# 2007
# Periodic Review Report
# Mr. C's Dry Cleaners Site
# NYSDEC Site No. 9-15-157
# Village of East Aurora
# Erie County, New York

**April 2008**

**Prepared for:**

**NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION**
**DIVISION OF ENVIRONMENTAL REMEDIATION**

**Prepared by:**

ecology and environment engineering, p.c.
International Specialists in the Environment

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# List of Abbreviations and Acronyms

| | |
|---|---|
| AGC | annual guideline concentrations |
| AS | air sparging |
| BGS | below ground surface |
| BTEX | benzene, toluene, ethyl benzene, and xylene |
| cfm | cubic feet per minute |
| cVOC | chlorinated volatile organic compound |
| EEEPC | Ecology and Environment Engineering, P.C. |
| EPA | (United States) Environmental Protection Agency |
| FS | Feasibility Study |
| GAC | granular activated carbon |
| gpd | gallons per day |
| gpm | gallons per minute |
| IAQ | indoor air quality |
| IC/EC | institutional controls and engineering controls |
| IO&MM | Inspection, Operations and Monitoring |
| Iyer | Iyer Environmental Group, PLLC |
| µg/L | micrograms per liter |
| $\mu g/m^3$ | micrograms per cubic meter |
| Matrix | Matrix Environmental Technologies, Inc. |
| MBE | minority-owned business enterprise |
| Mitkem | Mitkem Corporation |
| MPI | Malcolm-Pirnie, Inc. |
| Mr. C's | Mr. C's Dry Cleaners Site |
| NYSDEC | New York State Department of Environmental Conservation |
| NYSDOH | New York State Department of Health |
| NYSDOT | New York State Department of Transportation |

## List of Abbreviations and Acronyms (cont.)

| | |
|---|---|
| OM&M | operations, maintenance, and monitoring |
| OMEI | O&M Enterprise, Inc. |
| PCE | perchloroethylene or tetrachloroethene |
| PLC | program logic controller |
| PRR | Periodic Review Report |
| PVC | polyvinyl chloride |
| RI | remedial investigation |
| ROD | record of decision |
| SGC | short-term guideline concentrations |
| SMP | Site Management Plan |
| SPDES | State Pollution Elimination Discharge System |
| SSDS | sub-slab depressurization system |
| STL | Severn-Trent Laboratories, Inc. |
| SVE | soil vapor extraction |
| SVII | Soil Vapor Intrusion Investigation |
| TAGM | Technical and Administrative Guidance Memorandum |
| TCE | trichloroethylene |
| Tyree | The Tyree Corporation |
| VOC | volatile organic compounds |
| XRF | X-ray Fluorescence |

# 1 Introduction

Pursuant to Work Assignment No. D004442-DC13, accepted on May 29, 2007, Ecology and Environment Engineering, P.C. (EEEPC) is submitting this Periodic Review Report (PRR) to the New York State Department of Environmental Conservation (NYSDEC). This report covers the first operating year (January-December 2007) of the 2007 through 2011 Long-term Operations, Maintenance, and Monitoring (OM&M) Work Assignment Program for the Mr. C's Dry Cleaners Site (Mr. C's) in the village of East Aurora, Erie County, New York

This PRR was prepared for the Mr. C's remedial treatment system (NYSDEC Site No. 9-15-157), located at 586 Main Street in the village of East Aurora, Erie County, New York. This PRR also provides information on three additional remedial sites: the Agway air sparging/soil vapor extraction system (566 Main Street), the First Presbyterian Church sub-slab depressurization system (SSDS) (9 Paine Street), and the 27 Whaley Avenue residence SSDS unit, which are collectively operated, maintained, and monitored under the overall Mr. C's Work Assignment. In addition, information is provided on the groundwater monitoring network, which includes documentation on the cleanup and movement of groundwater upgradient and down gradient from the Mr. C's site.

## 1.1 Purpose

The purpose of this PRR is to annually review and report on the performance of the remedial treatment remedies that collectively make up the site. This report also provides an examination of operating records of each remedial operating unit, including the Site Management Plan (SMP), to evaluate whether the remedial equipment is performing within the manufacturers' operating guidelines and whether the remedial monitoring program is protective of the public health and the environment.

Section 1 of this PRR provides supportive background and historical information for each of the remedial treatment units and the surrounding groundwater monitoring network. In addition, site-specific regulatory compliance information is provided as baseline information. Section 2 evaluates the overall compliance with the decision documents, including the Record of Decision (ROD), associated remedial closure documentation, regulatory compliance, and the SMP for the operating year. Section 3 describes the uptime operations and cleanup efficiencies of each of the remedial treatment operations and provides general recommendations

on equipment replacement and repairs to improve the remedial action and the SMP for future operating years. Section 4 assesses the current condition of the remedial equipment and the oversight activities during the past reporting period. Section 5 provides support actions or decisions that justify closing or modifying any of the collective remedial processes that would end site management or re-classify the operations section at the site. Section 6 describes the institutional and engineering controls and provides some recommendations for continuing or modifying these controls. Section 7 reports all costs that have been expended for the individual remedial operating units for the collective remedial action. Finally, Section 8 provides an appraisal of any relevant information generated locally regarding the site as well as information that should be disseminated to the public based on past public reporting.

This PRR also provides sufficient details to document compliance with the SMP requirements associated with the:

1. OM&M Plan: to document the status of the OM&M of the remedy;

2. Monitoring Plan: to document the status of the monitoring of the remedy; and

3. Institutional Controls and Engineering Controls (IC/EC) Plan: to certify the IC/ECs, if applicable.

This PRR provides documentation of problems and describes changes necessary for the site to be in compliance with the SMP, including:

- The removal of IC/ECs that are no longer applicable;
- The addition of IC/ECs that are now necessary;
- Modifications in OM&M requirements;
- Installation and decommissioning of site monitoring wells, as necessary; and
- Modifications to the Corrective Action Work Plan and schedule, as necessary.

## 1.2 Background and Historical Information

### 1.2.1 Site Location and Description

The Mr. C's Dry Cleaners site (New York State Superfund Site 9-15-157) is located at 586 Main Street in the village of East Aurora, Erie County, New York (see Figure 1-1). The site is located on an approximately 0.5-acre parcel in a mixed-use area of residential, municipal, and light-commercial properties. Mr. C's Dry Cleaners is located in a one-story building on a concrete slab foundation with an adjacent paved parking lot. Mr. C's Dry Cleaners occupies the front portion of the building. Other commercial businesses occupy other parts of the building.

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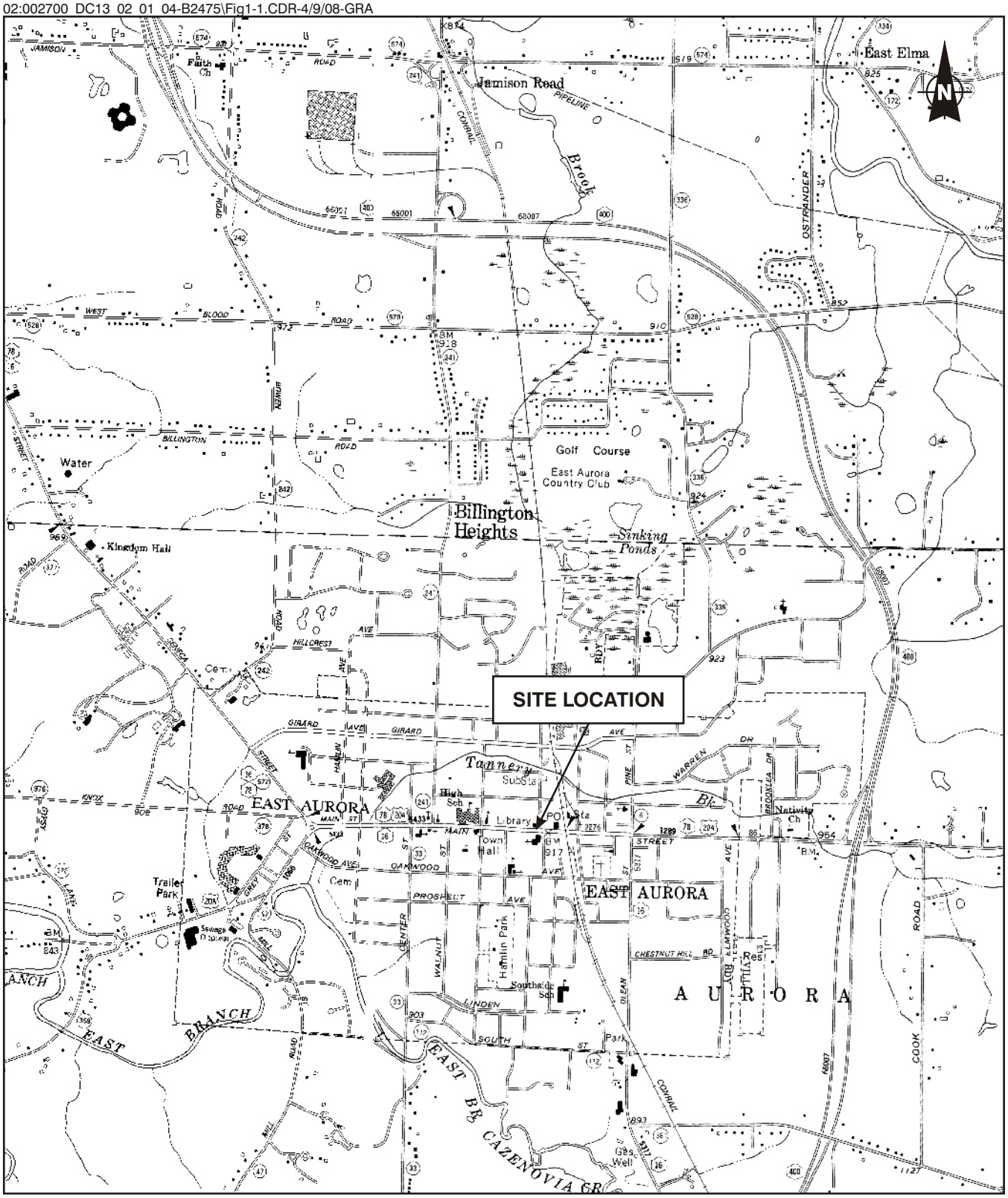


SOURCE: NYS Department of Transportation Raster Quadrangle, 1988.

**Scale**

0 2,000 4,000 Feet

**Figure 1-1 General Site Location Map**

A chlorinated volatile organic compound (cVOC) contaminant plume (consisting mainly of tetrachloroethene and its degradation by-products) extends beyond the immediate Mr. C's treatment system facility; therefore, the remedial treatment system operation collectively encompasses three other individual remedial treatment operating units besides the Mr. C's site groundwater pump-and-treatment system: the former Agway Retail Store and Agway Energy Products site air sparging and soil vapor extraction unit (AS/SVE), located at 566 Main Street; the First Presbyterian Church of East Aurora subslab depressurization system (SSDS) unit, located at 9 Paine Street; and a private residence subslab depressurization unit at 27 Whaley Avenue (see Figure 1-2, back pocket). All operational units are located within the village of East Aurora, New York.

### 1.2.2 Background and History

#### Mr. C's Dry Cleaners Site

Based on available Sanborn maps and NYSDEC file information, the site was used for various businesses, including a laundry, auto repair with spray painting, and a hotel, from 1912 to 1927. The existing building currently used by Mr. C's is believed to have been built around 1927. It has been in use as a dry cleaning operation since prior to 1970. Dry cleaning operations at Mr. C's utilize a solvent comprised primarily of tetrachloroethene, also known as perchloroethene (PCE). Prior to 1985, it is reported that filters and sludge were disposed of in dumpsters behind the building and collected by the Village of East Aurora. Since 1985, all dry cleaning wastes have been disposed of through a commercial waste disposal firm (NYSDEC 1997). The site is situated over highly conductive saturated sand and gravel glacial outwash deposits approximately 16 to 21 feet thick.

In December 1991, NYSDEC investigated chemical odors reported in the basement of the First Presbyterian Church, which is located to the southwest of Mr. C's. NYSDEC and the New York State Department of Health (NYSDOH) collected air samples in the church basement on several occasions, and PCE, benzene, and toluene were detected in the samples. Further investigations performed under a comprehensive remedial investigation (RI) performed by Malcolm-Pirnie, Inc. (MPI), of Orchard Park, New York, found PCE contamination in the area sanitary sewers and groundwater around the site (MPI 1995). The RI conducted in 1994 by MPI found the highest concentration of PCE beneath the Mr. C's building (MPI 1995). Other contaminants included PCE degradation compounds, petroleum hydrocarbons, and other volatile organic compounds (VOCs). The investigation delineated the vertical and horizontal extent of the contaminated groundwater plume by installing a network of groundwater monitoring wells upgradient and downgradient of the site.

Based on the results of the RI, the Mr. C's site was designated a Class 2 Hazardous Waste Site by NYSDEC, meaning that the site is believed to pose a significant risk to public health and the environment.

A feasibility study (FS) completed by MPI in November 1996 recommended remediation of the source plume using in situ air-stripping wells (MPI 1996). A

remedial action consisting of the installation of eight in situ air-stripping wells was selected, and a Record of Decision (ROD) was signed by NYSDEC in March 1997 (NYSDEC 1997). Additional pre-design investigations were conducted in December 1998 and April 1999 to confirm the limits of the groundwater contamination plume. An explanation of significant differences was issued in April 2000 to provide justification for the modification of the selected remedy to a conventional groundwater pump-and-treat system. The remedial design, including the preparation of contract documents and drawings, was completed in October 2000 by MPI (MPI 2000). The Tyree Corporation, Ltd (Tyree), the installation contractor, began remedial construction in May 2001 and completed the project in September 2002. Project oversight was performed by EEEPC. As part of the remedial construction, NYSDEC performed or installed the following major items:

- Nine groundwater pumping wells and 30 observation piezometers;
- Approximately 1,100 linear feet of double-wall groundwater collection piping;
- Improvements within the designated groundwater treatment system space inside the Mr. C's building, including demolition and removal of existing utilities and fixtures;
- A groundwater treatment system consisting of a sequestering agent feed system, bag filters, a 3,000-gallon holding tank, a low-profile air stripper, and two vapor-phase granular activated carbon (GAC) filter units; and
- Approximately 1,300 linear feet of 4-inch-diameter polyvinyl chloride (PVC) force main piping for discharge of treated groundwater to Tannery Brook.

OM&M of the treatment system was performed for 12 months by the installation contractor (Tyree) after construction was completed in September 2002. The OM&M services incorporated as part of the construction contract were completed by Tyree in September 2003.

EEEPC has operated, maintained, and monitored the remedial treatment system and support equipment since October 2003 as part of a work assignment under the NYSDEC Standby Contract. The initial work assignment was administered by EEEPC. EEEPC subcontracted the operation and maintenance (O & M) work to O & M Enterprise, Inc. (OMEI), of North Tonawanda, New York, for two 12-month periods that ended in October 2004 and October 2005. Severn Trent Laboratory (STL), of Amherst, New York, provided analytical services for the groundwater discharge permit compliance monitoring portion of the work assignment. During that period, modifications to the original system were made based on an air modeling study performed by EEEPC in September 2004 (EEEPC 2004a). Based on the results of the study, the vapor carbon units were removed in January 2005. The units were transported to another remedial site operated by NYSDEC.

Two additional one-year work assignments were granted to EEEPC to operate the Mr. C's remedial treatment system from October 2005 to October 2006 and October 2006 to July 2007. The work assignments were administered by EEEPC, operations and maintenance services were provided by OMEI, and analytical services were provided by STL.

A new four-year work assignment under EEEPC's Standby Contract began in July 2007 and will run through April 2011. The OM&M services were competitively bid and awarded to Iyer Environmental Group, PLLC, (Iyer) of Orchard Park, New York. Analytical services were also competitively bid and awarded to the Mitkem Corporation (Mitkem) of Warwick, Rhode Island.

The groundwater monitoring wells installed by MPI during the RI and the Agway site wells installed by Matrix Environmental Technologies, Inc. (Matrix) have been included in the long-term monitoring, maintenance, and evaluation program under EEEPC's work assignment for the Mr. C's site.

### Agway and Agway Energy Products Site, 866 Main Street, East Aurora, New York

The former Agway and Agway Energy Products site was located at 866 Main Street, East Aurora, New York, 150 feet west of the Mr. C's remedial site. A petroleum product release was detected at this site in 1987. Five monitoring wells and one recovery well were installed in 1989 to recover petroleum products. A new groundwater recovery well and a treatment system were installed and began operating in 1991. The Agway Energy Products complex occupied the corner lot intersected by Main Street and Whaley Avenue until October 1992, when operations as a retail gasoline distribution facility ceased. Subsequent to NYSDEC investigations, buildings and associated underground storage tanks, the fuel pump island, and other on-site structures were demolished between February and March 1993 (Matrix 2002).

Historically, the Agway site has been managed at three different levels. First, contaminated soils at the former spill area were removed from the surface to approximately 12 feet below ground surface (BGS) and replaced with clean fill. Second, groundwater contamination, which consists primarily of PCE migrating downgradient from the Mr. C's site, is being remediated by the Mr. C's treatment system. Groundwater pumping wells for the extraction of contaminated groundwater extend to a depth of 40 feet BGS. The third component of the remedial action is an air sparging and vapor extraction system, which was installed by Matrix and is currently operated and maintained by EEEPC.

Upon completion of site demolition and restoration activities, the owner of the Agway property was required, under a Memorandum of Agreement with NYSDEC Region 9, to install, operate, and monitor a small air sparging/soil vapor extraction system. Matrix installed the remedial system in September 2001 and operated it until June 2004. The air sparging system injects air through eight

sparge points installed to a depth of 20 feet BGS and extracting the soil vapor through nine fully screened vapor extraction points installed to a depth of 12 feet BGS. The vapor from the vapor extraction points is collected and discharged through a single emissions point at the operations building located on the former Agway site. Based on Matrix's report of November 14, 2003 (Matrix 2003), the last round of sampling was performed on five boreholes that were installed on August 29, 2003. The report indicated that a number of VOCs contaminants in the borehole samples exceeded the regulatory limits established by NYSDEC Technical and Administrative Guidance Memorandum (TAGM) 4046 Guidelines.

The eight groundwater monitoring wells on-site were sampled in October 2002 for benzene, toluene, ethyl benzene, and xylene (BTEX) compounds only. The analytical results for seven of the eight wells were below the NYSDEC Groundwater Quality Standards for these compounds. In September 2003, Matrix collected six soil boring samples around the site to evaluate the site for potential inactive status and remedial system shutdown. The report submitted by Matrix on November 14, 2003, indicated that BTEX concentrations in soils in five of the six bore holes were below the NYSDEC TAGM 4046 Guidelines.

In its November 14, 2003, report, Matrix requested that "no further action" be taken based on groundwater BTEX concentrations being below the NYSDEC groundwater quality standards and the intended reuse of the property as a parking lot by the Village of East Aurora, which would not result in any exposure pathways. However, the analytical results from the same borehole soils exceeded the NYSDEC regulatory guidelines for a number of VOCs. As a result of these high VOC levels, operation and maintenance of the air sparging/soil vapor extraction system was continued, and this work has been incorporated into the Mr. C's site OM&M work assignment being performed by EEEPC pending additional reviews by NYSDEC.

The remaining groundwater monitoring wells installed during the original Agway site investigation program have been incorporated into the long-term monitoring, maintenance, and evaluation program currently being performed by EEEPC.

### First Presbyterian Church, 9 Paine Avenue, East Aurora, New York

The First Presbyterian Church and school building occupy the northwest corner property bordered by Main Street and Paine Avenue in the village of East Aurora, New York. The original church and community building were constructed circa 1926. The adjoining school and administrative building were added onto the west side of the existing church in 1961.

Both structures have full basements with poured concrete floors. The west end of the school basement contains several classroom areas for preschool children. Based on historical reports of complaints of chemical odors by church members, NYSDEC began environmental investigations at the site in October 1991. Subsequent indoor air sampling conducted by NYSDEC, NYSDOH, and (under the RI) MPI confirmed that PCE was present in the basement of the church building

above the 100 micrograms per cubic meter ($\mu g/m^3$) guidance value established by NYSDOH. An air ventilation exhaust system installed in the church educational wing in the late 1990s reduced the air contaminant concentration to levels below the NYSDOH guidance value for PCE in indoor air. Subsequent investigations in the surrounding areas of the facility found PCE contamination in sanitary sewers, groundwater, and soil vapor.

Continuing complaints of odors in the church basement resulted in subsequent air and soil sampling conducted by EEEPC at the request of NYSDOH/NYSDEC in 2004. Additional air filtration devices were installed in classroom areas while investigations into the source of the VOCs in the church continued. These investigations revealed that VOC contamination was present below the basement floor slabs in concentrations sufficient to warrant the design and installation of SSDS units. The SSDS units were installed in early September 2004 by Mitigation Tech, of Brockport, New York, a subcontractor to OP-Tech, of North Tonawanda, New York (a NYSDEC Spills contractor). Following commissioning of the SSDS system, indoor ambient air samples were collected in the church and educational wing basement on September 20, 2004. The analytical results for these samples indicated a substantial reduction in PCE levels. Samples were collected again in the church basement and educational wing on January 25, 2005, to evaluate the performance of the SSDS units under winter conditions. The analytical results from this sampling effort indicated almost full removal of PCE in indoor air as a result of the continuous operation of the SSDS units.

The analytical results from a second round of post-commissioning sampling conducted in June 2006 again showed PCE removal to below NYSDOH guidance levels (EEEPC 2006). The continued OM&M of the SSDS units has been incorporated into the Mr. C's OM&M scope of work for the 2007 to 2011 work assignment.

### 27 Whaley Avenue Residence, East Aurora, New York

Several residential structures are located along the west side of Whaley Avenue north of Main Street, to the west of the Mr. C's and Agway Energy Products sites. The majority of the homes in the area are modest two- and three-floor wood-frame structures with lot sizes averaging less than 0.5 acre. The residential structure at 27 Whaley Avenue consists of a poured concrete foundation and wood framing. The building is constructed as a double-occupancy unit, capable of housing a family on the second floor. The house is approximately 80 to 90 years old. There was a fire in the back of the house on the second floor in the late 1990s. The building heating system consists of recirculated forced air with a natural gas furnace and no central air conditioning.

Concurrent with past investigations at the First Presbyterian Church, additional investigations were conducted by NYSDEC and NYSDOH to determine the extent of PCE contamination in groundwater beyond the Mr. C's site. Investigations by NYSDEC and NYSDOH conducted in July 1992 confirmed the migration of groundwater contamination from the Mr. C's site to the residential area to the

west. In accordance with the ROD, basement air samples were collected from homes in the Whaley Avenue corridor in 1996 as part of a periodic indoor air sampling program. Analytical results for samples collected from 27 Whaley Avenue showed PCE levels that approached or that were above the NYSDOH guidance value of 100 $\mu g/m^3$ for ambient indoor air. As a result, NYSDOH recommended installation of an air filtration device, which was in place by January 1997. The air filtration unit operated in the basement until 2004. During the initial Indoor Air Quality (IAQ) review in May 2004, the building was vacant and in the process of being sold, and the unit was removed.

As part of the Soil Vapor Intrusion Investigation (SVII) performed by EEEPC in July 2004, a soil gas survey was conducted along the north side of Main Street, east and west of Whaley Avenue, and on the east and west side of Whaley Avenue, starting at Main Street and proceeding north approximately 600 feet (EEEPC 2004b). Sub-slab contaminant levels detected at 27 Whaley Avenue warranted a multi-point, single-fan SSDS unit.

The SSDS unit was installed at the 27 Whaley Avenue residence in January 2005 by Mitigation Tech and has been operating since that time. The analytical results for ambient air samples collected in February 2005 and June 2006 after operating the SSDS unit indicated that trichloroethylene (TCE) and PCE concentrations were below NYSDOH guidance levels. A routine inspection of the system performed in September 2007 indicated the system was operating within the parameters initially established for the unit by the equipment manufacturer.

A second round of sampling and analysis conducted in June 2006 again showed PCE concentrations to be at an acceptable level (EEEPC 2006). The continued OM&M of the SSDS unit has been incorporated into the Mr. C's site scope of work for the 2007 to 2011 work assignment.

### Groundwater Monitoring Well Network

The majority of the groundwater monitoring well network was installed as part of the 1994 RI performed by MPI and the Agway site 2001 RI performed by Matrix. In addition, the nine groundwater pumping wells installed under the Mr. C's site remedial construction contract are included in the monitoring well network.

The monitoring well network provides information about long-term groundwater movement and contaminant cleanup in and around the site. The results of the initial groundwater sampling and analysis performed during the first RI provided information for use in developing the remedial action approach. Sampling and analysis were performed for the full monitoring well network in 2001, prior to the remedial construction, and again in 2002, after the remedial treatment system was operational, to evaluate the cleanup performed during the remedial action.

In September 2005, EEEPC collected samples from the Agway on-site groundwater monitoring wells. The analytical results for these samples indicated that cVOCs were still present at concentrations above NYSDEC's groundwater stan-

dards. Based on these results, it was decided that the wells on the site would remain operational and be utilized during the OM&M program.

As a part of the long-term monitoring program for the Mr. C's site, sampling and analysis were performed in 2004 and 2007 to obtain information on the concentrations and movements of contaminants at the site. The long-term monitoring reports are intended to be used to evaluate the overall remedial operations and support modifications to the treatment system to improve areas of collection and treatment.

## 1.3 Review of Site-Specific Regulatory Information

The regulatory compliance requirements for the remedial treatment system deal primarily with the discharge of treated effluent waters from the Mr. C's site. The original State Pollution Elimination Discharge System (SPDES) Equivalency Permit for the Mr. C's site remedial treatment system was obtained in 2001. The site Equivalency Permit was included in the contract documents for use by the contractor for startup and post-construction OM&M. EEEPC has performed OM&M services on the remedial treatment system since the completion of OM&M services by Tyree in September 2003. A copy of the site-specific SPDES Equivalency Permit is provided as Appendix A. The original site-specific SPDES Equivalency Permit expired in April 2006 and was not renewed.

# 2 Remedial Systems Compliance

## 2.1 General Regulatory Compliance

In 2007, all remedial operating units associated with the Mr. C's site were in compliance with the operating requirements for remedial treatment. Information regarding each individual operating unit is presented in the following subsections.

### 2.1.1 Mr. C's Site

#### Water

The site effluent discharge criteria were initially established by NYSDEC as an SPDES Equivalency Permit during the design phase of the contract documents in 2000 prepared by MPI. Once the system became operational in 2002, the influent and effluent from the remedial treatment system were sampled and analyzed, and the results were reported on a monthly basis as part of the compliance monitoring program. In February 2005, the SPDES Equivalency Permit was modified by NYSDEC Region 9 to eliminate metals analysis, total dissolved solids, and suspended solids. This modification was based on 30 months of analytical reporting prepared and submitted by EEEPC.

The current effluent criteria used for the remedial treatment system at the Mr. C's site are presented in Table 2-1.

**Table 2-1 Mr. C's Dry Cleaners Site Remediation, Effluent Criteria**

| Parameter/Analyte | Daily Maximum[1] | Units |
|---|---|---|
| Flow | 216,000 | gpd |
| pH | 6.0 - 9.0 | standard units |
| 1,1 Dichloroethene | 10 | µg/L |
| 1,2 Dichloroethane | 10 | µg/L |
| Trichloroethene | 10 | µg/L |
| Tetrachloroethene | 10 | µg/L |
| Vinyl Chloride | 10 | µg/L |
| Benzene | 5 | µg/L |
| Ethylbenzene | 5 | µg/L |
| Methylene Chloride | 10 | µg/L |
| 1,1,1 Trichloroethane | 10 | µg/L |
| Toluene | 5 | µg/L |

**Table 2-1 Mr. C's Dry Cleaners Site Remediation, Effluent Criteria**

| Parameter/Analyte | Daily Maximum[1] | Units |
|---|---|---|
| Methyl-t-Butyl Ether | NA | µg/L |
| o-Xylene | 5 | µg/L |
| m, p-Xylene | 10 | µg/L |
| Total Xylenes | NA | µg/L |
| Iron, total[2] | 600 | µg/L |
| Aluminum[2] | 4,000 | µg/L |
| Copper[2] | 48 | µg/L |
| Lead[2] | 11 | µg/L |
| Manganese[2] | 2,000 | µg/L |
| Silver[2] | 100 | µg/L |
| Vanadium[2] | 28 | µg/L |
| Zinc[2] | 230 | µg/L |
| Total Dissolved Solids[2] | 850 | mg/L |
| Total Suspended Solids[2] | 20 | mg/L |
| Hardness | NA | mg/L |
| Cyanide, Free[2] | 10 | µg/L |

Notes:
[1] "Daily Maximum" excerpted from Attachment E of Addendum 1 to the Construction Contract Document.
[2] Removed from the contaminant parameter list by NYSDEC Region 9 February 2005.

Key:
gpd = Gallons per day.
µg/L = Micrograms per liter.
mg/L = Milligrams per liter.
NA = Not applicable.

In 2007, the remedial treatment system met the discharge permit requirements with the exception of the results for March 2007. During the March 2007 reporting period, the treated effluent concentration of PCE was 28 µg/L, which was above the permit limit of 10 µg/L. As part of a corrective action plan in the OM&M manual, the treatment system was re-evaluated and the trays in the air-stripping unit were cleaned. A second sample of the treated effluent was then obtained, and the analytical results for PCE (19 µg/L) again exceeded the permit limit. A second corrective action was performed on the system that included extra cleaning of the air-stripping unit and switching to the alternate blower fan on the air-stripping unit. A third round of samples was obtained, and the analytical result for PCE (0.8 µg/L) was below the permit limit

## Air

During the initial construction of the remedial treatment system in June 2002, two 6,500 pound vapor-phase GAC units were installed in series to absorb the residual contaminant-laden vapors after treatment from the air-stripping process. The remedial treatment system was accepted and commissioned in September 2002 and included the air-stripping unit and vapor-phase GAC units.

The estimated air-stripper influent and effluent contaminant concentrations for the vapor-phase GAC units are provided in Table 2-2.

**Table 2-2 Mr. C's Dry Cleaners Site Remediation, Estimated Air-Stripper Influent and Target Effluent Concentrations**

| Analyte | Air-Stripper Influent Concentrations[1] (µg/L) | Air-Stripper Effluent Concentrations[2] (µg/L) |
|---|---|---|
| **Volatile Organic Compounds** | | |
| Chloroform | 3 | 7.0 |
| 1,1-Dichloroethene | 24 | 5.0 |
| 1,2-Dichloroethene | 54 | 5.0 |
| 1,2-Dichloropropane | 11.2 | 5.0 |
| Methylene Chloride | 2.2 | 5.0 |
| Tetrachloroethene | 21,200 | 0.7 |
| 1,1,1-Trichloroethane | 10.8 | 5.0 |
| Trichloroethene | 700 | 5.0 |
| Vinyl Chloride | 74 | 0.7 |
| **Petroleum Hydrocarbons** | | |
| Benzene | 17.4 | 0.8 |
| Ethylbenzene | 12.8 | 5.0 |
| Toluene | 2.2 | 5.0 |
| Xylene (total) | 3.4 | 5.0 |
| Chlorobenzene | 4.0 | 5.0 |

Notes:
[1] Values are typical.
[2] Values represent the target concentration.

Key:
µg/L = Micrograms per liter.

Part of Tyree's shop drawing submittal requirements was the submission of the breakthrough calculations of the vapor-phase GAC units and the submission of the Air Guide 1 Application. These were initially submitted, reviewed, and recommended for resubmission by EEEPC in May 2002. The revised calculations were resubmitted, reviewed, and approved by EEEPC in December 2002.

In July 2003, EEEPC reevaluated the breakthrough calculations provided by Tyree based on current concentrations from air sample analyses. Based on this reevaluation, EEEPC revised the calculated breakthrough of VOCs through the vapor-phase GAC units. In September 2004, EEEPC prepared and submitted an air quality analysis report that evaluated the potential ambient air impacts resulting from the operation of the Mr. C's site air stripper without the vapor-phase GAC units (EEEPC 2004a). The study used the short-term guideline concentrations (SGCs) and the annual guideline concentrations outlined in NYSDEC's *New York State Air Guide 1: Guidelines for the Control of Toxic Ambient Air Contaminants* (Air Guide 1) (NYSDEC 1991) and DAR-1 Annual Guideline Concentrations/Short-term Guideline Concentrations (AGC/SGC) Tables (NYSDEC 2003). Air impacts at the site were evaluated using the procedures for conducting

a screening-level analysis outlined in Appendix B of Air Guide 1: Ambient Air Quality Impact Screening Analysis (NYSDEC 1995); the U.S. Environmental Protection Agency's (EPA's) Industrial Source Complex-Long Term, Version 2 model; (ISCLT2) imbedded in NYSDEC's Air Guide-1 Software Program, Version 3.5 (AG1V35) (NYSDEC 2004); and local meteorological data for Buffalo, New York.

The results of the air modeling study demonstrated that the two vapor-phase GAC units were unnecessary. The results were subsequently evaluated and accepted by NYSDEC in October 2004. In January 2005, the two vapor-phase GAC units were decommissioned, removed from the Mr. C's remedial treatment system, and sent to another NYSDEC site for use.

### 2.1.2 Agway and Agway Energy Products Site, 566 Main Street, East Aurora, New York

#### Groundwater

The regulatory groundwater cleanup guidance that was established for the Mr. C's site is currently being used at the former Agway and Agway Energy Products site. The existing remedial treatment system at the site includes eight air sparging (AS) points, nine fully screened vapor extraction points, and approximately 200 linear feet of soil-vapor extraction (SVE) collection piping that collects extracted vapor contaminants to a central location and discharges them at one central emission point into the atmosphere. A limited volume of contaminated groundwater is generated as part of the remedial treatment system's air/water separator. Once the unit is half full, the liquids are containerized, transported on site, and pumped into the Mr. C's equalization tank for treatment.

PCE and TCE have been identified as contaminants in the lower aquifer at the Agway site. A number of groundwater wells at the Agway Energy Products site are used for long-term monitoring and analysis to evaluate the cleanup of groundwater and movement of contaminants around the site. The Agway site monitoring wells have been incorporated into the long-term groundwater monitoring network for the Mr. C's site. The results from periodic sampling/analysis events indicate the groundwater contaminant concentrations are still above the groundwater cleanup guidance requirements.

#### Air

Currently, no regulatory air cleanup guidance has been established for the former Agway and Agway Energy Products site. While sampling and analysis is performed on the single-point air discharge from the treatment shed under the long-term monitoring program, the effluent discharge is not under the regulatory permit program. The last reported air analysis for this discharge point (June 2006) indicated that 1,600 $\mu g/m^3$ of PCE were being discharged over the one-hour sampling period.

### 2.1.3 First Presbyterian Church, 9 Paine Avenue, East Aurora, New York

#### Groundwater

Groundwater pumping and discharge are not a part of the remedial operations at the First Presbyterian Church. Therefore, no regulatory permit requirements for groundwater discharge compliance sampling or analysis have been established for this location.

#### Air

The NYSDOH has determined that the concentrations of PCE and TCE in indoor air should not exceed 100 µg/$m^3$. The analytical data from the SVII performed in July 2004 showed that the PCE concentration in the sub-slab exceeded this limit. Subsequently, three SSDS units were installed in September 2004 and have operated on a continuous basis since their commissioning.

The NYSDEC and the NYSDOH have not established regulatory requirements for the discharge of sub-slab air into the atmosphere from each of the fan discharge points. Therefore, EEEPC has adopted the inspection, operation, maintenance, and monitoring (IOM&M) program established and approved at other NYSDEC SSDS installations in New York State. The IOM&M program includes annual maintenance inspection of the SSDS units and indoor ambient air monitoring every two years. The next scheduled air sampling will be performed during the fall 2008 heating season.

### 2.1.4 27 Whaley Avenue Residence

#### Groundwater

Groundwater pumping and discharge are not a part of the remedial operations at 27 Whaley Avenue, East Aurora, New York. Therefore, no regulatory permit requirements for groundwater discharge compliance sampling or analysis have been established for this location.

#### Air

The NYSDOH has determined that the concentrations of PCE and TCE in indoor air should not exceed 100 µg/$m^3$. The analytical data from the SVII performed in July 2004 showed that the PCE concentration in the sub-slab exceeded this limit. Subsequently, one SSDS unit was installed in January 2005 and has operated on a continuous basis since the unit was commissioned.

The NYSDEC and the NYSDOH have not established regulatory requirements for the discharge of sub-slab air into the atmosphere from the fan discharge point. Therefore, EEEPC has adopted the IOM&M program established and approved at other NYSDEC SSDS installations in New York State. The IOM&M program includes an annual maintenance inspection of the SSDS units and indoor ambient air monitoring every two years. The next scheduled sampling will be performed during the fall 2008 heating season.

# 3 Evaluation of Remedial Treatment Operations

## 3.1 General Evaluation of Remedial Treatment Operations

In 2007, the uptime operations and cleanup efficiencies of all the remedial operating units were very good.

### 3.1.1 Mr. C's Dry Cleaners Site

As shown in the original contract documents prepared by MPI, the remedial treatment system consists of nine groundwater pumping wells locations, a treatment system, and appurtenances, which were constructed by Tyree for the Mr. C's site. The groundwater wells pump contaminated groundwater from specific areas and depths in the village of East Aurora to the treatment system located at the Mr. C's site. The treatment facility uses air stripping to treat the contaminated groundwater. The treated effluent is then discharged through 1,300 linear feet of double-walled PVC piping to Tannery Brook, a small tributary of the East Branch of Cazenovia Creek that flows through the village of East Aurora.

The remedial treatment system has been operational since September 2002. From September 2002 until September 2003, OM&M was performed under contract by Tyree with EEEPC's oversight. Following Tyree's completion of the 12 months of OM&M services required by the construction contract, the system's OM&M services have been performed by EEEPC under a work assignment with NYSDEC.

The Mr. C's Dry Cleaners site remedial treatment system operates continuously, 24 hours per day, 365 days per year. Treatment system performance and compliance sampling, analysis, and monitoring are performed on a monthly basis. The treatment system, including all elements of the treatment equipment, is inspected and maintained on a weekly basis through a NYSDEC work assignment to EEEPC. The inspection, maintenance, and monitoring services are currently subcontracted to Iyer, a New York State-certified minority-owned business enterprise (MBE). All analytical services for the work assignment are performed by Mitkem.

A summary of the remedial treatment operations at the Mr. C's site for the 12 months from December 27, 2006, to January 2, 2008, is provided below.

## System Operational Up-Time in 2007

The up-time operations percentages are calculated based on actual monthly hours of treatment system operations in the reporting period divided by the potential hours of operation in the reporting period.

Local power outages or equipment failure do affect operations of the remedial treatment system. To minimize these downtimes, the system has an auto-dialer that sends an alarm to the OM&M subcontractor and EEEPC if an equipment failure is encountered. In addition, the treatment facility can be called at any time unless the phone service is down to check on the status of the various operating equipment in the building.

In 2007, based on information from the weekly OM&M reports from the subcontractor, the remedial treatment system operated 8,823 hours out of a possible 8,960 hours or an up-time operation of approximately 98.47%. Table 3-1 provides details on the monthly operation of the treatment system.

**Table 3-1 Treatment System Up-time in 2007, Mr. C's Dry Cleaners Site**

| Reporting Period or Month | Reporting Hours/ Maximum Hours | Operational Up-time (%) |
|---|---|---|
| December 27, 2006 to February 6, 2007 | 983/992 | 99.00 |
| February 6, 2007 to February 26, 2007 | 480/480 | 100.00 |
| February 26, 2007 to March 26, 2007 | 672/672 | 100.00 |
| March 26, 2007 to May 1, 2007 | 888/888 | 100.00 |
| May 1, 2007 to May 29, 2007 | 696/696 | 100.00 |
| May 29, 2007 to June 25, 2007 | 643/648 | 99.25 |
| June 25, 2007 to July 24, 2007 | 696/696 | 100.00 |
| July 24, 2007 to August 28, 2007 | 792/792 | 100.00 |
| August 28, 2007 to October 1, 2007 | 816/816 | 100.00 |
| October 1, 2007 to October 30, 2007 | 696/696 | 100.00 |
| October 30, 2007 to November 28, 2007 | 741/744 | 99.59 |
| November 28, 2007 to January 2, 2008[1] | 720/840 | 85.71 |
| **Total Hours of Operation in 2007** | **8,823/8,960** | |
| **Average Operational Up-time in 2007:** | | **98.47** |

Note:
[1] Air stripper cleaning performed.

## Groundwater Processed and Discharged through the Remedial Treatment System in 2007

The amount of groundwater processed and discharged is directly read from the effluent discharge meter located after the air-stripper unit. Readings are taken weekly and then calculated for each monthly reporting period.

In 2007, based on information obtained from the weekly monitoring reports from the OM&M subcontractor, the remedial treatment system processed and discharged 10,005,833 gallons of treated groundwater to Tannery Brook (see Table 3-2).

**Table 3-2 Groundwater Processed and Discharged at the Remedial Treatment System in 2007**

| Month | Actual Period | Gallons |
|---|---|---|
| January 2007 | 12/27/06 to 2/6/07 | 1,229,105 |
| February 2007 | 2/6/07 to 2/26/07 | 913,610 |
| March 2007 | 2/26/07 to 3/26/07 | 882,228 |
| April 2007 | 3/26/07 to 5/1/07 | 1,127,096 |
| May 2007 | 5/1/07 to 5/29/07 | 853,697 |
| June 2007 | 5/29/07 to 6/25/07 | 755,060 |
| July 2007 | 6/25/07 to 7/24/07 | 785,379 |
| August 2007 | 7/24/07 to 8/28/07 | 899,340 |
| September 2007 | 8/28/07 to 10/1/07 | 804,420 |
| October 2007 | 10/1/07 to 10/30/07 | 647,173 |
| November 2007 | 10/30/07 to 11/28/07 | 672,600 |
| December 2007 | 11/28/07 to 1/2/08 | 436,175 |
| **Total Gallons Treated in 2007:** | | **10,005,883** |

## Chlorinated Volatile Organic Compounds (cVOCs) Removal in 2007

The amount of cVOCs removed is based on the influent and effluent analytical results and the total flow processed. In 2007, based on calculations prepared by EEEPC, approximately 123 pounds of cVOCs were removed from the groundwater by the remedial treatment system (see Table 3-3).

**Table 3-3 cVOC Removal in 2007, Mr. C's Dry Cleaners Site**

| Month | Actual Period | Influent cVOCs (µg/L) | Effluent cVOCs (µg/L) | Removal Efficiency (%) | VOCs Removed (lbs.) |
|---|---|---|---|---|---|
| January 2007 | 12/27/06 to 2/6/07 | 1,406 | 1.30 | 99.10 | 14.40 |
| February 2007 | 2/6/07 to 2/26/07 | 1,017 | 4.70 | 99.54 | 7.72 |
| March 2007 | 2/26/07 to 3/26/07 | 1,693 | 0.80 | 99.95 | 12.47 |
| April 2007 | 3/26/07 to 5/1/07 | 1,665 | 3.10 | 99.81 | 15.63 |
| May 2007 | 5/1/07 to 5/29/07 | 1,666 | 0.76 | 99.95 | 11.86 |
| June 2007 | 5/29/07 to 6/25/07 | 1,478 | 15.50 | 98.95 | 9.21 |
| July 2007 | 6/25/07 to 7/24/07 | 1,268 | 8.90 | 99.30 | 8.25 |
| August 2007 | 7/24/07 to 8/28/07 | 1,429 | 0.00 | 100.00 | 10.72 |
| September 2007 | 8/28/07 to 10/1/07 | 1,719 | 0.00 | 100.00 | 11.54 |
| October 2007 | 10/1/07 to 10/30/07 | 1,875 | 0.00 | 100.00 | 10.68 |

**Table 3-3 cVOC Removal in 2007, Mr. C's Dry Cleaners Site**

| Month | Actual Period | Influent cVOCs (µg/L) | Effluent cVOCs (µg/L) | Removal Efficiency (%) | VOCs Removed (lbs.) |
|---|---|---|---|---|---|
| November 2007 | 10/30/07 to 11/28/07 | 1,296 | 13.50 | 99.70 | 6.47 |
| December 2007 | 11/28/07 to 1/2/08 | 1,175 | 0.00 | 100.00 | 4.27 |
| **Total amount of cVOCs removed in 2007:** | | | | | **123.22** |

Key:
cVOC = Chlorinated volatile organic compound.
VOC = Volatile organic compound.
µg/L = Micrograms per liter.

### 3.1.2 Agway and Agway Energy Products Site

The Agway remedial treatment operations run continuously, and the components of the system are maintained on a weekly basis by the OM&M subcontractor. The OM&M subcontractor also evaluates the system's performance on a weekly basis. Because the system has no dial-out alarm capabilities and is checked only once a week, equipment failures and power outages are handled on a weekly basis. The remedial system at the Agway and Agway Energy Products site has operated as intended since its original installation by Matrix.

### 3.1.3 First Presbyterian Church

As a part of the installation program, the head custodian of the property was instructed on the general operations of the three SSDS units. The head custodian also was provided with contact information for EEEPC and the OM&M subcontractor in the event electrical or mechanical issues are encountered with the unit(s). The access agreement for the SSDS unit inspection and maintenance is included in Appendix B. SSDS units are known to have very good reliability, and their fan's can operate reliably for five to seven years. The warrantees for the fans installed in the church are for five years from the date of installation.

Three SSDS units were installed at the First Presbyterian Church. Each system is evaluated for performance by EEEPC on an annual basis. EEEPC completes system assessment forms and an evaluation report for each unit, and these are provided to NYSDEC along with an evaluation of the general status of operations for the building. The facility's completed inspection forms for 2007 are provided in Appendix C.

Since the SSDS units were installed in September of 2004, only one fan has been replaced. The broken unit was reported by the church custodian in March 2007 and replaced the same month. The new unit was installed by the OM&M subcontractor and was covered under the manufacturer's original material warrantee. The overall SSDS system is currently operating as originally intended.

### 3.1.4 27 Whaley Avenue Residence

One SSDS unit was installed in the 27 Whaley Avenue residence in January 2005. The original property owner of the home was instructed on the general operation

of the system and was given contact information in the event mechanical or electrical issues were encountered with the unit. The access agreement for the SSDS unit inspection and maintenance is included in Appendix B. The system has operated on a continuous basis since its installation.

The performance of the system is evaluated by EEEPC on an annual basis. EEEPC completes system assessment forms and an evaluation report for each unit, and these are provided to NYSDEC along with an evaluation of the general operations for the building. The 2007 completed inspection forms for the facility are provided in Appendix C. The overall system continues to perform and function as when the unit was originally commissioned.

## 3.2 Equipment Replacement Program

All equipment is inspected on a periodic basis. At this time, an equipment replacement program based on regular time intervals cannot be established due to the lack of sufficient operational time and the apparent reliability of the equipment. However, based on the limited data to date, it appears that an occasional adjustment to the system operation or an occasional replacement of equipment will be required. The groundwater pumps and transducers have an anticipated life expectancy of approximately two to three years. Replacement pumps and replacement transducers should, therefore, be kept on hand for quick replacement after failure or even pre-emptive replacement.

The need for any additional adjustments to the system or equipment replacement will require evaluation on a case-by-case basis. Equipment replacement history and recommendations are provided in Section 4.

# 4 Remedial Treatment Equipment Condition and Oversight Activities

## 4.1 General Status of Treatment Equipment and Oversight

Operation and maintenance for the Mr. C's Dry Cleaners and Agway sites is performed on a weekly basis by EEEPC's OM&M subcontractor (Iyer). In the event of a major component system malfunction, an auto-dialer primary contact alarm alerts Iyer of the problem and a secondary alarm alerts EEEPC. Monthly reporting on the operations, maintenance, and compliance monitoring of the remedial treatment system is performed by EEEPC. When equipment repairs are required, Iyer reports them to EEEPC, and EEEPC reports them to NYSDEC. Information regarding all repairs performed on any of the four remedial systems is provided in the weekly OM&M report submitted to EEEPC and in a monthly report submitted to NYSDEC.

The current site contact list, including the names, addresses, phone numbers for the site, is provided in Appendix D.

When equipment issues are encountered, they are handled on a case-by-case basis. Major equipment issues are discussed with the NYSDEC project manager, and a corrective action approach is developed. Upon acceptance, the corrective action is initiated. Minor equipment and electronic maintenance, repair, and replacement costs are funded through the contingency task established when the project was initiated.

Analytical support services for groundwater and air analyses for all site and unit requirements are provided by Mitkem. The analytical frequency matrix is provided in Table 4-1.

**Table 4-1 Analytical Frequency Matrix, Mr. C's Dry Cleaners Site**

| | Groundwater | Air | Schedule |
|---|---|---|---|
| ■ Mr. C's Compliance Requirements | | | |
| a. Treatment System | X | | Monthly |
| b. Groundwater Monitoring Wells Network | X | | Two years |
| ■ Agway Site | | X | Two years |
| ■ First Presbyterian Church | | X | Two years |
| ■ 27 Whaley Avenue Site | | X | Two years |

### 4.1.1 Mr. C's Dry Cleaners Site

The longevity of the remedial treatment operations was established as 10 years according to the FS prepared by MPI in November 1996 and the ROD in March 1997. The condition of the operating treatment equipment has been good since startup operations began in September 2002. Major components, including the chemical sequestering system, equalization tank, bag filters, blowers, air-stripping unit, and groundwater pumping system, continue to operate at a high rate of efficiency as a result of the weekly monitoring and maintenance program.

Items that have had higher maintenance requirements over the last few years have been the pumps and the level transducers for the groundwater pumping system. These two active components have been in operation for over five years and are subject to harsh conditions. The groundwater pumping system, as previously mentioned, consists of nine groundwater pumping locations downgradient of the Mr. C's site treatment building. The groundwater pumping system is a batch process where each well's level transducer turns on the pump when the level set points are reached after recharge. The groundwater recharge is much slower at pump locations PW2 through PW8. The average pumping rate for these individual wells is from 4 to 5 gallons per minute (gpm). Pumping location RW-1 (Mr. C's parking lot) is the highest groundwater producer at 50 to 75 gpm.

Pump replacement is required when, over time, iron and calcium accumulate on the pump's housing and impeller and the unit can no longer pump. Either the motor bearings fail or the pump impeller is no longer operable. Groundwater pump operations can be monitored from the program logic controller (PLC) screen located in the Mr. C's site treatment building.

The groundwater pumping and groundwater monitoring network remain in good condition. Annual inspection of each groundwater pumping well and monitoring well, as well as any required repairs, are performed by Iyer. If a well is not pumping at an acceptable rate, or if a monitoring well is determined to be unnecessary, then the well will be decommissioned, an alternate groundwater pumping or monitoring well will be installed, or additional evaluations will be performed to locate a better monitoring point or pumping location to improve the network. The decision will be made after thoroughly discussing options with the NYSDEC project manager.

In 2007, the following repair and replacement work was performed on the Mr. C's site treatment system:

- Replacement of the groundwater pump and level transducer at PW-7;
- Replacement of level transducers at PW-3 and PW-8 as a result of power surges from lightning strikes in the area;
- Maintenance of groundwater pumps RW-1 and PW-7 by retraction, inspection, and cleaning; and

- Maintenance of the air stripper, which required dismantling, cleaning, and re-assembly.

### 4.1.2 Agway and Agway Energy Products Site

In 2007, the AS/SVE system required some equipment replacement and repairs, including the blower and compressor of the standalone system. An evaluation to determine why air is not delivered to four of the eight air sparge points has recently been completed and a plan of action is being prepared.

The equipment condition and status is reviewed and reported on a weekly basis by Iyer. In 2007, the following work was performed on the Agway remedial treatment system:

- Replacement of the vacuum blower;
- Replacement of the 30-amp circuit breaker on the air sparge compressor;
- Replacement of the air/water separator unit;
- Repair of the air sparge compressor solenoid valve;
- Repair of the bearings on the vapor-extraction blower drive motor; and
- Repair of the compressor electrical circuit.

### 4.1.3 First Presbyterian Church

The three SSDS units and piping systems were in very good condition in 2007. The only operating parts of the system are the three fans. In March 2007, one of the fans was replaced as a result of a worn bearing. More frequent inspections of each fan's condition will be necessary as the length of time that each fan operates increases.

In 2007, the following work was performed on the church's remedial treatment system:

- Replacement of the SSDS Unit Number 3 fan (fan still under warrantee); and
- Repair to SDSS Unit Number 3 exhaust stack mounting brackets.

### 4.1.4 27 Whaley Avenue Residence

The SSDS unit remained in very good condition. No repairs were required in 2007.

### 4.1.5 Groundwater Monitoring Well Network

During the long-term groundwater sampling performed in 2007, EEEPC conducted an inspection of all groundwater monitoring and pumping wells. The pur-

pose of these inspections was to determine and document the physical condition of the wells and to identify maintenance actions necessary to keep all wells in the network operational and viable for future monitoring. The results of the 2007 inspections are presented in Table 4-2.

**Table 4-2 Well Inspection Summary, Mr. C's Dry Cleaners Site**

| Well/Borehole No. | Date Inspected | PVC Well Casing ID | Inspection Observations/Maintenance Required |
|---|---|---|---|
| EE-1 | 08/08/07 | 2 | Replace concrete pad, possibly with asphalt |
| EE-2 | 08/09/07 | 2 | None |
| ESI-1 Replacement | 08/09/07 | 2 | None |
| ESI-3 | 08/07/07 | 2 | Asphalt needs to be removed near well cover |
| ESI-5 | 08/07/07 | 2 | TOIC cracked, pieces missing |
| ESI-6 | 08/08/07 | 2 | None |
| MW-4 | 08/08/07 | 4 | None |
| MW-7 | 08/08/07 | 2 | None |
| MW-8 | 08/08/07 | 2 | One bolt missing, needs new J-plug |
| MPI-1S | 08/08/07 | 2 | None |
| MPI-3S | 08/08/07 | 2 | None |
| MPI-4S | 08/09/07 | 2 | None |
| MPI-4I | 08/09/07 | 2 | None |
| MPI-5S | 08/08/07 | 2 | None |
| MPI-6S | 08/09/07 | 2 | None |
| MPI-7I | 08/07/07 | 2 | Bolts stripped |
| MPI-10B | 08/09/07 | 2 | None |
| MPI-12B | 08/10/07 | 2 | None |
| MPI-13B | 08/06/07 | 2 | Covered with asphalt during road resurfacing; needs new pad |
| MPI-14B | 08/06/07 | 2 | Missing cover (has temporary cover). Cover removed during road resurfacing. Also needs new curb box. |
| MPI-15B | 08/10/07 | 2 | Replace pad |
| RW-1 | 08/07/07 | 6 | Bolts stripped |
| PW-2 | 08/07/07 | 4 | One bolt missing |
| PW-3 | 08/07/07 | 4 | None |
| PW-4 | 08/07/07 | 4 | One bolt missing |
| PW-5 | 08/07/07 | 4 | One bolt missing |
| PW-6 | 08/07/07 | 4 | None |
| PW-7 | 08/07/07 | 4 | None |
| PW-8 | 08/07/07 | 4 | None |

Key:
ID = Inner diameter.
MW = Monitoring well.
PVC = Polyvinyl chloride.
PW = Pumping well.
TOIC = Top of inner casing.

Well maintenance issues that were identified included replacing missing or stripped bolts, replacing existing, or installing new asphalt/concrete pads, replacing existing well covers, installing a new water-tight well cap, and removal or replacement of a portion of a cracked casing. These maintenance issues will be addressed by the OM&M subcontractor in 2008.

# 5 Actions to Support Eventual Site Closure

## 5.1 Overall Project Goal

The overall project goal is to reduce the concentrations of cVOCs in the contaminated groundwater plume to the concentrations established by NYSDEC. Attaining these concentrations will allow for the eventual closure of the groundwater recovery and treatment systems. Suggested future actions or modifications that would improve the individual operations and shorten the time required to attain the target cVOC concentrations are presented below.

### 5.1.1 Mr. C's Treatment System Modifications to Support Site Closure

Operation of the groundwater treatment system remained efficient throughout 2007. Based on long-term groundwater monitoring program reporting, cVOC concentrations are declining and the contaminant plume is migrating to the northwest of the Mr. C's site. While contaminant capture continues at existing individual groundwater pumping locations, adding or relocating some groundwater pumping locations to maximize the capture of higher-concentration contaminants should be considered.

### 5.1.2 Agway and Former Agway Energy Products Site

While the upper aquifer has been cleaned up, cVOCs contamination continues to be extracted in the lower aquifer. Four of the existing eight air sparge points continue to sparge air, and the SVE system is capturing the contaminants for collection and discharge to the atmosphere. The other four air spargers are not operational. An investigation to determine why they are not operational was recently completed and, as stated in Section 4, a decision regarding actions to be taken will be made after thoroughly discussing options with the NYSDEC project manager.

### 5.1.3 SSDS Units – First Presbyterian Church and 27 Whaley Avenue Sites

No modifications of the SSDS units at these locations are currently anticipated.

# 6 Evaluation of Site Institutional and Engineering Controls

## 6.1 Institutional Controls

Permanent easements have been obtained for access to nine private and public properties that facilitate operation of the Mr. C's site remedial treatment system. One of the permanent easements encompasses the Agway site as a matter of institutional control. The existing permanent easements are adequate at this time, but if additional wells are installed as part of the groundwater pumping system, additional permanent easements may be required. Information on all the permanent easements for the Mr. C's site remedial treatment system is provided in Appendix H of the SMP.

Temporary access agreements have been obtained for the First Presbyterian Church and 27 Whaley Avenue properties for purposes of operation, maintenance, and monitoring of the SSDS units. Copies of the signed access agreements are provided in Appendix K of the SMP. Letters pertaining to these temporary access agreements for both locations and the requirements for operation and maintenance are presented in Appendix B of this report.

There are 29 operable monitoring wells in the groundwater monitoring well network. Thirteen wells are located on private property, and 16 are in the right-of-way of village streets or are covered by permanent easements. It is unknown whether access agreements have been obtained for the future maintenance and monitoring of the 13 wells located on private property (wells ESI-1, ESI-2, ESI-3, ESI-6, MPI-1S, MPI-2S, MPI-3S, MPI-5I, MPI-5S, MPI-11B, MPI-12B, MPI-15B, and EE-2). The locations of these monitoring wells are identified in the 2007 Long-term Groundwater Sampling and Data Summary Report.

## 6.2 Engineering Controls

The engineering controls that support remedial operations at the site are consistent operation and maintenance of the site. These OM&M service inspection requirements are provided in Appendix E.

# 7 Annual Remedial Action Costs

The approximate 2007 costs of OM&M of the remedial treatment system at the Mr. C's site, including equipment in the treatment building, the groundwater pumping system, the groundwater monitoring network, and utilities, are presented in Table 7-1.

**Table 7-1 2007 Remedial Action Costs, Mr. C's Dry Cleaners Site**

| Description | WA DC02 ($) | WA DC13 ($) | Total ($) |
|---|---|---|---|
| **A. Mr. C's Remedial Treatment System** | | | |
| Sub - OM&M Services | 22,902.94 | 14,533.13 | **37,436.07** |
| Sub - Analytical Services | 1,600.00 | 4,825.00 | **6,425.00** |
| Utilities - Electric | 5,534.67 | 9,619.51 | **15,154.18** |
| Utilities - Gas | 489.19 | 216.04 | **705.23** |
| Utilities - Telephone | 130.67 | 419.06 | **549.73** |
| Replacement Equipment | 1,159.25 | 1,452.91 | **2,612.16** |
| Long-term Monitoring Program | 0.00 | 20,850.27 | **20,850.27** |
| EEEPC Admin and Reporting | 19,991.88 | 39,876.41 | **59,868.29** |
| **Subtotal A:** | **51,808.60** | **91792.38** | **143,600.93** |
| **B. Agway and Former Agway Energy Products Site** | | | |
| Sub - OM&M Services | 5,032.29 | 4,844.38 | **9,876.67** |
| Sub - Analytical Services | 0.00 | 0.00 | **0.00** |
| Utilities - Electric | 1,869.43 | 2,971.95 | **4,841.38** |
| Replacement Equipment | 600.00 | 500.00 | **1,100.00** |
| EEEPC Admin and Reporting | 6,663.96 | 11,393.26 | **18,057.22** |
| **Subtotal B:** | **14,165.68** | **19,709.59** | **33,875.27** |
| **C. First Presbyterian Church SSDS Units** | | | |
| Sub - OM&M Services | 0.00 | 300.00 | **300.00** |
| Sub - Analytical Services | 0.00 | 0.00 | **0.00** |
| Replacement Equipment | 0.00 | 0.00 | **0.00** |

**Table 7-1 2007 Remedial Action Costs, Mr. C's Dry Cleaners Site**

| Description | WA DC02 ($) | WA DC13 ($) | Total ($) |
|---|---|---|---|
| EEEPC Admin and Reporting | 0.00 | 5,622.47 | **5,622.47** |
| **Subtotal C:** | **0.00** | **5,922.47** | **5,922.47** |
| **D. 27 Whaley Avenue SSDS Unit** | | | |
| Sub - OM&M Services | 0.00 | 0.00 | **0.00** |
| Sub - Analytical Services | 0.00 | 0.00 | **0.00** |
| Replacement Equipment | 0.00 | 0.00 | **0.00** |
| EEEPC Admin and Reporting | 0.00 | 2,174.16 | **2,174.16** |
| **Subtotal D:** | **0.00** | **2,174.16** | **2,174.16** |
| **Grand Total (Items A-D):** | **65,974.28.28** | **119,598.55** | **185,572.83** |

The total 2007 cost for the remedial treatment program for the Mr. C's site, including all the operating units, was $185,572.83.

# 8 Department or Local Public Reporting

## 8.1 NYSDEC Fact Sheet

The most recent fact sheet was issued by NYSDEC in December 2003. A copy of the fact sheet is provided as Appendix F.

## 8.2 Local Public Reporting

Local issues in the town of Aurora and village of East Aurora are covered by the *East Aurora Bee* and the *Buffalo News*. While the newspaper reports have the potential to impact remedial operations, these news articles are no longer available.

Past local newspaper articles have provided information that could have a potential future effect or impact on the Mr. C's site and the collective operating units include:

- **Relocation of the Town and Village Halls to the Agway and Bowling Alley Site.** Local public reporting around the site since 2005 included news of relocation of the Town and Village Hall to the former Agway site and surrounding properties. Surrounding properties have been continually acquired by a local management company. No further developments have been announced with the relocation plan in 2007.

- **Expansion of the Town of Aurora Library.** It was reported in the spring of 2007 that the Town Library planned an expansion of the building and parking lot along with the acquisition of the property at 19 Whaley Avenue. No further developments have been announced with the expansion plan in 2007.

- **Improvements to Main Street by the New York State Department of Transportation.** NYSDOT is planning improvements to Route 20A (Main Street) in East Aurora. These improvements may affect groundwater monitoring wells that are located within the right-of-way of Main Street near Whaley Avenue and the approaches to the local roads of Whaley Avenue and Paine Avenue. NYSDOT officials have been in contact with NYSDEC Region 9 officials regarding the environmental utilities that may be affected by construction activities in the vicinity of the remedial site. Information regarding the reconstruction of Main Street is still in the preliminary stages. An abbreviated

version of NYSDOT's draft site assessment report for the reconstruction of Main Street (U.S. Route 20A) is provided as Appendix G.

# 9 Annual Periodic Review Report Certification

## Certification

Ecology and Environment Engineering, P.C. (EEEPC) certifies that the services provided during 2007 at the Mr. C's Dry Cleaners site (NYSDEC Contract Number D004442 - Work Assignments DC02 and DC13) were performed in compliance with the Site Management Plan and accepted Site Operations, Maintenance, and Monitoring Plans based on the Remedial Construction Contract and Closure Documents entitled *Mr. C's Dry Cleaners Site, Construction Closure and Certification Report, Site Number 9-15-175, Village of East Aurora, Erie County, New York,* dated March 2005.

Signature: _____

Gerald A. Strobel, P.E.
Program Director

Date: 04-16-2008

# 10 References


Ecology and Environment Engineering, P.C. (EEEPC). 2004a. *Review for the Necessity of Granular Activated Carbon Units on the Influent Air Stream, Mr. C's Dry Cleaners Site*, September 2004.

_____. 2004b. Groundwater *Sampling and Subsurface Soil Sampling Report – Mr. C's Dry Cleaners Site*. July 2004.

_____. 2006. *Indoor Air Quality Sampling at First Presbyterian Church, East Aurora, New York*. June 2006.

_____. 2007. *Work Plan for the Operation, Maintenance, and Monitoring for the Mr. C's Dry Cleaners Site*. May 2007.

_____. 2007. *2007 Long-Term Groundwater Sampling and Data Summary Report – Mr. C's Dry Cleaners Site*. December 2007.

Malcolm-Pirnie, Inc. (MPI). 1995. *Remedial Investigation Report, Mr. C's Superfund Site*, Malcolm-Pirnie Inc., June 1995.

_____. 1996. *Feasibility Study Report, Mr. C's Superfund Site*. November 1996.

_____. 2000. Mr. C's Dry Cleaners Site, Contract Documents, and Addendums. October 2000.

Matrix Environmental Technologies, Inc. (Matrix). 2003. *Soil Sampling Results Report*. November 14, 2003.

New York State Department of Environmental Conservation (NYSDEC). 1991. New York State Air Guide: Guidelines for the Control of Toxic Ambient Air Contaminants (Air Guide 1).

_____. 1995. Air Guide 1: Ambient Air Quality Impact Screening Analysis.

_____. 1997. Division of Remediation. Record of Decision, Mr. C's Dry Cleaners Site, East Aurora (V), Erie County, Site Number 9-15-157. March 1997.

_____. 2003. DAR-1 Annual Guideline Concentrations/Short-term Guideline Concentrations (AGC/SGC) Tables.

_____. 2004. Air Guide -1Software Program Version 3.5 (AG1V35).

# A Mr. C's Site-Specific SPDES Equivalency Permit

# EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning April 2001

and lasting until April 2006

the discharges from the treatment facility to Tannery Brook, water index number E-1-4-14-4 , Class C , RECEIVING WATER shall be limited and monitored by the operator as specified below:

| Outfall Number and Parameter | Discharge Limitations | | Units | Minimum Monitoring Requirements | |
|---|---|---|---|---|---|
| | Daily Avg. | Daily Max | | Measurement Frequency | Sample Type |
| Outfall 001 - Treated Groundwater Remediation Discharge: | | | | | |
| Flow | Monitor | 216,000 | GPD | Continuous | Meter |
| pH (range) | 6.0 to 9.0 | | SU | Weekly | Grab |
| 1,1 Dichloroethene | Monitor | 10 | µg/l | Weekly | Grab |
| 1,2 Dichloroethene | Monitor | 10 | µg/l | Weekly | Grab |
| Tetrachloroethene | 2 | 10 | µg/l | Weekly | Grab |
| Trichloroethene | Monitor | 10 | µg/l | Weekly | Grab |
| Vinyl Chloride | Monitor | 10 | µg/l | Weekly | Grab |
| Benzene | Monitor | 5 | µg/l | Weekly | Grab |
| Ethyl benzene | Monitor | 5 | µg/l | Weekly | Grab |
| Methylene Chloride | Monitor | 10 | µg/l | Weekly | Grab |
| 1,1,1 Trichloroethane | Monitor | 10 | µg/l | Weekly | Grab |
| Toluene | Monitor | 5 | µg/l | Weekly | Grab |
| o-Xylene | Monitor | 5 | µg/l | Weekly | Grab |
| m & p Xylene | Monitor | 10 | µg/l | Weekly | Grab |
| Iron, Total | Monitor | 600 | µg/l | Weekly | Grab |
| Aluminum | Monitor | 4000 | µg/l | Weekly | Grab |
| Copper | Monitor | 48 | µg/l | Weekly | Grab |
| Lead | Monitor | 11 | µg/l | Weekly | Grab |
| Manganese | Monitor | 2000 | µg/l | Weekly | Grab |
| Silver | Monitor | 100 | µg/l | Weekly | Grab |
| Vanadium | Monitor | 28 | µg/l | Weekly | Grab |
| Zinc | Monitor | 230 | µg/l | Weekly | Grab |
| Total Dissolved Solids | Monitor | 850 | mg/l | Weekly | Grab |

| | | | | | |
|---|---|---|---|---|---|
| Total Suspended Solids | Monitor | 20 | mg/l | Weekly | Grab |
| Cyanide, Free | Monitor | 10 | µg/l | Weekly | Grab |

Additional Conditions:

(1) Discharge is not authorized until such time as an engineering submission showing the method of treatment is approved by the Department. The discharge rate may not exceed the effective or design treatment system capacity. All monitoring data, engineering submissions and modification requests must be submitted to:

Chief - Operation Maintenance and Support Section
Bureau of Hazardous Site Control
Division of Environmental Remediation
NYSDEC
50 Wolf Road
Albany, N.Y. 12233-7010

With a copy sent to:

John McMahon ,RWE, R-9
NYSDEC
270 Michigan Avenue
Buffalo, NY 14203-2999

(2) Only site generated wastewater is authorized for treatment and discharge.

(3) Authorization to discharge is valid only for the period noted above but may be renewed if appropriate. A request for renewal must be received 6 months prior to the expiration date to allow for a review of monitoring data and reassessment of monitoring requirements.

(4) Both concentration (mg/l or µg/l) and mass loadings (lbs/day) must be reported to the Department for all parameters except flow and pH.

(5) Any use of corrosion/scale inhibitors or biocidal-type compounds used in the treatment process must be approved by the department prior to use.

(6) This discharge and adminstration of this discharge must comply with the attached General Conditions.

(7) The Water Treatment Chemical - Carus Quest 101 from Carus Chemical Co. is permitted to be used at the dosage rate of 1.5 lbs/day, seven days a week (if required) ,24 hours per day. The conditions of use are listed on the form WTCFX(9/99) attached.

# B SSDS Access Agreements

**New York State Department of Environmental Conservation**
**Division of Environmental Remediation**
625 Broadway, Albany, New York 12233-7016
**Phone:** (518) 402-9768 • **FAX:** (518) 402-9020
**Website:** www.dec.state.ny.us

Alexander B. Grannis
Commissioner

Date: September 11, 2007

Mr. David DuBois
27 Whaley Avenue
East Aurora, New York 14052

RE: Access Agreement for Construction and Maintenance of Soil Vapor Mitigation Systems – 27 Whaley Avenue, East Aurora, New York 14052

Dear Mr. Higley:

The New York State Department of Environment Conservation (NYSDEC) previously installed a soil vapor mitigation system in your facility located at 27 Whaley Avenue, East Aurora, New York. The mitigation system was installed by NYSDEC's contractor, OP-TECH Environmental Services, Inc., in January 2005. NYSDEC and its contractor/subcontractors will require periodic access to this location for the life of the mitigation system to perform routine and owner-requested (non-routine) maintenance on the system. Routine inspections and maintenance will be scheduled in advance by a letter notification and a follow-up phone call. Requests for non-routine maintenance will be initiated by you.

Access will be needed for installation and inspections/maintenance of the exhaust fan systems and piping mounted on the building exterior as well as to the vacuum points located in the facility basements. Routine maintenance inspections will consist of checking the physical components of the soil vapor system and inspecting the facility for structural changes. Access to your property for routine inspections and maintenance service could take about 1 to 2 hours. Non-routine maintenance involving significant system changes, while not anticipated, may require longer visits.

Two copies of the Access Agreement have been provided. Please complete the forms on the back of this page, sign it, keep one copy for your records, and return the original to Ecology and Environment Engineering, P. C., using the self-addressed, stamped envelope enclosed. If you have any questions regarding general system operations, service, or any other related issues, please call me at 716-684-8060 or Mr. William Welling, Project Manager - NYSDEC at 518-402-9638.

Respectfully submitted on behalf of NYSDEC,

Michael G. Steffan, Task Manager
Inspection, Operations, Maintenance, and Monitoring Program
Ecology and Environment Engineering, P.C.

## Access Agreement For Maintenance Of Soil Vapor Mitigation Systems

**RE: Property:** 27 Whaley Avenue, East Aurora, New York 14052

☒ I agree to allow NYSDEC and its duly authorized agents to enter the facility at **27 Whaley Avenue, East Aurora, New York 14052**, to perform inspection and maintenance activities on the soil vapor mitigation system installed on my property. I understand that all routine inspections will be scheduled by telephone at least two weeks in advance and that I or my designee will be present at the time of inspection and maintenance.

☐ Access denied.

Name DAVID D. BOLS

Signature _____ Date 9.12.7

**This agreement may be rescinded by the property owner by writing to NYSDEC at the address on the front of this letter.*

**New York State Department of Environmental Conservation**
**Division of Environmental Remediation**
Remedial Bureau B, 12th Floor
625 Broadway, Albany, New York 12233-7016
Phone: (518) 402-9767 • FAX: (518) 402-9773
Website: www.dec.state.ny.us

Denise M. Sheehan
Commissioner

Date: September 11, 2007

First Presbyterian Church
9 Paine Avenue
East Aurora, New York 14052
Attention: Mr. William Larson

RE: Access Agreement for Construction and Maintenance of Soil Vapor Mitigation Systems – First Presbyterian Church, 9 Paine Avenue, East Aurora, New York 14052

Dear Mr. Larson:

The New York State Department of Environment Conservation (NYSDEC) previously installed a soil vapor mitigation system in your facility located at 9 Paine Avenue, East Aurora, New York. The mitigation system was installed by NYSDEC's contractor, OP-TECH Environmental Services, Inc., in September 2004. NYSDEC and its contractor/subcontractors will require periodic access to this location for the life of the mitigation system to perform routine and owner-requested (non-routine) maintenance on the system. Routine inspections and maintenance will be scheduled in advance by a letter notification and a follow-up phone call. Requests for non-routine maintenance will be initiated by you.

Access will be needed for installation and inspections/maintenance of the exhaust fan systems and piping mounted on the building exterior as well as to the vacuum points located in the facility basements. Routine maintenance inspections will consist of checking the physical components of the soil vapor system and inspecting the facility for structural changes. Access to your property for routine inspections and maintenance service could take about 1 to 2 hours. Non-routine maintenance involving significant system changes, while not anticipated, may require longer visits.

Two copies of the Access Agreement have been provided. Please complete the forms on the back of this page, sign it, keep one copy for your records, and return the original to Ecology and Environment Engineering, P. C., using the self-addressed, stamped envelope enclosed. If you have any questions regarding general system operations, service, or any other related issues, please call me at 716-684-8060 or Mr. William Welling, Project Manager - NYSDEC at 518-402-9638.

Respectfully submitted on behalf of NYSDEC,

Michael G. Steffan, Task Manager
Inspection, Operations, Maintenance, and Monitoring Program
Ecology and Environment Engineering, P.C.

## Access Agreement For Maintenance Of Soil Vapor Mitigation Systems

**RE: Property:** First Presbyterian Church, 9 Paine Avenue, East Aurora, New York 14052

☑ I agree to allow NYSDEC and its duly authorized agents to enter the facility at **9 Paine Avenue, East Aurora, New York 14052**, to perform inspection and maintenance activities on the soil vapor mitigation system installed on my property. I understand that all routine inspections will be scheduled by telephone at least two weeks in advance and that I or my designee will be present at the time of inspection and maintenance.

☐ Access denied.

Name William R. Larson

Signature William R Larson Date 9-17-07

**This agreement may be rescinded by the property owner by writing to NYSDEC at the address on the front of this letter.*

# C Completed SSDS Unit Inspection Forms – Presbyterian Church and 27 Whaley

C-1 Routine Inspection/Post Commissioning Review Log

C-2 Structure Inspection Form – 9 Payne Street

C-3 Structure Inspection Form – 27 Whaley Avenue

# C-1
# Routine Inspection/Post Commissioning Review Log

# Mr. C's Dry Cleaners Site

## Inspection, Operations, Maintenance & Monitoring Program (IOM&M)

NYSDEC PROJECT NUMBER #9-15-157

## Routine Inspection / Post Commissioning Review Log - SSDS

### Ecology and Environment Engineering, P. C.

| *Tracking #* | *Initial Date* | *Site / Address* | *IOM&M Routine Work Performed* | *Date Completed* |
|---|---|---|---|---|
| NRI - 001 | 3/12/2007 | First Presbyterian Church, 9 Paine Ave. East Aurora, NY | Fan repair to SSDS #3. Fan bearings on SSDS #3 have failed. Fan still under warrantee by Mitigation Tech. New fan received an installed by O&M Enterprises as part of the normal O&M services work. | 3/20/2007 |
| PCI - 001 | 9/12/2007 | First Presbyterian Church, 9 Paine Ave. East Aurora, NY | Annual System(s) review and leak testing | 9/12/2007 |
| PCI - 002 | 9/12/2007 | 27 Whaley Avenue, East Aurora, NY | Annual System(s) review and leak testing | 9/12/2007 |
| NRI - 002 | 9/12/2007 | First Presbyterian Church, 9 Paine Ave. East Aurora, NY | Support brackets on upper exhaust stack have come loose. Brackets need to be resecured. | 10/3/2007 |
| NRI - 003 | 2/26/2008 | First Presbyterian Church, 9 Paine Ave. East Aurora, NY | Fan repair to SSDS #2. Fan bearings on SSDS #2 have failed. Fan still under warrantee by Mitigation Tech. New fan received an installed by O&M Enterprises as part of the normal O&M services work. | 3/4/2008 |

PCI - Post Commissioning Inspection, RI - Routine inspection, NRI - Non-routine inspection or repair

C-2

Structure Inspection Form - 9 Payne Street

System Inspection Field Form
Soil Vapor Mitigation System
Mr. C's Dry Cleaners Site
Village of East Aurora, Erie County, NY
NYSDEC Site # 9-15-157

## STRUCTURE INSPECTION FORM

Routine or Non-Routine (underline one)

Address: First Presbyterian Church 9 Payne St. Tracking Number: PCI-001

Date of Inspection: 9/12/07
Date of Last Inspection: 3/17/07

Have the following items changed since the last visit?

| | No | Yes | If yes, explain... |
|---|---|---|---|
| Building Footprint | X | | |
| Basement/Slab Occupancy | X | | |
| Heating/Ventilating Systems | X | | |
| Basement Finish | X | | |
| Crawlspace | X | | |
| Drains, Sumps, Floor Cracks | X | | |
| Wall Penetrations, Cracks | X | | |
| Appliances (in basement) | X | | |
| Ownership | X | | |
| Siding | X | | |

*If any of these items have changed, a redesign may be required. Contact the maintenance supervisor for field review.*

**Deviations/Comments**

Fan stack support on west exterior building wall is loose at the roof line. IEG notified .

**Notations**
NRI – Non-routine Inspection

PCI - Post Commissioning Inspection

RI - Routine Inspection

Performed by: MG Steffan/JJ Kohler Date: 9/12/07

# Re-Commissioning Field Form
## Soil Vapor Mitigation System
## Mr. C's Dry Cleaners Site
## Village of East Aurora, Erie County, NY
## NYSDEC Site # 9-15-157

## TEST DATA AND BACKDRAFT

Routine or Non-Routine (underline one)

Address: First Presbyterian Church 9 Payne St. Tracking Number: PCI-001
Date of Inspection: 9/12/07
Date of Last Inspection: n/a

**Manometer Reading at Fan Inlet**
Prior Visit: see below Date:
As found:
As left:

**Manometer Reading at Suction Points (SSD#)**

| | Suction Points | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| SSD# | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Manometer Reading (Prior) | +1" | +2" | +4" | | | | | |
| Manometer Reading (As Found) | +1" | +2" | +4" | | | | | |
| Manometer Reading (As Left) | | | | | | | | |

Valves and manometers installed at proper location? Yes

**Communication Test (* See Comments)**

| | Suction Points | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Fan On | Point A | Point B | Point C | Point D | Point E | Point F | Point G | Point H |
| Test point identifier | 1-A | 1-B | 2-A | 2-B | 2-C | 2-D | 3-A | 3-B/3-C |
| Micromanometer Reading | +1" | +1" | +2" | +2" | +2" | +2" | +4" | +4"/ |
| Distance to Closest SSP (ft) | | | | | | | | |
| Smoke Test | OK | OK | OK | OK | OK | OK | OK | OK/OK |

| | Suction Points | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Fan Off-N/A | Point A | Point B | Point C | Point D | Point E | Point F | Point G | Point H |
| Test point identifier | NOT PERFORMED | | | | | | | |
| Micromanometer Reading | | | | | | | | |
| Distance to Closest SSP (ft) | | | | | | | | |
| Smoke Test | | | | | | | | |

| | As Found* | | As Left* | |
|---|---|---|---|---|
| | Yes | No | Yes | No |
| All fans in operation? | x | | x | |
| Winter conditions simulated? | | x | | x |
| Each test point tested? | x | | x | |
| Each test point sealed after testing? | x | | x | |
| Vacuum <-0.004 observed at each test point? | x | | x | |
| Smoke entered each test point? | x | | x | |
| All valves set prior to re-commissioning comm. test? | | x | | x |

| Backdraft Test | As Found Yes | As Found No | As Left Yes | As Left No |
|---|---|---|---|---|
| Windows closed? | x | | x | |
| Venting appliances on? | x | | x | |
| Doors closed? | x | | x | |
| Combustion sources on? | x | | x | |
| Backdraft Review | | | | |
| Hot water heater? | n/a | | n/a | |
| Furnace/Boiler? | x | | x | |
| Fireplace? | n/a | | n/a | |
| Dryer? | n/a | | n/a | |
| Owner notified of existing backdraft condition? | none | | noted | |
| Was a previous backdraft condition present during any previous visit? | no | | | |

| Redline Drawing | As Left Yes | As Left No |
|---|---|---|
| Piping redlines complete? | x | |
| Each switch and electrical tie in are identified? | x | |
| Cracks/penetrations are identified? | x | Fans checkd |
| As-built notes are complete? | x | |
| New ventilation devices identified? | | x |

**Deviations/Comments**

* As-found conditions = before corrective action.
* As-left conditions = after corrective action.

Performed by: MG Steffan/JJ Kohler Date: 9/12/07

System Inspection Field Form
Soil Vapor Mitigation System
Mr. C's Dry Cleaners Site
Village of East Aurora, Erie County, NY
NYSDEC Site # 9-15-157

## FAN AND ELECTRICAL INSPECTION FORM

Routine or Non-Routine (underline one)

Address: First Presbyterian Church 9 Payne St. Tracking Number: PCI-001

Date of Inspection: 9/12/07 Date of Last Inspection: 3/17/07

**Electric Meter Number:** Last visit: n/a Current visit: n/a

### Equipment Documentation

| As Found | | Manometer Reading (in. $H_20$) | |
|---|---|---|---|
| Fan Model | Suction Point | Prior | Current |
| Vesta | #1 | | 1" |
| Vesta | #2 | | 2" |
| Vesta | #3 | | 4" |
| | | | |

| As Left | | Manometer Reading (in. $H_20$) | |
|---|---|---|---|
| Fan Model | Suction Point | Prior | Current |
| Vesta | #1 | | 1" |
| Vesta | #2 | | 2" |
| Vesta | #3 | | 4" |
| | | | |

| | As Found | | As Left | |
|---|---|---|---|---|
| | Yes | No | Yes | No |
| **System Re-commissioning** | | | | |
| Is there a differential pressure shown in U-Tube manometer? | x | | x | |
| If yes, provide readings. | | | | |
| Was each fan shroud removed? No Fan shrouds present | | n/a | | |
| Is each fan mounted securely? | x | | x | |
| Are coupling connections secured? | x | | x | |
| Does each fan run when the switch is in the ON position? | x | | x | |
| Does each fan shut down when the switch is in the OFF position? | | | | |
| Is excessive noise heard when fan is running? | | x | | x |
| Does each fan induce suction when running? | x | | x | |
| Is switch is locked in the ON position? | x | | x | |
| **Electrical Check** | | | | |
| Are Romex connections secured? | x | | x | |
| Is each junction box closed? | x | | x | |
| Are conduit properly supported? | x | | x | |
| Does each fan start when the switch is ON position? | x | | x | |
| Are any appliances affected by fan operation? | | x | | x |
| Does each fan stop when the switch is in OFF position? | x | | x | |
| Are mitigation system labels applied? | x | | x | |
| Are the correct labels applied in the proper locations? | x | | x | |

**Deviations/Comments**

Fan stack support on west exterior building wall is loose at the roof line. IEG was notified and repair was completed on 9/25/07

Performed by: MG Steffan/JJ Kohler Date: 9/12/07

System Inspection Field Form
Soil Vapor Mitigation System
Mr. C's Dry Cleaners Site
Village of East Aurora, Erie County, NY
NYSDEC Site # 9-15-157

## PIPING, SLAB, AND WALL INSPECTION FORM

Routine or Non-Routine (underline one)

Address: First Presbyterian Church 9 Payne St. Tracking Number: PCI-001

Date of Inspection: 9/12/07
Date of Last Inspection: 3/17/07

| | As Found | | As Left | |
|---|---|---|---|---|
| **Piping Check** | Yes | No | Yes | No |
| Is glue evident at joints? | X | | X | |
| Are system suction points sealed? | X | | X | |
| Is piping system properly supported? | X | | X | |
| Are valves and manometers installed at proper locations? | X | | X | |
| Is excessive noise heard in piping joints? | | X | | X |
| Were piping modifications and 10% of old joints smoke tested? | X | | X | |
| Does smoke enter joints? | | X | | X |
| If yes: Was joint re-sealed? | | | | |
| Does smoke enter re-sealed joint? | | X | | X |
| **Slab Check** | | | | |
| Was each identified slab crack, repair, or modification smoke tested? | - | | - | |
| Does smoke enter? | - | | - | |
| If yes: Was area re-sealed with approved sealant*? | - | | - | |
| Does smoke enter re-sealed area? | - | | - | |
| Check/clean drain(s)/Dranjer(s)™? | X | | X | |
| Were drain(s)/Dranjer(s)™ smoke-tested? | X | | X | |
| **Wall Check** | | | | |
| Was each visible wall crack smoke tested? | X | | X | |
| Is movement observed at wall cracks? | | X | | X |
| If yes: Was crack was re-sealed with approved sealant? | | | - | |
| Does smoke enter re-sealed crack? | | | - | |
| Was the open course of top wall smoke tested? | | | - | |
| Does smoke enter top course? | | X | | X |
| If yes: Open block re-sealed with approved sealant? | - | | - | |
| Does smoke enter open block tops? | | X | | X |

**Deviations/Comments**

Water stains noted on lower half of SE play room wall, water leaking into room interior (wet carpeting and wall staining). Noted water noise in suction point in fan #1-does not affect operations. Exterior storm water drainage issues from roof and surrounding ground area noted on south side of church outside play room.

Performed by: MG Steffan/JJ Kohler Date: 9/12/07

* approved sealant shall be an odorless, non-toxic, non-flammable, environmentally safe product

ecology and environment engineering, p.c.
International Specialists in the Environment

BUFFALO CORPORATE CENTER 368 Pleasant View Drive, Lancaster, New York 14086
Tel: 716/684-8060, Fax: 716/684-0844

Mr. C's Dry Cleaners Site
NYSDEC Site No.: 9-15-157
NYSDEC Work Assignment No.: D004442-DC02 & DC13
Village of East Aurora, Erie County, New York

# Sub-slab Depressurization System
# Initial Commissioning Review

**Street Address: 9 Paine Avenue**
**City/State/ Zip: East Aurora, New York 14052**

**Property Owner: First Presbyterian Church of East Aurora**

**Property Owner Phone Number(s): Church – 716-652-0160, Bill Larson – 716-652-7650**

**Date of Installation: October 2004** **Date of Startup Operation: October 2004**

**System Installation Inspected by: Ecology and Environment Engineering, P. C.**

**Inspector(s): Greg Jones and M. Steffan**

**Property Owner Field Procedures Performed:**

- ☒ Access Agreement signed by Owner
- ☒ Inspection of Final System Installation
- ☒ Review of Sub-slab Communication Test Results
- ☒ Acceptable Cleanup at Completion
- ☒ Operating Instructions Installed
- ☒ Emergency Contact Information Installed
- ☒ Review of System Operations with Property Owner

**Additional Comments:**

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**Subcontractor Project Documentation Received:**

Subcontractor Name: Mitigation Tech, 55 Shumway Road, Brockport, New York 14420 - 585-637-7430

- ☒ Photo documentation
- ☐ Sub-slab Communication Test Results
- ☒ Record drawings – Seeler Eng, P. C.
- ☒ Product warranties

**Additional Comments:**

- Post commissioning inspection or air sampling required within the next heating season or 11/05. – **Air Sampling 1/25/05, 6/26/06**
- Routine Inspection and Maintenance 18 months after Post commission inspection (PCI) & air sampling - **RI – 3/17/07, PCI – 9/12/07**

**Submitted By:** M. Steffan **Dated:** 9/18/07

C-3

Structure Inspection Form - 27 Whaley Avenue

System Inspection Field Form
Soil Vapor Mitigation System
Mr. C's Dry Cleaners Site
Village of East Aurora, Erie County, NY
NYSDEC Site # 9-15-157

## STRUCTURE INSPECTION FORM

Routine or Non-Routine (underline one)

Address: 27 Whaley Avenue  Tracking Number: PCI-002

Date of Inspection: 9/12/07
Date of Last Inspection: June '06

Have the following items changed since the last visit?

| | No | Yes | If yes, explain... |
|---|---|---|---|
| Building Footprint | x | | |
| Basement/Slab Occupancy | x | | |
| Heating/Ventilating Systems | x | | Forced hot air/hot water tank |
| Basement Finish | x | | |
| Crawlspace | x | | No crawl spaces below livable areas |
| Drains, Sumps, Floor Cracks | x | | Floor drain/hole in basement floor w/ clear sealed cover |
| Wall Penetrations, Cracks | x | | |
| Appliances (in basement) | x | | Washer and dryer |
| Ownership | | x | Mr. David DuBois 465-4027 (cell) |
| Siding | x | | |

***If any of these items have changed, a redesign may be required.***
***Contact the maintenance supervisor for field review.***

**Deviations/Comments**

Former property owner Scott Higley
One test point at SSVE point #1 installed.
All other suction points sealed at floor line

**Notations**
NRI - Non-Routine Inspectio
PCI - Post Commissioning Inspection
RI - Routine Inspection

Performed by: MG Steffan/JJ Kohler  Date: 9/12/07

# Re-Commissioning Field Form
## Soil Vapor Mitigation System
## Mr. C's Dry Cleaners Site
## Village of East Aurora, Erie County, NY
## NYSDEC Site # 9-15-157

## TEST DATA AND BACKDRAFT

Routine or Non-Routine (underline one)

Address: 27 Whaley Avenue  Tracking Number: PCI-002
Date of Inspection: 9/12/07
Date of Last Inspection: n/a

**Manometer Reading at Fan Inlet**
Prior Visit: _____  Date: _____
As found: _____
As left: _____

**Manometer Reading at Suction Points (SSD#)-Located on Point #3**

| | Suction Points | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| SSD# | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Manometer Reading (Prior) | - | - | - | - | - | - | | |
| Manometer Reading (As Found) | +1.5" | +1.5" | | | | | | |
| Manometer Reading (As Left) | | | | | | | | |

Valves and manometers installed at proper location? Yes

**Communication Test** (* See Comments)

| | Suction Points | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Fan On | Point A | Point B | Point C | Point D | Point E | Point F | Point G | Point H |
| Test point identifier | P-1 | P-2 | P-3 | P-4 | P-5 | P-6 | | |
| Micromanometer Reading | | | +1.5" | | | | | |
| Distance to Closest SSP (ft) | | | | | | | | |
| Smoke Test | yes | yes | yes | yes | yes | yes | | |

| | Suction Points | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Fan Off-N/A | Point A | Point B | Point C | Point D | Point E | Point F | Point G | Point H |
| Test point identifier | Not Performed | | | | | | | |
| Micromanometer Reading | | | | | | | | |
| Distance to Closest SSP (ft) | | | | | | | | |
| Smoke Test | | | | | | | | |

| | As Found* | | As Left* | |
|---|---|---|---|---|
| | Yes | No | Yes | No |
| All fans in operation? | x | | x | |
| Winter conditions simulated? | | x | | x |
| Each test point tested? | x | | x | |
| Each test point sealed after testing? | x | | x | |
| Vacuum <-0.004 observed at each test point? | x | | x | |
| Smoke entered each test point? | x | | x | |
| All valves set prior to re-commissioning comm. test? | x | | x | |

| Backdraft Test | As Found Yes | As Found No | As Left Yes | As Left No |
|---|---|---|---|---|
| Windows closed? | x | | x | |
| Venting appliances on? | x | | x | |
| Doors closed? | x | | x | |
| Combustion sources on? | x | | x | |
| Backdraft Review | | | | |
| Hot water heater? | x | | x | |
| Furnace/Boiler? | - | | - | |
| Fireplace? | - | | - | |
| Dryer? | n/a | | n/a | |
| Owner notified of existing backdraft condition? | n/a | | n/a | |
| Was a previous backdraft condition present during any previous visit? | no | x | | x |

| Redline Drawing | As Left Yes | As Left No |
|---|---|---|
| Piping redlines complete? | x | |
| Each switch and electrical tie in are identified? | x | |
| Cracks/penetrations are identified? | - | - |
| As-built notes are complete? | x | |
| New ventilation devices identified? | - | - |

Deviations/Comments

* As-found conditions = before corrective action.
* As-left conditions = after corrective action.

Performed by: MG Steffan/JJ Kohler Date: 9/12/07

System Inspection Field Form
Soil Vapor Mitigation System
Mr. C's Dry Cleaners Site
Village of East Aurora, Erie County, NY
NYSDEC Site # 9-15-157

## CRAWLSPACE INSPECTION FORM

Routine or Non-Routine (underline one)

Address: 27 Whaley Avenue  Tracking Number: PCI-002

Date of Inspection: 9/12/07

| Inaccessible Crawlspace | As Found* | | As Left* | |
|---|---|---|---|---|
| | Crawlspace 1 | Crawlspace 2 | Crawlspace 1 | Crawlspace 2 |
| Suction Point # | | | | |
| Crawlspace Volume | cf. | cf. | cf. | cf. |
| Suction Pipe Diameter | in. | in. | in. | in. |
| Manometer reading | in. WC | in. WC | in. WC | in. WC |

| Accessible Crawlspace | As Found* | | As Left* | |
|---|---|---|---|---|
| | Crawlspace 1 | Crawlspace 2 | Crawlspace 1 | Crawlspace 2 |
| Suction Point # | | | | |
| Smoke test each membrane | | | | |
| Smoke entered seam | | | | |
| | | | | |

Deviations/Comments

"No Crawl Spaces"

EPDM on floor of existing fruit cellar. Smoke test performed on liner and seams.

No intake of smoke noted during construction.

* As-found conditions = before corrective action.
* As-left conditions = after corrective action.

Performed by: MG Steffan/JJ Kohler  Date: 9/12/07

System Inspection Field Form
Soil Vapor Mitigation System
Mr. C's Dry Cleaners Site
Village of East Aurora, Erie County, NY
NYSDEC Site # 9-15-157

## PIPING, SLAB, AND WALL INSPECTION FORM

Routine or Non-Routine (underline one)

Address: 27 Whaley Avenue  Tracking Number: PCI-002

Date of Inspection: 9/12/07
Date of Last Inspection:

| | As Found | | As Left | |
|---|---|---|---|---|
| **Piping Check** | Yes | No | Yes | No |
| Is glue evident at joints? | x | | x | |
| Are system suction points sealed? | x | | x | |
| Is piping system properly supported? | x | | x | |
| Are valves and manometers installed at proper locations? | x | | x | |
| Is excessive noise heard in piping joints? | | x | | x |
| Were piping modifications and 10% of old joints smoke tested? | x | | x | |
| Does smoke enter joints? | | x | | x |
| If yes: Was joint re-sealed? | | | | |
| Does smoke enter re-sealed joint? | n/a | | n/a | |
| **Slab Check** | | | | |
| Was each identified slab crack, repair, or modification smoke tested? | x | | x | |
| Does smoke enter? | | x | | x |
| If yes: Was area re-sealed with approved sealant*? | n/a | | | n/a |
| Does smoke enter re-sealed area? | n/a | | | n/a |
| Check/clean drain(s)/Dranjer(s)™? | x | | x | |
| Were drain(s)/Dranjer(s)™ smoke-tested? | x | | x | |
| **Wall Check** | | | | |
| Was each visible wall crack smoke tested? | n/a | | n/a | |
| Is movement observed at wall cracks? | n/a | | n/a | |
| If yes: Was crack was re-sealed with approved sealant? | n/a | | n/a | |
| Does smoke enter re-sealed crack? | n/a | | n/a | |
| Was the open course of top wall smoke tested? | n/a | | n/a | |
| Does smoke enter top course? | n/a | | n/a | |
| If yes: Open block re-sealed with approved sealant? | n/a | | n/a | |
| Does smoke enter open block tops? | n/a | | n/a | |

**Deviations/Comments**

Performed by: MG Steffan/JJ Kohler  Date: 9/12/07

* approved sealant shall be an odorless, non-toxic, non-flammable, environmentally safe product

System Inspection Field Form
Soil Vapor Mitigation System
Mr. C's Dry Cleaners Site
Village of East Aurora, Erie County, NY
NYSDEC Site # 9-15-157

## FAN AND ELECTRICAL INSPECTION FORM

Routine or Non-Routine (underline one)

Address: 27 Whaley Avenue  Tracking Number: PCI-001

Date of Inspection: 9/12/07  Date of Last Inspection: n/a

**Electric Meter Number:** Last visit: n/a  Current visit: n/a

Equipment Documentation

| As Found | | Manometer Reading (in. $H_20$) | |
|---|---|---|---|
| Fan Model | Suction Point | Prior | Current |
| Vesta | P3 | | +1.5" |
| | | | |
| | | | |
| | | | |

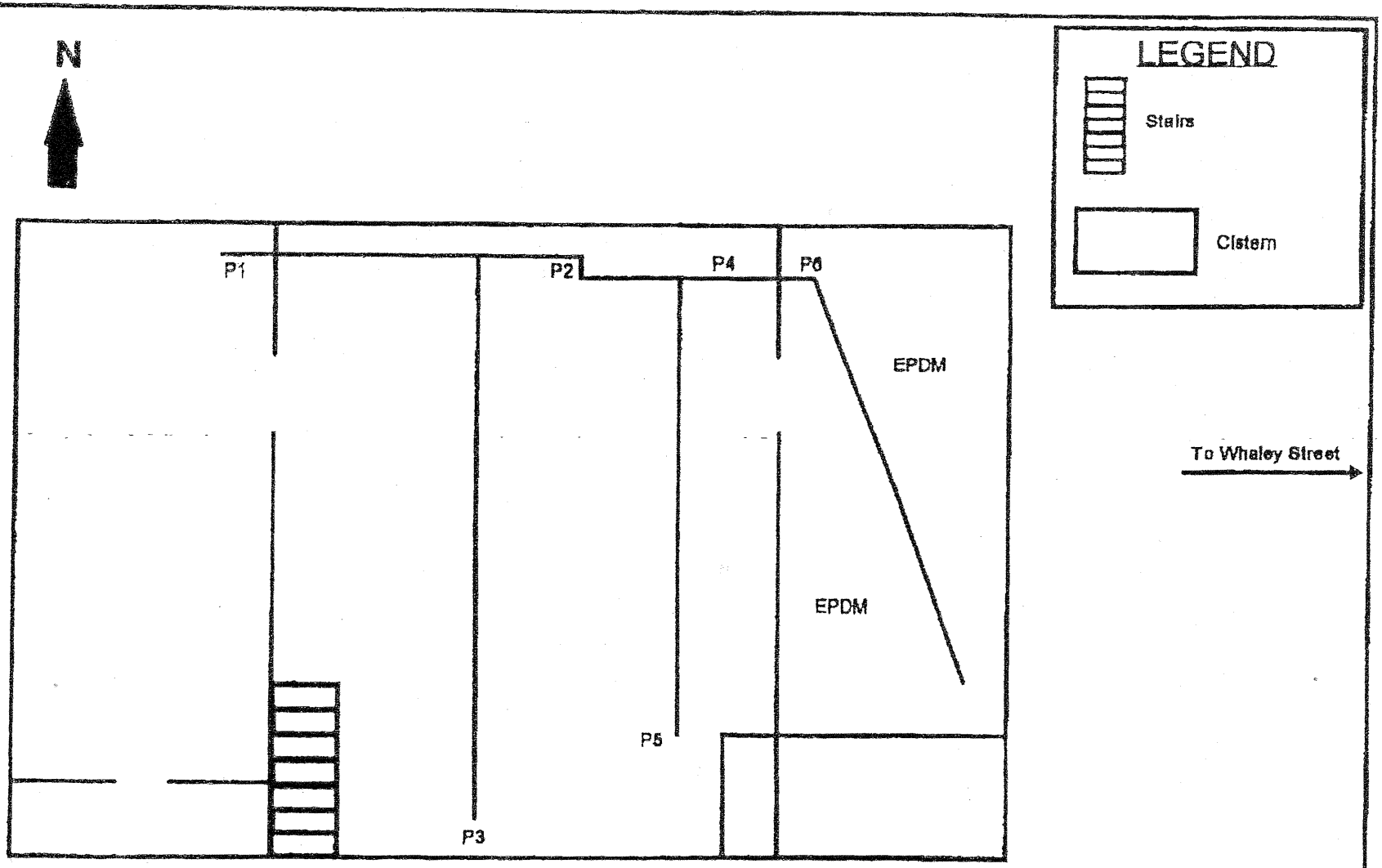
| As Left | | Manometer Reading (in. $H_20$) | |
|---|---|---|---|
| Fan Model | Suction Point | Prior | Current |
| Vesta | P3 | | +1.5" |
| | | | |
| | | | |
| | | | |

| | As Found | | As Left | |
|---|---|---|---|---|
| | Yes | No | Yes | No |
| **System Re-commissioning** | | | | |
| Is there a differential pressure shown in U-Tube manometer? | | x | | x |
| If yes, provide readings. | n/a | | n/a | |
| Was each fan shroud removed? No Fan shrouds present | n/a | | n/a | |
| Is each fan mounted securely? | x | | x | |
| Are coupling connections secured? | x | | x | |
| Does each fan run when the switch is in the ON position? | x | | x | |
| Does each fan shut down when the switch is in the OFF position? | x | | x | |
| Is excessive noise heard when fan is running? | | x | | x |
| Does each fan induce suction when running? | x | | x | |
| Is switch is locked in the ON position? | No switch | | No switch | |
| **Electrical Check** | | | | |
| Are Romex connections secured? | x | | x | |
| Is each junction box closed? | n/a | | n/a | |
| Are conduit properly supported? | x | | x | |
| Does each fan start when the switch is ON position? | x | | x | |
| Are any appliances affected by fan operation? | | x | | x |
| Does each fan stop when the switch is in OFF position? | x | | x | |
| Are mitigation system labels applied? | x | | x | |
| Are the correct labels applied in the proper locations? | x | | x | |

**Deviations/Comments**

The fan is located in the attic of the second floor apartment

Performed by: MG Steffan/JJ Kohler  Date: 9/12/07




| | | | |
|---|---|---|---|
| **OP-TECH ENVIRONMENTAL SERVICES, INC.** | | Date: February 2005 | Project No.: FDCH 0003 |
| 27 Whaley Street Basement | NYSDEC Region 9<br>27 Whaley Street<br>East Aurora, NY | Scale: Not To Scale | Figure No.: 1 |
| | | Drawn By: LG/jaw | Location: East Aurora, NY |

OP-TECH
ENVIRONMENTAL SERVICES, INC.

January 3, 2005

Mr. David J. Chiusano
Remediation Bureau E, Section A
Division of Environmental Remediation
*NYS Department of Environmental Conservation*
625 Broadway, 12th Floor
Albany, New York 12233-7013

RE: MR. C'S DRY CLEANERS SITE #915157
QUOTATION FOR SYSTEM INSTALLATION
27 WHALEY STREET – EAST AURORA, NY

Dear David:

Op-Tech Environmental Services is pleased to provide the following quotation to evaluate and install an active sub-slab depressurization system in the residence located at 27 Whaley Street in East Aurora, New York. Op-Tech will utilize Mitigation Technologies to install the system.

On Wednesday December 29, 2004 the residence was evaluated to determine the appropriate remediation method. Based on the evaluation, Mitigation Technologies has recommended the systems as outlined in their attached quotation.

The total estimated cost of the project is listed below. This cost is based on a subcontractor markup of 10% and 15 hours of Op-Tech project management time. In addition, I have estimated the cost associated with the site evaluation.

*System Installation*

| | |
|---|---|
| Mitigation Tech ($2,200+ 10%) | $2,420.00 |
| Op-Tech Management (15 hours) | $ 825.00 |

*Site Evaluation*

| | |
|---|---|
| Mitigation Tech ($330 + 10%) | $ 363.00 |
| Op-Tech | $ 165.00 |

# mitigation tech *radon correction specialists*

January 3, 2004

Ms. Linda Grimmer
OP-TECH Environmental Services, Inc.
108 Sawyer Ave.
Tonawanda, NY 14150
**Via fax: 716-873-7807**

Re: Sub-slab Ventilation -- DEC Site # 915157 (Mr. C's Cleaners)
Higley residence, 27 Whaley St., East Aurora, NY

Based on our discussion and survey, following is our proposal to provide environmental gas mitigation by active sub-slab depressurization. Cost and system configuration are considered to be close estimates based on field observations and homeowner consultation. All work will comply with EPA Radon mitigation standard 402-R93-078.

**Furnish and Install:**

- Professional consultation, design and supervision
- (1) FESTA Technologies 3.92 wci *Legend* [or as indicated by field measurement]centrifugal in-line fan to provide sub-slab ventilation via 3" schedule 40 pvc pipe to roof exhaust, attic fan and interior pipe to roof exhaust, with switched electrical connection
- (6) Suction points as follows: connection via 2" or 3" pvc pipe to cavities in sub-slab, with urethane seal, strategically located based on field observations at approximately uniform intervals at or near main basement perimeter, with balancing valve(s)
- (1) suction point at horizontal air collection loop recessed in front dirt basement area
- .045" EPDM rubberized membrane to cover front dirt basement area
- (1) Vacuum indicator on vertical pipe run
- Seal floor cracks and openings to sub-slab with urethane caulk or mortar
- Vacuum testing to measure and balance effective pressure field
- Three year warranty; labor and installed components; although system design is based on achieving a sufficient pressure differential, no specific warranty of effectiveness –effectiveness shall be determined by continuing field measuremem provided by others
- Customer to clear work area
- Monthly fan operating cost is approximately $8.00

Labor and Material:.....$2200.00

MITIGATION TECH

Nicholas E. Mouganis EPA listing # 15415-I ; NEHA ID# 100722

55 SHUMWAY ROAD, BROCKPORT, NEW YORK, 14420 * OFFICE/FAX 585-637-7430

Please contact me at (716) 873-7680 or Nick, of Mitigation Tech, at (585) 402-9812, should you have questions or require additional information. Thank you.

Sincerely,

OP-TECH ENVIRONMENTAL SERVICES, INC.

Linda J. Grimmer
*Buffalo Branch Manager*

/ljg
2005.01.01

Enclosure

Cc: Gregory P. Sutton, P.E., NYSDEC

ecology and environment engineering, p.c.
International Specialists in the Environment
BUFFALO CORPORATE CENTER 368 Pleasant View Drive, Lancaster, New York 14086
Tel: 716/684-8060, Fax: 716/684-0844

Mr. C's Dry Cleaners Site
NYSDEC Site No.: 9-15-157
NYSDEC Work Assignment No.: D004442-DC02 & DC13
Village of East Aurora, Erie County, New York

# Sub-slab Depressurization System
# Initial Commissioning Review

**Street Address: 27 Whaley Avenue**
**City/State/ Zip: East Aurora, New York 14052**

**Property Owner: Dave DuBois**

**Property Owner Phone Number(s): 716-465-4027**

**Date of Installation: February 2005** **Date of Startup Operation: February 2005**

**System Installation Inspected by: Ecology and Environment Engineering, P. C.**

**Inspector(s): Greg Jones and M. Steffan**

**Property Owner Field Procedures Performed:**

- ◙ Access Agreement signed by Owner
- ◙ Inspection of Final System Installation
- ◙ Review of Sub-slab Communication Test Results
- ◙ Acceptable Cleanup at Completion
- ◙ Operating Instructions Installed
- ◙ Emergency Contact Information Installed
- ◙ Review of System Operations with Property Owner

**Additional Comments:**

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**Subcontractor Project Documentation Received:**

Subcontractor Name: OP-TECH / Mitigation Tech, 55 Shumway Road, Brockport, New York 14420 - 585-637-7430

- ◙ Photo documentation
- □ Sub-slab Communication Test Results
- ◙ Record drawings – Sketches only
- ◙ Product warranties

**Additional Comments:**

- Post commissioning inspection or air sampling required within the next heating season or 11/05. – **Air Sampling 6/26/06**
- Routine Inspection and Maintenance 18 months after Post commission inspection (PCI) & air sampling - **RI – 6/26/06, PCI – 9/12/07**

**Submitted By:** M. Steffan **Dated:** 9/18/07

# D Site Contact List

# Mr. C's Dry Cleaners Site, NYSDEC Site #9-15-157
# Site Contact List
# Updated : February 12, 2008

| Name | Company | Address | Phone | Email & Other Info |
|---|---|---|---|---|
| Will Welling, PE | NYSDEC - Project Manager<br>Div. Of Environmental Remediation | 625 Broadway<br>Albany, New York 12233 | 518-402-9638<br>518-402-9819 fax<br>cell - 518-791-9603 | wbwellin@gw.dec.state.ny.us |
| Michael Steffan | Ecology and Environment Engineering, P.C.<br>(EEEPC Project Engineer & Project Manager) | 368 Pleasant View Drive<br>Lancaster, New York 14086 | 716.684-8060<br>716-684-0844 fax | msteffan@ene.com |
| Jeff Kohler | EEEPC<br>Project Engineer | 368 Pleasant View Drive<br>Lancaster, New York 14086 | 716.684-8060<br>716-684-0844 fax | jkohler@ene.com |
| Dharma Iyer<br>or<br>Rick Allen | Iyer Environmental Group, PLLC)<br>(OM&M Services for the site) | 44 Rolling Hills Drive<br>Orchard Park, New York 14120 | 716.662-4157<br>716-662-2118 fax<br>Dharma's cell<br>716.445-9684 | iegpllc@adelphia.net |
| Jim Stadelmaire<br>Senior Account Executive | Mitkem Corporation<br>(Analytical Services) | 175 Metro Center Boulevard<br>Warwick, Rhode Island 02886 | 401- 732- 3400 - office<br>401-732-3499 - fax<br>(716) 597 6596<br>(Jim's cell) | jstadelmaier@mitkem.com |

# Mr. C's Dry Cleaners Site, NYSDEC Site #9-15-157
# Site Contact List
# Updated : February 12, 2008

| Name | Company | Address | Phone | Email & Other Info |
|---|---|---|---|---|
| Cameron O'Connor | NYSDOH | 584 Delaware Avenue<br>Buffalo, New York 14202 | 716.847-4385 | cho01@health.state.ny.us |
| David Dubois | Owner of 27 Whaley Avenue with SSD System Installed and in Operation Since January 2005 | 27 Whaley Avenue<br>East Aurora, New York 14052 | 716.465-4027 | None |
| William Larson | Manager of 1st Presbyterian Church (Daycare Facility Also) located at 9 Paine Street where SSD System installed basement and in operation Since September 2004 | ***Bill's Home -***<br>62 Paine Avenue<br>East Aurora, New York 14052<br>***Church -***<br>9 Paine Avenue<br>East Aurora, New York 14052 | 716.652-7650<br>(Bill's home)<br>716.652-0160<br>(Church phone) | None |
| David Szymanski | NYSDEC - Region 9 DER Project Contact | 270 Michigan Avenue<br>Buffalo, New York 14203 | 716.851-7220 | dsszyman@gw.dec.state.ny.us |

# Mr. C's Dry Cleaners Site, NYSDEC Site #9-15-157
## Site Contact List
## Updated : February 12, 2008

| Name | Company | Address | Phone | Email & Other Info |
|---|---|---|---|---|
| On-site Treatment System Auto-dialer | Treatment System Status Checks and Channel Alarms | Mr. C's Treatment Building<br>586 Main Street<br>East Aurora, New York 14052 | 716.652-0094 | Pumping wells and collection lines located on property by easement |
| Mr. Crawford | Mr. C's Dry Cleaners | 586 Main Street<br>East Aurora, New York 14052 | 716.652-5900 | Pumping wells and collection lines located on property by easement |
| Agway Site<br>566 Main Street | Aurora Ventures, LLC<br>or EA 400 Main Street LLC, | 726 Main Street<br>East Aurora, New York 14052 | 716.652-6865 | Pumping wells and collection lines located on property by easement |
| Marie Pitt | Town of Aurora<br>Public Library | 550 Main Street<br>East Aurora, New York 14052 | 716.652-4440 | Pumping wells and collection lines located on property by easement |
| Mike & Marie Pitt | Residential Property Owner | 19 Whaley Avenue<br>East Aurora, New York 14052 | 716.652-3729 | Pumping wells and collection lines located on property by easement |
| Peoples Inc. | Group home for people with disabilities | 538 Main Street<br>East Aurora, New York 14052<br>(People Inc.<br>1219 N. Forest Road<br>Williamsville, New York 14221) | 716.634-8132<br>(Williamsville Phone) | Pumping wells and collection lines located on property by easement |

# Mr. C's Dry Cleaners Site, NYSDEC Site #9-15-157
# Site Contact List
# Updated : February 12, 2008

| Name | Company | Address | Phone | Email & Other Info |
|---|---|---|---|---|
| Village of East Aurora<br>David J. DiPietro | Mayor | 571 Main Sreet<br>East Aurora, NY 14052 | 716.655-7878 | david_dipietro@east-aurora.ny.us |
| Village of East Aurora<br>Matt Hoeh<br>Secretary - Barb | Superintendent of Public Works<br>(if work is required to be performed on Whaley Ave. | 40 Pine Street Extension<br>East Aurora, New York | 716-652-6057 | matt.hoeh@east-aurora.ny.us<br>Force main runs in the Right of Way of Whaley Avenue (village street) |
| Town of Aurora<br>Dwight D. Krieger | Supervisor | Aurora Town Hall<br>5 South Grove Street<br>East Aurora, NY 14052 | (716) 652-7590<br>Fax: (716) 652-3507 | Supervisor@townofaurora.com |
| Village of E. Aurora Police Dept.<br>Nancy Westfall (Police Clerk)<br>Ron Krowka<br>(Police Chief) | Security, Vandalism or Emergency Issues | 571 Main Sreet<br>East Aurora, NY 14052 | Phone: 652-1111<br>Fax: 652-3760 | nancy.westfall@east-aurora.ny.us<br>ron.krowka@east-aurora.ny.us |

# Mr. C's Dry Cleaners Site, NYSDEC Site #9-15-157
## Site Contact List
## Updated : February 12, 2008

| Name | Company | Address | Phone | Email & Other Info |
|---|---|---|---|---|
| New York State Electric and Gas | Electrical power to the Mr. C's and Agway remedial treatment units | NYSEG Customer Service<br>P. O. Box 5240<br>Binghamton, New York<br>13902-5240 | Emergencies -<br>1-800.572-1131 | nyseg.com<br>Account Numbers<br>M. C's - Electric<br># 1001-0310-422<br>Agway<br># 1001-7274-316 |
| National Fuel Gas | Natural Gas for heating the Mr. C's treatment building | 2875 Union Road, Suite 44<br>Cheektowaga, New York 14227 | Emergencies<br>1-800.444-3130 | www.nationalfuelgas.com<br>Account Number - 5819628-05 |
| Verizon Communications | Communications to the treatment facility<br>(Mr. C's only) | Verizon<br>PO Box 15124<br>Albany, New York 12212-5124 | 890-7711<br>(anywhere in NYS) | verizon.com<br>Account #<br>716-652-0094 416 26 2 |
| Police / Sheriff - Emergency | | | 911 | |
| Fire / First Aid - Emergency | | | 911 | |
| Ambulance | | | 911 | |
| Mercy Hospital | Hospital / Emergency Care Facility | 555 Abbott Road<br>Buffalo, New York | 716-826-7000 | |

# Mr. C's Dry Cleaners Site, NYSDEC Site #9-15-157
## Site Contact List
## Updated : February 12, 2008

| Name | Company | Address | Phone | Email & Other Info |
|---|---|---|---|---|
| Poison Control Center | | 219 Bryant Avenue<br>Buffalo, New York | 716-878-7654<br>800-336-6997 | |
| | | | | |
| | | | | |

# E Groundwater Treatment System Performance Monitoring Parameters and Minimum Frequencies

Attachment C
Mr. C's Dry Cleaners Site Remediation
NYSDEC Site # 9-15-157

Groundwater Treatment System Performance Monitoring Parameters and Minimum Frequencies

| | Sample Location | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Parameter** | Groundwater pumping Wells (Each) | Piezometers (Each) | Treatment Facility Influent | Bag Filters | Air Stripper Influent | Blower Inlet | Air Stripper Air Discharge | Air Stripper Effluent |
| Temperature | NA | NA | NA | NA | NA | NA | NA | Weekly |
| pH | NA | NA | NA | NA | Monthly | NA | NA | Monthly |
| Pressure | Weekly | NA | NA | Weekly | Weekly | Weekly | NA | Weekly |
| Flow Rate | NA | NA | Weekly | NA | NA | NA | Weekly | Weekly |
| Groundwater Elevations | Monthly | Monthly | NA | NA | NA | NA | NA | NA |
| VOCs Concentrations | NA | NA | NA | NA | Monthly | NA | Monthly | Monthly |
| Total VOCs Removed | Calculate | NA | NA | NA | Calculate | NA | Calculate | Calculate |
| Hardness | | | | | Monthly | | NA | Monthly |

# F NYSDEC Fact Sheet – Mr. C's Dry Cleaners Site

NEW YORK STATE DEPARTMENT OF

ENVIRONMENTAL CONSERVATION

**Dear Interested Citizen:**

This Fact Sheet is to inform you about the ongoing activities at the Mr. C's Dry Cleaners site. If you have any questions or would like more information, please do not hesitate to contact:


**Mr. David J. Chiusano**
**NYSDEC Project Manager**
Division of
Environmental Remediation
625 Broadway, 12th Floor
Albany, N.Y. 12233-7013
**(518) 402-9813**

or

**Mr. Greg Sutton**
**Local Project Coordinator**
NYSDEC
Region 9 Buffalo
270 Michigan Avenue
Buffalo, NY 14203
**(716) 851-7220**


For site-related health questions, please contact the following New York State Department of Health (NYSDOH) representative:


**Mr. Cameron O'Connor**
**Public Health Specialist**
NYSDOH
584 Delaware Avenue
Buffalo, NY 14202
**(716) 847-4385**


# FACT SHEET

## MR. C'S DRY CLEANERS

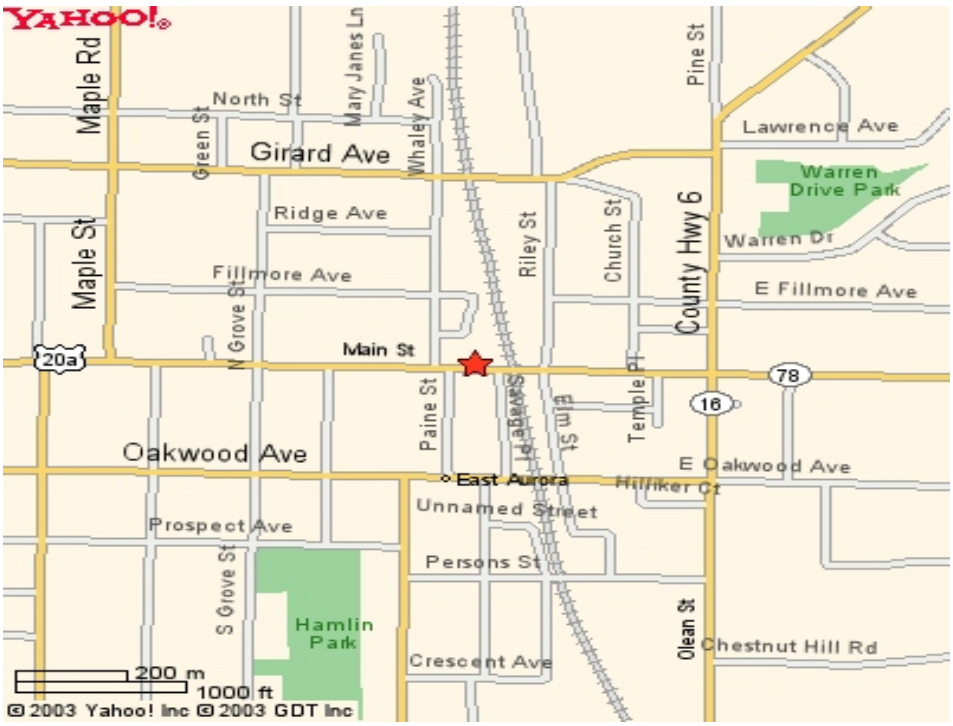
### Update of Cleanup Activities at the Mr. C's Dry Cleaners Site 586 Main Street, Village of East Aurora, NY

**DECEMBER 2003**

## Introduction:

The New York State Department of Environmental Conservation (NYSDEC) and the New York State Department of Health (NYSDOH) want to update you on the cleanup at the Mr. C's Dry Cleaners (Mr. C's) inactive hazardous waste disposal site. NYSDEC is cleaning up this site as part of its State Superfund Program to investigate and remediate inactive hazardous waste disposal sites throughout New York State. The State implemented the cleanup plan using money from the 1986 Environmental Quality Bond Act.

The Mr. C's Site (site) is located at 586 Main Street in the Village of East Aurora (see map below). The cleanup was necessary to address groundwater beneath the site that has been contaminated with a common dry cleaning chemical known as tetrachloroethene (perchloroethene or PCE). PCE is a volatile organic compound (VOC). VOCs are chemicals that can evaporate easily, such as ingredients in paint thinners, gasoline and solvents. Although residents in the area are served by the Erie County Water Authority with potable water, cleanup is proceeding to prevent the potential for incidental ingestion or the inhalation of vapor phase chemicals from the groundwater.




N ↑

Mr. C's Site Location Map
586 Main Street, East Aurora, County of Erie

## Operation and Maintenance:

Construction of the treatment system began in October 2001 and was completed in August 2002. Operation of the treatment system began in August 2002 and was monitored and maintained through September 2003 by a remedial construction contractor, the Tyree Organization (Tyree), under NYSDEC supervision. During this time, the treatment system was determined to be satisfactorily removing contamination from the groundwater as designed. To date, approximately 35 million gallons of groundwater have been removed and treated, which has resulted in approximately 500 pounds of VOC removed.

With the expiration of the contract with Tyree, NYSDEC has contracted the engineering services of Ecology & Environment Engineers (E&E) from Buffalo to operate the treatment system. E&E will be responsible for future operation, monitoring, and maintenance of the entire groundwater collection and treatment system. Currently, treated water is being sampled, monitored and discharged through a dedicated discharge line along Whaley Avenue to Tannery Brook off Ridge Road and is obtaining discharge limits established by the Department's Division of Water. Treated air is also being sampled, monitored and discharged in accordance with New York State guidelines. Operation, monitoring, and maintenance of the collection and treatment system will be performed indefinitely until such time it is determined that continued operation would not result in further significant groundwater contaminant removal. At such time the public will be notified of the Department's decision to change the operation of the system.

## What Happens Next:

The Department and its consultant will continue to operate and maintain the treatment system. Groundwater contaminant levels will continue to be monitored and reported to the NYSDEC and NYSDOH during that time frame. Groundwater samples will be collected periodically to determine contaminant level trends, which are anticipated to decrease over time. Once all of the data have been collected and reviewed, the NYSDEC will evaluate the feasibility of continuing to operate the treatment system.

## For More Information:

The Aurora Town Library has been designated as the local document repository in order to provide you with access to project information. Documents regarding past site investigations, construction, and O&M activities at the site are available for review at:

Aurora Town Public Library
550 Main Street
115 South Avenue
East Aurora, NY 14052
Hours: Monday 1 pm - 9 pm
Tuesday 10 am - 9 pm
Wednesday 1 pm - 5 pm
Thursday 1 pm - 9pm
Friday 10 am - 5 pm
Saturday 10 am - 5 pm
Sunday - Closed
(716) 652-4440

and at:

NYSDEC's Region 9 Buffalo Office
270 Michigan Avenue
Buffalo, NY 14203
For an appointment, contact Mr. Sutton at
(716) 851-7220

NYSDEC and NYSDOH will keep you informed throughout the remedial program. Your understanding and involvement in this project will help to ensure an effective remedial program. You are encouraged to contact the people listed on the front of this fact sheet at any time with questions, comments or concerns. Because our mailing list includes property owners of businesses and apartments, we encourage you and the building owners to share this fact sheet with your neighbors and tenants, and/or post this fact sheet in a prominent area of your building for tenants, employees, or visitors to view.

# G Draft Detailed Site Assessment for Deconstruction of Main Street

# TRANSPORTATION

# PROJECT REPORT

DRAFT
DETAILED SITE ASSESSMENT

FOR
RECONSTRUCTION OF MAIN STREET
(US 20A/NYS 16 & 78)
TRAFFIC CIRCLE TO EAST VILLAGE LINE

PIN 5576.67

VILLAGE OF EAST AURORA
ERIE COUNTY
NEW YORK

Prepared by
FISHER ASSOCIATES

For
ERDMAN ANTHONY ASSOCIATES

For submittal to

NEW YORK STATE
DEPARTMENT OF TRANSPORTATION

SEPTEMBER 2006

NEW YORK STATE DEPARTMENT OF TRANSPORTATION
GEORGE E. PATAKI, Governor THOMAS J. MADISON, JR., Commissioner

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Appendices

Appendix A – Project Location Maps
Appendix B – Radar Solutions International, Inc. Report
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Appendix D – Soil Sample Analytical Results and Laboratory Analytical Summary Tables

# 1.0 INTRODUCTION

Fisher Associates (Fisher Associates) prepared this Hazardous Waste/Contaminated Materials (HW/CM) Detailed Site Investigation Report (DSI) on behalf of Erdman Anthony Associates (EAA) for The New York State Department of Transportation (NYSDOT). This investigation was conducted in technical support of the proposed reconstruction of Main Street (US Route 20A / NYS Routes 16 and 78) from the traffic circle at the western terminus to the Village Line at the eastern terminus in the Village of East Aurora, Erie County, New York. The project limits are shown on Figure No. 1 - Project Location Map contained in Appendix A.

## 1.1 Site Background

The preferred alternative for this project involves reconstruction and geometric improvements to Main Street from the traffic circle to the east Village line. The project also includes the reconstruction of the Grey Street/Knox Road/ Buffalo Street intersection, and the Main Street intersections with Hamlin Avenue, Willow Street (North and South), Shearer Avenue, Center Street, Maple Street, Walnut Street, Grove Street (North and South), Park Place, Whaley Avenue, Paine Street, Elm Street, Riley Street, Church Street, Temple Place, Pine Street, and Olean Street. The proposed highway section for Main Street is a two-lane configuration with roadside parking and turn lanes incorporated in. Additional improvements are new curbs, sidewalks and closed drainage system. Right-of-way acquisitions would be required along various segments of the project.

The anticipated widening will require right-of-way acquisition, primarily at the intersections. In addition, the utility infrastructure will be replaced along the corridor that will require excavation within the right-of-way and across the frontage of several properties suspected of potential petroleum contamination and one (1) known NYSDEC Inactive Hazardous Waste Site. As such, a detailed Phase II Investigation was proposed for the project corridor.

## 1.2 Purpose and Scope

The purpose of the Detailed Site Investigation (DSI) was to determine the potential for encountering petroleum contaminated soils or petroleum products at the sites along the project corridor, and to determine the potential exposure risks to construction workers during the reconstruction work. To accomplish this, the DSI included a geophysical investigation and subsurface Geoprobe explorations in the areas where underground storage tanks (USTs) were historically used and/or where contaminated soils may be present due to historical land use (i.e., gasoline station, dry cleaner, automotive repair, etc.). The field investigations and laboratory analysis were conducted in accordance with the NYSDOT approved project sampling and analysis plans that included a Summary Table outlining the site concerns and the recommended investigations (following this Section). The hazardous waste/contaminated materials evaluation included field investigations (geoprobe borings, geophysical investigation) and analytical laboratory testing.

## Site Summary Table
## Main Street, East Aurora
## Detailed Site Investigation Summary

| NAME / SITE ADDRESS | ENVIRONMENTAL CONCERN(S) | STATUS OF SITE | RECOMMENDATIONS |
|---|---|---|---|
| Kwik Fill<br>5 Ernst Place<br>(Site 1) | SPILLS<br>USTs<br>RCRIS-SQG<br>FINDS<br>Historic and current land use | - Tanks leaking during tightness testing<br>- No reported spill closure for February 1999 spill<br>- (4) 10,000-gal UST active | Subsurface explorations (Geoprobe) and laboratory analytical testing along right-of-way |
| Circle Coin Laundry<br>16 Buffalo Street<br>(Site 2) | Historic land use | - Former Gasoline station that may be contributing to contamination to adjacent properties | Subsurface explorations (Geoprobe and Geophysical) and laboratory analytical testing along right-of-way |
| East Aurora Mobil<br>56 Hamburg Street<br>(Site 3) | RCRIS-SQG<br>USTs<br>FINDS<br>SPILLS | - Currently and historically a gasoline station<br>- (1) 12,000-gal, (2) 10,000-gal, (1) 1,000-gal, (1) 550-gal USTs active; (1) 6,000-gal, (2) 10,000-gal, (2) 550-gal USTs closed prior to 1991 | Subsurface explorations (Geoprobe) and laboratory analytical testing along right-of-way |
| Former TOPs Plaza<br>160 – 192 Main Street<br>(Site 4) | SPILLS | - Spill sources not identified | Subsurface explorations (Geoprobe and Geophysical) and laboratory analytical testing along right-of-way |
| Sunoco<br>a.k.a. Atlantic Refining<br>175 Main Street<br>(Site 5) | RCRIS-SQG<br>LTANKS<br>USTs<br>FINDS<br>ASTs<br>Historic and current land use | - (2) 15,000-gal UST active, (2) 8,000 and (1) 6,000-gal closed, (1) 240-gal AST active | Subsurface explorations (Geoprobe) and laboratory analytical testing along right-of-way |
| Guilman Gas<br>Brook Service<br>a.k.a. Montana Mills<br>227 Main Street<br>(Site 6) | RCRIS-SQG<br>LTANKS<br>USTs<br>FINDS<br>SPILLS<br>Historic land use | - (2) 10,000-gal and (1) 2,000-gal USTs closed | Subsurface explorations (Geoprobe) and laboratory analytical testing along right-of-way |
| Bachs Service<br>206-230 Main Street<br>(Former vacant lot, now Dunkin Donuts)<br>(Site 7) | LTANKS<br>USTs<br>ASTs<br>SPILLS<br>Historic land use | - (1) 2,000-gal and (2) 4,000-gal USTs closed in place, (2) 4,000-gal and (1) 2,000-gal UST closed | Subsurface explorations (Geoprobe and Geophysical) and laboratory analytical testing along right-of-way |
| NOCO Express<br>a.k.a. Cumberland Farms<br>495 Main Street<br>(Site 8) | RCRIS-SQG<br>LTANKS<br>USTs<br>FINDS<br>SPILLS<br>Historic and current land use | - (3) 10,000-gal and (2) 550-gal USTs closed prior to 1991 | Subsurface explorations (Geoprobe) and laboratory analytical testing along right-of-way |

| NAME / SITE ADDRESS | ENVIRONMENTAL CONCERN(S) | STATUS OF SITE | RECOMMENDATIONS |
|---|---|---|---|
| Agway Petroleum Corp.<br>566 Main Street<br>(Site 9) | RCRIS-SQG<br>LTANKS<br>USTs<br>ASTs<br>FINDS<br>CBS ASTs<br>SPILLS<br>Historic land use | - (2) 20,000-gal ASTs, (1) 12,000-gal, (2) 10,000-gal, and (1) 280-gal USTs closed<br>- Soil vapor extraction system at site<br>- Multiple monitoring wells at and adjacent to site | Subsurface explorations (Geoprobe) and laboratory analytical testing along right-of-way |
| Mr. C's Cleaners<br>586 Main Street<br>(Site 10) | RCRIS-LQG<br>RCRIS-SQG<br>NYSDEC Hazardous Waste Site<br>FINDS<br>Historic and current land use | - Former Auto Sales<br>- NYSDEC Superfund Site<br>- 26,000 pounds of hazardous waste removed from site | Subsurface explorations (Geoprobe and Geophysical) and laboratory analytical testing along right-of-way |
| Dan's Auto Repair<br>617 Main Street<br>(Site 11) | USTs<br>ASTs | - (2) 4,000-gal USTs closed, (3) 250-gal ASTs closed, (1) 550-gal AST active | Subsurface explorations (Geoprobe) and laboratory analytical testing along right-of-way |

## 2.0 FIELD INVESTIGATIONS

### 2.1 Geophysical Survey

The purpose of the geophysical investigation was to determine the potential presence of underground storage tanks (USTs) in or near the ROW in the vicinity of the Circle Coin Laundry (Site 2), the former TOPS Plaza (Site 4), the new Dunkin Donuts (former Bachs at Site 7), and Mr. C's Cleaners (Site 10). The USTs were identified in historic Sanborn Maps and during field reconnaissance. By verifying the presence and location of the USTs, the need for removal could be evaluated against abandoning the tank in place, and the soils surrounding the USTs could be assessed for the potential for contamination.

During the period of June 12 and 13, 2006, Radar Solutions International, Inc. (RSI) and Fisher Associates conducted the geophysical survey. To complete the survey, the right-of-way (ROW) area in front of the suspect properties was marked out into a 1 by 2 meter grid. The limits of the geophysical exploration program are shown on Figure Nos. 1 through 4 in the report prepared by RSI that is included in Appendix B. Upon completion of the grid, ground penetrating radar (GPR) and an EM-61 metal detector were utilized to detect subsurface metal anomalies within the area. Based upon the results of the GPR and EM-61 survey, the locations of the subsurface soil sampling did not require adjustment.

## 2.2 Soil Borings

On June 19 through June 30, 2006, representatives of Fisher Associates and Nature's Way Environmental Consultants & Contractors, Inc. (Nature's Way), advanced sixty-three (63) borings, using direct push technology (Geoprobe) at eleven (11) properties identified as Site 1 through Site 8. Refer to Drawing Nos. B-1 through B-8 – Detailed Site Investigation Plan, contained in Appendix A.

The borings were advanced to depths ranging from 1.6-meters (5.25-ft.) to 3.65-meters (12.0-ft.) below ground surface, where subsurface conditions allowed. During drilling, the borings were monitored at 4.0-ft. intervals using a RAE Systems MiniRAE 2000 photoionization detector (PID). The soil samples were scanned for the presence of organic compounds and the subsurface conditions were documented during the investigation. The borings were identified by site by the typical convention "B-1A", where: (B) is boring, (1) is Site 1, and (A) is the first boring on Site 1. Copies of the soil boring logs prepared by Fisher Associates are contained in Appendix C.

Representative soil samples were taken from the borings which had the highest PID reading above background (i.e., 5 ppm), at a depth where the highest PID reading was obtained during monitoring. Samples were taken from borings at the locations shown as boring numbers B-1I (11-12-ft.), B-2C (10.5-ft.), B-3D (11-ft.), B-6C (10.5-11.5-ft.), B-7C (10-ft.), B9A (10.5-11.5-ft.), B-9B (2-ft.), and B-11A (5-6-ft.). The soil samples were placed in laboratory grade glass jars and then submitted under standard chain-of-custody protocol to Paradigm Environmental Services (Paradigm), a New York State Department of Health approved laboratory for analysis.

It should be noted that there was a malfunction of the PID during soil borings B-1C through B-1J that caused erroneous readings. However, selected samples that exhibited staining or petroleum-like odors were collected from the borings and scanned the following day with a replacement PID. The results of the sample scanning are shown on the soil boring logs contained in Appendix C.

## 2.3 Soil Gas Evaluation

On June 28 and June 29, 2006, Fisher Associates conducted a soil gas evaluation as part of the DSI. The purpose of the soil gas evaluation was to determine the potential for human exposure contact with contaminants suspected to be in the area of Sites 9 and 10 during the replacement of the sanitary sewer (refer to Drawing Nos. B-7 and B-8). To evaluate the soil gas, probe rods with a sacrificial tip were advanced to a depth of 3.65-meters (m) (12.0-ft.) below ground surface (bgs). The rods were then extracted to a depth of 3.2-m (10.5-ft.) and the sacrificial tip was driven off the rods into the bottom of the hole. Teflon tubing was then inserted into the rods to the interface with the soils at 3.2-m, and the upper annulus of the probe rods was sealed with a rubber plug. The tubing into the subsurface soils was then purged with a small diaphragm pump at a rate of 2-liters per minute (LPM) for a period of five (5) minutes to draw the gasses in the surrounding soil into the tubing for monitoring and/or sampling.

The gas in the tube was then monitored with the PID to evaluate for the presence of volatile organic compounds (VOCs). Based on the readings on the PID, samples were collected in a tedlar bag (high PID readings) or in a Summa Canister (low PID readings). Samples were collected from points Soil Gas Point - 1 (SG-1), SG-4, and SG-10. The samples were transported under standard chain-of-custody protocol to Paradigm for analysis.

## 3.0 INVESTIGATION AND ANALYTICAL TEST RESULTS

### 3.1 Geophysical Survey

The geophysical survey indicates that no USTs appear to be present within the existing or proposed right-of-way (ROW) at Site 2 (Circle Coin Laundry), Site 4 (former TOPS Plaza), Site 7 (former Bachs Service), or Site 10 (Mr. C's Cleaners). The survey indicates the possible presence of larger metallic debris at Site 2 with several smaller metallic reflections at the remaining sites. Based on the size of the anomaly the reflectors shown at Site 2 could represent a small UST however, the patterns of the reflectors make it unlikely for the presence of an UST. Additional information about the survey and other features identified during the survey are contained in the RSI report that is attached in Appendix B.

### 3.2 Soil Borings

The soil samples collected at borings B-1I, B-2C, and B-3D were analyzed by Paradigm for VOCs via USEPA method 8021 plus MTBE and NYSDEC STARS Compounds, SVOCs via USEPA Method 8270C STARS, and RCRA Metals via USEPA Methods 6010 and 7471. The soil samples collected from borings B-6C, B-7C, B-9A, B-9B, and B-11A were analyzed via USEPA methods 8260B Target Compound List (TCL) and STARS, 8270C STARS, and RCRA Metals via USEPA Methods 6010/7471. The analytical laboratory results and chain-of-custody forms are contained in Appendix D.

The laboratory analysis results were compared to the NYSDEC *Technical and Administrative Guidance Memorandum (TAGM): Determination of Soil Cleanup Objectives and Cleanup Levels, TAGM 4046* (January 1994, amended with addition of STARS compounds per NYSDEC August 2001). As shown in Table 1 in Appendix D, SVOCs were detected at levels above the laboratory method detection limit (MDL) in samples collected from soil borings B-3D, B-7C, B-9A and B-9B. Of those compounds detected above the laboratory MDLs, none were detected at levels exceeding the NYSDEC Cleanup Guidance Levels listed in TAGM 4046.

Samples collected from soil borings B-1I, B-2C, B-3D, B-6C, B-7C, and B-9A also contained VOCs at concentrations above the laboratory MDL as shown on Table 2 in Appendix D. Of those compounds detected above the laboratory MDLs, two (2) compounds (ethylbenzene and m,p-xylene) were detected in boring B-2C; one (1) compound (1,2,4-trimethylbenzene) in boring B-3D; six (6) compounds (ethylbenzene, m,p-xylene, n-butylbenzene, sec-butylbenzene, n-propylbenzene, and isopropylbenzene) in boring B-7C; and five (5) compounds (m,p-xylene, o-xylene, naphthalene, 1,2,4-trimethylbenzene, and 1,3,5-trimethylbenzene) in boring B-9A were

at levels exceeding the NYSDEC Cleanup Guidance Levels listed in TAGM 4046. These identified exceedances may be from residual contamination produced by former USTs that were located adjacent to or outside the right of way or spills at the adjacent properties. Historical records indicate that Sites 1, 2, 3, 6, 7, and 9 were historically gasoline filling stations.

In addition to analyzing the soil samples collected from the test borings for petroleum compounds, the samples were analyzed for concentrations of heavy metals. The samples were analyzed for the eight (8) RCRA metals to determine soil management/disposal procedures during construction. As shown in Table 3 in Appendix D, several metals were detected above the laboratory MDL in each sample collected. Of the metals detected above the laboratory MDL, the levels for arsenic (borings B-7C, B-9B, and B-11A), chromium (borings B-9B and B-11A), and mercury (boring B-9B) were above the eastern USA background levels and/or the NYSDEC Cleanup Levels.

### 3.3 Soil Gas Evaluation

The purpose of the soil gas evaluation was to determine the potential for worker exposure to known contaminants in the disturbed soils during the replacement of the sanitary sewer in the vicinity of Sites 9 and 10. The potential for exposure exists due to the presence of petroleum-based compounds from the former Agway Petroleum (Site 9), and the petroleum-related compounds associated with Mr. C's Cleaners at Site 10 (a NYSDEC-listed Inactive Hazardous Waste Site) that are known to have migrated off-site and onto adjacent properties including the Main Street right-of-way.

The air drawn into the tubing was monitored with a PID for the presence of VOCs in the soil gasses. PID readings collected during the soil gas evaluation ranged from 0.0 parts per million (ppm) in SG-1 to 1,517 ppm in SG-4 and are shown in Table 4 in Appendix D. The object was to collect a low level PID reading air sample in a laboratory prepared Summa Canister and a higher level PID reading air sample in a Tedlar bag. The low level sample collected in the Summa Canister was analyzed via TO-15 analytical methods for compounds exceeding human exposure levels. The high level sample collected in the Tedlar bag would be analyzed for total VOCs present in the soil vapors.

Selected air samples were collected from soil gas points SG-1, SG-4, and SG-10 during the soil gas evaluation to determine the potential for encountering compounds that could be a health exposure issue for contractors replacing the sanitary sewer. Refer to Drawings B-7 and B-8 for the location of the area and the specific locations of the soil gas points.

Both Summa Canister and Tedlar bag samples were collected from soil gas point SG-1 that produced a PID reading of 0.0 parts per million (ppm). This soil gas point was in an area that would have been directly down gradient of both Mr. C's Cleaners and the Agway Petroleum, Inc. facility. This sample would serve as a baseline indicator of soil gas readings and the related potential compounds (if detected in the laboratory samples).

Additionally, a Summa Canister sample was collected from soil gas point SG-10 (16.9 ppm). The samples were transported under standard chain-of-custody protocol to Paradigm and analyzed via Method TO-15. As shown in Table 5 in Appendix D, nine (9) compounds (tetrachloroethene, 1,1,1-trichloroethane, benzene, ethylbenzede, toluene, m,p-xylene, o-xylene, acetone, and 2-butanone) were detected above the Method Detection Limit of TO-15 analysis in the sample collected at SG-1, and fourteen (14) compounds (chloroform, cis-1,2-dichloroethene, tetrachloroethene, 1,1,1-trichloroethane, 1,1,2-trichloroethane, trichloroethene, benzene, ethylbenzene, toluene, m,p-xylene, o-xylene, acetone, 2-butanone, and 2-hexanone were detected above the MDLs in the sample collected at SG-10. The detected compounds were compared to the published exposure limit values as developed by the National Institute of Occupational Safety and Health (NIOSH), the Occupational Safety and Health Administration (OSHA), and the American conference of Governmental Industrial Hygienists (ACGIH).

Of the compounds detected in the samples collected from both SG-1 and SG-10, the only compound that exceeds an exposure threshold is tetrachloroethene. In the sample collected from SG-1 the level of tetrachloroethene exceeds the NIOSH recommended exposure level (REL) over a time weighted average (TWA), and the OSHA permissible exposure level (PEL) for a TWA. In the sample collected from SG-10, tetrachloroethene exceeded the NIOSH REL, the OSHA PEL, and the ACGIH threshold limit value (TLV) for a TWA and the short term exposure limit (STEL).

## 4.0 CONCLUSIONS AND RECOMMENDATIONS

### 4.1 Geophysical Survey

The purpose of the DSI was to determine the potential for encountering petroleum contaminated soils or petroleum products at these sites. To accomplish this, the DSI included a geophysical investigation in the areas where USTs were historically used and may still have been present.

Based on the results of the geophysical survey, it is unlikely that USTs are present at the sites surveyed by RSI. The anomaly present at Site 2 could represent a small UST however, the patterns of the reflectors of the anomaly are not consistent with that of a UST.

Based on the conclusions of the geophysical survey, the data does not indicate any USTs present within the existing or proposed right-of-way for the areas surveyed. However, if USTs should be uncovered during construction, excavation should be halted and the NYSDEC Region 9 Spills Unit should be notified.

### 4.2 Subsurface Soils

The purpose of the DSI was to determine the potential for encountering petroleum contaminated soils or petroleum products at the eleven (11) sites identified within the project corridor during the environmental screening process. To accomplish this, the DSI included subsurface Geoprobe explorations in the areas where USTs were historically used and/or where contaminated soils may be present due to historical land use (i.e., gasoline station, automotive repair, etc.).

The soil samples collected at borings B-1I, B-2C, and B-3D were analyzed by Paradigm for VOCs via USEPA method 8021 plus MTBE and NYSDEC STARS Compounds, SVOCs via USEPA Method 8270C STARS, and RCRA Metals via USEPA Methods 6010 and 7471. The soil samples collected from borings B-6C, B-7C, B-9A, B-9B, and B-11A were analyzed via USEPA methods 8260B Target Compound List (TCL) and STARS, 8270C STARS, and RCRA Metals via USEPA Methods 6010/7471. The analytical laboratory results and chain-of-custody forms are contained in Appendix D.

The analytical laboratory test results for soil samples collected at Sites 2, 3, 7, 9, and 10 reveal the presence of soil with petroleum and/or heavy metal compounds above NYSDEC Cleanup Guidance Levels. Therefore, based on the laboratory data, PID data and field observations, it is anticipated that special excavation methods and monitoring by a NYSDOT-appointed Environmental Monitor will be required during construction excavation within the NYSDOT right-of-way in the areas around these sites and potentially Sites 1 and 6. In addition, excavated materials will require disposal at a NYSDEC permitted facility as petroleum-contaminated waste.

In addition to the above recommendations, because subsurface contamination was encountered at several of the sites with previous open and closed spill reports, Fisher Associates recommends that a copy of this report be forwarded to the NYSDEC Region 9 Spills Unit for their review and input.

### 4.3 Soil Gas Exposure Evaluation

The purpose of the soil gas evaluation was to determine the potential for worker exposure to known contaminants in the disturbed soils during the replacement of the sanitary sewer in the vicinity of Sites 9 and 10. The potential for exposure exists due to the presence of petroleum-based compounds from the former Agway Petroleum (Site 9), and the petroleum-related compounds associated with Mr. C's Cleaners at Site 10 (a NYSDEC-listed Inactive Hazardous Waste Site) that are known to have migrated off-site and onto adjacent properties including the Main Street right-of-way.

Based on the results of the soil gas evaluation, it appears that the area between soil gas points 1 through 12 contain contaminated soils at the depth of the existing/proposed sanitary sewer. The PID readings indicate elevated levels of VOCs as shown in Table 4 in Appendix D, and the laboratory analysis of the soil gas samples collected in the area show concentrations of petroleum-related compounds and compounds related to dry cleaning operations as shown in Tables 5 and 6 in Appendix D. Some of the individual concentrations of compounds are close to or above the recommended exposure levels as recommended by OSHA, NIOSH, and the ACGIH, and the cumulative concentrations are above the recommended exposure levels.

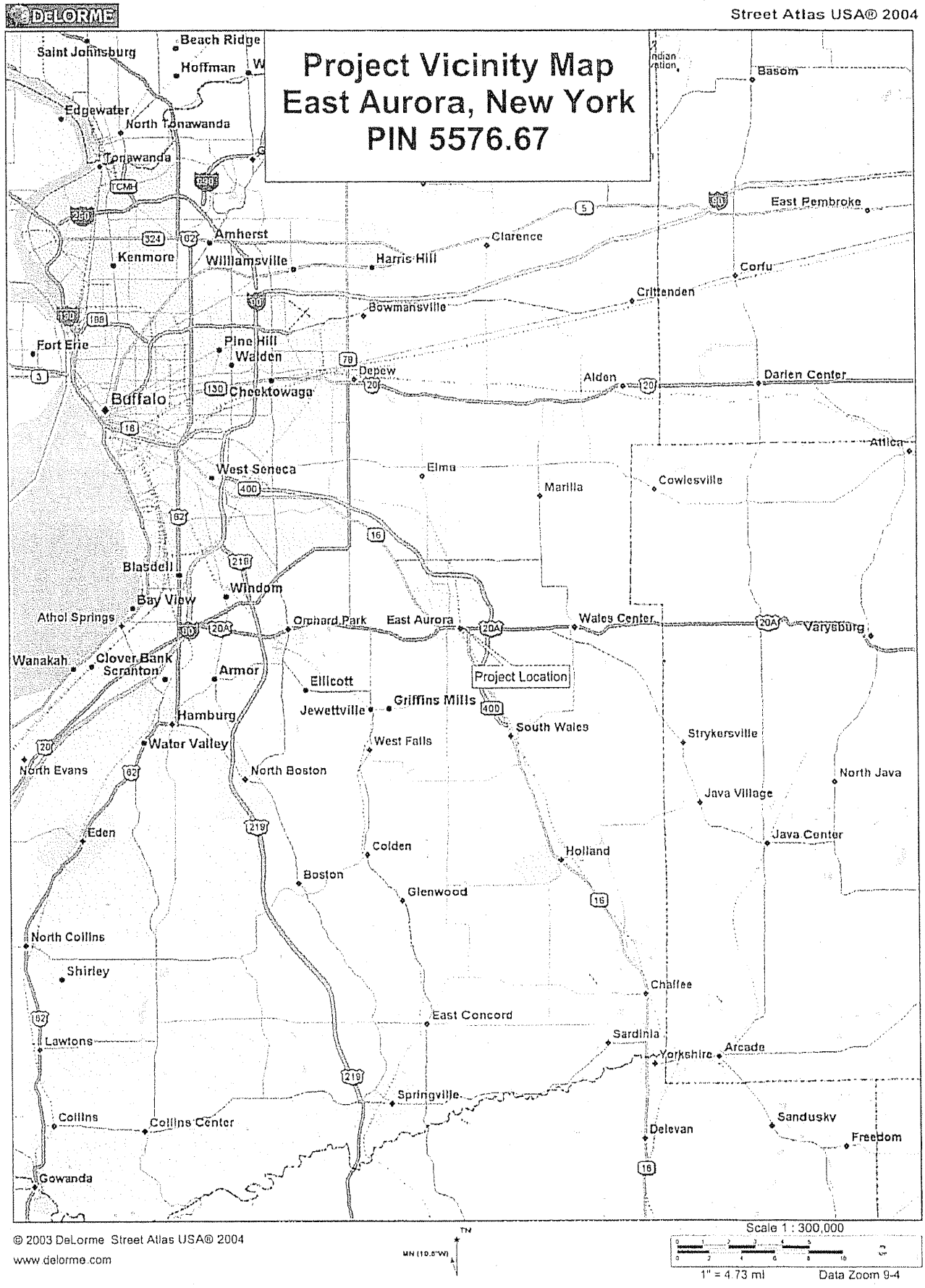
Therefore, it is recommended that the contractor replacing the sanitary sewer be trained in hazardous waste site operations and prepare a Certified Industrial Hygienist-approved Site Specific Health and Safety Plan for anticipated work in the area of Sites 9 and 10 that will include excavation monitoring by a NYSDOT-appointed Environmental Monitor.

It is also recommended that the contractor supply the NYSDOT and the NYSDEC with a Community Monitoring Plan for the work area that will include community air monitoring and particulate monitoring, and contain provisions for odor/vapor suppression due to the compounds known to be in the area.

The contractor will have to characterize the soils prior to disposal as the concentrations may vary between locations and may classify the soils as hazardous waste which will require special handling and disposal methods.

# APPENDIX A

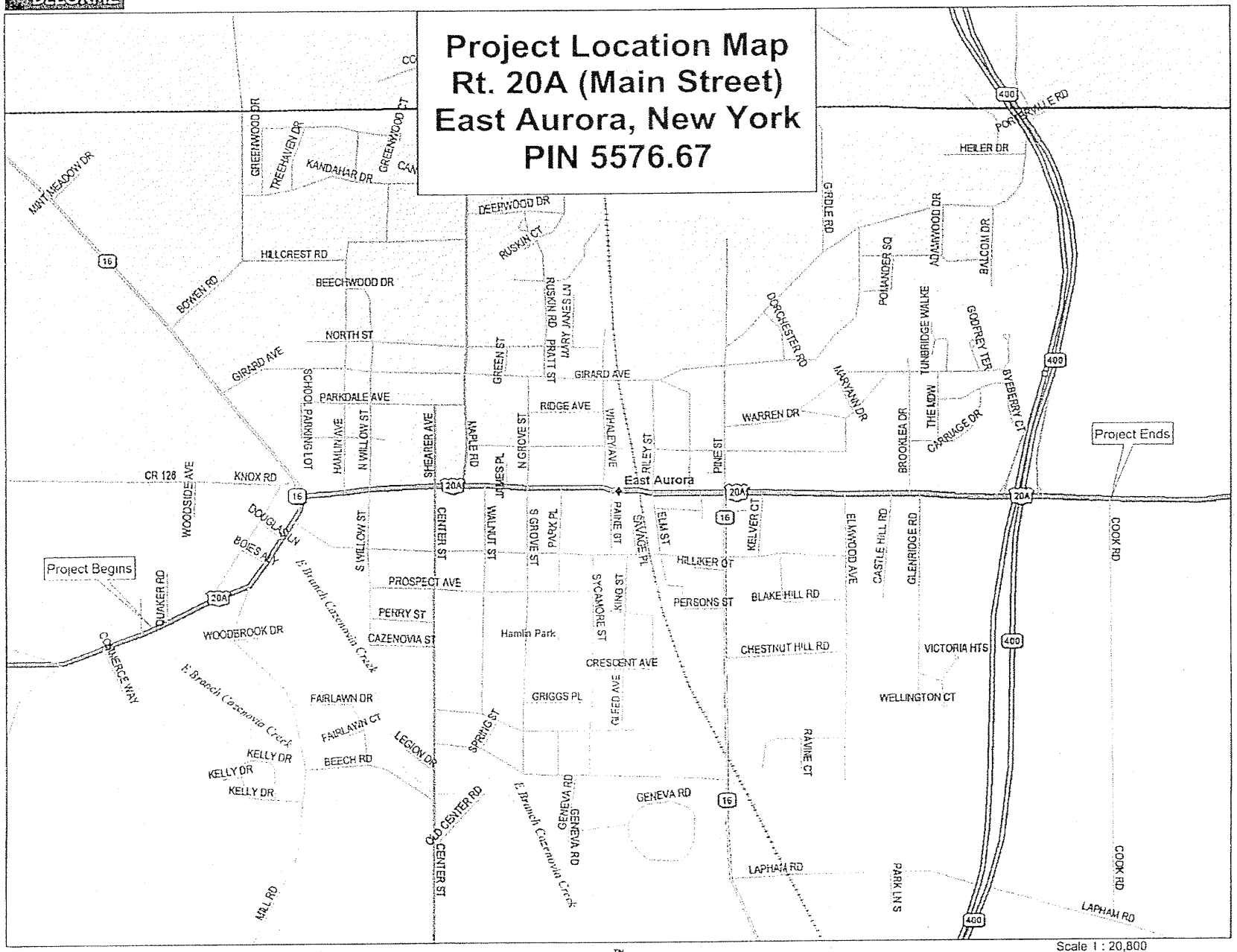
# PROJECT MAPS


DeLORME
Street Atlas USA® 2004
Project Vicinity Map
East Aurora, New York
PIN 5576.67
Saint Johnsburg
Beach Ridge
Hoffman
Edgewater
North Tonawanda
Tonawanda
Basom
East Pembroke
Amherst
Kenmore
Williamsville
Harris Hill
Clarence
Corfu
Crittenden
Bowmansville
Fort Erie
Pine Hill
Walden
Depew
Aldon
Darien Center
Buffalo
Cheektowaga
Attica
West Seneca
Elma
Marilla
Cowlesville
Blasdell
Windom
Bay View
Athol Springs
Orchard Park
East Aurora
Wales Center
Varysburg
Wanakah
Clover Bank
Scranton
Armor
Ellicott
Project Location
Griffins Mills
Jewettville
Hamburg
South Wales
Strykersville
Water Valley
West Falls
North Evans
North Boston
North Java
Java Village
Java Center
Eden
Colden
Holland
Boston
Glenwood
North Collins
Shirley
Chaffee
East Concord
Lawtons
Sardinia
Yorkshire
Arcade
Springville
Collins
Collins Center
Sandusky
Delevan
Freedom
Gowanda
© 2003 DeLorme Street Atlas USA® 2004
www.delorme.com
Scale 1 : 300,000
1" = 4.73 mi
Data Zoom 9-4

DELORME

Street Atlas USA® 2004

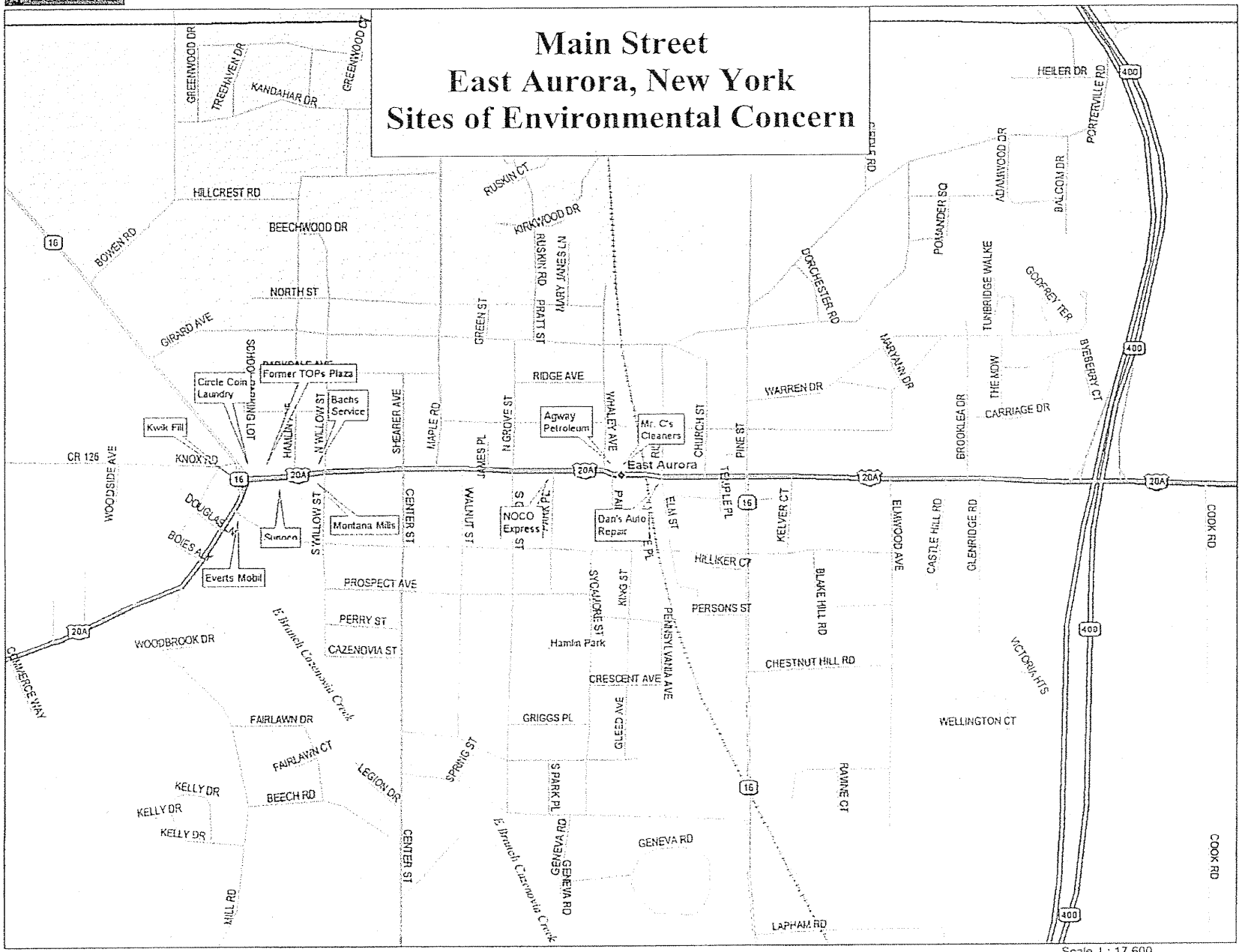
# Project Location Map
# Rt. 20A (Main Street)
# East Aurora, New York
# PIN 5576.67



DELORME

Street Atlas USA® 2004

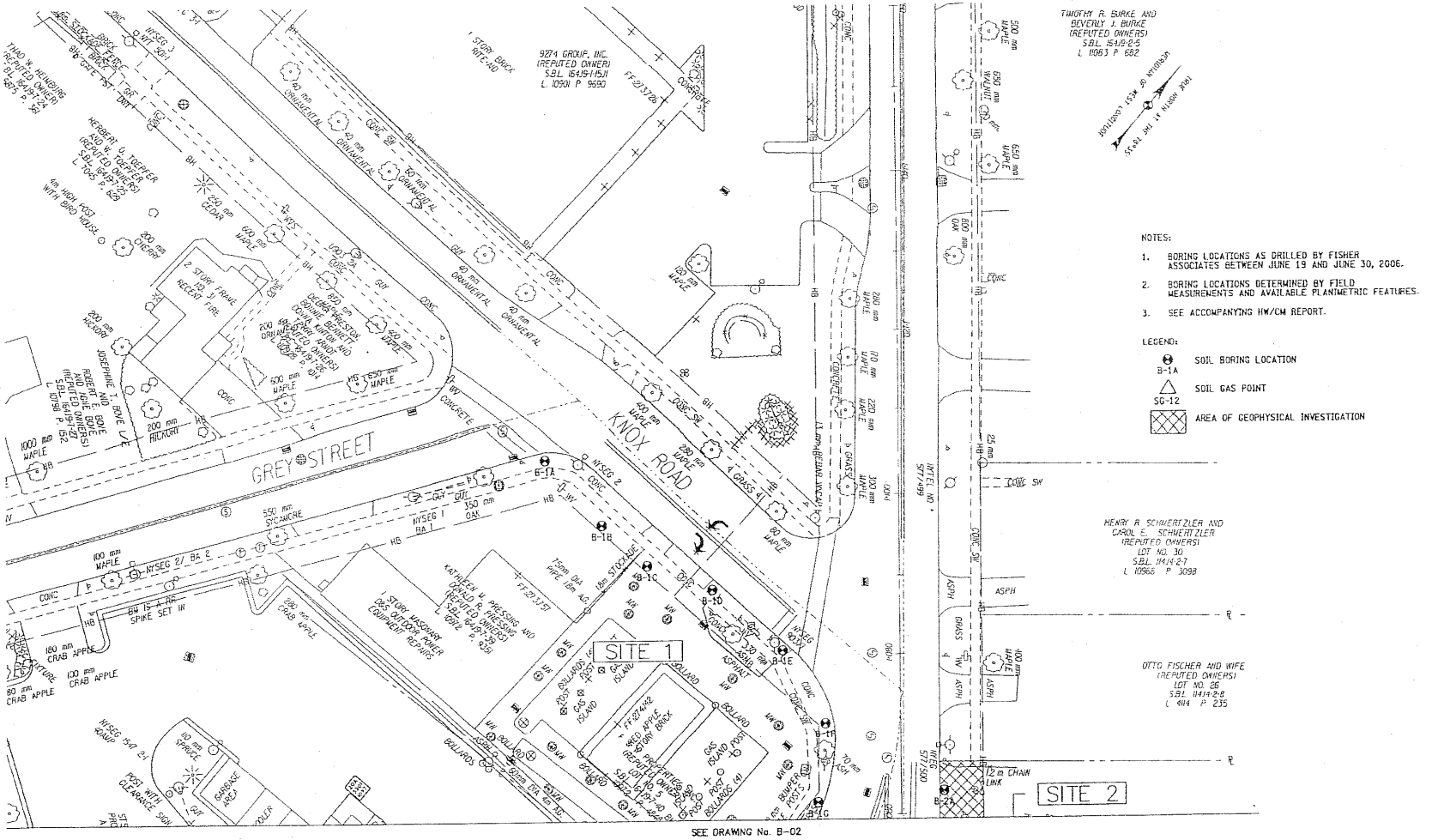
# Main Street
# East Aurora, New York
# Sites of Environmental Concern






TN
MN (10.8°W)

Scale 1 : 17,600
1" = 1,466.7 ft
Data Zoom 13-5




SEE DRAWING No. B-02



| DATE | No. | REVISION | BY |
|---|---|---|---|

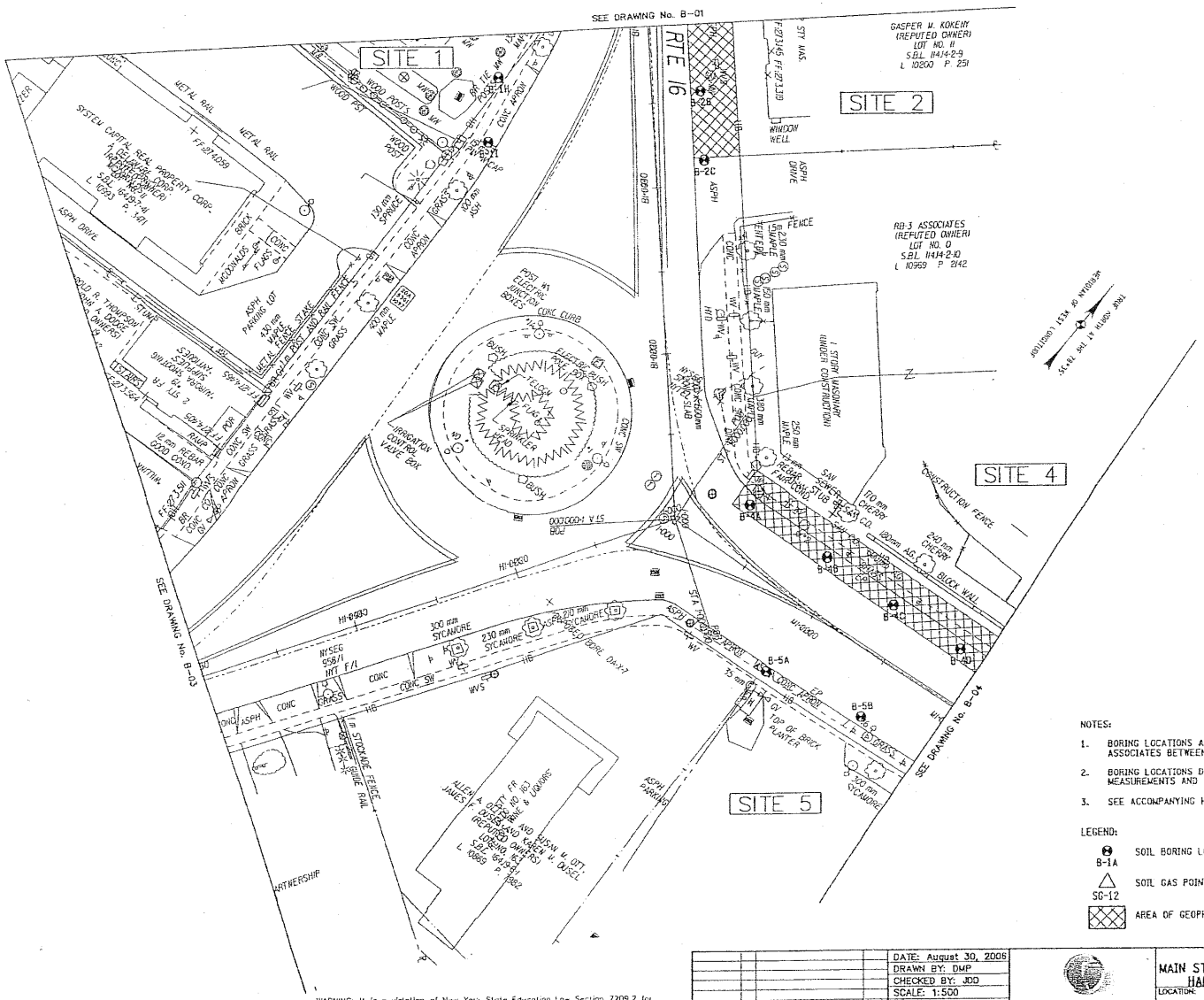
DATE: August 30, 2006
DRAWN BY: DMP
CHECKED BY: JDD
SCALE: 1:500
PROJECT No. 010910
DRAWING No. B-01

FISHERASSOCIATES

RECONSTRUCTION OF
MAIN STREET (U.S. RT. 20A/N.Y. RT. 16/78)
HAMBURG STREET TO N.Y. RT. 400

LOCATION:
TOWN AND VILLAGE OF EAST AURORA
ERIE COUNTY
NEW YORK

SOIL BORING LOCATIONS

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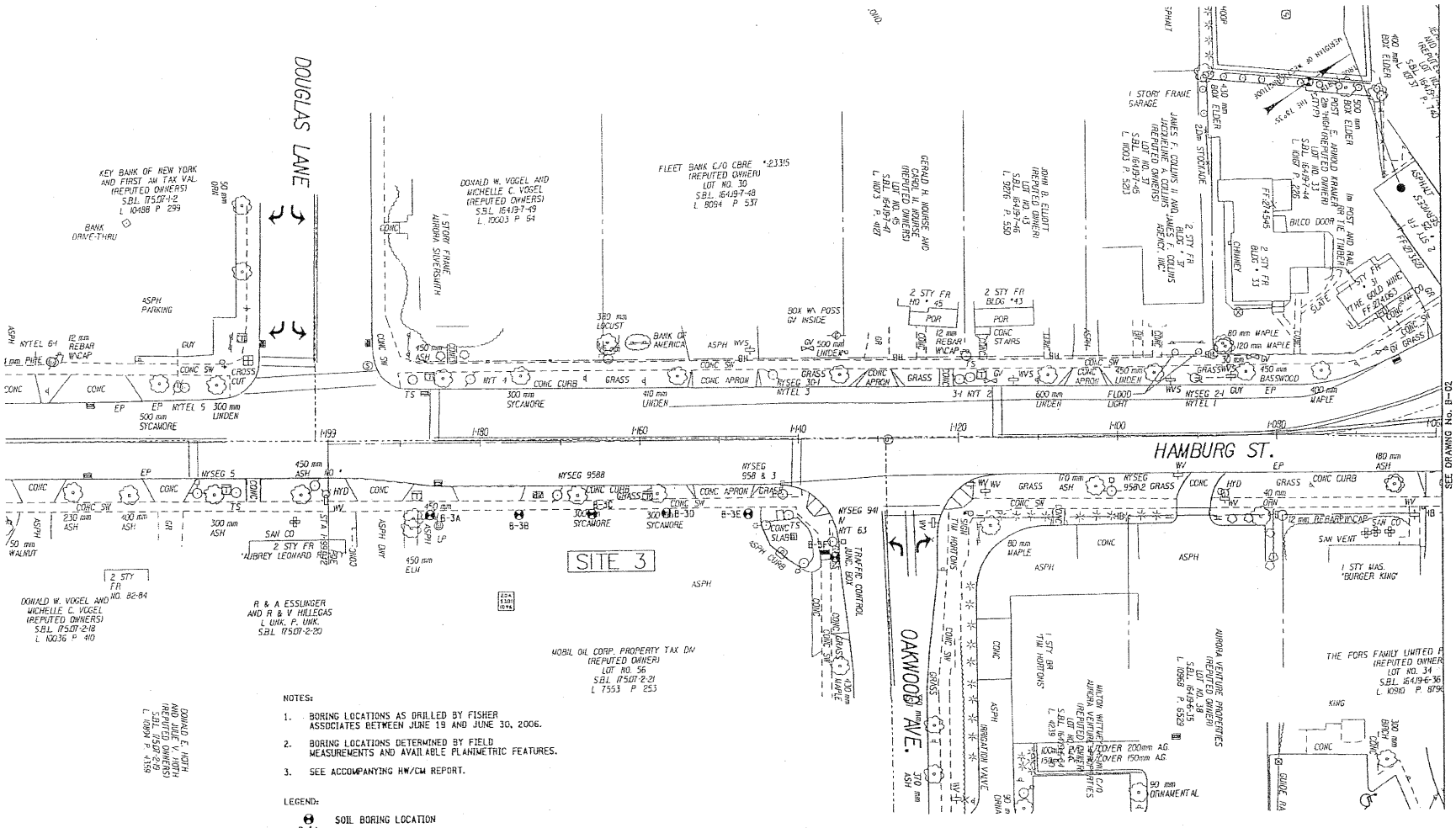
PROJECT No. 010910
DRAWING No. B-02

FISHERASSOCIATES

# RECONSTRUCTION OF MAIN STREET (U.S. RT. 20A/N.Y. RT. 16/78) HAMBURG STREET TO N.Y. RT. 400

LOCATION: TOWN AND VILLAGE OF EAST AURORA ERIE COUNTY NEW YORK

## SOIL BORING LOCATIONS




NOTES:

1. BORING LOCATIONS AS DRILLED BY FISHER ASSOCIATES BETWEEN JUNE 19 AND JUNE 30, 2006.
2. BORING LOCATIONS DETERMINED BY FIELD MEASUREMENTS AND AVAILABLE PLANIMETRIC FEATURES.
3. SEE ACCOMPANYING HW/CM REPORT.

LEGEND:

B-1A — SOIL BORING LOCATION

SG-12 — SOIL GAS POINT



| DATE | No. | REVISION | BY |
|---|---|---|---|

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CHECKED BY: JDD
SCALE: 1:500
PROJECT No. 010910
DRAWING No. B-03

FISHERASSOCIATES

RECONSTRUCTION OF
MAIN STREET (U.S. RT. 20A/N.Y. RT. 16/78)
HAMBURG STREET TO N.Y. RT. 400
LOCATION: TOWN AND VILLAGE OF EAST AURORA, ERIE COUNTY, NEW YORK

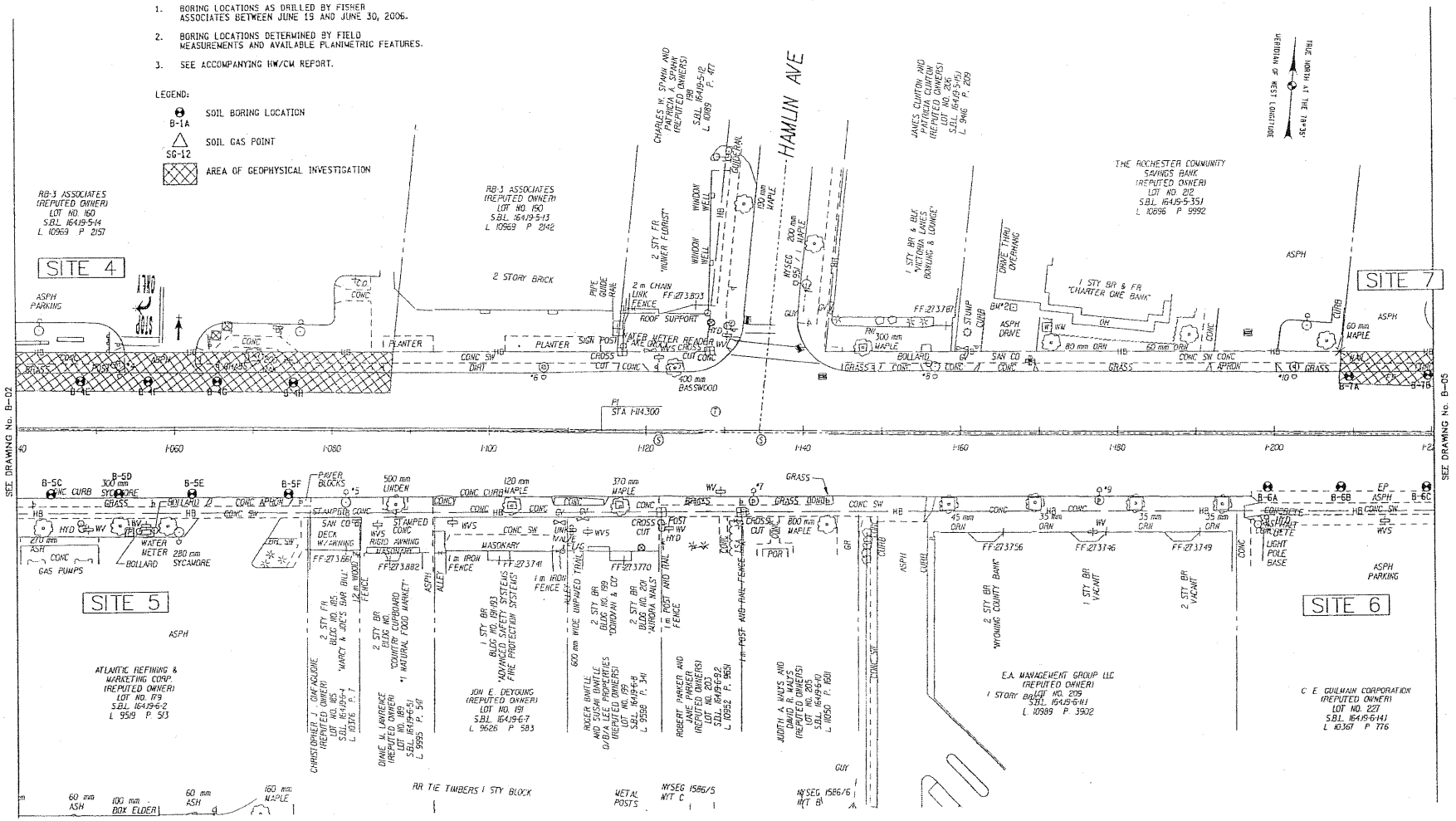
SOIL BORING LOCATIONS

NOTES:

1. BORING LOCATIONS AS DRILLED BY FISHER ASSOCIATES BETWEEN JUNE 19 AND JUNE 30, 2006.
2. BORING LOCATIONS DETERMINED BY FIELD MEASUREMENTS AND AVAILABLE PLANIMETRIC FEATURES.
3. SEE ACCOMPANYING HW/CW REPORT.

LEGEND:

- B-1A — SOIL BORING LOCATION
- SG-12 — SOIL GAS POINT
- AREA OF GEOPHYSICAL INVESTIGATION

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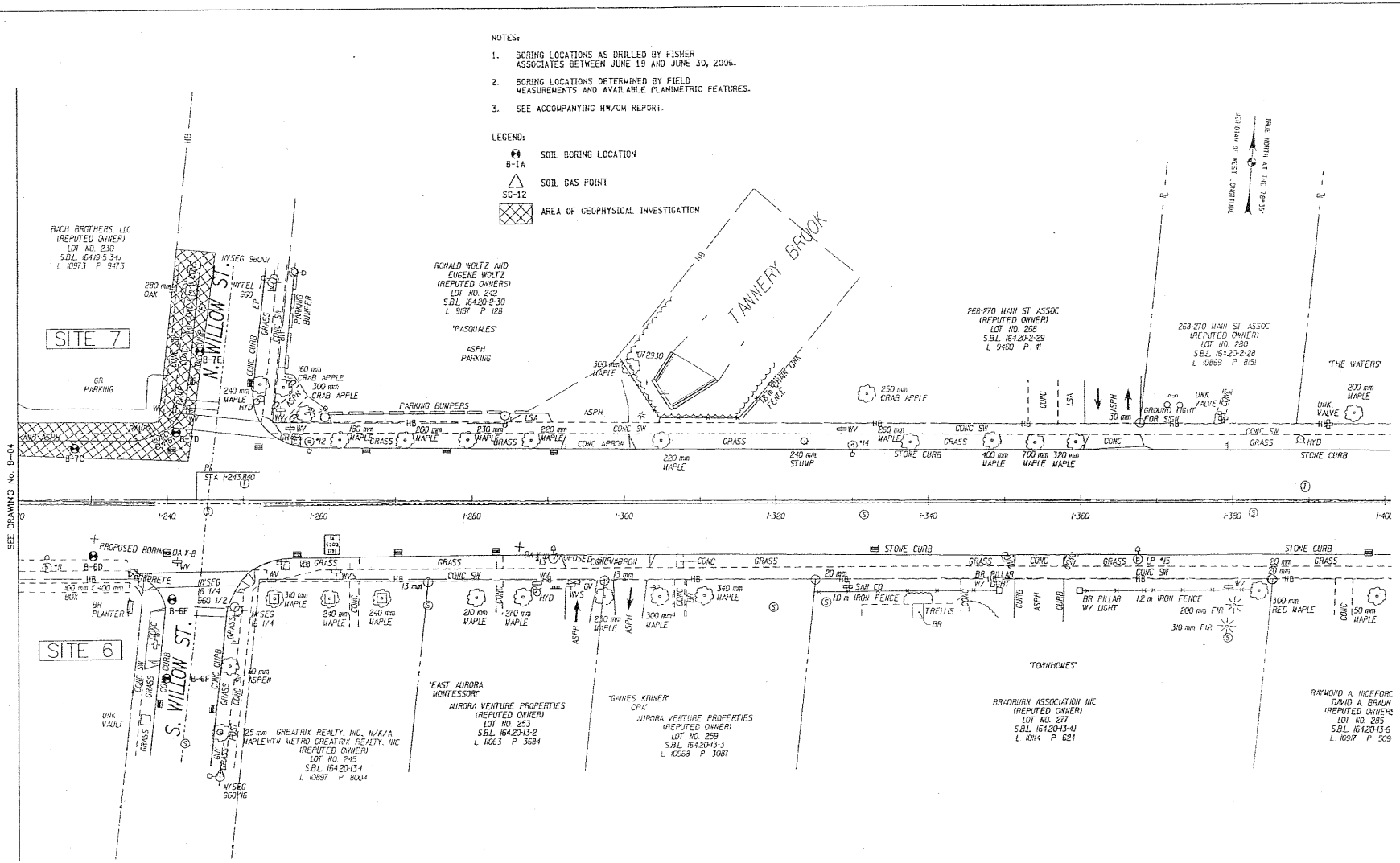
PROJECT No. 010910
DRAWING No. B-04

FISHERASSOCIATES

RECONSTRUCTION OF MAIN STREET (U.S. RT. 20A/N.Y. RT. 16/78) HAMBURG STREET TO N.Y. RT. 400

LOCATION: TOWN AND VILLAGE OF EAST AURORA ERIE COUNTY NEW YORK

SOIL BORING LOCATIONS

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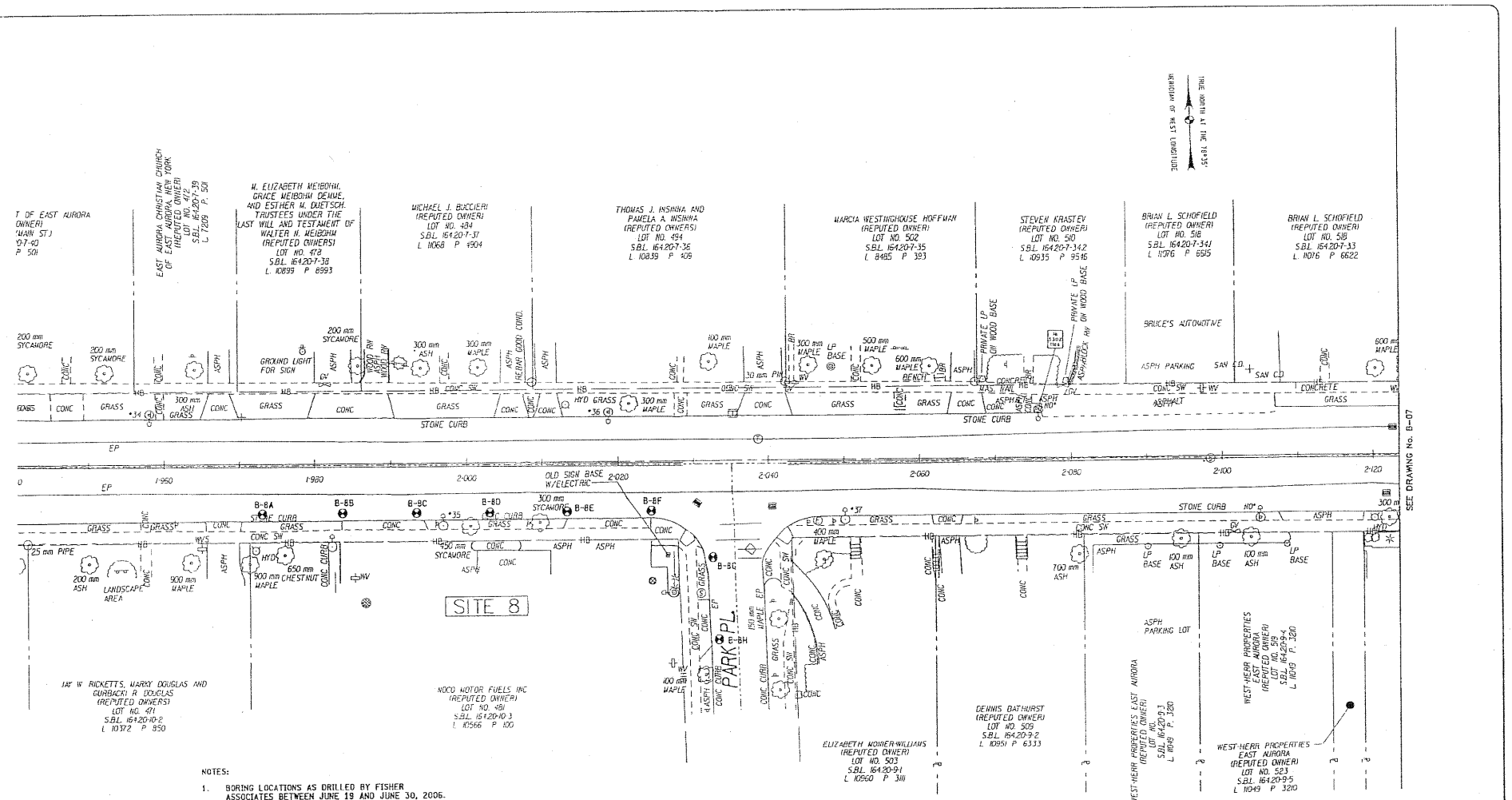
PROJECT No. 010910
DRAWING No. B-05

FISHERASSOCIATES

# RECONSTRUCTION OF MAIN STREET U.S. RT. 20A/N.Y. RT. 16/78) HAMBURG STREET TO N.Y. RT. 400

LOCATION: TOWN AND VILLAGE OF EAST AURORA ERIE COUNTY NEW YORK

## SOIL BORING LOCATIONS




NOTES:

1. BORING LOCATIONS AS DRILLED BY FISHER ASSOCIATES BETWEEN JUNE 19 AND JUNE 30, 2006.
2. BORING LOCATIONS DETERMINED BY FIELD MEASUREMENTS AND AVAILABLE PLANIMETRIC FEATURES.
3. SEE ACCOMPANYING HW/CM REPORT.

LEGEND:

B-1A — SOIL BORING LOCATION

SG-12 — SOIL GAS POINT



| DATE | No. | REVISION | BY |
|---|---|---|---|

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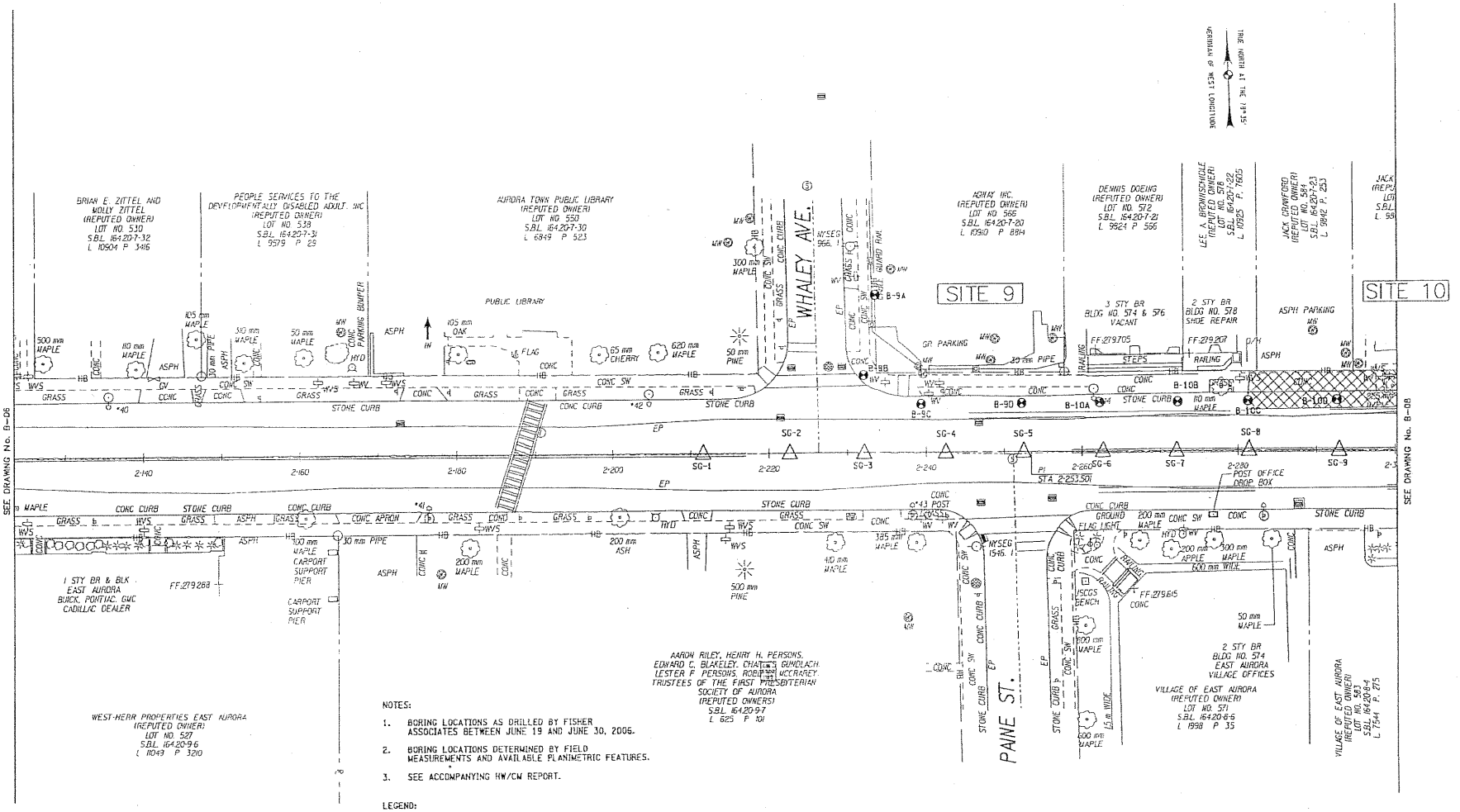
CHECKED BY: JDD
SCALE: 1:300
PROJECT No. 010910
DRAWING No. B-06

FISHERASSOCIATES

# RECONSTRUCTION OF MAIN STREET (U.S. RT. 20A/N.Y. RT. 16/78) HAMBURG STREET TO N.Y. RT. 400

LOCATION: TOWN AND VILLAGE OF EAST AURORA ERIE COUNTY NEW YORK

## SOIL BORING LOCATIONS


SITE 9
SITE 10
WHALEY AVE.
PAINE ST.
SEE DRAWING No. B-06
SEE DRAWING No. B-08
BRIAN E. ZITTEL AND MOLLY ZITTEL (REPUTED OWNER) LOT NO. 530 S.B.L. 164.20-7-32 L 10904 P 346
PEOPLE SERVICES TO THE DEVELOPMENTALLY DISABLED ADULT, INC (REPUTED OWNER) LOT NO. 538 S.B.L. 164.20-7-31 L 9579 P 29
AURORA TOWN PUBLIC LIBRARY (REPUTED OWNER) LOT NO. 550 S.B.L. 164.20-7-30 L 6849 P 523
PUBLIC LIBRARY
AGWAY INC. (REPUTED OWNER) LOT NO. 566 S.B.L. 164.20-7-20 L 10910 P 8814
DENNIS DOENG (REPUTED OWNER) LOT NO. 572 S.B.L. 164.20-7-21 L 9924 P 566
LEE A. BRONISCHOLE (REPUTED OWNER) LOT NO. 576 S.B.L. 164.20-7-22 L 10925 P. 7605
JACK CRAWFORD (REPUTED OWNER) LOT NO. 584 S.B.L. 164.20-7-23 L 9842 P. 253
3 STY BR BLDG NO. 574 & 576 VACANT
2 STY BR BLDG NO. 578 SHOE REPAIR
ASPH PARKING
GR. PARKING
1 STY BR & BLK EAST AURORA BUICK, PONTIAC, GMC CADILLAC DEALER
WEST-HERR PROPERTIES EAST AURORA (REPUTED OWNER) LOT NO. 527 S.B.L. 164.20-9-6 L 11049 P 3210
AARON RILEY, HENRY H. PERSONS, EDWARD C. BLAKELEY, CHARLES GUNDLACH, LESTER F. PERSONS, ROBERT MCCRAREY, TRUSTEES OF THE FIRST PRESBYTERIAN SOCIETY OF AURORA (REPUTED OWNERS) S.B.L. 164.20-9-7 L 625 P 101
2 STY BR BLDG NO. 574 EAST AURORA VILLAGE OFFICES
VILLAGE OF EAST AURORA (REPUTED OWNER) LOT NO. 571 S.B.L. 164.20-8-6 L 1998 P 35
VILLAGE OF EAST AURORA (REPUTED OWNER) LOT NO. 583 S.B.L. 164.20-7-4 L 7944 P. 875
POST OFFICE DROP BOX
STA 2+253.50
SG-1
SG-2
SG-3
SG-4
SG-5
SG-6
SG-7
SG-8
SG-9
B-1A
B-1B
B-1C
B-9A
B-9B
B-9C
B-10A
B-10B
B-10C
STONE CURB
CONC CURB
GRASS
ASPH
CONC
EP
NOTES:
1. BORING LOCATIONS AS DRILLED BY FISHER ASSOCIATES BETWEEN JUNE 19 AND JUNE 30, 2006.
2. BORING LOCATIONS DETERMINED BY FIELD MEASUREMENTS AND AVAILABLE PLANIMETRIC FEATURES.
3. SEE ACCOMPANYING HW/CW REPORT.
LEGEND:
B-1A SOIL BORING LOCATION
SG-12 SOIL GAS POINT
AREA OF GEOPHYSICAL INVESTIGATION
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DATE: August 30, 2006
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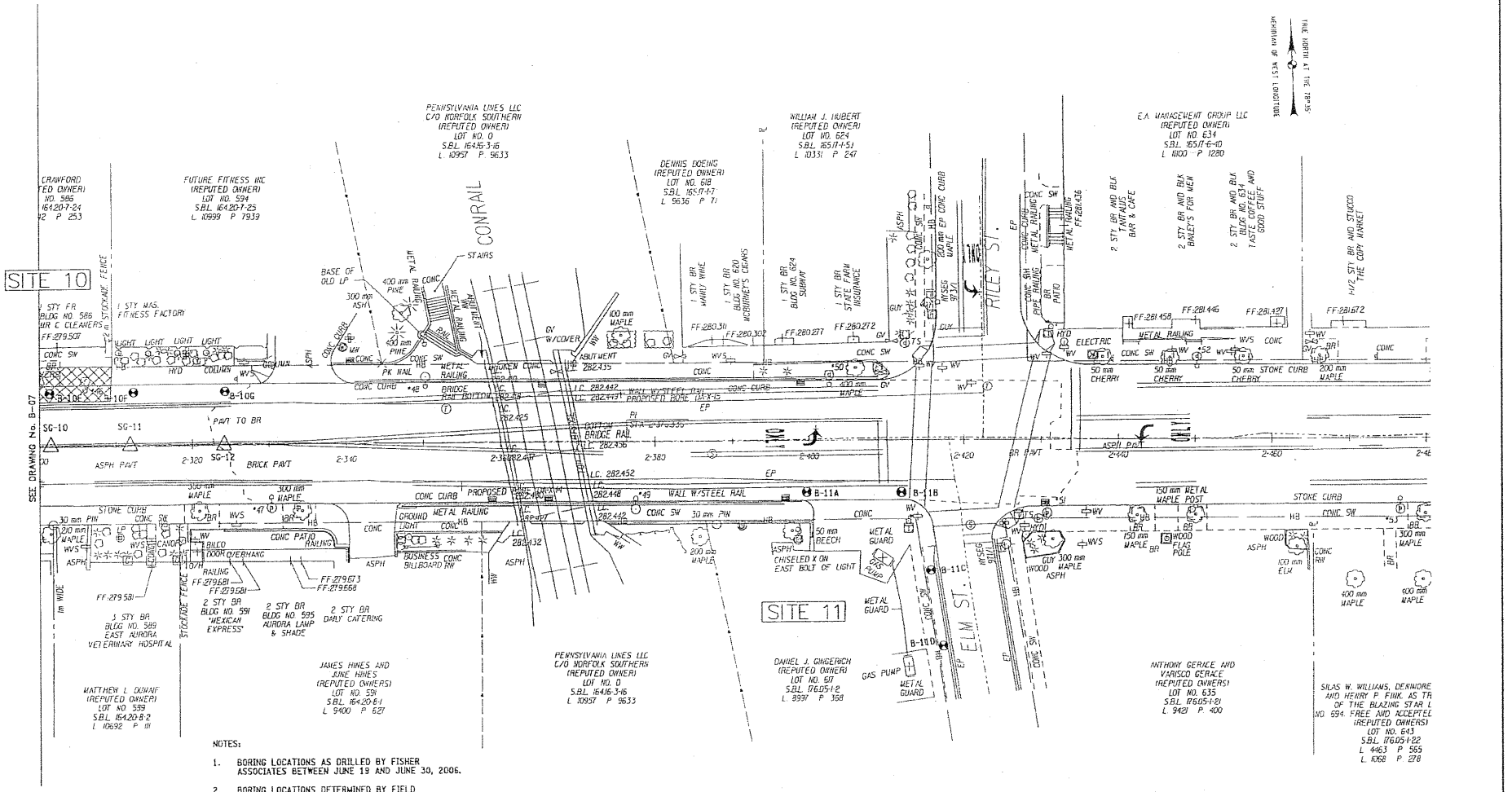
CHECKED BY: JDD
SCALE: 1:500
PROJECT No. 010910
DRAWING No. B-07
FISHERASSOCIATES
RECONSTRUCTION OF MAIN STREET U.S. RT. 20A/N.Y. RT. 16/78) HAMBURG STREET TO N.Y. RT. 400
LOCATION:
TOWN AND VILLAGE OF EAST AURORA ERIE COUNTY NEW YORK
SOIL BORING LOCATIONS




NOTES:

1. BORING LOCATIONS AS DRILLED BY FISHER ASSOCIATES BETWEEN JUNE 19 AND JUNE 30, 2006.
2. BORING LOCATIONS DETERMINED BY FIELD MEASUREMENTS AND AVAILABLE PLANIMETRIC FEATURES.
3. SEE ACCOMPANYING HW/CW REPORT.

LEGEND:

- B-1A — SOIL BORING LOCATION
- SG-12 — SOIL GAS POINT
- AREA OF GEOPHYSICAL INVESTIGATION



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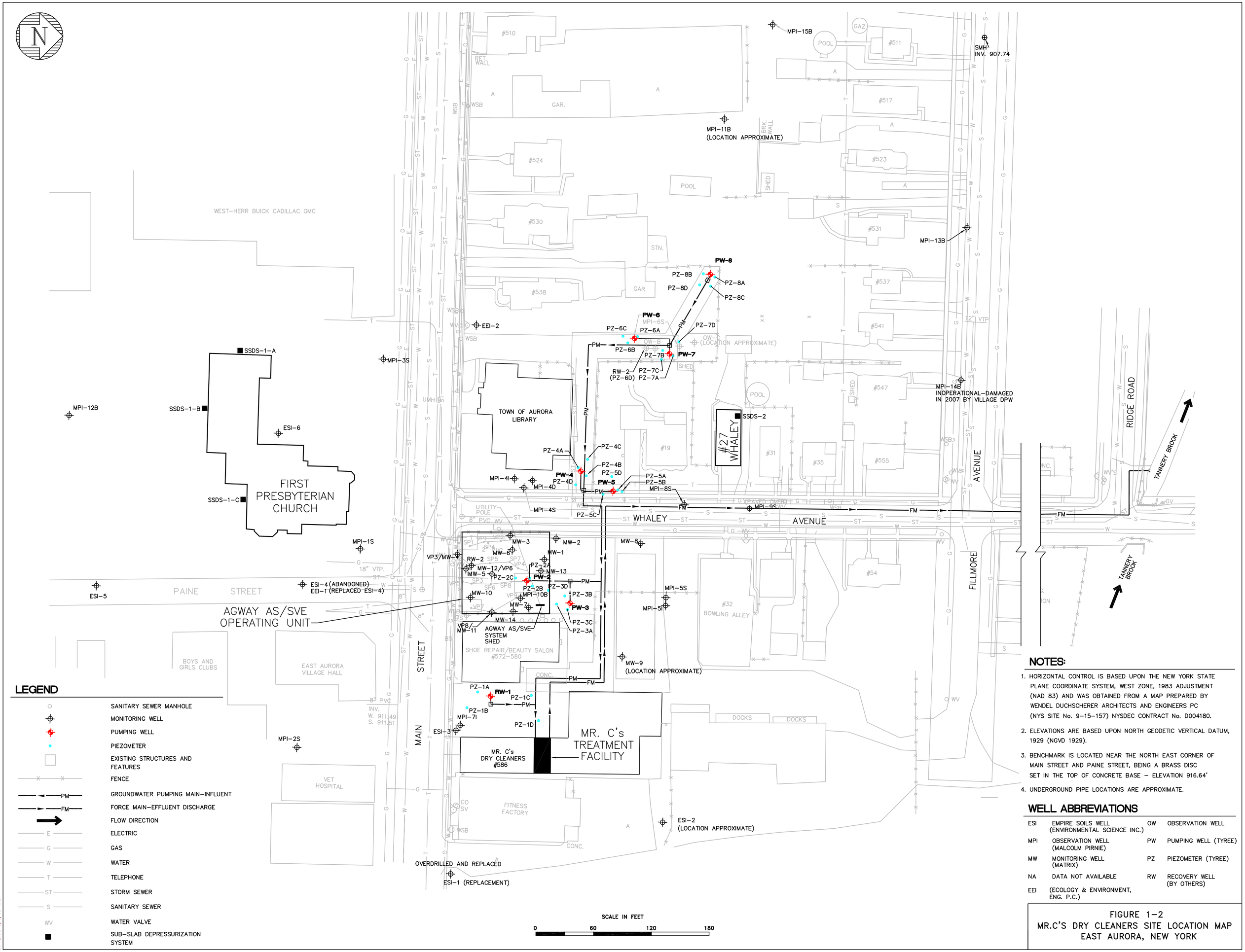
CHECKED BY: JDD
SCALE: 1:500
PROJECT No. 010910
DRAWING No. B-06

FISHERASSOCIATES

# RECONSTRUCTION OF MAIN STREET (U.S. RT. 20A/N.Y. RT. 16/78) HAMBURG STREET TO N.Y. RT. 400

LOCATION: TOWN AND VILLAGE OF EAST AURORA ERIE COUNTY NEW YORK

## SOIL BORING LOCATIONS




## LEGEND

- SANITARY SEWER MANHOLE
- MONITORING WELL
- PUMPING WELL
- PIEZOMETER
- EXISTING STRUCTURES AND FEATURES
- FENCE
- GROUNDWATER PUMPING MAIN-INFLUENT
- FORCE MAIN-EFFLUENT DISCHARGE
- FLOW DIRECTION
- ELECTRIC
- GAS
- WATER
- TELEPHONE
- STORM SEWER
- SANITARY SEWER
- WATER VALVE
- SUB-SLAB DEPRESSURIZATION SYSTEM

SCALE IN FEET

0 60 120 180

## NOTES:

1. HORIZONTAL CONTROL IS BASED UPON THE NEW YORK STATE PLANE COORDINATE SYSTEM, WEST ZONE, 1983 ADJUSTMENT (NAD 83) AND WAS OBTAINED FROM A MAP PREPARED BY WENDEL DUCHSCHERER ARCHITECTS AND ENGINEERS PC (NYS SITE No. 9-15-157) NYSDEC CONTRACT No. D004180.
2. ELEVATIONS ARE BASED UPON NORTH GEODETIC VERTICAL DATUM, 1929 (NGVD 1929).
3. BENCHMARK IS LOCATED NEAR THE NORTH EAST CORNER OF MAIN STREET AND PAINE STREET, BEING A BRASS DISC SET IN THE TOP OF CONCRETE BASE - ELEVATION 916.64'
4. UNDERGROUND PIPE LOCATIONS ARE APPROXIMATE.

## WELL ABBREVIATIONS

| | | | |
|---|---|---|---|
| ESI | EMPIRE SOILS WELL (ENVIRONMENTAL SCIENCE INC.) | OW | OBSERVATION WELL |
| MPI | OBSERVATION WELL (MALCOLM PIRNIE) | PW | PUMPING WELL (TYREE) |
| MW | MONITORING WELL (MATRIX) | PZ | PIEZOMETER (TYREE) |
| NA | DATA NOT AVAILABLE | RW | RECOVERY WELL (BY OTHERS) |
| EEI | (ECOLOGY & ENVIRONMENT, ENG. P.C.) | | |

FIGURE 1-2
MR.C'S DRY CLEANERS SITE LOCATION MAP
EAST AURORA, NEW YORK

F:\Arc\well analysis dec 2003\lyer well map_Figure 1-2.dwg
BUFFplot: 3/3/08 WAB