAL UNIFORM SITE**
**VILLAGE OF LINDENHURST, NEW YORK**

# SITE LOCATION MAP

**FIGURE 1-1**

\\Nt4\cadwork\2578\Quarterly Report\FIGURE 1.dwg, FIG 2-1, 12/8/2008 4:43:02 PM, PMartorano

From February 2005 through January 2010, D&B was responsible for operation, monitoring and reporting, with maintenance being completed by EnviroTrac Ltd. under subcontract with D&B from February 2005 through October 2006 and Systematic Technologies, Inc. under subcontract with D&B from November 2006 through December 2009. From January 2010 through the end of this reporting period, Environmental Assessment and Remediation (EAR), a NYSDEC "call-out" contractor, was responsible for operation, monitoring and maintenance, while all reporting and engineering services were completed by D&B.

As per the direction of the NYSDEC, this report encompasses the period from when D&B assumed site management activities in February 2005 to the end of December 2010. Future PRRs will be completed on an annual frequency, until otherwise directed by the NYSDEC.

The objectives of the PRR for the Site include:

- Presenting background information;
- Identifying the remedial goals established for the Site;
- Presenting a description of the remediation system components;
- Reviewing the Site monitoring protocols;
- Evaluating the GWE&TS operation and performance; and
- Presenting recommendations regarding the operation of the GWE&TS with respect to the system's performance, effectiveness and protectiveness and its ability to achieve goals established for the Site.

The remainder of this document consists of five sections: Section 2.0 provides a site overview, including a site description, a summary of background information and remedial history; Section 3.0 presents an evaluation of remedy performance, effectiveness and

protectiveness; Section 4.0 provides a cost evaluation; Section 5.0 provides a discussion of the remedy with regard to sustainable and "green" initiatives consistent with the NYSDEC DER-31 policy; and Section 6.0 provides conclusions and recommendations regarding the operation and overall performance of the system.

## 2.0 SITE OVERVIEW

### 2.1 Site Operations and Description

The Site is a NYSDEC Class 2 Inactive Hazardous Waste Site and is listed on the New York State Registry of Inactive Hazardous Waste Sites (Site No. 1-52-125). Laundering operations began at the Site in 1945 and continued until 1993. Dry cleaning activities were also conducted at the Site for a 17-year period between 1970 and 1987. All on-site buildings associated with these operations were subsequently demolished in February 1995.

The Site is approximately 1/2 acre in size. The surrounding properties are primarily commercial, with the exception of a residential area located to the south of the Site on Tompkins Lane. Access to the Site is from Tompkins Lane.

### 2.2 Site Impacts and Investigation History

Initial Investigation Activities

An initial investigation of the Site was completed in December 1987 by the property owner, American Linen Supply. Soil and groundwater samples collected at the Site exhibited elevated concentrations of chlorinated volatile organic compounds (VOCs), including PCE. The sources of the contamination were determined to be three former PCE storage tanks. The tanks were removed between 1985 and 1987; however, it was not determined if the contamination was the result of leaks, spills or both. Based on the results of the initial investigation, a Soil Vapor Extraction (SVE) system was installed in the southeast portion of the Site as part of an Interim Remedial Measure (IRM). The SVE system was placed into operation in July 1991. The goal of the IRM was to remove on-site soil contamination and to prevent migration of soil vapor off-site.

Figure 2-1, depicts the locations of former on-site features, including the former Active Industrial Uniform building, former dry wells/cesspools, a former soil vapor extraction (SVE) system, the locations of the former tetrachoroethene (PCE) tanks, as well as sample locations associated with previous investigations.

A Remedial Investigation (RI) was performed between October 1993 and April 1994. Based on the results of the RI, both shallow and deep groundwater contaminant plumes were identified extending from the Site in southwesterly directions toward Little Neck Creek (approximately 800 feet away from the Site). The shallow plume was found to have concentrations of PCE of as high as 20 milligrams per liter (mg/l) migrating south-southwest. The deep plume had a more southerly direction and was believed to be following a confining clay layer reported to be located at approximately 70 feet bgs. Soil contamination was identified in the on-site dry wells/cesspools with PCE concentrations of as high as 40,000 milligram per kilogram (mg/kg) identified in the southern portion of the Site. Elevated concentrations of PCE were also found in the soil at the former locations of the PCE tanks with concentrations of up to 30,000 mg/kg. Copies of the historical off-site plume maps are provided in Appendix A.

Record of Decision

Based on the findings of the RI, the NYSDEC issued a Record of Decision (ROD) in March 1997. In order to eliminate or mitigate threats to human health and the environment, the NYSDEC selected the following remedies:

- Continued operation of the existing SVE system to remediate shallow source area soil and expansion of the system to treat contaminated soil in the area of the dry wells/ cesspools on the north side of the site and under portions of the former building;
- Removal of VOCs from the SVE system emissions by activated carbon;
- Installation of an air-sparging (AS) system to remediate shallow on-site groundwater;
- Installation of a GWE&TS to capture and treat shallow off-site groundwater and discharge the treated groundwater to the storm water sewer system;

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(AKA WEST MONTAUK HIGHWAY) SR27A

ONE STORY CONCRETE BLOCK BUILDING (STORAGE)

Active Industrial Uniform Co., Inc.
(Building Removed 1994)

APPROXIMATE LOCATION OF FORMER PCE STORAGE TANKS

ABANDONED CONC SEPTIC TANK 8' DIAMETER.

VAPOR EXTRACTION SYSTEM CONTROL BUILDING

TOMPKINS LANE

GP-1 GP-2 GP-3 GP-4 GP-5 GP-6 GP-7 GP-8 GP-9 GP-10 GP-16 GP-17 GP-18 GP-19 GP-20 GP-21 GP-22 GP-23 GP-24 GP-25 GP-26 GP-27 GP-28

MW-4D MW-4S MW-5S

SB-1 SB-2 SB-4 SB-5 SB-6 SB-7 SB-8 SB-9 SB-10 SB-17

VEW-1 VEW-2 VEW-3 VEW-4 VEW-5 VEW-6 VEW-7

**LEGEND**

- MW-5S — MONITORING WELL LOCATION AND NUMBER. TYPICAL.
- SB-10 — SOIL TEST BORING LOCATION AND NUMBER. TYPICAL.
- ABANDONED 8' DIAMETER CESSPOOL WITH CONCRETE TYPE COVER TYPICAL.
- ABANDONED 8' DIAMETER CESSPOOL WITH MANHOLE TYPE COVER ACCESSIBLE AT SURFACE. TYPICAL.
- VEW-5 — VAPOR EXTRACTION WELL LOCATION AND NUMBER. TYPICAL.
- UNDERGROUND NO. 2 FUEL OIL STORAGE TANK. CLOSED IN PLACE. APPROX. LOCATION
- ABANDONED PROCESS WATER WELL. APPROX. LOCATION
- GP-5 — MONITORING WELL LOCATION, NUMBER AND GROUNDWATER ELEVATION
- GENERAL GROUNDWATER FLOW DIRECTION

SOURCE - C.T. MALE ASSOCIATES, P.C.

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ACTIVE INDUTRIAL UNIFORM SITE
VILLAGE OF LINDENHURST, NEW YORK

**ON-SITE FEATURES AND SAMPLE LOCATIONS (1998)**

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**FIGURE 2-1**

F:\2578\FIGURE 1.dwg, FIG 2-1, 12/11/2008 12:24:22 PM, DBCadd

- Environmental monitoring of groundwater existing upgradient, on-site and downgradient of the Site and periodic reviews; and
- Implementation of a deed restriction, including restrictions on soil excavation and other disturbance of on-site soil, and implementation of a groundwater use restriction for the property.

Pre-Design Investigation

Following the selection of the remedial alternative outlined in the ROD, a Pre-Design Investigation (PDI) was completed in 1998. The purpose of the PDI was to further define on-site soil and groundwater contamination, and off-site groundwater contamination, and to perform groundwater modeling studies to assess various pumping scenarios to best address the contaminant plumes.

The on-site soil and groundwater investigation conducted as part of the PDI targeted the on-site dry wells/cesspools. The locations of the sampling points are depicted on Figure 2-1. Analytical results generated from the PDI identified the on-site cesspools as a significant source of contamination at the Site. Similar to the results of remedial investigations conducted at the Site between October 1993 and April 1994, the greatest concentrations of chlorinated VOCs were identified in soil samples collected from the southern portion of the site. PCE concentrations of up to 760,000 mg/kg were detected in the 0 to 4-foot bgs sample collected at soil boring GP-22, located in the southeastern portion of the site. Additionally, elevated concentrations of petroleum hydrocarbons, most notably total xylenes, were identified in the soil on the southern portion of the property. The maximum recorded concentration of total xylenes was 62,000 ug/kg, detected in the 10 to 11-foot bgs sample collected at soil boring GP-21. Soil boring GP-21 was located in the southeastern portion of the Site. The greatest on-site groundwater concentrations of total VOCs in groundwater were identified at temporary groundwater sample point GP-1 (26,000 ug/l), located in the western portion of the site. All on-site groundwater samples were collected from 10 to 16-feet bgs.

Based on the results of the off-site groundwater investigation, the most significant VOC contamination was present in the Upper Glacial aquifer, between 26 to 40 feet bgs, extending in

a southwesterly direction from the Site. The PDI investigation determined Little Neck Creek to be the discharge point for the contaminant plume.

In order to better monitor on-site and off-site groundwater contaminant concentrations, 11 groundwater monitoring wells were installed as part of the PDI, prior to installation of the GWE&TS. Eight groundwater monitoring wells were installed on-site (MW-101 through MW-108) and three groundwater monitoring wells were installed off-site (MW-109, MW-110 and MW-111), downgradient of the Site (see Figures 2-2 and 2-3).

Based on the results of the pre-design investigation, the remedial system design initially outlined in the ROD was modified by moving the off-site recovery well location further downgradient of the site than originally proposed and increasing the design extraction flow rates from 60 gpm to 100 gpm.

Additionally, a second IRM was completed in November 2000 based on the results of the PDI, which consisted of the excavation and off-site disposal of approximately 600 cubic yards of unsaturated contaminated soil from the northeastern and southeastern portions of the Site. A total of nine drywell structures were also removed and disposed of as part of these activities. The lateral extent of the soil excavation, as well as the former locations of the drywells are provided on Figure 2-2.

In a letter dated February 5, 2001, the NYSDEC determined that the November 2000 soil excavation IRM activities had removed the on-site sources of contamination and, as a result, the air sparging system to be installed as per the requirements of the March 26, 1997 ROD would not be installed. The NYSDEC further concluded that if any residual contamination remained on-site, installation of an on-site extraction well (RW-1) pumping at a rate of 100 gpm, would have sufficient radius of influence to capture any contamination that would have otherwise been addressed by the air sparging system.

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APPROXIMATE EXTENT
OF LIMITED EXCAVATION
PERFORMED IN
NOVEMBER 2000

MW-101

MW-102

MW-103

MW-104

APPROXIMATE LOCATION
OF FORMER PCE
STORAGE TANKS

MW-105

APPROXIMATE EXTENT
OF LIMITED EXCAVATION
PERFORMED IN
NOVEMBER 2000

MW-106

MW-107

MW-108

RW-1

TOMPKINS LANE

**LEGEND**

MW-101 GROUNDWATER MONITORING WELL

RW-1 GROUNDWATER RECOVERY WELL

FORMER 8' DIAMETER DRYWELL

GROUNDWATER FLOW DIRECTION

BASE MAP SOURCE - CAMP DRESSER AND McKEE (MARCH 2000), LAW ENGINEERING AND ENVIRONMENTAL SERVICES, P.C. (SEPTEMBER 2002)

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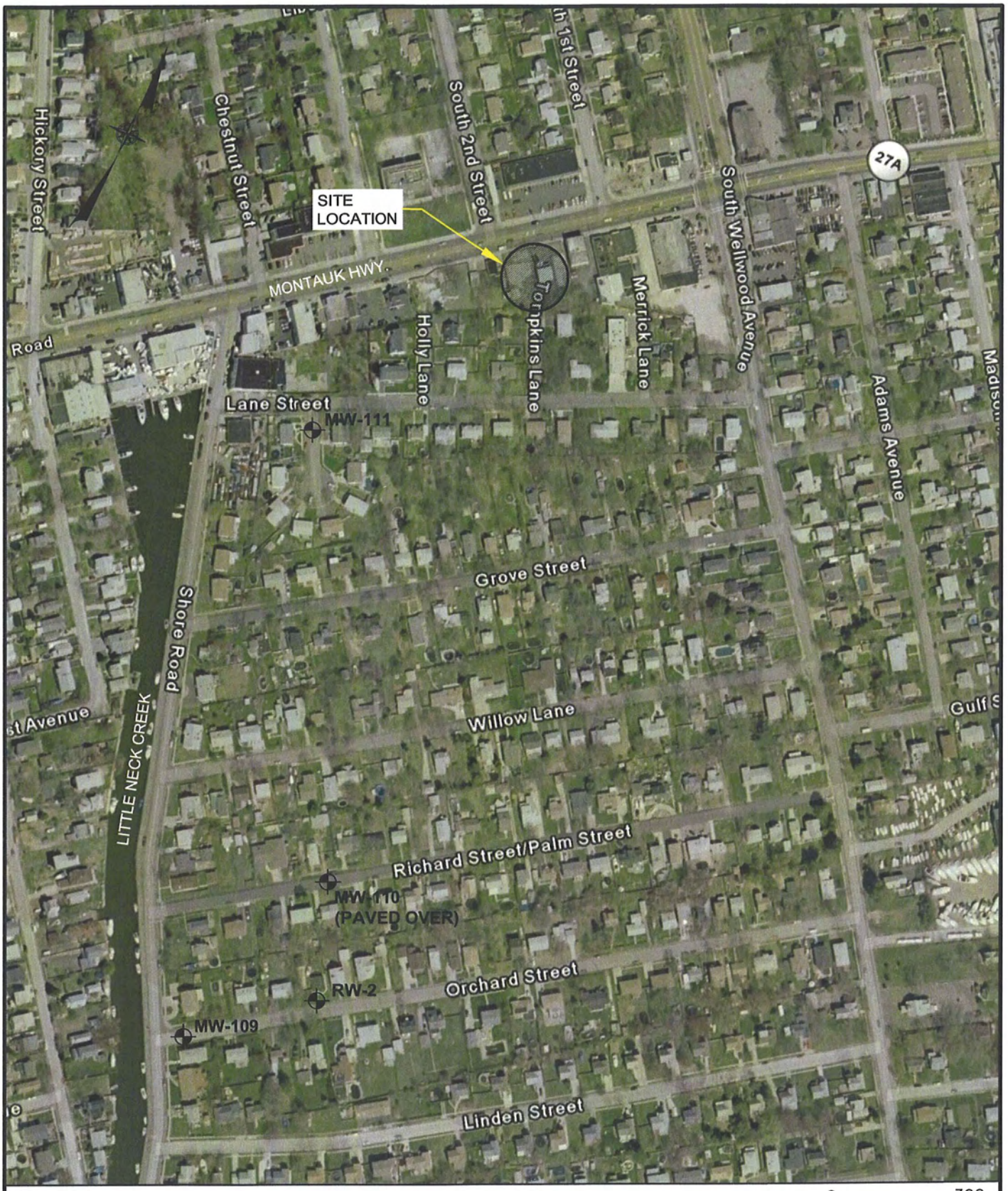
## ON-SITE MONITORING/RECOVERY WELL LOCATION MAP AND PERTINENT HISTORICAL FEATURES

**FIGURE 2-2**

F:\2578\FIGURE 2.dwg, FIG 2-3, 11/9/2011 2:50:51 PM, DBCadd




**SOURCE: GOOGLE EARTH 2005**

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**VILLAGE OF LINDENHURST, NEW YORK**

# OFF-SITE MONITORING WELLS AND RECOVERY WELLS LOCATION MAP

**FIGURE 2-3**

\\Nt4\cadwork\2578\FIGURE 5-2.dwg, FIG 2-4, 12/8/2008 4:52:50 PM, PMartorano

The installation of the on-site GWE&TS began in June 2001 and was completed in December 2001. It is our understanding that the former SVE system was shut down and dismantled during the GWE&TS construction process. The on-site GWE&TS was placed into routine operation on December 27, 2001 and was operated by others until D&B assumed site management activities in February 2005.

# 3.0 OPERATION AND MAINTENANCE (O&M) PLAN COMPLIANCE

## 3.1 O&M Plan Requirements and Compliance Status

The O&M scope of services for the Site GWE&TS consists of general facility maintenance activities, routine treatment system maintenance activities, non-routine treatment system maintenance activities and system alarm/shutdown response activities, in accordance with the requirements of the site-specific Operations and Maintenance Manual (OMM), dated April 2002.

Presented below is a summary of the O&M activities performed throughout this reporting period.

General Facility Maintenance Activities

General facility maintenance work items are those tasks which involved the maintenance and upkeep of the GWE&TS, as well as grounds keeping of the treatment facility property. General facility maintenance activities completed during this reporting period include:

- Inspection of the perimeter fence for tears and breaks;
- Lubrication of gate locks;
- Verification of posted safety information to ensure all information is current and accurate;
- Inspection of the groundwater recovery and monitoring wells to ensure the wells are secure and accessible;
- Snow removal services;
- Removal of overgrown vegetation; and
- Inspection of vehicle driveway for potholes and other damage.

Routine Treatment System Inspection and Maintenance Activities

Routine GWE&TS inspection and maintenance activities completed during this reporting period include:

- Monthly inspection/monitoring of GWE&TS equipment (recovery wells, packed-tower air strippers, transfer pumps, vacuum blower, vapor phase carbon absorption vessel and solids filtration system);
- Monthly inspection of the ground water recovery pumps to check for operating pressure, drawdown, periods of cycling and operation of controls;
- Quarterly inspection and routine preventive maintenance of the vacuum blower unit;
- Bi-annual inspection and routine preventive maintenance of the transfer pumps;
- As-needed acid washing of each of the two packed-tower air strippers;
- As-needed removal and replacement of packing materials in each of the two packed-tower air strippers;
- As-needed removal and replacement of the granular activated carbon (GAC) in each of the two carbon absorption vessels; and
- As-needed removal and replacement of the solids filter cartridges in the effluent particulate filter.

A summary of the routine treatment system inspection and maintenance services and their typical frequencies of completion is provided on Table 3-1. Overall, the treatment system was non-operational for approximately 2 days (41 hours) throughout this reporting period as a result of routine maintenance activities.

**TABLE 3-1**
**ACTIVE INDUSTRIAL UNIFORM SITE**
**NYSDEC SITE No. 1-52-125**

**ROUTINE INSPECTION AND MAINTENANCE SERVICES SUMMARY**

| Routine Inspection/Maintenance Item | Frequency | | | |
|---|---|---|---|---|
| | Monthly | Tri-Monthly | Semiannual | As-Needed |
| Extraction Wells (RW-1/RW-2) | | | | |
| Flow Rate (gpm) | X | | | |
| Total Flow (gal) | X | | | |
| Pump Pressure (psi) | X | | | |
| Drawdown | X | | | |
| Controls Inspection | X | | | |
| Air Stripper Towers (ST-1/ST-2) | | | | |
| Stripper Inlet Pressure (psi) | X | | | |
| Transfer Pump (P-1) Outlet Pressure (psi) | X | | | |
| Sump Level (inches) | X | | | |
| Discharge Speed (%) | X | | | |
| Air Stripper Blower (B-1) | | | | |
| Moisture Knockout Influent Vacuum (inches $H_2O$) | X | | | |
| Blower Influent Vacuum (inches $H_20$) | X | | | |
| Blower Effluent Pressure (inches $H_2O$) | X | | | |
| Blower Effluent Velocity (feet/minute) | X | | | |
| Blower Effluent Temperature ($^oF$) | X | | | |
| Blower Effluent Flow Rate ($ft^3$/minute) | X | | | |
| Treated Water Discharge | | | | |
| Flow Rate (gpm) | X | | | |
| Total Flow (gal) | X | | | |
| Vapor Phase Carbon | | | | |
| Lead vessel pressure (inches$H_2O$) | X | | | |
| Lead vessel temperature ($^oF$) | X | | | |
| Lag vessel pressure (inches $H_2O$) | X | | | |
| Lag vessel temperature ($^oF$) | X | | | |
| Cartridge Filter System | | | | |
| Inlet Pressure (psi) | X | | | |
| Outlet Pressure (psi) | X | | | |
| Pressure Differential (psi) | X | | | |
| Routine Maintenance Items | | | | |
| Pressure Blower Maintenance | | X | | |
| Particulate Filter Maintenance | X | | | |
| Transfer Pump Maintenance | | | X | |
| Air Stripper Maintenance | | | | X |
| GAC Removal and Replacement | | | | X |
| Air Stripper Packing Removal and Replacement | | | | X |

Non-Routine Treatment System Maintenance Activities

Non-routine treatment system maintenance activities are those tasks which involve out-of-scope maintenance and upkeep of the GWE&TS equipment, as well as out-of-scope maintenance in response to system alarms and/or shut downs. Non-routine maintenance, associated downtime, total number of alarm events, percent of total alarm shutdown time and the current status associated with each activity is summarized on Table 3-2. Copies of the GWE&TS shutdown logs, which include details of the non-routine maintenance activities that have occurred throughout this reporting period, are provided in Appendix B. Copies of non-routine maintenance reports are provided in Appendix C.

Overall, the GWE&TS was non-operational for approximately 387 days (9,290 hours) throughout this reporting period as a result of non-routine maintenance activities. As shown on Table 3-2, the majority of the system downtime is associated with freezing of the stripper tower pressure transducers, valves and other outside piping. Note, heat blankets and insulation have been installed in these areas; however, as the pressure transducer areas still periodically freeze it is warranted to further insulate these areas.

System Alarms

The GWE&TS is equipped with an autodialer alarm notification system which is programmed to call technicians in the event of an alarm condition. The following is a list of the current alarms for the system:

- Alarm #1 – Temperature Alarm
- Alarm #2 – Sound Level Alarm
- Alarm #3 – General Alarm
- Alarm #4 – High Pressure Stripper No. 1/2
- Alarm #5 – High Level Stripper No. 1/2
- Alarm #6 – High Pressure Transfer Pump No. 1/2
- Alarm #8 – Low Flow Extraction Well No. 1/2

**TABLE 3-2**
**ACTIVE INDUSTRIAL UNIFORM SITE**
**NYSDEC SITE No. 1-52-125**

**SUMMARY OF NON-ROUTINE MAINTENANCE/ALARM CONDITIONS AND ASSOCIATED DOWNTIME**
**FEBRUARY 2005 THROUGH DECEMBER 2010**

| NON-ROUTINE MAINTENANCE/ALARM ACTIVITY | DOWNTIME (HOURS) | TOTAL NUMBER OF ALARM EVENTS | PERCENT OF TOTAL ALARM SHUTDOWN TIME | STATUS/RESOLUTION |
|---|---|---|---|---|
| Freezing of the air stripper pressure transducers, valves and other outside piping. | 2,639 | 10 | 36% | Insulation, heat blankets and heat tape were installed around air stripper sumps, aqueous effluent piping and transducers in January 2011, to prevent freezing in the event of a system shutdown. |
| Damaged transfer pump, causing the building sump to overfill. | 1,995 | 1 | 27% | Damage to the impeller and internal parts of transfer pump No. 2, caused treated groundwater to pool in the building sump. A sump overfill alarm was then triggered, notifying technicians of the overfill condition. After considering several pump replacement options, the NYSDEC authorized the replacement of the pump in October 2009. |
| Replace malfunctioning programmable logic controller (PLC) card. | 952 | -- | -- | The PLC malfunction caused several erratic alarm conditions. The PLC replacement was completed following several diagnostic attempts. |
| Downtime associated with failure of treatment system auto dialer to notify technicians of a system failure. | 930 | -- | -- | Item has only sporadically occurred during this reporting period, but has resulted in a relatively large amount of downtime. |
| Redevelopment of extraction well RW-1 in order to increase well yield. | 681 | -- | -- | Work was completed in December 2007 in order to increase the yield of RW-1. As of April 2009, extraction well RW-1 was retrofitted with the Aqua Gard™ Preventative Well Maintenance System to facilitate periodic redevelopment, without having to remove the extraction well pump and associated piping. |
| System alarm due to high level in air stripper towers No. 1 or 2. | 321 | 18 | 4.4% | Air stripper tower sumps were drained to low levels and the treatment system was restarted. It is believed that the PLC card malfunction described above may have caused several of these alarm conditions |
| System alarm due to overheating of variable frequency drives. | 299 | 2 | 4.1% | VFD cooling fans were replaced. It may be warranted to stock replacement fans at the site, to limit such downtime in the future. |
| System alarm due to variable frequency drive malfunction. | 281 | 17 | 3.8% | Variable frequency drives were evaluated for faults and reset. |
| Repair of treatment system building heaters. | 218 | -- | -- | Periodic restarting of the heaters has been required. As of 12/23/10, the heaters were off and not repaired through the remainder of this reporting period. Based on an HVAC technician's assessment of the heating system performed following this reporting period, the height of the heater exhaust stacks may not be tall enough to prevent wind gusts from entering the stacks and potentially extinguishing the heater pilot lights. |

**TABLE 3-2**
**ACTIVE INDUSTRIAL UNIFORM SITE**
**NYSDEC SITE No. 1-52-125**

**SUMMARY OF NON-ROUTINE MAINTENANCE/ALARM CONDITIONS AND ASSOCIATED DOWNTIME**
**FEBRUARY 2005 THROUGH DECEMBER 2010**

| NON-ROUTINE MAINTENANCE/ALARM ACTIVITY | DOWNTIME (HOURS) | TOTAL NUMBER OF ALARM EVENTS | PERCENT OF TOTAL ALARM SHUTDOWN TIME | STATUS/RESOLUTION |
|---|---|---|---|---|
| System alarm due to low flow from extraction well RW-1. | 178 | 4 | 2.4% | Influent globe valve for RW-1 was adjusted and treatment system was restarted. |
| Redevelopment of extraction well RW-1 utilizing the proprietary Aqua Freed® process technology and installation of the Aqua Gard™ Preventative Well Maintenance System. Installation of a pitless adaptor for | 170 | -- | -- | Work was completed in April 2009 in order to increase and maintain the yield of RW-1. |
| Replace the globe valve at extraction well RW-1. | 154 | -- | -- | Damaged/non-functional valve was replaced. |
| System alarm due to a high level alarm condition in air stripper towers No. 1 and 2 caused by a malfunctioning float. | 133 | 2 | 1.8% | Malfunctioning floats were replaced. |
| System alarm due to a high level in treatment system building sump. | 103 | 3 | 1.5% | Assessed treatment system piping, equipment and valves, and made repairs as necessary. Sump was pumped to low level and the treatment system was restarted. |
| Repairs and maintenance associated with extraction well RW-2, including wiring repair, replacement of the extraction well piping elbow, diagnosis of a ground fault malfunction and replacement of the motor and pump due to wear of the pump/motor splines. | 86 (total system) 29,300 (RW-2 only) | -- | -- | The extraction well pump at RW-2 was replaced in January 2011; however, as of April 21, 2010, RW-2 was shut down due to low VOC concentrations, per the direction of the NYSDEC. Existing off-site monitoring wells and extraction well RW-2 should continue to be sampled for site specific VOCs and additional off-site monitoring wells may be needed to better monitor off-site contaminant concentrations. |
| System alarm due to high level in air stripper tower No. 2 caused by inability of transfer pump No. 2 to sufficiently evacuate the stripper sump. | 73 | 2 | 1.0% | Proportional integral derivative controller (PID controller) setpoints were adjusted to allow transfer pump No. 2 to pump at a higher velocity. |
| Boroscope system effluent piping to investigate a possible blockage causing high pressures in the effluent piping. | 70 | -- | -- | Boroscoping of the effluent piping was initiated in June 2010. During excavations performed as part of accessing below grade portions of the effluent piping, two USTs were encountered. Further boroscoping of the effluent line was put on hold to investigate the USTs, per the direction of the NYSDEC. |
| System alarm due to the building sump overfill caused by a leak from backflow prevention device. | 54 | 2 | 0.7% | Backflow prevention device was replaced. |
| Painting of PVC piping. | 10 | -- | -- | The exterior PVC system piping was painted in order to improve the appearance of the Site per the direction of the NYSDEC. |
| Replacement of broken/malfunctioning gauges, valves and/or sampling ports. | 6 | -- | -- | Repairs are completed as necessary. |
| Reconfiguration of the aqueous-phase influent and effluent system piping. | 6 | -- | -- | Targeted areas of the system piping were replaced in order to enhance safety and facilitate repairs. |

**TABLE 3-2**
**ACTIVE INDUSTRIAL UNIFORM SITE**
**NYSDEC SITE No. 1-52-125**

**SUMMARY OF NON-ROUTINE MAINTENANCE/ALARM CONDITIONS AND ASSOCIATED DOWNTIME**
**FEBRUARY 2005 THROUGH DECEMBER 2010**

| NON-ROUTINE MAINTENANCE/ALARM ACTIVITY | DOWNTIME (HOURS) | TOTAL NUMBER OF ALARM EVENTS | PERCENT OF TOTAL ALARM SHUTDOWN TIME | STATUS/RESOLUTION |
|---|---|---|---|---|
| System alarm due to a high pressure at the effluent cartridge filter. | 5 | 5 | 0.1% | Cartridges were replaced as necessary. |
| Repairs associated with building sump pump and associated piping. | 4 | -- | -- | Drainage piping within the treatment system building sump pump was altered to allow for the installation of an air bleed valve. |
| Patch hole in aqueous-phase effluent solids filter. | 3 | -- | -- | Work has been completed. |
| Replacement of equipment fuses. | 2 | -- | -- | Work has been completed. It may be warranted to stock replacement fuses at the site, to limit such future downtime. |
| System alarm due to a transfer pump fault. | 2 | 1 | 0.08% | Transfer pump setpoints were evaluated and changed as necessary. Restarted treatment system. |
| System alarm due to a loss of power at the treatment system building. | 1 | 1 | 0.02% | Reset transfer pump VFDs and restarted treatment system. |

Notes:

Reporting period elapsed time is 51,144 hours.

Reporting period total downtime is 9,290 hours.

## 3.2 Evaluation of O&M Activities

General Facility Evaluation

Throughout the course of this reporting period, general facility maintenance activities were completed as specified in the OMM. Overall, the scope of services for general facility maintenance activities is satisfactory.

Extraction and Treatment System Inspection and Operation Evaluation

Throughout the course of the monitoring period, various routine maintenance and monitoring activities were completed in accordance with the frequencies specified in the OMM. The scope of services for routine GWE&TS inspection and maintenance activities is generally considered adequate.

The minimum operating requirements of the major GWE&TS components are as follows:

- Extraction wells: The design flow rate for the extraction wells RW-1 and RW-2 is 100 gpm. However, based on information presented in the Active Industrial Final Design documents, dated March 2000, containment of the chlorinated plume could be achieved with the on-site extraction well pumping at a minimum of 80% of the design flow rate of 100 gpm (80 gpm);

- Packed-tower air strippers: The design of the packed-tower air strippers is based on the removal of influent contaminant concentrations at the design combined flow rate of 200 gpm, plus an additional 50 gpm, to levels below the specified design effluent concentrations.

- Vacuum blower: The design flow rate for the vacuum blower is 1,350 cubic feet per minute (CFM).

A summary of the GWE&TS operating conditions, including average influent flow rates, average VOC removal efficiencies and estimated average removal rates, estimated system runtimes, total gallons treated as measured at the treatment system effluent flow meter and cumulative total VOC removal is provided in Table 3-3. As summarized on Table 3-3, RW-1

**TABLE 3-3**
**ACTIVE INDUSTRIAL UNIFORM SITE**
**NYSDEC SITE No. 1-52-125**

**TREATMENT SYSTEM PERFORMANCE SUMMARY**
**FEBRUARY 2005 THROUGH DECEMBER 2010**

| SAMPLE COLLECTION DATE | SYSTEM INFLUENT AVERAGE EXTRACTION RATE (gpm) | SYSTEM INFLUENT TOTAL VOC CONCENTRATION (ug/L) | SYSTEM EFFLUENT TOTAL VOC CONCENTRATION (ug/L) | TOTAL VOC REMOVAL EFFICIENCY (%) | ESTIMATED AVERAGE TOTAL VOC REMOVAL RATE (lb/hr) | ESTIMATED SYSTEM RUNTIME (hr) | CUMULATIVE TOTAL GALLONS TREATED (gallons) | CUMULATIVE TOTAL VOC REMOVAL (lbs) |
|---|---|---|---|---|---|---|---|---|
| -- | -- | -- | -- | -- | -- | -- | -- | 784.00 (1) |
| 2/23/2005 | 84.60 (RW-1) 0.00 (RW-2) | 484 | < 5.0 | 98.97% | 2.05E-02 | 172 | 176,156,016 | 787.53 |
| 3/21/2005 | 83.90 (RW-1) 0.00 (RW-2) | 303 | < 5.0 | 98.35% | 1.27E-02 | 838 | 178,988,176 | 798.19 (2) |
| 4/19/2005 | 79.80 (RW-1) 0.00 (RW-2) | 562 | 3 J | 99.47% | 2.24E-02 | 444 | 182,214,592 | 808.15 |
| 5/16/2005 | 77.67 (RW-1) 0.00 (RW-2) | 636 | < 5.0 | 99.21% | 2.47E-02 | 644 | 185,114,336 | 824.08 |
| 6/20/2005 | 75.85 (RW-1) 0.00 (RW-2) | 693 | < 5.0 | 99.28% | 2.63E-02 | 1083 | 188,735,200 | 852.56 (2) |
| 7/25/05 (3) | 69.61 (RW-1) 82.32 (RW-2) | 378 | < 5.0 | 98.68% | 2.87E-02 | 576 (RW-1) 464 (RW-2) | 194,633,664 | 867.36 |
| 8/30/05 (3) | 70.25 (RW-1) 83.00 (RW-2) | 277 | < 5.0 | 98.19% | 2.12E-02 | 599 (RW-1) 599 (RW-2) | -- | 880.08 |
| 9/30/05 (3) | 68.70 (RW-1) 82.50 (RW-2) | 535 | < 5.0 | 99.07% | 4.05E-02 | 755 (RW-1) 460 (RW-2) | 205,155,680 | 904.13 (2) |
| 10/24/2005 | 67.10 (RW-1) 82.70 (RW-2) | 397 | < 5.0 | 98.74% | 2.97E-02 | 559 (RW-1) 559 (RW-2) | 210,285,088 | 920.76 |
| 11/21/2005 | 63.83 (RW-1) 81.58 (RW-2) | 464 | < 5.0 | 98.92% | 3.37E-02 | 669 (RW-1) 669 (RW-2) | 211,349,504 | 943.35 |
| 12/19/2005 | 63.82 (RW-1) 80.60 (RW-2) | 244 | < 5.0 | 97.95% | 1.76E-02 | 969 (RW-1) 969 (RW-2) | 215,060,928 | 960.44 (2) |
| 1/24/2006 | 63.00 (RW-1) 78.85 (RW-2) | 258 | < 5.0 | 98.06% | 1.83E-02 | 566 (RW-1) 566 (RW-2) | 222,502,112 | 970.79 |
| 2/24/2006 | 67.00 (RW-1) 79.00 (RW-2) | 390 | < 5.0 | 98.72% | 2.85E-02 | 673 (RW-1) 442 (RW-2) | 227,176,816 | 989.97 |
| 3/22/2006 | 66.55 (RW-1) 0.00 (RW-2) | 540 | < 5.0 | 99.07% | 1.80E-02 | 848 (RW-1) 0 (RW-2) | 229,496,144 | 1,005.21 (2) |
| 4/14/2006 | 65.46 (RW-1) 0.00 (RW-2) | 560 | < 5.0 | 99.11% | 1.83E-02 | 395 (RW-1) 0 (RW-2) | 231,529,680 | 1,012.46 |
| 5/23/2006 | 64.27 (RW-1) 0.00 (RW-2) | 223 | < 5.0 | 97.76% | 7.17E-03 | 423 (RW-1) 0 (RW-2) | 233,404,400 | 1,015.49 |
| 6/22/2006 | 64.76 (RW-1) 0.00 (RW-2) | 567 | < 5.0 | 99.12% | 1.84E-02 | 918 (RW-1) 0 (RW-2) | 236,046,544 | 1,032.35 (2) |
| 7/20/2006 | 65.32 (RW-1) 0.00 (RW-2) | 550 | < 5.0 | 99.09% | 1.80E-02 | 473 (RW-1) 0 (RW-2) | 238,472,464 | 1,040.86 |
| 8/17/2006 | 63.60 (RW-1) 91.30 (RW-2) | 258 | < 5.0 | 98.06% | 2.00E-02 | 719 (RW-1) 96 (RW-2) | 241,194,432 | 1,055.23 |
| 9/19/2006 | 60.33 (RW-1) 90.31 (RW-2) | 294 | < 5.0 | 98.30% | 2.22E-02 | 1016 (RW-1) 1016 (RW-2) | 248,561,776 | 1,077.73 (2) |
| 10/9/2006 | 59.18 (RW-1) 0.00 (RW-2) | 666 | < 5.0 | 99.25% | 1.97E-02 | 209 (RW-1) 0 (RW-2) | 251,381,904 | 1,081.85 |
| 11/1/2006 | 58.40 (RW-1) 0.00 (RW-2) | 840 | < 5.0 | 99.40% | 2.45E-02 | 550 (RW-1) 0 (RW-2) | 253,203,280 | 1,095.35 |
| 12/8/2006 | 56.70 (RW-1) 0.00 (RW-2) | 474 | < 5.0 | 98.95% | 1.34E-02 | 1418 (RW-1) 0 (RW-2) | 255,660,176 | 1,114.41 (2) |
| 1/5/2007 | 54.22 (RW-1) 0.00 (RW-2) | 405 | < 5.0 | 98.77% | 1.10E-02 | 85 (RW-1) 0 (RW-2) | 257,655,728 | 1,115.35 |
| 2/26/2007 | 56.28 (RW-1) 0.00 (RW-2) | 244 | < 5.0 | 97.95% | 6.87E-03 | 756 (RW-1) 0 (RW-2) | 259,973,632 | 1,120.54 |
| 3/16/2007 | 52.37 (RW-1) 0.00 (RW-2) | 281 | < 5.0 | 98.22% | 7.36E-03 | 505 (RW-1) 0 (RW-2) | 261,066,656 | 1,124.26 (2) |
| 6/15/2007 | 51.33 (RW-1) 0.00 (RW-2) | 269 | < 5.0 | 98.14% | 6.91E-03 | 213 (RW-1) 0 (RW-2) | 262,766,944 | 1,125.73 (2) |
| 7/12/2007 | 52.26 (RW-1) 0.00 (RW-2) | 257 (4) | < 5.0 | 98.05% | 6.72E-03 | 266 (RW-1) 0 (RW-2) | 264,603,936 | 1,127.52 |
| 8/10/2007 | 52.47 (RW-1) 0.00 (RW-2) | 251 | < 5.0 | 98.01% | 6.59E-03 | 692 (RW-1) 0 (RW-2) | 266,827,600 | 1,132.08 |
| 9/12/2007 | 51.57 (RW-1) 0.00 (RW-2) | 295 | < 5.0 | 98.31% | 7.61E-03 | 1232 (RW-1) 0 (RW-2) | 269,237,344 | 1,141.46 (2) |
| 10/22/2007 | 50.10 (RW-1) 0.00 (RW-2) | 247 | < 5.0 | 97.98% | 6.19E-03 | 504 (RW-1) 0 (RW-2) | 271,948,960 | 1,144.58 |
| 11/13/2007 | 49.28 (RW-1) 0.00 (RW-2) | 250 | 6.0 | 97.60% | 6.16E-03 | 1019 (RW-1) 0 (RW-2) | 273,529,584 | 1,150.85 (2) |
| 1/28/2008 | 42.64 (RW-1) 0.00 (RW-2) | 207 | < 5.0 | 97.58% | 4.42E-03 | 650 (RW-1) 0 (RW-2) | 276,417,824 | 1,153.72 |
| 2/22/2008 | 44.75 (RW-1) 0.00 (RW-2) | 241 | < 5.0 | 97.93% | 5.39E-03 | 473 (RW-1) 0 (RW-2) | 277,665,952 | 1,156.28 |
| 3/14/2008 | 43.71 (RW-1) 0.00 (RW-2) | 231 | < 5.0 | 97.83% | 5.05E-03 | 923 (RW-1) 0 (RW-2) | 279,000,320 | 1,160.94 (2) |
| 4/21/2008 | 40.16 (RW-1) 0.00 (RW-2) | 209 | < 5.0 | 97.60% | 4.19E-03 | 552 (RW-1) 0 (RW-2) | 281,259,424 | 1,163.25 |
| 5/14/2008 | 38.81 (RW-1) 0.00 (RW-2) | 153 | < 5.0 | 96.72% | 2.96E-03 | 0 (RW-1) 0 (RW-2) | 282,533,536 | 1,163.25 |
| 6/19/2008 | 40.21 (RW-1) 0.00 (RW-2) | 205 | < 5.0 | 97.56% | 4.12E-03 | 0 (RW-1) 0 (RW-2) | 284,523,744 | 1,169.26 (2) |
| 7/14/2008 | 39.96 (RW-1) 0.00 (RW-2) | 308 | < 5.0 | 98.38% | 6.16E-03 | 317 (RW-1) 0 (RW-2) | 285,937,696 | 1,171.21 |
| 8/6/2008 | 36.42 (RW-1) 0.00 (RW-2) | 408 | < 5.0 | 98.77% | 7.43E-03 | 215 (RW-1) 0 (RW-2) | 286,360,864 | 1,172.81 |
| 9/12/2008 | 33.56 (RW-1) 70.01 (RW-2) | 277 (RW-1) 39 (RW-2) | < 5.0 | 95.36% | 4.65E-03 (RW-1) 1.37E-03 (RW-2) | 1,228 (RW-1) 838 (RW-2) | 289,078,880 | 1,179.67 (2) |
| 10/22/2008 | 19.22 (RW-1) 82.51 (RW-2) | 91.9 | < 5.0 | 94.56% | 4.68E-03 | 483 (RW-1) 483 (RW-2) | 295,142,528 | 1,181.93 |
| 11/21/2008 | 24.64 (RW-1) 79.18 (RW-2) | 97.6 | < 5.0 | 94.88% | 5.07E-03 | 718 (RW-1) 718 (RW-2) | 299,845,696 | 1,185.57 |

**TABLE 3-3 (cont.)**
**ACTIVE INDUSTRIAL UNIFORM SITE**
**NYSDEC SITE No. 1-52-125**

**TREATMENT SYSTEM PERFORMANCE SUMMARY**
**FEBRUARY 2005 THROUGH DECEMBER 2010**

| SAMPLE COLLECTION DATE | SYSTEM INFLUENT AVERAGE EXTRACTION RATE (gpm) | SYSTEM INFLUENT TOTAL VOC CONCENTRATION (ug/L) | SYSTEM EFFLUENT TOTAL VOC CONCENTRATION (ug/L) | TOTAL VOC REMOVAL EFFICIENCY (%) | ESTIMATED AVERAGE TOTAL VOC REMOVAL RATE (lb/hr) | ESTIMATED SYSTEM RUNTIME (hr) | CUMULATIVE TOTAL GALLONS TREATED (gallons) | CUMULATIVE TOTAL VOC REMOVAL (lbs) |
|---|---|---|---|---|---|---|---|---|
| 12/16/2008 | 24.55 (RW-1) 79.22 (RW-2) | 80.6 | < 5.0 | 93.80% | 4.18E-03 | 740 (RW-1) 740 (RW-2) | 303,779,968 | 1,188.67 (2) |
| 1/13/2009 | 25.50 (RW-1) 78.57 (RW-2) | 68.0 | < 5.0 | 92.65% | 3.54E-03 | 0.75 (RW-1) 0.75 (RW-2) | 304,703,936 | 1,188.67 |
| 2/27/2009 | 29.98 (RW-1) 87.28 (RW-2) | 81.0 | < 5.0 | 93.83% | 4.75E-03 | 157 (RW-1) 157 (RW-2) | 305,501,216 | 1,189.42 |
| 4/1/2009 | 29.79 (RW-1) 86.99 (RW-2) | 78.1 | < 5.0 | 93.60% | 4.56E-03 | 754 (RW-1) 754 (RW-2) | 311,345,504 | 1,192.85 (2) |
| 4/24/2009 | 29.38 (RW-1) 83.02 (RW-2) | 89.1 | < 5.0 | 94.39% | 5.01E-03 | 527 (RW-1) 527 (RW-2) | 315,293,888 | 1,195.50 |
| 5/14/2009 | 88.43 (RW-1) 82.80 (RW-2) | 330 (RW-1) 15 (RW-2) | < 5.0 | 98.48% | 1.46E-02 (RW-1) 6.21E-04 (RW-2) | 305 (RW-1) 408 (RW-2) | 318,877,568 | 1,200.20 |
| 6/24/2009 | 86.12 (RW-1) 84.37 (RW-2) | 152.8 | < 5.0 | 96.73% | 1.30E-02 | 157 (RW-1) 157 (RW-2) | 328,417,856 | 1,202.25 |
| 10/1/2009 | 86.12 (RW-1) 84.37 (RW-2) | 152.8 | < 5.0 | 96.73% | 1.30E-02 | 210 (RW-1) 210 (RW-2) | 330,192,973 | 1,204.99 |
| 10/28/2009 | 90.59 (RW-1) 84.78 (RW-2) | 109.6 | 7.7 | 92.97% | 9.61E-03 | 621 (RW-1) 621 (RW-2) | 339,669,152 | 1,210.96 |
| 11/17/2009 | 92.34 (RW-1) 84.78 (RW-2) | 321 (RW-1) 14 (RW-2) | < 5.0 | 98.44% | 1.48E-02 (RW-1) 5.9E-04 (RW-2) | 440 (RW-1) 27 (RW-2) | 342,584,480 | 1,217.50 |
| 12/23/2009 | 88.69 (RW-1) 0.00 (RW-2) | 525 | < 5.0 | 99.05% | 2.33E-02 | 865 (RW-1) 0 (RW-2) | 347,588,256 | 1,237.66 |
| 3/1/2010 | 65.06 (RW-1) 66.18 (RW-2) | 338.0 (RW-1) 13.0 (RW-2) | < 5.0 | 98.52% | 1.10E-02 (RW-1) 4.3E-04 (RW-2) | 721 (RW-1) 136 (RW-2) | 351,586,210 | 1,245.66 |
| 3/25/2010 | 79.42 (RW-1) 79.42 (RW-2) | 392.6 (RW-1) 13.0 (RW-2) | < 5.0 | 98.73% | 1.56E-02 (RW-1) 5.2E-04 (RW-2) | 638 (RW-1) 523 (RW-2) | 357,216,512 | 1,255.88 |
| 4/29/2010 | 138.00 (RW-1) 66.42 (RW-2) | 637.0 (RW-1) 13.0 (RW-2) | < 5.0 | 99.22% | 4.40E-02 (RW-1) 4.3E-04 (RW-2) | 464 (RW-1) 275 (RW-2) | 364,420,768 | 1,276.38 |
| 5/27/2010 | 128.63 (RW-1) 0.00 (RW-2) | 560.0 | < 5.0 | 99.11% | 3.60E-02 | 671 (RW-1) 0 (RW-2) | 369,933,664 | 1,300.56 |
| 6/24/2010 | 124.45 (RW-1) 0.00 (RW-2) | 510.6 | < 5.0 | 99.02% | 3.18E-02 | 822 (RW-1) 0 (RW-2) | 375,115,264 | 1,326.70 |
| 7/28/2010 | 121.10 (RW-1) 0.00 (RW-2) | 400.0 | < 5.0 | 98.75% | 2.42E-02 | 649 (RW-1) 0 (RW-2) | 381,192,791 | 1,342.43 |
| 8/31/2010 | 117.77 (RW-1) 0.00 (RW-2) | 367.6 | < 5.0 | 98.64% | 2.17E-02 | 815 (RW-1) 0 (RW-2) | 387,127,584 | 1,360.08 |
| 9/27/2010 | 115.31 (RW-1) 0.00 (RW-2) | 371.5 | < 5.0 | 98.65% | 2.14E-02 | 734 (RW-1) 0 (RW-2) | 391,715,840 | 1,375.81 |
| 10/26/2010 | 112.29 (RW-1) 0.00 (RW-2) | 283.3 | < 5.0 | 98.24% | 1.59E-02 | 613 (RW-1) 0 (RW-2) | 396,475,584 | 1,385.55 |
| 11/30/2010 | 109.58 (RW-1) 0.00 (RW-2) | 232.7 | < 5.0 | 97.85% | 1.28E-02 | 831 (RW-1) 0 (RW-2) | 402,077,824 | 1,396.15 |
| 12/31/2010 (5) | 110.00 (RW-1) 0.00 (RW-2) | 232.7 | < 5.0 | 97.85% | 1.28E-02 | 543 (RW-1) 0 (RW-2) | 405,658,434 | 1,403.10 |

**NOTES:**
1. Total mass of VOC recovered through December 31, 2004 based on information contained in the Fourth Quarter 2004 Operation and Maintenance Report prepared by Blue Water Environmental Inc.
2. Estimated through the end of the reporting period.
3. Extraction well RW-2 restarted on 7/5/05 @16:20. Mass removal rates reflect operation of both extraction wells RW-1 and RW-2.
4. COMB-INF result approximated as average of 3/16/07 and 7/12/07 results due to laboratory reporting error.
5. No sampling event completed in December due to large amount of downtime. RW-1 flow rate and COMB-INF result approximated the same as the 11/30/2010 sampling event.

**ABBREVIATIONS**
gpm: gallons per minute
ug/L: micrograms per liter
lb/hr: pounds per hour

has been operating at a flow rate of between 20 gpm and 138 gpm (averaging approximately 67 gpm) and RW-2 has been operating at a flow rate of between 66 gpm and 91 gpm (averaging approximately 81 gpm). The GWE&TS has treated and discharged approximately 405,658,400 gallons of contaminated groundwater and removed approximately 613 pounds of total VOCs throughout this reporting period. With regard to the overall operation of the GWE&TS, all components functioned as intended, with the exception of the following items:

- Extraction well RW-1 yields fluctuated from a high of 138 gpm (April 2010) to a low of 20 gpm (November 2008), which is below the minimum design flow rate of 80 gpm. Decreases in RW-1 yields were determined to be a result of significant amounts of iron fouling within the extraction well screen. As a result, D&B recommended the redevelopment of extraction well RW-1 in December 2007 and May 2009. Redevelopment of RW-1 was accomplished in May 2009 per the approval of the NYSDEC utilizing the Aqua Freed® process, a proprietary technology. The redevelopment of extraction well RW-1 using this process increased yield to above the minimum design flow rate of 80 gpm. In addition, as part of the work completed, an Aqua Gard™ Preventative Well Maintenance System was installed in conjunction with a new pitless adaptor at the extraction well in order to facilitate future redevelopment of the extraction well utilizing this process without needing to remove the extraction well pump/motor and riser pipe.

- Extraction well RW-2 was not operational from February 2006 through August 2006 due to a faulty wire connection between the treatment system building control panel and the extraction well vault. The faulty wire connection was ultimately identified and repaired in August 2006.

- Extraction well RW-2 was not operational from September 2006 through August 2008 due to a failure of the extraction pump motor. At the request of the NYSDEC, D&B completed an evaluation of the extraction well pump to determine if the originally-fitted pump and motor were properly sized for the anticipated headloss from the extraction well to the treatment system building prior to the NYSDEC's purchase of a new pump and motor. Based on D&B's review, the originally-fitted pump and motor were considered adequate. Following D&B's pump and motor evaluation, several costs estimates were then obtained to replace the extraction well pump and motor. Following the NYSDEC's review of the cost estimates, the NYSDEC authorized the replacement of the pump and motor in June 2008. Field activities associated with the replacement of the extraction well pump and motor were subsequently performed in August 2008.

- Extraction well RW-2 was not operational from October 29, 2009 through February 12, 2010 due to worn splines on the shaft of the extraction well motor. A new extraction well motor and pump were installed in January 2010. In addition, the

extraction well was retrofitted with a pitless adaptor in February 2010 in order to facilitate future removal of the extraction well pump, if required.

Note that, as directed by the NYSDEC, extraction well RW-2 was shut down on April 21, 2010 due to low historical concentrations of site-specific VOCs and a continued decline in total VOC concentrations detailed in groundwater samples collected from the well. It should also be noted that extraction well RW-1's flow rate was increased to approximately 130 gpm in April 2010, following the shutdown of RW-2, in order to increase its radius of influence and better capture chlorinated VOC-contaminated groundwater on-site. Since this time, RW-1 has operated at an average flow rate of 120 gpm; however, RW-1's flow has decreased from a high of 130 gpm on April 21, 2010, to a low of 110 gpm on November 30, 2010.

Extraction and Treatment System Downtime Evaluation

As noted above, GWE&TS experienced approximately 387 days (9,290 hours) of downtime throughout this reporting period due to system alarm/shutdown conditions, the majority of which were associated with freezing of the air stripper pressure transducers and outside piping. These downtime events are detailed on Table 3-2. A brief summary of system alarm/shutdown conditions is provided below:

- System shutdowns occurring during winter months due to the freezing of system water within the air stripper sumps, primarily located within the area of the pressure transducers and outside piping. In order to prevent these areas from freezing, heat tracing and insulation were installed throughout the lower portion of the air stripper sump, as well as on all exposed exterior piping and pressure transducers.

- A malfunction of transfer pump No. 2 resulted in a large amount of GWE&TS downtime from July 9, 2009 through October 1, 2009 while the NYSDEC considered several pump replacement options. The malfunction was diagnosed as a broken impeller and damaged internal parts, and the transfer pump was replaced in-kind.

- Recurring high-pressure alarms at extraction well RW-1 caused the GWE&TS to shut down on several occasions from October 2007 through December 2007. In response to these alarms, and due to a steady decline in RW-1 well yield since D&B assumed site management duties in February 2005, the well pump and motor were removed

and the extraction well was redeveloped in December 2007. During redevelopment of the well, a large amount of sludge was observed on the outside of the pump which subsequentially tested positive for *Gallionella ferruginea*, an iron-oxidizing, chemolithotrophic bacterium. Upon redevelopment and reinstallation of the extraction well pump and motor, the extraction well yield had improved, but continued to decline over the following 2 years. As detailed above, redevelopment of extraction well RW-1 was also completed in May 2009 per the approval of the NYSDEC, utilizing the Aqua Freed® process. In addition, as part of the work completed, an Aqua Gard™ Preventative Well Maintenance System was also installed in order to facilitate future redevelopment of the extraction well, potentially reducing future downtime for such activities.

- General system alarms due to malfunctions associated with the transfer pump VFDs have recurred throughout this reporting period. It was ultimately diagnosed that the majority of these malfunctions were caused by a malfunctioning cooling fan within the VFD, which was replaced in August 2005 and again in February 2010. In order prevent this issue from causing future downtime, it may be warranted to maintain a set of replacement fans at the site.

- General system alarms due to high-high level conditions within air strippers No. 1 and 2 have recurred throughout this reporting period. It is believed that a programmable logic controller (PLC) card malfunction may have caused several of the high-high level alarm conditions.

# 4.0 MONITORING PLAN COMPLIANCE

## 4.1 Monitoring Requirements and Compliance Status

The monitoring scope of services for the Site GWE&TS consists of treatment system monitoring activities and groundwater monitoring activities completed in accordance with the requirements of the site-specific OMM, dated April 2002. Presented below is a summary of each monitoring activity performed throughout this reporting period, as well as associated performance standards, performance evaluation and compliance status.

Treatment System Monitoring Activities

GWE&TS monitoring activities performed throughout this reporting period included the sampling of the various treatment system processes to monitor overall system removal efficiencies, while at the same time, ensuring that all treatment system discharges are below applicable standards and/or discharge limits. The GWE&TS monitoring activities completed during this reporting period include the following:

- Collection and analysis of combined groundwater extraction well influent and system effluent samples on a monthly basis. Combined extraction well influent and system effluent samples are analyzed for Target Compound List (TCL) VOCs by Method 8260. Additionally, the combined extraction well influent samples are analyzed for Target Analyte List (TAL) metals by Method 6010B and for pH by Method 9040B on a monthly basis. System effluent samples are also analyzed for TAL metals by Method 6010B on a quarterly basis and for pH by Method 9040B, chemical oxygen demand (COD) by Method 410.4, alkalinity by Method 310.1, total suspended solids (TSS) by Standard Method (SM) 2540D and total dissolved solids (TDS) by SM 2540C on a semiannual basis. Additionally, system effluent samples are field monitored for dissolved oxygen, specific conductance, turbidity and chlorine on a semiannual basis.

- Collection and analysis of samples from each of the recovery well influent pipe sample taps, as well as collection of a "mid" sample located between the two air strippers on a quarterly basis. Influent samples are analyzed for TCL VOCs by Method 8260, TAL metals by Method 6010B and pH by Method 9040B. The "mid" samples are analyzed for TCL VOCs by Method 8260.

- Collection and analysis of vapor phase influent, midfluent and effluent samples from the carbon adsorption vessels on a monthly basis. Influent, midfluent and effluent samples are analyzed for TCL VOCs by Method TO-15.

Since D&B assumed O&M responsibilities for the Site in February 2005, TCL VOCs were analyzed utilizing Method 8260; however, as required by the NYSDEC, from May 2010 through the end of this reporting period, TCL VOCs were analyzed utilizing Method 624. Note Method 624 does not report cis-1,2-dichloroethylene (cis-1,2-DCE) and as a result, total VOC concentrations from May 2010 through the end of the reporting period will not be directly comparable to historic total VOC concentrations. In addition, based on D&B's recommendation, cis-1,2-DCE will be included in the reporting list for future sampling events. A summary of the routine treatment system monitoring analytes and their typical frequency of completion is provided on Table 4-1.

Groundwater Monitoring Activities

Groundwater monitoring activities performed throughout this monitoring period included the sampling of nine on-site groundwater monitoring wells (MW-101 through MW-108 and MW-5S) and three off-site groundwater monitoring wells (MW-109, MW-111 and MW-2S). Groundwater monitoring activities consists of the collection and analysis of samples from each of the twelve monitoring wells on a quarterly basis. Groundwater monitoring well locations are provided in Figures 2-2 and 2-3. As described above, the groundwater samples were analyzed for VOCs by Method 8260 since February 2005; however, from May 2010 through the end of this reporting period TCL VOCs were analyzed utilizing Method 624.

Note that, sampling of groundwater monitoring wells MW-2S and MW-5S is not required as per the site-specific O&M Plan, dated April 2002. However, based on elevated concentrations of chlorinated VOCs detected in monitoring well MW-2S during groundwater sampling activities completed as part of a November 2007 Vapor Intrusion Investigation completed by the NYSDEC, this well was added to the routine groundwater monitoring program. In addition, monitoring well MW-5S was discovered during the completion of the April 2010

**TABLE 2**
**ACTIVE INDUSTRIAL UNIFORM SITE**
**NYSDEC SITE No. 1-52-125**
**TREATMENT SYSTEM AND GROUNDWATER SAMPLING SUMMARY**

| Sampling Location | Sampling Frequency | | | Analytical Parameters | | | | |
|---|---|---|---|---|---|---|---|---|
| | Monthly | Quarterly | Semi-Annual | VOC (EPA Method 624) | VOC (EPA Method TO-15) | SPDES Parameters(1) | TAL Metals (EPA SOW ILM 04.0) | pH (EPA Method 9040) |
| Recovery Well No. 1 | X | | | X | | | X | X |
| Recovery Well No. 2 | | X | | X | | | X | X |
| Air Stripper Aqueous Effluent | X | | | X | | | | |
| Air Stripper Aqueous Effluent | | X | | X | | | X | |
| Air Stripper Aqueous Effluent | | | X | X | | X | | |
| Air Stripper Vapor Effluent | | | X | | X | | | |
| Groundwater Monitoring Wells MW-103 through MW-107, MW-2S and MW-5S | | X | | X | | | | |
| Groundwater Monitoring Wells MW-101, MW-102, MW-108, MW-109 and MW-111 | | | X | X | | | | |

(1) SPDES parameters include COD by EPA Method 410.1/410.2, Alkalinity by EPA Method 310.1, TSS by EPA Method 160.28 and TDS by EPA Method 160.1.

underground storage tank removal excavation described above. In order to provide additional on-site groundwater contaminant concentration data in this area, monitoring well MW-5S was added to the routine groundwater monitoring program per the direction of the NYSDEC.

Lastly, and as detailed in each quarterly monitoring report, groundwater monitoring well MW-110 was reportedly paved over in 2005 and could not be located throughout this reporting period. Therefore groundwater monitoring well MW-110 has not been sampled since the beginning of this reporting period.

Data Analysis

All aqueous samples collected from February 2005 through January 2010 were submitted to Mitkem Corporation (Mitkem) for analysis. All aqueous samples collected from February 2010 through December 2010 were submitted to Test America Laboratories, Inc. (TAL) for analysis.

All vapor-phase air samples collected from February 2005 through September 2006 were submitted to Severn Trent Laboratories Vermont (STL), a subcontractor to Mitkem. All vapor-phase air samples collected from October 2006 through December 2009 were submitted to Centek Laboratories, LLC (Centek) for analysis. All vapor-phase air samples collected from January 2010 through December 2010 were submitted to TAL for analysis.

Mitkem, STL, Centek and TAL are all New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP)-certified laboratories.

All data packages were reviewed for completeness and compliance with NYSDEC Analytical Services Protocol (ASP) Quality Assurance/Quality Control (QA/QC) requirements. Any QA/QC issues arising with the sample results were qualified in the Active Industrial quarterly monitoring reports. Copies of all data packages received throughout the course of the monitoring period are provided in Appendix D. Copies of all Data Validation Checklists are provided in Appendix E.

## 4.2 Treatment System Performance Standards and Compliance Status

Aqueous Phase Effluent Discharge Standards and Compliance Status

The treated groundwater discharged from the air stripper towers is pumped via underground piping to Little Neck Creek. This discharge is authorized by NYSDEC under a State Pollution Discharge Elimination System (SPDES) permit equivalency, which provides for site specific VOCs, metals, pH and wet chemistry parameter discharge limits. A copy of the SPDES permit equivalency and a summary of the site-specific aqueous phase effluent discharge limits, as included in the O&M Manual for the Site, is provided in Appendix F.

Based on the analytical data, all analytes in the treated groundwater discharged from the GWE&TS were in compliance with all SPDES requirements throughout this reporting period, with the exception of a pH value detected in the grab sample collected from the air stripper discharge on January 28, 2008. The grab sample field-screened for pH was reported at a value of 5.85, which is slightly below the NYSDEC site-specific effluent range limitation of 6.9. However, the results of split samples collected for laboratory analysis of pH by Method 9040 was within the NYSDEC site-specific effluent range of 6.9.

Vapor Phase Effluent Discharge Standards and Compliance Status

Exhaust gas generated by the air stripper towers as a result of the air stripping process are directed through two series-configured 5,000-pound vapor phase granular activated carbon (GAC) vessels, connected in a series configuration, prior to discharge to the atmosphere. This discharge is authorized by the NYSDEC under an air discharge permit equivalency, which provides for site-specific discharge parameters. A copy of the air discharge permit equivalency document and a summary of site-specific vapor phase effluent limits, as included in the site-specific OMM are provided in Appendix G.

A summary of the exceedances noted at the effluent of the GWE&TS during this reporting period are provided on Table 4-2. As detailed on Table 4-2, several VOCs were detected at concentrations exceeding their respective site-specific effluent limits on twenty-two occasions during this reporting period.

All vapor-phase air discharge exceedances were immediately reported to the NYSDEC upon review of the data and were also noted in the quarterly monitoring reports. Per the direction of the NYSDEC, the GWE&TS was not shut down due to these exceedances since the total VOC emission rate was less than 0.5 lbs/hr at the time of each occurrence. GAC change-outs are discussed in Section 4.3.

## 4.3 Treatment System Performance Evaluation

Groundwater Treatment Performance

Based on the influent sample results for this reporting period, total combined influent VOC concentrations ranged from a low of 68.0 micrograms per liter (ug/l) to a high of 840 ug/l, detected on November 1, 2006. RW-1 influent VOC concentrations ranged from a low of 153 ug/l to a high of 840 ug/l, detected on November 1, 2006, and RW-2 influent VOC concentrations ranged from a low of 13.02 ug/l to a high of 58.0 ug/l, detected on September 30, 2005.

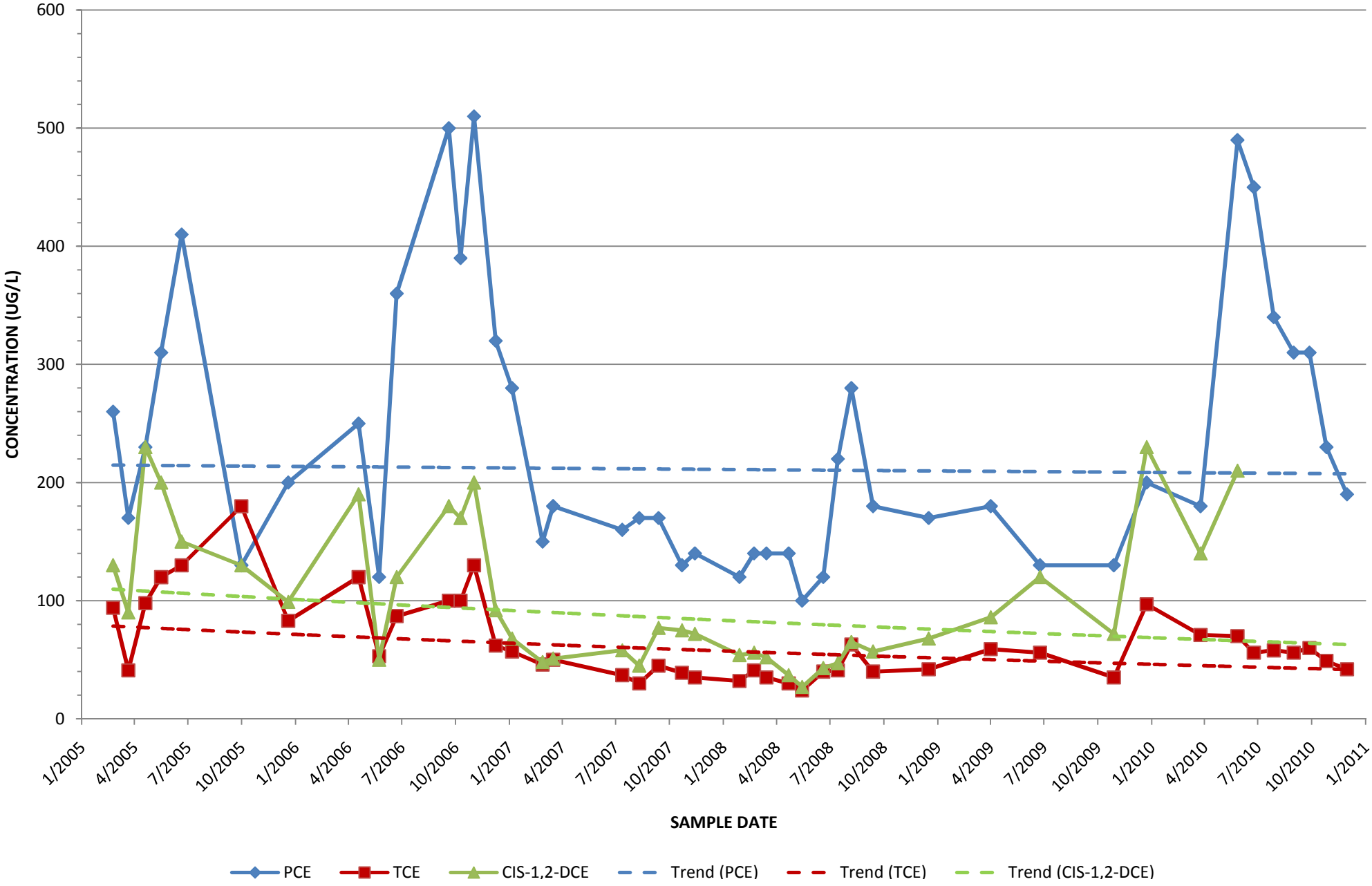
Based on the influent sample results, cis-1,2-DCE, trichloroethylene (TCE) and PCE have been detected at concentrations in RW-1 influent groundwater above their applicable NYSDEC Class GA groundwater standard or guidance value throughout this reporting period. A graph depicting the concentrations of cis-1,2-DCE, TCE and PCE throughout the reporting period, is provided as Figure 4-1. As shown on Figure 4-1, PCE was the predominate site-specific VOC that was detected in RW-1 influent groundwater, ranging from a low of 100 ug/l to

**TABLE 4-2**
**ACTIVE INDUSTRIAL UNIFORM SITE**
**NYSDEC SITE No. 1-52-125**

**TREATMENT SYSTEM AIR DISCHARGE VOC EXCEEDANCE SUMMARY**
**FEBRUARY 2005 THROUGH DECEMBER 2010**

| Date | Exceedance | Emission Rate (lbs/hr) | NYSDEC Permit Equivalency Discharge Limit (lbs/hr) |
|---|---|---|---|
| 8/30/2005 | 1,2-Dichloroethene (total) | 3.5E-03 | 3.0E-03 |
| 10/24/2005 | 1,2-Dichloroethene (total) | 1.1E-02 | 3.0E-03 |
| 11/21/2005 | 1,2-Dichloroethene (total) | 1.2E-02 | 3.0E-03 |
| 4/18/2006 | 1,2-Dichloroethene (total) | 7.3E-03 | 3.0E-03 |
| 7/31/2006 | 1,2-Dichloroethene (total) | 3.3E-03 | 3.0E-03 |
| 8/17/2006 | 1,2-Dichloroethene (total) | 9.4E-03 | 3.0E-03 |
| 9/19/2006 | 1,2-Dichloroethene (total) | 1.0E-02 | 3.0E-03 |
| 10/9/2006 | 1,2-Dichloroethene (total) | 1.3E-02 | 3.0E-03 |
| 11/1/2006 | 1,2-Dichloroethene (total) | 9.0E-03 | 3.0E-03 |
| 12/8/2006 | 1,2-Dichloroethene (total) | 8.1E-03 | 3.0E-03 |
| | Trichloroethylene | 1.3E-02 | 6.0E-03 |
| 1/5/2007 | 1,2-Dichloroethene (total) | 3.3E-03 | 3.0E-03 |
| | Trichloroethylene | 9.1E-03 | 6.0E-03 |
| 2/26/2007 | Tetrachloroethylene | 5.0E-02 | 7.0E-03 |
| | Trichloroethylene | 1.0E-02 | 6.0E-03 |
| 4/21/2008 | Xylenes (total) | 2.5E-03 | 1.0E-03 |
| 3/1/2010 | 1,2-Dichloroethene (total) | 3.7E-03 | 3.0E-03 |
| 4/29/2010 | 1,2-Dichloroethene (total) | 6.0E-03 | 3.0E-03 |
| 5/27/2010 | 1,2-Dichloroethene (total) | 4.1E-03 | 3.0E-03 |
| 6/24/2010 | 1,2-Dichloroethene (total) | 3.6E-03 | 3.0E-03 |
| 7/28/2010 | 1,2-Dichloroethene (total) | 3.7E-03 | 3.0E-03 |
| 8/31/2010 | 1,2-Dichloroethene (total) | 4.4E-03 | 3.0E-03 |
| 9/27/2010 | 1,2-Dichloroethene (total) | 6.8E-03 | 3.0E-03 |
| 10/26/2010 | 1,2-Dichloroethene (total) | 5.7E-03 | 3.0E-03 |
| 11/30/2010 | 1,2-Dichloroethene (total) | 8.1E-03 | 3.0E-03 |
| | Trichloroethylene | 1.2E-02 | 6.0E-03 |

**FIGURE 4-1**
**ACTIVE INDUSTRIAL UNIFORM SITE**
**NYSDEC SITE No. 1-25-125**
**HISTORICAL RESULTS OF RW-1 INFLUENT ANALYSIS**
**SITE SPECIFIC VOCs**

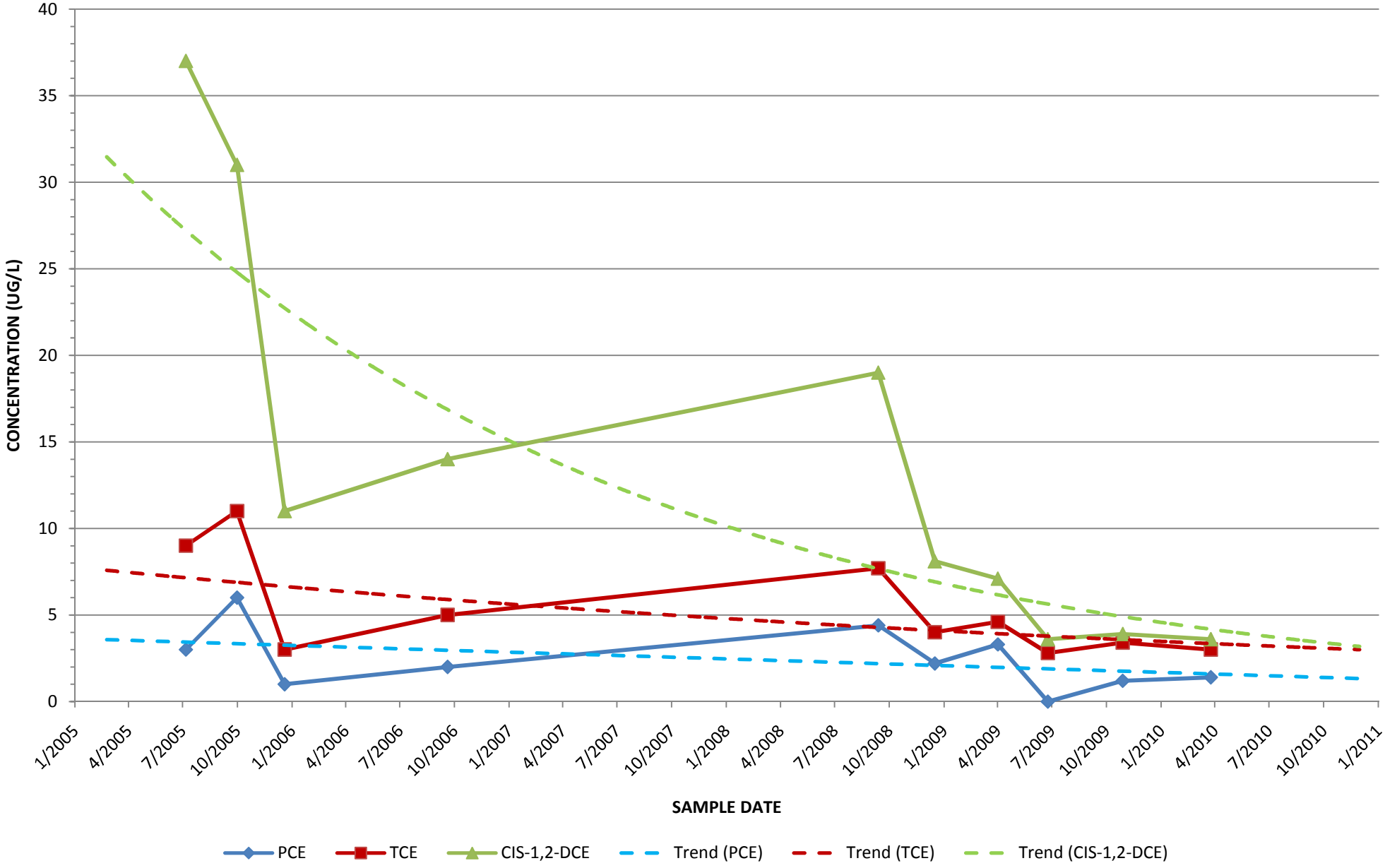


a high of 510 ug/l, detected on November 1, 2006. PCE has exhibited several spikes in concentration, but has maintained an overall slightly decreasing trend throughout this reporting period. The most recent spike of PCE on May 27, 2010 occurred immediately following the increase of RW-1's flow rate to approximately 130 gpm and is likely due to the increased on-site radius of influence. Cis-1,2-DCE and TCE were detected at overall lower concentrations, ranging from lows of 27.0 ug/l and 24.0 ug/l to highs of 230 ug/l and 180 ug/l, respectively. Overall, both cis-1,2-DCE and TCE have shown a general decreasing trend throughout this reporting period.

Based on the influent sample results, cis-1,2-DCE, TCE and PCE have been detected at concentrations in RW-2 influent groundwater above their applicable NYSDEC Class GA Groundwater Standards throughout the majority of the beginning and middle of this reporting period. A graph depicting the concentrations of cis-1,2-DCE, TCE and PCE throughout this reporting period is provided as Figure 4-2. As shown on Figure 4-2, cis-1,2-DCE was the predominate site-specific VOC that was detected in RW-2 influent groundwater ranging from a low of 3.6 ug/l to a high of 37.0 ug/l, detected on July 7, 2005. PCE and TCE were detected at overall lower concentrations, ranging from lows of non-detect and 2.8 ug/l to highs of 6.0 ug/l to 11.0 ug/l, respectively. Overall, all site specific contaminants have shown a decreasing trend throughout the reporting period and have been detected below their applicable NYSDEC Class GA Groundwater Standard from July 2009 through the end of this reporting period. As a result of this trend, RW-2 was shut down in April 2010 per the direction of the NYSDEC.

As discussed in Section 4.2, the GWE&TS has effectively been treating the extracted groundwater to below the required effluent standards. Approximately 619 pounds of VOCs were removed from the extracted groundwater during this reporting period and the total pounds per hour (lb/hr) average VOC removal rate for this reporting period ranged from a low of $2.96 \times 10^{-3}$ lb/hr to a high of $4.05 \times 10^{-2}$ lb/hr detected on September 30, 2005. The average total VOC

**FIGURE 4-2**
**ACTIVE INDUSTRIAL UNIFORM SITE**
**NYSDEC SITE No. 1-25-125**
**HISTORICAL RESULTS OF RW-2 INFLUENT ANALYSIS**
**SITE SPECIFIC VOCs**



removal efficiency for the treatment system throughout this reporting period was approximately 97.8%. A summary of the treatment system performance results for the reporting period is provided on Table 3-6.

Vapor Phase Treatment Performance

Based on the effluent sample results for this reporting period, total effluent VOCs ranged from a low of 19.5 micrograms per cubic meter ($ug/m^3$) to a high of 13,833 $ug/m^3$, detected on February 26, 2007. The lb/hr average VOC emission rate for this period ranged from a low of $9.3x10^{-5}$ to a high of $6.6x10^{-2}$, also detected on February 26, 2007. As VOC removal efficiency requirements are not provided in the April 2002 O&M Plan, the efficiency of the GAC vessels was evaluated throughout this reporting period based on the contaminant concentrations in effluent vapor, as compared to the site-specific effluent limits and a total effluent VOC limit of 0.5 lbs/hr as per the NYSDEC.

As discussed in Section 4.2, concentrations of cis-1,2-DCE, TCE and PCE were detected slightly in exceedance of their respective site-specific effluent limits in effluent vapor during various months throughout this reporting period. It should be noted, that the GWE&TS was not shut down due to these exceedances, as per the direction of the NYSDEC, and due to the fact that the total VOC emission rate was less than 0.5 lb/hr at the time of each occurrence.

In response to these effluent limit exceedances, removal and replacement of the GAC within each vessel was performed in March 2007. Effluent vapor VOC exceedances have again been noted from March 2010 through the end of this reporting period. Based on these exceedances it was initially recommended to remove or replace the GAC. However, based on the low total effluent contaminant concentrations, and as directed by the NYSDEC, the GAC will be removed from the carbon vessels and the system effluent vapor will then be discharged directly to the atmosphere, without carbon treatment.

## 4.4 Groundwater Monitoring Network Evaluation

On-Site Monitoring Well Network (MW-101 through MW-108)

A summary of the site-specific VOCs (PCE, TCE, VC and cis-1,2-DCE) detected throughout this reporting period in each of the eight on-site groundwater monitoring wells are graphically presented on Figures 1 through 8, provided in Appendix H. A summary of the results from the groundwater monitoring events completed during this reporting period are summarized below:

- MW-101: Concentrations of site-specific VOCs have been detected at concentrations below their respective Class GA Groundwater Standards from March 2005 through the end of this reporting period. While, as detailed above, cis-1,2-DCE was not reported from April 2010 through December 2010, this site contaminant has historically been non-detect or detected at concentrations well below its Class GA Groundwater Standard in this well.

- MW-102: Concentrations of site-specific VOCs have been detected at concentrations below their respective Class GA Groundwater Standards from June 2005 through the end of this reporting period. While, as detailed above, cis-1,2-DCE was not reported from April 2010 through December 2010, this site contaminant has historically been non-detect or detected at concentrations well below its Class GA Groundwater Standard in this well.

- MW-103: Site-specific VOC concentrations have been detected below Class GA Groundwater Standards since June 2010 and have exhibited generally decreasing trends throughout this reporting period. PCE has been the site-specific VOC predominately detected within MW-103, with concentrations ranging from non-detect to 75.6 ug/l, detected in October 2004. While cis-1,2-DCE was not reported from April 2010 through December 2010, this site contaminant has been sporadically detected prior to April 2010 at concentrations ranging from 4.0 ug/l to 3,100 ug/l, detected in December 2008. However, cis-1,2-DCE exhibited non-detect concentrations from June 2009 through March 2010.

- MW-104: Site-specific VOC concentrations have consistently been detected at concentrations in exceedance of the Class GA Groundwater Standards in MW-104. PCE and TCE have been the site-specific VOCs predominately detected within MW-104 as follows:

    - PCE was detected at concentrations ranging from 8.0 ug/l to 1,660 ug/l, detected in October 2004. Overall, PCE concentrations have exhibited a decreasing trend throughout this reporting period; and

- TCE was detected at concentrations ranging from 0.6 ug/l to 60.9 ug/l, detected in October 2004. Overall, PCE concentrations have exhibited a slightly increasing trend. However, note that TCE concentrations have been below its Class GA Groundwater Standard from June 2010 through the remainder of this reporting period.

- MW-105: Site-specific VOC concentrations have been detected below Class GA Groundwater Standards since December 2009 and have exhibited overall decreasing trends throughout this reporting period. PCE has been the site-specific VOC predominately detected within MW-105, with concentrations ranging from 0.47 ug/l to 149 ug/l, detected in October 2004. While cis-1,2-DCE was not reported from April 2010 through December 2010, this site-specific contaminant has historically been non-detect or detected at concentrations below Class GA Groundwater Standards from March 2005 through March 2010; with the exception of a concentration of 18.0 ug/l detected in September 2009.

- MW-106: Site-specific VOC concentrations have been detected at concentrations in exceedance of Class GA Groundwater Standards. PCE, TCE, cis-1,2-DCE and VC have been the site-specific VOCs predominately detected within MW-106, as follows:

  - PCE was detected at concentrations ranging from 3.8 ug/l to 380 ug/l, with the maximum concentration detected in April 2009. Overall, PCE concentrations have exhibited an increasing trend throughout this reporting period;
  - TCE was detected at concentrations ranging from 2.4 ug/l to 610 ug/l, with the maximum concentration detected in September 2008. Overall, TCE concentrations have exhibited a decreasing trend throughout this reporting period;
  - Cis-1,2-DCE was detected at concentrations ranging from 150 ug/l to 6,200 ug/l, with the maximum concentration detected in September 2008. Overall, cis-1,2-DCE concentrations have exhibited an increasing trend; however, note that from June 2009 through March 2010, cis-1,2-DCE concentrations exhibited a decreasing trend from a high of 540 ug/l to 150 ug/l; and
  - VC was detected at concentrations ranging from 2.9 ug/l to 500 ug/l, with the maximum concentration detected in September 2008. Overall, VC concentrations have exhibited a decreasing trend throughout this reporting period.

  Based on the historical contaminant concentration trends and relatively high VOC concentrations detected in MW-106, a "hot spot" area may be present in close proximity to MW-106. Note that, as detailed in Section 2.2, contaminated soil was identified and removed in the vicinity of MW-106 in November 2000. Based on

review of historical records, approximately 600 cubic yards of unsaturated soil was removed from this area.

- MW-107: Site-specific VOC concentrations have been detected below Class GA Groundwater Standards since June 2010 and have generally exhibited overall decreasing trends throughout this reporting period. PCE has been the site-specific VOC predominately detected within MW-107, with concentrations ranging from non-detect to 198 ug/l, detected in June 2004. While cis-1,2-DCE was not reported from April 2010 through December 2010, this site contaminant has historically been detected at concentrations below its Class GA Groundwater Standard from January 2008 through March 2010.

- MW-108: Site-specific VOCs have been detected at concentrations below their respective Class GA Groundwater Standards and Guidance Values from June 2010 and have generally exhibited overall decreasing trends through the end of this reporting period. While cis-1,2-DCE was not reported from April 2010 through December 2010, this site contaminant has historically been non-detect or detected at concentrations less than its Class GA Groundwater Standard, from June 2004 through March 2010.

- MW-5S: As detailed above, following discovery of the well as part of the UST excavation, MW-5S has been sampled as part of D&B's work assignment since June 2010. Site specific VOCs have been detected at concentrations below their respective Class GA Groundwater Standards from June 2010 through the end of this reporting period.

Overall, site-specific VOCs have shown a decreasing trend since on-site extraction well RW-1's flow rate was increased to approximately 130 gpm on April 21, 2010, as detailed in Section 3.2. Also likely contributing to the overall decreasing contaminant concentration trends, is the excavation of the USTs, below grade drainage structure, and associated contaminated soil in June 2010, as described in Section 2.2. As detailed above, further investigation of the southwestern and eastern areas of the site is warranted, and additional details regarding these recommendations is provided in Section 8.0.

Off-Site Monitoring Well Network (MW-109, MW-111 and MW-2S)

A summary of the site-specific VOCs (PCE, TCE, VC and cis-1,2-DCE) detected during the reporting period in each of the three off-site groundwater monitoring wells located downgradient of the GWE&TS are graphically represented on Figures 9 through 11, provided in

Appendix H. Results from the groundwater monitoring events completed during this reporting period are summarized below:

- MW-109: Monitoring well MW-109 is located approximately 1,800 feet south of the site. Site-specific VOCs have been detected at concentrations below their respective Class GA Groundwater Standards from June 2006 through the end of this reporting period.

- MW-111: Monitoring well MW-111 is located approximately 580 feet southwest of the site. Site-specific VOCs have been detected at concentrations below their respective Class GA Groundwater Standards throughout this reporting period.

- MW-2S: Monitoring well MW-2S is located approximately 220 feet south of the site. One or more of the site-specific VOCs have been detected at concentrations in exceedances of their respective Class GA Groundwater Standards from September 2008 through the end of this reporting period. PCE, TCE, cis-1,2-DCE and VC have been the site-specific VOCs predominately detected within MW-2S as follows:

  - PCE was detected at concentrations ranging from 2.2 ug/l to 85 ug/l, with the maximum concentration detected in March 2009. Overall, PCE concentrations have exhibited a slightly increasing trend throughout this reporting period;
  - TCE was detected at concentrations ranging from 2.3 ug/l to 250 ug/l, with the maximum concentration detected in December 2009. Overall, TCE concentrations have exhibited a slightly increasing trend throughout this reporting period; however, note that from June 2010 throughout the end of this reporting period, TCE concentrations were below its Class GA Groundwater Standard of 5.0 ug/l;
  - Cis-1,2-DCE was detected at concentrations ranging from 1.2 ug/l to 2,500 ug/l, with the maximum concentration detected in December 2009. Overall, cis-1,2-DCE concentrations have exhibited an increasing trend throughout this reporting period; and
  - VC was detected at concentrations ranging from 0.95 ug/l to 6.6 ug/l, with the maximum concentration detected in September 2010. Overall, VC concentrations have exhibited a slightly increasing trend throughout this reporting period.

## 4.5 Interim Remedial Measures

As detailed in the Active Industrial Uniform Site Quarterly Report No. 22, two USTs, several buried below grade drainage structures, including several drywells, floor drain, trap, a valve and a fractured pipe and approximately 300 to 360 cubic yards of contaminated soil, were

identified and excavated within the vicinity of MW-104 between April and June 2010 as part of an interim remedial measure (IRM). The USTs and below grade structures were disposed of off-site and the contaminated soil was remediated on-site utilizing an ex-situ soil vapor extraction system. In addition, a limited site soil and groundwater investigation, consisting of the investigation of the dry wells identified during the excavation, and the "pre-characterization" of an area in the southwestern portion of the site, was completed in order to assess the need for additional IRM actions following the excavation of the USTs and associated below grade structures.

The "pre-characterization" soil and groundwater sampling program identified elevated chlorinated VOC concentrations in association with the drywells and in the southwestern portion of the site. In order to further remediate on-site soil and maintain the effectiveness and protectiveness of the groundwater treatment system, D&B has recommended to remove the identified on-site drywells and excavate additional soil in the southwestern area of the site. Note, this work was completed in June and July 2011, and will be summarized in the subsequent PRR prepared for the Site.

## 5.0 INSTITUTIONAL CONTROL/ENGINEERING CONTROL (IC/EC) CERTIFICATION PLAN REPORT

The intent of this section is to provide a description of the Institutional and Engineering Controls (IC/ECs) in place for the Site, as well as mechanisms used to monitor and enforce such controls.

Institutional Controls

By definition, an IC is any non-physical means for enforcing restriction on the use of real property that limits human health and environmental exposure, restricts the use of groundwater, provides notice to potential owners, operators, or member of the public, or prevents action that would interfere with the effectiveness and/or integrity of operation, maintenance and monitoring activities at or pertaining to the remedial site.

ICs in the form of a groundwater use restriction and land-use restriction are mandatory controls required for the Site as per the site-specific ROD dated March 1997. In an effort to confirm that such controls exist, a copy of the deed for the Active Industrial Uniform property was obtained from the Suffolk County Clerk's Office and a Freedom of Information request was submitted to the Village of Lindenhurst. A copy of this documentation is provided in Appendix I. Based on the information received, the property deed does not include any groundwater or land use restrictions. Additionally, the Village of Lindenhurst does not have any restrictions on file for the property. Note that while the restrictions are not formally recorded, the intent of the ICs are currently being met since there is no on-site use of groundwater for potable purposes and no structures have been built on-site, other than the GWE&TS. In order to ensure that future property owners are aware of these restrictions, D&B recommends instituting the appropriate deed restrictions for groundwater and land use at the Site.

Engineering Controls

By definition, an EC is any physical barrier or method employed to actively or passively contain, stabilize or monitor contamination, restrict the movement of contamination to ensure long-term effectiveness of a remedial program, or eliminate potential exposure pathways to contamination. The GWE&TS is currently the only EC in place for the Site and has generally operated in accordance with the design standards throughout the majority of this reporting period.

It should be noted, however, that the IC/EC Certification Form provided by the NYSDEC does not currently list the GWE&TS. The IC/EC Certification Form should be revised to include the groundwater extraction and treatment system as an EC. A copy of the completed IC/EC certification form, as provided by the NYSDEC, is included as Appendix J.

## 6.0 GREEN REMEDIATION MONITORING PLAN

In accordance with the NYSDEC's new DER-31 Green Remediation policy, the following section provides a qualitative assessment of the overall environmental impacts or "footprint" associated with the operation of the Site GWE&TS. In addition, recommendations are provided in order to minimize the environmental impacts of the remedy.

### 6.1 Qualitative Overview of Environmental Impacts

Electric Usage

Based on a review of the electric utility bills from the most recent operational year of this reporting period (January 2010 through December 2010), the groundwater extraction and treatment system used a total of approximately 125,160 kilowatt-hours (KWH) of electricity, at an average of 344 KWH/day. The GWE&TS currently obtains 100% of its electricity from the local electric utility, Long Island Power Authority (LIPA). Based on publically available information, LIPA currently supplies electricity from a variety of fuel sources, including fossil fuels (46%), nuclear (11%), refuse burning (4%) and renewables (3%). The remaining 35% of its electric is supplied from other outside electric utilities.

Electricity usage associated with the GWE&TS is mainly attributed to operation of the submersible extraction well pumps (RW-1 and RW-2), pressure blower and effluent transfer pumps. Currently, only the transfer pumps are equipped with variable frequency drives to modulate their flow and associated electric usage. Minor electricity usage can also be attributed to building and site lighting, building HVAC and treatment system controls.

Fossil Fuel Usage

The groundwater extraction and treatment system directly uses fossil fuels (e.g., natural gas) for the operation of the building heaters. In addition, fossil fuels are indirectly used during the completion of maintenance and monitoring activities associated with the overall operation of the GWE&TS. Fossil fuel use results from completion of the following site related activities:

- Operation of the natural gas building heaters;
- Transportation to and from the Site for monitoring, sampling and system alarm response;
- Operation of a portable generator to power a submersible pump for groundwater monitoring well sampling activities;
- Off-site transportation and shipment of samples collected for laboratory analysis; and
- Disposal of waste, such as spent GAC, generated at the Site.

Water Usage

The GWE&TS does not directly use water for operation. However, as the treatment system building is connected to the Suffolk County Public Water Supply, a nominal amount of water was utilized during the completion of maintenance and monitoring activities associated with the GWE&TS and groundwater monitoring well network.

Air Emissions

Exhaust gas from each packed-tower air stripper is directed into two series-configured 5,000-pound capacity GAC vessels, which are designed to remove VOCs from the exhaust gas prior to discharge to the atmosphere. Note that while the GWE&TS is equipped with GAC vessels to capture VOCs emitted from the GWE&TS, there is a potential for emission of VOCs from the GWE&TS once the GAC is exhausted. However, the effluent air is monitored on a routine basis to prevent or limit these instances.

In addition, monitoring and maintenance activities associated with the GWE&TS also result in indirect emissions to the air through the off-site generation of electricity utilized to power the treatment system and the combustion of fossil fuels, as discussed above.

Consumption of Materials and Generation of Waste

Monitoring, maintenance and reporting activities associated with the GWE&TS result in material consumption and the generation of waste. A summary of the current material consumption and waste generation activities for the system are summarized below:

- Personal protective equipment associated with GWE&TS and groundwater sampling, such as nitrile gloves and hearing protection, etc.;
- Polyethylene tubing, twine and bailers associated with groundwater sampling;
- Packaging material and ice used to pack and preserve samples to be submitted for laboratory analysis;
- Florescent light bulbs for building lighting;
- Paper and office supplies associated with GWE&TS site logs, monitoring logs and report preparation;
- Repair and replacement of equipment associated with the GWE&TS; and
- GAC usage and off-site transportation and disposal/regeneration.

## 7.0 COST EVALUATION

The total cost of operation of the treatment system from February 2005 through December 2010 was approximately $954,430. This total includes engineering and subcontractor costs, as well as utility costs associated with the operation of the GWE&TS (electric, natural gas, telephone and water). It should be noted that this total does not include any administrative costs incurred by NYSDEC throughout the reporting period in support of this project. A review of these costs is provided on Table 7-1. The following provides a brief review of each cost item:

- Subcontractors include the analytical laboratory and maintenance contractors associated with the routine/non-routine maintenance of the GWE&TS. As summarized on Table 7-1, subcontractor costs were approximately 49% of the total costs for this reporting period.

- Engineering costs include effort invoiced in association with project management, monitoring, sampling, subcontractor oversight and alarm response, report preparation, project planning and other office-related work items. As summarized on Table 7-1, engineering costs were approximately 36% of the total costs for this reporting period.

- Utilities consumed in support of the overall operation of the GWE&TS include electric, telephone, gas and water. As summarized on Table 7-1, utility costs were approximately 14% of the total costs for this reporting period, primarily due to electric usage.

- Expenses include, but are not necessarily limited to, sample shipment, auto travel, reproduction and other miscellaneous costs associated with the operation and maintenance of the GWE&TS (e.g., sampling/equipment supplies, PPE, etc.). As summarized on Table 7-1, expense costs were approximately 2% of the total costs for this reporting period.

## TABLE 7-1

## ACTIVE INDUSTRIAL UNIFORM SITE
## NYSDEC SITE No. 1-52-125
## TREATMENT SYSTEM COST SUMMARY

| COST ITEM | BUDGET EXPENDED (FEBRUARY 2005 THROUGH DECEMBER 2010) | PERCENT OF TOTAL |
|---|---|---|
| **ENGINEERING SUPPORT** | | |
| Dvirka and Bartilucci Consulting Engineers | $ 339,537.49 | 35.6% |
| **SUBCONTRACTORS** | | |
| NYSDEC Call-Out Contractor (Routine/Non-routine Maintenance Activities) | $ 247,265.58 | 25.9% |
| Mitkem Corporation (Analytical Laboratory) | $ 83,583.01 | 8.8% |
| Systematic Technologies (Routine/Non-routine Maintenance Activities) | $ 68,892.76 | 7.2% |
| Envirotrac Ltd. (Routine/Non-routine Maintenance Activities) | $ 27,702.87 | 2.9% |
| Subsurface Technologies (Proprietary Well Redevelopment Contractor) | $ 23,199.75 | 2.4% |
| NYSDEC Call-Out Laboratory (Analytical Laboratory) | $ 12,340.07 | 1.3% |
| Con-Test Analytical Laboratory (Analytical Laboratory) | $ 5,175.00 | 0.54% |
| Action Trucking (Waste Disposal Contractor) | $ 1,780.00 | 0.19% |
| **SUB-TOTAL** | **$ 469,939.04** | **49.2%** |
| **UTILITIES** | | |
| Electric | $ 115,773.17 | 12.1% |
| Gas | $ 6,709.75 | 0.70% |
| Telephone | $ 6,118.25 | 0.64% |
| Water | $ 1,267.06 | 0.13% |
| **SUB-TOTAL** | **$ 129,868.23** | **13.6%** |
| **EXPENSES** | | |
| Shipping (FedEx/USP) | $ 4,857.56 | 0.51% |
| Equipment Rental | $ 3,154.46 | 0.33% |
| Miscellaneous | $ 3,065.93 | 0.32% |
| Auto Travel | $ 2,858.79 | 0.30% |
| Supplies | $ 558.86 | 0.06% |
| Reproduction | $ 312.84 | 0.03% |
| Gas and Oil | $ 156.94 | 0.02% |
| Equipment Usage | $ 120.00 | 0.01% |
| **SUB-TOTAL** | **$ 15,085.38** | **1.6%** |
| **TOTAL** | **$ 954,430.14** | |
| **AVERAGE COST/MONTH** | **$ 13,442.68** | |
| **COST/POUND OF VOC REMEDIATED** | **$ 1,558.36** | |

Based on the total cost of $954,430 incurred during this reporting period, the average cost of monthly system operation is approximately $13,443 per month. In addition, when compared to a total of 612 pounds of VOCs removed throughout this reporting period (as summarized on Table 3-4), the average contaminant (total VOC) removal cost is approximately $1,558 per pound of VOC.

# 8.0 CONCLUSIONS AND RECOMMENDATIONS

## 8.1 Conclusions

Based on the evaluation of the GWE&TS performance, effectiveness and protectiveness throughout this reporting period, and as detailed in the preceding sections, the following conclusions have been established:

- O&M Plan – As noted in Section 3.2, the O&M scope of services was performed in accordance with the requirements of the site-specific O&M Plan, dated April 2002, with the exception of low yield conditions at extraction well RW-1. However, it should be noted that, RW-1's yield has been restored to above the minimum-required flow rate of 80 gpm, as specified in Active Industrial Uniform Contract Documents. As of the end of this reporting period, the extraction well yield is greater than 100 gpm in order to ensure that the GWE&TS is adequately capturing the full extent of the on-site plume and to prevent the off-site migration of site-specific contaminants;

- Monitoring Plan – As noted in Section 4.1, monitoring requirements were maintained throughout the reporting period in accordance with the requirements of the site-specific O&M Plan, dated April 2002; and

- IC/EC Compliance Status – As noted in Section 5.1, institutional controls consisting of groundwater and land-use restrictions are not currently filed with the Suffolk County Clerk's office or the Village of Lindenhurst. However, the intent of both on-site restrictions is currently being met since there is no on-site use of groundwater for potable purposes and no structures have been built on-site, other than the groundwater extraction and treatment system. All EC requirements are currently in place and operating as intended; however, the GWE&TS is not currently listed on the IC/EC form provided by the NYSDEC.

## 8.2 Recommendations

Based on evaluation of the operation of GWE&TS throughout this reporting period, and as detailed in the preceding sections, the following recommendations have been established to improve the overall performance, effectiveness and protectiveness of the GWE&TS:

Operation and Maintenance Recommendations

- Additional Insulation: The pressure transducers located at each packed-tower air stripper sump are not properly insulated or protected with heat tracing, contributing to the majority of the system downtime associated with alarm conditions. As such, D&B recommends the installation of additional heat tracing and insulation within the area of the pressure transducers and any exposed exterior piping to prevent future freezing and subsequent downtime;

- Extraction Well RW-1 Yields: In order to ensure that the GWE&TS is adequately capturing the full extent of the on-site plume and to prevent off-site migration of site-specific contaminants, D&B recommends continuing operation of extraction well RW-1 at a minimum flow rate of 100 gpm. In addition, D&B also recommends completing an on-site radius of influence test utilizing the existing groundwater monitoring well network to confirm that a minimum flow rate of 100 gpm at RW-1 is adequate to influence all areas of the site. In addition, based on the decreasing flow trend exhibited by RW-1 throughout the reporting period, it is likely that extraction well RW-1 may require redevelopment utilizing the Aqua Freed® process within the next reporting period to maintain a minimum flow rate of 100 gpm; and

- Spare VFD Fans: In order to minimize future downtime associated with the replacement of malfunctioning VFD cooling fans, D&B recommends purchasing spare fans and storing them on-site.

Monitoring Recommendations

- On-Site Source Area Assessment: In order to investigate the possibility of an additional "source area" in the vicinity of monitoring well MW-106, D&B recommends installing soil boring locations in this area. Note that, based on available records, an IRM consisting of the removal of approximately 600 cubic yards of unsaturated soil was completed in this area in November 2000. As such, in order to characterize any potentially remaining soil contamination in this area, it is recommended to advance the soil borings from grade to a minimum depth of 20 feet below grade. However, if evidence of contamination is observed at the terminal depth at any soil boring, that soil boring should be extended accordingly in an effort to define the vertical extent of contamination. Upon approval of this recommendation, D&B will provide the NYSDEC with a soil boring installation and sampling scope of work for review and approval;

- Off-Site Groundwater Plume Assessment: D&B recommends installing up to six temporary Geoprobe wells downgradient of the Site in order to more accurately define the current off-site location and configuration of the groundwater plume. Based on the results of the samples collected from the temporary wells, it may be warranted to install additional permanent groundwater monitoring wells to be

included as part of long term groundwater monitoring at the Site. Upon approval of this recommendation, D&B will provide the NYSDEC with a temporary well installation and sampling scope of work for review and approval; and

- Reduction in Groundwater Monitoring: Based on the consistent low concentrations of site-specific VOCs detected within monitoring wells MW-101, MW-102, MW-108, MW-109 and MW-111, D&B recommends reducing the sampling of these groundwater monitoring wells to a semiannual frequency. This reduction will result in lower groundwater sampling labor and laboratory analytical costs. Additionally, this reduction will also provide for an overall decrease in environmental impacts associated with the performance of such activities.
- Reduction in Air Stripper Vapor Effluent Sampling Frequency: Based on consistent low concentrations of site-specific VOCs detected in air stripper vapor effluent samples, D&B has recommended reducing the sampling of air stripper vapor effluent from quarterly to a semiannual frequency.

  Also note that sampling of air stripper vapor influent and midfluent is no longer performed since the air stripper exhaust piping was reconfigured to bypass the GAC vessels and discharge directly to the atmosphere in June 2011, per the direction of the NYSDEC.

Institutional and Engineering Control Recommendations

- Institutional Controls: Based on available information, institutional controls (ICs) such as groundwater and land-use restrictions are not currently in place for the Site. These ICs should be included with the property deed as a legal document to ensure that the current property owner and any future property owners are aware of these site-specific restrictions until no longer deemed necessary by the NYSDEC; and

- Engineering Controls: The IC/EC form should be revised and updated to include the GWE&TS as an active EC for the Site.

Green and Sustainability Recommendations

- Extraction Well Pump RW-1 VFD: The influent flow rate for extraction well RW-1 is currently controlled by a globe valve in the system influent piping. As such, the extraction well is pumping at 100% capacity regardless of how much water is introduced to the system from this extraction well. Therefore, in order to reduce the electric usage associated with the operation of extraction well pump RW-1, D&B recommends installing a VFD to control the extraction well pump motor. If the flow rate were controlled by a VFD rather than the globe valve, the pump would use less

electricity, and subsequently be less costly to operate at a flow rate below its maximum capacity;

- Building Lighting: In order to reduce the electric usage associated with site lighting, D&B recommends investigating the feasibility of installing motion sensors on the existing building exterior lights. Adding motion sensor lighting would increase Site security and reduce electrical costs. In addition, it is recommended that all light bulbs within building lighting fixtures be replaced with high efficiency bulbs to further reduce electricity costs;

- Renewable Energy Feasibility Assessment: Electricity provided from the local utility is mainly generated from non-renewable sources. In order to off-set the electricity usage for the GWE&TS from non-renewable sources, D&B recommends evaluating the feasibility of installing alternate energy sources or purchasing renewable energy credits;

- Geothermal Feasibility Assessment: In order to reduce the fossil fuel usage associated with the building heaters, D&B recommends evaluating the feasibility of installing a geothermal heat pump system utilizing the existing groundwater piping. A geothermal heat pump system uses a fraction of the electricity of an electric heater, does not directly burn any fossil fuels and is subsequently less costly to operate. Note that the existing building heaters would remain as backup heaters. In addition, it is recommended to maintain the building heat at no more than 50°F in the winter season;

- Monitoring Well Sampling Frequency Reduction: In order to further reduce the fossil fuel usage associated with Site groundwater sampling, D&B recommends reducing the quarterly sampling frequency of groundwater monitoring wells MW-101, MW-102, MW-108, MW-109 and MW-111 to a semiannual frequency, as presented above; and

- Reduction of Paper Use: In order to reduce the use of paper associated with report preparation, it is recommended to transmit reports electronically as PDF files.

General Recommendations

- As per the NYSDEC, the requirements of the O&M Plan, Monitoring Plan and IC/EC Plan shall be included as part of a Site Management Plan (SMP) for the Site. An SMP does not currently exist for the Site. Therefore, in order to remain consistent with this requirement, an SMP shall be prepared and submitted to the NYSDEC for review and approval;

- D&B recommends the completion of a Remedial System Optimization (RSO) evaluation in order to improve the efficiency, effectiveness and net environmental benefit of the GWE&TS, while at the same time, identifying potential

modifications/alternatives for reducing overall project costs and expedite closure of the Site; and

- Based on a review of the guidance documents provided by the NYSDEC, it is recommended that periodic review be maintained and completed on an annual basis. The frequency of follow-up Periodic Review Reports shall be determined by the NYSDEC based on future Site conditions and compliance.

# APPENDIX A

# HISTORICAL OFF-SITE PLUME MAPS

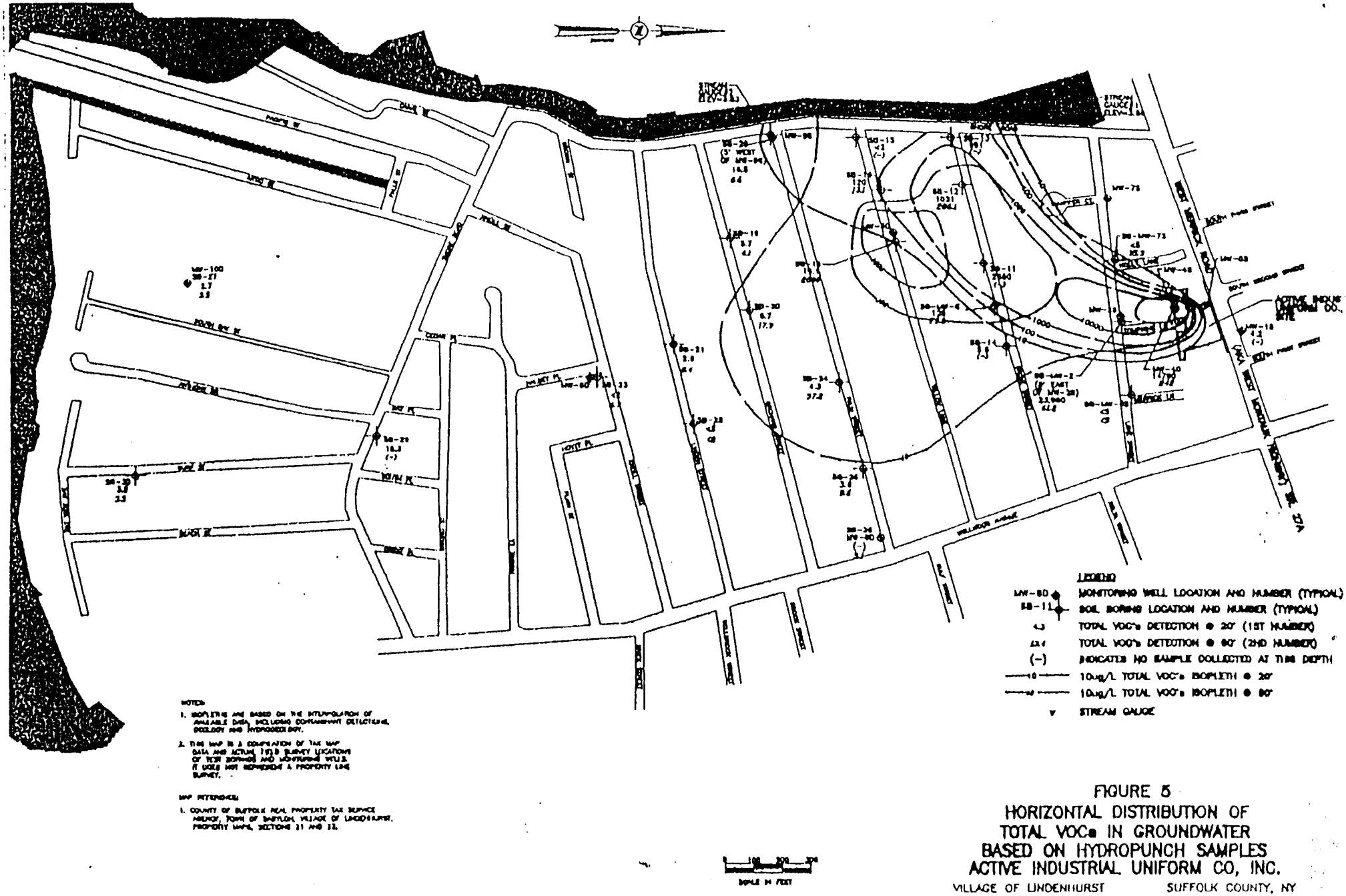
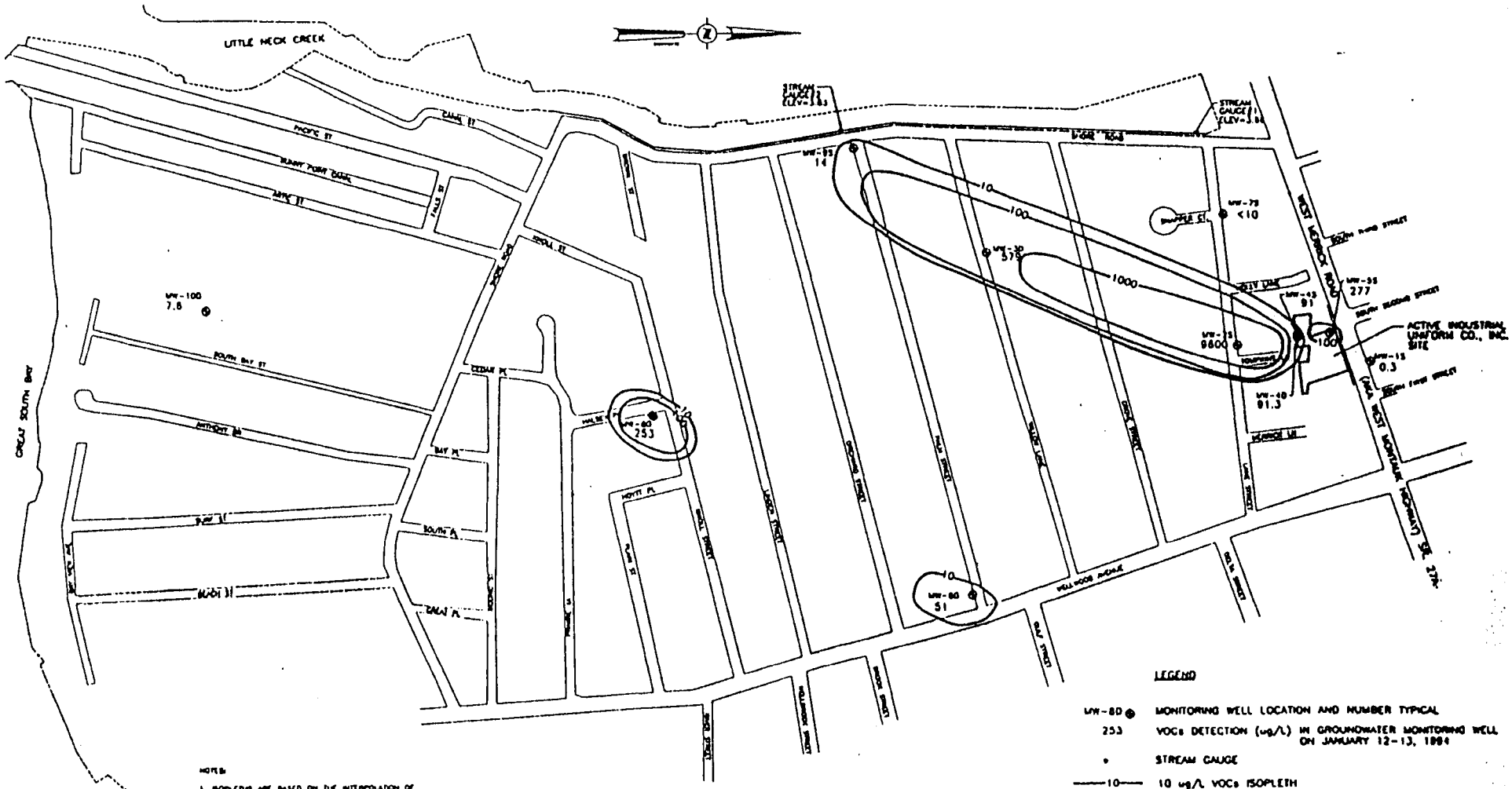



FIGURE 5
HORIZONTAL DISTRIBUTION OF
TOTAL VOCs IN GROUNDWATER
BASED ON HYDROPUNCH SAMPLES
ACTIVE INDUSTRIAL UNIFORM CO, INC.
VILLAGE OF LINDENHURST SUFFOLK COUNTY, NY




NOTES:

1. ISOPLETHS ARE BASED ON THE INTERPOLATION OF AVAILABLE DATA INCLUDING CONTAMINANT DETECTIONS, GEOLOGY AND HYDROGEOLOGY.
2. THIS MAP IS A COMPILATION OF TAX MAP DATA AND ACTUAL FIELD SURVEY LOCATIONS OF PAST BOREHOLE AND MONITORING WELLS. IT DOES NOT REPRESENT A PROPERTY LINE SURVEY.

MAP REFERENCE:

1. COUNTY OF SUFFOLK REAL PROPERTY TAX SERVICE AGENCY, TOWN OF BABYLON, VILLAGE OF LINDENHURST, PROPERTY MAPS, SECTIONS 31 AND 33.

LEGEND

MW-80 ● MONITORING WELL LOCATION AND NUMBER TYPICAL

253 VOCs DETECTION (ug/L) IN GROUNDWATER MONITORING WELL ON JANUARY 12-13, 1984

● STREAM GAUGE

—10— 10 ug/L VOCs ISOPLETH

0 100 200 300
SCALE IN FEET

FIGURE 6
HORIZONTAL DISTRIBUTION OF VOCs
IN GROUNDWATER BASED ON
MONITORING WELL SAMPLES
ACTIVE INDUSTRIAL UNIFORM CO, INC.
VILLAGE OF LINDENHURST SUFFOLK COUNTY, NY

# APPENDIX B

# DETAILS OF SYSTEM SHUTDOWNS AND NON-ROUTINE MAINTENANCE

**ACTIVE INDUSTRIAL UNIFORM SITE**
**NYSDEC SITE No. 1-52-125**
**APPENDIX B - SUMMARY OF SYSTEM SHUTDOWNS AND NON-ROUTINE MAINTENANCE**

| SHUT-OFF DATE/TIME | RESTART DATE/TIME | CAUSE FOR SHUTDOWN |
|---|---|---|
| 2/15/05 4:35 AM | 2/17/05 2:30 PM | Alarm Condition No. 5 - High level air stripper sump No. 1. Alarm generated as a result of a faulty high level float switch in air stripper sump. Replaced switch and restarted system. |
| 3/8/05 9:48 PM | 3/10/05 8:30 AM | Alarm Condition No. 5 - High level air stripper sump No. 1. Caused by VFD overload in air stripper No. 1 transfer pump. Reset VFD and restarted system. |
| 4/1/05 8:04 AM | 4/1/05 9:20 AM | Performance monitoring - Shut down system for schedule particulate filter maintenance event. Replace filter media and restarted system. |
| 4/8/05 10:37 AM | 4/8/05 11:15 AM | Alarm condition No. 5 - High water level in air stripper No. 1 caused system to go into alarm. Alarm generated is a result of an overload in the variable frequency drive (VFD) for transfer pump P-1. Reset VFD, drained air stripper No. 1 to low level and restarted system. |
| 5/6/05 8:46 AM | 5/6/05 9:05 AM | Fixed broken piping for sump pump. System restarted after pump piping was repaired and tightened. |
| 5/6/05 9:12 AM | 5/6/05 11:05 AM | Performance monitoring - Replaced damaged process control valve BV-22 and restarted system. |
| 5/13/05 9:04 AM | 5/13/05 9:55 AM | Performance monitoring - Shut down system for schedule particulate filter maintenance event. Replace filter media and restarted system. |
| 6/16/05 2:15 PM | 6/16/05 4:15 PM | Performance monitoring - shut down system for scheduled particulate filter, pressure blower and transfer pumps maintenance events. Restarted system after completion of the required maintenance. |
| 6/16/05 4:15 PM | 6/16/05 4:45 PM | Performance monitoring - shut down system for scheduled particulate filter, pressure blower and transfer pumps maintenance events. Restarted system after completion of the required maintenance. |
| 6/16/05 4:45 PM | 6/16/05 5:15 PM | Performance monitoring - shut down system for scheduled particulate filter, pressure blower and transfer pumps maintenance events. Restarted system after completion of the required maintenance. |
| 6/17/05 1:48 PM | 6/17/05 5:45 PM | Alarm condition No. 5 - High water level in air stripper No. 1 caused system to go into alarm. Alarm generated is a result of an overload in the variable frequency drive (VFD) for transfer pump P-1. Reset VFD, drained air stripper No. 1 to low level and restarted system. |
| 7/5/05 4:00 PM | 7/5/05 4:20 PM | System shut down to restart extraction well RW-2. RW-2 restarted at a flow rate of 81 gpm. System combined influent flow rate approximately 152 gpm. |
| 7/26/05 9:10 AM | 7/26/05 10:15 AM | System maintenance - Shut down system for scheduled particulate filter maintenance event. Replaced filter media and restarted system. |
| 8/18/05 3:04 AM | 8/18/05 4:57 PM | Alarm condition #3 & #5 - High level in air stripper #2. Drained sump to low level and restarted system. |
| 8/18/05 5:05 PM | 8/18/05 5:35 PM | Alarm condition #3 - General alarm due to high pressure in cartridge filter. Drained cartridge filter. Restarted system. |
| 8/18/05 7:33 PM | 8/29/05 4:45 PM | Alarm condition #3 & #5 - Air stripper transfer pump #2 down due to a malfunctioning muffin fan in variable frequency drive, causing a high level larm in stripper #2. New fan ordered and replaced on 8/29/05. Restarted system. |
| 9/13/05 4:30 PM | 9/26/05 11:30 AM | Shutdown extraction well RW-2, at the request of the NYSDEC, due to a residential complaint of a water leak at the extraction well vault. Inspection of RW-2 revealed a leak in the extraction piping and fitting within the extraction wellhead assembly. Repairs to wellhead completed on 9/26/05. Extraction well RW-1 remained operational during the period when RW-2 was being repaired. |
| 9/14/05 9:30 AM | 9/14/05 2:50 PM | System maintenance - Shut down system while repairs for RW-2 were being conducted. Restarted RW-1 upon completion of work. |
| 9/19/05 8:50 AM | 9/19/05 12:10 PM | System maintenance - Shut down system while repairs for RW-2 were being conducted. Restarted RW-1 upon completion of work. |
| 9/20/05 8:45 AM | 9/20/05 9:32 AM | System maintenance - Shut down system for scheduled particulate filter maintenance event. Replaced filter media and restarted RW-1. |
| 9/26/05 9:00 AM | 9/26/05 11:30 AM | System maintenance - Shut down system while repairs for RW-2 were being conducted. Restarted RW-1and RW-2 upon completion of work. |
| 9/26/05 12:00 PM | 9/26/05 12:15 PM | Alarm condition #3 - General alarm due to high pressure in cartridge filter. Restarted system. |
| 9/26/05 12:30 PM | 9/26/05 12:55 PM | Alarm condition #3 - General alarm due to high pressure in cartridge filter. Reconfigured system set points and opened optional filter cartridge bypass valves 100%. Restarted system. |
| 10/13/05 8:26 AM | 10/13/05 3:15 PM | Alarm condition #3 & #5 - High level in air stripper #2 due to transfer pump #2 fail. Pump #2 failed due to VFD #2 malfunction. Reset VFD #2. Changed VFD #2 OFF set point from 20" to 10". Drained both sumps to low level and restarted system. |
| 10/24/05 11:40 AM | 10/24/05 1:20 PM | System Maintenance - Shutdown system for scheduled filter cartridge changeout, blower maintenance |
| 10/24/05 11:40 AM | 10/24/05 1:20 PM | Pressure switch replacement and cartridge filter inlet and outlet pressure gauge replacement. |

**ACTIVE INDUSTRIAL UNIFORM SITE**
**NYSDEC SITE No. 1-52-125**
**APPENDIX B - SUMMARY OF SYSTEM SHUTDOWNS AND NON-ROUTINE MAINTENANCE**

| SHUT-OFF DATE/TIME | RESTART DATE/TIME | CAUSE FOR SHUTDOWN |
|---|---|---|
| 12/1/05 3:17 PM | 12/1/05 4:03 PM | System Maintenance - Shutdown system for scheduled filter cartridge changeout. |
| 12/1/05 4:09 PM | 12/1/05 4:11 PM | System Maintenance - System effluent flow meter not recording total flow. Reset system power in order to reset effluent flow meter. Turned system back on and flow meter responded. |
| 12/19/05 11:15 AM | 12/19/05 12:00 PM | System Maintenance - Shutdown system for scheduled filter cartridge changeout and blower maintenance. |
| 12/19/05 12:00 PM | 12/19/05 12:25 PM | System Maintenance - Shutdown system for scheduled filter cartridge changeout and blower maintenance. |
| 1/30/06 8:58 AM | 1/30/06 9:53 AM | System Maintenance - Shutdown system for scheduled filter cartridge changeout. |
| 2/1/06 5:46 PM | 2/2/06 8:56 PM | Alarm condition #3 & #5 - High level in air stripper #1. Drained both sumps to low level and restarted system. |
| 2/12/06 12:00 AM | | Estimated malfunction date for extraction well RW-2 based on total gallons pumped for RW-2, recorded on 1/24/06 and 2/24/06. RW-2 was not in operation for the remainder of the 1st quarter. |
| 2/21/06 2:18 PM | 2/24/06 2:40 PM | System Error - Extraction well RW-2 observed to not be running upon arrival at site, but RW-1 and system was still running. Turned off system and reset circuit breaker for both extraction wells. Restart systemed. Extraction well RW-1 failed due to "overcurrent" error from the Coyote monitoring panel and RW-2 failed due to "phase" error from the Coyoto monitoring panel. Returned to site on 2/24/06 with EnviroTrac to troubleshoot extraction well problems. Extraction well RW-1 error was a result of incorrect wiring to the Coyote monitoring panel. Extraction well RW-2 error likely due to a faulty wire connection between the treatment system building and the RW-2 well head. Restarted extraction well RW-1 only. |
| 3/1/06 9:09 PM | 3/2/06 9:05 AM | Alarm condition #3 & #5 - High level in air stripper #1 due to VFD #1 and VFD #2 underload condition. Reset both VFD #1 and VFD #2. Drained both sumps to low level and restarted extraction well RW-1 only. |
| 5/5/06 2:10 PM | 5/5/06 2:40 PM | Performance Monitoring - Routine blower maintenance. |
| 5/5/06 2:10 PM | 5/23/06 6:10 PM | RW-2 inadvertently turned on instead of RW-1 after system maintenance (RW-2 not running due to pump malfunction; thus treatment system was not running) |
| 7/18/06 11:30 PM | 7/19/06 5:00 PM | Alarm condition No. 3 and No. 5 - A high level stripper No. 2 caused the system to go into alarm. Opened the system control panel and VFD No. 2 blinking. Reset VFD No. 2 and system turned on. |
| 10/9/06 8:35 PM | 10/12/06 12:27 PM | Alarm condition No. 3 and 8 - A low flow from extraction well pump RW-1 caused the system to go into alarm. Reset control panel and restarted system. |
| 10/12/06 12:38 PM | 10/12/06 12:48 PM | System Troubleshoot - System shut down due the failure of extraction well pump RW-2 to restart. Reset power to entire system and restarted system. |
| 10/12/06 1:10 PM | 10/12/06 1:14 PM | System Troubleshoot - System shut down due the failure of extraction well pump RW-2 to restart. Reset the motor starter for extration well pump RW-2, however RW-2 would not restart. Restarted extraction well pump RW-1 only. |
| 11/8/06 10:46 AM | 11/10/06 3:15 PM | Alarm condition No. 3 and 8 - A low flow from extraction well pump RW-1 caused the system to go into alarm. Reset control panel and restarted extraction well pump RW-1 only. |
| 11/26/06 3:30 PM | 11/27/06 3:50 PM | Alarm condition No. 3 and 5 - A high level stripper No. 1 caused the system to go into alarm. Opened the system control panel and VFD No. 1 blinking. Reset VFD No. 1 and restarted extraction well pump RW-1 only. |
| 11/28/06 8:50 AM | 11/29/06 4:00 PM | Alarm condition No. 3 and 8 - A low flow from extraction well pump RW-1 caused the system to go into alarm. Reset control panel and restarted extraction well pump RW-1 only. |
| 11/30/06 10:15 AM | 12/1/06 4:00 PM | Alarm condition No. 3 and 5 - A high level stripper No. 1 caused the system to go into alarm. Opened the system control panel and VFD No. 1 blinking. Reset VFD No. 1 and restarted extraction well pump RW-1 only. |
| 12/6/06 8:15 AM | 12/6/06 8:45 AM | [(1)]Blower Maintenance - Performed routine blower maintenance and restarted extraction well pump RW-1 once maintenance was completed. |
| 1/3/07 2:20 PM | 1/4/07 6:40 PM | Alarm condition #5 and #8 - High level air stripper sump/ Low flow RW-1. Purge both air strippers, press reset - no action. Sump pit full due to leaking pipes. Purge sump pit and restarted system. |
| 1/9/07 2:30 PM | 1/10/07 4:00 PM | Alarm condition #3 - High sump pit level. Sump pit filled with water from leaking plumbing (backflow valve). Turned off water and purged sump pit. Restarted system. |
| 1/24/07 8:20 AM | 1/24/07 9:20 AM | Solids filtration change-out |

**ACTIVE INDUSTRIAL UNIFORM SITE**
**NYSDEC SITE No. 1-52-125**
**APPENDIX B - SUMMARY OF SYSTEM SHUTDOWNS AND NON-ROUTINE MAINTENANCE**

| SHUT-OFF DATE/TIME | RESTART DATE/TIME | CAUSE FOR SHUTDOWN |
|---|---|---|
| 1/24/07 9:20 AM | 1/24/07 12:00 PM | transfer pump maintenance. |
| 1/24/07 12:00 PM | 1/24/07 3:48 PM | Sump pit high level bypassed due to malfunctioning pump. Restarted system. |
| 1/26/07 1:30 AM | 1/28/07 1:00 PM | Alarm condition #3 and #5 - High level air stripper sump. Purge air stripper sump #1. Air stripper sump #2 will not purge and is reading either 0 or 120 inches and high transfer pump pressure. Possible frozen pipe. Wait for ambient air temperature to rise above freezing and restarted system. |
| 2/5/07 2:40 AM | 2/21/07 4:00 PM | Alarm condition #3 and #5 - High level air stripper sump. Both air stripper sump frozen and must wait for ambient air temperature to rise. Attempt to restart on both 2/5 and 2/6 - failed. System restarted on 2/21. |
| 3/6/07 7:40 AM | 3/9/07 9:20 PM | Alarm condition #3 and #5 - High level air stripper sump/ high pressure transfer pump #2 alarm. Both air stripper sump frozen and must wait for ambient air temperature to rise. Transfer pumps 1&2 VFDs not grounded properly. New ground cables installed. Restarted system. |
| 3/21/07 7:55 AM | 3/22/07 4:10 PM | Alarm condition #3 - High level air stripper sump #2 and high level sump pit. Air strippers and sump pit purged. Restarted system. |
| 3/24/07 2:15 PM | 3/27/07 5:00 PM | Alarm condition # 3 & 5 - High level air stripper sump. Purge both air stripper sumps and attempt restart. System went into general alarm with a high level air stripper sump #2 light. System unresponsive. Float in air stripper #2 broken. Float repaired. |
| 3/27/07 5:00 PM | 3/27/07 6:00 PM | Blower Maintenance - Performed routine blower maintenance and restarted system once maintenance was completed. |
| 3/27/07 6:00 PM | 4/1/07 12:00 AM | System did not call out on 3/27 and was down for the remainder of the quarter. Approximate shut-off date/time for system based on total flow and downtime from 3/16/07 through 4/20/07. |
| 4/1/07 12:00 AM | 4/27/07 4:45 PM | System did not call out on 3/27/07. Approximate shut-off date/time for system based on total flow and downtime from 3/16/07 through 4/20/07. |
| 4/27/07 5:00 PM | 6/6/07 8:40 AM | System down due a faulty PLC and system troubleshooting. Replaced PLC on 6/6/07and restarted system. |
| 6/7/07 8:00 AM | 6/7/07 8:00 PM | Routine Maintenance Event - Granular activated carbon (GAC) removal and replacement. Also repaired damaged GAC bed screen. |
| 6/28/07 5:30 PM | 6/28/07 6:00 PM | Routine Maintenance Event - Pressure blower maintenance. |
| 6/28/07 7:22 PM | 7/1/07 12:00 AM | Alarm condition #3 - High level air stripper sump #1. Air stripper sump pit purged. Restarted system on 7/1/07 @ 13:50. |
| 7/1/07 12:00 AM | 7/1/07 1:50 PM | Alarm condition #3 - High level air stripper sump #1. Air stripper sump pit purged. Restarted system. |
| 7/17/07 1:30 PM | 7/17/07 4:45 PM | Routine System Maintenance - Transfer pump maintenance event. |
| 9/18/07 9:00 AM | 9/18/07 9:30 AM | Routine System Maintenance - Blower maintenance event. |
| 10/11/07 5:00 PM | 10/12/07 8:00 AM | Alarm condition #3 & #8 - High pressure RW-1. Restart system, but panel still indicates a high pressure RW-1. |
| 11/27/07 11:15 AM | 11/27/07 3:15 PM | Alarm condition #3 & #8 - High pressure RW-1. Restart system, but panel still indicates a high pressure RW-1. |
| 11/28/07 11:20 AM | 11/29/07 8:00 AM | Alarm condition #3 & #8 - High pressure RW-1. Restart system, but panel still indicates a high pressure RW-1. |
| 11/29/07 11:10 AM | 11/30/07 8:45 AM | Alarm condition #3 & #8 - High pressure RW-1. Restart system, but panel still indicates a high pressure RW-1. |
| 11/30/07 4:15 PM | 12/26/07 11:45 AM | Alarm condition #3 & #8 - High pressure RW-1.<br>Non-routine Maintenance - Extraction well RW-1 redeveloped and pump pulled, inspected and cleaned between 12/21/07 and 12/28/07. Restarted system. |
| 12/27/07 8:00 AM | 12/27/07 12:30 PM | Non-routine maintenance - Replacement of 3" ball valve in RW-1 vault. |
| 1/3/08 12:15 AM | 1/3/08 7:25 AM | Alarm condition #3 & #5 - High stripper #1. Pump stripper #1 to low level and restart system. |
| 1/3/08 7:40 AM | 1/3/08 7:45 AM | Alarm condition #3 - High pressure filter. Restart system. |
| 1/3/08 9:10 AM | 1/3/08 10:10 AM | Routine maintenance event - Performed blower and transfer pump routine maintenance and changeout particulate filter. Restart system. |

**ACTIVE INDUSTRIAL UNIFORM SITE**
**NYSDEC SITE No. 1-52-125**
**APPENDIX B - SUMMARY OF SYSTEM SHUTDOWNS AND NON-ROUTINE MAINTENANCE**

| SHUT-OFF DATE/TIME | RESTART DATE/TIME | CAUSE FOR SHUTDOWN |
|---|---|---|
| 1/3/08 10:10 AM | 1/3/08 10:40 AM | Routine maintenance event - Performed blower and transfer pump routine maintenance and changeout particulate filter. Restart system. |
| 1/3/08 10:40 AM | 1/3/08 11:30 AM | Routine maintenance event - Performed blower and transfer pump routine maintenance and changeout particulate filter. Restart system. |
| 1/19/08 8:45 AM | 1/19/08 10:30 AM | Alarm condition #3 & #5 - High stripper #1 and transfer pump #1 fault. Sump flooded out. Pump stripper #1 to low level and restart system. |
| 2/11/08 12:45 AM | 2/11/08 8:30 AM | Alarm condition #3 & #5 - High stripper #1. Pipes and sensors frozen. Wait till ice melts and restarted system. |
| 2/11/08 9:30 AM | 2/13/08 6:20 PM | Alarm condition #3 & #5 - High stripper #1. Pipes frozen. Wait till ice melts, pumped air stripper #1 to low level and restarted system. |
| 2/14/08 11:45 AM | 2/15/08 5:30 PM | Alarm condition #3 & #5 - High stripper #1. Pump stripper #1 to low level and restart system. |
| 2/15/08 6:15 PM | 2/15/08 6:45 PM | Alarm condition #3 & #5 - High stripper #1. Transfer pump #2 not keeping up with transfer pump #1 resulting in high level stripper #2. Set points changed for transfer pump #1 and air stripper #1. Restart system. |
| 2/17/08 3:00 AM | 2/18/08 9:45 AM | Alarm condition #3 & #5 - Low flow extraction well #1. Adjust valve in building for extraction well #1 and reduce the flow rate from ~50 gpm to ~45 gpm. |
| 3/26/08 4:00 PM | 3/26/08 5:00 PM | Routine maintenance event - Performed blower maintenance. Restart system. |
| 6/8/08 8:30 PM | 6/9/08 8:30 AM | General alarm - High stripper #1 - Reset VFD's. Pump stripper sump #1 to low level. Restart system |
| 6/9/08 9:10 AM | 6/9/08 1:10 PM | General alarm - High pressure cartridge filter/High stripper #1 - Pump stripper #1 to low level. Restart system |
| 6/17/08 8:00 AM | 6/17/08 8:45 AM | Routine maintenance event - Performed blower routine maintenance. Restart system. |
| 7/10/08 7:17 AM | 7/10/08 2:30 PM | Alarm condition #3 & #5 - General alarm/High air stripper #1. Pump air strippers to low levels. Restarted system. |
| 7/17/08 1:00 PM | 7/23/08 6:00 PM | Upon arrival at site for monthly maintenance event, water observed to be overflowing out of Extraction Well RW-1 vault. System manually shut down.<br>Non-Routine Maintenance Event - Inspected piping in vault and observed a crack in the ball valve piping. Ordered new parts.<br>Non-Route Maintenance Event - RW-1 ball valve repaired. Restarted system. Also diagnosed inoperable roof vent and replaced drive belt. |
| 7/28/08 3:30 PM | 8/5/08 11:15 AM | System went down due to apparent power surge and also affected the auto dialer. System shutdown time approximated based on total gallons pumped from RW-1 on 7/23/08 through 8/6/08 and RW-1 flow rate recorded on 7/23/08. Restarted system and reset auto dialer circuit breaker. |
| 8/8/08 3:00 PM | 8/8/08 4:20 PM | Routine Maintenance Event - Performed routine transfer pump maintenance. Restarted system. |
| 8/21/08 10:15 AM | 8/21/08 10:45 AM | Routine Maintenance Event - Performed routine blower maintenance. Restarted system. |
| 8/22/08 6:30 PM | 8/22/08 8:05 PM | Non-Route Maintenance Event - System shutdown to properly seal RW-2 electrical connection at well-head after replacement. Restarted system. |
| 8/30/08 7:11 PM | 8/31/08 10:00 PM | Alarm condition #3 & #5 - High level air stripper. Tripped/restarted/reset breaker. Hand pumped air stripper level down. Restarted system. |
| 9/12/08 7:00 AM | 9/12/08 8:00 AM | Routine Maintenance Event - Filter maintenance. Changed filters and gasket. |
| 9/12/08 8:00 AM | 9/12/08 9:45 AM | Non-Routine Maintenance - Replaced fuses for RW-2; provided temporary fix sump pump piping. Restarted system. |
| 9/12/08 7:00 PM | 9/15/08 7:20 PM | Alarm condition #3 & #5 - High level air stripper #2. Pump down air stripper strippers; restarted system. System stays on for a few minutes and shuts off. Transfer pumps are not able to pump water out of strippers as fast as water is pumped in. This is due to the operation, RW-2 @ 85 GPM. Set new data points on PLC for transfer pumps. Restarted system. |
| 10/9/08 10:30 AM | 10/10/08 5:00 PM | Alarm condition 3 & 5 - High Level Air Stripper #1: |
| 11/21/08 8:45 AM | 11/21/08 9:15 AM | Routine Maintenance Event - Performed routine blower maintenance. Restarted system. |
| 12/22/08 3:50 AM | 1/1/09 12:00 AM | Alarm condition 3 & 5 - High Level Air Stripper #1: System not running upon arrival for sampling on 1/13/09. Shutdown time approximated based on gallons pumped since 12/16/08 monitoring event. Downtime continues into Quarter 17. |

**ACTIVE INDUSTRIAL UNIFORM SITE**
**NYSDEC SITE No. 1-52-125**
**APPENDIX B - SUMMARY OF SYSTEM SHUTDOWNS AND NON-ROUTINE MAINTENANCE**

| SHUT-OFF DATE/TIME | RESTART DATE/TIME | CAUSE FOR SHUTDOWN |
|---|---|---|
| 1/1/09 12:00 AM | 1/13/09 8:15 AM | Alarm condition 3 & 5 - High Level Air Stripper #1: System not running upon arrival for sampling. System shut down during Quarter 16 (12/22/08 @ 3:50 AM). Hand pumped strippers #1 and #2 to low level. Restarted system. |
| 1/14/09 7:00 AM | 2/21/09 12:00 AM | Alarm condition 3 & 5 - High Level Air Stripper #1: Hand pumped strippers #1 and #2 to low level. Unable to restart system.<br>Non-routine maintenance: Pressure transducer for air stripper #2 is malfunctioning, possibly due to the freezing of the air stripper sumps. Replaced broken transducer with a new transducer on 2/21/09. Insulated piping and transducers to prevent future problems with freezing. Restarted system. |
| 2/22/09 6:00 AM | 2/23/09 8:00 AM | Alarm condition 3 & 5 - High Level Air Stripper #1 - Hand pumped strippers #1 and #2 to low level. Restarted system. |
| 3/2/09 10:47 AM | 3/3/09 8:15 AM | Alarm condition 3 & 5 - High Level Air Stripper #1: Hand pumped strippers #1 and #2 to low level. Restarted system. |
| 4/1/09 1:40 PM | 4/1/09 3:50 PM | Non-routine maintenance - Repaired wiring to sump pump; Installed new valve; and Installed back-up battery system. |
| 4/3/09 2:15 PM | 4/3/09 4:00 PM | Alarm condition 3 & 5 - Reset VFDs. Hand pumped strippers #1 and #2 to low level. Restarted system. |
| 4/27/09 1:23 PM | 4/27/09 2:45 PM | Non-routine maintenance - Aqua-Freed application for RW-1 and Aquaguard installation. Restart only RW-1 to test pumping rate. |
| 4/27/09 4:00 PM | 4/30/09 9:35 AM | Non-routine maintenance - Aqua-Freed application for RW-1 and Aquaguard installation. Restart only RW-2 to run system while introducing purge water from RW-1 redevelopment. |
| 4/27/09 4:00 PM | 5/4/09 5:00 PM | Non-routine maintenance - Aqua-Freed application for RW-1 and Aquaguard installation. Restart RW-1. |
| 5/5/09 6:50 AM | 5/5/09 4:15 PM | Alarm condition 3 & 5 - Reset VFDs. Hand pumped strippers #1 and #2 to low level. Restarted system. |
| 5/5/09 4:52 PM | 5/5/09 5:16 PM | Alarm condition 3 & 5 - Reset VFDs. Hand pumped strippers #1 and #2 to low level. Reset PID set points based on high flows. Restarted system. |
| 6/12/09 3:36 AM | 6/12/09 7:18 PM | Alarm condition 3 & 5 - Reset VFDs. Hand pumped strippers #1 and #2 to low level. Restarted system. |
| 6/16/09 7:37 PM | 6/19/09 3:30 PM | Alarm condition 3 - High level building sump. Hand pumped sump level to low level. Restarted system. |
| 6/24/09 9:20 AM | 6/24/09 12:45 PM | Routine/Non-Routine Maintenance Event - Performed routine blower maintenance. Patch hole in effluent filter with epoxy. Restart system. |
| 7/7/09 3:50 PM | 7/7/09 6:20 PM | Alarm condition 3 & 5 - Reset VFDs. Hand pumped strippers #1 and #2 to low level. Restarted system. |
| 7/9/09 9:00 PM | 10/1/09 12:00 AM | Alarm condition 3 - High level in sump due to leak from transfer pump #2; system shutdown to repair/replace transfer pump #2, repair non-pressure rated pipe fitting and broken valves, and repair/replace the moisture knock-out drum tank. |
| 10/29/09 10:42 AM | | Extraction Well RW-2 shuts down due to wear of the pump/motor splines. Repairs completed in January 2010. |
| 10/30/09 4:47 PM | 11/1/09 10:30 AM | Alarm condition 3 and 5: Reset VFDs. Hand pumped strippers #1 and #2 to low level. Restarted system. |
| 12/8/09 10:00 AM | 12/8/09 10:15 AM | Routine/Non-Routine Maintenance Event[(1)] - Performed routine blower maintenace. Daignosed and reset heaters. |
| 1/3/10 12:00 AM | 1/27/10 12:00 PM | Alarm response due to general alarm. Unable to restart treatment system. RW-2 was also pulled and replaced in the time period with a pitless adpator. Air strippers were winterized |
| 1/29/10 3:32 PM | 1/29/10 6:00 PM | Alarm due to building sump filled with water. Leak from faulty ball valve associated with filter. Cut off valve and capped PVC pipe going into filter. |
| 2/12/10 9:00 AM | 2/12/10 5:30 PM | Routine/Non-Routine Maintenance Event[(1)] - Performed routine blower maintenace. Daignosed and reset heaters. |
| 2/16/10 12:00 AM | 2/16/10 11:00 AM | High high air stripper number 1 |
| 2/19/10 12:00 AM | 2/19/10 3:04 PM | High high air stripper number 1 |
| 2/22/10 12:00 AM | 2/23/10 2:00 PM | Alarm conditions due to VFD overheating. Fans replaced. |
| 2/24/10 8:30 AM | 2/24/10 2:00 PM | Reconfigure influent piping |
| 3/4/10 12:00 AM | 3/4/10 10:00 AM | High high air stripper number 1 |

**ACTIVE INDUSTRIAL UNIFORM SITE**
**NYSDEC SITE No. 1-52-125**
**APPENDIX B - SUMMARY OF SYSTEM SHUTDOWNS AND NON-ROUTINE MAINTENANCE**

| SHUT-OFF DATE/TIME | RESTART DATE/TIME | CAUSE FOR SHUTDOWN |
|---|---|---|
| 3/6/10 12:00 AM | 3/6/10 4:00 PM | High high air stripper number 1 |
| 3/7/10 12:00 AM | 3/9/10 3:00 PM | Problem with VFD1 fan. Replace and restart system. |
| 3/15/10 12:00 AM | 3/15/10 1:00 PM | Unknown |
| 3/15/10 2:00 PM | 3/15/10 7:00 PM | Unknown |
| 3/17/10 1:25 PM | 3/17/10 3:35 PM | Troubleshooting of RW2 Coyote monitor |
| 3/20/10 10:00 AM | 3/20/10 3:00 PM | High high air stripper number 1; vfd lost power |
| 4/12/10 10:00 AM | 4/15/10 8:00 AM | Video tape effluent line for blockage due to high pressure from transfer pump 2. Discovered USTs near building when digging to scope effluent line. |
| 6/10/10 12:06 AM | 6/10/10 9:00 AM | General alarm - High high alarm in air stripper #1. Pump down. Restarted system. |
| 7/15/10 9:15 AM | 7/15/10 2:00 PM | Non-routine maintenance - Painting of PVC piping. |
| 7/16/10 8:25 AM | 7/16/10 1:20 PM | Non-routine maintenance - Painting of PVC piping. |
| 10/4/10 9:40 AM | 10/4/10 11:31 AM | Transfer pump fault. Reset and restarted system. |
| 10/26/10 2:23 PM | 10/26/10 3:45 PM | Non-routine maintenance - Replacement of ports. |
| 10/28/10 12:44 PM | 10/28/10 2:00 PM | Non-routine maintenance - Replacement of ports. |
| 11/5/10 1:32 PM | 11/5/10 2:48 PM | Loss of Power. Reset VFOs and restarted system. |
| 12/16/10 5:56 AM | 12/16/10 12:10 PM | General alarm - High level in Tower 1 and ice. |
| 12/23/10 7:17 AM | 12/23/10 9:30 AM | General alarm - High level AST. Responded to alarm. Shut down and restarted system |

# APPENDIX C

# NON-ROUTINE MAINTENANCE REPORTS

# MAINTENANCE AND INSPECTION REPORT
## ACTIVE INDUSTRIAL SITE, LINDENHURST, NY

| Date: May 06, 2005 | | | | |
|---|---|---|---|---|
| Name of Personnel Onsite | Title | Time Arrived | Time Departed | Total Hours |
| James Wilkinson | Sr. Technician | 8:00 am | 11:30 am | 3 onsite / 1.5 setup and travel |
| | | | | |
| | | | | |
| | | | | |

Check off Items that were completed:

- ☐ Snow Removal
- ☐ Pressure Blower Maintenance
- ☐ Pressure Blower Fan Wheel Replacement
- ☐ Transfer Pump Maintenance
- ☐ Air Stripper Maintenance
- ☐ Carbon Removal and Replacement
- ☐ Remove and Replace Air Stripper Packing
- ☐ Solids Filtration System Maintenance
- X Non-routine Maintenance
- ☐ Other

Work Completed:

Replaced leaking Ball Valve BV-22 and associated piping. Restarted system.

| Name of Part / Supply / Material | | Manufacturer / Supplier | Model Number | Quantity Used |
|---|---|---|---|---|
| Tee | | Walters West End Supply | 4 inch PVC | 1 ea |
| Union | | Walters West End Supply | 4 inch PVC | 1 ea |
| Elbow 90 | | Walters West End Supply | 4 inch PVC | 2 ea |
| Coupling | | Walters West End Supply | 4 inch PVC | 1 ea |
| Valve | | Walters West End Supply | 4 inch PVC | 1 ea |
| Pipe | | Walters West End Supply | 4 inch PVC | 6 ft |
| Description of Waste | Volume of Waste | Disposal Facility Name & Address | Transporter Name & Address | Method of Disp. |
| No regulated waste generated | | | | |
| | | | | |
| | | | | |

In signing this I hereby certify that to the best of my knowledge the maintenance and inspection activities performed during this event conform to the requirements specified under contract between EnviroTrac Ltd., and Dvirka and Bartilucci.

Anthony Fiorentino 6/22/05. Signature / Print / Date

Anthony Fiorentino

# MAINTENANCE AND INSPECTION REPORT
## ACTIVE INDUSTRIAL SITE, LINDENHURST, NY

| Date: May 13, 2005 | | | | |
|---|---|---|---|---|
| Name of Personnel Onsite | Title | Time Arrived | Time Departed | Total Hours |
| James Wilkinson | Sr. Technician | 8:00 am | 10:00 am | 2 onsite / 1.5 prep and travel |
| | | | | |
| | | | | |
| | | | | |

Check off Items that were completed:

- ☐ Snow Removal
- ☐ Pressure Blower Maintenance
- ☐ Pressure Blower Fan Wheel Replacement
- ☐ Transfer Pump Maintenance
- ☐ Air Stripper Maintenance
- ☐ Carbon Removal and Replacement
- ☐ Remove and Replace Air Stripper Packing
- X Solids Filtration System Maintenance
- ☐ Non-routine Maintenance
- ☐ Other

Work Completed:

Remove and replace the solids filtration cartridges.

| Name of Part / Supply / Material | Manufacturer / Supplier | Model Number | Quantity Used |
|---|---|---|---|
| 50 micron Particulate filter | Nugent and Potter | EFP 50 | 75 |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

| Description of Waste | Volume of Waste | Disposal Facility Name & Address | Transporter Name & Address | Method of Disp. |
|---|---|---|---|---|
| No regulated waste generated | | | | |
| | | | | |
| | | | | |

In signing this I hereby certify that to the best of my knowledge the maintenance and inspection activities performed during this event conform to the requirements specified under contract between EnviroTrac Ltd., and Dvirka and Bartilucci.

Anthony Fiorentine 6/22/05 . Signature / Print / Date

Anthony Fiorentine

# MAINTENANCE AND INSPECTION REPORT
## ACTIVE INDUSTRIAL SITE, LINDENHURST, NY

| Date: June 16, 2005 | | | | |
|---|---|---|---|---|
| Name of Personnel Onsite | Title | Time Arrived | Time Departed | Total Hours |
| James Wilkinson | Sr. Technician | 4:00 pm | 5:30 pm | 1.5 onsite / 1.5 prep and travel |
| Orazio Levanti | Sr. Technician | 2:30 pm | 5:30 pm | 3.0 onsite / 1.5 prep and travel |
| | | | | |
| | | | | |

Check off Items that were completed:

- ☐ Snow Removal
- X Pressure Blower Maintenance
- ☐ Pressure Blower Fan Wheel Replacement
- X Transfer Pump Maintenance
- ☐ Air Stripper Maintenance
- ☐ Carbon Removal and Replacement
- ☐ Remove and Replace Air Stripper Packing
- X Solids Filtration System Maintenance
- ☐ Non-routine Maintenance
- ☐ Other

Work Completed:

Remove and replace the solids filtration cartridges. Perform maintenance on pressure blower, greased motor. Performed maintenance on water knock-out transfer pump and greased four transfer pumps.

| Name of Part / Supply / Material | Manufacturer / Supplier | Model Number | Quantity Used |
|---|---|---|---|
| 50 micron Particulate filter | Nugent and Potter | EFP 50 | 75 |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

| Description of Waste | Volume of Waste | Disposal Facility Name & Address | Transporter Name & Address | Method of Disp. |
|---|---|---|---|---|
| No regulated waste generated | | | | |
| | | | | |
| | | | | |

In signing this I hereby certify that to the best of my knowledge the maintenance and inspection activities performed during this event conform to the requirements specified under contract between EnviroTrac Ltd., and Dvirka and Bartilucci.

Anthony Fiorentino 6/22/05 . Signature / Print / Date

Anthony Fiorentino

# MAINTENANCE AND INSPECTION REPORT
## ACTIVE INDUSTRIAL SITE, LINDENHURST, NY

| Date: October 24, 2005 | | | | |
|---|---|---|---|---|
| Name of Personnel Onsite | Title | Time Arrived | Time Departed | Total Hours |
| James Wilkinson | Sr. Technician | 11:00 | 13:30 | 2.5 onsite/ 1.0 prep and travel |
| Steve Sussman | Sr. Technician | 11:00 | 13:30 | 2.5 onsite / 1.0 prep and travel |
| | | | | |
| | | | | |

Check off Items that were completed:

- ☐ Snow Removal
- X Pressure Blower Maintenance
- ☐ Pressure Blower Fan Wheel Replacement
- ☐ Transfer Pump Maintenance
- ☐ Air Stripper Maintenance
- ☐ Carbon Removal and Replacement
- ☐ Remove and Replace Air Stripper Packing
- X Solids Filtration System Maintenance
- ☐ Non-routine Maintenance
- ☐ Other

Work Completed:

Remove and replace the solids filtration cartridges. Perform maintenance on pressure blower, greased motor. Replaced pressure switches (supplied by D&B). Replaced pressure gauges to monitor pressure drop across the solids filter (supplied by D&B).

| Name of Part / Supply / Material | Manufacturer / Supplier | Model Number | Quantity Used |
|---|---|---|---|
| 50 micron Particulate filter | Nugent and Potter | EFP 50 | 75 |
| | | | |
| | | | |
| | | | |
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| Description of Waste | Volume of Waste | Disposal Facility Name & Address | Transporter Name & Address | Method of Disp. |
|---|---|---|---|---|
| No regulated waste generated | | | | |
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In signing this I hereby certify that to the best of my knowledge the maintenance and inspection activities performed during this event conform to the requirements specified under contract between EnviroTrac Ltd., and Dvirka and Bartilucci.

Anthony Fiorentine 12/28/05. Signature / Print / Date Anthony Fiorentine

# MAINTENANCE AND INSPECTION REPORT
## ACTIVE INDUSTRIAL SITE, LINDENHURST, NY

| Date: December 1, 2005 | | | | |
|---|---|---|---|---|
| Name of Personnel Onsite | Title | Time Arrived | Time Departed | Total Hours |
| Steve Sussman | Sr. Technician | 15:00 | 16:30 | 1.5 onsite / 1.5 prep and travel |
| | | | | |
| | | | | |
| | | | | |

Check off Items that were completed:

- ☐ Snow Removal
- ☐ Pressure Blower Maintenance
- ☐ Pressure Blower Fan Wheel Replacement
- ☐ Transfer Pump Maintenance
- ☐ Air Stripper Maintenance
- ☐ Carbon Removal and Replacement
- ☐ Remove and Replace Air Stripper Packing
- X Solids Filtration System Maintenance
- ☐ Non-routine Maintenance
- ☐ Other

Work Completed:

Remove and replace the solids filtration cartridges.

| Name of Part / Supply / Material | Manufacturer / Supplier | Model Number | Quantity Used |
|---|---|---|---|
| 50 micron Particulate filter | Nugent and Potter | EFP 50 | 75 |
| | | | |
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| Description of Waste | Volume of Waste | Disposal Facility Name & Address | Transporter Name & Address | Method of Disp. |
|---|---|---|---|---|
| No regulated waste generated | | | | |
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In signing this I hereby certify that to the best of my knowledge the maintenance and inspection activities performed during this event conform to the requirements specified under contract between EnviroTrac Ltd., and Dvirka and Bartilucci.

Anthony Fiorentino 12/28/05 . Signature / Print / Date Anthony Fiorentino

# MAINTENANCE AND INSPECTION REPORT
## ACTIVE INDUSTRIAL SITE, LINDENHURST, NY

| Date: December 19, 2005 | | | | |
|---|---|---|---|---|
| Name of Personnel Onsite | Title | Time Arrived | Time Departed | Total Hours |
| Steve Sussman | Sr. Technician | 11:00 | 12:30 | 1.5 onsite/ 1.5 prep and travel |
| | | | | |
| | | | | |
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Check off Items that were completed:

- ☐ Snow Removal
- X Pressure Blower Maintenance
- ☐ Pressure Blower Fan Wheel Replacement
- ☐ Transfer Pump Maintenance
- ☐ Air Stripper Maintenance
- ☐ Carbon Removal and Replacement
- ☐ Remove and Replace Air Stripper Packing
- X Solids Filtration System Maintenance
- ☐ Non-routine Maintenance
- ☐ Other

Work Completed:

Remove and replace the solids filtration cartridges. Perform maintenance on pressure blower. Interior of blower in good condition.

| Name of Part / Supply / Material | Manufacturer / Supplier | Model Number | Quantity Used |
|---|---|---|---|
| 50 micron Particulate filter | Nugent and Potter | EFP 50 | 75 |
| | | | |
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| Description of Waste | Volume of Waste | Disposal Facility Name & Address | Transporter Name & Address | Method of Disp. |
|---|---|---|---|---|
| No regulated waste generated | | | | |
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In signing this I hereby certify that to the best of my knowledge the maintenance and inspection activities performed during this event conform to the requirements specified under contract between EnviroTrac Ltd., and Dvirka and Bartilucci.

Anthony Fiorentine 12/28/05. Signature / Print / Date Anthony Fiorentine

# MAINTENANCE AND INSPECTION REPORT
## ACTIVE INDUSTRIAL SITE, LINDENHURST, NY

| Date: February 24, 2006 | | | | |
|---|---|---|---|---|
| Name of Personnel Onsite | Title | Time Arrived | Time Departed | Total Hours |
| Orazio Levanti | Sr. Engineer | 8:30 | 16:30 | 8 onsite / 1 prep and travel |
| | | | | |
| | | | | |
| | | | | |

Check off Items that were completed:

- ☐ Snow Removal
- ☐ Pressure Blower Maintenance
- ☐ Pressure Blower Fan Wheel Replacement
- ☐ Transfer Pump Maintenance
- ☐ Air Stripper Maintenance
- ☐ Carbon Removal and Replacement
- ☐ Remove and Replace Air Stripper Packing
- ☐ Solids Filtration System Maintenance
- X Non-routine Maintenance
- ☐ Other

Work Completed:

Troubleshooting RW-1 and RW-2 pump failures.
Corrected wiring for RW-1 pump in control panel.
Diagnosed RW-2 pump problem – electrical conduit, wiring and junction box in well vault need to be replaced.

| Name of Part / Supply / Material | Manufacturer / Supplier | Model Number | Quantity Used |
|---|---|---|---|
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| Description of Waste | Volume of Waste | Disposal Facility Name & Address | Transporter Name & Address | Method of Disp. |
|---|---|---|---|---|
| No regulated waste generated | | | | |
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In signing this I hereby certify that to the best of my knowledge the maintenance and inspection activities performed during this event conform to the requirements specified under contract between EnviroTrac Ltd., and Dvirka and Bartilucci.

James Wilkinson. Signature / Print / Date James Wilkinson 3/16/06

# MAINTENANCE AND INSPECTION REPORT
## ACTIVE INDUSTRIAL SITE, LINDENHURST, NY

| Date: January 30, 2006 | | | | |
|---|---|---|---|---|
| Name of Personnel Onsite | Title | Time Arrived | Time Departed | Total Hours |
| Steve Sussman | Sr. Technician | 15:00 | 16:30 | 1.5 onsite / 1.5 prep and travel |
| | | | | |
| | | | | |
| | | | | |

Check off Items that were completed:

- ☐ Snow Removal
- ☐ Pressure Blower Maintenance
- ☐ Pressure Blower Fan Wheel Replacement
- ☐ Transfer Pump Maintenance
- ☐ Air Stripper Maintenance
- ☐ Carbon Removal and Replacement
- ☐ Remove and Replace Air Stripper Packing
- X Solids Filtration System Maintenance
- ☐ Non-routine Maintenance
- ☐ Other

Work Completed:

Remove and replace the solids filtration cartridges.

| Name of Part / Supply / Material | Manufacturer / Supplier | Model Number | Quantity Used |
|---|---|---|---|
| 50 micron Particulate filter | Nugent and Potter | EFP 50 | 75 |
| | | | |
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| Description of Waste | Volume of Waste | Disposal Facility Name & Address | Transporter Name & Address | Method of Disp. |
|---|---|---|---|---|
| No regulated waste generated | | | | |
| | | | | |
| | | | | |

In signing this I hereby certify that to the best of my knowledge the maintenance and inspection activities performed during this event conform to the requirements specified under contract between EnviroTrac Ltd., and Dvirka and Bartilucci.

James Wilkinson _____. Signature / Print / Date James Wilkinson 3/16/06

# MAINTENANCE AND INSPECTION REPORT
## ACTIVE INDUSTRIAL SITE, LINDENHURST, NY

Date: May 5, 2006

| Name of Personnel Onsite | Title | Time Arrived | Time Departed | Total Hours |
|---|---|---|---|---|
| Jim Wilkinson | Engineer | 1:00 | 2:30 | 1.5 onsite/ 1.5 prep and travel |
| | | | | |
| | | | | |
| | | | | |

Check off Items that were completed:

- ☐ Snow Removal
- X Pressure Blower Maintenance
- ☐ Pressure Blower Fan Wheel Replacement
- ☐ Transfer Pump Maintenance
- ☐ Air Stripper Maintenance
- ☐ Carbon Removal and Replacement
- ☐ Remove and Replace Air Stripper Packing
- X Solids Filtration System Maintenance
- ☐ Non-routine Maintenance
- ☐ Other

Work Completed:

Perform maintenance on pressure blower. Interior of blower in good condition.

| Name of Part / Supply / Material | Manufacturer / Supplier | Model Number | Quantity Used |
|---|---|---|---|
| | | | 75 |
| | | | |
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| Description of Waste | Volume of Waste | Disposal Facility Name & Address | Transporter Name & Address | Method of Disp. |
|---|---|---|---|---|
| No regulated waste generated | | | | |
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In signing this I hereby certify that to the best of my knowledge the maintenance and inspection activities performed during this event conform to the requirements specified under contract between EnviroTrac Ltd., and Dvirka and Bartilucci.

Jim Wilkinson / Jim Wilkinson /6/14/06. Signature / Print / Date

# MAINTENANCE AND INSPECTION REPORT
## ACTIVE INDUSTRIAL SITE, LINDENHURST, NY

| Date: August 14, 2006 | | | | |
|---|---|---|---|---|
| Name of Personnel Onsite | Title | Time Arrived | Time Departed | Total Hours |
| Jim Wilkinson | Engineer | 8:00 | 4:30 | 8.5 onsite/ 1.5 prep and travel |
| | | | | |
| | | | | |
| | | | | |

Check off Items that were completed:

- ☐ Snow Removal
- ☐ Pressure Blower Maintenance
- ☐ Pressure Blower Fan Wheel Replacement
- ☐ Transfer Pump Maintenance
- ☐ Air Stripper Maintenance
- ☐ Carbon Removal and Replacement
- ☐ Remove and Replace Air Stripper Packing
- ☐ Solids Filtration System Maintenance
- X Non-routine Maintenance
- ☐ Other

Work Completed:

Dewatering well vault for electrical repairs by electricians. Transferred water from RW-2 well vault to treatment system using submersible pump and 55-gallon drums. Electricians repaired corroded wiring in pull box and well vault.

| Name of Part / Supply / Material | Manufacturer / Supplier | Model Number | Quantity Used |
|---|---|---|---|
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| Description of Waste | Volume of Waste | Disposal Facility Name & Address | Transporter Name & Address | Method of Disp. |
|---|---|---|---|---|
| No regulated waste generated | | | | |
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In signing this I hereby certify that to the best of my knowledge the maintenance and inspection activities performed during this event conform to the requirements specified under contract between EnviroTrac Ltd., and Dvirka and Bartilucci.

Jim Wilkinson 10/18/06 . Signature / Print / Date

# MAINTENANCE AND INSPECTION REPORT

## ACTIVE INDUSTRIAL UNIFORM SITE, LINDENHURST, NY

Date: 12/6/06

| Name of Personnel Onsite | Title | Time Arrived | Time Departed | Total Hours |
|---|---|---|---|---|
| Luke Sorensen | President | 0800 | 1300 | 5 |
| | | | | |
| | | | | |
| | | | | |

Check off Items that were completed:

- ☐ Item 1: Snow Removal
- ☑ Item 2: Pressure Blower Maintenance
- ☐ Item 2A: Pressure Blower Fan Wheel Replacement
- ☐ Item 3: Transfer Pump Maintenance
- ☐ Item 4: Air Stripper Maintenance
- ☐ Item 5: Granular Activated Carbon Removal and Replacement
- ☐ Item 6: Removal and Replacement of Air Stripper Packing Material
- ☐ Item 7: Solids Filtration Changeout
- ☑ Item 8: Non-Routine Maintenance Services

Description of Work:

1.) Pressure Blower Maintenance.
2.) Non Routine Maintenance: a.) Diagnosed electrical fault at RW-2: found short circuits to Ground in down-well pump motor/power cable assembly (2 hrs.); b.) Diagnosed inoperable building heaters. Found tripped safety switches in both units. Reset switches. Corrected problem (2.25 hours).

| Name of Part / Supply / Material | Manufacturer | Model Number | Quantity Used |
|---|---|---|---|
| Grease | ExxonMobil | Mobilith SHC 100 | 1 |
| | | | |
| | | | |
| | | | |
| | | | |

| Description of Waste Generated | Volume of Waste | Disposal Facility (Name & Address) | Waste Transporter (Name & Address) |
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In signing this report I hereby certify that to the best of my knowledge the maintenance and inspection activities performed during this event conform to the requirements specified under contract between ST1 and Dvirka and Bartilucci.

Luke Sorensen 12/15/06

Signature / Print / Date

# MAINTENANCE AND INSPECTION REPORT

## ACTIVE INDUSTRIAL UNIFORM SITE, LINDENHURST, NY

| Date: 1/24/07 | | | | |
|---|---|---|---|---|
| Name of Personnel Onsite | Title | Time Arrived | Time Departed | Total Hours |
| Luke Sorensen | President | 0800 | 1400 | 8 |
| | | | | |
| | | | | |
| | | | | |

Check off Items that were completed:

- ☐ Item 1: Snow Removal
- ☐ Item 2: Pressure Blower Maintenance
- ☐ Item 2A: Pressure Blower Fan Wheel Replacement
- ☑ Item 3: Transfer Pump Maintenance
- ☐ Item 4: Air Stripper Maintenance
- ☐ Item 5: Granular Activated Carbon Removal and Replacement
- ☐ Item 6: Removal and Replacement of Air Stripper Packing Material
- ☑ Item 7: Solids Filtration Change-out
- ☑ Item 8: Non-Routine Maintenance Services

Description of Work:

1.) Solids filter maintenance.
2.) Transfer pump maintenance.
3.) Non-routine maintenance: a.) Picked up replacement reduced pressure zone (RPZ) valve in Medford, picked up replacement transfer pump companion flange gaskets in Holbrook (2.5 hours, round-trip); b.) Replaced RPZ valve (1 hour).

| Name of Part / Supply / Material | Manufacturer | Model Number | Quantity Used |
|---|---|---|---|
| Grease | ExxonMobil | Mobilith SHC 100 | Not measurable |
| Solids filter elements | Harmsco | 931-10 | 25 |
| 2" Companion flange gasket | Jones-Stevens | Unknown | 1 |
| 3" Companion flange gasket | Jones-Stevens | Unknown | 1 |
| 1" RPZ valve | Wilkins | 975XL | 1 |
| Description of Waste Generated | Volume of Waste | Disposal Facility (Name & Address) | Waste Transporter (Name & Address) |
| Spent solids filter media (remains on site, will be picked up week of 1/28/07) | 1 DOT 17H drum (AKA 55 gallon drum) | Trans: AHMM, 303 Middle Country Road, Middle Island, NY 11953<br><br>Disp: MDWPT, 49350 I-94 Service Drive, Belleville, Michigan 48111 | |

In signing this report I hereby certify that to the best of my knowledge the maintenance and inspection activities performed during this event conform to the requirements specified under contract between STI and Dvirka and Bartilucci.

Luke Sorensen 1/24/07

Signature / Print / Date

# BLACKMAN®

website: www.blackman.com

SALES ORDER
1771547 R
PICK TICKET
C.O.D.

TIME: 12:06:38
DATE: 1/24/07

SHIPPED FROM * * * * * C.O.D. * * * * *
BLACKMAN PLBG SPLY CO INC
2700 ROUTE 112
MEDFORD, NY 11763

Phone # 631 475 3170

JAN 24 2007

| SOLD TO | SHIP TO | SPECIAL INSTRUCTIONS |
|---|---|---|
| 631-475-3170<br>SYSTEMATIC TECH<br>Blackman Medford Corp.<br>2700 Route 112<br>MEDFORD NY 11763 | 2700 ROUTE 112<br>MEDFORD NY 11763 | WILL CALL |

| WRITTEN BY | DATE OF ORDER | ACCOUNT NO. | JOB NAME | JOB NUMBER | CUSTOMER'S ORDER NO. | SLMN | SHIPPED VIA | FREIGHT | PAGE NO |
|---|---|---|---|---|---|---|---|---|---|
| SMO | 1/24/07 | 005172 | | | CASH | HSE | | | 1 |

| LINE NO | LOCATION | QUANTITY ORDERED | QUANTITY SHIPPED | QUANTITY BACK ORD | DESCRIPTION | UNIT PRICE | AMOUNT |
|---|---|---|---|---|---|---|---|
| 001 | PB 060 | 1 | 1 | 0 | WILKINS 1" 975XL RPZ W/BV | | |

| LENGTHS | | | | | COILS | VALVES | BAGS | BUNDLES | CARTONS | CRATES | PIECES |
|---|---|---|---|---|---|---|---|---|---|---|---|
| STEEL | COPPER | BRASS | PLASTIC | SOIL | | | | | | | |
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| ORDER FILLED BY | ORDER CHECKED BY | MATERIAL RECEIVED IN GOOD CONDITION PURSUANT TO TERMS OF SALE ON REVERSE (Signature) |
|---|---|---|
| | | X |
| | | PRINT NAME HERE / FIRM NAME |

**THANK YOU FOR YOUR ORDER**

**ANY CLAIMS FOR SHORTAGES MUST BE MADE WITHIN 48 HOURS. RETURNS MUST HAVE PRIOR CONSENT. ALL RETURNS SUBJECT TO REHANDLING AND RESTOCKING CHARGES.**

FORM BB-202 (REV. 8/05)

1771547 ORIG

CUSTOMER'S COPY

# MAINTENANCE AND INSPECTION REPORT

## ACTIVE INDUSTRIAL UNIFORM SITE, LINDENHURST, NY

| Date: 3/9/07 | | | | |
|---|---|---|---|---|
| Name of Personnel Onsite | Title | Time Arrived | Time Departed | Total Hours |
| L. Sorensen | Technician | 1615 | 2145 | 5.5 |
| | | | | |
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| | | | | |

Check off Items that were completed:

- ☐ Item 1: Snow Removal
- ☐ Item 2: Pressure Blower Maintenance
- ☐ Item 2A: Pressure Blower Fan Wheel Replacement
- ☐ Item 3: Transfer Pump Maintenance
- ☐ Item 4: Air Stripper Maintenance
- ☐ Item 5: Granular Activated Carbon Removal and Replacement
- ☐ Item 6: Removal and Replacement of Air Stripper Packing Material
- ☐ Item 7: Solids Filtration Change-out
- ☑ Item 8: Non-Routine Maintenance Services

Description of Work:

Non-Routine Maintenance, One Technician: Diagnosed electrical interference issue with PLC; inspected AS-2 discharge; primed transfer pumps; re-started system.

| Name of Part / Supply / Material | Manufacturer | Model Number | Quantity Used |
|---|---|---|---|
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| Description of Waste Generated | Volume of Waste | Disposal Facility (Name & Address) | Waste Transporter (Name & Address) |
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In signing this report I hereby certify that to the best of my knowledge the maintenance and inspection activities performed during this event conform to the requirements specified under contract between STI and Dvirka and Bartilucci

Luke Sorensen 3/31/07

Signature / Print / Date

# MAINTENANCE AND INSPECTION REPORT

## ACTIVE INDUSTRIAL UNIFORM SITE, LINDENHURST, NY

| Date: 3/27/07 | | | | |
|---|---|---|---|---|
| Name of Personnel Onsite | Title | Time Arrived | Time Departed | Total Hours |
| L. Sorensen | Technician | 1600 | 1815 | 2.25 |
| | | | | |
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Check off Items that were completed:

- ☐ Item 1: Snow Removal
- ☑ Item 2: Pressure Blower Maintenance
- ☐ Item 2A: Pressure Blower Fan Wheel Replacement
- ☐ Item 3: Transfer Pump Maintenance
- ☐ Item 4: Air Stripper Maintenance
- ☐ Item 5: Granular Activated Carbon Removal and Replacement
- ☐ Item 6: Removal and Replacement of Air Stripper Packing Material
- ☐ Item 7: Solids Filtration Change-out
- ☑ Item 8: Non-Routine Maintenance Services

Description of Work:

1.) Pressure blower maintenance;
2.) Non-Routine Maintenance, One Technician: Diagnosed inoperable float switch in AS-2, replaced with that from acid recirculation tank; re-started system.

| Name of Part / Supply / Material | Manufacturer | Model Number | Quantity Used |
|---|---|---|---|
| Bearing Grease | Mobil | Mobilith SHC 100 | Not measurable |
| | | | |
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| Description of Waste Generated | Volume of Waste | Disposal Facility (Name & Address) | Waste Transporter (Name & Address) |
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In signing this report I hereby certify that to the best of my knowledge the maintenance and inspection activities performed during this event conform to the requirements specified under contract between STI and Dvirka and Bartilucci.

Luke Sorensen 3/31/07

Signature / Print / Date

# MAINTENANCE AND INSPECTION REPORT

## ACTIVE INDUSTRIAL UNIFORM SITE, LINDENHURST, NY

Date: 5/17/07

| Name of Personnel Onsite | Title | Time Arrived | Time Departed | Total Hours |
|---|---|---|---|---|
| L. Sorensen | President | | | |
| | | | | |
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Check off Items that were completed:

- ☐ Item 1: Snow Removal
- ☐ Item 2: Pressure Blower Maintenance
- ☐ Item 2A: Pressure Blower Fan Wheel Replacement
- ☐ Item 3: Transfer Pump Maintenance
- ☐ Item 4: Air Stripper Maintenance
- ☐ Item 5: Granular Activated Carbon Removal and Replacement
- ☐ Item 6: Removal and Replacement of Air Stripper Packing Material
- ☐ Item 7: Solids Filtration Change-out
- ☑ Item 8: Non-Routine Maintenance Services

Description of Work:

Replaced PLC analog input module

| Name of Part / Supply / Material | Manufacturer | Model Number | Quantity Used |
|---|---|---|---|
| Analog Input Module | Automation Direct | F2-08AD-1 | 1 |
| | | | |
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| Description of Waste Generated | Volume of Waste | Disposal Facility (Name & Address) | Waste Transporter (Name & Address) |
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In signing this report I hereby certify that to the best of my knowledge the maintenance and inspection activities performed during this event conform to the requirements specified under contract between STI and Dvirka and Bartilucci.

Luke Sorensen 6/14/07

Signature / Print / Date

# MAINTENANCE AND INSPECTION REPORT

## ACTIVE INDUSTRIAL UNIFORM SITE, LINDENHURST, NY

Date: 6/7/07

| Name of Personnel Onsite | Title | Time Arrived | Time Departed | Total Hours |
|---|---|---|---|---|
| L. Sorensen | President | | | |
| | | | | |
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| | | | | |

Check off Items that were completed:

- ☐ Item 1: Snow Removal
- ☐ Item 2: Pressure Blower Maintenance
- ☐ Item 2A: Pressure Blower Fan Wheel Replacement
- ☐ Item 3: Transfer Pump Maintenance
- ☐ Item 4: Air Stripper Maintenance
- ☑ Item 5: Granular Activated Carbon Removal and Replacement
- ☐ Item 6: Removal and Replacement of Air Stripper Packing Material
- ☐ Item 7: Solids Filtration Change-out
- ☑ Item 8: Non-Routine Maintenance Services

Description of Work:

1.) GAC removal and replacement
2.) Replacement of GAC bed screen

| Name of Part / Supply / Material | Manufacturer | Model Number | Quantity Used |
|---|---|---|---|
| Carbon Media | Global Minerals | 4 x 8 Virgin VGAC | 10,000# |
| Carbon Bed Screen | CGL | 3/16 Polypropylene, 3/32 Holes on 5/16 Staggered Centers | 1 Set |
| | | | |
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| Description of Waste Generated | Volume of Waste | Disposal Facility (Name & Address) | Waste Transporter (Name & Address) |
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In signing this report I hereby certify that to the best of my knowledge the maintenance and inspection activities performed during this event conform to the requirements specified under contract between STI and Dvirka and Bartilucci

Luke Sorensen 6/14/07

Signature / Print / Date

# MAINTENANCE AND INSPECTION REPORT

## ACTIVE INDUSTRIAL UNIFORM SITE, LINDENHURST, NY

Date: 6/11/07

| Name of Personnel Onsite | Title | Time Arrived | Time Departed | Total Hours |
|---|---|---|---|---|
| L. Sorensen | President | | | |
| R. Wickers | Technician | | | |
| | | | | |
| | | | | |

Check off Items that were completed:

- ☐ Item 1: Snow Removal
- ☐ Item 2: Pressure Blower Maintenance
- ☐ Item 2A: Pressure Blower Fan Wheel Replacement
- ☐ Item 3: Transfer Pump Maintenance
- ☐ Item 4: Air Stripper Maintenance
- ☐ Item 5: Granular Activated Carbon Removal and Replacement
- ☐ Item 6: Removal and Replacement of Air Stripper Packing Material
- ☐ Item 7: Solids Filtration Change-out
- ☑ Item 8: Non-Routine Maintenance Services

Description of Work:

Cleared vegetation within compound

| Name of Part / Supply / Material | Manufacturer | Model Number | Quantity Used |
|---|---|---|---|
| | | | |
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| Description of Waste Generated | Volume of Waste | Disposal Facility (Name & Address) | Waste Transporter (Name & Address) |
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In signing this report I hereby certify that to the best of my knowledge the maintenance and inspection activities performed during this event conform to the requirements specified under contract between STI and Dvirka and Bartilucci.

Luke Sorensen 6/14/07

Signature / Print / Date

# MAINTENANCE AND INSPECTION REPORT

## ACTIVE INDUSTRIAL UNIFORM SITE, LINDENHURST, NY

| Date: 6/28/07 | | | | |
|---|---|---|---|---|
| Name of Personnel Onsite | Title | Time Arrived | Time Departed | Total Hours |
| L. Sorensen | President | 1730 | 1800 | 0.5 |
| | | | | |
| | | | | |
| | | | | |

Check off Items that were completed:

- ☐ Item 1: Snow Removal
- ☑ Item 2: Pressure Blower Maintenance
- ☐ Item 2A: Pressure Blower Fan Wheel Replacement
- ☐ Item 3: Transfer Pump Maintenance
- ☐ Item 4: Air Stripper Maintenance
- ☐ Item 5: Granular Activated Carbon Removal and Replacement
- ☐ Item 6: Removal and Replacement of Air Stripper Packing Material
- ☐ Item 7: Solids Filtration Change-out
- ☐ Item 8: Non-Routine Maintenance Services

Description of Work:

Item 2: Pressure Blower Maintenance

| Name of Part / Supply / Material | Manufacturer | Model Number | Quantity Used |
|---|---|---|---|
| Bearing Grease | ExxonMobil | Mobilith SHC100 | Not Measurable |
| | | | |
| | | | |
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| Description of Waste Generated | Volume of Waste | Disposal Facility (Name & Address) | Waste Transporter (Name & Address) |
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In signing this report I hereby certify that to the best of my knowledge the maintenance and inspection activities performed during this event conform to the requirements specified under contract between STI and Dvirka and Bartilucci.

Luke Sorensen 8/22/07

Signature / Print / Date

# MAINTENANCE AND INSPECTION REPORT

## ACTIVE INDUSTRIAL UNIFORM SITE, LINDENHURST, NY

Date: 7/17/07

| Name of Personnel Onsite | Title | Time Arrived | Time Departed | Total Hours |
|---|---|---|---|---|
| L. Sorensen | President | 1405 | 1635 | 2.5 |
| | | | | |
| | | | | |
| | | | | |

Check off Items that were completed:

- ☐ Item 1: Snow Removal
- ☐ Item 2: Pressure Blower Maintenance
- ☐ Item 2A: Pressure Blower Fan Wheel Replacement
- ☑ Item 3: Transfer Pump Maintenance
- ☐ Item 4: Air Stripper Maintenance
- ☐ Item 5: Granular Activated Carbon Removal and Replacement
- ☐ Item 6: Removal and Replacement of Air Stripper Packing Material
- ☐ Item 7: Solids Filtration Change-out
- ☑ Item 8: Non-Routine Maintenance Services

Description of Work:

Item 3: Transfer Pump Maintenance

Item 8: Non-Routine Maintenance Services: Supply/install 3" pipe repair coupling on TP-1 intake

| Name of Part / Supply / Material | Manufacturer | Model Number | Quantity Used |
|---|---|---|---|
| Bearing Grease | ExxonMobil | Mobilith SHC100 | Not Measurable |
| Pipe Repair Coupling | Dresser | 3" | 1 |
| | | | |
| | | | |
| | | | |

| Description of Waste Generated | Volume of Waste | Disposal Facility (Name & Address) | Waste Transporter (Name & Address) |
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In signing this report I hereby certify that to the best of my knowledge the maintenance and inspection activities performed during this event conform to the requirements specified under contract between STI and Dvirka and Bartilucci.

Luke Sorensen 8/22/07

Signature / Print / Date

# MAINTENANCE AND INSPECTION REPORT

## ACTIVE INDUSTRIAL UNIFORM SITE, LINDENHURST, NY

Date: 7/31/07

| Name of Personnel Onsite | Title | Time Arrived | Time Departed | Total Hours |
|---|---|---|---|---|
| L. Sorensen | President | 1300 | 1730 | 4.5 |
| | | | | |
| | | | | |
| | | | | |

Check off Items that were completed:

- ☐ Item 1: Snow Removal
- ☐ Item 2: Pressure Blower Maintenance
- ☐ Item 2A: Pressure Blower Fan Wheel Replacement
- ☐ Item 3: Transfer Pump Maintenance
- ☐ Item 4: Air Stripper Maintenance
- ☐ Item 5: Granular Activated Carbon Removal and Replacement
- ☐ Item 6: Removal and Replacement of Air Stripper Packing Material
- ☐ Item 7: Solids Filtration Change-out
- ☑ Item 8: Non-Routine Maintenance Services

Description of Work:

Item 8: Non-Routine Maintenance Services:

1.) Repaired damaged fence
2.) Filled sinkhole in parking lot

| Name of Part / Supply / Material | Manufacturer | Model Number | Quantity Used |
|---|---|---|---|
| Repair Section of Chain-Link Fence | Unknown | 72"x24" Galvanized | 1 |
| Recycled Concrete/Asphalt Blend | N/A | N/A | 1 Cubic Yard |
| | | | |
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| Description of Waste Generated | Volume of Waste | Disposal Facility (Name & Address) | Waste Transporter (Name & Address) |
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In signing this report I hereby certify that to the best of my knowledge the maintenance and inspection activities performed during this event conform to the requirements specified under contract between STI and Dvirka and Bartilucci.

Luke Sorensen 8/22/07

Signature / Print / Date

# MAINTENANCE AND INSPECTION REPORT

## ACTIVE INDUSTRIAL UNIFORM SITE, LINDENHURST, NY

Date: 9/18/07

| Name of Personnel Onsite | Title | Time Arrived | Time Departed | Total Hours |
|---|---|---|---|---|
| L. Sorensen | President | 0900 | 0930 | 1 |
| | | | | |
| | | | | |
| | | | | |

Check off Items that were completed:

- ☐ Item 1: Snow Removal
- ☑ Item 2: Pressure Blower Maintenance
- ☐ Item 2A: Pressure Blower Fan Wheel Replacement
- ☐ Item 3: Transfer Pump Maintenance
- ☐ Item 4: Air Stripper Maintenance
- ☐ Item 5: Granular Activated Carbon Removal and Replacement
- ☐ Item 6: Removal and Replacement of Air Stripper Packing Material
- ☐ Item 7: Solids Filtration Change-out
- ☐ Item 8: Non-Routine Maintenance Services

Description of Work:

Item 2: Pressure Blower Maintenance

| Name of Part / Supply / Material | Manufacturer | Model Number | Quantity Used |
|---|---|---|---|
| Bearing Grease | ExxonMobil | Mobilith SHC100 | Not Measurable |
| | | | |
| | | | |
| | | | |
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| Description of Waste Generated | Volume of Waste | Disposal Facility (Name & Address) | Waste Transporter (Name & Address) |
|---|---|---|---|
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In signing this report I hereby certify that to the best of my knowledge the maintenance and inspection activities performed during this event conform to the requirements specified under contract between STI and Dvirka and Bartilucci.

Luke Sorensen 9/19/07

Signature / Print / Date

# MAINTENANCE AND INSPECTION REPORT

## ACTIVE INDUSTRIAL UNIFORM SITE, LINDENHURST, NY

| Date: 11/29/07 | | | | |
|---|---|---|---|---|
| Name of Personnel Onsite | Title | Time Arrived | Time Departed | Total Hours |
| L. Sorensen | President | 1615 | 1715 | 1 |
| | | | | |
| | | | | |
| | | | | |

Check off Items that were completed:

- ☐ Item 1: Snow Removal
- ☐ Item 2: Pressure Blower Maintenance
- ☐ Item 2A: Pressure Blower Fan Wheel Replacement
- ☐ Item 3: Transfer Pump Maintenance
- ☐ Item 4: Air Stripper Maintenance
- ☐ Item 5: Granular Activated Carbon Removal and Replacement
- ☐ Item 6: Removal and Replacement of Air Stripper Packing Material
- ☐ Item 7: Solids Filtration Change-out
- ☑ Item 8: Non-Routine Maintenance Services

Description of Work:

Item 8:

- Re-started building heaters
- Diagnosed RW-1 low level alarm: well appears to be running dry

| Name of Part / Supply / Material | Manufacturer | Model Number | Quantity Used |
|---|---|---|---|
| | | | |
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| Description of Waste Generated | Volume of Waste | Disposal Facility (Name & Address) | Waste Transporter (Name & Address) |
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In signing this report I hereby certify that to the best of my knowledge the maintenance and inspection activities performed during this event conform to the requirements specified under contract between STI and Dvirka and Bartilucci.

Luke Sorensen 12/4/07

Signature / Print / Date

# MAINTENANCE AND INSPECTION REPORT

## ACTIVE INDUSTRIAL UNIFORM SITE, LINDENHURST, NY

| Date: 12/21/07 | | | | |
|---|---|---|---|---|
| Name of Personnel Onsite | Title | Time Arrived | Time Departed | Total Hours |
| L. Sorensen | President | 0745 | 1845 | 12 (incl. trvl.) |
| | | | | |
| | | | | |
| | | | | |

Check off Items that were completed:

- ☐ Item 1: Snow Removal
- ☐ Item 2: Pressure Blower Maintenance
- ☐ Item 2A: Pressure Blower Fan Wheel Replacement
- ☐ Item 3: Transfer Pump Maintenance
- ☐ Item 4: Air Stripper Maintenance
- ☐ Item 5: Granular Activated Carbon Removal and Replacement
- ☐ Item 6: Removal and Replacement of Air Stripper Packing Material
- ☐ Item 7: Solids Filtration Change-out
- ☑ Item 8: Non-Routine Maintenance Services

Description of Work:

Item 8: Non-Routine Maintenance Services: RW-1 surging/pump cleaning

| Name of Part / Supply / Material | Manufacturer | Model Number | Quantity Used |
|---|---|---|---|
| Pressure Gauge | Weksler | AY44-2 | 2 |
| Bicycle Pump | Blackburn | MTB | 1 |
| Pneumatic Groundwater Level Sensing Assembly | Systematic Technologies | | 1 |
| | | | |
| | | | |

| Description of Waste Generated | Volume of Waste | Disposal Facility (Name & Address) | Waste Transporter (Name & Address) |
|---|---|---|---|
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In signing this report I hereby certify that to the best of my knowledge the maintenance and inspection activities performed during this event conform to the requirements specified under contract between STI and Dvirka and Bartilucci.

Luke Sorensen 1/17/08

Signature / Print / Date

# MAINTENANCE AND INSPECTION REPORT

## ACTIVE INDUSTRIAL UNIFORM SITE, LINDENHURST, NY

Date: 12/27/07

| Name of Personnel Onsite | Title | Time Arrived | Time Departed | Total Hours |
|---|---|---|---|---|
| L. Sorensen | President | 0830 | 1230 | 5 (incl. trvl.) |
| | | | | |
| | | | | |
| | | | | |

Check off Items that were completed:

- ☐ Item 1: Snow Removal
- ☐ Item 2: Pressure Blower Maintenance
- ☐ Item 2A: Pressure Blower Fan Wheel Replacement
- ☐ Item 3: Transfer Pump Maintenance
- ☐ Item 4: Air Stripper Maintenance
- ☐ Item 5: Granular Activated Carbon Removal and Replacement
- ☐ Item 6: Removal and Replacement of Air Stripper Packing Material
- ☐ Item 7: Solids Filtration Change-out
- ☑ Item 8: Non-Routine Maintenance Services

Description of Work:

Item 8: Replacement of 3" ball valve in RW-1 vault; re-start system; monitor/adjust RW-1 flow-rate

| Name of Part / Supply / Material | Manufacturer | Model Number | Quantity Used |
|---|---|---|---|
| 3" Sch. 80 PVC F x F True-Union Ball Valve | Hayward | | 1 |
| | | | |
| | | | |
| | | | |
| | | | |

| Description of Waste Generated | Volume of Waste | Disposal Facility (Name & Address) | Waste Transporter (Name & Address) |
|---|---|---|---|
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In signing this report I hereby certify that to the best of my knowledge the maintenance and inspection activities performed during this event conform to the requirements specified under contract between STI and Dvirka and Bartilucci.

Luke Sorensen 1/17/08

Signature / Print / Date

# MAINTENANCE AND INSPECTION REPORT

## ACTIVE INDUSTRIAL UNIFORM SITE, LINDENHURST, NY

Date: 1/3/08

| Name of Personnel Onsite | Title | Time Arrived | Time Departed | Total Hours |
|---|---|---|---|---|
| L. Sorensen | President | 0915 | 1145 | 2.5 |
| | | | | |
| | | | | |
| | | | | |

Check off Items that were completed:

- ☐ Item 1: Snow Removal
- ☑ Item 2: Pressure Blower Maintenance
- ☐ Item 2A: Pressure Blower Fan Wheel Replacement
- ☑ Item 3: Transfer Pump Maintenance
- ☐ Item 4: Air Stripper Maintenance
- ☐ Item 5: Granular Activated Carbon Removal and Replacement
- ☐ Item 6: Removal and Replacement of Air Stripper Packing Material
- ☑ Item 7: Solids Filtration Change-out
- ☐ Item 8: Non-Routine Maintenance Services

Description of Work:

Item 7: Solids Filtration Change-out
Item 3: Transfer Pump Maintenance
Item 2: Pressure Blower Maintenance

| Name of Part / Supply / Material | Manufacturer | Model Number | Quantity Used |
|---|---|---|---|
| Solids Filter Cartridges | Harmsco | 931-10 | 25 |
| Bearing Grease | Exxonmobil | Mobilith SHC-100 | Not Measurable |
| | | | |
| | | | |

| Description of Waste Generated | Volume of Waste | Disposal Facility (Name & Address) | Waste Transporter (Name & Address) |
|---|---|---|---|
| Spent Filter Media | 1 Drum | MDWPT, 49350 I-94 Service Dr., Belleville, Michigan 48111 | AHMM, 303 Middle Country Rd., Middle Island, NY 11953 |
| | | | |
| | | | |

In signing this report I hereby certify that to the best of my knowledge the maintenance and inspection activities performed during this event conform to the requirements specified under contract between STI and Dvirka and Bartilucci.

Luke Sorensen 1/17/08

Signature / Print / Date

# MAINTENANCE AND INSPECTION REPORT

## ACTIVE INDUSTRIAL UNIFORM SITE, LINDENHURST, NY

Date: 3/26/08

| Name of Personnel Onsite | Title | Time Arrived | Time Departed | Total Hours |
|---|---|---|---|---|
| L. Sorensen | President | 1600 | 1700 | 1 |
| | | | | |
| | | | | |
| | | | | |

Check off Items that were completed:

- ☐ Item 1: Snow Removal
- ☑ Item 2: Pressure Blower Maintenance
- ☐ Item 2A: Pressure Blower Fan Wheel Replacement
- ☐ Item 3: Transfer Pump Maintenance
- ☐ Item 4: Air Stripper Maintenance
- ☐ Item 5: Granular Activated Carbon Removal and Replacement
- ☐ Item 6: Removal and Replacement of Air Stripper Packing Material
- ☐ Item 7: Solids Filtration Change-out
- ☐ Item 8: Non-Routine Maintenance Services

Description of Work:

- Item 2: Pressure blower maintenance

| Name of Part / Supply / Material | Manufacturer | Model Number | Quantity Used |
|---|---|---|---|
| Bearing Grease | Exxon Mobil | Mobilith SHC 100 | Not Measurable |
| | | | |
| | | | |
| | | | |
| | | | |

| Description of Waste Generated | Volume of Waste | Disposal Facility (Name & Address) | Waste Transporter (Name & Address) |
|---|---|---|---|
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In signing this report I hereby certify that to the best of my knowledge the maintenance and inspection activities performed during this event conform to the requirements specified under contract between STI and Dvirka and Bartilucci

Luke Sorensen 3/27/08

Signature / Print / Date

# MAINTENANCE AND INSPECTION REPORT

## ACTIVE INDUSTRIAL UNIFORM SITE, LINDENHURST, NY

| Date: 6/17/08 | | | | |
|---|---|---|---|---|
| Name of Personnel Onsite | Title | Time Arrived | Time Departed | Total Hours |
| L. Sorensen | President | 0800 | 0845 | 2.25 (incl. travel) |
| E. sorensen | Technician | 0800 | 0845 | 2.25 (incl. travel) |
| | | | | |
| | | | | |

Check off Items that were completed:

- ☐ Item 1: Snow Removal
- ☑ Item 2: Pressure Blower Maintenance
- ☐ Item 2A: Pressure Blower Fan Wheel Replacement
- ☐ Item 3: Transfer Pump Maintenance
- ☐ Item 4: Air Stripper Maintenance
- ☐ Item 5: Granular Activated Carbon Removal and Replacement
- ☐ Item 6: Removal and Replacement of Air Stripper Packing Material
- ☐ Item 7: Solids Filtration Change-out
- ☐ Item 8: Non-Routine Maintenance Services

Description of Work:

Item 2: Pressure Blower Maintenance

| Name of Part / Supply / Material | Manufacturer | Model Number | Quantity Used |
|---|---|---|---|
| Bearing Grease | ExxonMobil | Mobilith SHC100 | Not Measurable |
| | | | |
| | | | |
| | | | |
| | | | |

| Description of Waste Generated | Volume of Waste | Disposal Facility (Name & Address) | Waste Transporter (Name & Address) |
|---|---|---|---|
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In signing this report I hereby certify that to the best of my knowledge the maintenance and inspection activities performed during this event conform to the requirements specified under contract between STI and Dvirka and Bartilucci.

Luke Sorensen 6/29/08

Signature / Print / Date

# MAINTENANCE AND INSPECTION REPORT

## ACTIVE INDUSTRIAL UNIFORM SITE, LINDENHURST, NY

| Date: 7/18/08 | | | | |
|---|---|---|---|---|
| Name of Personnel Onsite | Title | Time Arrived | Time Departed | Total Hours |
| L. Sorensen | President | 1315 | 1415 | 2.5 (incl. travel) |
| E. Sorensen | Technician | 1315 | 1415 | 2.5 (incl. travel) |
| | | | | |
| | | | | |

Check off Items that were completed:

- ☐ Item 1: Snow Removal
- ☐ Item 2: Pressure Blower Maintenance
- ☐ Item 2A: Pressure Blower Fan Wheel Replacement
- ☐ Item 3: Transfer Pump Maintenance
- ☐ Item 4: Air Stripper Maintenance
- ☐ Item 5: Granular Activated Carbon Removal and Replacement
- ☐ Item 6: Removal and Replacement of Air Stripper Packing Material
- ☐ Item 7: Solids Filtration Change-out
- ☑ Item 8: Non-Routine Maintenance Services

Description of Work:

Item 8: Non-Routine Maintenance Services: Assess leaking valve in RW-1 well-head enclosure

| Name of Part / Supply / Material | Manufacturer | Model Number | Quantity Used |
|---|---|---|---|
| | | | |
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| Description of Waste Generated | Volume of Waste | Disposal Facility (Name & Address) | Waste Transporter (Name & Address) |
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In signing this report I hereby certify that to the best of my knowledge the maintenance and inspection activities performed during this event conform to the requirements specified under contract between STI and Dvirka and Bartilucci.

Luke Sorensen 8/4/08

Signature / Print / Date

# MAINTENANCE AND INSPECTION REPORT

## ACTIVE INDUSTRIAL UNIFORM SITE, LINDENHURST, NY

| Date: 7/23/08 | | | | |
|---|---|---|---|---|
| Name of Personnel Onsite | Title | Time Arrived | Time Departed | Total Hours |
| L. Sorensen | President | 1400 (1 Hr picking up materials prior) | 1945 | 8.25 (incl. travel) |
| E. Sorensen | Technician | 1400 (1 Hr picking up materials prior) | 1945 | 8.25 (incl. travel) |
| | | | | |
| | | | | |

Check off Items that were completed:

- ☐ Item 1: Snow Removal
- ☐ Item 2: Pressure Blower Maintenance
- ☐ Item 2A: Pressure Blower Fan Wheel Replacement
- ☐ Item 3: Transfer Pump Maintenance
- ☐ Item 4: Air Stripper Maintenance
- ☐ Item 5: Granular Activated Carbon Removal and Replacement
- ☐ Item 6: Removal and Replacement of Air Stripper Packing Material
- ☐ Item 7: Solids Filtration Change-out
- ☑ Item 8: Non-Routine Maintenance Services

Description of Work:

Item 8: Pick up materials at three local suppliers, replace ball valve in RW-1 well-head enclosure; diagnose inoperable roof vent, replace drive belt.

| Name of Part / Supply / Material | Manufacturer | Model Number | Quantity Used |
|---|---|---|---|
| 3" True-Union Ball Valve | Hayward | | 1 |
| 3" x Close Gal NPT Pipe Nipple | Ward | | 1 |
| V-Belt | Advance | | 1 |
| 3" Gal Riser Clamp | Unknown | | 1 |
| | | | |

| Description of Waste Generated | Volume of Waste | Disposal Facility (Name & Address) | Waste Transporter (Name & Address) |
|---|---|---|---|
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In signing this report I hereby certify that to the best of my knowledge the maintenance and inspection activities performed during this event conform to the requirements specified under contract between STI and Dvirka and Bartilucci.

Luke Sorensen 8/4/08

Signature / Print / Date

# MAINTENANCE AND INSPECTION REPORT

## ACTIVE INDUSTRIAL UNIFORM SITE, LINDENHURST, NY

| Date: 8/5/08 | | | | |
|---|---|---|---|---|
| Name of Personnel Onsite | Title | Time Arrived | Time Departed | Total Hours |
| L. Sorensen | President | 0940 | 1310 | 5 (incl travel, eq. pickup, drop off) |
| E. Sorensen | Technician | 0940 | 1310 | 5 (incl travel, eq. pickup, drop off) |
| | | | | |
| | | | | |

Check off Items that were completed:

- ☐ Item 1: Snow Removal
- ☐ Item 2: Pressure Blower Maintenance
- ☐ Item 2A: Pressure Blower Fan Wheel Replacement
- ☐ Item 3: Transfer Pump Maintenance
- ☐ Item 4: Air Stripper Maintenance
- ☐ Item 5: Granular Activated Carbon Removal and Replacement
- ☐ Item 6: Removal and Replacement of Air Stripper Packing Material
- ☐ Item 7: Solids Filtration Change-out
- ☑ Item 8: Non-Routine Maintenance Services

Description of Work:

Item 8: Non-Routine Maintenance – Vegetation Removal

| Name of Part / Supply / Material | Manufacturer | Model Number | Quantity Used |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
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| Description of Waste Generated | Volume of Waste | Disposal Facility (Name & Address) | Waste Transporter (Name & Address) |
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In signing this report I hereby certify that to the best of my knowledge the maintenance and inspection activities performed during this event conform to the requirements specified under contract between STI and Dvirka and Bartilucci.

Luke Sorensen 8/15/08

Signature / Print / Date

# MAINTENANCE AND INSPECTION REPORT

## ACTIVE INDUSTRIAL UNIFORM SITE, LINDENHURST, NY

| Date: 8/8/08 | | | | |
|---|---|---|---|---|
| Name of Personnel Onsite | Title | Time Arrived | Time Departed | Total Hours |
| L. Sorensen | President | 0800 | 1815 | 11.75 (incl. travel) |
| E. Sorensen | Technician | 0800 | 1815 | 11.75 (incl. travel) |
| | | | | |
| | | | | |

Check off Items that were completed:

- ☐ Item 1: Snow Removal
- ☐ Item 2: Pressure Blower Maintenance
- ☐ Item 2A: Pressure Blower Fan Wheel Replacement
- ☑ Item 3: Transfer Pump Maintenance
- ☐ Item 4: Air Stripper Maintenance
- ☐ Item 5: Granular Activated Carbon Removal and Replacement
- ☐ Item 6: Removal and Replacement of Air Stripper Packing Material
- ☐ Item 7: Solids Filtration Change-out
- ☑ Item 8: Non-Routine Maintenance Services

Description of Work:

1.) Item 8: Non-Routine Maintenance:

Removed/replaced RW-2 pump, motor, power cord; surged well with rubber block; installed pressure gauge/isolation valve on well-head discharge piping; re-installed pump assembly but unable to connect discharge piping due to accumulation of silt in bottom of well that prevents installation of pump to full depth; notified S. Tauss, operations put on hold until a later date after D&B selects a solution for removal of silt;

Left four (4) pressure gauges and isolation valves in treatment building for installation at later date;

Adjusted tension on roof vent fan that was making "squealing" noise – problem corrected;

Called back to site by S. Tauss after departure to respond to a system shutdown. Met "Kevin" of D&B, gave direction on re-starting system.

2.) Item 3: Transfer Pump Maintenance

| Name of Part / Supply / Material | Manufacturer | Model Number | Quantity Used |
|---|---|---|---|
| Well Pump | Grundfos | 150S100-5 | 1 |
| Motor | Franklin | 2366124020 | 1 |
| Pressure Gauge | Weksler | AY44-2 | 5 |
| Isolation Valve | Apollo | 1/4BRBVMXF | 5 |
| Motor Cord | Morris | 10/3AWG50FTXLPE | 1 |

| Splice Kit | Polaris | 4-14AWG | 4 |
|---|---|---|---|
| Description of Waste Generated | Volume of Waste | Disposal Facility (Name & Address) | Waste Transporter (Name & Address) |
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In signing this report I hereby certify that to the best of my knowledge the maintenance and inspection activities performed during this event conform to the requirements specified under contract between STI and Dvirka and Bartilucci. Luke Sorensen 8/15/08

Signature / Print / Date

# MAINTENANCE AND INSPECTION REPORT

## ACTIVE INDUSTRIAL UNIFORM SITE, LINDENHURST, NY

| Date: 8/21/08 | | | | |
|---|---|---|---|---|
| Name of Personnel Onsite | Title | Time Arrived | Time Departed | Total Hours |
| L. Sorensen | President | 1030 | 1415 | 3.75 on site |
| E. Sorensen | Technician | 1030 | 1415 | 3.75 on site |
| | | | | |
| | | | | |

Check off Items that were completed:

- ☐ Item 1: Snow Removal
- ☑ Item 2: Pressure Blower Maintenance
- ☐ Item 2A: Pressure Blower Fan Wheel Replacement
- ☐ Item 3: Transfer Pump Maintenance
- ☐ Item 4: Air Stripper Maintenance
- ☐ Item 5: Granular Activated Carbon Removal and Replacement
- ☐ Item 6: Removal and Replacement of Air Stripper Packing Material
- ☐ Item 7: Solids Filtration Change-out
- ☑ Item 8: Non-Routine Maintenance Services

Description of Work:

Item 2: Pressure Blower Maintenance

1. Inspected fan wheel for wear and corrosion;
2. Inspected fan wheel for buildup of materials;
3. Inspected motor winding for dust and dirt;
4. Lubricated motor bearings.

Item 8: Non-Routine Maintenance Services

1. Picked up garbage from site exterior
2. Vacuumed/mopped building interior

| Name of Part / Supply / Material | Manufacturer | Model Number | Quantity Used |
|---|---|---|---|
| Bearing Grease | Mobil | Mobilith SHC100 | Not Measurable |
| | | | |
| | | | |
| | | | |
| | | | |

| Description of Waste Generated | Volume of Waste | Disposal Facility (Name & Address) | Waste Transporter (Name & Address) |
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In signing this report I hereby certify that to the best of my knowledge the maintenance and inspection activities performed during this event conform to the requirements specified under contract between STI and Dvirka and Bartilucci. Luke Sorensen 11/3/08

Signature / Print / Date

# MAINTENANCE AND INSPECTION REPORT

## ACTIVE INDUSTRIAL UNIFORM SITE, LINDENHURST, NY

| Date: 8/22/08 | | | | |
|---|---|---|---|---|
| Name of Personnel Onsite | Title | Time Arrived | Time Departed | Total Hours |
| L. Sorensen | President | 0800 | 2015 | 12.25 on site |
| E. Sorensen | Technician | 0800 | 2015 | 12.25 on site |
| | | | | |
| | | | | |

Check off Items that were completed:

- ☐ Item 1: Snow Removal
- ☐ Item 2: Pressure Blower Maintenance
- ☐ Item 2A: Pressure Blower Fan Wheel Replacement
- ☐ Item 3: Transfer Pump Maintenance
- ☐ Item 4: Air Stripper Maintenance
- ☐ Item 5: Granular Activated Carbon Removal and Replacement
- ☐ Item 6: Removal and Replacement of Air Stripper Packing Material
- ☐ Item 7: Solids Filtration Change-out
- ☑ Item 8: Non-Routine Maintenance Services

Description of Work:

Item 8: Non-Routine Maintenance
Removed RW-2 well pump, bailed sand from well, placed sand in drum on site, re-installed well pump.

| Name of Part / Supply / Material | Manufacturer | Model Number | Quantity Used |
|---|---|---|---|
| DOT 17H Drum | | | 1 |
| | | | |
| | | | |
| | | | |
| | | | |

| Description of Waste Generated | Volume of Waste | Disposal Facility (Name & Address) | Waste Transporter (Name & Address) |
|---|---|---|---|
| Sand | ½ Drum | | |
| | | | |
| | | | |

In signing this report I hereby certify that to the best of my knowledge the maintenance and inspection activities performed during this event conform to the requirements specified under contract between STI and Dvirka and Bartilucci.

Luke Sorensen 11/3/08

Signature / Print / Date

# MAINTENANCE AND INSPECTION REPORT

## ACTIVE INDUSTRIAL UNIFORM SITE, LINDENHURST, NY

| Date: 8/29/08 | | | | |
|---|---|---|---|---|
| Name of Personnel Onsite | Title | Time Arrived | Time Departed | Total Hours |
| L. Sorensen | President | 0700 | 1000 | 3 on site |
| E. Sorensen | Technician | 0700 | 1000 | 3 on site |
| | | | | |
| | | | | |

Check off Items that were completed:

- ☐ Item 1: Snow Removal
- ☐ Item 2: Pressure Blower Maintenance
- ☐ Item 2A: Pressure Blower Fan Wheel Replacement
- ☐ Item 3: Transfer Pump Maintenance
- ☐ Item 4: Air Stripper Maintenance
- ☐ Item 5: Granular Activated Carbon Removal and Replacement
- ☐ Item 6: Removal and Replacement of Air Stripper Packing Material
- ☑ Item 7: Solids Filtration Change-out
- ☑ Item 8: Non-Routine Maintenance Services

Description of Work:

Item 8: Non-Routine Maintenance

1. Furnish and install brass fittings for level gauge on RW-2;
2. Furnish and install sump pump fuses

Item 7: Solids Filtration Change-Out

1. Removed and replaced filter cartridges
2. Fabricated and replaced gasket

| Name of Part / Supply / Material | Manufacturer | Model Number | Quantity Used |
|---|---|---|---|
| Filter Cartridges | Harmsco | 2.5x10 | 75 |
| Fuse | Amptrap | 20A | 3 |
| Brass fittings | Mueller | Unknown | Lot |
| Solids Filter Gasket | Systematic | N/A | 1 |
| | | | |
| Description of Waste Generated | Volume of Waste | Disposal Facility (Name & Address) | Waste Transporter (Name & Address) |
| Spent Filters | ½ Drum | | |
| | | | |
| | | | |

In signing this report I hereby certify that to the best of my knowledge the maintenance and inspection activities performed during this event conform to the requirements specified under contract between STI and Dvirka and Bartilucci.

Luke Sorensen 11/3/08

Signature / Print / Date

# MAINTENANCE AND INSPECTION REPORT

## ACTIVE INDUSTRIAL UNIFORM SITE, LINDENHURST, NY

Date: 9/12/08

| Name of Personnel Onsite | Title | Time Arrived | Time Departed | Total Hours |
|---|---|---|---|---|
| L. Sorensen | President | 0700 | 1000 | 3 on site |
| E. Sorensen | Technician | 0700 | 1000 | 3 on site |
| | | | | |
| | | | | |

Check off Items that were completed:

- ☐ Item 1: Snow Removal
- ☐ Item 2: Pressure Blower Maintenance
- ☐ Item 2A: Pressure Blower Fan Wheel Replacement
- ☐ Item 3: Transfer Pump Maintenance
- ☐ Item 4: Air Stripper Maintenance
- ☐ Item 5: Granular Activated Carbon Removal and Replacement
- ☐ Item 6: Removal and Replacement of Air Stripper Packing Material
- ☑ Item 7: Solids Filtration Change-out
- ☑ Item 8: Non-Routine Maintenance Services

Description of Work:

Item 8: Non-Routine Maintenance

1. Furnish and install brass fittings for level gauge on RW-2;
2. Furnish and install sump pump fuses

Item 7: Solids Filtration Change-Out

1. Removed and replaced filter cartridges
2. Fabricated and replaced gasket

| Name of Part / Supply / Material | Manufacturer | Model Number | Quantity Used |
|---|---|---|---|
| Filter Cartridges | Harmsco | 2.5x10 | 75 |
| Fuse | Amptrap | 20A | 3 |
| Brass fittings | Mueller | Unknown | Lot |
| Solids Filter Gasket | Systematic | N/A | 1 |
| | | | |

| Description of Waste Generated | Volume of Waste | Disposal Facility (Name & Address) | Waste Transporter (Name & Address) |
|---|---|---|---|
| Spent Filters | ½ Drum | | |
| | | | |
| | | | |

In signing this report I hereby certify that to the best of my knowledge the maintenance and inspection activities performed during this event conform to the requirements specified under contract between STI and Dvirka and Bartilucci.

Luke Sorensen 11/8/08

Signature / Print / Date

# MAINTENANCE AND INSPECTION REPORT

## ACTIVE INDUSTRIAL UNIFORM SITE, LINDENHURST, NY

| Date: 11/21/08 | | | | |
|---|---|---|---|---|
| Name of Personnel Onsite | Title | Time Arrived | Time Departed | Total Hours |
| L. Sorensen | President | 0840 | 0920 | 0.66 on site |
| E. Sorensen | Technician | 0840 | 0920 | 0.66 on site |
| | | | | |
| | | | | |

Check off Items that were completed:

- ☐ Item 1: Snow Removal
- ☑ Item 2: Pressure Blower Maintenance
- ☐ Item 2A: Pressure Blower Fan Wheel Replacement
- ☐ Item 3: Transfer Pump Maintenance
- ☐ Item 4: Air Stripper Maintenance
- ☐ Item 5: Granular Activated Carbon Removal and Replacement
- ☐ Item 6: Removal and Replacement of Air Stripper Packing Material
- ☐ Item 7: Solids Filtration Change-out
- ☐ Item 8: Non-Routine Maintenance Services

Description of Work:

Item 2: Pressure Blower Maintenance

1. Inspected fan wheel for wear and corrosion – none found.
2. Inspected fan wheel for buildup of materials – none found.
3. Inspected motor winding for dust and dirt – none found.
4. Lubricated motor bearings.

| Name of Part / Supply / Material | Manufacturer | Model Number | Quantity Used |
|---|---|---|---|
| Bearing Grease | Mobil | Mobilith SHC100 | Not Measurable |
| | | | |
| | | | |
| | | | |
| | | | |

| Description of Waste Generated | Volume of Waste | Disposal Facility (Name & Address) | Waste Transporter (Name & Address) |
|---|---|---|---|
| | | | |
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| | | | |

In signing this report I hereby certify that to the best of my knowledge the maintenance and inspection activities performed during this event conform to the requirements specified under contract between STI and Dvirka and Bartilucci.

Luke Sorensen 11/30/08

Signature / Print / Date

# MAINTENANCE AND INSPECTION REPORT

## ACTIVE INDUSTRIAL UNIFORM SITE, LINDENHURST, NY

| Date: 2/13/09 | | | | |
|---|---|---|---|---|
| Name of Personnel Onsite | Title | Time Arrived | Time Departed | Total Hours |
| L. Sorensen | President | 1350 | 1600 | 3.75, incl. travel |
| | | | | |
| | | | | |
| | | | | |

Check off Items that were completed:

- ☐ Item 1: Snow Removal
- ☐ Item 2: Pressure Blower Maintenance
- ☐ Item 2A: Pressure Blower Fan Wheel Replacement
- ☐ Item 3: Transfer Pump Maintenance
- ☐ Item 4: Air Stripper Maintenance
- ☐ Item 5: Granular Activated Carbon Removal and Replacement
- ☐ Item 6: Removal and Replacement of Air Stripper Packing Material
- ☐ Item 7: Solids Filtration Change-out
- ☑ Item 8: Non-Routine Maintenance Services

Description of Work:

Item 8: Non-Routine Maintenance

1. Replaced broken pipe fittings on eyewash station;
2. Diagnosed inoperable system. Found Air Stripper #2 level transmitter inoperable;
3. Re-ignited building heaters

| Name of Part / Supply / Material | Manufacturer | Model Number | Quantity Used |
|---|---|---|---|
| Pipe fittings | Misc. | Misc. | 3 |
| | | | |
| | | | |
| | | | |
| | | | |

| Description of Waste Generated | Volume of Waste | Disposal Facility (Name & Address) | Waste Transporter (Name & Address) |
|---|---|---|---|
| | | | |
| | | | |
| | | | |

In signing this report I hereby certify that to the best of my knowledge the maintenance and inspection activities performed during this event conform to the requirements specified under contract between STI and Dvirka and Bartilucci.

Luke Sorensen 3/4/09

Signature / Print / Date

# MAINTENANCE AND INSPECTION REPORT

## ACTIVE INDUSTRIAL UNIFORM SITE, LINDENHURST, NY

| Date: 3/3/09 | | | | |
|---|---|---|---|---|
| Name of Personnel Onsite | Title | Time Arrived | Time Departed | Total Hours |
| J. Sorensen | Technician | 1130 | 1215 | 2.25, incl. travel |
| | | | | |
| | | | | |
| | | | | |

Check off Items that were completed:

- ☑ Item 1: Snow Removal
- ☐ Item 2: Pressure Blower Maintenance
- ☐ Item 2A: Pressure Blower Fan Wheel Replacement
- ☐ Item 3: Transfer Pump Maintenance
- ☐ Item 4: Air Stripper Maintenance
- ☐ Item 5: Granular Activated Carbon Removal and Replacement
- ☐ Item 6: Removal and Replacement of Air Stripper Packing Material
- ☐ Item 7: Solids Filtration Change-out
- ☐ Item 8: Non-Routine Maintenance Services

Description of Work:

Item 1: Snow Removal

| Name of Part / Supply / Material | Manufacturer | Model Number | Quantity Used |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

| Description of Waste Generated | Volume of Waste | Disposal Facility (Name & Address) | Waste Transporter (Name & Address) |
|---|---|---|---|
| | | | |
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In signing this report I hereby certify that to the best of my knowledge the maintenance and inspection activities performed during this event conform to the requirements specified under contract between STI and Dvirka and Bartilucci. Luke Sorensen 3/4/09

Signature / Print / Date

# MAINTENANCE AND INSPECTION REPORT

## ACTIVE INDUSTRIAL UNIFORM SITE, LINDENHURST, NY

| Date: 3/4/09 | | | | |
|---|---|---|---|---|
| Name of Personnel Onsite | Title | Time Arrived | Time Departed | Total Hours |
| L. Sorensen | President | 0830 | 0945 | 1.15 on site |
| | | | | |
| | | | | |
| | | | | |

Check off Items that were completed:

- ☐ Item 1: Snow Removal
- ☑ Item 2: Pressure Blower Maintenance
- ☐ Item 2A: Pressure Blower Fan Wheel Replacement
- ☐ Item 3: Transfer Pump Maintenance
- ☐ Item 4: Air Stripper Maintenance
- ☐ Item 5: Granular Activated Carbon Removal and Replacement
- ☐ Item 6: Removal and Replacement of Air Stripper Packing Material
- ☐ Item 7: Solids Filtration Change-out
- ☐ Item 8: Non-Routine Maintenance Services

Description of Work:

Item 2: Pressure Blower Maintenance

1. Inspected fan wheel for wear and corrosion – none found.
2. Inspected fan wheel for buildup of materials – none found.
3. Inspected motor winding for dust and dirt – none found.
4. Lubricated motor bearings.

| Name of Part / Supply / Material | Manufacturer | Model Number | Quantity Used |
|---|---|---|---|
| Bearing Grease | Mobil | Mobilith SHC100 | Not Measurable |
| | | | |
| | | | |
| | | | |
| | | | |

| Description of Waste Generated | Volume of Waste | Disposal Facility (Name & Address) | Waste Transporter (Name & Address) |
|---|---|---|---|
| | | | |
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| | | | |

In signing this report I hereby certify that to the best of my knowledge the maintenance and inspection activities performed during this event conform to the requirements specified under contract between STI and Dvirka and Bartilucci.

Luke Sorensen 3/4/09

Signature / Print / Date

# MAINTENANCE AND INSPECTION REPORT

## ACTIVE INDUSTRIAL UNIFORM SITE, LINDENHURST, NY

| Date: 6/24/09 | | | | |
|---|---|---|---|---|
| Name of Personnel Onsite | Title | Time Arrived | Time Departed | Total Hours |
| J. Sorensen | Technician | 0910 | 1310 | 4 on site |
| O. Rodriguez | Technician | 0910 | 1310 | 4 on site |
| | | | | |
| | | | | |

Check off Items that were completed:

- ☐ Item 1: Snow Removal
- ☑ Item 2: Pressure Blower Maintenance
- ☐ Item 2A: Pressure Blower Fan Wheel Replacement
- ☐ Item 3: Transfer Pump Maintenance
- ☐ Item 4: Air Stripper Maintenance
- ☐ Item 5: Granular Activated Carbon Removal and Replacement
- ☐ Item 6: Removal and Replacement of Air Stripper Packing Material
- ☐ Item 7: Solids Filtration Change-out
- ☑ Item 8: Non-Routine Maintenance Services

Description of Work:

Item 2: Pressure Blower Maintenance
1. Inspected fan wheel for wear and corrosion – none found.
2. Inspected fan wheel for buildup of materials – none found.
3. Inspected motor winding for dust and dirt – none found.
4. Lubricated motor bearings.

Item 8: Non-Routine Maintenance
1. Vegeation clearing
2. Repaired leak in solids filter housing using epoxy

| Name of Part / Supply / Material | Manufacturer | Model Number | Quantity Used |
|---|---|---|---|
| Bearing Grease | Mobil | Mobilith SHC100 | Not Measurable |
| Fuel | BP | 87 Octane Gasoline | 5 Gallons |
| Epoxy Repair Kit | Devcon | Fasmetal | 1 Kit |
| | | | |
| | | | |

| Description of Waste Generated | Volume of Waste | Disposal Facility (Name & Address) | Waste Transporter (Name & Address) |
|---|---|---|---|
| | | | |
| | | | |
| | | | |

In signing this report I hereby certify that to the best of my knowledge the maintenance and inspection activities performed during this event conform to the requirements specified under contract between STI and Dvirka and Bartilucci

Luke Sorensen 7/13/09

Signature / Print / Date

# MAINTENANCE AND INSPECTION REPORT

## ACTIVE INDUSTRIAL UNIFORM SITE, LINDENHURST, NY

| Date: 4/1/09 | | | | |
|---|---|---|---|---|
| Name of Personnel Onsite | Title | Time Arrived | Time Departed | Total Hours |
| L. Sorensen | President | 1320 | 1610 | 2.833 On Site, 1.5 Travel |
| | | | | |
| | | | | |
| | | | | |

Check off Items that were completed:

- ☐ Item 1: Snow Removal
- ☐ Item 2: Pressure Blower Maintenance
- ☐ Item 2A: Pressure Blower Fan Wheel Replacement
- ☐ Item 3: Transfer Pump Maintenance
- ☐ Item 4: Air Stripper Maintenance
- ☐ Item 5: Granular Activated Carbon Removal and Replacement
- ☐ Item 6: Removal and Replacement of Air Stripper Packing Material
- ☐ Item 7: Solids Filtration Change-out
- ☒ Item 8: Non-Routine Maintenance Services

Description of Work:

Item 8: Non-Routine Maintenance Services:

1.) Install UPS System
2.) Install vacuum breaker
3.) Diagnose/repair inoperable sump float switch (open circuit)

| Name of Part / Supply / Material | Manufacturer | Model Number | Quantity Used |
|---|---|---|---|
| UPS System | APC | BE550G | 1 |
| Vacuum Breaker | McMaster-Carr | 4817K55 | 1 |
| | | | |
| | | | |
| | | | |

| Description of Waste Generated | Volume of Waste | Disposal Facility (Name & Address) | Waste Transporter (Name & Address) |
|---|---|---|---|
| | | | |
| | | | |
| | | | |

In signing this report I hereby certify that to the best of my knowledge the maintenance and inspection activities performed during this event conform to the requirements specified under contract between STI and Dvirka and Bartilucci. Luke Sorensen 4/13/09

Signature / Print / Date

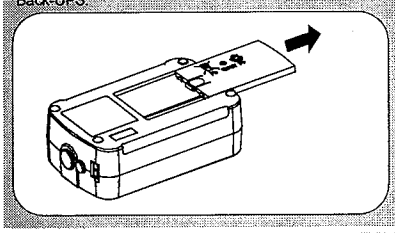
# Back-UPS® ES 450/550G
## User Guide

www.apc.com

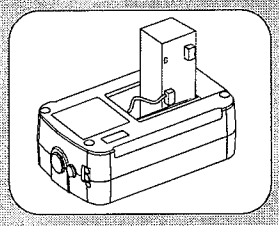
## 1 Connect Battery

For safety, the Back-UPS ES is shipped with one battery wire disconnected. The UPS will not operate until the wire is connected to the touch-safe battery terminal.
**NOTE:** Small sparks may occur during battery connection. This is normal.

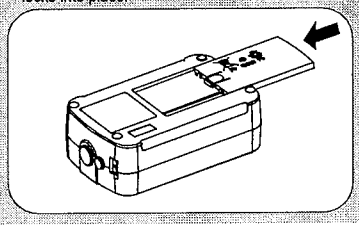
❶ Turn the Back-UPS ES over and press in the release tab. Slide the plastic battery cover off of the Back-UPS.



❷ Connect the battery wire firmly to the battery terminal.



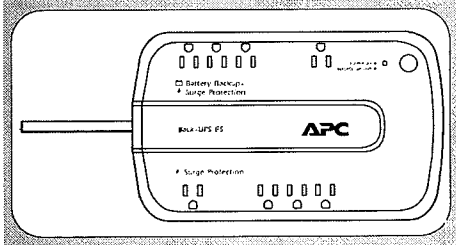
❸ Insert the battery back into the compartment. Slide the plastic battery cover until the release tab locks into place.



## 2 Connect Equipment

**Battery Back-up + Surge Protection**

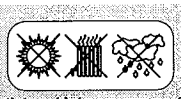
These outlets are powered whenever the Back-UPS ES is switched ON. During a power outage or other utility problems (brownouts, over-voltages), these outlets will be powered for a limited time by the Back-UPS ES. Plug your computer, monitor, and other peripheral devices into the outlets.




**Surge Protection**

These outlets provide full-time protection from surges even if the Back-UPS ES is switched OFF. Plug your printer, fax machine, scanner, or other peripherals that do not need battery power into these outlets.

**Place the Back-UPS ES to avoid:**
- Direct sunlight
- Excessive heat
- Excessive humidity or contact with fluids



**Plug the Back-UPS ES power cord directly into a wall outlet; not into a surge protector or power strip.**

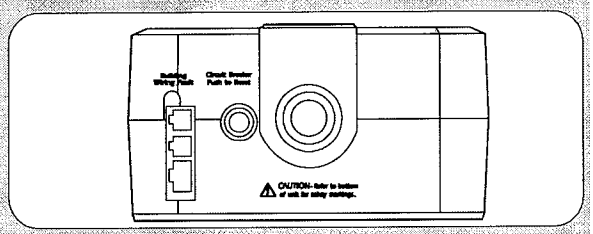
**Connect Computer Cable**

The supplied cable and software provide automatic file saving and shutdown of the operating system in the case of a sustained power outage.

Connect the cable to the Data Port of the Back-UPS ES. Connect the other end of the cable to the USB port on your computer. The software will automatically find the computer's USB Port.

**Connect Modem / Phone / DSL / Fax**

The Back-UPS protects a single line (2-wire) phone (including Digital Subscriber Line - DSL), Home Phoneline Networking Association (HPNA) type equipment, modem, or fax machines from surges when connected through the UPS as shown in the drawing below.




## 3 Turn the Unit On and Install the Software

**Press the ON/OFF switch turn the unit ON.**

A single short beep and the green "Power On" indicator confirms the Back-UPS ES is on and ready to provide protection.

The Back-UPS ES should charge for at least 16 hours to ensure sufficient runtime. The unit is being charged whenever it is connected to utility power, whether the unit is turned ON or OFF.

If the red Building Wiring Fault indicator (located on the end near the power cord) is lit, your building wiring presents a shock hazard that should be corrected by a qualified electrician.

**Install the PowerChute Personal Edition software.**
Place the PowerChute CD into the computer and following the installation instructions on the screen.

## 4 Transfer Voltage and Sensitivity Adjustment (Optional)

To adjust the transfer voltage:

1. Plug the Back-UPS into the utility power source. The Back-UPS will be in "Standby mode" (no indicators are lit).
2. Press the ON/OFF push button fully in for 10 seconds. The Online LED will begin glowing in a cyclical order: GREEN-AMBER-RED, indicating it is going into "Program mode".
3. The Back-UPS will then indicate the current sensitivity, as shown in the *Transfer Voltage and Sensitivity Adjustment* table below.
4. To select the LOW sensitivity setting, press the ON/OFF push button until the LED begins flashing GREEN.
5. To select the MEDIUM sensitivity setting, press the ON/OFF push button until the LED begins flashing RED.
6. To select the HIGH sensitivity setting, press the ON/OFF push button until the LED begins flashing AMBER.
7. To exit Programming mode, once sensitivity is set, wait approximately 5 seconds, and all of the LED indicators will be off (unlit).

## Status Indicators

The Back-UPS ES indicates operating status using a combination of visual and audible indicators. Use the following table to identify the status of the Back-UPS ES.

| Status | Visual Indications (Power On - Green) (Replace Battery - Red) | Audible Indication | Alarm Terminates When |
|---|---|---|---|
| **Power On** - UPS is supplying conditioned utility power to the load. | Power On pushbutton - ON (lit) | None | Not applicable. |
| **On Battery** - UPS is supplying battery power to the load connected to the Battery outlets. | Power On pushbutton - ON (off during beep) | Beeping 4 times every 30 seconds | UPS transfers back to Power On operation, or when UPS is turned off. |
| **Low Battery Warning** - UPS is supplying battery power to the load connected to the battery outlets, and the battery is near exhaustion. | Power On indicator is flashing | Rapid beeping (every 1/2 second) | UPS transfers back to normal operation, or when UPS is turned off. |
| **Replace Battery** - The battery is disconnected.<br><br>The battery is in need of charging, or is at the end of its usual life and must be replaced. | Replace Battery indicator is Flashing<br><br>Power On and Replace Battery indicators - flashing (alternating) | Constant tone<br><br>Constant tone | UPS is turned off with the power switch. |
| **Overload Shutdown** - During On Battery operation a battery power supplied outlet overload was detected. | None | Constant tone | UPS is turned off with the power switch. |
| **Sleep Mode** - During On Battery operation the battery power has been completely exhausted and the UPS is waiting for utility power to return to normal. | None | Beeping once every 4 seconds | Utility power is restored, or if utility power is not restored within 32 seconds, or the UPS is turned off. |
| **Building Wiring Fault** - Your building wiring presents a shock hazard that should be corrected by a licensed electrician. | Building Wiring Fault LED (red) - ON | None | UPS is unplugged, or UPS is plugged into a properly wired outlet. |

| Indicators Flashing | Sensitivity Setting | Input Voltage Range (For Utility Operation) | When to Use |
|---|---|---|---|
| Green Flashing | LOW | 88-142 | Input voltage is extremely low or high.<br>Not recommended for computer loads. |
| Red Flashing | MEDIUM (factory default) | 92-139 | Back-UPS frequently goes on battery. |
| Amber Flashing | HIGH | 96-136 | Connected equipment is sensitive to voltage fluctuations. |

# Troubleshooting

| Problem | Probable Cause | Solution |
|---|---|---|
| **Back-UPS ES will not turn on.** | The battery is disconnected, and either power is unavailable at the wall outlet, or utility power is having a "brownout" or an "over voltage" condition. | Connect the battery (see *Connect Battery*) and ensure power is available at the wall outlet. If battery is connected and power is unavailable, the unit can be "cold started" (operated on battery power) by holding the power button down until two beeps are heard. |
| **No power available at the Surge Protection outlets.** | Surge Protection outlets were overloaded.<br>Utility power not available at the wall outlet. | Reduce the amount of equipment plugged into the Surge Protection outlets.<br>Ensure the fuse or circuit breaker for the outlet is not tripped, and that the wall switch controlling the outlet (if any) is in the ON position. |
| **Back-UPS is on, but Replace Battery indicator flashes, and unit emits a constant tone.** | Battery is disconnected. | Connect the battery (see *Connect Battery* diagram). |
| **Connected equipment loses power.** | Equipment is connected to the "Surge Protection" outlets.<br>The Back-UPS ES is overloaded.<br>PowerChute Personal Edition software has performed a shutdown due to a power failure.<br>The Back-UPS ES has exhausted its available battery power.<br>Connected equipment does not accept the step-approximated sine waveform from the Back-UPS ES.<br>The Back-UPS ES may require service. | Ensure the equipment you want to stay powered during a power failure is plugged into the "Battery Backup plus Surge Protection" outlets and NOT the "Surge Protection Only" outlets.<br>Make sure the equipment plugged into the outlets of the unit are not overloading its capacity. Try removing some of the equipment and see if the problem continues.<br>The Back-UPS ES is operating normally.<br>The Back-UPS ES can only operate on battery power for a limited amount of time. The unit will eventually turn off when the available battery power has been used. Allow the unit to recharge for 16 hours before expecting maximum runtime.<br>The output waveform is designed for computers and computer-related equipment. It is not designed for use with motor-type equipment.<br>Contact APC Technical Support for further troubleshooting. |
| **The Power On indicator is lit and the Back-UPS ES beeps four times every 30 seconds.** | The Back-UPS ES is On Battery. | The Back-UPS ES is operating normally, and using battery power. Once On Battery, you may want to save your current work, power down your equipment, and turn the unit OFF. Once normal power is restored, you may turn the unit back ON, and power your equipment. |
| **The Power On indicator flashes and the Back-UPS beeps twice per second at the same time.** | Battery capacity is low (about 2 minutes of use remaining). | The Back-UPS ES is about to shut off due to a low battery charge condition! When the unit beeps twice every second, the battery has about 2 minutes of power remaining. Immediately power down your computer, and turn the unit OFF. When normal power returns, the unit will recharge the battery. |
| **Building Wiring Fault indicator is lit.** | Your building wiring presents a shock hazard. Using the Back-UPS with this condition will void the warranty. | Call a qualified electrician for service. |
| **Inadequate runtime.** | The battery is not fully charged.<br>Battery is near the end of useful life. | Allow the unit to charge by leaving it plugged into the wall at least 16 hours.<br>As a battery ages, the amount of runtime available will decrease. You can replace the battery by ordering one at www.apc.com. Batteries also age prematurely if the Back-UPS ES is placed near excessive heat. |
| **No phone/fax/DSL signal from the Back-UPS.** | Data line from the ISP or wall outlet is connected to the wrong jack on the Back-UPS. | Make sure the data line from the wall outlet is connected to the jack labeled "Wall Outlet". |
| **Internet connection lost during power outage.** | Modem lost AC power. | Plug the modem's AC power cord into one of the "Battery Back-up Plus Surge Protection outlets" |

# Specifications

| Model BE450/550G | | |
|---|---|---|
| Input | Voltage | 120 Vrms nominal |
| | Frequency | 60 Hz ± 3 |
| | Brownout Transfer | 92 Vrms, typical |
| | Over-voltage Transfer | 139 Vrms, typical |
| Output | UPS Capacity (4 outlets) | 450 VA/550 VA ; 257 W/330 W |
| | Total Amperage (8 outlets) | 12 Amps (including UPS output) |
| | Voltage - On Battery | 115 Vrms ± 8% (step-approximated sine wave) |
| | Frequency - On Battery | 60 Hz ± 1 Hz |
| | Transfer Time | 6 ms typical, 10 ms maximum |
| Protection and Filter | AC Surge Protection | Full time, 340 joules |
| | Phone/fax/DSL Surge Protection | Single line (2-wire) |
| | EMI/RFI Filter | Full time |
| | AC Input | Resettable circuit breaker |
| Battery | Type | Sealed, maintenance-free lead acid |
| | Average Life | 3 - 5 years depending on the number of discharge cycles and environmental temperature |
| Physical | Net Weight | Back-UPS 450: 10 lb ( 4.5 kg)<br>Back-UPS 550: 12.4 lb (5.6 kg) |
| | Size | 11.2 in (H) x 7.1 in (W) x 3.4 in (D)<br>(28.2 cm x 18 cm x 8.7cm) |
| | Operating Temperature | +32°F to 104°F (0°C to 40°C) |
| | Storage Temperature | +5°F to 113°F (-15°C to 45°C) |
| | Operating Relative Humidity | 0 to 95% non-condensing |
| | Operating Elevation | 0 to 10,000 ft (0 to 3,000m) |
| Safety and Regulatory | Safety Approvals | TUV C-US certified; UL 1778 standard per CSA standard C22.2 No. 107.3, FCC part 68 & FCC part 15 Class B, NOM certified |
| | EMC Compliance | **Notice:** This device complies with part 68 and part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.<br>"On the bottom of this equipment is a label that contains, among other information, the FCC registration number and ringer equivalence number (REN) for this equipment. If requested, this information must be provided to the telephone company." |

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## Order Replacement Battery

Replace with an APC qualified battery. Replacement batteries can be ordered from www.apc.com (valid credit card required). The replacement battery part number for this Back-UPS 450 is RBC 114, and for Back-UPS 550 is RBC 110.

## Warranty

The standard warranty is 3 years from the date of purchase. APC's standard procedure is to replace the original unit with a factory reconditioned unit. Customers who must have the original unit back due to assigned asset tags and set depreciation schedules must declare such a need at first contact with APC Technical Support. APC will ship the replacement unit once the defective unit is received by the repair department or cross-ship upon the provision of a valid credit card number. The customer pays for shipping to APC, and APC pays ground freight transportation costs back to the customer.

## Service

Please DO NOT RETURN Back-UPS ES to the place of purchase under any circumstances.

1. Consult the Troubleshooting section to eliminate common problems.
2. Verify the battery is connected (see *Connect Battery*) and that the Circuit Breaker is not tripped (see *Troubleshooting* section).

If you still have problems or questions, please contact APC via the internet or at one of the phone numbers listed below.

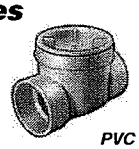
3. Before contacting APC, please be sure to record the date purchased, UPS model, and serial number (on bottom of unit).
4. Be prepared to troubleshoot the problem over the telephone with a Technical Support Representative. If this is not successful, the representative will issue a Return Material Authorization Number (RMA#) and a shipping address.
5. Pack the unit in its original packaging. If the original packaging is not available, ask APC Technical Support about obtaining a new set. Pack the unit properly to avoid damage in transit. Never use foam beads for packaging. Damage sustained in transit is not covered under warranty (insuring the package for full value is recommended).
6. Write the RMA# on the outside of the package.
7. Return the unit by insured carrier to the address given to you by APC Technical Support.

## APC Contact Information

| | |
|---|---|
| Online Technical Support: | http://support.apc.com<br>http://www.apc.com/support<br>esupport@apcc.com |
| Web Site: | www.apc.com |
| USA/Canada: | 1.800.800.4272 |
| Mexico: | +52.292.0253 / 52.292.0255 |
| Brazil: | +0800.12.72.1 |
| Worldwide: | +1.401.789.5735 |

*For information about check valves, see page 470. For information about pipe size, see pages 2-3.*

## Backwater Swing Check Valves



*PVC*

- Maximum Pressure: 0 psi (gravity flow)
- Cracking Pressure: 0 psi
- Temperature Range: PVC: 33° to 140° F; ABS: 33° to 180° F

Prevent backflow in drain, waste, and vent piping systems. Valves have a top clean-out lid for easy access. Seal is Buna-N. Approvals: BOCA, IAPMO, and SBCCI. CSA certified. *Note:* Cv factor not rated. For horizontal use only. ***PVC valves*** are white and have a PVC seat; ***ABS valves*** are black and have an ABS seat. **Connections:** Socket weld (not threaded).

| Pipe Size | End-to-End Lg. | PVC | Each | ABS | Each |
|---|---|---|---|---|---|
| 1 1/2" | 4 3/16" | **4670K12** | $40.94 | **4670K52** | $40.94 |
| 2" | 4 1/2" | **4670K14** | 40.94 | **4670K54** | 40.94 |
| 3" | 7 3/8" | **4670K16** | 45.29 | **4670K56** | 45.29 |
| 4" | 9 3/4" | **4670K18** | 52.08 | **4670K58** | 52.08 |
| 6" | 15 1/8" | **4670K22** | 159.51 | **4670K62** | 148.51 |

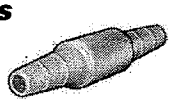
## ABS Swing Check Sump Pump Valves

- Maximum Pressure: 50 psi @ 73° F
- Cracking Pressure: 1.5 psi
- Temperature Range: 40° to 140° F

Designed for sump pump line connections, valves are ABS with PVC end connections. They're easy to install—simply slip over ABS, PVC, steel pipe, or copper tubing, and tighten the Type 301 stainless steel hose clamps. Install vertically or horizontally. Disc is EPDM rubber over stainless steel; EPDM acts as soft seat. Color is black. *Note:* Cv factor not rated. **Connections:** Flexible couplers with pipe clamps.

| Pipe Size | End-to-End Lg. | | Each |
|---|---|---|---|
| 1 1/4" to 1 1/2" | 4 3/4" | **7744K11** | $13.19 |
| 2" | 4 1/2" | **7744K12** | 26.18 |

## Vacuum Swing Check Valves



- Maximum Vacuum: 29.9" Hg
- Temperature Range: −25° to +176° F

These check valves are used in vacuum lines, relying on back pressure for instant operation in any position. Tapered ends easily connect to soft thermoplastic tubing (arrows on valve indicate direction of free flow). Body is polyethylene, disc is neoprene and acts as soft seat. Color is white. *Note:* Cracking pressure and Cv factor not rated. **Connections:** Barbed.

| Fit Tube ID | End-to-End Lg. | | Each |
|---|---|---|---|
| 5/16" to 1/4" | 2 3/4" | **4610K13** | $6.80 |
| 1/2" to 3/8" | 3 3/16" | **4610K17** | 9.43 |

## Vacuum-Breaking Valves with Garden Hose Connections

*For use with Hose Bibbs and Sill Cocks*

*For use with Wall/Yard Faucets*

Connect these vacuum breaking valves to hose bibbs and sill cocks or wall/yard faucets. Meant for intermittent use only, valves are not for connections subject to continuous pressure. Body is brass, internal parts are stainless steel, and diaphragm is rubber. Meet American Society of Sanitation Engineers (ASSE) Standard 1011, ANSI A1121.3, and Universal Plumbing Code (UPC). Listed by International Association of Plumbing and Mechanical Officials (IAPMO) and certified by CSA B64.2. Maximum pressure is 125 psi. Temperature range is 33° to 180° F. ***Removable valves*** are secured with a set screw. ***Removable valves with a breakaway set screw*** are secured with a plastic set screw. The head of the screw can be broken off to prevent tampering and removal of the valve. ***Permanent-mount valves*** cannot be removed once they are threaded onto your hose.

**Connections:** 3/4" garden-hose thread female inlet and male outlet.

| O'all Ht. | Brass | Each | Chrome-Plated Brass | Each |
|---|---|---|---|---|
| ***For Use with Hose Bibbs and Sill Cocks*** | | | | |
| *Removable* | | | | |
| 1 1/2" | **46605K55** | $19.12 | **46605K58** | $24.91 |
| *Removable w/Breakaway Screw* | | | | |
| 1 3/8" | **46605K75** | 9.47 | **46605K85■** | 19.84 |
| *Permanent Mount* | | | | |
| 1 3/4" | **46605K65** | 22.94 | **46605K68■** | 26.27 |
| ***For Use with Wall/Yard Faucets*** | | | | |
| *Removable* | | | | |
| 2" | **46605K88** | 24.26 | **46605K89** | 36.08 |

■ Overall height is 1 1/2".

## Bronze Horizontal-Lift Check Valves

- Maximum Pressure:
  Class 125: 200 psi @ 150° F, Steam: 125 psi @ 353° F;
  Class 300: 1000 psi @ 150° F, Steam: 300 psi @ 421° F
- Cracking Pressure: Less than 1 psi
- Temp. Range: Class 125: −20° to +406° F; Class 300: −20° to +450° F

These rugged valves handle pulsating flow conditions that would cause excessive wear in a swing check valve, meet MSS-SP-80-Type 1, and are rated for steam service. They have a bronze body and work in water, noncorrosive liquids, and gases. Disc is bronze, except 4894K47, which is brass. All have metal-to-metal seat. **Connections:** NPT female.

| Pipe Size | Cv Factor | Class 125 End-to-End Lg. | | Each | Class 300 End-to-End Lg. | | Each |
|---|---|---|---|---|---|---|---|
| 1/2" | 2.87 | 2 5/32" | **4894K47** | $57.98 | 2 9/16" | **4894K81** | $136.87 |
| 3/4" | 5.24 | 2 1/2" | **4894K12** | 91.55 | 3" | **4894K82** | 165.31 |
| 1" | 8.86 | 3" | **4894K13** | 116.82 | 3 1/2" | **4894K83** | 281.44 |
| 1 1/4" | 15.67 | 3 19/32" | **4894K14** | 154.00 | 4 1/16" | **4894K84** | 375.81 |
| 1 1/2" | 21.83 | 3 7/8" | **4894K15** | 206.22 | 4 5/8" | **4894K85** | 407.27 |
| 2" | 37.84 | 4 21/32" | **4894K16** | 306.40 | 5 3/4" | **4894K86** | 505.00 |

## Forged Steel Horizontal-Lift Piston Check Valves—Class 800

*Socket Weld*

- Maximum Pressure: 1975 psi
- Cracking Pressure: 0.26 to 0.35 psi
- Maximum Temperature: 800° F

Also known as gravity-lift valves, these are API 602, ASME B16.34 certified. The bolted body and cap provide maximum strength for high pressure applications. Piston is Type 410 stainless steel; gasket is Type 316L stainless steel and graphite. Seat is metal-to-metal. Note: For horizontal use only. **Connections:** NPT female or socket weld (not threaded).

| Pipe Size | End-to-End Lg. | Cv Factor | NPT Female | Each | Socket Weld | Each |
|---|---|---|---|---|---|---|
| 1/2" | 3 5/32" | 1.2 | **4895K63** | $60.87 | **4895K83** | $60.31 |
| 3/4" | 3 35/64" | 2.8 | **4895K64** | 65.77 | **4895K84** | 65.17 |
| 1" | 4 21/64" | 5 | **4895K65** | 76.96 | **4895K85** | 76.26 |
| 1 1/4" | 5 29/32" | 9 | **4895K66** | 151.17 | **4895K86** | 149.80 |
| 1 1/2" | 5 29/32" | 12.5 | **4895K67** | 151.17 | **4895K87** | 150.63 |
| 2" | 7 3/32" | 17.5 | **4895K68** | 211.45 | **4895K88** | 211.45 |

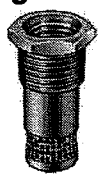
## FDA-Compliant Nylon Check Valves

- Maximum Pressure: 150 psi @ 70° F
- Cracking Pressure: 0.5 psi
- Temperature Range: −60° to +200° F

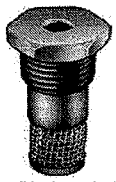
Made of material that meets FDA requirements for use with soft tubing in food and beverage applications, these check valves fit into tight spots and have good chemical resistance. Diaphragm is silicone. Color is natural white. *Note:* Cv factor is not rated. **Connections:** Barbed.

| For Tube ID | End-to-End Lg. | | Each | For Tube ID | End-to-End Lg. | | Each |
|---|---|---|---|---|---|---|---|
| 1/8" | 1 5/16" | **2987K21** | $3.70 | 1/4" | 1 11/16" | **2987K25** | $3.70 |
| 3/16" | 1 11/16" | **2987K23** | 3.70 | 3/8" | 1 15/16" | **2987K27** | 3.87 |

## Inline Vacuum-Breaking Valves



*w/NPT Female Outlet*



*w/Unthreaded Outlet*

For use on steam coils, heat exchangers, and space heaters to prevent water hammer, these valves fit directly into vessels or your processing line. Ball is spring-loaded and kept closed by pressure. When pressure drops below atmospheric, creating a vacuum situation, the valve opens and lets in air. As soon as the vacuum is broken and the pressure rises above atmospheric, the valve quickly closes again. Choose a brass or Type 303 stainless steel valve body. All have stainless steel internal parts with an EPR (ethylene propylene rubber) seat. Maximum pressure is 300 psi. Temperature range is −20° to +365° F. **Connections:** NPT male inlet; choose from NPT female outlet or unthreaded hole diameter.

**To Order:** Please specify NPT female outlet or unthreaded.

| Pipe Size, Inlet × Outlet | Ht. | Tube OD | Brass | Each | Type 303 Stainless Steel | Each |
|---|---|---|---|---|---|---|
| 3/8" × 1/4" | 1 1/2" | 9/16" | **4817K13♥** | $43.93 | **4817K63** | $80.92 |
| 1/2" × 3/8" | 1 3/4" | 11/16" | **4817K54** | 46.48 | **4817K64** | 93.34 |
| 3/4" × 1/2" | 2 1/8" | 13/16" | **4817K55** | 60.54 | **4817K65** | 121.32 |
| 1" × 3/4" | 2 3/8" | 1 1/16" | **4817K56** | 108.97 | **4817K66** | 157.61 |
| 1 1/4" × 1" | 2 15/16" | 1 5/16" | **4817K57** | 172.69 | **4817K67** | 207.04 |
| 1 1/2" × 1 1/4" | 3 1/16" | 1 9/16" | **4817K58** | 173.78 | **4817K68** | 230.77 |

♥ Available with NPT female outlet only.

ENVIRONMENTAL
ASSESSMENT &
REMEDIATIONS

# Active Industrial Uniform
# 63 West Merrick Road
# Lindenhurst, NY
# NYSDEC Site # 152125

## EAR Photos From Initial Site Walk (07-22-09)


Non-pressure rated elbow

Replace elbow and all PVC between existing flange and new flange

Cut, and insert flange

Effluent transfer pump to be removed for evaluation/repair

Non-Pressure Rated Elbow


## Air/Water Separator to be replaced

Leak from bottom of drum

Sump pump piping to be replaced/reconfigured

Transfer pump to be removed and evaluated/repaired

Effluent filter basket to be potentially replaced


Pressure meter to potentially be replaced

ENVIRONMENTAL
ASSESSMENT &
REMEDIATIONS

## Broken handle on globe valve

## Supports recommended for potable water line


**Paul Martorano**

**From:** Trego, Donald A. [Trego@ENVIRO-ASMNT.COM]
**Sent:** Friday, July 24, 2009 1:07 PM
**To:** Payson Long
**Cc:** Paul Martorano; Hough, Kevin
**Subject:** FW: Magnatex Pumps Quote T-3662 by CP

Mr. Long,

Please see below for a shipping estimate from Magnatex. If you want the entire exact pump from Magentex, the total cost would be $6797.56 (without our contract markup).

If you decide to replace the pump with the exact replacement, rather than a similar pump with equal specifications, I would be required to submit a single source vendor request for approval by NYSDEC contract and payments section (CPS).

Please let me know how you would like us to proceed.

Sincerely,

Donald A Trego
Vice President
Environmental Assessment & Remediations
Trego@Enviro-Asmnt.com
Phone: 1-888-EAR-6789
Fax: 631-447-6497
www.Enviro-Asmnt.com

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---

**From:** Christi Prust [mailto:cprust@magnatexpumps.com]
**Sent:** Friday, July 24, 2009 12:53 PM
**To:** Trego, Donald A.
**Cc:** lhoff@magnatexpumps.com
**Subject:** RE: Magnatex Pumps Quote T-3662 by CP

Donald,

Due to our current shop load, lead time would be 2-4 weeks for the parts and/or the pump.
We will not collect sales tax in NY.
Shipping FedEx 3 days – for parts - $44.40
Shipping FedEx 3 days – for pump - $707.56
Shipping quote is only valid for (1) week.

Please let me know if you have any questions or if there is anything I can do to further assist you. Thanks and have a great day!

Best Regards,

Christi Prust
Magnatex Pumps, Inc.
719-329-0777

---

**From:** Trego, Donald A. [mailto:Trego@ENVIRO-ASMNT.COM]
**Sent:** Friday, July 24, 2009 9:15 AM
**To:** Christi Prust
**Subject:** RE: Magnatex Pumps Quote T-3662 by CP

Can you please provide a cost for shipping to Patchogue, NY and any applicable sales tax? I need a firm total cost to provide to my client. Also, what is the lead time on the parts and pump?

Thanks.

Donald A Trego
Vice President
Environmental Assessment & Remediations
Trego@Enviro-Asmnt.com
Phone: 1-888-EAR-6789
Fax: 631-447-6497
www.Enviro-Asmnt.com

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---

**From:** Christi Prust [mailto:cprust@magnatexpumps.com]
**Sent:** Friday, July 24, 2009 11:10 AM
**To:** Trego, Donald A.
**Subject:** FW: Magnatex Pumps Quote T-3662 by CP

Dear Donald,

Per our phone conversation – the price of the inner magnet + impeller assembly is $4912 and the price for the complete bare pump, MTA-A10-P-F20-2-FE is $6090.

Please let me know if you have any questions or if there is anything I can do to further assist you. Thanks and have a great afternoon!

Best regards,

Christi Prust
Magnatex Pumps, Inc.
719-329-0777
cprust@magnatexpumps.com
www.magnatexpumps.com

ENVIRONMENTAL
ASSESSMENT &
REMEDIATIONS

# Active Industrial Uniform
# 63 West Merrick Road
# Lindenhurst, NY
# NYSDEC Site # 152125

## EAR Photos Of Damage To Effluent Transfer Pump (07-23-09/07-24-09)

Effluent transfer pump


Broken Parts

Model: MTA-A10-P-F20-2-FE
Size: 3x2x6
Material: PFA
HP: 15
Serial # T-502111-1B/P2

Damage to PFA
Liner and Casing

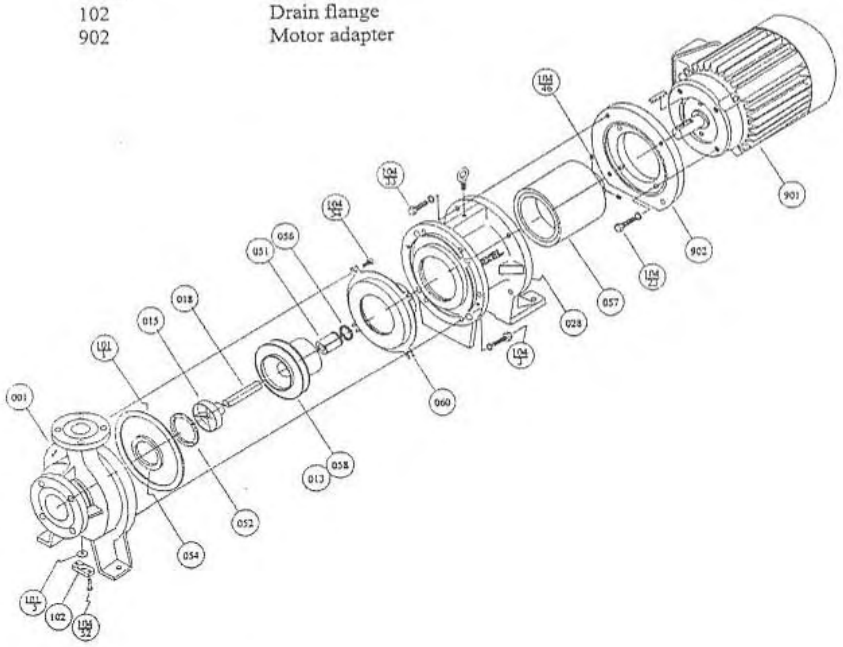
# Other Damaged Parts

# Explode View Drawing Of Transfer Pump

13b. **EXPLODED VIEW DRAWING**

**MODEL MTA-A10**

| Item no. | Description |
|---|---|
| 001 | Casing |
| 015 | Shaft support |
| 018 | Shaft |
| 028 | Bracket |
| 051 | Bushing |
| 052 | Mouth ring |
| 054 | Front thrust ring |
| 056 | Rear thrust ring |
| 057 | Outer magnet |
| 058+013 | Inner magnet + Impeller |
| 060 | Rear casing |
| 101-1 | Casing gasket |
| 101-5 | Drain gasket |
| 102 | Drain flange |
| 902 | Motor adapter |



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**Paul Martorano**

**From:** Trego, Donald A. [Trego@ENVIRO-ASMNT.COM]
**Sent:** Monday, July 27, 2009 11:52 AM
**To:** Payson Long
**Cc:** Paul Martorano; Stephen Tauss; Hough, Kevin
**Subject:** Site ID 152125 Active Industrial Remedial Services Call-out 118404 - Effluent Pump

Mr. Long,

I have contacted another supplier (Hayes Pump) of a magnetic drive, Teflon lined, close coupled transfer pump that is rated for the same performance specifications (250 GPM @ 160 TH) as the transfer pump previously in service (Magnatec). Their applications engineer provided the attached quote. As you can see from the attached PDF, their recommended pump requires a 25 HP motor. This increase in HP would not only greatly increase electrical usage cost, but would require a change in several system electrical components (Variable Freq Drive, wiring, etc..). Also, the cost of $18,436 (before tax, and shipping) is far greater than the cost of replacing the pump end on the previous in service pump (Magantec $6797.56).

Please call to discuss.

Sincerely,

Donald A Trego
Vice President
Environmental Assessment & Remediations
Trego@Enviro-Asmnt.com
Phone: 1-888-EAR-6789
Fax: 631-447-6497
www.Enviro-Asmnt.com

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GOULDS PUMPS HAYES PUMP INC

# Enviromental Assessment & Remediations

Lew Blanche
Hayes Pump
295 Fairfield Ave
Fairfield NJ 07004
Phone: 973-808-0606
Fax: 973-808-7311
Email: Lblanche@hayespump.com

INQ NO: Email of 7/27/09
Proposal No: LAB09-07-27 01
Item No: ITEM 001

July 27, 2009

Attn: Mr. Donald A Trego

## MODEL:3298 M SIZE:2x3-8 QTY: 1

## Operating conditions

| | |
|---|---|
| SERVICE | Transfer |
| LIQUID | Water / 5 % Hydrochoric Acid Temp. 70.0 deg F, SP.GR 1.000, Viscosity 1.000 cp, rated / max. suction pressure 0.0 / 0.0 psi g |
| CAPACITY Rated | 250.0 gpm |
| HEAD | 160.0 (ft) |

| PRICE in USD | |
|---|---|
| Pump Unit | Incl |
| Driver | Incl |
| Boxing | |
| Testing | |
| Freight | |
| Accessories | |
| **Total 1 Unit** | **18,436** |
| Shipment: 4 to 6 weeks Ex-Works / Factory | |

## Performance at 3560 RPM

| | |
|---|---|
| PUBLISHED EFFY | 57.0% (CDS) |
| RATED EFFY | 56.5% |
| RATED POWER | 17.9 hp (Run out 20.6 hp) |
| NPSHR | 17.4 ft |
| DISCH PRESSURE(R) | 76.4 psi g (96.9 psi g @ Shut off) Based on 0.0 psi g Suc.press |
| PERF. CURVE | 5229-1 (Rotation CW viewed from coupling end) |
| SHUT OFF HEAD | 223.8 ft |
| MIN. FLOW | Continuous Stable: 44.0 gpm Hydraulic: 44.0 gpm Thermal: N/A |

## Materials

| | |
|---|---|
| CONSTRUCTION | Tefzel lined (close coupled) |
| CASING | Ductile iron/ Tefzel lined (max.casing.pres. @ rated temp. 225.0 psi g) |
| MAGNETS | Neodymium-Iron |
| IMPELLER | CFR Tefzel - Enclosed (7.3750 in rated, max=8.3800 in, min=5.5000 in) |
| STAT. SHAFT MAT. | Silicon Carbide |
| MAG DRIVE ASSY | D07717A03 |
| BASEPLATE | Channel steel E01096A01 |

## Casing connections

Casing drain flanged

## Flanges

150# raised face

## Liquid end features

Containment Shell O-ring in Viton
Impeller balance holes
Magnets balanced to ISO 1940 G6.3 balance levels
Thrust and radial bearings-carbon

## Testing

Non witnessed casing hydrostatic-test

## Painting

Goulds Blue standard painting

## Protection devices

0.4-10A (PS20, 100-240VAC)

## Driver : Electric motor Manufacturer : Pump mfg`s Choice

| | | | |
|---|---|---|---|
| FURNISHED BY | Pump mfg | MOUNTED BY | Pump mfg |
| RATING | 25.0 hp (18.6 KW) | ENCLOSURE | TEFC - Epact Efficient |
| PHASE/FREQ/VOLTS | 3/60 Hz/208-230/460 | SPEED | 3600 RPM |
| INSULATION/SF | F/1.15 | FRAME | 284TSC |

## Weights and Measurements

| | |
|---|---|
| TOTAL NET UNIT WEIGHT / VOLUME | 766.0 lb / 10.7 ft³ |
| TOTAL GROSS UNIT WEIGHT / GROSS VOLUME | 862.0 lb / 19.2 ft³ |

Program Version 1.30.0.0

Our offer does not include specific review and incorporation of any Statutory or Regulatory Requirements and the offer is limited to the requirements of the design specifications. Should any Statutory or Regulatory requirements need to be reviewed and incorporated then the Customer is responsible to identify those and provide copies for review and revision of our offer.

**Our quotation is offered in accordance with our comments and exceptions identified in our proposal.**

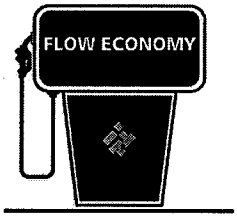
Click here to download the pump Bulletin

## PUMPSMART FLOW ECONOMY ESTIMATES

**FIXED SPEED**

**13.3**
**gpm/kW**

Expected range for typical operation 10.4 to 16.2 gpm/kW




**PUMPSMART**

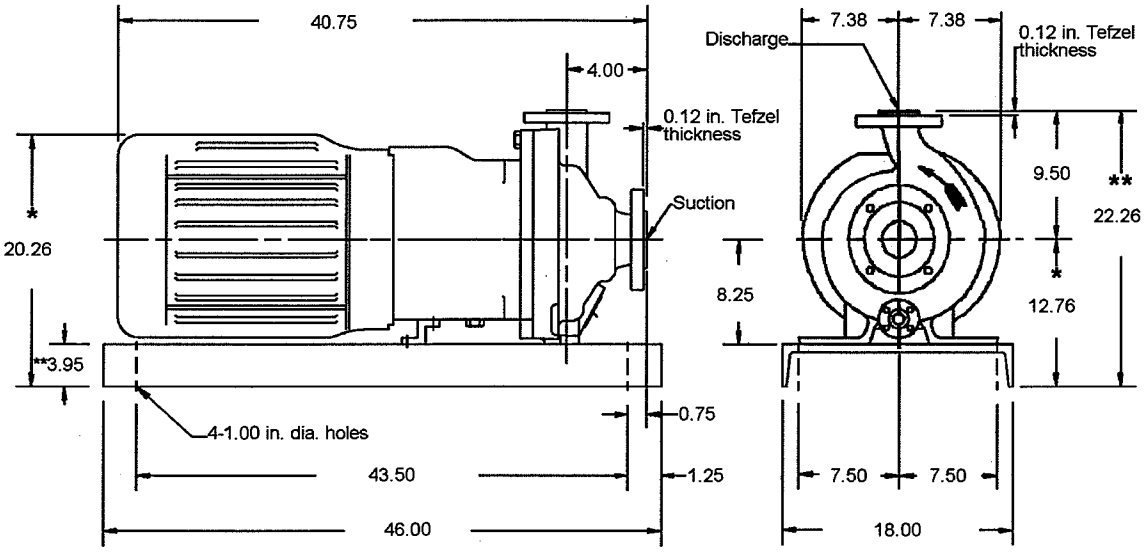
**19.5**
**gpm/kW**

Expected range for typical operation 15.9 to 22.5 gpm/kW

Click Here To Learn More!

**Estimated Annual Savings 2,600 USD**

GOULDS PUMPS **OUTLINE DRAWING** **Model 3298 M**
**Size 2x3-8**
ITT




## *Pump specification*

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| SUCT.FLANGE SIZE | *3"* | DRILLING | *ANSI 150#* | FACING | *RF* | FINISH | *SMOOTH* |
| DISCH.FLANGE SIZE | *2"* | DRILLING | *ANSI 150#* | FACING | *RF* | FINISH | *SMOOTH* |
| PUMP ROTATION ( LOOKING AT PUMP FROM MOTOR ) | | | | *CW* | | | |
| TYPE OF LUBRICATION | *N/A* | | | | | COOLED | *NO* |
| TYPE OF STUFFING BOX | *N/A* | | | | | COOLED | *NO* |
| TYPE OF SEALING | *SEALLESS PUMP* | | | | | | |

## *Weights and Measurements*

| | |
|---|---|
| PUMP | *176.0 lb* |
| MOTOR | *340.0 lb* |
| BASEPLATE | *250.0 lb* |
| TOTAL | *766.0 lb* |
| GR.VOLUME w/BOX | *19.2 ft³* |
| GR.WEIGHT w/BOX | *862.0 lb* |

## *Motor specification*

| | | | | | |
|---|---|---|---|---|---|
| MOTOR BY | *PUMP MFG* | MOUNT BY | *PUMP MFG* | MFG. | *PUMP MFG'S CHOICE* |
| FRAME | *284TSC* | POWER | *25.0 hp* | RPM | *3600* |
| PHASE | *3* | FREQUENCY | *60 HZ* | VOLTS | *208-230/460* |
| INSULATION | *F* | S.F. | *1.15* | | |
| ENCLOSURE | *TEFC - EPACT EFFICIENT* | | | | |

## *Auxiliary specification*

| | |
|---|---|
| COUPLING BY | CPLG TYPE |
| CPL GUARD BY | CPLG GUARD MATL |
| BASEPLATE *CHANNEL STEEL E01096A01* | |

## *Notes and References*

- MTR DIMENSIONS ARE APPROXIMATE
- INSTALL FOUNDATION BOLTS IN PIPE SLEEVES
- ALLOW FROM 0.75 to 1.50in. FOR GROUTING. SEE INSTRUCTION BOOK FOR DETAILS.

**Tolerance is +0 -0.56 in.
*Tolerance is +0 -0.50 in.
** Foundation bolt grip thickness

FOR PUMP TAPPED OPENINGS REFER TO DWG.:
TLAB09-07-27 01 / ITEM 001

DRAWING IS FOR REFERENCE ONLY.
NOT CERTIFIED FOR CONSTRUCTION UNLESS SIGNED.

Customer: Enviromental Assessment & Remediations
Serial No:
Customer P.O. No:
Item No: ITEM 001
End User: Enviromental Assessment & Remediations
Service: Transfer

Copyright 2009
ITT Corp

All dimensions are in inches.
Drawing is not to scale
Weights (lbs) are approximate

**DRAWING NO** LAB09-07-27 01/ITEM 001

FORM # ED0259 Program Version 1.30.0.0

| Model: 3298 | Size: 2x3-8 | Group: M | 60Hz | RPM: 3560 | Stages: 1 |
|---|---|---|---|---|---|

Job/Inq.No. : Email of 7/27/09
Purchaser : Enviromental Assessment & Remediations
End User : Enviromental Assessment & Remediations
Issued by : Lewis Blanche
Item/Equip.No. : ITEM 001
Quotation No. : LAB09-07-27 01
Date : 07/27/2009
Service : Transfer
Order No. :
Certified By :
Rev. : 0

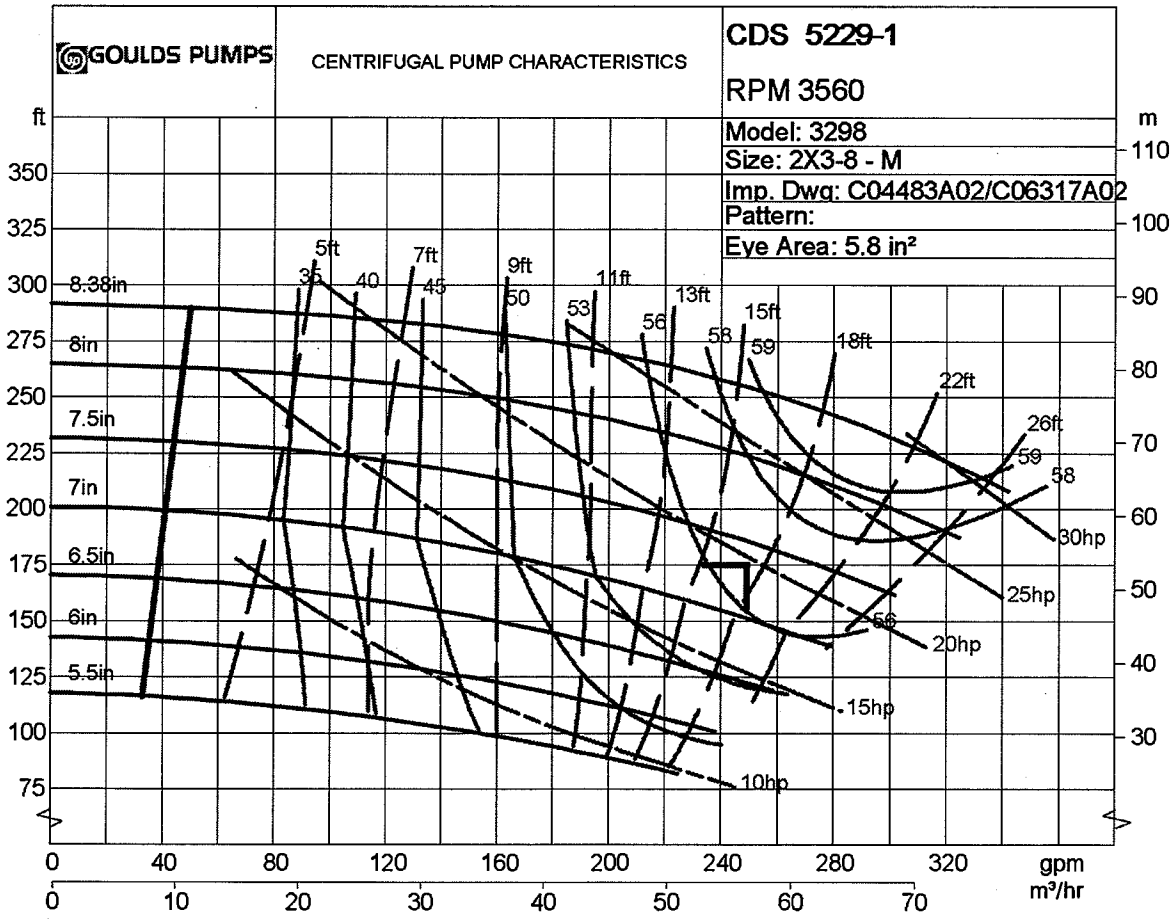
**Operating Conditions**

| | | | | | |
|---|---|---|---|---|---|
| Liquid: | Water / 5 % Hydrochoric Acid | Published Efficiency: | 57.0 % | Suction Specific Speed: | 6,180 gpm(US) ft |
| Temp.: | 70.0 deg F | Rated Pump Efficiency: | 56.5 % | Min. Hydraulic Flow: | 44.0 gpm |
| S.G./Visc.: | 1.000/1.000 cp | Rated Total Power: | 17.9 hp | Min. Thermal Flow: | N/A |
| Flow: | 250.0 gpm | Non-Overloading Power: | 20.6 hp | Power@Min. Flow: | 11.29 hp |
| TDH: | 160.0 ft | Imp. Dia. First 1 Stg(s): | 7.3750 in | | |
| NPSHa: | | NPSHr: | 17.4 ft | | |
| Solid size: | | Shut off Head: | 223.8 ft | | |
| % Susp. Solids (by wtg): | | Vapor Press: | | | |

Max. Solids Size: 0.0060 in

**Pump Performance**

**Notes:** 1. Power and efficiency Losses are not reflected on the curve below.
2. Elevated temperature effects on performance are not included.




ITT

**Paul Martorano**

---

**From:** Trego, Donald A. [Trego@ENVIRO-ASMNT.COM]
**Sent:** Wednesday, July 29, 2009 4:45 PM
**To:** Payson Long
**Cc:** Stephen Tauss; Paul Martorano; Hough, Kevin
**Subject:** Site ID 152125 Active Industrial Remedial Services Call-out 118404 - Effluent Pump

Mr. Long,

As discussed, and approved by yourself and CPS, a replacement Magnatex Pump (MTA-A10-P-F20-2-FE) was ordered today.

I will keep you posted as to the status.

Please let me know if you have any questions.

Donald A Trego
Vice President
Environmental Assessment & Remediations
Trego@Enviro-Asmnt.com
Phone: 1-888-EAR-6789
Fax: 631-447-6497
www.Enviro-Asmnt.com

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**Paul Martorano**

---

**From:** Trego, Donald A. [Trego@ENVIRO-ASMNT.COM]
**Sent:** Friday, August 07, 2009 2:52 PM
**To:** Payson Long
**Cc:** Paul Martorano; Stephen Tauss; Hough, Kevin
**Subject:** Site ID 152125 Active Industrial Remedial Services Call-out 118404 - Status

Mr. Long,

This e-mail is to provide you with a brief status update on our activities at the above referenced project.

1) The effluent transfer pump replacement has been ordered and should ship from the manufacturer today.
2) A new 110 gallon 304 SS drum and associated 304 SS materials to construct a new knockout tank have been ordered. The drum should arrive in approximately 2 weeks. We will construct the new knockout tank when all the parts arrive and install upon completion.
3) Most of the piping repairs/replacements have been completed. Everything that can be done has been done. We are waiting on the replacement transfer pump to complete the piping repairs/replacements.
4) As we discussed today, EAR went to the site this afternoon to conduct basic property maintenance (i.e. grass cutting). We will plan on conducting the maintenance bi-weekly.

Please let me know if you have any comments or questions.

Sincerely,

Donald A Trego
Vice President
Environmental Assessment & Remediations
Trego@Enviro-Asmnt.com
Phone: 1-888-EAR-6789
Fax: 631-447-6497
www.Enviro-Asmnt.com

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**Paul Martorano**

**From:** Trego, Donald A. [Trego@ENVIRO-ASMNT.COM]
**Sent:** Monday, August 17, 2009 11:36 AM
**To:** Payson Long
**Cc:** Paul Martorano; Stephen Tauss; Hough, Kevin
**Subject:** Site ID 152125 Active Industrial Remedial ServicesCall-out118404

Mr. Long,

As we discussed, the replacement transfer pump has been installed and the piping complete. We will be meeting onsite with D&B today at 15:00 so they can start up the system. We will be there to monitor the pump startup.

If you have any questions or concerns, please let me know.

Sincerely,

Donald A Trego
Vice President
Environmental Assessment & Remediations
Trego@Enviro-Asmnt.com
Phone: 1-888-EAR-6789
Fax: 631-447-6497
www.Enviro-Asmnt.com

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**Paul Martorano**

**From:** Trego, Donald A. [Trego@ENVIRO-ASMNT.COM]
**Sent:** Thursday, September 03, 2009 11:33 AM
**To:** Payson Long
**Cc:** Paul Martorano; Hough, Kevin; Stephen Tauss
**Subject:** Site ID 152125 Active Industrial Remedial Services Call-out118404

Mr. Long,

As we discussed, the electrical motor for the effluent transfer pump was ordered last week after your approval. The motor has shipped and is expected to arrive at our office on September 8, 2009. Upon arrival, we will install and then meet with D&B to re-start the system.

The new 304 SS knockout tank has been fabricated to the original design and has been installed.

As discussed, when we removed the level sensor from the old knockout tank the bottom float was broken and off of the level rod. Please see attached photo. We have contacted the manufacturer and the replacement float is $10 + shipping and markup. With your approval we will order the replacement float and repair the level sensor.

Donald A Trego
Vice President
Environmental Assessment & Remediations
Trego@Enviro-Asmnt.com
Phone: 1-888-EAR-6789
Fax: 631-447-6497
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ENVIRONMENTAL
ASSESSMENT &
REMEDIATIONS

# Active Industrial Uniform
# 63 West Merrick Road
# Lindenhurst, NY
# NYSDEC Site # 152125

## EAR Site Photos 09-18-09

# Flange On System Effluent Piping That Was Leaking

## Water Leaking From Cracked Flange

## Rusted Bolts and Nuts

## Inside Of Effluent Pipe

## Flange Against Back Wall

## Drain Pipe In Front Of Flange

## Cut Off Rusted Bolts

# New Flange And Piping Repair

## New Coupling

# Effluent Flow Meter Details


ENVIRONMENTAL
ASSESSMENT &
REMEDIATIONS

# Active Industrial Uniform
# 63 West Merrick Road
# Lindenhurst, NY
# NYSDEC Site # 152125

## EAR Site Photos 09-10-09

## Old, Rusted Steel Knock-Out Tank

## New, 304 Stainless Steel Knockout Tank


AIR

# New Electrical Motor Attached To New Transfer Pump

# Finished Re-Piping

# Water Line Secured

## Yard Maintenance
## (Photo from 09-10-09)

# MAINTENANCE AND INSPECTION REPORT

## ACTIVE INDUSTRIAL UNIFORM SITE, LINDENHURST, NY

| Date: 12/8/09 | | | | |
|---|---|---|---|---|
| Name of Personnel Onsite | Title | Time Arrived | Time Departed | Total Hours |
| L. Sorensen | President | 1000 | 1030 | 0.5, on site |
| P. Hahn | Technician | 1000 | 1030 | 0.5, on site |
| | | | | |
| | | | | |

Check off Items that were completed:

- ☐ Item 1: Snow Removal
- ☑ Item 2: Pressure Blower Maintenance
- ☐ Item 2A: Pressure Blower Fan Wheel Replacement
- ☐ Item 3: Transfer Pump Maintenance
- ☐ Item 4: Air Stripper Maintenance
- ☐ Item 5: Granular Activated Carbon Removal and Replacement
- ☐ Item 6: Removal and Replacement of Air Stripper Packing Material
- ☐ Item 7: Solids Filtration Change-out
- ☐ Item 8: Non-Routine Maintenance Services

Description of Work:

Item 2: Pressure Blower Maintenance

1. Inspected fan wheel for wear and corrosion – none found.
2. Inspected fan wheel for buildup of materials – none found.
3. Inspected motor winding for dust and dirt – none found.
4. Lubricated motor bearings.

| Name of Part / Supply / Material | Manufacturer | Model Number | Quantity Used |
|---|---|---|---|
| Bearing Grease | Mobil | Mobilith SHC100 | Not Measurable |
| | | | |
| | | | |
| | | | |
| | | | |

| Description of Waste Generated | Volume of Waste | Disposal Facility (Name & Address) | Waste Transporter (Name & Address) |
|---|---|---|---|
| | | | |
| | | | |
| | | | |

In signing this report I hereby certify that to the best of my knowledge the maintenance and inspection activities performed during this event conform to the requirements specified under contract between STI and Dvirka and Bartilucci.

Luke Sorensen 1/13/10

Signature / Print / Date

# APPENDIX D

# SYSTEM MONITORING DATA PACKAGES

# APPENDIX E

# DATA VALIDATION CHECKLISTS

## DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/11/05

II. Holding Times

| Sample I.D. | Date Received | Date Extracted | Date Analyzed | Holding Time Exceeded? |
|---|---|---|---|---|
| CPCV-INF | 2/23/05 | | 3/18/05 | No |
| CPCV-MID | 2/23/05 | | 3/18/05 | No |
| SPSV-EFF | 2/23/05 | | 3/18/05 | No |

## DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/11/05

Fraction: VOA

III. Tune Summary

**Samples run within 24 hours of BFB, not 12**

| Tune File I.D. Number | Acceptable ? | Comments |
|---|---|---|
| 1. CY001P | YES | INITIAL |
| 2. CY016P | YES | Samples |
| 3. CY017P | YES | QC samples |
| 4. | | |
| 5. | | |
| 6. | | |
| 7. | | |
| 8. | | |
| 9. | | |
| 10. | | |

# DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/11/05

Fraction: VOA

IV. Initial Calibration Summary (GC/MS)

Date of Calibration: 3/1/05

A. Standard Data Files

| | | | |
|---|---|---|---|
| Standard 1 ID: | CY0002I2 | Conc: | 0.2 |
| Standard 2 ID: | CY0005 | Conc: | 0.5 |
| Standard 3 ID: | CY005 | Conc: | 5 |
| Standard 4 ID: | CY010 | Conc: | 10 |
| Standard 5 ID: | CY020, CY040 | Conc: | 20, 40 |

B. 1. All SPCC met Criteria ?

Yes

2. Calculate a SPCC average RRF

Comments:

# DATA VALIDATION – ORGANICS

Site Name: Franklin

Laboratory Name: Mitkem

Reviewer: R.Petrella

Date of Review: 5/11/05

Fraction: VOA

Date of Calibration: 3/1/05

IV. Initial Calibration Summary (continued)

2. All CCC met Criteria ?

Yes

Comments:

Calculate a CCC % RSD

Protocol allows up to 4 %RSD to be >25% if <40%

C. 1. Was the tune for the initial calibration acceptable ?

Yes

2. Was the calibration conducted within 12 hours of the tune

Yes

Comments:

D. Overall assessment of the initial calibration:
(list the associated samples)

ok

# DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/11/05

Fraction: VOA

VI. Continuing Calibration Summary (GC/MS)

Date of Initial Calibration: 3/1/05

Date of Continuing Calibration: 3/17, 3/18 File ID: CY010N, CY010O

A. 1. All SPCC met criteria ?

Yes

Calculate a SPCC RRF

Comments:

2. All CCC met criteria ?

Yes

Calculate a CCC % D

Comments:

B. Overall assessment of Continuing Calibration
(list associated samples)

OK,

# DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/11/05

Fraction: VOA

VIII. Internal Standard Area Summary (GC/MS)

Were all internal standard peak areas within the contract limits ?

Yes

If No, please note below

| Sample | Internal Standard Outside Limits | Amount Above Contract Requirement | Comments |
|---|---|---|---|

## DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/11/05

Fraction: VOA

IX. Blank Summary

Date/Time of Analysis: File ID:

| Compound | Concentration | ≤ CROL | Comments |
|---|---|---|---|
| VHBLK2D | Chlorobenzene 2 ug/l <10 | | Compound not detected in samples, qualification of data not required |

List the samples associated with this method blank.

**Trip blank clean, all other method blanks clean**

# DATA VALIDATION – ORGANICS

Site Name: Franklin Active Laboratory Name: Mitkem

Reviewer: R.Petrella RP Date of Review: 5/11/05

I. Data Deliverable Requirements

| | |
|---|---|
| A. Legible | Yes |
| B. Paginated | Yes |
| C. Arranged in order | Yes |
| D. Consistent dates | Yes |
| E. Case Narrative | Yes |
| F. Chain-of-Custody Record | Yes |
| G. Sample Data Complete | Yes |
| H. Standard Date Complete | Yes |
| I. Raw QC Data Complete | Yes |

Comments: D0207– 3 air samples were collected and analyzed for VOA, Samples were collected on 2/23/05 -

## DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/11/05

Fraction: VOA

X. Surrogate Recovery Summary

Were all surrogate recoveries within the contract limits ?

YES

| Sample | Surrogate Compound Outside Recovery Limits | Amount Above Contract Requirement | Comments |
|---|---|---|---|

## DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/11/05

Fraction: VOA

**Site specific QC was not provided**

XI. Matrix Spike/Matrix Spike Duplication Summary

Sample ID: _____ Matrix: _____

Did the MS/MSD recovery data meet the contract recommended requirements ?

Yes

If No, please note below.

Blank spike was analyzed and all recoveries were within limits

# DATA VALIDATION – ORGANICS

Site Name: Franklin Avenue Laboratory Name: Mitkem

Reviewer: R.Petrella RP Date of Review: 5/12/05

I. Data Deliverable Requirements

| | |
|---|---|
| A. Legible | Yes |
| B. Paginated | Yes |
| C. Arranged in order | Yes |
| D. Consistent dates | Yes |
| E. Case Narrative | Yes |
| F. Chain-of-Custody Record | Yes |
| G. Sample Data Complete | Yes |
| H. Standard Date Complete | Yes |
| I. Raw QC Data Complete | Yes |

Comments: D0256 – 10 water samples and one trip blank were collected and analyzed for VOA

Samples were collected on 3/3/05 and 3/4/05

## DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/12/05

II. Holding Times

| Sample I.D. | Date Received | Date Extracted | Date Analyzed | Holding Time Exceeded? |
|---|---|---|---|---|
| TB-1 | 3/5/05 | | 3/8/05 | No |
| MW-105 | 3/5/05 | | 3/9/05 | No |
| MW-103 | 3/5/05 | | 3/8/05 | No |
| MW-101 | 3/5/05 | | 3/8/05 | No |
| MW-102 | 3/5/05 | | 3/8/05 | No |
| Mw-104 | 3/5/05 | | 3/9/05 | No |
| MW-108 | 3/5/05 | | 3/9/05 | No |
| MW-107 | 3/5/05 | | 3/9/05 | No |
| MW-106 | 3/5/05 | | 3/9, 3/11 | No |
| MW-111 | 3/5/05 | | 3/9/05 | No |
| MW-109 | 3/5/05 | | 3/9/05 | No |

## DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/12/05

Fraction: VOA

III. Tune Summary

**Samples run within 24 hours of BFB, not 12**

| Tune File I.D. Number | Acceptable ? | Comments |
|---|---|---|
| 1. V2G7300 | YES | INITIAL |
| 2. V2G7320 | YES | DILUTION |
| 3. V5F8920 | YES | INITIAL |
| 4. V5F8940 | YES | SAMPLES |
| 5. V5F8970 | YES | SAMPLES |
| 6. | | |
| 7. | | |
| 8. | | |
| 9. | | |
| 10. | | |

# DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/12/05

Fraction: VOA

IV. Initial Calibration Summary (GC/MS)

Date of Calibration: 3/10/05, 3/7/05

A. Standard Data Files

| | | | |
|---|---|---|---|
| Standard 1 ID: | V2G7302, V5F8922 | Conc: | 10 |
| Standard 2 ID: | V2G7305, V5F8925 | Conc: | 20 |
| Standard 3 ID: | V2G7306, V5F8921 | Conc: | 50 |
| Standard 4 ID: | V2G7304, V5F8924 | Conc: | 100 |
| Standard 5 ID: | V2G7303, V5F8923 | Conc: | 200 |

B. 1. All SPCC met Criteria ?

Yes

2. Calculate a SPCC average RRF

Comments:

# DATA VALIDATION – ORGANICS

Site Name: Franklin

Laboratory Name: Mitkem

Reviewer: R.Petrella

Date of Review: 5/12/05

Fraction: VOA

Date of Calibration: 3/10/05, 3/7/05

IV. Initial Calibration Summary (continued)

2. All CCC met Criteria ?

Yes

Comments:

Calculate a CCC % RSD

Protocol allows up to 4 %RSD to be >25% if <40%

C. 1. Was the tune for the initial calibration acceptable ?

Yes

2. Was the calibration conducted within 12 hours of the tune

Yes

Comments:

D. Overall assessment of the initial calibration:
(list the associated samples)

ok

## DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/12/05

Fraction: VOA

VI. Continuing Calibration Summary (GC/MS)

Date of Initial Calibration: 3/10/05, 3/7/05

Date of Continuing Calibration: 3/11, 3/8/05, 3/9/05 File ID: V2G7321, V5F8941, V5F8972

A. 1. All SPCC met criteria ?

Yes

Calculate a SPCC RRF

Comments:

2. All CCC met criteria ?

Yes

Calculate a CCC % D

Comments: Protocol allows up to 4%D to be >25% if <40%

B. Overall assessment of Continuing Calibration
(list associated samples)

ok

## DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/12/05

Fraction: VOA

VIII. Internal Standard Area Summary (GC/MS)

Were all internal standard peak areas within the contract limits ?

Yes

If No, please note below

| Sample | Internal Standard Outside Limits | Amount Above Contract Requirement | Comments |
|---|---|---|---|

## DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/12/05

Fraction: VOA

IX. Blank Summary

Date/Time of Analysis: File ID:

| Compound | Concentration | ≤ CROL | Comments |
|---|---|---|---|

List the samples associated with this method blank.

**Trip blank clean, all other method blanks clean**

## DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/12/05

Fraction: VOA

X. Surrogate Recovery Summary

Were all surrogate recoveries within the contract limits ?

YES

| Sample | Surrogate Compound Outside Recovery Limits | Amount Above Contract Requirement | Comments |
|---|---|---|---|

## DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/12/05

Fraction: VOA

XI. Matrix Spike/Matrix Spike Duplication Summary

Sample ID: MW-104 Matrix: water

Did the MS/MSD recovery data meet the contract recommended requirements ?

Yes*

If No, please note below.

Blank spike was analyzed and all recoveries were within limits

2 OF 132 SPIKE RECOVERIES WERE OUTSIDE QC LIMITS, 1 OF 66 RECOVERIES WERE OUTSIDE LIMITS

# DATA VALIDATION – ORGANICS

Site Name: Franklin Active Laboratory Name: Mitkem

Reviewer: R.Petrella RP Date of Review: 5/12/05

I. Data Deliverable Requirements

| | |
|---|---|
| A. Legible | Yes |
| B. Paginated | Yes |
| C. Arranged in order | Yes |
| D. Consistent dates | Yes |
| E. Case Narrative | Yes |
| F. Chain-of-Custody Record | Yes |
| G. Sample Data Complete | Yes |
| H. Standard Date Complete | Yes |
| I. Raw QC Data Complete | Yes |

Comments: D0202 - 2 water samples were collected and analyzed for VOA, one sample also run for pH, iron and manganese Samples were preserved w HCL

Samples were collected on 2/23/05

Metals analysis was preformed on ¾-3/5

COMP-INF was reanalyzed at a 1:3 dilution

All metal QC met requirements

## DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/12/05

II. Holding Times

| Sample I.D. | Date Received | Date Extracted | Date Analyzed | Holding Time Exceeded? |
|---|---|---|---|---|
| COMB INF | 2/24/05 | | 3/1-3/2 | No |
| COMP EFF | 2/24/05 | | 3/1/05 | No |

*also run for
pH, Fe & Mn

# DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/12/05

Fraction: VOA

III. Tune Summary

**Samples run within 24 hours of BFB, not 12**

| Tune File I.D. Number | Acceptable ? | Comments |
|---|---|---|
| 1. V6D5620 | YES | INITIAL |
| 2. V6D5660 | yes | Samples |
| 3. V6D5690 | YES | DILUTION |
| 4. | | |
| 5. | | |
| 6. | | |
| 7. | | |
| 8. | | |
| 9. | | |
| 10. | | |

# DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/12/05

Fraction: VOA

IV. Initial Calibration Summary (GC/MS)

Date of Calibration: 2/28/05

A. Standard Data Files

| | | | |
|---|---|---|---|
| Standard 1 ID: | V6D5622 | Conc: | 10 |
| Standard 2 ID: | V6D5625 | Conc: | 20 |
| Standard 3 ID: | V6D5621 | Conc: | 50 |
| Standard 4 ID: | V6D5624 | Conc: | 100 |
| Standard 5 ID: | V6D5623 | Conc: | 200 |

B. 1. All SPCC met Criteria ?

Yes

2. Calculate a SPCC average RRF

Comments:

## DATA VALIDATION – ORGANICS

Site Name: Franklin

Laboratory Name: Mitkem

Reviewer: R.Petrella

Date of Review: 5/12/05

Fraction: VOA

Date of Calibration: 2/28/05

IV. Initial Calibration Summary (continued)

2. All CCC met Criteria ?

Yes

Comments: _____

_____

Calculate a CCC % RSD

Protocol allows up to 4 %RSD to be >25% if <40%

C. 1. Was the tune for the initial calibration acceptable ?

Yes

2. Was the calibration conducted within 12 hours of the tune

Yes

Comments: _____

_____

_____

D. Overall assessment of the initial calibration:
(list the associated samples)

ok

_____

_____

_____

## DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/12/05

Fraction: VOA

VI. Continuing Calibration Summary (GC/MS)

Date of Initial Calibration: 2/28/05

Date of Continuing Calibration: 3/1/05, 3/2/05 File ID: V6D5661, V6D5691

A. 1. All SPCC met criteria ?

Yes

Calculate a SPCC RRF

Comments:

2. All CCC met criteria ?

Yes

Calculate a CCC % D

Comments: Protocol allows up to 4 %D to be >25% if <40%

B. Overall assessment of Continuing Calibration (list associated samples)

OK,

## DATA VALIDATION – ORGANICS

Name: Franklin Laboratory Name: Mitkem

iewer: R.Petrella Date of Review: 5/12/05

:tion: VOA

Internal Standard Area Summary (GC/MS)

'e all internal standard peak areas within the contract limits ?

Yes

), please note below

| ıple | Internal Standard Outside Limits | Amount Above Contract Requirement | Comments |
|---|---|---|---|

## DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/12/05

Fraction: VOA

IX. Blank Summary

Date/Time of Analysis: _____ File ID: _____

| Compound | Concentration | < CROL | Comments |
|---|---|---|---|

List the samples associated with this method blank.

_____

_____

_____

_____

## DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/12/05

Fraction: VOA

X. Surrogate Recovery Summary

Were all surrogate recoveries within the contract limits ?

YES

| Sample | Surrogate Compound Outside Recovery Limits | Amount Above Contract Requirement | Comments |
|---|---|---|---|

## DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/12/05

Fraction: VOA

**Site specific QC was not provided**

XI. Matrix Spike/Matrix Spike Duplication Summary

Sample ID: _____ Matrix: _____

Did the MS/MSD recovery data meet the contract recommended requirements ?

Yes

If No, please note below.

Blank spike was analyzed and all recoveries were within limits

# DATA VALIDATION – ORGANICS

Site Name: Franklin Active Laboratory Name: Mitkem

Reviewer: R.Petrella RP Date of Review: 5/12/05

I. Data Deliverable Requirements

| | |
|---|---|
| A. Legible | Yes |
| B. Paginated | Yes |
| C. Arranged in order | Yes |
| D. Consistent dates | Yes |
| E. Case Narrative | Yes |
| F. Chain-of-Custody Record | Yes |
| G. Sample Data Complete | Yes |
| H. Standard Date Complete | Yes |
| I. Raw QC Data Complete | Yes |

Comments: D0415– 3 air samples were collected and analyzed for VOA, Samples were collected on 3/21/05

## DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/11/05

II. Holding Times

| Sample I.D. | Date Received | Date Extracted | Date Analyzed | Holding Time Exceeded? |
|---|---|---|---|---|
| CPCV-INF | 3/22/05 | | 4/9/05 | No |
| CPCV-MID | 3/22/05 | | 4/9/05 | No |
| CPCV-EFF | 3/22/05 | | 4/9/05 | No |

## DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/13/05

Fraction: VOA

III. Tune Summary

**Samples run within 24 hours of BFB, not 12**

| Tune File I.D. Number | Acceptable ? | Comments |
|---|---|---|
| 1. BZ002P | YES | INITIAL |
| 2. BZ005P | YES | Samples |
| 3. | | |
| 4. | | |
| 5. | | |
| 6. | | |
| 7. | | |
| 8. | | |
| 9. | | |
| 10. | | |

# DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/13/05

Fraction: VOA

IV. Initial Calibration Summary (GC/MS)

Date of Calibration: 4/5-4/6

A. Standard Data Files

| | | | |
|---|---|---|---|
| Standard 1 ID: | BZ0002 | Conc: | 0.2 |
| Standard 2 ID: | BZ0005 | Conc: | 0.5 |
| Standard 3 ID: | BZ005 | Conc: | 5 |
| Standard 4 ID: | BZ010I2 | Conc: | 10 |
| Standard 5 ID: | BZ020, BZ040 | Conc: | 20, 40 |

B. 1. All SPCC met Criteria ?

Yes

2. Calculate a SPCC average RRF

Comments:

# DATA VALIDATION – ORGANICS

Site Name: Franklin

Laboratory Name: Mitkem

Reviewer: R.Petrella

Date of Review: 5/13/05

Fraction: VOA

Date of Calibration: 4/5-4/6/05

IV. Initial Calibration Summary (continued)

2. All CCC met Criteria ?

Yes

Comments:

Calculate a CCC % RSD

Protocol allows up to 4 %RSD to be >25% if <40%

C. 1. Was the tune for the initial calibration acceptable ?

Yes

2. Was the calibration conducted within 12 hours of the tune

Yes

Comments:

D. Overall assessment of the initial calibration:
(list the associated samples)

ok

# DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/13/05

Fraction: VOA

VI. Continuing Calibration Summary (GC/MS)

Date of Initial Calibration: 4/5-4/6/05

Date of Continuing Calibration: 4/8 File ID: BZ010CI2

A. 1. All SPCC met criteria ?

Yes

Calculate a SPCC RRF

Comments:

2. All CCC met criteria ?

Yes

Calculate a CCC % D

Comments:

B. Overall assessment of Continuing Calibration
(list associated samples)

OK,

## DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/11/05

Fraction: VOA

VIII. Internal Standard Area Summary (GC/MS)

Were all internal standard peak areas within the contract limits ?

Yes

If No, please note below

| Sample | Internal Standard Outside Limits | Amount Above Contract Requirement | Comments |
|---|---|---|---|

## DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/11/05

Fraction: VOA

IX. Blank Summary

Date/Time of Analysis: File ID:

| Compound | Concentration | ≤ CROL | Comments |
|---|---|---|---|
| VHBLK2D | Chlorobenzene 2 ug/l <10 | | Compound not detected in samples, qualification of data not required |

List the samples associated with this method blank.

**Trip blank clean, all other method blanks clean**

## DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/11/05

Fraction: VOA

X. Surrogate Recovery Summary

Were all surrogate recoveries within the contract limits ?

YES

| Sample | Surrogate Compound Outside Recovery Limits | Amount Above Contract Requirement | Comments |
|---|---|---|---|

## DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/11/05

Fraction: VOA

**Site specific QC was not provided**

XI. Matrix Spike/Matrix Spike Duplication Summary

Sample ID: _____ Matrix: _____

Did the MS/MSD recovery data meet the contract recommended requirements ?

Yes

If No, please note below.

Blank spike was analyzed and all recoveries were within limits

## DATA VALIDATION – ORGANICS

Site Name: ACTIVE Franklin / Laboratory Name: Mitkem

Reviewer: R.Petrella RP Date of Review: 5/12/05

I. Data Deliverable Requirements

| | |
|---|---|
| A. Legible | Yes |
| B. Paginated | Yes |
| C. Arranged in order | Yes |
| D. Consistent dates | Yes |
| E. Case Narrative | Yes |
| F. Chain-of-Custody Record | Yes |
| G. Sample Data Complete | Yes |
| H. Standard Date Complete | Yes |
| I. Raw QC Data Complete | Yes |

Comments: D0333– 3 water samples and one trip blank were collected and analyzed for VOA, one sample was also run for metals and pH, VOA samples were preserved with HCL

Samples were collected on 3/21/05

# DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/12/05

II. Holding Times

| Sample I.D. | Date Received | Date Extracted | Date Analyzed | Holding Time Exceeded? |
|---|---|---|---|---|
| COMB INF | 3/22/05 | | 3/30/05 | No |
| COMB EFF | 3/22/05 | | 3/30/05 | No |
| MID | 3/22/05 | | 3/30/05 | No |

# DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/12/05

Fraction: VOA

III. Tune Summary

**Samples run within 24 hours of BFB, not 12**

| Tune File I.D. Number | Acceptable ? | Comments |
|---|---|---|
| 1. V6D5800 | YES | INITIAL |
| 2. V6D5810 | YES | samples |
| 3. | | |
| 4. | | |
| 5. | | |
| 6. | | |
| 7. | | |
| 8. | | |
| 9. | | |
| 10. | | |

# DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/12/05

Fraction: VOA

IV. Initial Calibration Summary (GC/MS)

Date of Calibration: 3/29/05

A. Standard Data Files

| | | | |
|---|---|---|---|
| Standard 1 ID: | V6D5802 | Conc: | 10 |
| Standard 2 ID: | V6D5805 | Conc: | 20 |
| Standard 3 ID: | V6D5801 | Conc: | 50 |
| Standard 4 ID: | V6D5804 | Conc: | 100 |
| Standard 5 ID: | V6D5803 | Conc: | 200 |

B. 1. All SPCC met Criteria ?

Yes

2. Calculate a SPCC average RRF

Comments:

# DATA VALIDATION – ORGANICS

Site Name: Franklin

Laboratory Name: Mitkem

Reviewer: R.Petrella

Date of Review: 5/12/05

Fraction: VOA

Date of Calibration: 3/29/05

IV. Initial Calibration Summary (continued)

2. All CCC met Criteria ?

Yes

Comments: _____

_____

Calculate a CCC % RSD

Protocol allows up to 4 %RSD to be >25% if <40%

C. 1. Was the tune for the initial calibration acceptable ?

Yes

2. Was the calibration conducted within 12 hours of the tune

Yes

Comments: _____

_____

_____

D. Overall assessment of the initial calibration:
(list the associated samples)

ok

_____

_____

## DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/12/05

Fraction: VOA

VI. Continuing Calibration Summary (GC/MS)

Date of Initial Calibration: 3/29/05

Date of Continuing Calibration: 3/30 File ID: V6D5811

A. 1. All SPCC met criteria ?

Yes

Calculate a SPCC RRF

Comments:

2. All CCC met criteria ?

Yes

Calculate a CCC % D

Comments: Protocol allows up to 4%D to be >25% if <40%

B. Overall assessment of Continuing Calibration
(list associated samples)

ok

## DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/12/05

Fraction: VOA

VIII. Internal Standard Area Summary (GC/MS)

Were all internal standard peak areas within the contract limits ?

Yes

If No, please note below

| Sample | Internal Standard Outside Limits | Amount Above Contract Requirement | Comments |
|---|---|---|---|

# DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/12/05

Fraction: VOA

IX. Blank Summary

Date/Time of Analysis: File ID:

| Compound | Concentration | ≤ CROL | Comments |
|---|---|---|---|

List the samples associated with this method blank.

**method blanks clean**

## DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/12/05

Fraction: VOA

X. Surrogate Recovery Summary

Were all surrogate recoveries within the contract limits ?

YES

| Sample | Surrogate Compound Outside Recovery Limits | Amount Above Contract Requirement | Comments |
|---|---|---|---|

## DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/12/05

Fraction: VOA

**Site specific QC not provided**

XI. Matrix Spike/Matrix Spike Duplication Summary

Sample ID: _____ Matrix: _____

Did the MS/MSD recovery data meet the contract recommended requirements ?

Yes

If No, please note below.

Blank spike was analyzed and all recoveries were within limits

## Data Validation Check List

SDG: Active Industrial
Number of Samples: 3 air
Analysis: VOC

Contractual Compliance

| | VOC | Metals |
|---|---|---|
| Tunes: | OK | |
| Surrogate Recoveries | | |
| Blanks | | |
| Initial Calibrations | | |
| Continuing Calibrations | | |
| Spikes | — | |
| Duplicates | — | |
| Laboratory Control Samples | OK | |

PD 11/8/05

Comments/Notes: SDG# - 00869

Date Sampled - 7/25/05

Date analyzed: CPCV-INF - 8/9/05
CPCV-MID - 8/9/05
CPCV-EFF - 8/9/05

Area Counts - OK

## Data Validation Check List

| | | |
|---|---|---|
| SDG: | Active Industrial | |
| Number of Samples: | 3 water | |
| Analysis: | pH, VOC, Metals - Comb Inf | |
| Contractual Compliance | Comb Inf (pH) / Comb Inf (VOC) | |
| | **VOC** | **Metals** |
| Tunes: | OK Comb Inf, RW-2, Comb Eff | — |
| Surrogate Recoveries | OK | — |
| Blanks | OK | OK |
| Initial Calibrations | OK | OK |
| Continuing Calibrations | OK | OK |
| Spikes | — | — |
| Duplicates | — | — |
| Laboratory Control Samples | OK | OK |

Comments/Notes: SDG #MD0792

Comb inf, comb eff, RW-2

Date Sampled - 7/6/05

Date Analyzed - D0792-01A - 7/8/05
02A - 7/7/05
03A - 7/7/05
01C - 7/28-7/29/05
01B
RW-2 - 7/7/05

Comb. Inf - 7/7/05, 7/8
Comb. Eff. - 7/7/05
RW-2 - 7/7/05

metals run 7/28 - 7/29
areacts - OK

## Data Validation Check List

SDG: Active Industrial
Number of Samples: 2 - Water
Analysis: pH - Comb. inf  VOC - Comb Inf + Eff  Metals - Comb inf

Contractual Compliance

| | VOC | Metals |
|---|---|---|
| Tunes: | OK | — |
| Surrogate Recoveries | OK | — |
| Blanks | OK | OK |
| Initial Calibrations | OK | OK |
| Continuing Calibrations | OK | OK |
| Spikes | — | — |
| Duplicates | — | — |
| Laboratory Control Samples | OK | OK |

Comments/Notes: # D1025

Date Collected - 8/30/05
Date Analyzed - Comb Inf - 9/1/05
Comb Eff - 9/1/05

metals run 9/19 - 9/23

No problems with data set.

## Data Validation Check List

SDG: Active Industrial
Number of Samples: 3-aer
Analysis: VOCs - TO15

Contractual Compliance

| | VOC | Metals |
|---|---|---|
| Tunes: | OK | |
| Surrogate Recoveries | — | |
| Blanks | Clean | |
| Initial Calibrations | OK | |
| Continuing Calibrations | OK | |
| Spikes | — | |
| Duplicates | — | |
| Laboratory Control Samples | OK | |

RP 11/8/05

Comments/Notes: # ~~86~~ D1027
Date Sampled - 8/30/05
Date Analyzed - 9/18/05
area cf - ok

No problems found with sample results.

## Data Validation Check List

SDG: Active Industrial
Number of Samples: 11 Water
Analysis: VOC

Contractual Compliance

| | VOC | Metals |
|---|---|---|
| Tunes: | Ok | |
| Surrogate Recoveries | Ok | |
| Blanks | Clean | |
| Initial Calibrations | Ok | |
| Continuing Calibrations | Ok | |
| Spikes | Ok | |
| Duplicates | Ok | |
| Laboratory Control Samples | Ok | |

DP 11/8/05

Comments/Notes: #D1033

| | Date Collected | Date Analyzed |
|---|---|---|
| MW-101 | 8/31/05 | 9/3/05 |
| MW-102 | 8/31 | 9/3 |
| MW-103 | 8/31 | 9/3 |
| MW-104 | 9/1 | 9/3, 9/6 |
| MW-105 | 8/31 | 9/3 |
| 106 | 9/1 | 9/3 |
| 107 | 9/1 | 9/3. |
| 108 | 9/1 | 9/3 |
| 109 | 8/31 | 9/6 |
| 111 | 8/31 | 9/3 9/6 |

MW 104 Run as MS/MSD - high recovery of tetrachloroethene in both the MS and MSD is due to high conc of cmpd in sample

area cts ok

## Data Validation Check List

SDG: Active Industrial
Number of Samples: 5 water
Analysis: VOC, pH, Metals

Contractual Compliance

| | VOC | Metals |
|---|---|---|
| Tunes: | OK | — |
| Surrogate Recoveries | OK | — |
| Blanks | OK | OK |
| Initial Calibrations | OK | OK |
| Continuing Calibrations | OK | OK |
| Spikes | — | OK |
| Duplicates | — | OK |
| Laboratory Control Samples | OK | OK |

Comments/Notes: # D1147

Date collected - 9/30 VTSR 10/3/05
Date analyzed - Comb Inf - 10/5 + 10/6
RW-1 - 10/5 + 10/8
RW-2 - 10/5 + 10/6
Comb Eff - 10/5
Mid - 10/5
metals run 10/5

Samples were to be delivered on Saturday But FedEx did not deliver till MONDAY.

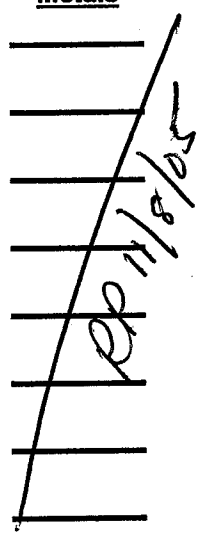
area cts - OK

## Data Validation Check List

SDG: Active Industrial
Number of Samples: 3 AIR
Analysis: VOC

Contractual Compliance

| | VOC | Metals |
|---|---|---|
| Tunes: | OK | |
| Surrogate Recoveries | — | |
| Blanks | OK | |
| Initial Calibrations | OK | |
| Continuing Calibrations | OK | |
| Spikes | — | |
| Duplicates | — | |
| Laboratory Control Samples | OK | |




Comments/Notes: # 01146

Date Sampled - 9/30/05

Date Analyzed - 10/15

Area cts OK

Active

D1544 an D1545

## Data Validation Check List

SDG: D1544

Number of Samples: 5 air

Analysis: VOA, Met PH

Contractual Compliance

| | VOA | SVOA | Pest/PCB | Metals |
|---|---|---|---|---|
| Tunes: | OK | | NA | NA |
| Surrogate Recoveries | OK | | | NA |
| Blanks | OK | | | OK |
| Initial Calibrations | OK | | | OK |
| Continuing Calibrations | OK | | | OK |
| Spikes | — | | | — |
| Duplicates | — | | | — |
| Laboratory Control Samples | NA | NA | | OK |

Comments/Notes: calculated 12/19 VTSR 12/20

VOA 12/21 - 12/23

RW-1 reanalyzed at a secondary dilution

Active D1267
AIR – D1268

**Data Validation Check List**

SDG: D1267
Number of Samples: 2 waters
Analysis: VOA, met, pH

Contractual Compliance

| | VOA | SVOA | Pest/PCB | Metals |
|---|---|---|---|---|
| Tunes: | OK | | NA | NA |
| Surrogate Recoveries | OK | | | NA |
| Blanks | OK | | | OK |
| Initial Calibrations | OK | | | OK |
| Continuing Calibrations | OK | | | OK |
| Spikes | Batch | | | — |
| Duplicates | Batch | | | — |
| Laboratory Control Samples | NA | NA | | OK |

Comments/Notes: COMB INF
COMB EFF
Collected 10/24 VTSR 10/25
VOA 10/26, 11/14
met 11/3 – 11/8

COMB INF required reanalysis at a secondary dilution which was performed out of hold result qualified as estimated possibly biased low.

D1268 – STL Burlington
all data rcvd within hold – no problems found.

Active

D1413
AdR – D1414

## Data Validation Check List

SDG: D1413
Number of Samples: 2
Analysis: VOA, met, pH

Contractual Compliance

| | VOA | SVOA | Pest/PCB | Metals |
|---|---|---|---|---|
| Tunes: | OK | | NA | NA |
| Surrogate Recoveries | * | | | NA |
| Blanks | OK | | | |
| Initial Calibrations | OK | | | |
| Continuing Calibrations | OK | | | |
| Spikes | — | | | |
| Duplicates | — | | | |
| Laboratory Control Samples | NA | NA | | |

RP 2/9/06

RP 2/9/06

Comments/Notes: Comb Inf, Comb Eff
Collected 11/21/05
VTSR 11/22/05
VOA 11/23, 11/28
met 12/1 - 12/13

*BFB out on Comb INF sample reran at a dilution all recoveries OK

Inf reran at 1:2 dilution.

D1414 – ST Burlington
Data within hold
no problems found

Active D1465

MW101 - MW109, MW111

## Data Validation Check List

SDG: D1465
Number of Samples: 10 waters
Analysis:

Contractual Compliance

| | VOA | SVOA | Pest/PCB | Metals |
|---|---|---|---|---|
| Tunes: | OK | | NA | NA |
| Surrogate Recoveries | OK | | | NA |
| Blanks | OK | | | |
| Initial Calibrations | OK | RPD 19/06 | RPD 19/06 | RPD 19/06 |
| Continuing Calibrations | OK | | RPD 19/06 | |
| Spikes | OK | | | |
| Duplicates | OK | | | |
| Laboratory Control Samples | NA | NA | | |

Comments/Notes: Collected 12/1, 12/2
VTSR 12/3
VOA Run 12/5, 12/12

MW104 run as MS/MSD

MW106 reanalyzed at a 1:3 dilution ~~out of~~ since within 10day from VTSR No qualification of data required.

# DATA VALIDATION – ORGANICS

Site Name: ACTIVE Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/17/06

I. Data Deliverable Requirements

| | |
|---|---|
| A. Legible | Yes |
| B. Paginated | Yes |
| C. Arranged in order | Yes |
| D. Consistent dates | Yes |
| E. Case Narrative | Yes |
| F. Chain-of-Custody Record | Yes |
| G. Sample Data Complete | Yes |
| H. Standard Date Complete | Yes |
| I. Raw QC Data Complete | Yes |

Comments: E0077– 3 air samples were collected and analyzed for VOA
Samples were collected on 1/24/06
Samples were subcontracted to STL Burlington

## DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/17/06

II. Holding Times

| Sample I.D. | Date Received | Date Extracted | Date Analyzed | Holding Time Exceeded? |
|---|---|---|---|---|
| VPCV INF | 1/27/06 | | 1/30/06 | No |
| VPCV MID | 1/27/06 | | 1/30/06 | No |
| VPSV EFF | 1/27/06 | | 1/30/06 | No |

# DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/17/06

Fraction: VOA

III. Tune Summary

**Samples run within 24 hours of BFB, not 12**

| Tune File I.D. Number | Acceptable ? | Comments |
|---|---|---|
| 1. BEE01PV | YES | INITIAL |
| 2. BEE04PV | YES | samples |
| 3. | | |
| 4. | | |
| 5. | | |
| 6. | | |
| 7. | | |
| 8. | | |
| 9. | | |
| 10. | | |

# DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/17/06

Fraction: VOA

IV. Initial Calibration Summary (GC/MS)

Date of Calibration: 1/25/06

A. Standard Data Files

| | | | |
|---|---|---|---|
| Standard 1 ID: | BEE002V2 | Conc: | 0.2 |
| Standard 2 ID: | BEE005V | Conc: | 0.5 |
| Standard 3 ID: | BEE05V | Conc: | 5 |
| Standard 4 ID: | BEE10V | Conc: | 10 |
| Standard 5 ID: | BEE20V, BEE40V | Conc: | 20, 40 |

B. 1. All SPCC met Criteria ?

Yes

2. Calculate a SPCC average RRF

Comments:

## DATA VALIDATION – ORGANICS

Site Name: Franklin

Laboratory Name: Mitkem

Reviewer: R.Petrella

Date of Review: 5/17/06

Fraction: VOA

Date of Calibration: 1/25/06

IV. Initial Calibration Summary (continued)

2. All CCC met Criteria ?

Yes

Comments:

Calculate a CCC % RSD

Protocol allows up to 4 %RSD to be >25% if <40%

C. 1. Was the tune for the initial calibration acceptable ?

Yes

2. Was the calibration conducted within 12 hours of the tune

Yes

Comments:

D. Overall assessment of the initial calibration:
(list the associated samples)

ok

## DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/17/06

Fraction: VOA

VI. Continuing Calibration Summary (GC/MS)

Date of Initial Calibration: 1/25/06

Date of Continuing Calibration: 1/29 File ID: BEE10CV

A. 1. All SPCC met criteria ?

Yes

Calculate a SPCC RRF

Comments:

2. All CCC met criteria ?

Yes

Calculate a CCC % D

Comments: Protocol allows up to 4%D to be >25% if <40%

B. Overall assessment of Continuing Calibration
(list associated samples)

ok

## DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/17/06

Fraction: VOA

VIII. Internal Standard Area Summary (GC/MS)

Were all internal standard peak areas within the contract limits ?

Yes

If No, please note below

| Sample | Internal Standard Outside Limits | Amount Above Contract Requirement | Comments |
|---|---|---|---|

## DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/17/06

Fraction: VOA

IX. Blank Summary

Date/Time of Analysis: File ID:

| Compound | Concentration | ≤ CROL | Comments |
|---|---|---|---|

List the samples associated with this method blank.

**method blanks clean**

## DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/17/06

Fraction: VOA

X. Surrogate Recovery Summary

Were all surrogate recoveries within the contract limits ?

YES

| Sample | Surrogate Compound Outside Recovery Limits | Amount Above Contract Requirement | Comments |
|---|---|---|---|

# DATA VALIDATION – METALS

## DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/17/06

Fraction: VOA

**Site specific QC not provided**

XI. Matrix Spike/Matrix Spike Duplication Summary

Sample ID: _____ Matrix: _____

Did the MS/MSD recovery data meet the contract recommended requirements ?

Yes

If No, please note below.

Blank spike was analyzed and all recoveries were within limits

# DATA VALIDATION – ORGANICS

Site Name: ACTIVE Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/17/06

I. Data Deliverable Requirements

| | |
|---|---|
| A. Legible | Yes |
| B. Paginated | Yes |
| C. Arranged in order | Yes |
| D. Consistent dates | Yes |
| E. Case Narrative | Yes |
| F. Chain-of-Custody Record | Yes |
| G. Sample Data Complete | Yes |
| H. Standard Date Complete | Yes |
| I. Raw QC Data Complete | Yes |

Comments: E0075– 2 water samples analyzed for VOA, one sample was also run for metals and pH and one for metals only

Samples were collected on 1/24/06

Metals run 2/1 and 2/7

# DATA VALIDATION – METALS

## DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/17/06

Fraction: VOA

**Site specific QC not provided**

XI. Matrix Spike/Matrix Spike Duplication Summary

Sample ID: _____ Matrix: _____

Did the MS/MSD recovery data meet the contract recommended requirements ?

Yes

If No, please note below.

Blank spike was analyzed and all recoveries were within limits

## DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/17/06

Fraction: VOA

X. Surrogate Recovery Summary

Were all surrogate recoveries within the contract limits ?

YES

| Sample | Surrogate Compound Outside Recovery Limits | Amount Above Contract Requirement | Comments |
|---|---|---|---|

## DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/17/06

Fraction: VOA

IX. Blank Summary

Date/Time of Analysis: File ID:

| Compound | Concentration | ≤ CROL | Comments |
|---|---|---|---|

List the samples associated with this method blank.

**method blanks clean**

## DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/17/06

Fraction: VOA

VIII. Internal Standard Area Summary (GC/MS)

Were all internal standard peak areas within the contract limits ?

Yes

If No, please note below

| Sample | Internal Standard Outside Limits | Amount Above Contract Requirement | Comments |
|---|---|---|---|

# DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/17/06

Fraction: VOA

VI. Continuing Calibration Summary (GC/MS)

Date of Initial Calibration: 1/17/06

Date of Continuing Calibration: 1/25, 1/26 File ID: V6E0461, V6E0501

A. 1. All SPCC met criteria ?

Yes

Calculate a SPCC RRF

Comments:

2. All CCC met criteria ?

Yes

Calculate a CCC % D

Comments: Protocol allows up to 4%D to be >25% if <40%

B. Overall assessment of Continuing Calibration
(list associated samples)

ok

# DATA VALIDATION – ORGANICS

Site Name: Franklin

Laboratory Name: Mitkem

Reviewer: R.Petrella

Date of Review: 5/17/06

Fraction: VOA

Date of Calibration: 1/17/06

IV. Initial Calibration Summary (continued)

2. All CCC met Criteria ?

Yes

Comments: _____

Calculate a CCC % RSD

Protocol allows up to 4 %RSD to be >25% if <40%

C. 1. Was the tune for the initial calibration acceptable ?

Yes

2. Was the calibration conducted within 12 hours of the tune

Yes

Comments: _____

D. Overall assessment of the initial calibration:
(list the associated samples)

Ok

# DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/17/06

Fraction: VOA

IV. Initial Calibration Summary (GC/MS)

Date of Calibration: 1/17/06

A. Standard Data Files

| | | | |
|---|---|---|---|
| Standard 1 ID: | V6E0262 | Conc: | 10 |
| Standard 2 ID: | V6E0265 | Conc: | 20 |
| Standard 3 ID: | V6E0261 | Conc: | 50 |
| Standard 4 ID: | V6E0264 | Conc: | 100 |
| Standard 5 ID: | V6E0263 | Conc: | 200 |

B. 1. All SPCC met Criteria ?

Yes

2. Calculate a SPCC average RRF

Comments:

## DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/17/06

Fraction: VOA

III. Tune Summary

**Samples run within 24 hours of BFB, not 12**

| Tune File I.D. Number | Acceptable ? | Comments |
|---|---|---|
| 1. V6E0260 | YES | INITIAL |
| 2. V6E0460 | YES | samples |
| 3. V6E0500 | YES | SAMPLES |
| 4. | | |
| 5. | | |
| 6. | | |
| 7. | | |
| 8. | | |
| 9. | | |
| 10. | | |

# DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/11/06

II. Holding Times

| Sample I.D. | Date Received | Date Extracted | Date Analyzed | Holding Time Exceeded? |
|---|---|---|---|---|
| COMB INF | 1/25/06 | | 1/26/06 | No |
| COMB EFF | 1/25/06 | | 1/25/06 | No |

# DATA VALIDATION – ORGANICS

Site Name: ACTIVE Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/17/06

I. Data Deliverable Requirements

| | |
|---|---|
| A. Legible | Yes |
| B. Paginated | Yes |
| C. Arranged in order | Yes |
| D. Consistent dates | Yes |
| E. Case Narrative | Yes |
| F. Chain-of-Custody Record | Yes |
| G. Sample Data Complete | Yes |
| H. Standard Date Complete | Yes |
| I. Raw QC Data Complete | Yes |

Comments: E0205– 2 water samples analyzed for VOA, one sample was also run for metals and pH and one for metals only

Samples were collected on 2/24/06

~~Metals run 2/1 and 2/7~~

## DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/17/06

II. Holding Times

| Sample I.D. | Date Received | Date Extracted | Date Analyzed | Holding Time Exceeded? |
|---|---|---|---|---|
| COMB INF | 2/25/06 | | 3/9/06 | No |
| COMB EFF | 2/25/06 | | 3/9/06 | No |

## DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/17/06

Fraction: VOA

III. Tune Summary

**Samples run within 24 hours of BFB, not 12**

| Tune File I.D. Number | Acceptable ? | Comments |
|---|---|---|
| 1. V6E0950 | YES | INITIAL |
| 2. V6E1060 | YES | samples |
| 3. V6E1100 | YES | SAMPLES |
| 4. | | |
| 5. | | |
| 6. | | |
| 7. | | |
| 8. | | |
| 9. | | |
| 10. | | |

# DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/17/06

Fraction: VOA

IV. Initial Calibration Summary (GC/MS)

Date of Calibration: 3/3/06

A. Standard Data Files

| | | | |
|---|---|---|---|
| Standard 1 ID: | V6E0952 | Conc: | 10 |
| Standard 2 ID: | V6E0955 | Conc: | 20 |
| Standard 3 ID: | V6E0951 | Conc: | 50 |
| Standard 4 ID: | V6E0954 | Conc: | 100 |
| Standard 5 ID: | V6E0953 | Conc: | 200 |

B. 1. All SPCC met Criteria ?

Yes

2. Calculate a SPCC average RRF

Comments:

# DATA VALIDATION – ORGANICS

Site Name: Franklin

Laboratory Name: Mitkem

Reviewer: R.Petrella

Date of Review: 5/17/06

Fraction: VOA

Date of Calibration: 3/3/06

IV. Initial Calibration Summary (continued)

2. All CCC met Criteria ?

Yes

Comments: _____

Calculate a CCC % RSD

Protocol allows up to 4 %RSD to be >25% if <40%

C. 1. Was the tune for the initial calibration acceptable ?

Yes

2. Was the calibration conducted within 12 hours of the tune

Yes

Comments: _____

D. Overall assessment of the initial calibration:
(list the associated samples)

Ok

# DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/17/06

Fraction: VOA

VI. Continuing Calibration Summary (GC/MS)

Date of Initial Calibration: 3/3/06

Date of Continuing Calibration: 3/9, 3/10 File ID: V6E1061, V6E1101

A. 1. All SPCC met criteria ?

Yes

Calculate a SPCC RRF

Comments:

2. All CCC met criteria ?

Yes

Calculate a CCC % D

Comments: Protocol allows up to 4%D to be >25% if <40%

B. Overall assessment of Continuing Calibration
(list associated samples)

ok

## DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/17/06

Fraction: VOA

VIII. Internal Standard Area Summary (GC/MS)

Were all internal standard peak areas within the contract limits ?

Yes

If No, please note below

| Sample | Internal Standard Outside Limits | Amount Above Contract Requirement | Comments |
|---|---|---|---|

## DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/17/06

Fraction: VOA

IX. Blank Summary

Date/Time of Analysis: File ID:

| Compound | Concentration | ≤ CROL | Comments |
|---|---|---|---|

List the samples associated with this method blank.

**method blanks clean**

## DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/17/06

Fraction: VOA

X. Surrogate Recovery Summary

Were all surrogate recoveries within the contract limits ?

YES

| Sample | Surrogate Compound Outside Recovery Limits | Amount Above Contract Requirement | Comments |
|---|---|---|---|

## DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/17/06

Fraction: VOA

**Site specific QC not provided**

XI. Matrix Spike/Matrix Spike Duplication Summary

Sample ID: _____ Matrix: _____

Did the MS/MSD recovery data meet the contract recommended requirements ?

Yes

If No, please note below.

Blank spike was analyzed and all recoveries were within limits

# DATA VALIDATION – ORGANICS

Site Name: ACTIVE Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/17/06

I. Data Deliverable Requirements

| | |
|---|---|
| A. Legible | Yes |
| B. Paginated | Yes |
| C. Arranged in order | Yes |
| D. Consistent dates | Yes |
| E. Case Narrative | Yes |
| F. Chain-of-Custody Record | Yes |
| G. Sample Data Complete | Yes |
| H. Standard Date Complete | Yes |
| I. Raw QC Data Complete | Yes |

Comments: E0206– 3 air samples were collected and analyzed for VOA

Samples were collected on 2/24/06

Samples were subcontracted to STL Burlington

# DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/17/06

II. Holding Times

| Sample I.D. | Date Received | Date Extracted | Date Analyzed | Holding Time Exceeded? |
|---|---|---|---|---|
| VPCV INF | 3/1/06 | | 3/14/06 | No |
| VPCV MID | 3/1/06 | | 3/14/06 | No |
| VPSV EFF | 3/1/06 | | 3/14/06 | No |

## DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/17/06

Fraction: VOA

III. Tune Summary

**Samples run within 24 hours of BFB, not 12**

| Tune File I.D. Number | Acceptable ? | Comments |
|---|---|---|
| 1. BEI01PV | YES | INITIAL |
| 2. BEI11PV | YES | samples |
| 3. | | |
| 4. | | |
| 5. | | |
| 6. | | |
| 7. | | |
| 8. | | |
| 9. | | |
| 10. | | |

# DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/17/06

Fraction: VOA

IV. Initial Calibration Summary (GC/MS)

Date of Calibration: 3/6/06

A. Standard Data Files

| | | | |
|---|---|---|---|
| Standard 1 ID: | BEI002V2 | Conc: | 0.2 |
| Standard 2 ID: | BEI005V | Conc: | 0.5 |
| Standard 3 ID: | BEI05V | Conc: | 5 |
| Standard 4 ID: | BEI10V | Conc: | 10 |
| Standard 5 ID: | BEI20V, BEI40V | Conc: | 20, 40 |

B. 1. All SPCC met Criteria ?

Yes

2. Calculate a SPCC average RRF

Comments:

## DATA VALIDATION – ORGANICS

Site Name: Franklin

Laboratory Name: Mitkem

Reviewer: R.Petrella

Date of Review: 5/17/06

Fraction: VOA

Date of Calibration: 3/6/06

IV. Initial Calibration Summary (continued)

2. All CCC met Criteria ?

Yes

Comments:

Calculate a CCC % RSD

Protocol allows up to 4 %RSD to be >25% if <40%

C. 1. Was the tune for the initial calibration acceptable ?

Yes

2. Was the calibration conducted within 12 hours of the tune

Yes

Comments:

D. Overall assessment of the initial calibration:
(list the associated samples)

ok

## DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/17/06

Fraction: VOA

VI. Continuing Calibration Summary (GC/MS)

Date of Initial Calibration: 3/6/06

Date of Continuing Calibration: 3/13 File ID: BEI10GV2

A. 1. All SPCC met criteria ?

Yes

Calculate a SPCC RRF

Comments:

2. All CCC met criteria ?

Yes

Calculate a CCC % D

Comments: Protocol allows up to 4%D to be >25% if <40%

B. Overall assessment of Continuing Calibration
(list associated samples)

ok

# DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/17/06

Fraction: VOA

VIII. Internal Standard Area Summary (GC/MS)

Were all internal standard peak areas within the contract limits ?

Yes

If No, please note below

| Sample | Internal Standard Outside Limits | Amount Above Contract Requirement | Comments |
|---|---|---|---|

## DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/17/06

Fraction: VOA

IX. Blank Summary

Date/Time of Analysis: File ID:

| Compound | Concentration | ≤ CROL | Comments |
|---|---|---|---|

List the samples associated with this method blank.

**method blanks clean**

## DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/17/06

Fraction: VOA

X. Surrogate Recovery Summary

Were all surrogate recoveries within the contract limits ?

YES

| Sample | Surrogate Compound Outside Recovery Limits | Amount Above Contract Requirement | Comments |
|---|---|---|---|

# DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/17/06

Fraction: VOA

**Site specific QC not provided**

XI. Matrix Spike/Matrix Spike Duplication Summary

Sample ID: _____ Matrix: _____

Did the MS/MSD recovery data meet the contract recommended requirements ?

Yes

If No, please note below.

Blank spike was analyzed and all recoveries were within limits

# DATA VALIDATION – ORGANICS

Site Name: ACTIVE Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/17/06

I. Data Deliverable Requirements

| | |
|---|---|
| A. Legible | Yes |
| B. Paginated | Yes |
| C. Arranged in order | Yes |
| D. Consistent dates | Yes |
| E. Case Narrative | Yes |
| F. Chain-of-Custody Record | Yes |
| G. Sample Data Complete | Yes |
| H. Standard Date Complete | Yes |
| I. Raw QC Data Complete | Yes |

Comments: E0289– 10 water samples and 1 trip blank analyzed for VOA

Samples were collected on 3/13/06 and 3/14

## DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/17/06

Fraction: VOA

XI. Matrix Spike/Matrix Spike Duplication Summary

Sample ID: MW-104 Matrix: water

Did the MS/MSD recovery data meet the contract recommended requirements ?

Yes

If No, please note below.

2 of 136 spike recoveries were outside limits., all RPD's within limits

## DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/17/06

Fraction: VOA

X. Surrogate Recovery Summary

Were all surrogate recoveries within the contract limits ?

YES

| Sample | Surrogate Compound Outside Recovery Limits | Amount Above Contract Requirement | Comments |
|---|---|---|---|

## DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/17/06

Fraction: VOA

IX. Blank Summary

Date/Time of Analysis: File ID:

| Compound | Concentration | ≤ CROL | Comments |
|---|---|---|---|

List the samples associated with this method blank.

**method blanks and trip blank clean**

## DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/17/06

Fraction: VOA

VIII. Internal Standard Area Summary (GC/MS)

Were all internal standard peak areas within the contract limits ?

Yes

If No, please note below

| Sample | Internal Standard Outside Limits | Amount Above Contract Requirement | Comments |
|---|---|---|---|

## DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/17/06

Fraction: VOA

VI. Continuing Calibration Summary (GC/MS)

Date of Initial Calibration: 3/3/06

Date of Continuing Calibration: 3/16, 3/17 File ID: V6E1231, V6E1271

A. 1. All SPCC met criteria ?

Yes

Calculate a SPCC RRF

Comments:

2. All CCC met criteria ?

Yes

Calculate a CCC % D

Comments: Protocol allows up to 4%D to be >25% if <40%

B. Overall assessment of Continuing Calibration
(list associated samples)

ok

## DATA VALIDATION – ORGANICS

Site Name: Franklin

Laboratory Name: Mitkem

Reviewer: R.Petrella

Date of Review: 5/17/06

Fraction: VOA

Date of Calibration: 3/3/06

IV. Initial Calibration Summary (continued)

2. All CCC met Criteria ?

Yes

Comments: _____

_____

Calculate a CCC % RSD

Protocol allows up to 4 %RSD to be >25% if <40%

C. 1. Was the tune for the initial calibration acceptable ?

Yes

2. Was the calibration conducted within 12 hours of the tune

Yes

Comments: _____

_____

_____

D. Overall assessment of the initial calibration:
(list the associated samples)

Ok

_____

_____

# DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/17/06

Fraction: VOA

IV. Initial Calibration Summary (GC/MS)

Date of Calibration: 3/3/06

A. Standard Data Files

| | | | |
|---|---|---|---|
| Standard 1 ID: | V6E0952 | Conc: | 10 |
| Standard 2 ID: | V6E0955 | Conc: | 20 |
| Standard 3 ID: | V6E0951 | Conc: | 50 |
| Standard 4 ID: | V6E0954 | Conc: | 100 |
| Standard 5 ID: | V6E0953 | Conc: | 200 |

B. 1. All SPCC met Criteria ?

Yes

2. Calculate a SPCC average RRF

Comments:

# DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/17/06

Fraction: VOA

III. Tune Summary

| Tune File I.D. Number | Acceptable ? | Comments |
|---|---|---|
| 1. V6E0950 | YES | INITIAL |
| 2. V6E1230 | YES | samples |
| 3. V6E1270 | YES | SAMPLES |
| 4. | | |
| 5. | | |
| 6. | | |
| 7. | | |
| 8. | | |
| 9. | | |
| 10. | | |

# DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/17/06

II. Holding Times

| Sample I.D. | Date Received | Date Extracted | Date Analyzed | Holding Time Exceeded? |
|---|---|---|---|---|
| Trip blank | 3/15/06 | | 3/16/06 | No |
| MW-105 | 3/15/06 | | 3/16/06 | No |
| MW-103 | 3/15/06 | | 3/16/06 | No |
| MW-102 | 3/15/06 | | 3/16/06 | No |
| MW-101 | 3/15/06 | | 3/16/06 | No |
| MW-106 | 3/15/06 | | 3/16/06 | No |
| MW-107 | 3/15/06 | | 3/16/06 | No |
| MW-104* | 3/15/06 | | 3/17/06 | No |
| MW-108 | 3/15/06 | | 3/17/06 | No |
| MW-111 | 3/15/06 | | 3/17/06 | No |
| MW-109 | 3/15/06 | | 3/17/06 | No |

* run as MS/MSD

# DATA VALIDATION – ORGANICS

Site Name: ACTIVE Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/11/06

I. Data Deliverable Requirements

| | |
|---|---|
| A. Legible | Yes |
| B. Paginated | Yes |
| C. Arranged in order | Yes |
| D. Consistent dates | Yes |
| E. Case Narrative | Yes |
| F. Chain-of-Custody Record | Yes |
| G. Sample Data Complete | Yes |
| H. Standard Date Complete | Yes |
| I. Raw QC Data Complete | Yes |

Comments: E0330– 3 water samples and one trip blank were collected and analyzed for VOA, one sample was also run for metals and pH and one for metals only

Samples were collected on 3/22/06

Metals run 3/27/06 and 4/4/06

## DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/11/06

Fraction: VOA

**Site specific QC not provided**

XI. Matrix Spike/Matrix Spike Duplication Summary

Sample ID: _____ Matrix: _____

Did the MS/MSD recovery data meet the contract recommended requirements ?

Yes

If No, please note below.

Blank spike was analyzed and all recoveries were within limits

## DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/11/06

Fraction: VOA

X. Surrogate Recovery Summary

Were all surrogate recoveries within the contract limits ?

YES

| Sample | Surrogate Compound Outside Recovery Limits | Amount Above Contract Requirement | Comments |
|---|---|---|---|

## DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/11/06

Fraction: VOA

IX. Blank Summary

Date/Time of Analysis: File ID:

| Compound | Concentration | ≤ CROL | Comments |
|---|---|---|---|

List the samples associated with this method blank.

**method blanks clean**

## DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/11/06

Fraction: VOA

VIII. Internal Standard Area Summary (GC/MS)

Were all internal standard peak areas within the contract limits ?

Yes

If No, please note below

| Sample | Internal Standard Outside Limits | Amount Above Contract Requirement | Comments |
|---|---|---|---|

# DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/11/06

Fraction: VOA

VI. Continuing Calibration Summary (GC/MS)

Date of Initial Calibration: 3/22/06, 3/26

Date of Continuing Calibration: 3/24 File ID: V6E1461, V6E1501

A. 1. All SPCC met criteria ?

Yes

Calculate a SPCC RRF

Comments:

2. All CCC met criteria ?

Yes

Calculate a CCC % D

Comments: Protocol allows up to 4%D to be >25% if <40%

B. Overall assessment of Continuing Calibration
(list associated samples)

ok

# DATA VALIDATION – ORGANICS

Site Name: Franklin

Laboratory Name: Mitkem

Reviewer: R.Petrella

Date of Review: 5/11/06

Fraction: VOA

Date of Calibration: 3/22/06

IV. Initial Calibration Summary (continued)

2. All CCC met Criteria ?

Yes

Comments: _____

_____

Calculate a CCC % RSD

Protocol allows up to 4 %RSD to be >25% if <40%

C. 1. Was the tune for the initial calibration acceptable ?

Yes

2. Was the calibration conducted within 12 hours of the tune

Yes

Comments: _____

_____

_____

D. Overall assessment of the initial calibration:
(list the associated samples)

ok

_____

_____

# DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/11/06

Fraction: VOA

IV. Initial Calibration Summary (GC/MS)

Date of Calibration: 3/22/06

A. Standard Data Files

| | | | |
|---|---|---|---|
| Standard 1 ID: | V6E1392 | Conc: | 10 |
| Standard 2 ID: | V6E1395 | Conc: | 20 |
| Standard 3 ID: | V6E1391 | Conc: | 50 |
| Standard 4 ID: | V6E1394 | Conc: | 100 |
| Standard 5 ID: | V6E1393 | Conc: | 200 |

B. 1. All SPCC met Criteria ?

Yes

2. Calculate a SPCC average RRF

Comments:

# DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/11/06

Fraction: VOA

III. Tune Summary

**Samples run within 24 hours of BFB, not 12**

| Tune File I.D. Number | Acceptable ? | Comments |
|---|---|---|
| 1. V6E1390 | YES | INITIAL |
| 2. V6E1460 | YES | samples |
| 3. V6E1500 | YES | SAMPLES |
| 4. | | |
| 5. | | |
| 6. | | |
| 7. | | |
| 8. | | |
| 9. | | |
| 10. | | |

## DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/11/06

II. Holding Times

| Sample I.D. | Date Received | Date Extracted | Date Analyzed | Holding Time Exceeded? |
|---|---|---|---|---|
| COMB INF | 3/23/06 | | 3/24/06 | No |
| COMB EFF | 3/23/06 | | 3/24/06 | No |
| MID | 3/23/06 | | 3/24/06 | No |

# DATA VALIDATION – ORGANICS

Site Name: ACTIVE Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/17/06

I. Data Deliverable Requirements

| | |
|---|---|
| A. Legible | Yes |
| B. Paginated | Yes |
| C. Arranged in order | Yes |
| D. Consistent dates | Yes |
| E. Case Narrative | Yes |
| F. Chain-of-Custody Record | Yes |
| G. Sample Data Complete | Yes |
| H. Standard Date Complete | Yes |
| I. Raw QC Data Complete | Yes |

Comments: E0335– 3 air samples were collected and analyzed for VOA
Samples were collected on 3/22/06
Samples were subcontracted to STL Burlington

# DATA VALIDATION – METALS

## DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/17/06

Fraction: VOA

**Site specific QC not provided**

XI. Matrix Spike/Matrix Spike Duplication Summary

Sample ID: _____ Matrix: _____

Did the MS/MSD recovery data meet the contract recommended requirements ?

Yes

If No, please note below.

Blank spike was analyzed and all recoveries were within limits

## DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/17/06

Fraction: VOA

X. Surrogate Recovery Summary

Were all surrogate recoveries within the contract limits ?

YES

| Sample | Surrogate Compound Outside Recovery Limits | Amount Above Contract Requirement | Comments |
|---|---|---|---|

## DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/17/06

Fraction: VOA

IX. Blank Summary

Date/Time of Analysis: File ID:

| Compound | Concentration | ≤ CROL | Comments |
|---|---|---|---|

List the samples associated with this method blank.

**method blanks clean**

## DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/17/06

Fraction: VOA

VIII. Internal Standard Area Summary (GC/MS)

Were all internal standard peak areas within the contract limits ?

Yes

If No, please note below

| Sample | Internal Standard Outside Limits | Amount Above Contract Requirement | Comments |
|---|---|---|---|

# DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/17/06

Fraction: VOA

VI. Continuing Calibration Summary (GC/MS)

Date of Initial Calibration: 3/29-3/30

Date of Continuing Calibration: 3/31, 4/2 File ID: CDV10BV, CDV10DV

A. 1. All SPCC met criteria ?

Yes

Calculate a SPCC RRF

Comments:

2. All CCC met criteria ?

Yes

Calculate a CCC % D

Comments: Protocol allows up to 4%D to be >25% if <40%

B. Overall assessment of Continuing Calibration
(list associated samples)

ok

## DATA VALIDATION – ORGANICS

Site Name: Franklin

Laboratory Name: Mitkem

Reviewer: R.Petrella

Date of Review: 5/17/06

Fraction: VOA

Date of Calibration: 3/29-30

IV. Initial Calibration Summary (continued)

2. All CCC met Criteria ?

Yes

Comments: _____

_____

Calculate a CCC % RSD

Protocol allows up to 4 %RSD to be >25% if <40%

C. 1. Was the tune for the initial calibration acceptable ?

Yes

2. Was the calibration conducted within 12 hours of the tune

Yes

Comments: _____

_____

_____

D. Overall assessment of the initial calibration:
(list the associated samples)

ok

_____

_____

# DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/17/06

Fraction: VOA

IV. Initial Calibration Summary (GC/MS)

Date of Calibration: 3/29-3/30/06

A. Standard Data Files

| | | | |
|---|---|---|---|
| Standard 1 ID: | CDV002V2 | Conc: | 0.2 |
| Standard 2 ID: | CDV005V | Conc: | 0.5 |
| Standard 3 ID: | CDV05V | Conc: | 5 |
| Standard 4 ID: | CDV10V | Conc: | 10 |
| Standard 5 ID: | CDV20V, CDV40V | Conc: | 20, 40 |

B. 1. All SPCC met Criteria ?

Yes

2. Calculate a SPCC average RRF

Comments:

## DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/17/06

Fraction: VOA

III. Tune Summary

**Samples run within 24 hours of BFB, not 12**

| Tune File I.D. Number | Acceptable ? | Comments |
|---|---|---|
| 1. CDV01PV | YES | INITIAL |
| 2. CDV03PV | YES | samples |
| 3. CDV05PV | YES | SAMPLES |
| 4. | | |
| 5. | | |
| 6. | | |
| 7. | | |
| 8. | | |
| 9. | | |
| 10. | | |

# DATA VALIDATION – ORGANICS

Site Name: Franklin Laboratory Name: Mitkem

Reviewer: R.Petrella Date of Review: 5/17/06

II. Holding Times

| Sample I.D. | Date Received | Date Extracted | Date Analyzed | Holding Time Exceeded? |
|---|---|---|---|---|
| VPCV INF | 3/27/06 | | 4/3/06 | No |
| VPCV MID | 3/27/06 | | 4/3/06 | No |
| VPSV EFF | 3/27/06 | | 4/3/06 | No |

# DATA VALIDATION – ORGANICS

Site Name: Active Industrial Laboratory Name: Mitkem

Reviewer: R. Petrella Date of Review: 11/13/06

I. Data Deliverable Requirements

| | |
|---|---|
| A. Legible | Yes |
| B. Paginated | Yes |
| C. Arranged in order | Yes |
| D. Consistent dates | Yes |
| E. Case Narrative | Yes |
| F. Chain-of-Custody Record | Yes |
| G. Sample Data Complete | Yes |
| H. Standard Date Complete | Yes |
| I. Raw QC Data Complete | Yes |

Comments: E1154

3 air SAMPLES – for VOA by TO15

Samples subbed to STL Vermont. Samples collected on 7/31/06 STL did not receive the samples until 8/4/06

# DATA VALIDATION – ORGANICS

Site Name: Active Industrial Laboratory Name: Mitkem

Reviewer: R. Petrella Date of Review: 11/13/06

Fraction: VOA

**Site specific QC not provided**

XI. Matrix Spike/Matrix Spike Duplication Summary

Sample ID: _____ Matrix: _____

Did the MS/MSD recovery data meet the contract recommended requirements ?

Yes No

If No, please note below.

_____

_____

_____

_____

## DATA VALIDATION – ORGANICS

Site Name: Active Industrial Laboratory Name: Mitkem

Reviewer: R. Petrella Date of Review: 11/13/06

Fraction: VOA

X. Surrogate Recovery Summary

Were all surrogate recoveries within the contract limits ?

Yes

If No, please note below.

| Sample | Surrogate Compound Outside Recovery Limits | Amount Above Contract Requirement | Comments |
|---|---|---|---|

# DATA VALIDATION – ORGANICS

Site Name: Active Industrial Laboratory Name: Mitkem

Reviewer: R. Petrella Date of Review: 11/13/06

Fraction: VOA

All blanks clean

IX. Blank Summary

Date/Time of Analysis: File ID:

| Compound | Concentration | ≤ CROL | Comments |
|---|---|---|---|

List the samples associated with this method blank.

# DATA VALIDATION – ORGANICS

Site Name: Active Industrial Laboratory Name: Mitkem

Reviewer: R. Petrella Date of Review: 11/13/06

Fraction: VOA

VIII. Internal Standard Area Summary (GC/MS)

Were all internal standard peak areas within the contract limits ?

Yes

If No, please note below

| Sample | Internal Standard Outside Limits | Amount Above Contract Requirement | Comments |
|---|---|---|---|

# DATA VALIDATION – ORGANICS

Site Name: Active Industrial Laboratory Name: Mitkem

Reviewer: R. Petrella Date of Review: 11/13/06

Fraction: VOA

VI. Continuing Calibration Summary (GC/MS)

Date of Initial Calibration: 8/9, 8/7

Date of Continuing Calibration: 8/12, 8/11 File ID: BEZ10CV, CEK10DV2

A. 1. All SPCC met criteria ?

Yes

Calculate a SPCC RRF

Comments:

2. All CCC met criteria ?

Yes

Calculate a CCC % D

Comments:

B. Overall assessment of Continuing Calibration
(list associated samples)

ok

# DATA VALIDATION – ORGANICS

Site Name: Active Industrial

Laboratory Name: Mitkem

Reviewer: R. Petrella

Date of Review: 11/13/06

Fraction: VOA

Date of Calibration: 8/9, 8/7

IV. Initial Calibration Summary (continued)

2. All CCC met Criteria ?

Yes

Comments:

Calculate a CCC % RSD

C. 1. Was the tune for the initial calibration acceptable ?

Yes

2. Was the calibration conducted within 12 hours of the tune

Yes

Comments:

D. Overall assessment of the initial calibration:
(list the associated samples)

ok

# DATA VALIDATION – ORGANICS

Site Name: Active Industrial Laboratory Name: Mitkem

Reviewer: R. Petrella Date of Review: 11/13/06

Fraction: VOA

IV. Initial Calibration Summary (GC/MS)

Date of Calibration: 8/9, 8/7

A. Standard Data Files

| | | | |
|---|---|---|---|
| Standard 1 ID: | BEZ002V, CEK002V | Conc: | 0.2 |
| Standard 2 ID: | BEZ005V, CEK005V | Conc. | 0.5 |
| Standard 3 ID: | BEZ05V, CEK05V | Conc: | 5 |
| Standard 4 ID: | BEZ10V, CEJ10DV | Conc: | 10 |
| Standard 5 ID: | BEZ20V, BEZ40V, CEK20V, CEK40V | Conc: | 20, 40 |

B. 1. All SPCC met Criteria ?

Yes

2. Calculate a SPCC average RRF

Comments:

# DATA VALIDATION – ORGANICS

Site Name: Active Industrial  Laboratory Name: Mitkem

Reviewer: R. Petrella  Date of Review: 11/13/06

Fraction: VOA

III. Tune Summary

| Tune File I.D. Number | Acceptable ? | Comments |
|---|---|---|
| 1. BEZ01PV | YES | INITIAL |
| 2. BEZ04PV | YES | SAMPLES |
| 3. | | |
| 4. CEJ07PV | YES | INITIAL |
| 5. CEK05PV | YES | SAMPLES |
| 6. | | |
| 7. | | |
| 8. | | |
| 9. | | |
| 10. | | |

# DATA VALIDATION – ORGANICS

Site Name: Active Industrial Laboratory Name: Mitkem

Reviewer: R. Petrella Date of Review: 11/13/06

II. Holding Times

| Sample I.D. | Date Received | Date Extracted | Date Analyzed | Holding Time Exceeded? |
|---|---|---|---|---|
| VPCV-EFF | 8/4/06 | | 8/12/06 | No |
| VPCV-MID | 8/4/06 | | 8/11/06 | No |
| VPCV-INF | 8/4/06 | | 8/12/06 | No |

# DATA VALIDATION – ORGANICS

Site Name: Active Industrial Laboratory Name: Mitkem

Reviewer: R. Petrella RP Date of Review: 11/13/06

I. Data Deliverable Requirements

| | |
|---|---|
| A. Legible | Yes |
| B. Paginated | Yes |
| C. Arranged in order | Yes |
| D. Consistent dates | Yes |
| E. Case Narrative | Yes |
| F. Chain-of-Custody Record | Yes |
| G. Sample Data Complete | Yes |
| H. Standard Date Complete | Yes |
| I. Raw QC Data Complete | Yes |

Comments: E1280

3 air SAMPLES – for VOA by TO15

Samples subbed to STL Vermont. STL did not receive the samples until 9/25/06

## DATA VALIDATION – ORGANICS

Site Name: Active Industrial Laboratory Name: Mitkem

Reviewer: R. Petrella Date of Review: 11/13/06

II. Holding Times

| Sample I.D. | Date Received | Date Extracted | Date Analyzed | Holding Time Exceeded? |
|---|---|---|---|---|
| VPCV-EFF | 8/23/06 | | 9/1/06 | No |
| VPCV-MID | 8/23/06 | | 9/1/06 | No |
| VPCV-INF | 8/23/06 | | 9/5/06 | No |

# DATA VALIDATION – ORGANICS

Site Name: Active Industrial Laboratory Name: Mitkem

Reviewer: R. Petrella Date of Review: 11/13/06

Fraction: VOA

III. Tune Summary

| Tune File I.D. Number | Acceptable ? | Comments |
|---|---|---|
| 1. BEZ01PV | YES | INITIAL |
| 2. BEZ18PV | YES | SAMPLES |
| 3. BFA02PV | YES | SAMPLES |
| 4. | | |
| 5. | | |
| 6. | | |
| 7. | | |
| 8. | | |
| 9. | | |
| 10. | | |

## DATA VALIDATION – ORGANICS

Site Name: Active Industrial Laboratory Name: Mitkem

Reviewer: R. Petrella Date of Review: 11/13/06

Fraction: VOA

IV. Initial Calibration Summary (GC/MS)

Date of Calibration: 8/9, 9/1

A. Standard Data Files

| | | | |
|---|---|---|---|
| Standard 1 ID: | BEZ002V, BFA002 | Conc: | 0.2 |
| Standard 2 ID: | BEZ005V, BFA005V | Conc. | 0.5 |
| Standard 3 ID: | BEZ05V, BFA05V | Conc: | 5 |
| Standard 4 ID: | BEZ10V, BFA010 | Conc: | 10 |
| Standard 5 ID: | BEZ20V, BEZ40V, BFA20V, BFA40V | Conc: | 20, 40 |

B. 1. All SPCC met Criteria ?

Yes

2. Calculate a SPCC average RRF

Comments:

# DATA VALIDATION – ORGANICS

Site Name: Active Industrial

Laboratory Name: Mitkem

Reviewer: R. Petrella

Date of Review: 11/13/06

Fraction: VOA

Date of Calibration: 8/9, 9/1

IV. Initial Calibration Summary (continued)

2. All CCC met Criteria ?

Yes

Comments: _____

_____

Calculate a CCC % RSD

C. 1. Was the tune for the initial calibration acceptable ?

Yes

2. Was the calibration conducted within 12 hours of the tune

Yes

Comments: _____

_____

_____

D. Overall assessment of the initial calibration:
(list the associated samples)

ok

_____

_____

_____

## DATA VALIDATION – ORGANICS

Site Name: Active Industrial Laboratory Name: Mitkem

Reviewer: R. Petrella Date of Review: 11/13/06

Fraction: VOA

VI. Continuing Calibration Summary (GC/MS)

Date of Initial Calibration: 8/9, 9/1

Date of Continuing Calibration: 8/31, 9/5 File ID: BEZ10QV, BFA10AV

A. 1. All SPCC met criteria ?

Yes

Calculate a SPCC RRF

Comments:

2. All CCC met criteria ?

Yes

Calculate a CCC % D

Comments:

B. Overall assessment of Continuing Calibration (list associated samples)

ok

## DATA VALIDATION – ORGANICS

Site Name: Active Industrial Laboratory Name: Mitkem

Reviewer: R. Petrella Date of Review: 11/13/06

Fraction: VOA

VIII. Internal Standard Area Summary (GC/MS)

Were all internal standard peak areas within the contract limits ?

Yes

If No, please note below

| Sample | Internal Standard Outside Limits | Amount Above Contract Requirement | Comments |
|---|---|---|---|

## DATA VALIDATION – ORGANICS

Site Name: Active Industrial Laboratory Name: Mitkem

Reviewer: R. Petrella Date of Review: 11/13/06

Fraction: VOA

All blanks clean

IX. Blank Summary

Date/Time of Analysis: _____ File ID: _____

| Compound | Concentration | ≤ CROL | Comments |
|---|---|---|---|

List the samples associated with this method blank.

_____

_____

_____

_____

## DATA VALIDATION – ORGANICS

Site Name: Active Industrial Laboratory Name: Mitkem

Reviewer: R. Petrella Date of Review: 11/13/06

Fraction: VOA

X. Surrogate Recovery Summary

Were all surrogate recoveries within the contract limits ?

Yes

If No, please note below.

| Sample | Surrogate Compound Outside Recovery Limits | Amount Above Contract Requirement | Comments |
|---|---|---|---|

## DATA VALIDATION – ORGANICS

Site Name: Active Industrial Laboratory Name: Mitkem

Reviewer: R. Petrella Date of Review: 11/13/06

Fraction: VOA

**Site specific QC not provided**

XI. Matrix Spike/Matrix Spike Duplication Summary

Sample ID: _____ Matrix: _____

Did the MS/MSD recovery data meet the contract recommended requirements ?

Yes No

If No, please note below.

_____

_____

_____

_____

# DATA VALIDATION – METALS

# DATA VALIDATION – ORGANICS

Site Name: Active Industrial  Laboratory Name: Mitkem

Reviewer: R. Petrella  Date of Review: 11/13/06

I. Data Deliverable Requirements

| | |
|---|---|
| A. Legible | Yes |
| B. Paginated | Yes |
| C. Arranged in order | Yes |
| D. Consistent dates | Yes |
| E. Case Narrative | Yes |
| F. Chain-of-Custody Record | Yes |
| G. Sample Data Complete | Yes |
| H. Standard Date Complete | Yes |
| I. Raw QC Data Complete | Yes |

Comments: E1256

2 WATER SAMPLES – INF run for VOA, pH and metals, Eff run for VOA only

# DATA VALIDATION – ORGANICS

Site Name: Active Industrial Laboratory Name: Mitkem

Reviewer: R. Petrella Date of Review: 11/13/06

II. Holding Times

| Sample I.D. | Date Received | Date Extracted | Date Analyzed | Holding Time Exceeded? |
|---|---|---|---|---|
| COMB INF | 8/18/06 | | 8/21/06 | No |
| COMP EFF | 8/18/06 | | 8/21/06 | No |

# DATA VALIDATION – ORGANICS

Site Name: Active Industrial  Laboratory Name: Mitkem

Reviewer: R. Petrella  Date of Review: 11/13/06

Fraction: VOA, SVOA

III. Tune Summary

| Tune File I.D. Number | Acceptable ? | Comments |
|---|---|---|
| 1. V6E4913 | YES | INITIAL |
| 2. V6E5390 | YES | SAMPLES |
| 3. | | |
| 4. | | |
| 5. | | |
| 6. | | |
| 7. | | |
| 8. | | |
| 9. | | |
| 10. | | |

# DATA VALIDATION – ORGANICS

Site Name: Active Industrial Laboratory Name: Mitkem

Reviewer: R. Petrella Date of Review: 11/13/06

Fraction: VOA

IV. Initial Calibration Summary (GC/MS)

Date of Calibration: 8/5/06

A. Standard Data Files

| | | | |
|---|---|---|---|
| Standard 1 ID: | V6E4927 | Conc: | 5 |
| Standard 2 ID: | V6E4926 | Conc: | 20 |
| Standard 3 ID: | V6E4925 | Conc: | 50 |
| Standard 4 ID: | V6E4930 | Conc: | 100 |
| Standard 5 ID: | V6E4930 | Conc: | 200 |

B. 1. All SPCC met Criteria ?

Yes

2. Calculate a SPCC average RRF

Comments:

## DATA VALIDATION – ORGANICS

Site Name: Active Industrial

Laboratory Name: Mitkem

Reviewer: R. Petrella

Date of Review: 11/13/06

Fraction: VOA

Date of Calibration: 8/5/06

IV. Initial Calibration Summary (continued)

2. All CCC met Criteria ?

Yes

Comments: _____

_____

Calculate a CCC % RSD

C. 1. Was the tune for the initial calibration acceptable ?

Yes

2. Was the calibration conducted within 12 hours of the tune

Yes

Comments: _____

_____

_____

D. Overall assessment of the initial calibration:
(list the associated samples)

ok

_____

_____

_____

## DATA VALIDATION – ORGANICS

Site Name: Active Industrial Laboratory Name: Mitkem

Reviewer: R. Petrella Date of Review: 11/13/06

Fraction: VOA

VI. Continuing Calibration Summary (GC/MS)

Date of Initial Calibration: 8/5/06

Date of Continuing Calibration: 8/21 File ID: V6E5391

A. 1. All SPCC met criteria ?

Yes

Calculate a SPCC RRF

Comments:

2. All CCC met criteria ?

Yes

Calculate a CCC % D

Comments: Protocol allows up to 4%D to be > 20% if <40%

B. Overall assessment of Continuing Calibration
(list associated samples)

ok

## DATA VALIDATION – ORGANICS

Site Name: Active Industrial Laboratory Name: Mitkem

Reviewer: R. Petrella Date of Review: 11/13/06

Fraction: VOA

VIII. Internal Standard Area Summary (GC/MS)

Were all internal standard peak areas within the contract limits ?

Yes

If No, please note below

| Sample | Internal Standard Outside Limits | Amount Above Contract Requirement | Comments |
|---|---|---|---|

## DATA VALIDATION – ORGANICS

Site Name: Active Industrial Laboratory Name: Mitkem

Reviewer: R. Petrella Date of Review: 11/13/06

Fraction: VOA

__ All blanks clean

IX. Blank Summary

Date/Time of Analysis: _____ File ID: _____

| Compound | Concentration | ≤ CROL | Comments |
|---|---|---|---|

List the samples associated with this method blank.

_____

_____

_____

_____

# DATA VALIDATION – ORGANICS

Site Name: Active Industrial Laboratory Name: Mitkem

Reviewer: R. Petrella Date of Review: 11/13/06

Fraction: VOA

X. Surrogate Recovery Summary

Were all surrogate recoveries within the contract limits ?

Yes

If No, please note below.

| Sample | Surrogate Compound Outside Recovery Limits | Amount Above Contract Requirement | Comments |
|---|---|---|---|

## DATA VALIDATION – ORGANICS

Site Name: Active Industrial Laboratory Name: Mitkem

Reviewer: R. Petrella Date of Review: 11/13/06

Fraction: VOA

**Site specific QC not provided**

XI. Matrix Spike/Matrix Spike Duplication Summary

Sample ID: _____ Matrix: _____

Did the MS/MSD recovery data meet the contract recommended requirements ?

Yes No

If No, please note below.

_____

_____

_____

_____

# DATA VALIDATION – METALS

Site Name: Active Industrial Laboratory Name: Mitkem

Reviewer: R. Petrella Date of Review: 11/13/06

I. Holding times

| Sample | Date Received | Date Digested | Date Analyzed | Holding Time Exceeded? |
|---|---|---|---|---|
| COMB INF | 8/18/06 | | 8/29/06 | No |
| COMB EFF | 8/18/06 | | 9/1/06 | No |

# DATA VALIDATION – METALS

Site Name: Active Industrial Laboratory Name: Mitkem

Reviewer: R. Petrella Date of Review: 11/13/06

Associated Samples: _____

II. Initial Calibration

1. Were all initial instrument calibrations performed?

   Yes

   Comments:

_____

_____

_____

2. Were the initial calibration verification standards analyzed at the contract specified frequency?

   Yes

   Comments:

_____

_____

_____

3. Were the initial calibration results within the control limits listed below?

   For tin and mercury: 80-120% of the true value
   For all other metals: 90-110% of the true value

   Yes

   If "No", note analytes _____

# DATA VALIDATION – METALS

Site Name: Active Industrial Laboratory Name: Mitkem

Reviewer: R. Petrella Date of Review: 11/13/06

Associated Samples: _____

III. Continuing Calibration

1. Were the continuing calibration verification standards analyzed at the contract specified frequency?

   Yes

   Comments:

_____

_____

_____

2. Were the continuing calibration results within the control limits listed below?

   For tin and mercury: 80-120% of the true value
   For all other metals: 90-110% of the true value

   Yes

   If "No", note analytes _____

## DATA VALIDATION – METALS

Site Name: Active Industrial Laboratory Name: Mitkem

Reviewer: R. Petrella Date of Review: 11/13/06

IV. Blank Summary

A. Method Blanks

1. Was a method blank prepared and analyzed at the contract specified frequency?

   Yes

2. Were all the analytes below the CRDL in the method blank?

   Yes

Comments:

B. Calibration Blanks

1. Were all initial and continuing calibration blanks analyzed at the contract specified frequency/

   Yes

2. Were all the analytes below the CRDL in all the calibration blanks?

   Yes

Comments:

## DATA VALIDATION – METALS

Site Name: Active Industrial Laboratory Name: Mitkem

Reviewer: R. Petrella Date of Review: 11/13/06

**Site specific QC not provided**

V. Duplicate Analysis

1. Was a duplicate prepared and analyzed at the contract specified frequency?

   Yes No

   Comments:

2. Were control limits for the relative percent differences (RPD) met for each analyte?

   Yes No

   Comments:

For sample values >5 times the CRDL, the RPD control limit is ±20%.

For sample values ≤ 5 times the CRDL, the RPD control limit is ±CRDL.

If sample results were outside of the control limits, all data associated with that duplicate sample should have been flagged with a "*".

## DATA VALIDATION – METALS

Site Name: Active Industrial Laboratory Name: Mitkem

Reviewer: R. Petrella Date of Review: 11/13/06

**Site specific QC not provided**

VI. Matrix Spike Analysis

1. Was a matrix spike prepared and analyzed at the contract specified frequency?

   Yes No

   Comments:

2. Were the matrix spike recoveries within the contract specified control limits (75-125%)?

   Yes No

   If "No", note analytes _____

   Data should have been flagged with "N" for analytes out of control limits. If the sample concentration exceeds the spike concentration by a factor of four or more, no flag is required.

## DATA VALIDATION – METALS

Site Name: Active Industrial Laboratory Name: Mitkem

Reviewer: R. Petrella Date of Review: 11/13/06

VII. ICP Interference Check Sample Summary

1. Was the ICP serial dilution analyzed at the contract specified frequency?

   Yes

   Comments:

2. Were the serial dilution differences within the contract specified limits of ±w 10%?

   Yes

   Comments:

3. Was the ICP CRDL check standard analyzed at the contract specified frequency for the analytes required?

   Yes

   Comments:

## DATA VALIDATION – METALS

Site Name: Active Industrial Laboratory Name: Mitkem

Reviewer: R. Petrella Date of Review: 11/13/06

VII. ICP Interference Check Sample Summary (continued):

4. Was the ICP interference check sample analyzed at the contract specified frequency:

   Yes

   Comments:

5. Were the ICP interference check sample results within the control limit of ± 20% of the mean value?

   Yes

   If "No", not analytes

## DATA VALIDATION – METALS

Site Name: Active Industrial Laboratory Name: Mitkem

Reviewer: R. Petrella Date of Review: 11/13/06

VIII. Laboratory Control Sample Analysis

1. Was a laboratory control sample analyzed at the contract required frequency?

   Yes

   Comments:

2. Were the percent recoveries within the control limits of 80-120% (except for Ag and Sb) for each analyte?

   Yes

   Comments:

## DATA VALIDATION – ORGANICS

Site Name: Active Industrial Laboratory Name: Mitkem

Reviewer: R. Petrella Date of Review: 11/13/06

Fraction: VOA

X. Surrogate Recovery Summary

Were all surrogate recoveries within the contract limits ?

Yes

If No, please note below.

| Sample | Surrogate Compound Outside Recovery Limits | Amount Above Contract Requirement | Comments |
|---|---|---|---|

## DATA VALIDATION – ORGANICS

Site Name: Active Industrial Laboratory Name: Mitkem

Reviewer: R. Petrella Date of Review: 11/13/06

Fraction: VOA

All blanks clean

IX. Blank Summary

Date/Time of Analysis: _____ File ID: _____

| Compound | Concentration | ≤ CROL | Comments |
|---|---|---|---|

List the samples associated with this method blank.

_____

_____

_____

_____

## DATA VALIDATION – ORGANICS

Site Name: Active Industrial Laboratory Name: Mitkem

Reviewer: R. Petrella Date of Review: 11/13/06

Fraction: VOA

VIII. Internal Standard Area Summary (GC/MS)

Were all internal standard peak areas within the contract limits ?

Yes

If No, please note below

| Sample | Internal Standard Outside Limits | Amount Above Contract Requirement | Comments |
|---|---|---|---|

# DATA VALIDATION – ORGANICS

Site Name: Active Industrial Laboratory Name: Mitkem

Reviewer: R. Petrella Date of Review: 11/13/06

Fraction: VOA

VI. Continuing Calibration Summary (GC/MS)

Date of Initial Calibration: 8/5/06

Date of Continuing Calibration: 9/20, 9/21 File ID: V6E6091, V6E6121

A. 1. All SPCC met criteria ?

Yes

Calculate a SPCC RRF

Comments:

2. All CCC met criteria ?

Yes

Calculate a CCC % D

Comments:

B. Overall assessment of Continuing Calibration (list associated samples)

ok

## DATA VALIDATION – ORGANICS

Site Name: Active Industrial

Laboratory Name: Mitkem

Reviewer: R. Petrella

Date of Review: 11/13/06

Fraction: VOA

Date of Calibration: 8/5/06

IV. Initial Calibration Summary (continued)

2. All CCC met Criteria ?

Yes

Comments: _____

Calculate a CCC % RSD

C. 1. Was the tune for the initial calibration acceptable ?

Yes

2. Was the calibration conducted within 12 hours of the tune

Yes

Comments: _____

D. Overall assessment of the initial calibration:
(list the associated samples)

ok

## DATA VALIDATION – ORGANICS

Site Name: Active Industrial Laboratory Name: Mitkem

Reviewer: R. Petrella Date of Review: 11/13/06

Fraction: VOA

IV. Initial Calibration Summary (GC/MS)

Date of Calibration: 8/5/06

A. Standard Data Files

| | | | |
|---|---|---|---|
| Standard 1 ID: | V6E4927 | Conc: | 5 |
| Standard 2 ID: | V6E4926 | Conc: | 20 |
| Standard 3 ID: | V6E4925 | Conc: | 50 |
| Standard 4 ID: | V6E4930 | Conc: | 100 |
| Standard 5 ID: | V6E4930 | Conc: | 200 |

B. 1. All SPCC met Criteria ?

Yes

2. Calculate a SPCC average RRF

Comments:

# DATA VALIDATION – ORGANICS

Site Name: Active Industrial  Laboratory Name: Mitkem

Reviewer: R. Petrella  Date of Review: 11/13/06

Fraction: VOA, SVOA

III. Tune Summary

| Tune File I.D. Number | Acceptable ? | Comments |
|---|---|---|
| 1. V6E4913 | YES | INITIAL |
| 2. V6E6090 | YES | SAMPLES |
| 3. V6E6120 | YES | DILUTION |
| 4. | | |
| 5. | | |
| 6. | | |
| 7. | | |
| 8. | | |
| 9. | | |
| 10. | | |

## DATA VALIDATION – ORGANICS

Site Name: Active Industrial Laboratory Name: Mitkem

Reviewer: R. Petrella Date of Review: 11/13/06

II. Holding Times

| Sample I.D. | Date Received | Date Extracted | Date Analyzed | Holding Time Exceeded? |
|---|---|---|---|---|
| COMB INF | 9/20/06 | | 9/20/06 | No |
| COMP EFF | 9/20/06 | | 9/20/06 | No |
| RW-1 INF | 9/20/06 | | 9/20,9/21 | No |
| RW-2 INF | 9/20/06 | | 9/20/06 | No |
| COMB MID | 9/20/06 | | 9/20/06 | No |

# DATA VALIDATION – ORGANICS

Site Name: Active Industrial  Laboratory Name: Mitkem

Reviewer: R. Petrella RP 11/13/06  Date of Review: 11/13/06

I. Data Deliverable Requirements

| | |
|---|---|
| A. Legible | Yes |
| B. Paginated | Yes |
| C. Arranged in order | Yes |
| D. Consistent dates | Yes |
| E. Case Narrative | Yes |
| F. Chain-of-Custody Record | Yes |
| G. Sample Data Complete | Yes |
| H. Standard Date Complete | Yes |
| I. Raw QC Data Complete | Yes |

Comments: E1431

5 WATER SAMPLES – INF and EFF run for VOA, pH and metals, the mid sample was run just for VOA

RW-1 required reanalysis at a secondary dilution for concentration of tetrachloroethene.

# DATA VALIDATION – ORGANICS

Site Name: Active Industrial Laboratory Name: Mitkem

Reviewer: R. Petrella Date of Review: 11/13/06

Fraction: VOA

**Site specific QC not provided**

XI. Matrix Spike/Matrix Spike Duplication Summary

Sample ID: _____ Matrix: _____

Did the MS/MSD recovery data meet the contract recommended requirements ?

Yes No

If No, please note below.

_____

_____

_____

_____

# DATA VALIDATION – METALS

Site Name: Active Industrial Laboratory Name: Mitkem

Reviewer: R. Petrella Date of Review: 11/13/06

I. Holding times

| Sample | Date Received | Date Digested | Date Analyzed | Holding Time Exceeded? |
|---|---|---|---|---|
| COMB INF | 9/20/06 | | 9/22/06 | No |
| COMB EFF | 9/20/06 | | 9/22/06 | No |
| RW-1 INF | 9/20/06 | | 9/22/06 | No |
| RW-2 | 9/20/06 | | 9/22/06 | No |

# DATA VALIDATION – METALS

Site Name: Active Industrial Laboratory Name: Mitkem

Reviewer: R. Petrella Date of Review: 11/13/06

Associated Samples: _____

II. Initial Calibration

1. Were all initial instrument calibrations performed?

   Yes

   Comments:

_____

_____

_____

2. Were the initial calibration verification standards analyzed at the contract specified frequency?

   Yes

   Comments:

_____

_____

_____

3. Were the initial calibration results within the control limits listed below?

   For tin and mercury: 80-120% of the true value
   For all other metals: 90-110% of the true value

   Yes

   If "No", note analytes _____

## DATA VALIDATION – METALS

Site Name: Active Industrial Laboratory Name: Mitkem

Reviewer: R. Petrella Date of Review: 11/13/06

Associated Samples: _____

III. Continuing Calibration

1. Were the continuing calibration verification standards analyzed at the contract specified frequency?

   Yes

   Comments:

_____

_____

_____

2. Were the continuing calibration results within the control limits listed below?

   For tin and mercury: 80-120% of the true value
   For all other metals: 90-110% of the true value

   Yes

   If "No", note analytes _____

## DATA VALIDATION – METALS

Site Name: Active Industrial Laboratory Name: Mitkem

Reviewer: R. Petrella Date of Review: 11/13/06

IV. Blank Summary

A. Method Blanks

1. Was a method blank prepared and analyzed at the contract specified frequency?

   Yes

2. Were all the analytes below the CRDL in the method blank?

   Yes

Comments:

B. Calibration Blanks

1. Were all initial and continuing calibration blanks analyzed at the contract specified frequency/

   Yes

2. Were all the analytes below the CRDL in all the calibration blanks?

   Yes

Comments:

## DATA VALIDATION – METALS

Site Name: Active Industrial Laboratory Name: Mitkem

Reviewer: R. Petrella Date of Review: 11/13/06

**Site specific QC not provided**

V. Duplicate Analysis

1. Was a duplicate prepared and analyzed at the contract specified frequency?

   Yes No

   Comments:

2. Were control limits for the relative percent differences (RPD) met for each analyte?

   Yes No

   Comments:

For sample values >5 times the CRDL, the RPD control limit is ±20%.

For sample values ≤ 5 times the CRDL, the RPD control limit is ±CRDL.

If sample results were outside of the control limits, all data associated with that duplicate sample should have been flagged with a "*".

## DATA VALIDATION – METALS

Site Name: Active Industrial Laboratory Name: Mitkem

Reviewer: R. Petrella Date of Review: 11/13/06

**Site specific QC not provided**

VI. Matrix Spike Analysis

1. Was a matrix spike prepared and analyzed at the contract specified frequency?

   Yes No

   Comments:

2. Were the matrix spike recoveries within the contract specified control limits (75-125%)?

   Yes No

   If "No", note analytes _____

   Data should have been flagged with "N" for analytes out of control limits. If the sample concentration exceeds the spike concentration by a factor of four or more, no flag is required.

## DATA VALIDATION – METALS

Site Name: Active Industrial Laboratory Name: Mitkem

Reviewer: R. Petrella Date of Review: 11/13/06

VII. ICP Interference Check Sample Summary

1. Was the ICP serial dilution analyzed at the contract specified frequency?

   Yes

   Comments:

2. Were the serial dilution differences within the contract specified limits of ±w 10%?

   Yes

   Comments:

3. Was the ICP CRDL check standard analyzed at the contract specified frequency for the analytes required?

   Yes

   Comments:

## DATA VALIDATION – METALS

Site Name: Active Industrial Laboratory Name: Mitkem

Reviewer: R. Petrella Date of Review: 11/13/06

VII. ICP Interference Check Sample Summary (continued):

4. Was the ICP interference check sample analyzed at the contract specified frequency:

   Yes

   Comments:

5. Were the ICP interference check sample results within the control limit of ± 20% of the mean value?

   Yes

   If "No", not analytes

# DATA VALIDATION – METALS

Site Name: Active Industrial Laboratory Name: Mitkem

Reviewer: R. Petrella Date of Review: 11/13/06

VIII. Laboratory Control Sample Analysis

1. Was a laboratory control sample analyzed at the contract required frequency?

   Yes

   Comments:

2. Were the percent recoveries within the control limits of 80-120% (except for Ag and Sb) for each analyte?

   Yes

   Comments:

# DATA VALIDATION – ORGANICS

Site Name: Active Industrial Laboratory Name: Mitkem

Reviewer: R. Petrella Date of Review: 11/13/06

Fraction: VOA

**Site specific QC not provided**

XI. Matrix Spike/Matrix Spike Duplication Summary

Sample ID: _____ Matrix: _____

Did the MS/MSD recovery data meet the contract recommended requirements ?

Yes No

If No, please note below.

_____

_____

_____

_____

# DATA VALIDATION – ORGANICS

Site Name: Active Industrial Laboratory Name: Mitkem

Reviewer: R. Petrella Date of Review: 11/13/06

Fraction: VOA

X. Surrogate Recovery Summary

Were all surrogate recoveries within the contract limits ?

Yes

If No, please note below.

| Sample | Surrogate Compound Outside Recovery Limits | Amount Above Contract Requirement | Comments |
|---|---|---|---|

# DATA VALIDATION – ORGANICS

Site Name: Active Industrial Laboratory Name: Mitkem

Reviewer: R. Petrella Date of Review: 11/13/06

Fraction: VOA

All blanks clean

IX. Blank Summary

Date/Time of Analysis: _____ File ID: _____

| Compound | Concentration | ≤ CROL | Comments |
|---|---|---|---|

List the samples associated with this method blank.

_____

_____

_____

_____

# DATA VALIDATION – ORGANICS

Site Name: Active Industrial Laboratory Name: Mitkem

Reviewer: R. Petrella Date of Review: 11/13/06

Fraction: VOA

VIII. Internal Standard Area Summary (GC/MS)

Were all internal standard peak areas within the contract limits ?

Yes

If No, please note below

| Sample | Internal Standard Outside Limits | Amount Above Contract Requirement | Comments |
|---|---|---|---|

# DATA VALIDATION – ORGANICS

Site Name: Active Industrial Laboratory Name: Mitkem

Reviewer: R. Petrella Date of Review: 11/13/06

Fraction: VOA

VI. Continuing Calibration Summary (GC/MS)

Date of Initial Calibration: 9/29

Date of Continuing Calibration: 9/29, 10/2 File ID: _____

A. 1. All SPCC met criteria ?

Yes

Calculate a SPCC RRF

Comments: _____

_____

2. All CCC met criteria ?

Yes

Calculate a CCC % D

Comments: _____

_____

B. Overall assessment of Continuing Calibration
(list associated samples)

ok _____

_____

# DATA VALIDATION – ORGANICS

Site Name: Active Industrial

Laboratory Name: Mitkem

Reviewer: R. Petrella

Date of Review: 11/13/06

Fraction: VOA

Date of Calibration: 9/29

IV. Initial Calibration Summary (continued)

2. All CCC met Criteria ?

Yes

Comments: _____

_____

Calculate a CCC % RSD

C. 1. Was the tune for the initial calibration acceptable ?

Yes

2. Was the calibration conducted within 12 hours of the tune

Yes

Comments: _____

_____

_____

D. Overall assessment of the initial calibration:
(list the associated samples)

ok

_____

_____

# DATA VALIDATION – ORGANICS

Site Name: Active Industrial Laboratory Name: Mitkem

Reviewer: R. Petrella Date of Review: 11/13/06

Fraction: VOA

IV. Initial Calibration Summary (GC/MS)

Date of Calibration: 9/29

A. Standard Data Files

| | | | |
|---|---|---|---|
| Standard 1 ID: | CEP002V | Conc: | 0.2 |
| Standard 2 ID: | CEP005V | Conc. | 0.5 |
| Standard 3 ID: | CEP05V | Conc: | 5 |
| Standard 4 ID: | CEP10V | Conc: | 10 |
| Standard 5 ID: | CEP20V, CEP40V | Conc: | 20, 40 |

B. 1. All SPCC met Criteria ?

Yes

2. Calculate a SPCC average RRF

Comments:

# DATA VALIDATION – ORGANICS

Site Name: Active Industrial

Laboratory Name: Mitkem

Reviewer: R. Petrella

Date of Review: 11/13/06

Fraction: VOA

III. Tune Summary

| Tune File I.D. Number | Acceptable ? | Comments |
|---|---|---|
| 1. CEP02PV | YES | INITIAL/SAMPLES |
| 2. CEP03PV | YES | SAMPLES |
| 3. | | |
| 4. | | |
| 5. | | |
| 6. | | |
| 7. | | |
| 8. | | |
| 9. | | |
| 10. | | |

# DATA VALIDATION – ORGANICS

ite Name: Active Industrial  Laboratory Name: Mitkem

Reviewer: R. Petrella  Date of Review: 11/13/06

II. Holding Times

| Sample I.D. | Date Received | Date Extracted | Date Analyzed | Holding Time Exceeded? |
|---|---|---|---|---|
| VPCV-EFF | 9/20/06 | | 9/30/06 | No |
| VPCV-MID | 9/20/06 | | 10/2/06 | No |
| VPCV-INF | 9/20/06 | | 10/2/06 | No |

# DATA VALIDATION – ORGANICS

Site Name: Active Industrial  Laboratory Name: Mitkem

Reviewer: R. Petrella 11/13/06  Date of Review: 11/13/06

I. Data Deliverable Requirements

| | |
|---|---|
| A. Legible | Yes |
| B. Paginated | Yes |
| C. Arranged in order | Yes |
| D. Consistent dates | Yes |
| E. Case Narrative | Yes |
| F. Chain-of-Custody Record | Yes |
| G. Sample Data Complete | Yes |
| H. Standard Date Complete | Yes |
| I. Raw QC Data Complete | Yes |

Comments: E1432

3 air SAMPLES – for VOA by TO15

Samples subbed to STL Vermont. STL did not receive the samples until 9/25/06

# DATA VALIDATION – ORGANICS

Site Name: Active Industrial

Laboratory Name: Mitkem

Reviewer: R. Petrella

Date of Review: 11/14/06

I. Data Deliverable Requirements

| | |
|---|---|
| A. Legible | Yes |
| B. Paginated | Yes |
| C. Arranged in order | Yes |
| D. Consistent dates | Yes |
| E. Case Narrative | Yes |
| F. Chain-of-Custody Record | Yes |
| G. Sample Data Complete | Yes |
| H. Standard Date Complete | Yes |
| I. Raw QC Data Complete | Yes |

Comments: E1501

10 WATER SAMPLES – analyzed for VOA

# DATA VALIDATION – ORGANICS

Site Name: Active Industrial Laboratory Name: Mitkem

Reviewer: R. Petrella Date of Review: 11/14/06

II. Holding Times

| Sample I.D. | Date Received | Date Extracted | Date Analyzed | Holding Time Exceeded? |
|---|---|---|---|---|
| TB-1 | 9/30/06 | | 10/4-10/6 | No |
| MW-111 | 9/30/06 | | 10/4-10/6 | No |
| MW-109 | 9/30/06 | | 10/4-10/6 | No |
| MW-105 | 9/30/06 | | 10/4-10/6 | No |
| MW-103 | 9/30/06 | | 10/4-10/6 | No |
| MW-101 | 9/30/06 | | 10/4-10/6 | No |
| MW-102 | 9/30/06 | | 10/4-10/6 | No |
| MW-106 | 9/30/06 | | 10/4-10/6 | No |
| MW-107 | 9/30/06 | | 10/4-10/6 | No |
| MW-104 | 9/30/06 | | 10/4-10/6 | No |
| MW-108 | 9/30/06 | | 10/4-10/6 | No |

# DATA VALIDATION – ORGANICS

Site Name: Active Industrial  Laboratory Name: Mitkem

Reviewer: R. Petrella  Date of Review: 11/14/06

Fraction: VOA, SVOA

III. Tune Summary

| Tune File I.D. Number | Acceptable ? | Comments |
|---|---|---|
| 1. V2H8830 | YES | INITIAL |
| 2. V2H8840 | YES | SAMPLES |
| 3. V6E6250 | YES | INITIAL |
| 4. V6E6610 | YES | SAMPLES |
| 5. | | |
| 6. | | |
| 7. | | |
| 8. | | |
| 9. | | |
| 10. | | |

# DATA VALIDATION – ORGANICS

Site Name: Active Industrial Laboratory Name: Mitkem

Reviewer: R. Petrella Date of Review: 11/14/06

Fraction: VOA

IV. Initial Calibration Summary (GC/MS)

Date of Calibration: 10/4, 9/26

A. Standard Data Files

| | | | |
|---|---|---|---|
| Standard 1 ID: | V2H8837, V6E6252 | Conc: | 5 |
| Standard 2 ID: | V2H8835, V6E6255 | Conc: | 20 |
| Standard 3 ID: | V2H8831, V6E6251 | Conc: | 50 |
| Standard 4 ID: | V2H8834, V6E6254 | Conc: | 100 |
| Standard 5 ID: | V2H8833, V6E6253 | Conc: | 200 |

B. 1. All SPCC met Criteria ?

Yes

2. Calculate a SPCC average RRF

Comments:

# DATA VALIDATION – ORGANICS

Site Name: Active Industrial

Laboratory Name: Mitkem

Reviewer: R. Petrella

Date of Review: 11/14/06

Fraction: VOA

Date of Calibration: 10/4, 9/26

IV. Initial Calibration Summary (continued)

2. All CCC met Criteria ?

Yes

Comments:

Calculate a CCC % RSD

C. 1. Was the tune for the initial calibration acceptable ?

Yes

2. Was the calibration conducted within 12 hours of the tune

Yes

Comments:

D. Overall assessment of the initial calibration:
(list the associated samples)

ok

## DATA VALIDATION – ORGANICS

Site Name: Active Industrial Laboratory Name: Mitkem

Reviewer: R. Petrella Date of Review: 11/14/06

Fraction: VOA

VI. Continuing Calibration Summary (GC/MS)

Date of Initial Calibration: 10/4, 9/26

Date of Continuing Calibration: 10/4, 10/6 File ID: V6H8841, V6E6610

A. 1. All SPCC met criteria ?

Yes

Calculate a SPCC RRF

Comments:

2. All CCC met criteria ?

Yes

Calculate a CCC % D

Comments:

B. Overall assessment of Continuing Calibration
(list associated samples)

ok

## DATA VALIDATION – ORGANICS

Site Name: Active Industrial Laboratory Name: Mitkem

Reviewer: R. Petrella Date of Review: 11/14/06

Fraction: VOA

VIII. Internal Standard Area Summary (GC/MS)

Were all internal standard peak areas within the contract limits ?

Yes

If No, please note below

| Sample | Internal Standard Outside Limits | Amount Above Contract Requirement | Comments |
|---|---|---|---|

## DATA VALIDATION – ORGANICS

Site Name: Active Industrial Laboratory Name: Mitkem

Reviewer: R. Petrella Date of Review: 11/14/06

Fraction: VOA

All blanks clean

IX. Blank Summary

Date/Time of Analysis: _____ File ID: _____

| Compound | Concentration | ≤ CROL | Comments |
|---|---|---|---|

List the samples associated with this method blank.

_____

_____

_____

_____

## DATA VALIDATION – ORGANICS

Site Name: Active Industrial Laboratory Name: Mitkem

Reviewer: R. Petrella Date of Review: 11/14/06

Fraction: VOA

X. Surrogate Recovery Summary

Were all surrogate recoveries within the contract limits ?

Yes

If No, please note below.

| Sample | Surrogate Compound Outside Recovery Limits | Amount Above Contract Requirement | Comments |
|---|---|---|---|

## DATA VALIDATION – ORGANICS

Site Name: Active Industrial Laboratory Name: Mitkem

Reviewer: R. Petrella Date of Review: 11/14/06

Fraction: VOA

XI. Matrix Spike/Matrix Spike Duplication Summary

Sample ID: MW-111 Matrix: WATER

Did the MS/MSD recovery data meet the contract recommended requirements ?

Yes*

If No, please note below.

11 of 132 spike recoveries were slightly above limits all RPD's were within limits no action required.

## Data Validation Check List

SDG: F0018
Number of Samples: 2 Waters
Analysis: VOA, Met

| Contractual Compliance | VOC | Met |
|---|---|---|
| Tunes: | OK | — |
| Surrogate Recoveries | OK | — |
| Blanks | clean | OK |
| Initial Calibrations | OK | OK |
| Continuing Calibrations | OK | OK |
| Spikes | Blank-OK | — |
| Duplicates | — | — |
| Laboratory Control Samples | OK | OK |

Comments/Notes: Coolers wet, coolers off
collected 1/5 VTSR 9/6 Run VOA 1/10 (VOA)
1/11, 1/17 (Met)

✓ No problems with analysis

## Data Validation Check List

SDG: F0019
Number of Samples: 3 air
Analysis: VOA - TO15

Contractual Compliance

| | VOC | |
|---|---|---|
| Tunes: | Ok | |
| Surrogate Recoveries | Ok | |
| Blanks | / | |
| Initial Calibrations | / | |
| Continuing Calibrations | / | |
| Spikes | / | |
| Duplicates | / | |
| Laboratory Control Samples | | |

Comments/Notes: Collected 1/5/07
Analyzed by CenteK

No problems with analysis

Samples had cmpd concentrations exceeding calibration range. Samples not rerun at dilutions since canister samples.

**Data Validation Check List**

SDG: F0248
Number of Samples: 2 GW
Analysis: VOA, Met

| Contractual Compliance | VOC | Met |
|---|---|---|
| Tunes: | OK | / |
| Surrogate Recoveries | OK | / |
| Blanks | OK* | OK |
| Initial Calibrations | OK | OK |
| Continuing Calibrations | OK | OK |
| Spikes | / | OK |
| Duplicates | / | OK |
| Laboratory Control Samples | OK | OK |

* cmpds in blank not detected in sample.

Comments/Notes: combwf combeff.
collect 2/26 VTSR 2/27 analyzed 3/5, 3/7 - VOA
Met 3/9, 3/12

No problems with analysis

combwf - rerun at a 1:2 dilution for tetrachloroethene.

**Data Validation Check List**

SDG: F0249
Number of Samples: 3 air
Analysis: TO15

Contractual Compliance

| | VOC | |
|---|---|---|
| Tunes: | Ok | |
| Surrogate Recoveries | Ok | |
| Blanks | ✓ | |
| Initial Calibrations | ✓ | |
| Continuing Calibrations | ✓ | |
| Spikes | ✓ | |
| Duplicates | ✓ | |
| Laboratory Control Samples | ✓ | |

Comments/Notes: collected 2/26; analyzed by Centek.

No problems with analysis

## Data Validation Check List

SDG: F0337
Number of Samples: 3 waters
Analysis: VOC | MET

| | VOC | MET |
|---|---|---|
| Contractual Compliance | | |
| Tunes: | OK | — |
| Surrogate Recoveries | * | — |
| Blanks | clean | OK |
| Initial Calibrations | OK | OK |
| Continuing Calibrations | OK | OK |
| Spikes | blank OK | — |
| Duplicates | — | — |
| Laboratory Control Samples | — | OK |

SMC 1
* Comb Inf 117
mid 116
limit 115
no action Required

Comments/Notes: Comp Inf, Eff, mid
Collected 3/16 VTSR 3/17 Run 3/19
met 3/23, 4/4

No problems with analysis

## Data Validation Check List

SDG: F0340
Number of Samples: 3 air
Analysis: VOC-TO15

Contractual Compliance

| | VOC | |
|---|---|---|
| Tunes: | Ok | |
| Surrogate Recoveries | Ok | |
| Blanks | Ok | |
| Initial Calibrations | ✓ | |
| Continuing Calibrations | ✓ | |
| Spikes | ✓ | |
| Duplicates | ✓ | |
| Laboratory Control Samples | ✓ | |

Comments/Notes: collected 3/16/07
samples analyzed by Centek

No problems with analysis ✓

**Data Validation Check List**

SDG: F0364
Number of Samples: 10 waters
Analysis: VOC, plt

Contractual Compliance

| | VOC | |
|---|---|---|
| Tunes: | OK | |
| Surrogate Recoveries | OK | |
| Blanks | OK* | |
| Initial Calibrations | OK | |
| Continuing Calibrations | OK | |
| Spikes | OK | |
| Duplicates | OK | |
| Laboratory Control Samples | OK | |

Comments/Notes: Collected 3/20, 3/21 VTSR 3/22
Run 3/21e, 3/23, 3/24

No problems with analysis

MW-106 required reanalysis at a 1:40 dilution

MW-104 run as the MS/MSD

*Naphthalene, 1,2,3-trichlorobenzene detected in method blank run on 3/24 - cmpds detected in MW-109 qualified as Tr.p blank Chloroform UJ

## Data Validation Check List

SDG: Active Industrial F0887

Number of Samples: 10 wells

Analysis: VOC + pH

Contractual Compliance

| | VOC | SVOC | PCB | METALS |
|---|---|---|---|---|
| Tunes: | OK | | | |
| Surrogate Recoveries | OK | | | |
| Blanks | OK Clean | | | |
| Initial Calibrations | OK | | | |
| Continuing Calibrations | OK | | | |
| Spikes | OK | | | |
| Duplicates | OK | | | |
| Laboratory Control Samples | OK | | | |

Comments/Notes: MW105, MW-101, MW-102, MW-103, MW-104, MW-108, MW-107, MW-106, MW-111, MW-109 collected 6/26, VTSR 6/27 analyzed 7/4

MW-105 run as MS/MSD

No problems found w Sample results.

F0957

## Data Validation Check List

SDG: Active Industrial
Number of Samples: 2 waters
Analysis: VOA, Metals

Contractual Compliance

| | VOC | SVOC | PCB | METALS |
|---|---|---|---|---|
| Tunes: | OK | | | — |
| Surrogate Recoveries | OK | | | — |
| Blanks | OK | | | OK |
| Initial Calibrations | OK | 8 | 8 | OK |
| Continuing Calibrations | OK | 8 | 8 | OK |
| Spikes | blank | | | OK |
| Duplicates | — | | | OK |
| Laboratory Control Samples | OK | | | OK |

Comments/Notes: collected 7/12 VTSR 7/13,
Comb Inf
Comb Eff
VOA 7/13
Hg 7/18
Cyan cts - OK
Met 7/26

F0976

## Data Validation Check List

SDG: Active Industrial
Number of Samples: 3 air
Analysis:

Contractual Compliance

| | VOC | SVOC | PCB | METALS |
|---|---|---|---|---|
| Tunes: | Ok | | | |
| Surrogate Recoveries | Ok | | | |
| Blanks | Ok | | | |
| Initial Calibrations | Ok | & | & | & |
| Continuing Calibrations | Ok | | | |
| Spikes | / | | | |
| Duplicates | / | | | |
| Laboratory Control Samples | Ok | | | |

Comments/Notes: collected 7/17

Samples rec'd at 7/17

No problems

F1114

## Data Validation Check List

SDG: Active Industrial
Number of Samples: 2 waters
Analysis: VOA, met

Contractual Compliance

| | VOC | SVOC | PCB | METALS |
|---|---|---|---|---|
| Tunes: | OK | | | |
| Surrogate Recoveries | OK | | | |
| Blanks | # | | | OK |
| Initial Calibrations | OK | | | OK |
| Continuing Calibrations | OK | | | OK |
| Spikes | Blank OK | | | OK |
| Duplicates | — | | | OK |
| Laboratory Control Samples | OK | | | OK |

Comments/Notes: CombINF, CombEFF
Collection 8/10 VTSR 8/11 VOA run 8/17
met 8/21, 8/23

area ct OK

CombInf – 1,2,4 trichlorobenzene, hexachlorobutadiene naphthalene and 1,2,3,4 trichlorobenzene detected at 1ug/l also detected in blank at 2ug/l ∴ Results qualified as non-detect due to blank contamination

# No Problems

F1115

## Data Validation Check List

SDG: Active Industrial
Number of Samples: 3 air
Analysis: VOC

Contractual Compliance

| | VOC | SVOC | PCB | METALS |
|---|---|---|---|---|
| Tunes: | OK | | | |
| Surrogate Recoveries | OK | | | |
| Blanks | OK | | | |
| Initial Calibrations | OK | | | |
| Continuing Calibrations | OK | | | |
| Spikes | / | | | |
| Duplicates | / | | | |
| Laboratory Control Samples | OK | | | |

Comments/Notes: Centek analyzed air samples collected 8/10 VTSR 8/14

No Problems w sample results

F1300

## Data Validation Check List

SDG: Active Industrial
Number of Samples: 3 air
Analysis: VOA

Contractual Compliance

| | VOC | SVOC | PCB | METALS |
|---|---|---|---|---|
| Tunes: | Ok | | | |
| Surrogate Recoveries | Ok | | | |
| Blanks | Ok | | | |
| Initial Calibrations | Ok | R | R | R |
| Continuing Calibrations | Ok | | | |
| Spikes | / | | | |
| Duplicates | / | | | |
| Laboratory Control Samples | Ok | | | |

Comments/Notes: Samples analyzed by Centek
collected 9/12 rec'd at Centek 9/18

No Problems with air data

F1289

## Data Validation Check List

SDG: Active Industrial
Number of Samples: 3 VOA, metals
Analysis:

Contractual Compliance

| | VOC | SVOC | PCB | METALS |
|---|---|---|---|---|
| Tunes: | OK | | | |
| Surrogate Recoveries | OK | | | |
| Blanks | OK | | | OK |
| Initial Calibrations | OK | | | OK |
| Continuing Calibrations | OK | | | OK |
| Spikes | | | | |
| Duplicates | | | | |
| Laboratory Control Samples | OK | | | OK |

Comments/Notes: Comp INF, Comp Eff, MID
Collected 9/12 VTSR 9/13 VOA Run 9/14
Mercury 9/24
Metals 9/28
Area cts ok
no problems in sample results.

~~F1410~~
F1410

## Data Validation Check List

SDG: Active Industrial
Number of Samples: 10 wells
Analysis: VOC, pH

| Contractual Compliance | VOC | SVOC | PCB | METALS |
|---|---|---|---|---|
| Tunes: | OK | | | |
| Surrogate Recoveries | OK | | | |
| Blanks | | | | |
| Initial Calibrations | OK | OK | | |
| Continuing Calibrations | OK | OK | OK | |
| Spikes * | OK | | OK | OK |
| Duplicates | OK | | | |
| Laboratory Control Samples | OK | | | |

Comments/Notes: MW-101, MW-102, MW-103, MW-104, MW-105
MW-106, MW-107, MW-108, MW-109, MW-111
collected 9/28
VTSR 9/29
analyzed VOA 10/1 → 10/4

MW-104 run as MS/MSD

MW 104 run 1:8 MW-106 run 1:2

* Tetrachloroethene was detect in sample at 1200 ug/kg which is 20x that in spike -

area cts OK -

Naphthalene qualified as ND in sample MW101 due to blank contamination

F1530

## Data Validation Check List

SDG: Active Industrial
Number of Samples: 3 air samples
Analysis: VOC

Contractual Compliance

| | VOC | | | METALS |
|---|---|---|---|---|
| Tunes: | OK | | | |
| Surrogate Recoveries | OK | | | |
| Blanks | OK | | | |
| Initial Calibrations | OK | | | |
| Continuing Calibrations | OK | | | |
| Spikes | / | | | |
| Duplicates | / | | | |
| Laboratory Control Samples | OK | | | |

RP 3/28/08

Comments/Notes: F1530 collection 10/22 VTSR 10/23
Centek - subcontracted for air analyses.
Mini cans used.

Appears canisters were contaminated as all 3 samples have same cmpds at similar concentrations

F1529

## Data Validation Check List

SDG: Active Industrial
Number of Samples: 2 waters
Analysis: Both VOC, INF- Metals

Contractual Compliance

| | VOC | | | METALS |
|---|---|---|---|---|
| Tunes: | OK | | | ✓ |
| Surrogate Recoveries | OK* | | | ✓ |
| Blanks | OK | | | OK |
| Initial Calibrations | 10/12 - OK | | | OK |
| Continuing Calibrations | 10/23 OK | | | OK |
| Spikes | Blank Spike Run | | | OK |
| Duplicates | ✓ | | | OK |
| Laboratory Control Samples | OK | | | OK |

Comments/Notes:

F1529

| | Rec. | Run | Issued |
|---|---|---|---|
| COMB INF | 10/23 | 10/23 | 10/24, 11/5 |
| Comb EFF | 10/23 | 10/23 | — |

Comb eff – TOL-d8 recovery 84% = lower limit 85%
qualification of data not required

Dup/spike run on COMB INF

F1669

## Data Validation Check List

SDG: Active Industrial
Number of Samples: 2 waters
Analysis: VOC, Met

Contractual Compliance

| | VOC | | | METALS |
|---|---|---|---|---|
| Tunes: | OK | | | ✓ |
| Surrogate Recoveries | * | | | ✓ |
| Blanks | clean | | | OK |
| Initial Calibrations | 11/9 OK | | | OK |
| Continuing Calibrations | 11/14 OK | | | OK |
| Spikes | blank - OK | | | ✓ |
| Duplicates | ✓ | | | |
| Laboratory Control Samples | OK | | | |

Comments/Notes: collected 11/13, VTSR 11/14
VOC Run 11/15
MET 11/27
Dibromo Fluoromethane (surrogate) recoveries slightly above limit of 115 - no action required.

F1672

## Data Validation Check List

SDG: Active Industrial
Number of Samples: 3 air
Analysis: VOC

Contractual Compliance

| | VOC | | | METALS |
|---|---|---|---|---|
| Tunes: | OK | | | |
| Surrogate Recoveries | OK | | | |
| Blanks | OK | | | |
| Initial Calibrations | OK | | | |
| Continuing Calibrations | OK | | | |
| Spikes | — | | | |
| Duplicates | — | | | |
| Laboratory Control Samples | OK | | | |

Comments/Notes:
subcontracted to CenteK.

# APPENDIX F

# SPDES PERMIT EQUIVALENCY

Groundwater Water Quality For Design and Effluent Limits

| Parameter | Influent Concentration | Effluent Concentration* |
|---|---|---|
| Trichloroethane | 5900 µg/l | 10 µg/l |
| Tetrachloroethene | 6800 µg/l | 4 µg/l |
| 1,2 Dichloroethene (Total) | 2800 µg/l | 10 µg/l |
| 1,1,1 Trichloroethane | 1200 µg/l | 5 µg/l |
| Xylene | 1100 µg/l | 5 µg/l** |
| Vinyl Chloride | 190 µg/l | 10 µg/l |
| Iron | 1.4 to 4.0 mg/l | 4 mg/l |
| Manganese | 2.83 to 10.1 mg/l | 2 mg/l |
| Total Dissolved Solids | 130 to 294 mg/l | Monitor |
| Total Suspended Solids | 10 to 29 mg/l | 20 mg/l |
| Aluminum | 34 to 1810 ug/l | 4000 ug/l |
| Arsenic | 1.4 to 28.5 ug/l | 140 ug/l |
| Cadmium (T) | 0.3 to 9.5 ug/l | 30 ug/l |
| Copper (T) | 1.5 to 13.3 ug/l | 38 ug/l |
| Nickel (T) | 2.8 to 12.4 ug/l | 65 ug/l |
| Silver (T) | 0.6 to 2.2 ug/l | 9 ug/l |
| Zinc (T) | 15 to 163 ug/l | 370 ug/l |
| Chloride (dissolved) | 40 mg/l | NA |
| COD (dissolved) | mg/l | NA |
| Conductivity (dissolved) at 25 Deg C | 0.28 to 5.1 ms/cm | NA |
| Turbidity | 4 to 425 NTU | NA |
| pH | 6.2 | 6 to 9 |
| Alkalinity (dissolved) | 39 to 80 mg/l | NA |
| Dissolved Oxygen | 0.37 to 2.9 mg/l | NA |

* NYSDEC site specific Effluent limitations and monitoring Requirements
** effluent limits for xylene-o = 5 ug/l; Xylene-m&p = 10 ug/l.

# APPENDIX G

# AIR DISCHARGE PERMIT EQUIVALENCY

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

COPIES
WHITE - ORIGINAL
GREEN - DIVISION OF AIR
WHITE - REGIONAL OFFICE
WHITE - FIELD REP.
YELLOW - APPLICANT

LOCATION FACILITY EMISSION POINT

A ADD
C CHANGE
D DELETE

READ INSTRUCTIONS CONTAINED IN FORM 78-11-12 BEFORE ANSWERING ANY QUESTION

# PROCESS, EXHAUST OR VENTILATION SYSTEM

## APPLICATION FOR PERMIT TO CONSTRUCT OR CERTIFICATE TO OPERATE

**SECTION A**

1. NAME OF OWNER / FIRM: New York State Dept. of Conservation
2. NUMBER AND STREET ADDRESS: 50 Wolf Road
3. CITY - TOWN - VILLAGE: Albany
4. STATE: NY
5. ZIP: 12233-7010
6. NAME OF AUTHORIZED AGENT: Mike Posillico
7. TELEPHONE: 631-752-2145
8. NUMBER AND STREET ADDRESS: Blue Water Environmental 1610 New Highway
9. CITY - TOWN - VILLAGE: Farmingdale
10. STATE: NY
11. ZIP: 11735
12. FACILITY NAME (IF DIFFERENT FROM OWNER / FIRM): Active Industrial Uniform Co. Site
13. FACILITY LOCATION (NUMBER AND STREET ADDRESS): Wellwood Avenue
14. CITY - TOWN - VILLAGE: Lyndenhurst, NY
15. ZIP:
16. BUILDING NAME OR NUMBER:
17. FLOOR NAME OR NUMBER:
18. OWNER CLASSIFICATION: A ☐ COMMERCIAL C. ☐ UTILITY E. ☒ STATE H. ☐ HOSPITAL B ☐ INDUSTRIAL D. ☐ FEDERAL F. ☐ MUNICIPAL I. ☐ RESIDENTIAL G. ☐ EDUC. INST. J. ☐ OTHER
19. NAME OF P.E. OR ARCHITECT PREPARING APPLICATION: Dave Share
20. N.Y.S. P.E. OR ARCHITECT LICENSE NO.: 075259
21. TELEPHONE: (518) 862-2138
22. START UP DATE: 01 / 01 (MO / YR)
23. DRAWING NUMBERS OF PLANS SUBMITTED:
24. NAME & TITLE OF OWNER'S REPRESENTATIVE: Gerald W. Burke, PM
25. TELEPHONE: (518) 457-9280
26. SIGNATURE OF OWNER'S REPRESENTATIVE OR AGENT WHEN APPLYING FOR A PERMIT TO CONSTRUCT
27. PERMIT TO CONSTRUCT: A. ☒ NEW SOURCE B. ☐ MODIFICATION
28. CERTIFICATE TO OPERATE: A. ☒ NEW SOURCE C ☐ EXISTING SOURCE B ☐ MODIFICATION

**SECTION B**

| 29. EMISSION POINT ID. | 30. GROUND ELEVATION (FT.) | 31. HEIGHT ABOVE STRUCTURES (FT.) | 32. STACK HEIGHT (FT.) | 33. INSIDE DIMENSIONS (IN.) | 34. EXIT TEMP. (°F) | 35. EXIT VELOCITY (FT./SEC.) | 36. EXIT FLOW RATE (ACFM) | 37. SOURCE CODE | 38. HRS / DAY | 39. DAYS / YR | 40. % OF OPERATION BY SEASON (Winter / Spring / Summer / Fall) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 00001 | 10 | 10 | 25 | 8.0 | 90°F | 0.35 | 1350 | | 24 | 365 | 25 / 25 / 25 / 25 |

**SECTION C**

41. DESCRIBE PROCESS OR UNIT:
1. 2. 3. 4. 5. 6. 7. 8.

**SECTION D**

| 42. EMISSION CONTROL EQUIPMENT I.D. | 43. CONTROL TYPE | 44. MANUFACTURER'S NAME AND MODEL NUMBER | 45. DISPOSAL METHOD | 46. DATE INSTALLED MONTH / YEAR | 47. USEFUL LIFE |
|---|---|---|---|---|---|
| 01 | 17 | Barneby Sutcliffe Protect™ VS-6 | 9 | 10/00 | 10 |
| 02 | 17 | Barneby Sutcliffe Protect™ VS-6 | 9 | 10/00 | 10 |

**SECTION E**

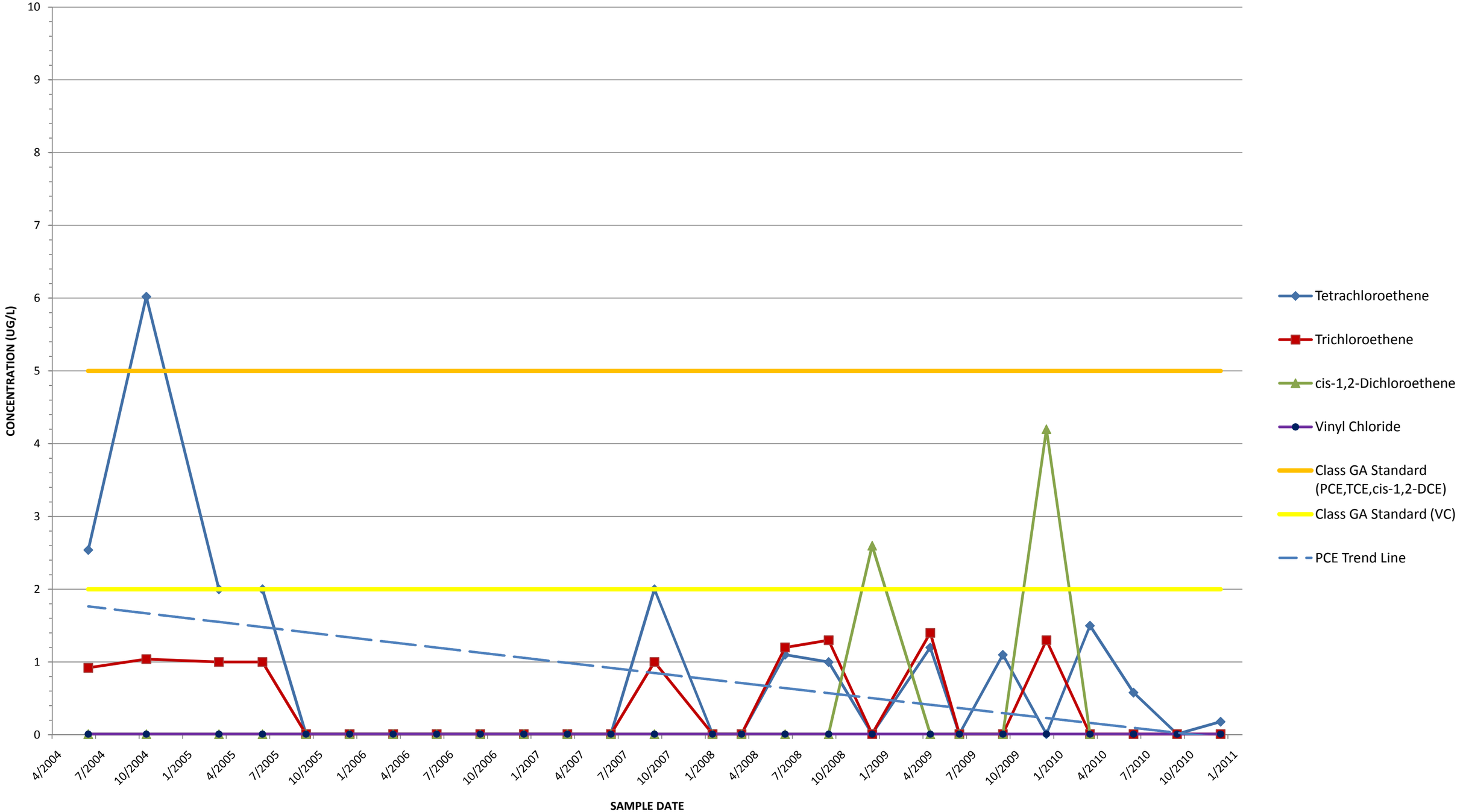
CALCULATIONS

| Constituent | GW Inf. Conc. (mg/L) | GW Eff. Conc. (mg/L) | Removed (mg/L) | GW Q (gpm) | Mass Loading (lb/hr) | Carb Removal (%) | ER (lb/hr) |
|---|---|---|---|---|---|---|---|
| Trichloroethene | 5.900 | 0.010 | 5.890 | 200 | 0.59 | 99% | 0.006 |
| Tetrachloroethene | 6.800 | 0.004 | 6.796 | 200 | 0.68 | 99% | 0.007 |
| 1,2-Dichlorothene (total) | 2.800 | 0.010 | 2.790 | 200 | 0.28 | 99% | 0.003 |
| 1,1,1-Trichloroethane | 1.200 | 0.005 | 1.195 | 200 | 0.12 | 99% | 0.001 |
| Xylenes | 1.100 | 0.005 | 1.095 | 200 | 0.11 | 99% | 0.001 |
| Vinyl Chloride | 0.190 | 0.010 | 0.180 | 200 | 0.02 | 20% | 0.014 |

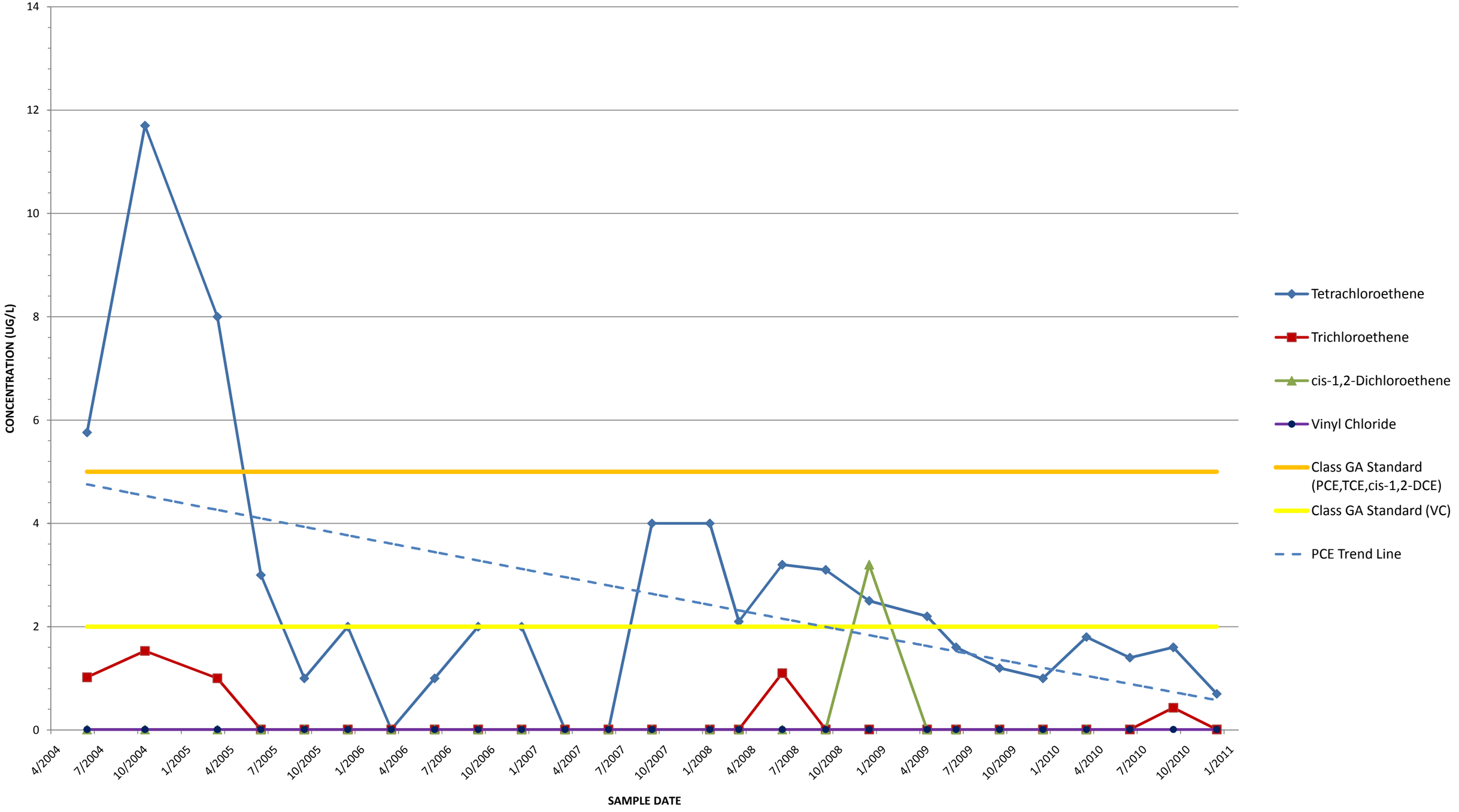
# APPENDIX H

# HISTORICAL MONITORING WELL CONCENTRATION GRAPHS

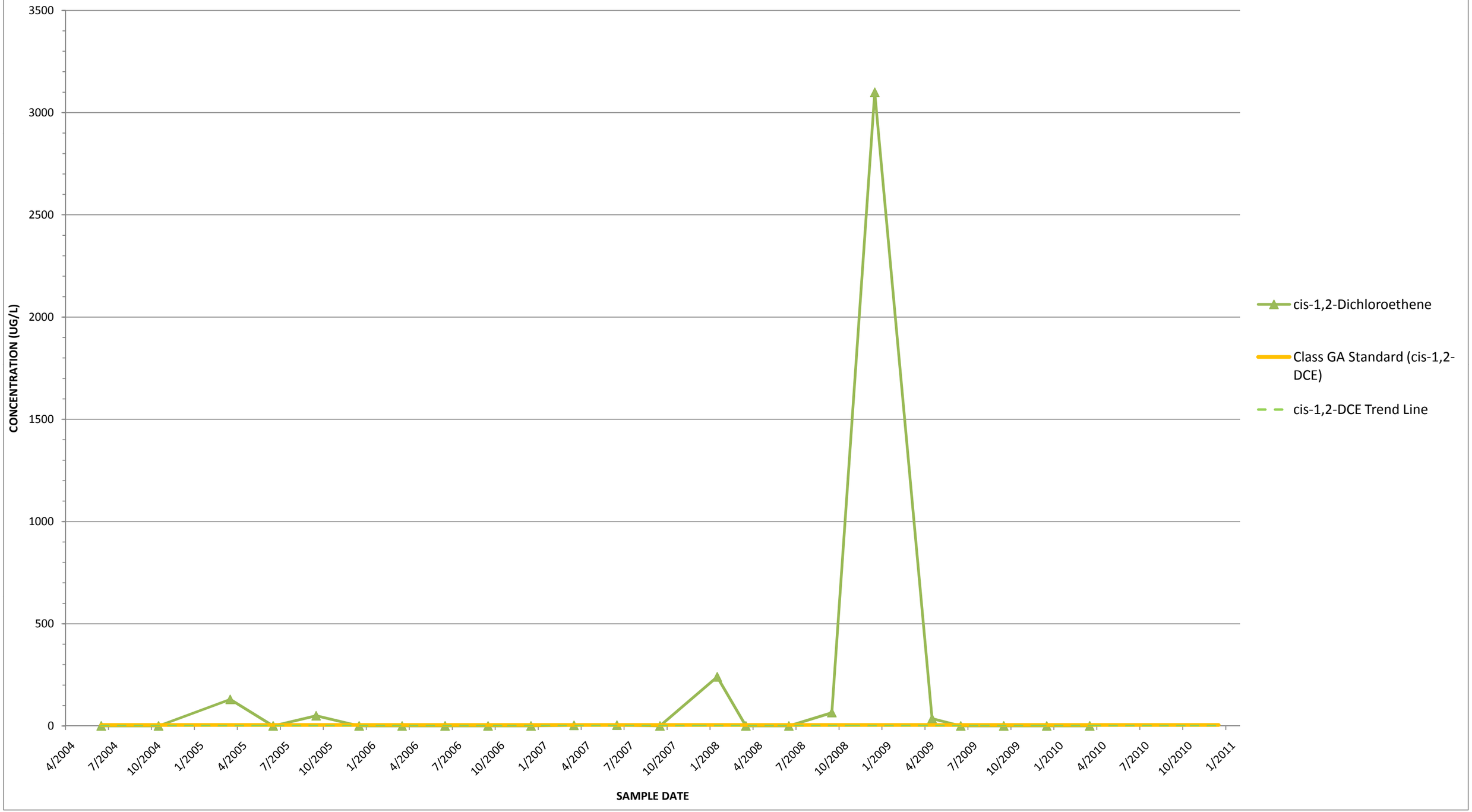
**APPENDIX H**
**ACTIVE INDUSTRIAL UNIFORM SITE**
**NYSDEC SITE No. 1-52-125**
**SUMMARY OF GROUNDWATER SAMPLING RESULTS (MW-101)**



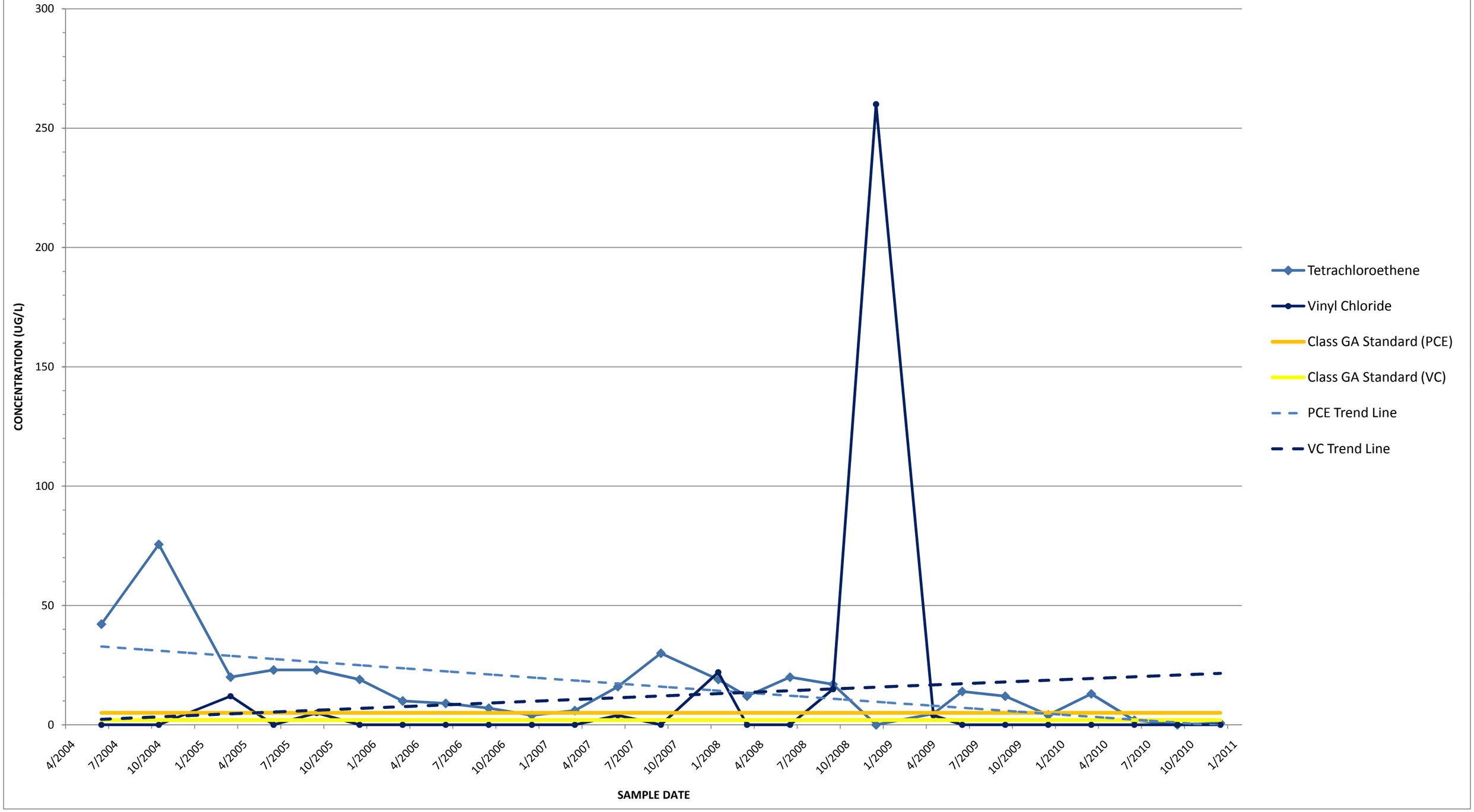
**APPENDIX H**
**ACTIVE INDUSTRIAL UNIFORM SITE**
**NYSDEC SITE No. 1-52-125**
**SUMMARY OF GROUNDWATER SAMPLING RESULTS (MW-102)**



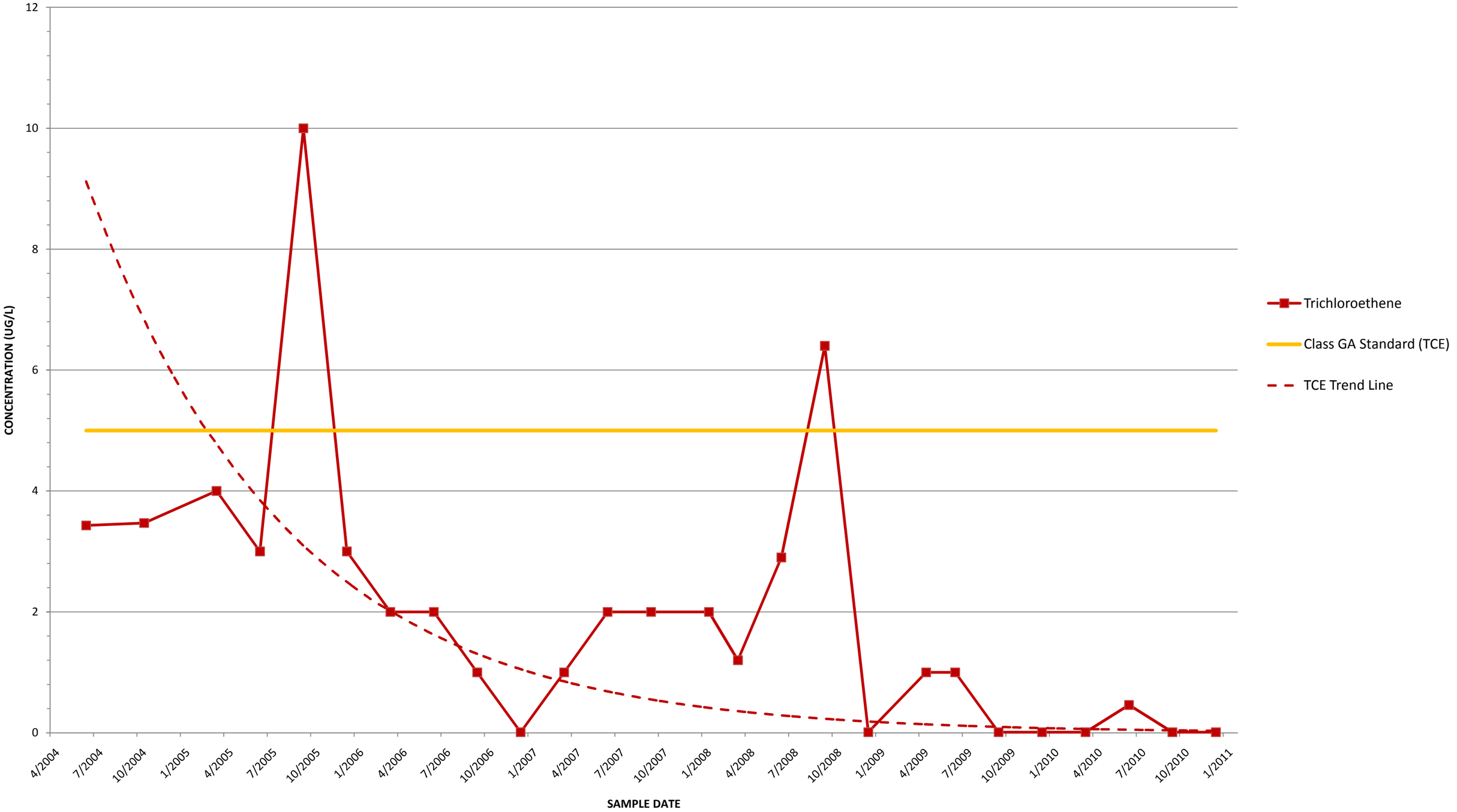
**APPENDIX H**
**ACTIVE INDUSTRIAL UNIFORM SITE**
**NYSDEC SITE No. 1-52-125**
**SUMMARY OF GROUNDWATER SAMPLING RESULTS (MW-103)**



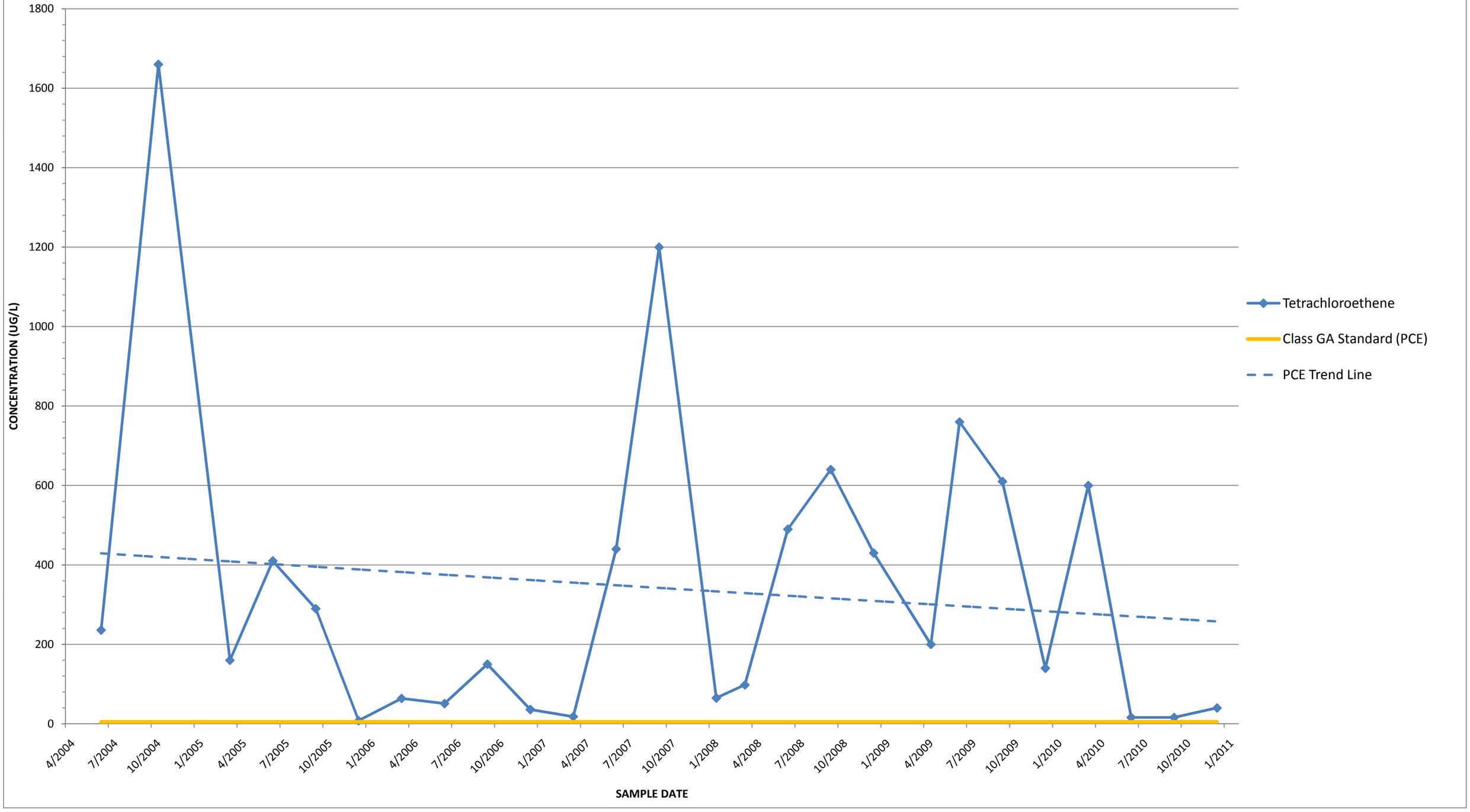
**APPENDIX H**
**ACTIVE INDUSTRIAL UNIFORM SITE**
**NYSDEC SITE No. 1-52-125**
**SUMMARY OF GROUNDWATER SAMPLING RESULTS (MW-103)**



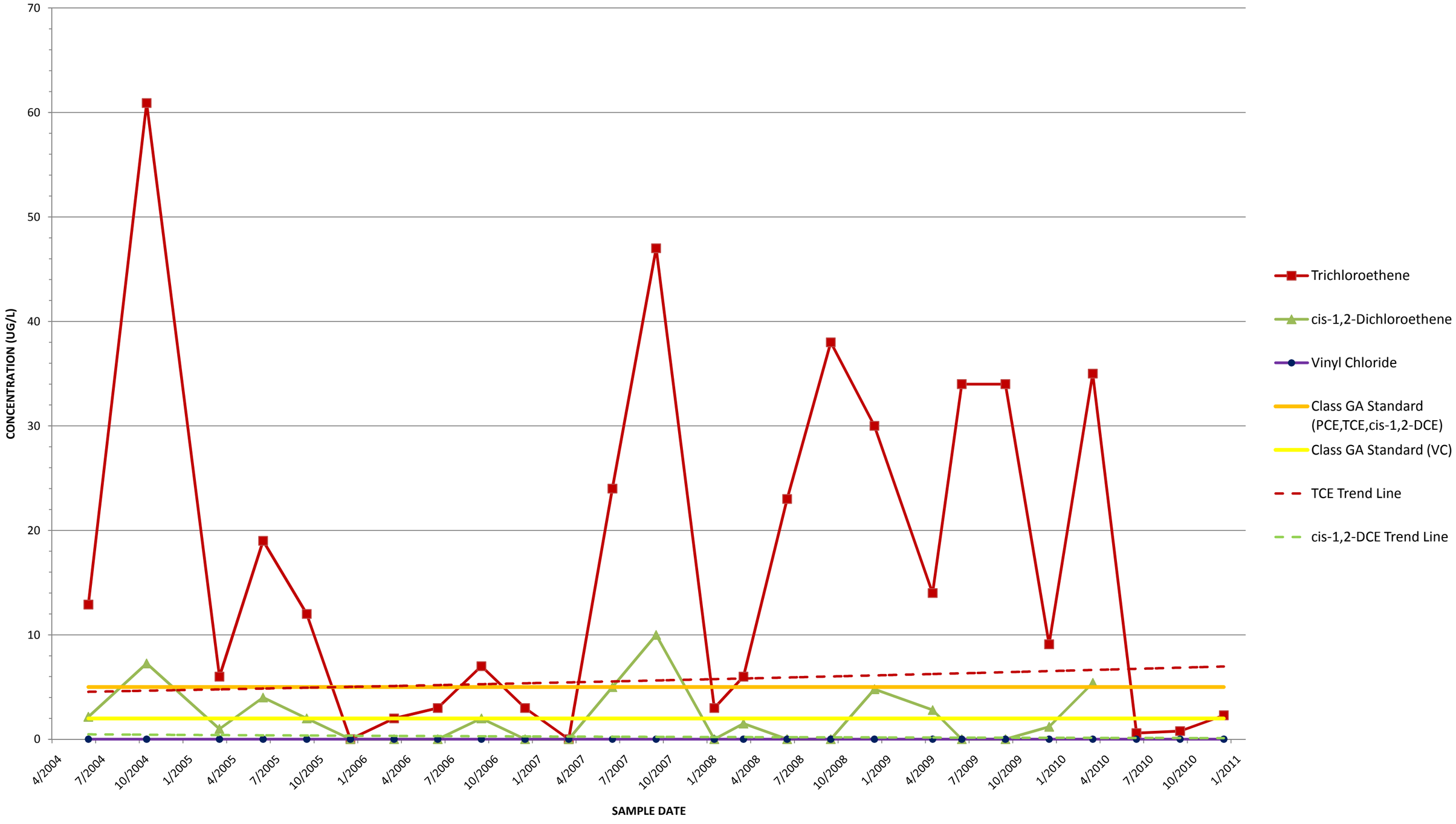
**APPENDIX H**
**ACTIVE INDUSTRIAL UNIFORM SITE**
**NYSDEC SITE No. 1-52-125**
**SUMMARY OF GROUNDWATER SAMPLING RESULTS (MW-103)**



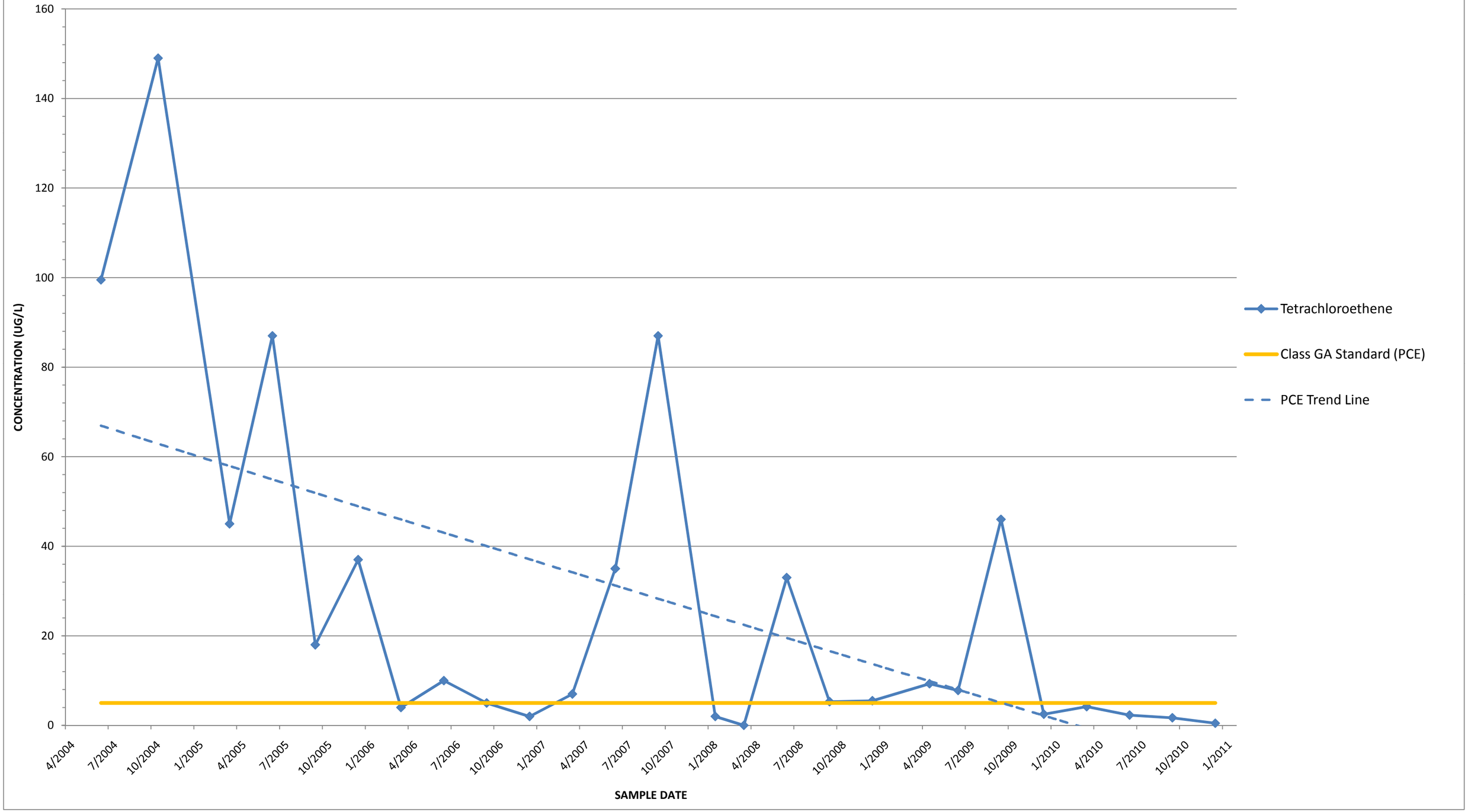
**APPENDIX H**
**ACTIVE INDUSTRIAL UNIFORM SITE**
**NYSDEC SITE No. 1-52-125**
**SUMMARY OF GROUNDWATER SAMPLING RESULTS (MW-104)**



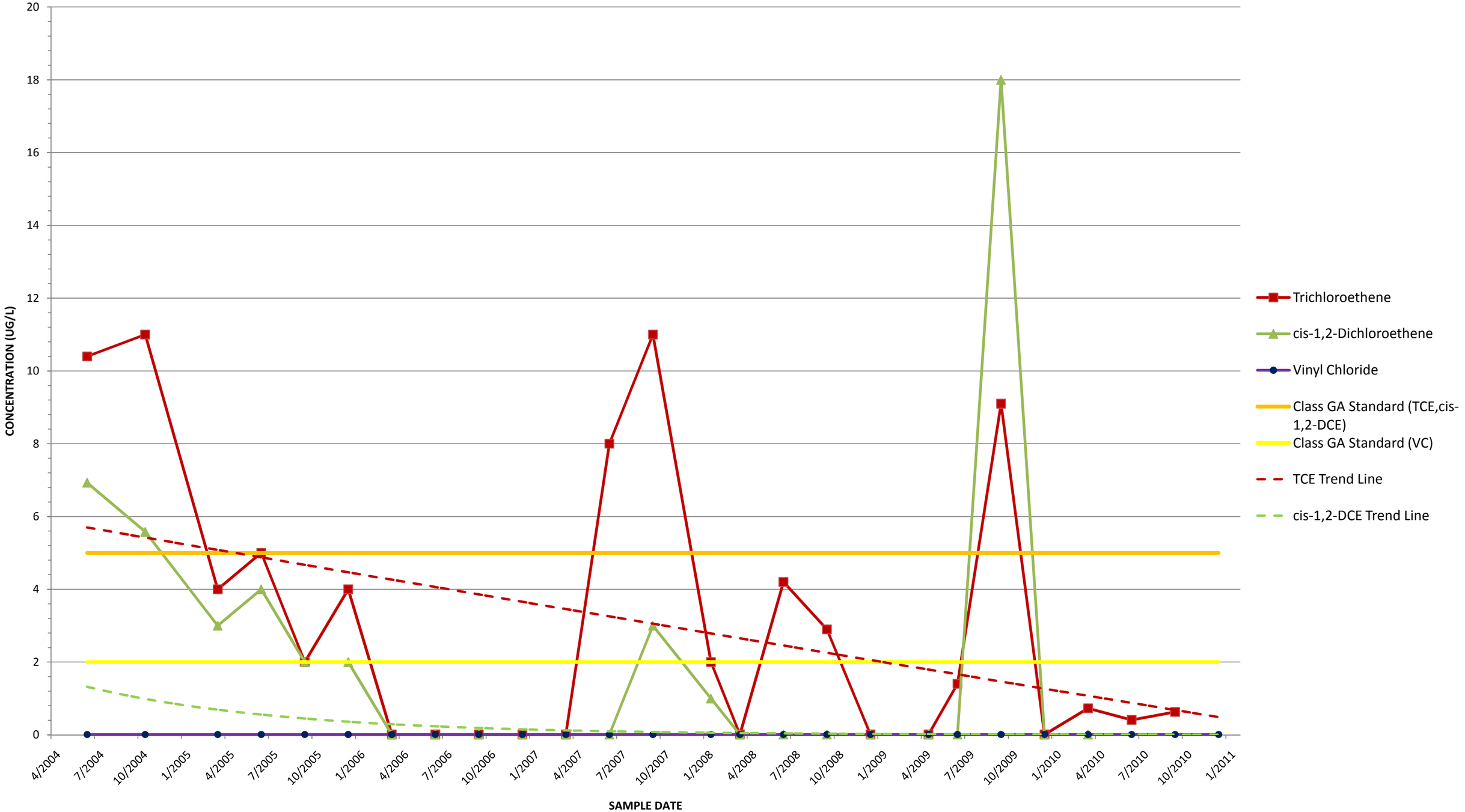
**APPENDIX H**
**ACTIVE INDUSTRIAL UNIFORM SITE**
**NYSDEC SITE No. 1-52-125**
**SUMMARY OF GROUNDWATER SAMPLING RESULTS (MW-104)**



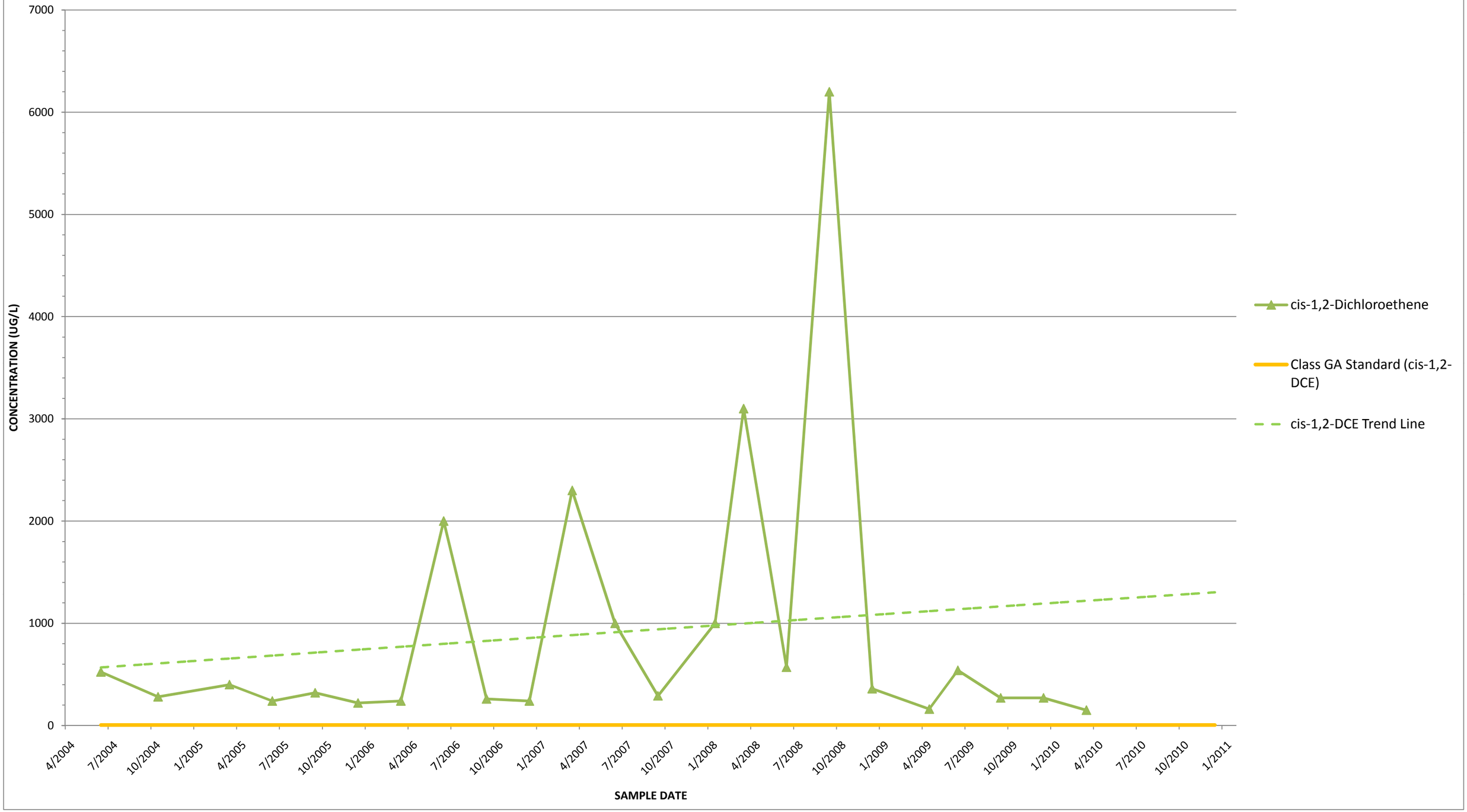
**APPENDIX H**
**ACTIVE INDUSTRIAL UNIFORM SITE**
**NYSDEC SITE No. 1-52-125**
**SUMMARY OF GROUNDWATER SAMPLING RESULTS (MW-105)**



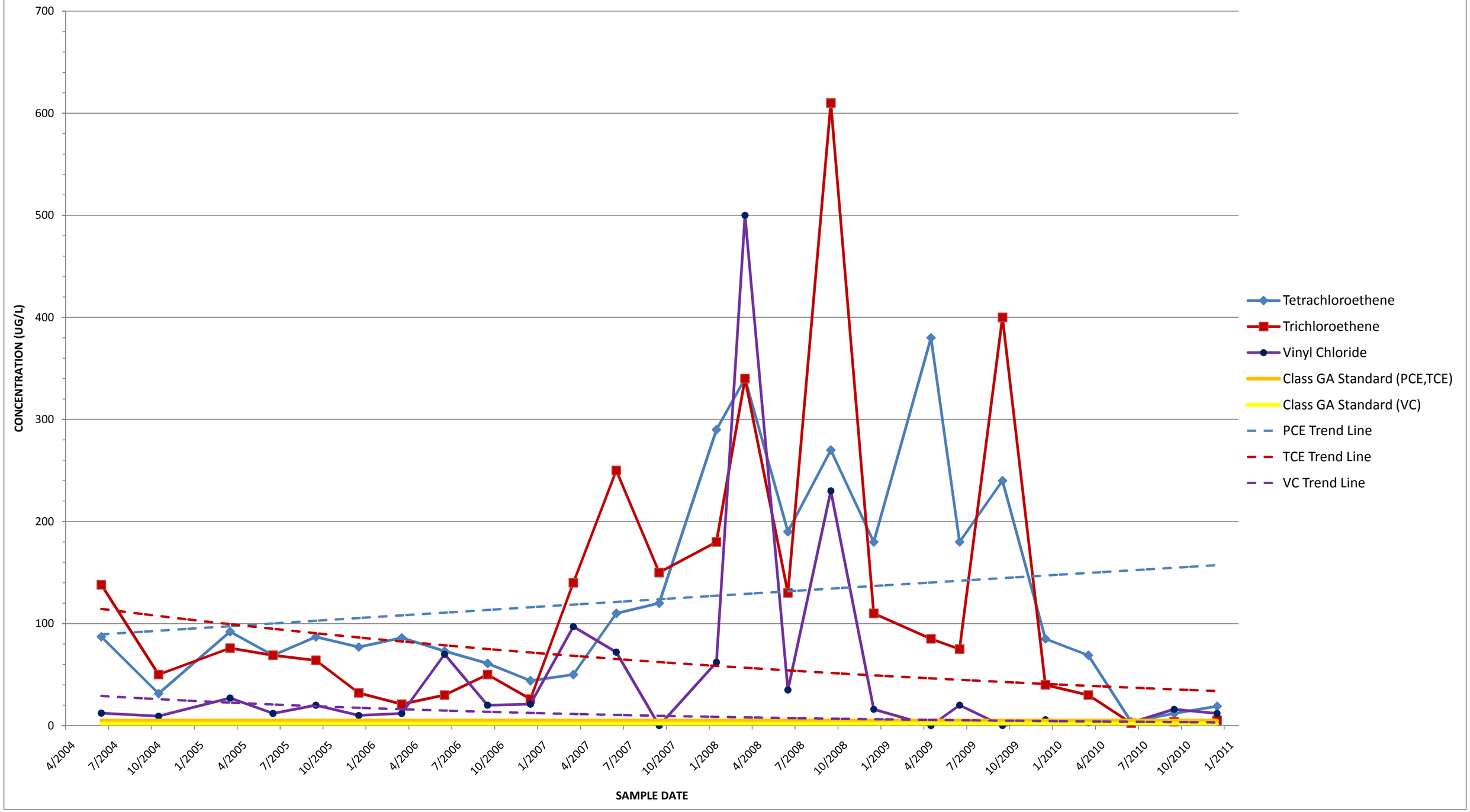
**APPENDIX H**
**ACTIVE INDUSTRIAL UNIFORM SITE**
**NYSDEC SITE No. 1-52-125**
**SUMMARY OF GROUNDWATER SAMPLING RESULTS (MW-105)**



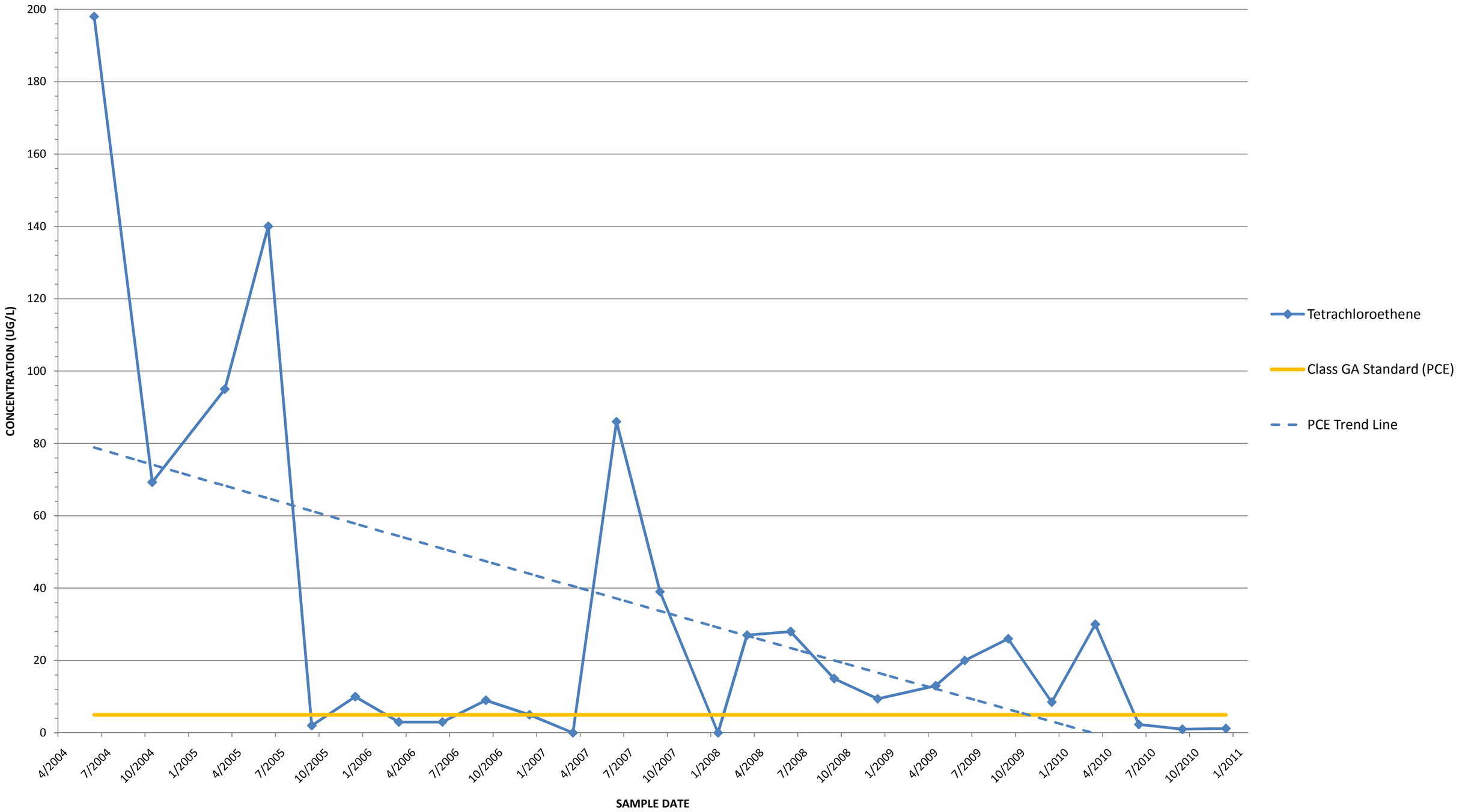
**APPENDIX H**
**ACTIVE INDUSTRIAL UNIFORM SITE**
**NYSDEC SITE No. 1-52-125**
**SUMMARY OF GROUNDWATER SAMPLING RESULTS (MW-106)**



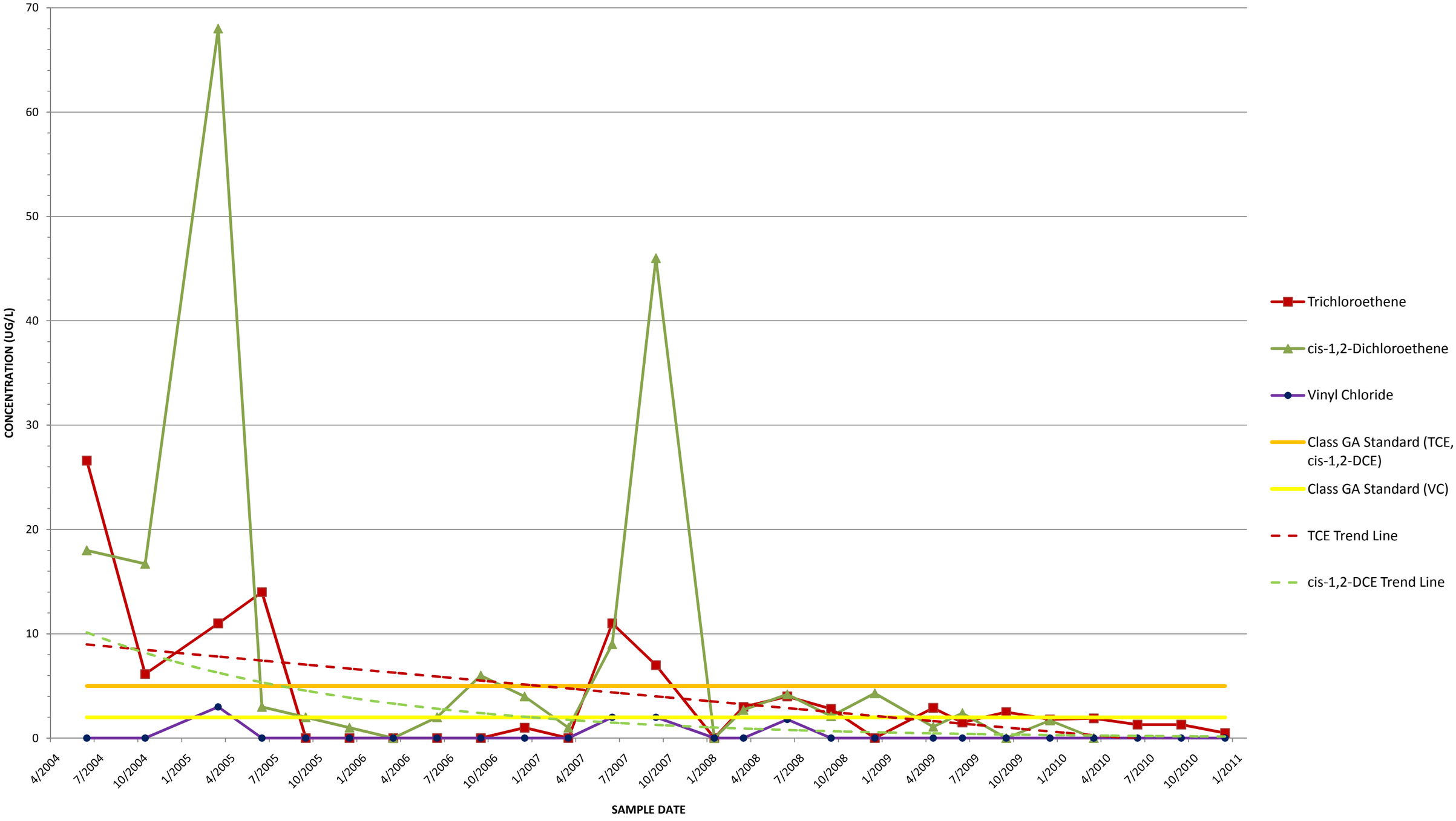
**APPENDIX H**
**ACTIVE INDUSTRIAL UNIFORM SITE**
**NYSDEC SITE No. 1-52-125**
**SUMMARY OF GROUNDWATER SAMPLING RESULTS (MW-106)**



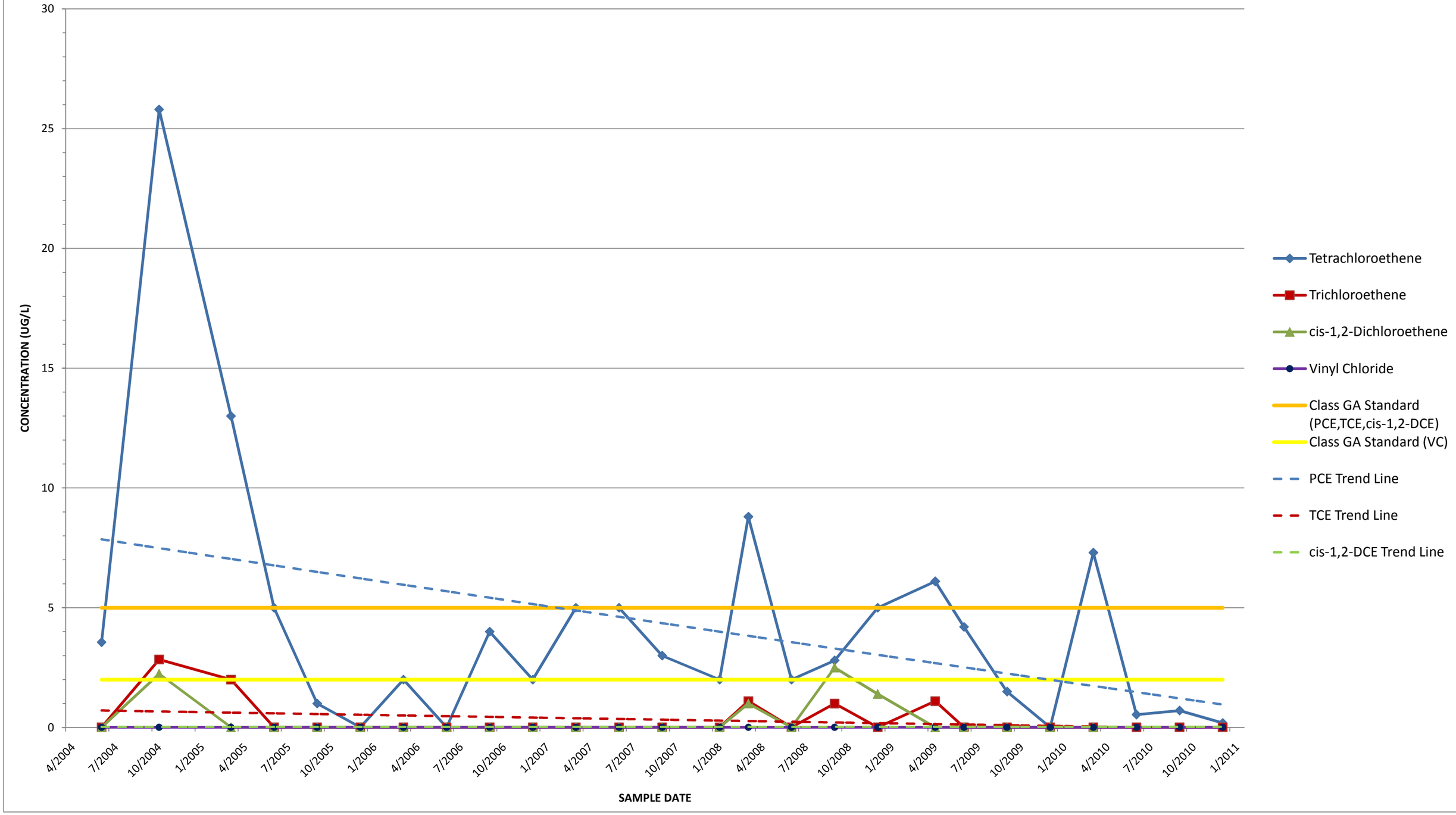
**APPENDIX H**
**ACTIVE INDUSTRIAL UNIFORM SITE**
**NYSDEC SITE No. 1-52-125**
**SUMMARY OF GROUNDWATER SAMPLING RESULTS (MW-107)**



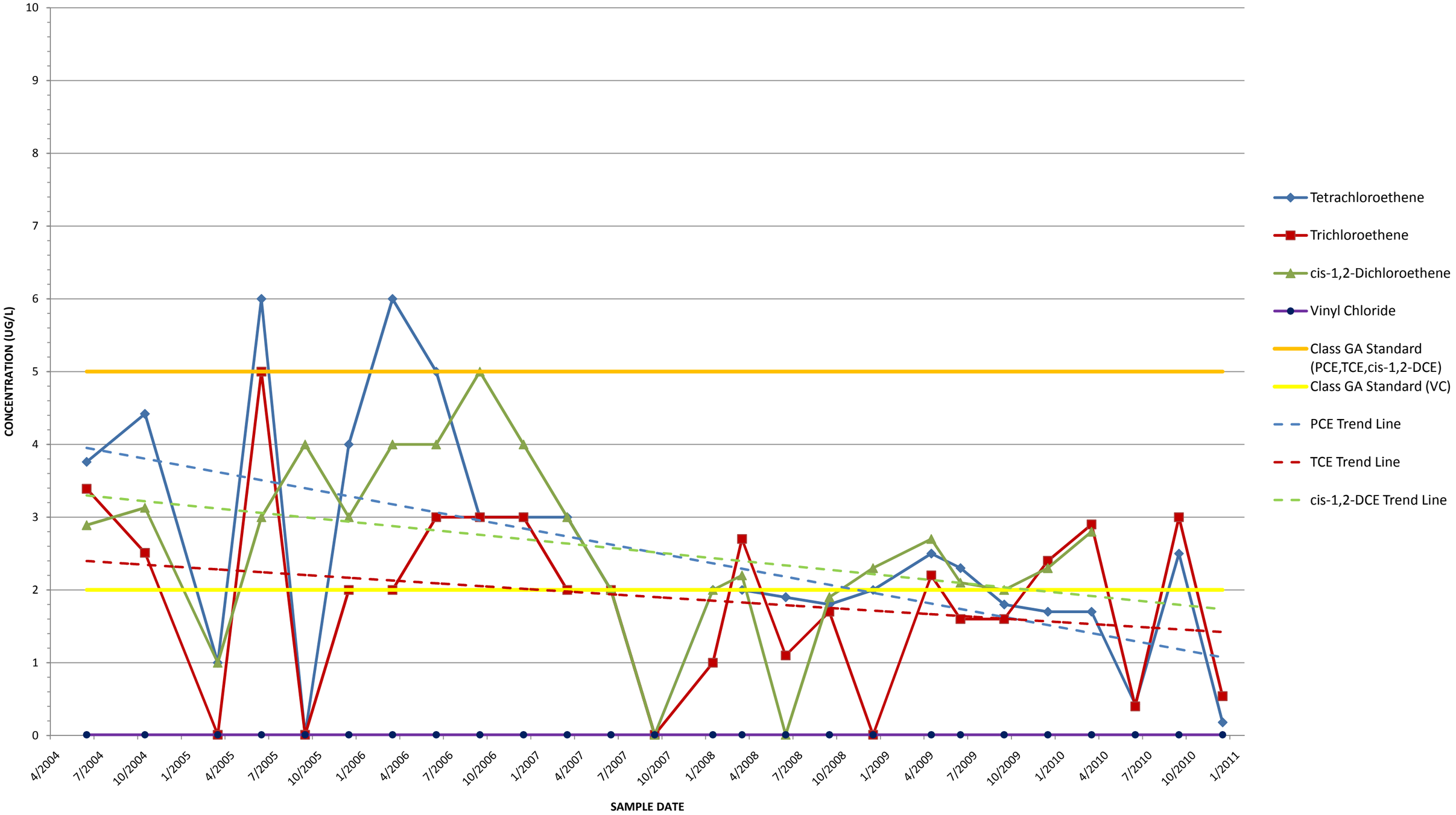
**APPENDIX H**
**ACTIVE INDUSTRIAL UNIFORM SITE**
**NYSDEC SITE No. 1-52-125**
**SUMMARY OF GROUNDWATER SAMPLING RESULTS (MW-107)**



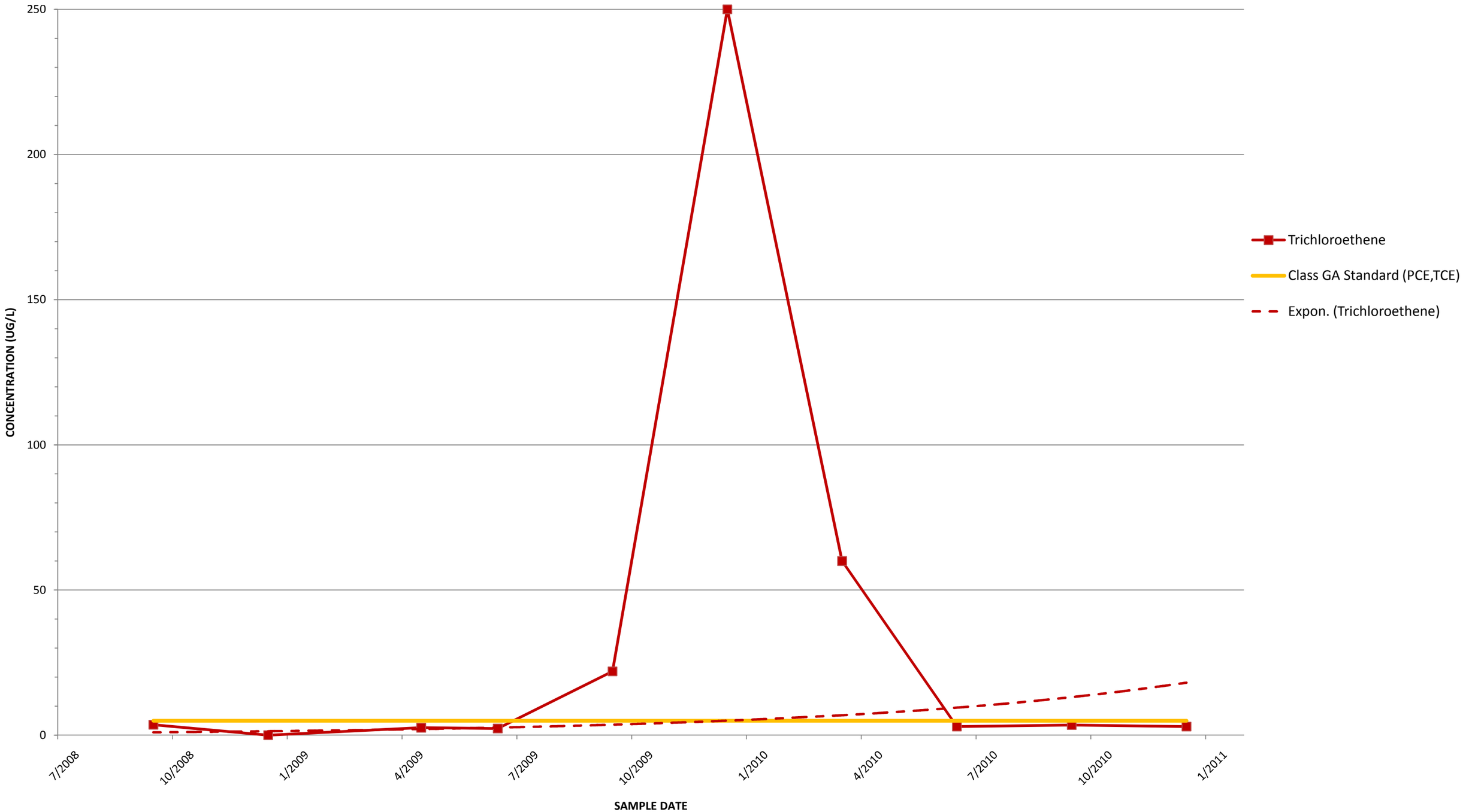
**APPENDIX H**
**ACTIVE INDUSTRIAL UNIFORM SITE**
**NYSDEC SITE No. 1-52-125**
**SUMMARY OF GROUNDWATER SAMPLING RESULTS (MW-108)**



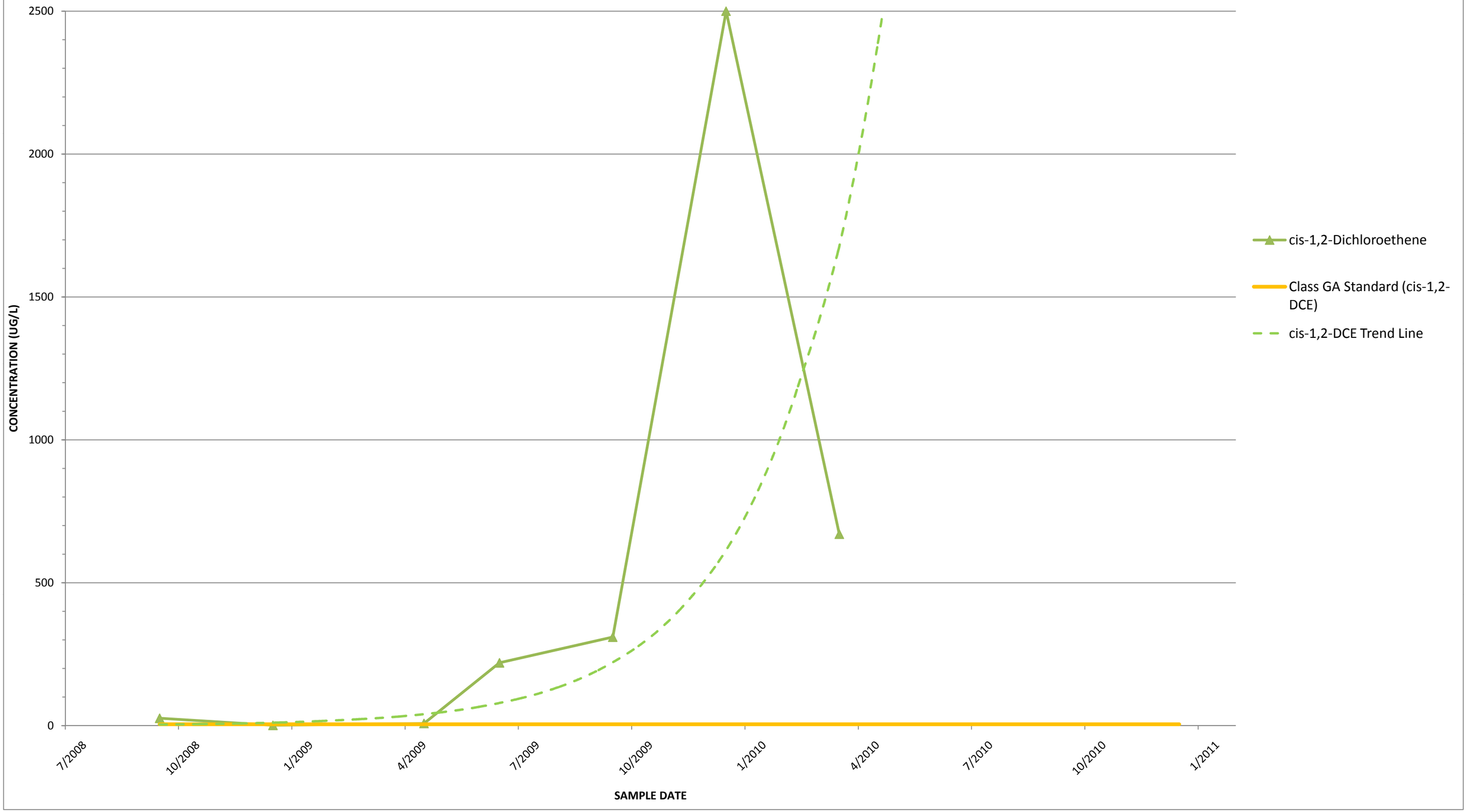
**APPENDIX H**
**ACTIVE INDUSTRIAL UNIFORM SITE**
**NYSDEC SITE No. 1-52-125**
**SUMMARY OF GROUNDWATER SAMPLING RESULTS (MW-109)**



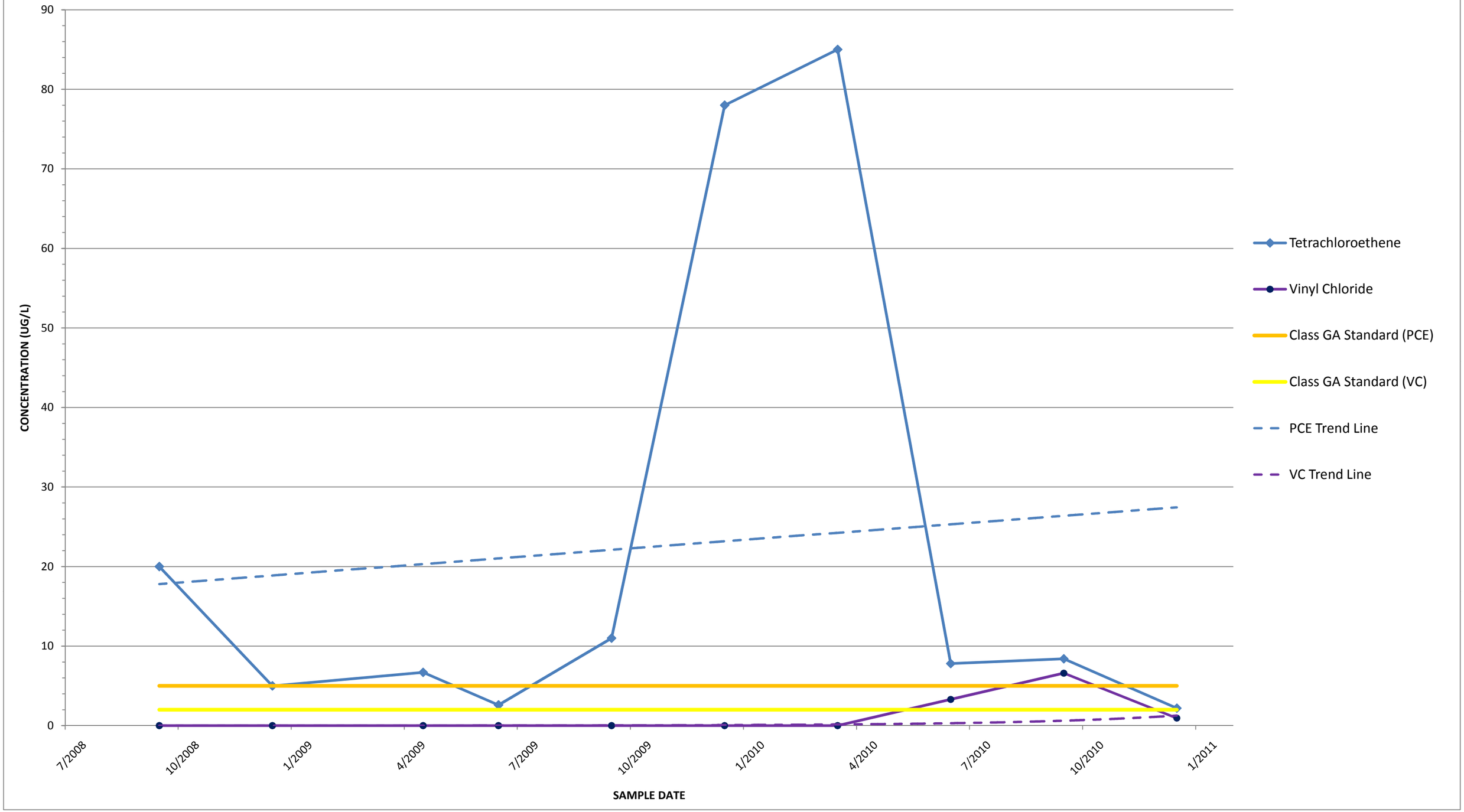
**APPENDIX H**
**ACTIVE INDUSTRIAL UNIFORM SITE**
**NYSDEC SITE No. 1-52-125**
**SUMMARY OF GROUNDWATER SAMPLING RESULTS (MW-2S)**



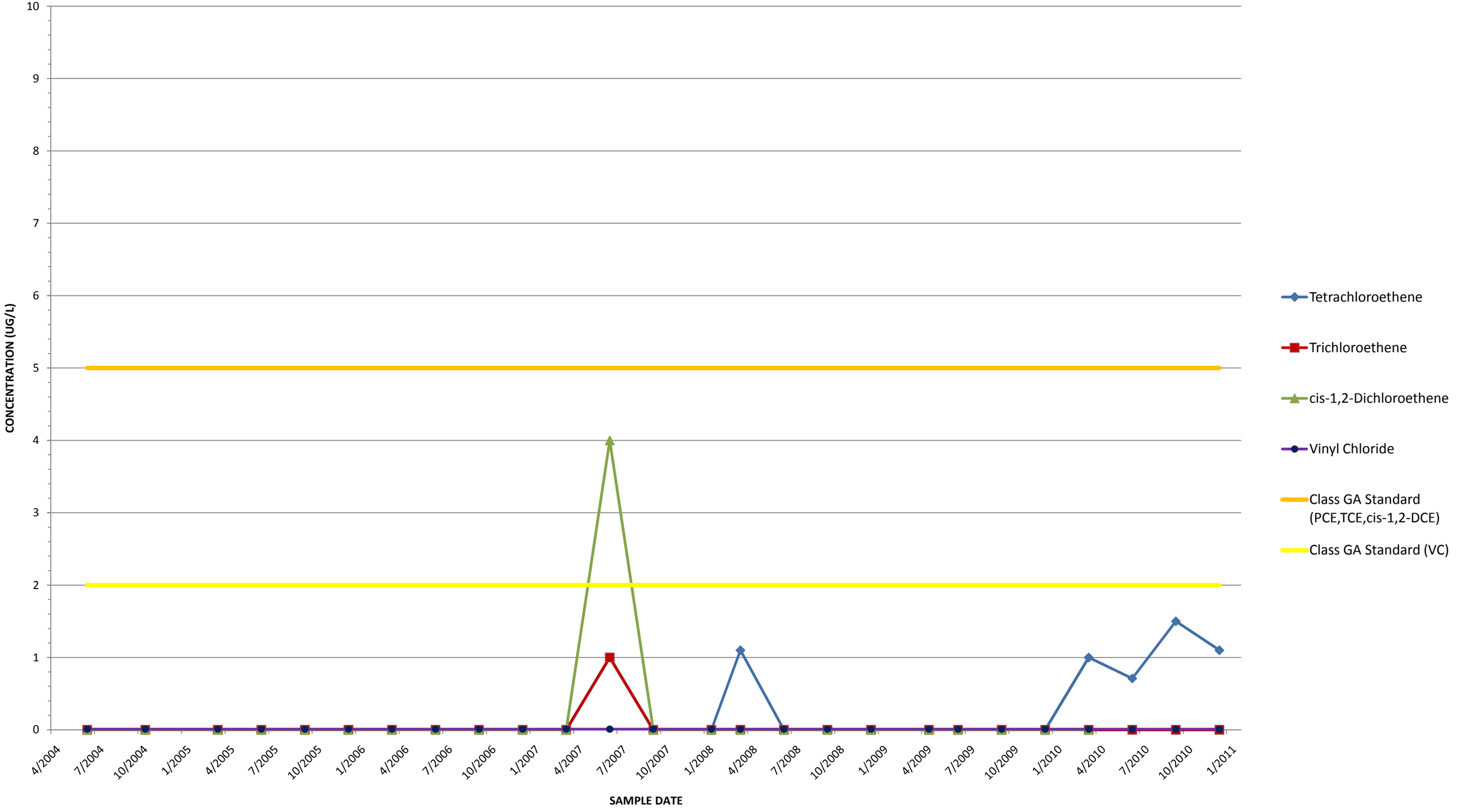
**APPENDIX H**
**ACTIVE INDUSTRIAL UNIFORM SITE**
**NYSDEC SITE No. 1-52-125**
**SUMMARY OF GROUNDWATER SAMPLING RESULTS (MW-2S)**



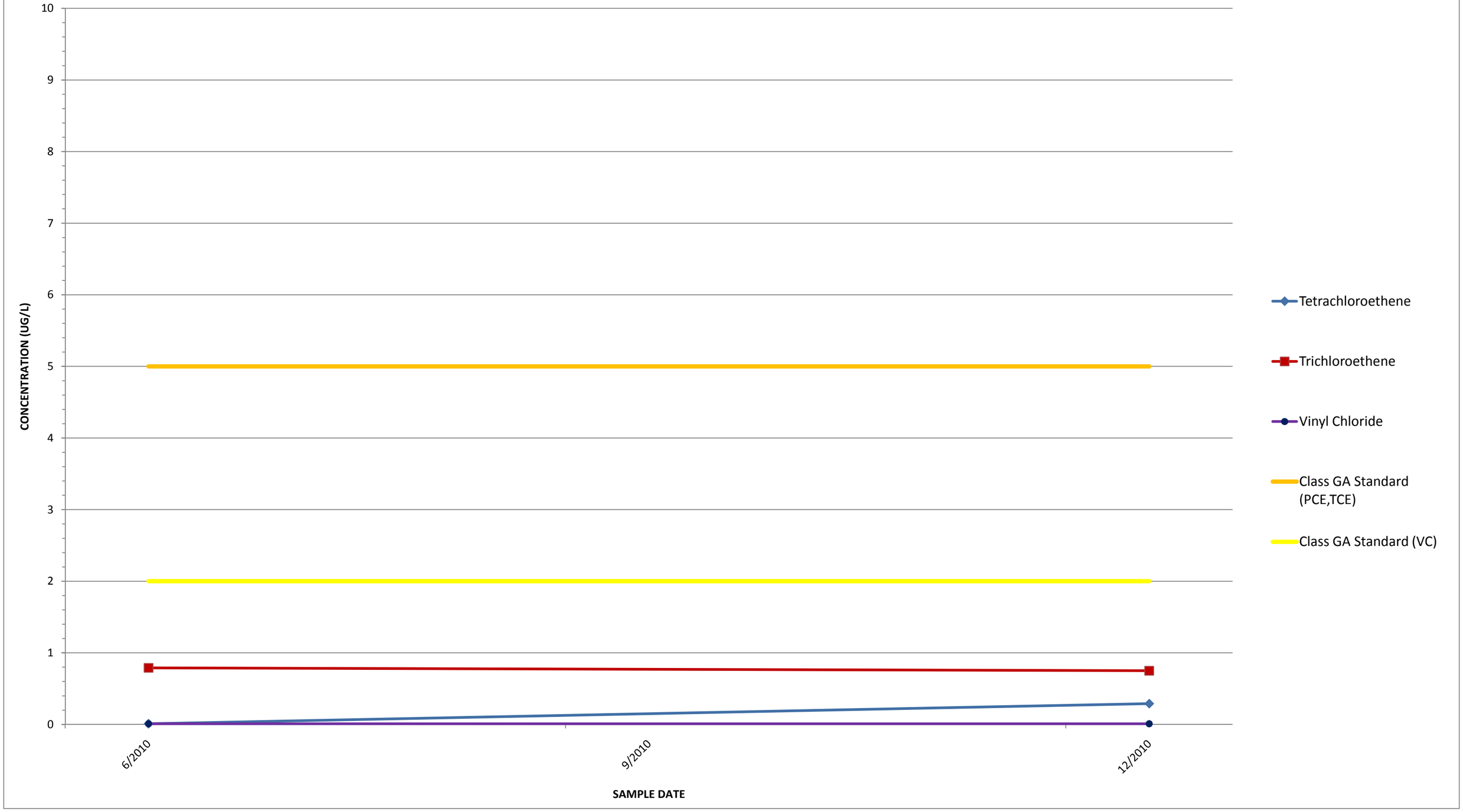
**APPENDIX H**
**ACTIVE INDUSTRIAL UNIFORM SITE**
**NYSDEC SITE No. 1-52-125**
**SUMMARY OF GROUNDWATER SAMPLING RESULTS (MW-2S)**



**APPENDIX H**
**ACTIVE INDUSTRIAL UNIFORM SITE**
**NYSDEC SITE No. 1-52-125**
**SUMMARY OF GROUNDWATER SAMPLING RESULTS (MW-111)**



**APPENDIX H**
**ACTIVE INDUSTRIAL UNIFORM SITE**
**NYSDEC SITE No. 1-52-125**
**SUMMARY OF GROUNDWATER SAMPLING RESULTS (MW-5S)**



# APPENDIX I

## ACTIVE INDUSTRIAL UNIFORM SITE DEED AND FREEDOM OF INFORMATION REQUEST LETTER

LIBER 8730 PAGE 188

Bargain and Sale Deed, without Covenant against Grantor's Acts — Individual or Corporation.

CONSULT YOUR LAWYER BEFORE SIGNING THIS INSTRUMENT - THIS INSTRUMENT SHOULD BE USED BY LAWYERS ONLY

280.50

**THIS INDENTURE**, made the 12th day of November, nineteen hundred and seventy-nine

**BETWEEN** IRVING BECKERMAN and ESTHER BECKERMAN, his wife, both residing at 130 Lake Shore Drive, West Palm Beach, Florida, 33408

party of the first part, and ACTIVE INDUSTRIAL UNIFORM CO., INC., a New York Corporation, with offices at 63 West Merrick Road (also known as West Montauk Highway), Lindenhurst, New York

party of the second part,

**WITNESSETH**, that the party of the first part, in consideration of

TEN ($10.00)---------- dollars,

lawful money of the United States, paid

by the party of the second part, does hereby grant and release unto the party of the second part, the heirs or successors and assigns of the party of the second part forever,

**ALL** that certain plot, piece or parcel of land, with the buildings and improvements thereon erected, situate, lying and being in the Incorporated Village of Lindenhurst, in the Town of Babylon, County of Suffolk and State of New York, being lots 19-24, inclusive, and Lot 248 in Block 18, as shown on the "Amended Map No. 2, of South Bay Estates," and filed in the Office of the Clerk of the County of Suffolk on 8/17/1921, as Map No. 282; and Lots 64-66, inclusive, as shown on "Map of Village Center Park," as filed 8/24/1926 in the Office of the Clerk of the County of Suffolk as Map No. 815; and a portion of the two foot reserve strip as shown on the latter map, which said lots and reserve strip when taken together, are bounded and described as follows:

BEGINNING at a point on the southerly side of Montauk Highway, distant 329.19 feet westerly from the corner formed by the intersection of the southerly side of Montauk Highway with the westerly side of Wellwood Avenue, as widened;

RUNNING thence South 18 degrees 02 minutes East, 134.92 feet to the northerly side of the two (2') foot reserve strip on Map of Village Center Park;

THENCE South 86 degrees 58 minutes 50 seconds East along said, 30.59 feet;

THENCE South 6 degrees 17 minutes 50 seconds East, 14.96 feet;

THENCE South 83 degrees 42 minutes 10 seconds West, 100.00 feet to the easterly side of Tompkins Lane;

THENCE North 6 degrees 17 minutes 50 seconds west along said easterly side of Tompkins Lane, 29.35 feet to the southerly side of said reserve strip;

THENCE North 86 degrees 58 minutes 50 seconds west along said 50.67 feet to the westerly side of Tompkins Lane;

RECEIVED
$ 280.50
REAL ESTATE
DEC 4 1979
TRANSFER TAX
SUFFOLK
COUNTY

14675

54346

18-3-19

Dist. 0103

Section 022.00

Block 01.00

Lot 009.001 009.002 025.000

THENCE South 6 degrees 17 minutes 50 seconds East, along the westerly side of Tompkins Lane 37.56 feet;

THENCE South 83 degrees 42 minutes 10 seconds west, 100.00 feet;

THENCE North 16 degrees 17 minutes 50 seconds West, 53.97 feet to the southerly side of said reserved strip;

THENCE South 86 degrees 58 minutes 50 seconds East, along said reserved strip, 73.18 feet;

THENCE North 10 degrees 02 minutes West, 83.17 feet to the southerly side of Montauk Highway; and

THENCE North 71 degrees 58 minutes East along the southerly side of Montauk Highway, 140.00 feet to the point or place of BEGINNING.

Subject to telephone agreement recorded in Liber 1078 op 318.

Subject to any state of facts an accurate survey may reveal.

**TOGETHER** with all right, title and interest, if any, of the party of the first part, in and to any streets and roads abutting the above described premises to the center lines thereof,

**TOGETHER** with the appurtenances and all the estate and rights of the party of the first part in and to said premises,

**TO HAVE AND TO HOLD** the premises herein granted unto the party of the second part, the heirs or successors and assigns of the party of the second part forever.

**AND** the party of the first part, in compliance with Section 13 of the Lien Law, covenants that the party of the first part will receive the consideration for this conveyance and will hold the right to receive such consideration as a trust fund to be applied first for the purpose of paying the cost of the improvement and will apply the same first to the payment of the cost of the improvement before using any part of the total of the same for any other purpose.

The word "party" shall be construed as if it read "parties" whenever the sense of this indenture so requires.

**IN WITNESS WHEREOF,** the party of the first part has duly executed this deed the day and year first above written.

IN PRESENCE OF:

Irving Beckerman

ESTHER BECKERMAN

3759 PAGE 101

STATE OF NEW YORK, COUNTY OF Suffolk SS:

On the 12th day of November 1979, before me personally came IRVING BECKERMAN

to me known to be the individual described in and who executed the foregoing instrument, and acknowledged that he executed the same.

Notary Public

Notary Public, State of Florida at Large
My Commission Expires Aug. 24, 1980
Bonded By American Fire & Casualty Company

STATE OF NEW YORK, COUNTY OF SS:

On the day of 19, before me personally came
to me known, who, being by me duly sworn, did depose and say that he resides at No.

;

that he is the
of

, the corporation described in and which executed the foregoing instrument; that he knows the seal of said corporation; that the seal affixed to said instrument is such corporate seal; that it was so affixed by order of the board of directors of said corporation, and that he signed h name thereto by like order.

STATE OF FLORIDA, COUNTY OF Palm Beach SS:

On the 12th day of November 1979, before me personally came ESTHER BECKERMAN

to me known to be the individual described in and who executed the foregoing instrument, and acknowledged that she executed the same.

Notary Public

Notary Public, State of Florida at Large
My Commission Expires Aug. 24, 1980
Bonded By American Fire & Casualty Company

STATE OF NEW YORK, COUNTY OF SS:

On the day of 19, before me personally came
the subscribing witness to the foregoing instrument, with whom I am personally acquainted, who, being by me duly sworn, did depose and say that he resides at No.

;

that he knows

to be the individual described in and who executed the foregoing instrument; that he, said subscribing witness, was present and saw execute the same; and that he, said witness, at the same time subscribed h name as witness thereto.

Title No. TPS-1-711 952

IRVING BECKERMAN and
ESTHER BECKERMAN, his wife

TO

ACTIVE INDUSTRIAL UNIFORM CO., INC.

Bargain and Sale Deed
Without Covenant Against Grantor's Acts

The land affected by the within instrument lies in Section in Block on the Land Map of the County of

Record at Request of
Active Industrial Uniform Co., Inc.
c/o American Linen Supply Co.
47 South Ninth Street
Minneapolis, Minnesota 55402

RESERVE THIS SPACE FOR USE OF RECORDING OFFICE

RECORDED 20.1

DEC 4 9 33 AM '79

RECORDED IN THE OFFICE OF THE CLERK OF THE COUNTY OF SUFFOLK

168

# APPENDIX J

# INSTITUTIONAL AND ENGINEERING CONTROL FORM

**New York State Department of Environmental Conservation**
**Division of Environmental Remediation**
**Bureau of Technical Support, 11th Floor**
625 Broadway, Albany, New York 12233-7020
**Phone:** (518) 402-9553 **Fax:** (518) 402-9595
**Website:** www.dec.ny.gov

Alexander B. Grannis
Commissioner

9/8/2008

# Site Management Periodic Review 45-Day Reminder Notice

Active Indust Uniform Co Inc
63-65 W. Merrick Rd.
Lindenhurst, N.Y., ZZ 11757

Site Name: Active Industrial Uniform
Site No.: 152125
Site Address: 63 West Merrick Road
Lindenhurst, NY 11757

This is a reminder that a Periodic Review Report (PRR) must be submitted by you, the owner or Remedial Party, to the New York State Department of Environmental Conservation (Department), by Friday, August 15, 2008. The PRR documents compliance with the Site Management Plan, and also includes a signed and completed Institutional and Engineering Controls (IC/EC) Certification Form (See Enclosure 1). Periodic certification, indicating that all ICs / ECs at a site are in-place and effective, is mandated by various statutory and/or regulatory authorities under the New York Environmental Conservation Law and its implementing regulations (See Enclosure 2).

Only one PRR, including one IC/EC Certification, is to be submitted for a site. Hence, if a site is comprised of multiple properties or parcels, then you, as the owner or Remedial Party, shall arrange to submit one consolidated PRR.

Please refer to Enclosure 2 for instructions to complete the IC/EC Certification Form, and to determine if the IC/EC Certifications page needs to be signed by a registered Professional Engineer or another Qualified Environmental Professional. In order to verify current IC/ECs, you may access the Environmental Site Remediation Database, which includes IC/EC details, and site information such as site summaries, the name(s) of the site / property owner(s), the location, and status of the site, at **http://www.dec.ny.gov/cfmx/extapps/derfoil/index.cfm.**

Note that this form must be submitted even if an IC/EC cannot be certified; however, the Periodic Review process will not be considered complete until all necessary corrective measures are conducted, and all controls are certified.

If you have any questions, or need additional forms, please contact Payson Long, Project Manager at 518-402-9813 .

Enclosures

ec: Payson Long, Project Manager
Robert Knizek, Bureau Director
Hazardous Waste Remediation Engineer, Region 1
Gary Litwin, DOH

cc: Active Indust Uniform Co Inc
Remedial Party / Certificate Holder

**Enclosure 1**
**NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION**
**Site Management Periodic Review Report Notice**
**Institutional and Engineering Controls Certification Form**

**Site Details** **Box 1**

**Site No. 152125**

**Site Name Active Industrial Uniform**

Site Address: 63 West Merrick Road Zip Code: 11757

City/Town: Lindenhurst

County: Suffolk

Current Use: Structure

Intended Use: Industrial

**Verification of Site Details** **Box 2**

| | | YES | NO |
|---|---|---|---|
| 1. | Are the Site Details above, correct? | ☐ | ☐ |
| | If NO, are changes handwritten above or included on a separate sheet? | ☐ | |
| 2. | Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment since the initial/last certification? | ☐ | ☐ |
| | If YES, is documentation or evidence that documentation has been previously submitted included with this certification? | ☐ | |
| 3. | Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property since the initial/last certification? | ☐ | ☐ |
| | If YES, is documentation or evidence that documentation has been previously submitted included with this certification? | ☐ | |
| 4. | Has a change-of-use occurred since the initial/last certification? | ☐ | ☐ |
| | If YES, is documentation or evidence that documentation has been previously submitted included with this certification? | ☐ | |
| 5. | For non-significant-threat Brownfield Cleanup Program Sites subject to ECL 27-1415.7(c), has any new information revealed that assumptions made in the Qualitative Exposure Assessment for offsite contamination are no longer valid ? | ☐ | ☐ |
| | If YES, is the new information or evidence that new information has been previously submitted included with this Certification? | ☐ | |
| 6. | For non-significant-threat Brownfield Cleanup Program Sites subject to ECL 27-1415.7(c), are the assumptions in the Qualitative Exposure Assessment still valid (must be certified every five years) ? | ☐ | ☐ |
| | If NO, are changes in the assessment included with this certification? | ☐ | |

**SITE NO. 152125** **Box 3**

| Description of Institutional Control | Control Certification YES | NO |
|---|---|---|
| **ACTIVE INDUST UNIFORM CO INC** | | |
| Deed Restriction | | |
| S_B_L Image: 0103022000100025000 | | |
| Ground Water Use Restriction | ☐ | ☐ |
| Landuse Restriction | ☐ | ☐ |
| S_B_L Image: 0103022000100009002 | | |
| Ground Water Use Restriction | ☐ | ☐ |
| Landuse Restriction | ☐ | ☐ |
| S_B_L Image: 0103022000100009001 | | |
| Ground Water Use Restriction | ☐ | ☐ |
| Landuse Restriction | ☐ | ☐ |

**Box 4**

| Description of Engineering Control | Control Certification YES | NO |
|---|---|---|

Attach documentation if IC/ECs cannot be certified or why IC/ECs are no longer applicable.
(Also see instructions)

**Control Description for Site No. 152125**

**Control Certification Statement**

For each Institutional or Engineering control listed above, I certify by checking "Yes" that all of the following statements are true:

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

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

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

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

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

**IC/EC CERTIFICATIONS**
**SITE NO. 152125**

**Box 5**

**SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE**

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

I _____ at _____,
print name print business address

am certifying as _____(Owner or Remedial Party)

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

_____ _____
Signature of Owner or Remedial Party Rendering Certification Date

**Box 6**

**QUALIFIED ENVIRONMENTAL PROFESSIONAL (QEP) SIGNATURE**

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

I _____ at _____,
print name print business address

am certifying as a Qualified Environmental Professional for the _____

(Owner or Remedial Party) for the Site named in the Site Details Section of this form.

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

**Enclosure 2**

**Certification of Institutional Controls/ Engineering Controls** (ICs/ECs)
**Step-by-Step Instructions, Certification Requirements and Definitions**

The Owner, or Remedial Party, and when necessary, a Professional Engineer (P.E.), or the Qualified Environmental Professional (QEP), must review and complete the IC/EC Certification Form, sign the IC/EC Certifications Signature Page, and return it, along with the Periodic Review Report (PRR), within 45 days of the date of this notice.

Please use the following instructions to complete the IC/EC Certification.

## I. Verification of Site Details (Box 1 and Box 2):

1. Answer the six questions in the Verification of Site Details Section. Questions 5 and 6 only refer to sites in the Brownfield Cleanup Program. Environmental Conservation Law (ECL) Section 27-1415-7(c) is included in section **IV. IC/EC Certification Requirements**, below. The Owner and/or your P.E. or QEP may include handwritten changes and/or other supporting documentation, as necessary.

## II. Verification of Institutional / Engineering Controls (Box 3 and Box 4)

1. Review the listed IC/ECs, confirming that all existing controls are listed, and that all existing controls are still applicable. If there is a control that is no longer applicable the Owner / Remedial Party is to petition the Department requesting approval to remove the control.

2. Select "YES" or "NO" for **Control Certification** for each IC/EC, based on Sections (a)-(e) of the **Control Certification Statement**.

3. If you cannot certify "YES" for each Control, please continue to complete the remainder of this **Control Certification** form. Attach supporting documentation that explains why the **Control Certification** cannot be rendered, as well as a statement of proposed corrective measures, and an associated schedule for completing the corrective measures. Note that this **Control Certification** form must be submitted even if an IC or EC cannot be certified; however, the certification process will not be considered complete until corrective action is conducted.

   If the Department concurs with the explanation, the corrective measures, and the proposed schedule, a letter authorizing the implementation of those corrective measures will be issued by the Project Manager. Once the corrective measures are complete, a new Periodic Review Report (with IC/EC Certification) is to be submitted within 45 days to the Department. If the Department has any questions or concerns regarding the PRR and/or completion of the IC/EC Certification, the Project Manager will contact you.

## III. IC/EC Certification by Signature (Box 5 and Box 6):

1. If you certified "YES" for each Control, please complete and sign the IC/EC Certifications page. To determine WHO signs the **IC/EC Certification,** please use Table 1, Signature Requirements for the IC/EC Certification, below.

| Table 1. Signature Requirements for Control Certification Page | | |
|---|---|---|
| **Type of Control** | **Example of IC/EC** | **Required Signatures** |
| IC | Environmental Easement<br>Deed Restriction. | A site or property owner or remedial party. |
| EC which does not include a treatment system or engineered caps. | Fence, Clean Soil Cover,<br>Individual House Water Treatment System,<br>Vapor Mitigation System | A site or property owner or remedial party, and a QEP. (P.E. license not required) |
| EC that includes treatment system or an engineered cap. | Pump & Treat System providing hydraulic control of a plume, Part 360 Cap. | A site or property owner or remedial party, and a QEP with a P.E. license. |

## IV. IC/EC Certification Requirements:

ECL requires periodic certification of IC(s) and EC(s) as follows:

Environmental Restoration Program (ERP): ECL Section 56-0503. (Environmental restoration projects; state assistance)

State Superfund Program (SSF): ECL 27-1318. (Institutional and engineering controls)

Brownfields Cleanup Program (BCP): ECL Section 27-1415. (Remedial program requirements)

> ECL Section 27-1415-7(c) states:
> "At non-significant threat sites where contaminants in groundwater at the site boundary contravene drinking water standards, such certification shall also certify that no new information has come to the owner's attention, including groundwater monitoring data from wells located at the site boundary, if any, to indicate that the assumptions made in the qualitative exposure assessment of offsite contamination are no longer valid. Every five years the owner at such sites shall certify that the assumptions made in the qualitative exposure assessment remain valid. The requirement to provide such certifications may be terminated by a written determination by the Commissioner in consultation with the Commissioner of Health, after notice to the parties on the brownfield site contact list and a public comment period of thirty days."

Voluntary Cleanup Program (VCP): Applicable program guidance.

Response Program - Petroleum Remediation: Applicable program guidance.

Federal Brownfields Program: Applicable program guidance.

Manufactured Gas Plant (MGP) Projects: Applicable division guidance (including non-registry listed MGPs).

WHERE to mail the signed Certification Form by Friday, August 15, 2008:

New York State Department of Environmental Conservation
Division of Environmental Remediation

625 Broadway, BURE
Albany, NY 12233

Attn: Payson Long, Project Manager

**Please note that extra postage may be required**.

## V. Definitions

**"Engineering Control"** (EC) means any physical barrier or method employed to actively or passively contain, stabilize, or monitor contamination, restrict the movement of contamination to ensure the long-term effectiveness of a remedial program, or eliminate potential exposure pathways to contamination. Engineering controls include, but are not limited to, pavement, caps, covers, subsurface barriers, vapor barriers, slurry walls, building ventilation systems, fences, access controls, provision of alternative water supplies via connection to an existing public water supply, adding treatment technologies to such water supplies, and installing filtration devices on private water supplies.

**"Institutional Control"** (IC) means any non-physical means of enforcing a restriction on the use of real property that limits human and environmental exposure, restricts the use of groundwater, provides notice to potential owners, operators, or members of the public, or prevents actions that would interfere with the effectiveness of a remedial program or with the effectiveness and/or integrity of operation, maintenance, or monitoring activities at or pertaining to a remedial site.

**"Professional Engineer"** (P.E.) means an individual or firm licensed, or otherwise authorized under article 145 of the Education Law of the State of New York, to practice engineering.

**"Property Owner"** means, for purposes of an IC/EC certification, the actual owner of a property. If the site has multiple properties with different owners, the Department requires that the owners be represented by a single representative to sign the IC/EC Certification.

**"Oversight Document"** means any document the Department issues pursuant to each Remedial Program to define the role of a person participating in the investigation and/or remediation of a site or area(s) of concern. Examples for the various programs are:

**BCP** (after approval of the BCP application by Department) - Brownfield Site Cleanup Agreement.
**ERP** (after approval of the ERP application by Department) - State Assistance Contract.
**Federal Superfund Sites** - Federal Consent Decrees, Administrative Orders on Consent or Unilateral Orders issued pursuant to CERCLA.
**Response Program** - Order on Consent, or Stipulation pursuant to Article 12 of the Navigation Law (and the ECL).
**SSF Program** - Administrative Consent Order, Record of Decision.
**VCP** (after approval of the VCP application by Department) - Voluntary Cleanup Agreement.
**RCRA Corrective Action Sites**- Federal Consent Decrees, Administrative Orders on Consent or

permit conditions issued pursuant to RCRA.

**"Qualified Environmental Professional"** (QEP) means a person who possesses sufficient specific education, training, and experience necessary to exercise professional judgment to develop opinions and conclusions regarding the presence of releases or threatened releases to the surface or subsurface of a property or off-site areas, sufficient to meet the objectives and performance factors for the areas of practice identified by this Part. Such a person must:

(1) hold a current professional engineer's or a professional geologist's license or registration issued by the State or another state, and have the equivalent of three years of full-time relevant experience in site investigation and remediation of the type detailed in this Part; or

(2) be a site remediation professional licensed or certified by the federal government, a state or a recognized accrediting agency, to perform investigation or remediation tasks consistent with Department guidance, and have the equivalent of three years of full-time relevant experience.

**"Qualitative Exposure Assessment"** means a qualitative assessment to determine the route, intensity, frequency, and duration of actual or potential exposures of humans and/or fish and wildlife to contaminants.

**"Remedial Party"** means a person implementing a remedial program at a remedial site pursuant to an order, agreement or State assistance contract with the Department.

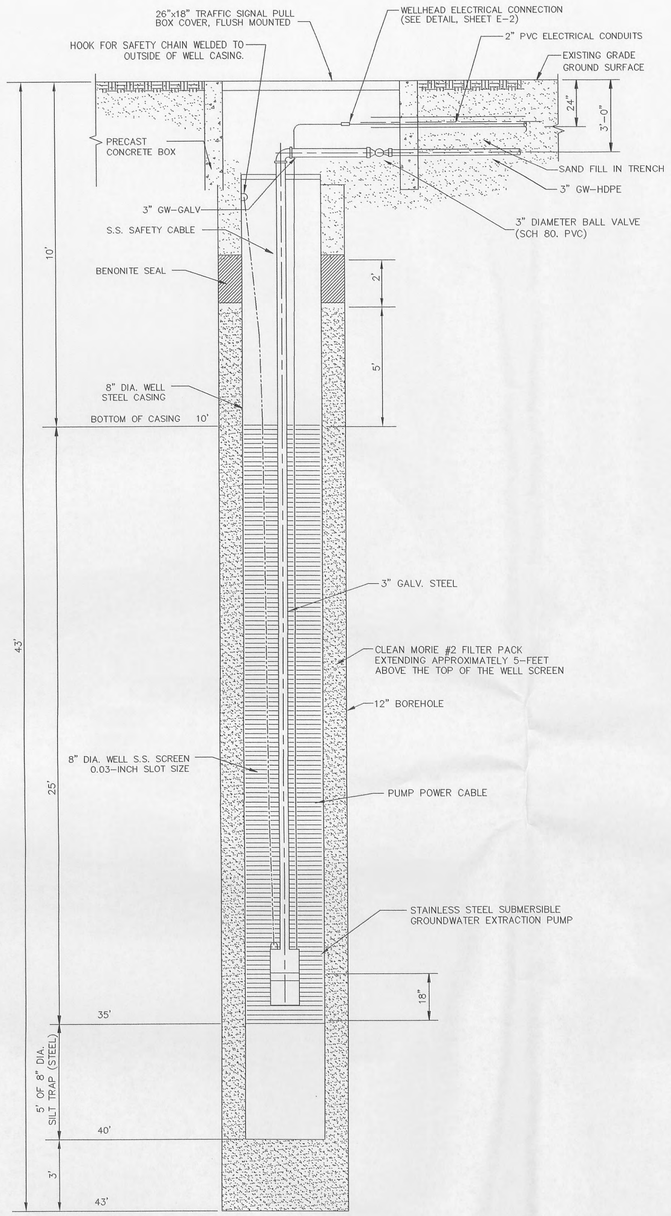
**"Site Management"** (SM) means the activities undertaken as the last phase of the remedial program at a site, which continue after a Certificate of Completion is issued. Site management is conducted in accordance with a site management plan, which identifies and implements the IC/ECs required for a site, as well as any necessary monitoring and/or operation and maintenance of the remedy.

**"Site Management Plan"** (SMP) means a document which details the steps necessary to assure that the institutional and engineering controls required for a site are in-place, and any physical components of the remedy are operated, maintained and monitored to assure their continued effectiveness, developed pursuant to Section 6 of DER-10, *Technical Guidance for Site Investigation and Remediation.*

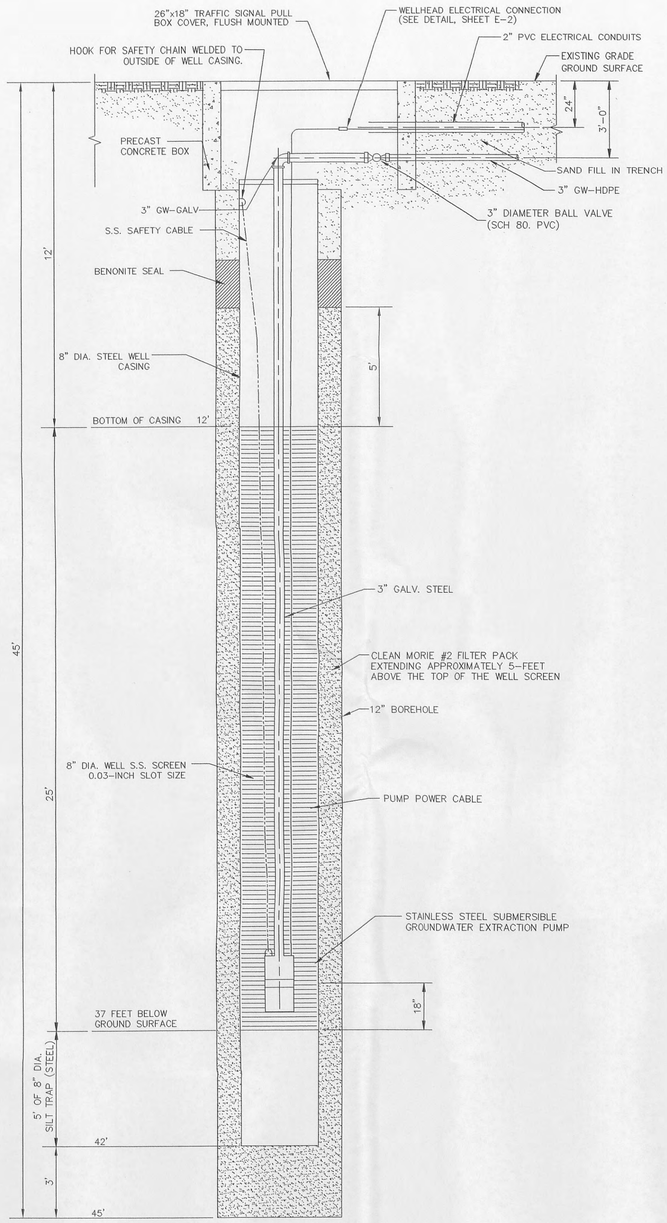
**"Site Owner"** means the actual owner of a site. If the site has multiple owners of multiple properties with ICs and/or ECs, the Department requires that the owners designate a single representative for IC/EC Certification activities.

# APPENDIX K

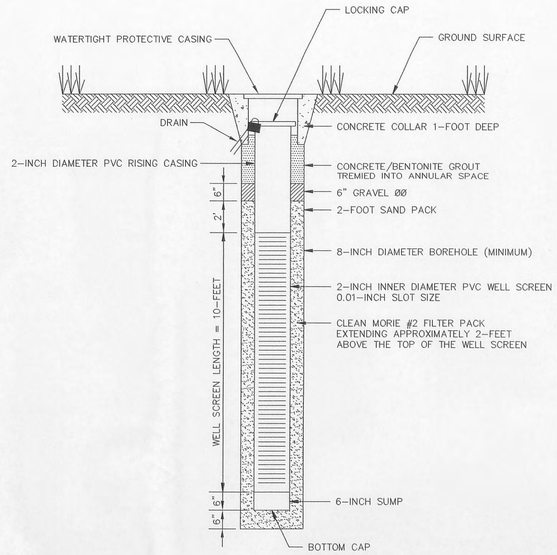
# MONITORING AND EXTRACTION WELL AS-BUILTS




RW-1
NTS




RW-2
NTS




TYPICAL MONITORING WELL DETAIL
NTS

NOTES:

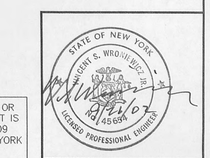
1. OFF-SITE MONITORING WELLS ARE TO BE APPROXIMATELY 35-FEET DEEP.
2. ON-SITE MONITORING WELLS ARE TO BE APPROXIMATELY 15-FEET DEEP.

RECOVERY WELL NOTES:

1. GRAVEL PACK CONSISTING OF CLEAN MORIE #2 FILTER PACK WILL BE PLACED AROUND THE WELL SCREEN EXTENDING A MINIMUM OF THREE FEET BELOW THE SILT TRAP AND EXTENDING FIVE FEET ABOVE THE TOP OF THE WELL SCREEN.

2. A BENTONITE SEAL TWO FEET THICK WILL BE PLACED ABOVE THE GRAVEL PACK AND THE REMAINING ANNULUS WILL BE GROUTED WITH CEMENT/BENTONITE GROUT.

UNAUTHORIZED ALTERATIONS OR ADDITIONS TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW.




VINCENT S. WRONIEWICZ
NEW YORK PROFESSIONAL ENGINEER, NO. 045694-1

SOURCE: ORIGINAL DRAWING PROVIDED BY CAMP DRESSER & McKEE, DATED MARCH 2000.

| REV. # | DATE | BY | | APP. BY |
|---|---|---|---|---|
| . | 6/10/02 | MGW | AS-BUILT CONSTRUCTION DRAWINGS | VSW |

ACTIVE INDUSTRIAL UNIFORM
LINDENHURST, SUFFOLK COUNTY, NEW YORK

AS-BUILT DRAWINGS

| | |
|---|---|
| DRAWN BY: | M.G.W. 6/26/01 |
| PREPARED BY: | A.K.G. 6/26/01 |
| CHECKED BY: | D.M.S. 6/28/01 |

LAW
ENGINEERING AND ENVIRONMENTAL SERVICES, P.C.

DRAWING TITLE:
WELL CONSTRUCTION AND WELLHEAD DETAILS

| | |
|---|---|
| FIGURE NUMBER: | C-6 |
| SCALE: | NOT TO SCALE |
| PROJECT NUMBER: | 22000.0.0019 |
| ISSUE DATE: | 9/25/02 |

FILE: C:\Work Law\ACTIVE\ACTIVE INDUSTRIAL UNIFORM\CADD\FINAL AS-BUILTS\AU_C-6.DWG, DATE: 09/23/2002, 08:13:56PM