Work Plan

Remedial Action Work Plan
Brownfield Cleanup Program
110 Luther Avenue Brownfield Site
110 Luther Avenue, Liverpool
Onondaga County, New York

BCP Site # C734118

June 2011
Revised: September 2011

S&W
REDEVELOPMENT

REMEDIAL ACTION WORK PLAN
BROWNFIELD CLEANUP PROGRAM
110 LUTHER AVENUE BROWNFIELD SITE
110 LUTHER AVENUE, LIVERPOOL
ONONDAGA COUNTY, NEW YORK

BCP Site #C734118

Prepared for

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June 2011
Revised: September 2011

Project No. N9013

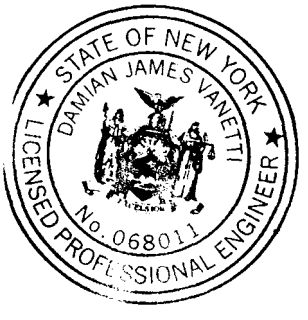
CERTIFICATIONS

110 LUTHER AVENUE BCP SITE #C734118

REMEDIAL ACTION WORK PLAN

I, Damian Vanetti, certify that I am currently a NYS registered professional engineer and that this Remedial Action Work Plan was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10).

068011	9-21-2011	
NYS Professional Engineer #	Date	Signature



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SECTION 1 - INTRODUCTION

Syracuse Label Company, Inc (Syracuse Label) has entered into a Brownfield Cleanup Agreement (BCA) (Site No. C734118, Agreement Index No. B7-0811-09-08) with the New York State Department of Environmental Conservation (NYSDEC) under the NYS Brownfield Cleanup Program (BCP). The subject Site occupies approximately 1.40 acres located at 110 Luther Avenue in the Town of Salina, Onondaga County, New York (Figure 1-1). A Site survey is included in Attachment A.

Syracuse Label is a manufacturer of printed labels for a variety of products. The labels are generally printed on rolled paper stock, which is passed through continuous printing machines with inks applied in the required design.

The majority of the 110 Luther Avenue Site (the 'Site') consists of a one story building that contains offices, light manufacturing, and warehouse operations. The remainder of the Site consists of paved areas. The Site is located in a commercial/industrial area just east of Interstate 81 and is bordered by Albion Avenue to the west, Knapp Avenue to the north, Luther Avenue to the east, and an open lot and maintenance garage to the west (Figure 1-2).

A Remedial Investigation (RI) was completed at the Site, by S&W Redevelopment of North America, LLC (SWRNA), between December 2009 and November 2010 pursuant to the BCA. The RI was conducted to provide a systematic assessment of environmental conditions on the property in accordance with the NYSDEC approved RI Work Plan (October 2009, SWRNA), NYSDEC's draft *Brownfield Cleanup Program Guide* (May 2004), 6 NYCRR Part 375-3, and the *Technical Guidance for Site Investigation and Remediation* (DER-10) (May 2010).

The objective of the RI was to define the nature and extent of contamination, identify contaminant source areas (if present), produce data of sufficient quantity and quality to complete an exposure assessment, and provide the basis to develop appropriate remedial action based on the Site's contemplated industrial use.

A pilot test was conducted at the site from February 21 to February 24, 2011 in accordance with a NYSDEC approved Pilot Test Work Plan (SWRNA, February 2011). The objective of the pilot test was to determine the effectiveness of an in-situ chemical reduction (ISCR) technology for the treatment of chlorinated volatile organic compounds (cVOCs) in groundwater. In addition, sub-slab communication tests were completed during December 2009, in accordance with guidelines set forth in NYSDOH's *Guidance for Evaluating Soil Vapor Intrusion in the State of New York* (October 2006). The objective of the communication tests was to determine the feasibility of a sub-slab depressurization system for the on-site building.

This Remedial Action Work Plan (RAWP) provides an overview of the BCP site, a summary of the RI findings, the remedial goals and remedial action objectives, a discussion of the remedy selection, a summary of the Pilot Test findings, a summary of the sub-slab communication test findings, and the remedial design for the proposed remedial approach.

SECTION 2 - PROJECT OVERVIEW

2.1 SITE HISTORY

Syracuse Label currently owns the Site, which consists of approximately 1.40 acres of land located in the Village of Liverpool, in the Town of Salina, Onondaga County, New York (Figures 1-1 and 1-2).

The Site is currently developed with a single story building used for Site operations. Paved parking areas, a paved vehicle delivery area, and small landscape planters occupy the remainder of the Site. Various portions of the Site now owned by Syracuse Label have been owned and operated by numerous businesses since the 1920's, including:

- All-State Stamping Corporation;
- Tuff-Kote;
- Syracuse Bumper Plating;
- Erhand & Gilcher, Inc.;
- Raynor Overhead Door;
- Prince Tool & Die; and
- Syracuse Truck Sales.

The Site is located in a primarily commercial/industrial area, is rectangular in shape, and flat to nearly flat (0 to 2% slope). The eastern Site boundary along Luther Avenue is interrupted by a parcel that is owned by the Brannock Device Company, Inc. which operates in a one story building at 116 Luther Avenue. There are several commercial/manufacturing businesses along Luther Avenue to the east, north, and south of the Site including Syracuse Crank and Machine, Diverse Food Products, Walk on Wood Flooring, and Bush Electronics. There are several vacant lots, a semi-residential/commercial building, an auto repair shop, and Interstate 81 located to the west of the Site, along Albion Avenue.

2.2 NATURE AND EXTENT OF CONTAMINATION

2.2.1 Site Hydrogeology. Major surface water features near the Site include Beartrap Creek, located approximately 800 feet north of the Site, and Ley Creek, located approximately 1,300 feet east of the Site. There are minor grassy areas for rainwater infiltration at the Site and the remainder of the site is paved or buildings, with the majority of storm water runoff to a storm water drainage and conveyance system.

Depth to water measurements taken from monitoring wells during the RI were used to calculate groundwater elevations, and indicated that water is typically two to three feet below ground surface. Based on groundwater elevations, groundwater flows from northwest to southeast across the Site. Groundwater elevation data is provided on Figure 2-1 shows groundwater elevation contours and flow direction.

A granular material consisting of sand and gravel was identified in soil borings advanced through asphalt, at thicknesses ranging from several inches to two feet. Borings advanced through the concrete slab identified no granular material. Below the granular material, or concrete slab, soils consist of dense, gray/brown, silty clay and clayey silt to a depth of at least 14 feet below ground surface.

2.2.2 Soil. Analytical data collected during the RI indicate that soil contamination is relatively minor. Laboratory analysis of eight subsurface soil samples determined that no samples contained volatile organic compounds (VOCs) above Commercial Soil Cleanup Objectives (SCOs). Three of the eight subsurface soil samples were also analyzed for semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), and metals and determined that no samples contained SVOCs, PCBs, or metals above Commercial SCOs. Even though the Site currently, and for the foreseeable future, is intended for industrial uses, when compared to Unrestricted Use SCOs; it was determined that the soil samples do not contain any SVOCs or PCBs above Unrestricted Use SCOs. Soil samples contain two VOCs (acetone: max conc 0.074 ppm; and vinyl chloride:

0.02 ppm) and two metals (chromium: 33.5 ppm; and nickel: 33.1 ppm) at concentrations that only marginally exceed Unrestricted Use SCOs. Historical data which includes soil samples from areas prior to and following remedial activities identified several SVOCs and VOCs above Unrestricted Use SCOs. None of the soil data identified any analytes above Industrial Use SCOs or above the Commercial Use SCOs.

Chlorinated VOCs are the primary Site contaminants in groundwater. The fact that none of the soil borings (from which samples were collected) encountered grossly contaminated soils or non-aqueous phase liquid (NAPL), and that the soil data indicated that there are no soil impacts above Commercial SCOs, indicates that soil is not likely a significant source of contamination to other Site media. Also, none of the analytes detected in soil were at concentrations or frequencies indicative of widespread impacts in soil. Therefore, the transport of contaminants that may occur in Site soils to other Site media is not significant based on the findings of the RI. Furthermore, previous Site activities removed discrete sources of contamination including underground storage tanks and grossly impacted soils from several locations around the Site (RI Report, SWRNA 2011). Therefore, soil does not appear to be an ongoing source of contamination at the Site.

2.2.3 Groundwater. Based on the findings of the RI the primary contaminants of concern in groundwater are VOCs, specifically chlorinated VOCs including tetrachloroethene (PCE), trichloroethene (TCE), cis -1,2, dichloroethene (DCE), and vinyl chloride (VC) (Appendix A).

The groundwater sample results identified two SVOCs (pentachlorophenol and bis(2-ethylhexyl)phthalate) above groundwater standards. Both of these SVOCs exceedances were detected in one downgradient sample taken from MW-19 (offsite), suggesting that SVOCs are not likely a Site related impact.

Groundwater samples taken from the Site did not indicate PCB impacts.

The groundwater sample results identified some metals above groundwater

standards in all of the samples taken, however, the majority of those detected (i.e. iron, manganese, magnesium, sodium, and zinc) are commonly occurring elements and were not detected above Unrestricted Use SCO's in Site soil samples. Zinc was only detected at concentrations in excess of standards in one groundwater sample (MW-12), located near the historic floor trench drain. Cadmium (MW-10) was the only metal detected above standards in groundwater that is not commonly detected, but its detection in only one sample indicates that it is limited in extent. The elevated concentrations of metals in groundwater samples are potentially the result of the turbidity of sample water, and may not be representative of ambient groundwater.

Tetrachloroethene (PCE), and its degradation byproducts Trichloroethene (TCE), cis-1,2-Dichloroethene (DCE), and Vinyl chloride (VC) are the principal contaminants of concern impacting Site groundwater based on the frequency and concentration of sample detections. Groundwater impacts are confined to the central/eastern portion of the Site, based on samples from upgradient monitoring well MW-5, cross-gradient well MW-9, and downgradient wells MW-18 and MW-19, which did not contain elevated levels of the contaminants of concern. This is likely the result of the low hydraulic gradient, and low conductivity of saturated soils. The sample taken from MW-2, upgradient of the site buildings, during the February 2010 sampling event had a detection of PCE of 22 ug/l. which was above the groundwater standard of 5 ug/l. The previous samples taken from MW-2 did not have detections of PCE. Future groundwater monitoring at the site will need to include MW-2 in order to further evaluate the data. The groundwater data suggests that groundwater impacts occur in a relatively narrow band centered on a historic floor trench drain, and onsite areas downgradient of the floor trench. Groundwater data collected from offsite (downgradient) wells MW-18 and MW-19 suggest that significant offsite migration of impacts downgradient of the trench area is not occurring.

The groundwater samples taken from the central/eastern portion of the Site contained elevated concentrations of PCE and its degradation products: TCE, DCE, and VC. The increased concentrations of these degradation products in the vicinity of the trench suggest that naturally occurring attenuation of PCE via reductive dechlorinization is occurring. This attenuation of impacts is expected to occur under reducing (i.e. negative Eh measurements) conditions such as those that are observed at the Site (Appendix A), and has likely controlled migration of contaminants.

2.2.4 Soil Vapor. The two soil vapor wells near the shared property boundary between the 110 Luther Avenue Site and the adjacent property contained water. The presence of water prevented a soil vapor sample from being collected from these soil vapor points. Water was also encountered below the sub-slab of the northeastern portion of the building during the sub-slab communication testing. The presence of water in the shallow subsurface in the northeastern and southwestern portions of the Site can act as a barrier to soil vapor migration in those directions and soil vapor intrusion, as a result of minimal soil pore space where vapor could collect.

Soil vapor samples taken from off-site soil vapor wells identified multiple compounds. However, the majority of these compounds were not detected in groundwater samples from on-site wells, suggesting that their presence is not Site related. Seven VOCs, including acetone, toluene, xylene (total), methylene chloride, PCE, TCE, and DCE, were detected in both onsite groundwater samples and offsite soil vapor samples. However, the concentrations of these compounds in soil vapor samples are relatively low. The two soil vapor wells that were sampled are located in the downgradient direction, and detected minor amounts of chlorinated VOCs and other VOCs that are not related to the site, which suggests that Site groundwater contamination is not significantly migrating off-site.

2.3 REMEDIATION GOALS

A Remedial Investigation has been completed by Syracuse Label at the 110 Luther Avenue Brownfield Site (BCP Site No. C734118). Syracuse Label has used and intends to continue using this Site for the manufacture and distribution of printed labels and related products. Based on the current, intended, and reasonably anticipated future industrial use of the Site, the remedial approach should achieve at a minimum the criteria for Industrial Use under NYS Brownfield Cleanup Program as defined by Environmental Conservation Law (ECL), Article 27, Title 14. However, the soil data for the Site indicate that the soils meet the criteria for a Track 4 Commercial Use. In accordance with the Division of Environmental Restoration (DER) guidance document, Technical Guidance for Site Investigation and Remediation (DER-10, May 2010), the Commercial Use category is defined as follows:

The Commercial use category anticipates use by businesses with the primary purpose of buying, selling or trading of merchandise or services. The commercial use category:

i. restricts the use to commercial activities including the buying and/or selling of goods or services, or other uses identified in subparagraph iii below;

ii. requires a Site Management Plan (SMP) to manage remaining soil contamination and institutional/ engineering controls at the site;

iii. is the appropriate use category for the following site uses:

(1) health care facilities, including hospitals, clinics etc.; or

(2) college academic and administrative facilities; and

iv. allows for passive recreational, which includes recreational uses with limited potential for soil contact, such as:

(1) artificial surface fields;

(2) outdoor tennis or basketball courts;

(3) other paved recreational facilities used for roller hockey, roller skating, shuffle board, etc.

(4) outdoor pools;

(5) indoor sports or recreational facilities;

(6) golf courses; and

(7) paved (raised) bike or walking paths.

Based on the findings of the RI, there were no sources of contamination identified in Site soils and the soil sample data indicated that the parameters analyzed met the Commercial Use SCOs. Therefore, no further action is required with respect to soils. In general, the results of the RI indicate that groundwater is the principal medium of concern, and that tetrachloroethene (PCE), and its degradation by products (TCE, DCE, and VC), are the principal groundwater contaminants of concern. Due to the potential for soil vapor to be generated from the groundwater contamination and potential for soil vapor intrusion in the Site buildings and the adjacent building encompassed by the Syracuse Label buildings (Brannock) the remedial approach will need to address soil vapor intrusion mitigation. The data also indicates that groundwater contamination off-site and down-gradient is minimal; coupled with the proposed on-site treatment of groundwater, no further action is proposed for off-site treatment.

2.4 REMEDIAL ACTION OBJECTIVES (RAOS)

The following remedial Action Objectives (RAOs) have been identified for the site based on the overall remediation goal to achieve Commercial Use standards and the protection of human health and the environment. The RAOs are listed by specific media below.

2.4.1 Groundwater. RAOs for Public Health Protection:

- Prevent ingestion of groundwater with contaminant levels exceeding drinking water standards.
- Prevent contact with, or inhalation of volatiles, from contaminated groundwater.

RAOs for Environmental Protection:

- Restore ground water to pre-disposal/pre-release conditions, to the extent practicable.

2.4.2 Soil. RAOs for Public Health Protection;

- Prevent ingestion/direct contact with potential contaminated soil that exceeds Commercial Use SCOs.

2.4.3 Soil Vapor. RAOs for Public Health Protection;

- Minimize the potential for soil vapor intrusion to occur in the on-site building.

SECTION 3 - REMEDIAL ALTERNATIVES ANALYSIS

The overall remediation goal for the site is to protect human health and the environment from site-related contamination in a manner that is consistent with the current, intended and reasonably anticipated future Industrial use of the Site. The appropriate remedial action to meet these goals depends on the nature and extent of contamination, the use of the Site, and the existence of exposure pathways to contamination relative to the Industrial use.

This remedial alternatives analysis is included in this RAWP as the basis for selection of a remedy that achieves the identified future use and RAOs for this Site. In accordance with DER-10 this alternatives analysis compares two alternatives 1).Unrestricted Use SCOs (Track 1, allow all potential uses to occur at the Site) and, 2). A proposed alternative that achieves the remedial goals and identified RAOs.

3.1 ALTERNATIVES ANALYSIS

The goal of the remedy selection process in the BCP is to select a remedy for the Site that is overall protective of public health and the environment, taking into account the current, intended, and reasonably anticipated future land use of the Site.

As identified in the RAOs, the remedial approach is focused on groundwater contaminants (specifically chlorinated VOCs) and the potential for soil vapor intrusion to occur in the on-site buildings.

No specific remedial actions are proposed relative to soils for this site, because RI data indicate that historic site activities have removed potential sources and analytical data shows that the soil samples are below the designated use SCOs. Groundwater from the site does not appear to significantly impact off-site areas downgradient of the Site. In addition, on-site and off-site potential use of groundwater is effectively preempted by the fact that the surrounding area is supplied by a municipal water source.

The Alternatives Analysis identifies and compares potential site remedies. In accordance

with DER-10, the alternatives to be evaluated are: an Unrestricted Use, and an alternative that achieves a level of remediation that is consistent with the Use of the Site.

The proposed alternatives are each evaluated and compared in terms of nine (9) specific criteria identified in 6 NYCRR Part 375-1.8(f):

- Compliance with standards, criteria, and guidance (SCGs)
- Protection of human health and the environment
- Short-term impact and effectiveness
- Long-term effectiveness and permanence
- Reduction of toxicity, mobility, or volume of contamination
- Implementability
- Cost effectiveness
- Land use
- Community Acceptance

The ninth criterion, community acceptance, will be further evaluated during public comment periods when feedback may be provided in relation to the proposed remedial alternative. The selected remedial action should produce a tangible benefit to the local community by achieving RAOs consistent with the current and reasonably anticipated future use for the site.

The following is an overview of each alternative, Unrestricted Use and Commercial Use and a comparative evaluation of the two (2) alternatives for the site, with respect to the nine evaluation criteria.

3.2 UNRESTRICTED USE (TRACK 1) ALTERNATIVE

An Unrestricted Use remedy would maximize the range of potential land use scenarios for the site. This alternative would require a remedial approach that would result in no future restrictions to site use (i.e. the level of cleanup should permit all types of future reuse scenarios), and no institutional/engineering controls to address exposure and achieve the remedial action objectives (RAOs). However, it would allow for

groundwater use restrictions to be placed on the site.

An Unrestricted Use alternative requires that site remediation be completed to meet Unrestricted Use SCOs, thereby meeting SCGs for soils. Based on the RI and historical investigation sample analytical data there were only discrete area with soils that remained with concentrations that exceeded the Unrestricted Use SCOs. To achieve Unrestricted Use SCOs at the site it may require additional soil confirmatory sampling and the removal of soils that were above Unrestricted Use SCOs. To accomplish this, soil would have to be removed from below the existing buildings, until Unrestricted Use SCOs are met or bedrock is encountered. Based on available data this approach would require removal and off-site disposal of soil across much of the site and likely to a depth of approximately 8-10 feet bgs. Off-site soil would need to be imported to the site to reestablish site grades and promote drainage. It is assumed that the surface would be paved and building slabs replaced to return the area to its current condition.

In addition, the Unrestricted Use approach would require groundwater remediation to a level that would meet SCGs and preclude the potential for generation of contaminated soil vapor such that there were no engineering controls required. Once the remedial action is completed a Final Engineering Report would need to be prepared that certifies that the remedial action was completed in accordance with an approved Remedial Work Plan. The FER would summarize the remedial activities, include data and would be certified by a Professional Engineer licensed in NYS.

An Unrestricted Use remedy would eliminate the potential on-site risk associated with direct human contact with contaminated soil now and in the future, and would provide a benefit in relation to potential wildlife exposure by removing contaminated soil from the site.

An Unrestricted Use remedy would create a significant short-term impact associated with soil excavation and construction activity, and off site transport and disposal of contaminated soil. More importantly, the implementation of an Unrestricted Use alternative would completely interrupt the business operations of Syracuse Label for an extended period of time. Overall the option of achieving an Unrestricted Use level of

clean-up is cost prohibitive and not feasible.

3.3 COMMERCIAL USE ALTERNATIVE

The data collected during this RI have provided sufficient and adequate information on the nature and extent of Site contamination to develop a remedial approach and prepare a Remedial Work Plan. Although the Human Health Exposure Assessment identified COPCs in groundwater, the likelihood of receptors being exposed is limited due to the Site's industrial use, the majority of the Site is covered by asphalt paving and building slabs and the Site is serviced by a public water supply. The remedial strategy should focus on remediating groundwater in the area of the Site located around, and downgradient, of the former floor trench drain. The goal would be to mitigate the potential for migration of chlorinated VOC contaminated groundwater off-site, and mitigating potential soil vapor intrusion risks.

This section reviews the remedial action alternative appropriate for the current and foreseeable future industrial use of the site. Although the use of the site is designated as Industrial, the soils at the site meet the Commercial SCOs. The Commercial Use alternative for this site would include the following elements:

1. Groundwater Treatment. Remediation of impacted Site groundwater to achieve the state RAOs. The proposed remedy is the implementation of an In-Situ Chemical Reduction (ISCR) technology by in-situ injection of a reductive dechlorination compound to chemically and biologically degrade the chlorinated VOCs. The injection would include pre- and post-injection monitoring for a specified period of time to evaluate the performance of the remedy. Contingency plans would be included if the remedy did not perform as expected. It is anticipated that the in-situ treatment of groundwater will have an immediate and ongoing positive result that will reduce the on-site concentrations of contaminants in groundwater and reduce the potential for off-site migration of contaminants. In addition, the reduced concentrations of contaminants in groundwater will reduce the potential for generation of soil vapors that could intrude into buildings.

2. Engineering controls. Engineering controls for the site would include a sub-slab depressurization system (SSDS) in existing on-site buildings and any future site buildings. The SSDS engineering control would mitigate the potential for soil vapor intrusion from the sub-slab into the buildings. The SSDS would operate continuously until such time the Departments' evaluation of the system's performance allows the system to be shut down. The adjacent parcel and building (Brannock) owner was approached by Syracuse Label and declined access to the property to evaluate and/or mitigate soil vapor intrusion. Based on the denial of access, no further remedial action can be taken relative to the adjacent off-site building.
3. Final Engineering Report. Once the remedial action is completed a Final Engineering Report would need to be prepared that certifies that the remedial action was completed in accordance with an approved Remedial Action Work Plan. The FER would summarize the remedial activities, include applicable data and documentation and would be certified by a Professional Engineer licensed in NYS.
4. Institutional Controls. Institutional controls to restrict the use of the site, and use of groundwater at the site, would be put in place to further limit the potential for human or environmental exposure. The institutional controls for this site would be recorded in an Environmental Easement, filed with the Onondaga County Clerk's office, and would inform all future owners of these controls. The Environmental Easement will be recorded within 30 days of the NYSDEC's execution of the Environmental Easement. The Environmental Easement will be recorded with the Onondaga County Clerk with notifications to the County and Town of Salina municipal officials. A copy of that instrument will be provided to NYSDEC certified as recorded by the County Clerk.
5. Site Management Plan. As part of the Environmental Easement, a Site Management Plan (SMP) would be prepared to address how site soils would be characterized and handled for any future construction work that takes place at the site after the remedial action is complete. The SMP would also specify how the SSDS is to be operated, periodically inspected and maintained to preclude potential exposures related to soil vapor intrusion. The SMP will

include the requirement to monitor whether there is a change in ownership of the adjacent property currently owned by The Brannock Device Company, located at 116 Luther Avenue. If a change in ownership occurs the current owner will need to be notified of the environmental conditions of the 110 Luther Avenue Site and afforded the option to evaluate the potential for soil vapor intrusion into the building. The SMP would include a monitoring plan that requires the periodic monitoring of the performance of the groundwater treatment remedy and the SSDS. Periodic Reporting requirements will be included that review the monitoring, maintenance, change in use and modifications to the BCP site. The Periodic Reports will be certified by a Professional Engineer licensed in NYS.

The identified Commercial Use remedial alternative including groundwater treatment, SSDS engineering controls and institutional controls would meet the stated remedial action objectives for this Site and support the current, intended and reasonably anticipated future use of the site. A detailed discussion of the groundwater system and SSDS design is included in subsequent sections.

3.4 EVALUATION OF ALTERNATIVES

The evaluation of alternatives compares the Unrestricted Use (Track 1) and Commercial Use (Track 4) alternatives.

In accordance with BCP guidance, the selected remedy will provide protection to public health and the environment, taking into account the current intended and reasonably anticipated future land use of the site.

An evaluation has been prepared to identify a suitable remedial action in accordance with 6NYCRR Part 375 1.10 (c) (1-6). In the specific context of the contemplated end use of the property, the selected remedy should be:

- Consistent with applicable standards, criteria, and guidance (SCGs).
- Protective of the public health and the environment.

- Effective for both short-term and long-term.
- Able to reduce toxicity, mobility, and volume of the hazardous constituents.
- Feasible from implementability and cost effective perspective.
- Reasonably anticipated to be acceptable to the local community.

3.4.1 Compliance with Standards, Criteria, and Guidance (SCGs). A review of the standards, criteria and guidance documents pertinent to site specific conditions have been completed. Groundwater SCGs are based on 6NYCRR Part 703 and ambient water quality standards and guidance values. The SCG for soil is the 6 NYCRR Part 375-6.8(b) Soil Cleanup Objectives (SCOs). The SCG for soil vapor is the NYSDOH Guidance for Evaluating Indoor Air Intrusion in New York State (October 2006).

An Unrestricted Use alternative remedy will meet SCGs for all soil within the site boundary. A Commercial Use alternative will comply with soil SCGs for the designated use under the current conditions with no further remedial actions.

Because RI analytical data indicate site soil is not causing significant groundwater contamination, it is unlikely that Unrestricted Use soil removal would provide a measurable improvement in groundwater quality compared to Commercial Use alternative. In addition, since both Unrestricted Use and Commercial Use alternatives can restrict groundwater use at the site to eliminate any potential human exposure to groundwater impacts, they are equally protective of human health. Because the Site and surrounding area is supplied by public water the potential for direct human exposure is limited.

A Track 1 remedy will meet soil SCGs (i.e. Unrestricted Use SCOs) for soil within the site boundary. The proposed Track 4 approach will leave soil below Commercial SCOs at the Site and currently the majority of the Site is covered by 6 inches of asphalt or concrete.

Both the Track 1 and Track 4 alternatives will treat contaminated groundwater, with an objective to meet groundwater SCGs. The principal groundwater

contaminants – chlorinated VOCs – were not detected in soil above Commercial SCOs.

3.4.2 Protection of Human Health and the Environment. Both Unrestricted Use and Commercial Use alternatives are protective of human health and the environment. The Unrestricted Use alternative would remove soil contamination to meet soil SCGs, whereas the Commercial Use alternative would leave some subsurface soils in place above Unrestricted Use SCOs, where it will not be accessible to humans or wildlife. The Site Management Plan under Commercial Use will provide further protection if soils are excavated during future development.

Unrestricted Use and Commercial Use both permit groundwater use restrictions, so are equally protective to human health relative to groundwater exposure. As previously noted, site soil has not been identified as a source of groundwater contamination at the site, so the soil removal required for Unrestricted Use is not likely to produce a measurable improvement to groundwater quality compared to Commercial Use.

VOCs in groundwater are a contaminant of concern for this site so Unrestricted Use would require the treatment of groundwater to a level that would preclude the potential for soil vapor intrusion issues. The Commercial Use alternative includes the installation and operation of an SSDS to minimize the potential for soil vapor intrusion to occur in the on-site building until such time as the NYSDEC and NYSDOH allow the system to be shut down. This engineering control will have monitoring, maintenance and reporting requirements to assure that the system continues to operate as intended.

Both Track 1 and Track 4 alternatives are protective of human health and the environment. Both actions prohibit groundwater use, provide groundwater treatment, and reduce future migration potential for groundwater contaminants. Both Track 1 and Track 4 will address soil vapor intrusion, by removing the main soil vapor contaminant source (i.e. groundwater treatment) and under Track 4 by

operation of the SSDS.

3.4.3 Short-Term Effectiveness. Unrestricted Use would require excavation of soil to meet SCGs. Commercial Use remedy would not include soil excavation or movement of soil for current, intended or reasonably anticipated future uses. Future construction activities subsequent to the initial remedial actions at the site, if any, could potentially involve excavation and disturbance of subsurface soils or fill material that are potentially left in place under Commercial Use. The Commercial Use approach has less potential for exposure to workers and the community than Unrestricted Use, primarily due to there being no need to excavate soil during implementation of the remedy.

After remediation under the Unrestricted Use alternative, the risk of exposure to site construction workers would likely be lower than for Commercial Use. However, this is offset by a relatively greater exposure risk during the implementation of an Unrestricted Use compared to a Commercial Use, since more soil would be excavated and transported off-site for disposal at a solid waste permitted facility under the Unrestricted Use alternative. The proposed Unrestricted Use approach would include a Health and Safety Plan (HSP) and Community Air Monitoring Plan (CAMP) to identify requirements for action levels, personal protective equipment and emergency procedures to address potential short-term impacts. The SMP under Commercial Use will ensure that soils excavated in the future from the site are properly characterized and managed, to address potential exposure issues to site soils and would include implementation of a HSP and CAMP.

In the short term during remedial activities the potential exists for airborne contamination to be released from the site under the Unrestricted Use scenarios. The potential for airborne release is greater under an Unrestricted Use remediation approach than the proposed Commercial Use approach due to the extent and duration of soil excavation.

Airborne release potentially includes dust and vapor-phase contaminants for this

site. During excavation and construction under Unrestricted Use alternative, potential airborne releases will be mitigated by dust control measures during site work. Dust control measures may include wetting of travel areas that are exposed to soil surfaces that are prone to produce airborne dust. Under both Unrestricted Use and Commercial Use scenarios, the implementation of a Community Air Monitoring Plan (CAMP) during construction activities would monitor airborne dust and VOCs that could potentially migrate off-site and provide a means to identify what controls need to be implemented.

A short term impact would also include the truck traffic on local roads hauling excavated soil from the site and hauling clean back fill to the site. The Unrestricted Use alternative would include extensive truck traffic compared to minimal truck traffic under the Commercial Use alternative.

3.4.4 Long-Term Effectiveness and Performance. Both the Unrestricted Use alternative and the proposed Commercial Use alternative provide a long-term and effective solution. Both alternatives will reduce public and environmental exposure to site COPCs. An Unrestricted Use remedy would provide a permanent solution due to the removal of all soils that did not meet Unrestricted SCOs. A Commercial Use remedial action will require engineering and institutional controls to be recorded with the deed to the property via the Environmental Easement. Commercial Use is considered equally effective and permanent as Unrestricted Use for this site based on the current, intended and reasonably anticipated future use. The Commercial Use Site Management Plan will be referenced in the Environmental Easement and will require annual certifications of all controls and plan implementation.

3.4.5 Reduction of Toxicity, Mobility, and Volume. Unrestricted Use would result in a greater reduction in the volume of soil COPCs on site than Commercial Use, but it may not have a measurable effect on toxicity of soil COPCs compared to Commercial Use, since Unrestricted Use and Commercial Use will both effectively mitigate exposure. During implementation of Unrestricted Use, the mobility of soil COPCs may be temporarily higher than that for Commercial Use,

since Unrestricted Use would require extensive excavation. Following implementation, there is not likely to be any difference in toxicity and mobility of site contaminants between Unrestricted Use and the proposed Commercial Use approach based on the current, intended and reasonably anticipated future use.

Both alternatives will reduce overall toxicity, mobility, and volume of site groundwater contamination. Track 1 could result in a marginally greater reduction in the volume of contamination on-site, but probably too slight to have a measurable effect on toxicity compared to Track 4. Because Site groundwater contaminants have not significantly migrated downgradient of the Site and the area is supplied by public water, both Track 1 and the proposed Track 4 will effectively mitigate potential exposure based on the Site's current and future use.

3.4.6 Implementability. Technical and administrative feasibility of implementing the alternative remedial actions are all achievable. However, the implementation of the Unrestricted Use alternative is not cost-effective for the planned use of the property, due to interruption of the business operations and the extensive costs and time associated with handling, transporting, treatment, and disposal of large volumes of soil. Unrestricted Use is more difficult to implement than Commercial Use owing to more extensive remedial activity that would likely be required to meet SCOs and potential impacts to the local community (truck traffic, noise, etc). More significant short term exposures are also created by the implementation of the Unrestricted Use remedy.

Unrestricted Use would support the widest range of future site uses. Under Commercial Use, deed restrictions will apply, but will not prevent the productive end use of the property that is currently contemplated. Under Commercial Use, installation and maintenance of the engineering controls/institutional controls are all readily implemented.

3.4.7 Costs. The cost for implementing Unrestricted Use would significantly exceed the cost for Commercial Use. Unrestricted Use would involve interrupting business operations, removing a large quantity of soil to meet unrestricted SCOs.

The significant cost of the Unrestricted Use alternative would likely make it cost prohibitive for the intended use of the site.

3.4.8 Land Use. The Unrestricted Use alternative and the Commercial Use remedy and end use are consistent with the current zoning. Neighboring land uses are consistent with commercial and industrial uses.

3.4.9 Community Acceptance. The Commercial Use remedy coupled with current, intended and reasonably anticipated future site use is aligned with community redevelopment interests. It is therefore anticipated that the proposed remedy, will receive a favorable response from the local community. In order to obtain the necessary community acceptance, the selected remedy will be made available for public review and comment.

The Unrestricted Use remedy would provide a level of cleanup that exceeds what is necessary to support the site's intended use. An Unrestricted Use remedy would increase the duration of construction work on site to excavate soils, cause an increase in construction traffic and noise, and create additional truckloads of soil to be hauled off site and on-site, such that the additional work required to achieve an Unrestricted Use cleanup may reduce public acceptance.

SECTION 4 - DATA EVALUATION OF REMEDIAL APPROACH

4.1 GROUNDWATER PILOT TEST

A pilot test was conducted at the site from February 21 to February 24, 2011 in accordance with a NYSDEC approved Pilot Test Work Plan (SWRNA, February 2011). The objective of the pilot test was to determine the effectiveness of In-Situ Chemical Reduction (ISCR) using EHC® technology for the treatment of chlorinated volatile organic compounds (cVOCs) in groundwater. EHC® is a patented combination of controlled-release carbon and zero valent iron (ZVI) particles used to stimulate in-situ chemical reduction of organic compounds in groundwater. The following subsections discuss the methods and findings of the groundwater Pilot Test.

4.1.1 Community Air Monitoring. Air monitoring for particulate matter (e.g. airborne "dust") and volatile organic compounds (VOCs) was conducted during all intrusive (i.e. drilling) activities that occurred onsite. The air monitoring was conducted in accordance with the NYSDEC/DOH approved Community Air Monitoring Plan (SWRNA 2011). Since work was performed indoors air monitoring occurred in two locations at the edge of the work zone, near an office doorway and near a walkway (Figure 4-1). Particulate matter was monitored using a pDR-1000, and VOCs were monitored using a MiniRAE 2000 photoionization detector (PID). Results of air monitoring can be found in Appendix B.

The monitoring results indicate that only on day one (February 21, 2011) did the particulate readings indicate an exceedance of the action level (150 ug/m3 above background). The spike in particulate readings corresponds to the time when the fans and injection equipment were first started in the building, it is speculated that the starting of equipment may have liberated dust and particulates in the work area.

The VOC background PID readings fluctuated over the duration of the pilot test work from approximately 1.5 ppm to 4.7 ppm. Only on day one (February 21,

2011) and day three (February 23, 2011) did VOC readings exceed the action levels of 1 ppm over background for short durations. The short duration spikes did not specifically correlate with any of the pilot test work activities. The spikes in PID readings range from approximately 3 ppm to 6 ppm.

4.1.2 Pre-Pilot Test Groundwater Monitoring. Groundwater samples were collected from monitoring wells MW-7, -11, and -17, prior to initiating pilot test injection, for the purposes of establishing baseline groundwater conditions. The samples were analyzed by an NYSDOH Environmental Laboratory Accreditation Program (ELAP) Certified laboratory for the following parameters:

- chlorinated VOCs including tetrachloroethene (PCE), trichloroethene (TCE), cis-1,2-dicholoroethene (DCE), and vinyl chloride (VC) by EPA Method 8260B;
- metals including iron, calcium, magnesium, and manganese by EPA Method 6010B;
- anions including chloride, sulfate, and nitrate;
- total organic carbon (TOC);
- dissolved organic carbon (DOC);
- biological oxygen demand (BOD);
- alkalinity;
- hardness;
- dissolved gasses including ethane, ethane, and methane; and
- field parameters including pH, ORP, dissolved oxygen (DO), and turbidity.

Groundwater samples were collected using low flow purge and sampling techniques (i.e. peristaltic pump). Groundwater samples that were being analyzed for VOCs were collected using dedicated disposable Teflon® microbailers. Field parameters were measured using a YSI 6820 water quality meter with flow thru during purging. The pre-pilot test groundwater sample analytical results were consistent with the previous groundwater data.

4.1.3 Pilot Test Injection Points. The pilot test was performed in a discrete area centered on elevated cVOC concentrations in groundwater samples, specifically monitoring well MW-11 (Figure 4-2 and Appendix C). The pilot test consisted of injecting EHC® into the subsurface through direct push soil borings. EHC® is zero valent iron and carbon, and was delivered to the site in 50 pound bags in powder form. The EHC® was mixed with potable water onsite to form a slurry of approximately 29 percent solids.

EHC® was injected into the subsurface through a series of ten (10) injection points (i.e. soil borings). The soil borings were completed by advancing steel casing with an injection tip by direct push methods. Each soil boring was completed to a depth of approximately 15-feet below ground surface (bgs) to correspond with the depth of existing monitoring wells. Once completed, the EHC® slurry was injected into the subsurface through the casing. One batch of EHC® slurry (50 pounds of powder mixed with approximately 25 gallons of potable water) was injected at each 2-foot interval as the casing was withdrawn from the boring in order to treat the entire column of groundwater.

The pilot test injected 2,800 pounds of EHC®, mixed with approximately 1,400 gallons of potable water, into the subsurface through ten (10) soil borings. The amount of slurry injected into each boring was as follows:

- 300 pounds of dry chemical (approximately 150 gallons of slurry) was injected into each boring: PTIP-1, -3, -4, -5, -6, and -10; and
- 250 pounds of dry chemical (approximately 125 gallons of slurry) was injected into each boring: PTIP-2, -7, -8, and -9.

4.1.4 Pilot Test Observation Borings. After pilot test injection was completed, nine (9) soil borings were advanced in and around the injection area for the purposes of collecting soil to determine the radius of influence of EHC® (Figure 4-2 and Appendix C). These borings were completed to a depth of 15 feet bgs to correspond with the depths of the injection borings. Soil samples were taken from these borings with a 4 foot long, 2 inch inside diameter, stainless steel macrocore.

The soil samples were left exposed to the air for a period of time so that the EHC® would oxidize and become more apparent.

Based on visual observations of the soil samples, it was determined that each observation boring, except PTOB-7, contained EHC® slurry or discoloration due to EHC® injection. Observation boring PTOB-7 was completed approximately 3 feet upgradient of the injection area.

4.1.5 Post-Pilot Test Groundwater Monitoring. Two (2) rounds of groundwater monitoring were completed after pilot test injection as a measure of its effectiveness. The first round was completed on March 22, 2011, and the second round was completed on April 18, 2011. Groundwater samples were collected from monitoring wells MW-7, -11, and -17 using the same methods as pre-pilot test sampling. The samples were analyzed by an ELAP Certified laboratory for the same parameters as pre-pilot test groundwater samples listed above.

Laboratory analytical results are included on Figures 4-3, 4-4, and 4-5 and in Tables 4-1 and 4-2, and laboratory analytical reports are included as Appendix D. Groundwater elevation data and field parameters from each sampling event are included in Tables 4-3 and 4-4 respectively, and groundwater sampling logs are included as Appendix E.

4.1.6 Pilot Test Groundwater VOCs Analytical Results. Three (3) groundwater monitoring wells, downgradient well MW-7, central well MW-11, and upgradient well MW-17, were sampled as part of the pilot test monitoring. The groundwater samples were analyzed for volatile organic compounds (VOCs) by EPA Method 8260B.

4.1.6.1 Tetrachloroethene (PCE). PCE analytical results identified significant decreases in concentrations in samples taken from each of the three (3) groundwater monitoring wells, as a result of pilot test injection. Groundwater samples taken from the upgradient well MW-17 identified

the smallest decrease (21.6 percent), which is to be expected because groundwater was treated downgradient of MW-17. Groundwater samples taken from wells located within (MW-11) and downgradient of (MW-7) the injection area identified significant decreases (94.8 percent and 97.8 percent, respectively).

4.1.6.2 Trichloroethene (TCE). TCE analytical results identified changes in concentrations in samples taken from each of the three (3) groundwater monitoring wells. Groundwater samples taken from upgradient monitoring well MW-17 identified an increase of 28.6 percent. Groundwater samples taken from wells located within (MW-11) and downgradient of (MW-7) the injection area identified significant decreases (60.3 percent and 94.2 percent, respectively).

4.1.6.3 Dichloroethene (DCE). Dichloroethene concentrations include cis-1,2-dichloroethene and trans-1,2-dichloroethene. None of the groundwater samples detected trans-1,2-dichloroethene at concentrations that exceeded laboratory detection limits.

DCE analytical results identified significant increases in concentrations in samples taken from each of the three (3) groundwater monitoring wells. Groundwater samples taken from upgradient well MW-17, central well MW-11, and downgradient well MW-7 identified increases of 40.0 percent, 1,926.3 percent, and 553.8 percent, respectively. This data is a direct indication of the effectiveness of chemical reduction of the PCE and TCE in groundwater in the targeted treatment area.

4.1.6.4 Vinyl chloride (VC). VC analytical results identified minor increases in concentrations in samples taken from downgradient monitoring well MW-7 (11.3 percent). VC was not detected above laboratory detection limits in any groundwater samples taken from central well MW-11 or upgradient well MW-17, from pre- or post-pilot test groundwater sampling events.

4.1.7 Pilot Test Groundwater Indicator Parameters Analytical Results. The distribution of a groundwater remediation amendment, in this case EHC®, throughout the treatment zone is initially measured by the physical observation of the amendment in the treatment zone. As described in the previous section, observation borings installed at the conclusion of the pilot test injection documented the physical distribution of the ISCR amendment (EHC®) at locations 5 feet from the points of injection.

Once pilot test injection is complete, the amendment initiates a series of groundwater condition changes as a result of chemical and microbial processes. To document these changes, groundwater is monitored and compared to "baseline" data to evaluate the influence of the amendment on groundwater conditions. For the pilot test completed at the 110 Luther Avenue site, two rounds (March and April 2011) of post-pilot test monitoring samples were taken from wells located upgradient (MW-17), downgradient (MW-7), and within (MW-11) the pilot test injection area. The groundwater samples were analyzed for "indicator parameters" including:

- Total organic carbon (TOC);
- Dissolved organic carbon (DOC);
- Volatile fatty acids (VFAs);
- Biological oxygen demand (BOD);
- Nitrate;
- Sulfate;
- Chloride;
- Hardness;
- Alkalinity;
- Hydrocarbon gases (methane, ethane, and ethene); and
- Metals (calcium, iron, manganese, and magnesium).

In addition to the aforementioned parameters, field parameters useful for evaluating groundwater conditions including pH, oxidation-reduction potential (ORP), and dissolved oxygen (DO) were also recorded (Table 4-4).

Collectively, the data indicate that the EHC® is relatively well distributed in the subsurface and that the expected groundwater conditions are being observed. EHC® uses a combination of cellulose derived carbon and zero valent iron (ZVI) to initiate chemical and biological processes that create in-situ chemical reduction (ISCR) conditions. As a result of the carbon source, concentrations of TOC, DOC, and VFAs above background conditions are considered an indication that the substrate (EHC® carbon source) is present. TOC and DOC are essentially a direct proxy of the substrate, while VFAs are produced by the fermentation of carbon substrate that comprises EHC®.

The concentration of these three parameters are above background levels (February 2011) in both injection area monitoring well MW-11 and downgradient monitoring well MW-7 (Figure 4-5A). The concentrations of these parameters are greatest in the sample from well MW-11, which is expected given its proximity to pilot test injection points. Upgradient well MW-17 did not have detectable levels of any of the three parameters. The data suggests that EHC® distribution extends from the injection zone near well MW-11 to downgradient well MW-7. Alternatively, substrate distribution was not observed in upgradient well MW-17, which is as expected during the pilot test.

A measure of the biological activity stimulated by the pilot test injection is depicted by BOD and DO (Figure 4-5B). BOD is a measure of the oxygen needed to support aerobic microbes. Generally speaking, the higher the BOD level the greater the biological activity. The BOD levels following the pilot test indicate an initial dramatic increase (March 2011) from "baseline" levels (February 2011) with decreased concentrations in April 2011. This data indicates that the carbon source provided by the injection allowed aerobic bacteria to flourish. As the aerobic bacteria respire, dissolved oxygen levels decrease (Figure 4-5B) causing aerobic bacteria to die off. This trend should continue causing the

groundwater to become more anoxic, and more hospitable to the anaerobic microbes responsible for the dechlorination reactions.

Carbon dioxide is produced by aerobic respiration, causing pH to decrease (Figure 4-5C). The decrease in pH causes carbonate minerals such as calcite ($CaCO_3$) to dissolve, which increases alkalinity.

4.1.8 Conclusions of Pilot Test Groundwater Monitoring. It was determined that the pilot test has had a dramatic affect on the concentration and composition of the chlorinated VOCs found in the samples from injection area well MW-11 and downgradient well MW-7 compared to what is expected under "natural conditions." Also, as demonstrated by the relationships of the indicator parameters, the affects of the injection was visible in the injection area (MW-11) and a significant distance downgradient of the injection area (MW-7).

Based on the results of post-pilot test injection groundwater sampling, ISCR using EHC® was determined to be very effective. The data indicates a radius of influence greater than 10 feet (based on data collected form MW-7). As a result, a full scale injection using EHC® is being proposed to destroy the remaining contamination in the former trench drain area and is further discussed in Section 5 of this RAWP.

4.2 SOIL VAPOR SUB-SLAB DEPRESSURIZATION SYSTEM

Sub-slab communication tests were conducted in the buildings at the 110 Luther Avenue site by Radon Home Services, Inc. (RHS), a certified radon mitigation contractor, in accordance with guidelines set forth in NYSDOH's *Guidance for Evaluating Soil Vapor Intrusion in the State of New York* (October 2006). The objective of the communication tests was to determine the feasibility of sub-slab depressurization to minimize the potential for soil vapor intrusion (SVI) to occur in the on-site buildings. The communication tests were done in December 2009.

The communication tests involved the creation of negative pressure fields by applying a vacuum to a series of suction points, and measuring the corresponding vacuum at test holes drilled through the floor slab. Baseline pressure readings were taken at each of the suction and test holes prior to testing (Table 4-5). A Sears 6.5 hp shop vac was used to generate suction at the suction holes, and pressure was measured at the test holes using an Energy Conservatory Model DG3 micromanometer.

To establish the full extent of the pressure field, pressure readings were taken at the test holes until there was no longer measurable vacuum from the suction hole. Measurements did not need to be taken at all the test holes for any give suction hole; because once the pressure field was not measurable it was no longer necessary to continue testing further away. The test data were used to determine the feasibility of creating a negative pressure field beneath the floor slab, and to provide a basis for the building SSDS design.

4.2.1 Communication Test Results. RHS drilled ten (10) suction holes (S1 through S10) and fifteen (15) test holes (T1 through T15) through the floor slab as shown on Figure 4-5. They also utilized five (5) existing soil venting system locations for their evaluation of sub-slab communication (Figure 4-5). RHS determined that the shaded area of Figure 4-6 contained a wet sub-slab (i.e. water was observed in the test hole) during drilling suction holes and test holes in that area. No communication is possible in a wet sub-slab environment so no communication test was performed on that portion of the building.

Sub-slab air pressure prior to the communication test was measured at all ten (10) suction holes, all fifteen (15) test holes, and all five (5) existing locations (Table 4-5). These baseline pressures were generally positive, with four of the twenty readings being neutral (0.0 Pa[1]), and two negative readings ranging from -0.1 Pa (-0.0004 in WC[2]) to -35.9 Pa (-0.1436 in WC). Positive measurements in the other fourteen test holes ranged from +0.1 Pa (+0.0004 in WC) to +8.4 Pa (+0.0336 in WC).

[1] Pa = Pascals
[2] in WC = Inches of water column

Communication test results are presented in Table 4-6, and Figure 4-7 depicts those results. Seventeen (17) of the twenty (20) test holes produced a measurable sub-slab vacuum. Pressure readings at the test holes ranged from -65 Pa to +2.3 Pa. The positive reading, from T15, still represents a decrease in sub-slab pressures.

The table below indicates the number of test holes that were affected by each of the suction holes.

Suction Hole	# of Test Holes Where Vacuum was Measured	Suction Hole	# of Test Holes Where Vacuum was Measured
S1	3	S6	2
S2	4	S7	2
S3	3	S8	1
S4	2	S9	2
S5	4	S10	6

There are three locations that did not produce measurable changes in pressure during testing. Two of the three locations (T12 and T13) are immediately adjacent to the portion of the building that contained a wet sub-slab, so it is possible that the locations are also affected by water. The other location is one of the pre-existing soil venting system points (ET3). This point is located in an area that is known to have shallow groundwater, so it is possible that the location is affected by water.

In general, the results of the communication test at the site buildings indicate that sub-slab air pressure across the building footprint can be reduced by applying a vacuum to multiple suction points. Sixteen of the twenty communication test pressure readings were below the standard SSDS design objective of -0.5 Pa (-0.002 in WC). These findings indicate that sub-slab depressurization is feasible in the site buildings.

SECTION 5 - REMEDIAL DESIGN

This section reviews the proposed remedial action for the site as identified in Section 3.

The proposed remedial approach is a Track 4 Restricted Use with Commercial Soil Cleanup Objectives with two main elements; 1.a groundwater remediation program to destroy groundwater contamination and reduce off-site transport potential, and engineering/institutional controls to minimize the exposure risk to contaminated media that may remain in place. This combined approach will meet the stated remediation goals for this site. The remedial design will provide the details necessary to implement the construction, operation, maintenance, and monitoring of the remedial program.

1. Groundwater Remediation. Groundwater treatment will be accomplished by an In-Situ Chemical Reduction (ISCR) remedial action to decrease the dissolved contaminant mass in the groundwater. This action will reduce the off-site transport potential for site contamination, and will also remove the principal potential source of soil vapor contamination at the site.
2. Engineering/Institutional Controls. Engineering controls will be implemented to address potential soil vapor intrusion risks in existing and future site buildings and potential exposure to contaminants that may remain in soils in the subsurface. In addition institutional controls will include: 1) a groundwater use restriction will be put in place as an institutional control that prohibits future groundwater use without treatment and consent from NYSDEC/NYSDOH and 2) Site use restriction restricting the use to Commercial or Industrial uses. A Site Management Plan (SMP) will be prepared that requires the future management of soils, maintenance and monitoring of the SSDS system, monitoring of the effectiveness of the groundwater remedial action and periodic reporting.

The combination of ISCR to remediate groundwater and engineering/institutional controls to mitigate potential exposure to contaminated media will protective of human heath and the environment by eliminating to the best practicable extent on-site

groundwater contaminants, and will support the current and anticipated future industrial use of the site. The operation of the components of the remedy will continue until the remedial objectives have been achieved, or until the Department determines that continued operation is technically impracticable or not feasible.

Green remediation principles and techniques will be implemented to the extent feasible in the design, implementation, and site management of the remedy as per NYSDEC Guidance DER-31/ Green Remediation (August, 2010). The major green remediation components are as follows;

- Considering the environmental impacts of treatment technologies and remedy stewardship over the long term;
- Reducing direct and indirect greenhouse gas and other emissions;
- Increasing energy efficiency and minimizing use of non-renewable energy;
- Conserving and efficiently managing resources and materials;
  Reducing waste, increasing recycling and increasing reuse of materials which would otherwise be considered a waste;
- Maximizing habitat value and creating habitat when possible
- Fostering green and healthy communities and working landscapes which balance ecological, economic and social goals; and
- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development.

5.1 GROUNDWATER REMEDIATION

The groundwater area of concern (AOC) will be remediated by ISCR to destroy chlorinated compounds including tetrachloroethene (PCE) and its degradation by-products, trichloroethene (TCE), cis- and trans-1,2-dichloroethene (DCE), and vinyl chloride (VC).

Overall, the laboratory analytical results indicate that PCE, TCE, DCE, and VC are the compounds detected most frequently and at the highest concentrations relative to other groundwater VOCs at the site. The analytical data has indicated one general AOC exists in shallow groundwater at the site with respect to these principal contaminants. The area is identified by wells MW-7, MW-11, and MW-17, and is referred to as the former trench drain area. Figure 5-1 identifies the specific target treatment area to which ISCR will be applied to remediate groundwater contamination.

In-situ chemical reduction (ISCR) is a remediation technology that involves the subsurface injection of slurry of carbon and zero valent iron (ZVI) for the in-situ treatment of organic contaminants. ISCR is a technology used to treat chlorinated ethene compounds (a type of volatile organic compound) such as PCE, TCE, DCE and VC in the soil and groundwater. The process injects a chemical reducing agent into the subsurface via injection wells or an infiltration gallery. The method of injection and depth of injection is determined by location of the contamination. As the chemical reducer comes into contact with the contaminant, a reduction reaction occurs that breaks down the contaminant into relatively benign compounds such as ethene, ethane, iron and chloride.

ISCR using EHC® (a product manufactured by Adventus Americas, Inc.) has been selected for the following reasons:

- It will not oxidize ferrometallic infrastructure, such as subsurface utilities, that may be located in proximity of the site;
- Leverages pre-existing reducing, and reductive dechlorination conditions, which facilitate natural degradation of contaminants of concern in site groundwater;
- It produces strong reducing conditions capable of destroying the target contaminants (chlorinated VOCs);
- It can be deployed as a solid or liquid;
- Safe to transport and handle, provided safe handling procedures are followed;
- It may persist after injection, up to sixty months, limiting rebound commonly observed by other in-situ remedial methods;

- The presence of zero valent iron and the controlled release carbon source minimizes the production of problematic fermentation by-products such as methane; and
- Based on Pilot Test results ISCR is effective given the existing site groundwater and soil characteristics.

EHC® has been used in wastewater treatment for several decades to reduce raw water contaminants. Over the years it has become an accepted method for groundwater remediation. Once injected into the sub-surface, physical, chemical, and microbiological processes combine to create strong reducing conditions. These processes stimulate rapid and complete dechlorination of the chlorinated VOC molecules producing non-toxic reaction by-products that include ethene, ethane, iron, and chloride.

5.1.1 Baseline Groundwater Monitoring. Groundwater samples will be collected from monitoring wells MW-2, -7, -8, -11, -12, -13, and -17 (Figure 5-2), prior to initiating full scale injection, for the purposes of establishing baseline groundwater conditions. The samples will be analyzed by an ELAP Certified laboratory for the following parameters:

- chlorinated VOCs including tetrachloroethene (PCE), trichloroethene (TCE), cis-1,2-dicholoroethene (DCE), and vinyl chloride (VC) by EPA Method 8260B;
- metals including iron, calcium, magnesium, and manganese by EPA Method 6010B;
- anions including chloride, sulfate, and nitrate;
- total organic carbon (TOC);
- dissolved organic carbon (DOC);
- biological oxygen demand (BOD);
- alkalinity;
- hardness;
- dissolved gasses including ethane, ethane, and methane; and
- field parameters including pH, ORP, dissolved oxygen (DO), and turbidity.

Groundwater samples will be collected using low flow purge and sampling techniques (i.e. peristaltic pump). Groundwater samples that will be analyzed for VOCs will be collected using dedicated disposable Teflon® microbailers. Field parameters will be measured using a YSI 6820 water quality meter (or equivalent) with flow thru during purging.

5.1.2 Cleanup Levels and End-Point Goals. The overall remediation goal for the site is to protect human health and the environment from site-related contamination, in a manner that supports continued industrial use of the site. To that end, the ISCR system will be designed and implemented with the goal of destroying contaminants of concern within a defined target treatment zone in the groundwater AOC. Exact treatment removal efficiency cannot be determined at this point of the project. However, magnitude reductions will be the target goal for ISCR implementation. The overall cleanup goal for groundwater is the New York State groundwater quality standards. At sites where achieving the groundwater standards is not feasible, the groundwater cleanup end-point is the practicable extent of the groundwater remediation technology.

A Site Management Plan (SMP) will be provided to NYSDEC for review and acceptance following implementation of the ISCR remedy (See Section 7). The SMP will be appended to the Final Engineering Report (FER), and will include a post-remediation sampling program to assess ISCR effectiveness. The SMP will indicate that low-level asymptotic conditions and bulk contaminant removal will be considered in evaluating post-remediation ISCR effectiveness.

5.1.3 Mass of EHC® Required. The volume of groundwater contamination within the AOC is based on the saturated thickness, which is approximately 14 feet (the treatment zone thickness as measured from below the concrete slab to a depth of approximately 15 feet below grade), and the effective porosity of the soil, which is estimated to be 24 percent. The estimated volume of groundwater in the AOC is calculated as:

Volume = Area x Saturated Thickness x Effective Porosity

Area (sq ft)	Saturated Thickness (ft)	Effective Porosity (Percent)	Groundwater Volume (gallons)
1,600	14	24	40,250

Adventus (the manufacturer of EHC®) proposed that the amount of EHC® needed to destroy the PCE, TCE, DCE, and VC dissolved in groundwater in the AOC would be approximately 12,750 pounds, with an average of approximately 270 pounds per injection boring (Appendix F).

The proposed injection area was modified slightly from what Adventus proposal due to site limitations. As a result, the proposed injection area was reduced from approximately 2,400 square feet to approximately 1,600 square feet (approximately 20 feet wide and 80 feet long). Approximately 300 pounds of EHC® will be injected into each boring in order to accommodate for the smaller injection area. This will allow for the injection of 9,900 pounds of EHC® through thirty-three (33) injection borings. During the Pilot Test 2,800 pounds of EHC® was injected in the center of the proposed target treatment zone, and is still having a positive impact on contaminated groundwater. Therefore, a combined total of 12,700 pounds of EHC® will be injected into the target treatment zone.

5.1.4 Injection System. Community air monitoring will be performed in accordance with the CAMP (Appendix G) during all intrusive (i.e. drilling and injecting) activities.

The required mass of EHC® (9,900 pounds) will be injected into the sub-surface through thirty-three (33) injection borings (Figures 5-3 and 5-4). The injection borings will be installed in a 6-foot grid (approximate) along the former floor trench drain, and advanced to 15-feet bgs to correspond with monitoring wells installed in the area.

Each boring will be completed by coring the concrete floor of the building, or asphalt of the parking area, and advancing 2-inch diameter steel casing with an injection tip to 15-feet bgs via direct push methods (Figure 5-5).

Each bag of EHC® powder (50 pounds) will be mixed in a mixing tank with potable water supplied on-site (approximately 15 gallons) creating a slurry containing approximately 29 percent solids. The slurry will be pumped with a grout pump unit down through the casing and out of the injection tip as the casing is withdrawn from the boring (Figure 5-4). A batch of slurry (50 pounds of EHC® powder mixed with 15 gallons of water) will be injected at specific intervals (15-, 13-, 11-, 9-, 6-, and 3-feet bgs) in order to treat the entire saturated thickness. Each injection boring will receive approximately 300 pounds of dry chemical, which results in a vertical distribution of approximately 22 pounds per vertical foot. Borings will be sealed with bentonite, and the concrete or asphalt will be restored to pre-existing conditions.

Upon completion of injection, several soil borings will be completed throughout the injection area for the purposes of observing the influence of EHC® injection and observe the distribution of the chemicals. These borings will be completed by coring the concrete or asphalt, and advancing a 2 inch diameter macrocore to 15 feet bgs via direct push methods. The soil samples will be exposed to the air to allow the EHC® to oxidize, at which point it turns the soils orange and becomes more visible. Once soil samples are collected the borings will be backfilled with hydrated bentonite pellets, and the concrete or asphalt will be restored to pre-existing conditions.

5.1.5 Compliance Monitoring. Groundwater monitoring wells that exist within (MW-7, MW-11, and MW-17), and adjacent to (MW-2, MW-8, MW-12, and MW-13), the injection area will be monitored following injection (Figure 5-2). These seven (7) monitoring wells will be sampled quarterly for a minimum of two (2) years in order to determine ISCR effectiveness.

In addition, site monitoring will be conducted using existing monitoring wells MW-1, MW-10, MW-18 and MW-19 (Figure 5-2). The first site monitoring event will be conducted during the second round of compliance monitoring and will continue quarterly for a minimum of two (2) years in order to evaluate the effectiveness of the groundwater treatment on-site and off-site.

Groundwater samples will be collected using low flow purge and sampling techniques (i.e. peristaltic pump). Groundwater samples that will be analyzed for VOCs will be collected using dedicated disposable Teflon® microbailers. Field parameters will be measured using a YSI 6820 water quality meter (or equivalent) with flow thru during purging.

Groundwater samples will be analyzed by an ELAP Certified laboratory for the following parameters:

- chlorinated VOCs including tetrachloroethene (PCE), trichloroethene (TCE), cis-1,2-dicholoroethene (DCE), and vinyl chloride (VC) by EPA Method 8260B;
- metals including iron, calcium, magnesium, and manganese by EPA Method 6010B;
- anions including chloride, sulfate, and nitrate;
- total organic carbon (TOC);
- dissolved organic carbon (DOC);
- biological oxygen demand (BOD);
- alkalinity;
- hardness;
- dissolved gasses including ethane, ethane, and methane; and
- field parameters including pH, ORP, dissolved oxygen (DO), and turbidity.

Based on results of the first two years of compliance and site monitoring, NYSDEC may recommend modification to the monitoring frequency or groundwater treatment actions from that point forward.

5.1.6 Environmental Media Handling. Any soils that may be generated during remedial activities will be drummed and staged onsite awaiting characterization and offsite disposal.

Groundwater generated during remedial activities and compliance monitoring activities will be drummed and staged onsite awaiting characterization and offsite disposal.

5.2 SOIL VAPOR SUB-SLAB DEPRESSURIZATION SYSTEM

Based on the elevated levels of chlorinated VOCs in groundwater, an SSDS will be installed as a presumptive remedy in accordance with NYSDEC DER-15 guidance without implementation of a soil vapor and/or indoor air investigation to quantify potential soil vapor intrusion into on-site buildings. Soil vapor intrusion (SVI) sub-slab communication was investigated by Radon Home Services, Inc (RHS) in December 2009. A sub-slab depressurization system was deemed feasible based on the results of a communication test. As a result, a sub-slab depressurization system (SSDS) will be constructed following guidelines prescribed by the Environmental Protection Agency (USEPA), as presented in Appendix E of the New York State Department of Health (NYSDOH) *Guidance for Evaluating Soil Vapor Intrusion in the State of New York* (October 2006). The SSDS will be installed by RHS, a certified radon mitigation contractor. A copy of the selected contractor's radon mitigation proficiency certification is included in Appendix H.

5.2.1 SSDS System Requirements. The general design and installation requirements of the SSDS are identified below.

- Sealing. The operating principle of the SSDS will be to create negative pressure (i.e. a vacuum) below the building floor slab relative to inside the building, which will preclude vapors below the slab from

entering the building. To improve system performance, visible cracks, holes, and gaps in the floor will be filled with compatible caulks, non-shrink mortar, grouts, or expanding foam to create a seal that will prevent short-circuiting of air. Materials used as sealants will not emit any VOCs upon curing.

- Operation. The system vent fan will run on electrical power, and be designed in a manner to provide efficient energy usage. The system shall be designed to avoid the creation of other health, safety, or environmental hazards to building occupants (e.g. backdrafting of natural draft combustion appliances), and shall also avoid compromising moisture and temperature controls and other comfort features, and to minimize noise.
- Vent Fan. The vent fan and exhaust piping shall not be located within or below an occupied area of the building to avoid entry of subsurface vapors in the event of a fan leak. The vent fan is proposed to be located on the roof of the buildings.
- Exhaust. The vent pipe's exhaust shall be a minimum of 12-inches above the roof line of the building, and at least 10-feet above ground level. It shall be at least 10-feet (laterally) away form any openings in the building (i.e. doors, windows) that are less that 2-feet (vertically) below the exhaust point.
- Labeling. The SSDS shall be clearly labeled to identify its purpose, and a note to contact Syracuse Labels President if there are any questions.
- Pressure Monitors. Pressure monitors shall be installed on the system to measure vacuum in the suction line. The monitors shall be placed in a visible location, and building managers will be made aware of them, how they work, and how they are read, and what to do if they indicate a problem.

5.2.2 SSDS Component Requirements. Figure 5-6 is a conceptual design schematic that identifies the main system components, which are discussed below.

Piping used for the SSDS will be schedule 40 PVC. Requirements of installing the SSDS piping include:

- All joints and connections shall be permanently sealed with adhesives as specified by the manufacturer of the pipe, and made air tight.
- Any external piping runs will be insulated to avoid freezing and condensation buildup as necessary.
- Vent pipes shall be fastened to the structure of the building with hangers, straps, or other supports that will secure the piping. Existing plumbing pipes, ducts, or mechanical equipment shall not be used to support SSDS pipe.
- Supports for vent pipes shall be installed at every six-feet on horizontal runs. Vertical runs will be secured either above or below the points of penetration through floors, ceilings, and roofs, or at least every 8-feet on runs that do not penetrate floors, ceilings, or roofs.
- To prevent blockage of air flow into the bottom of the vent pipe (i.e. at the suction point), the pipe shall be supported or secured in a permanent manner that prevents downward settlement into the sub-slab aggregate material.
- Vent pipes shall be installed in a configuration that allows condensation and/or rainwater to drain downward in the ground beneath the slab.
- Vent pipes shall not block access to any areas requiring maintenance or inspection. Pipes shall not be installed in front of or interfere with any light sources, opening, door, window, or equipment access required by code.

The vent fan shall be designed or other wise sealed to reduce the potential for leakage of vapors from the vent fan housing. Requirements for installing the vent fan include:

- The vent fan shall be installed in a configuration that avoids condensation buildup in the fan housing.

- Vent fans mounts on the exterior of the building shall be rated for outdoor use.
- Vent fans shall be installed in the vent pipe using removable couplings or flexible connections that can be tightly secured to both the fan and the vent pipe.

The wiring of the vent fan shall conform to local regulations. Requirements for wiring the vent fan include:

- Wiring may not be located in or chased through the installation ducting or any other heating or cooling ductwork.
- The fan will be mounted on the exterior side of the building, which prohibits the use of plugged cords to supply power to the fan.
- High-flow vent fans typically rate at between 112 and 245 watts. If the rated electrical requirement of the system fan exceeds 50 percent of the circuit capacity into which it will be connected, or if the total connected load on the circuit (including the vent fan) exceeds 80 percent of the circuit's rated capacity, a separate, dedicated circuit shall be installed to power the fan.
- An electrical disconnect switch or circuit breaker shall be installed to permit deactivation of the fan for maintenance or repair.

5.2.3 Suction Point Design and Layout. The SSDS design provided herein was provided by Radon Home Services, Inc (RHS), a certified radon mitigation contractor (Appendix I). The installation approach will utilize a core drill to create 4-inch diameter holes in the floor slab of the building, through which 3-inch diameter vertical suction points will be installed. A backer rod will be placed in the annulus between the PVC pipe and the sidewall of the core, and the surface of the penetrations will be permanently sealed with air-tight non-VOC emitting caulk (see Figure 5-6).

Each of the vertical suction pipes will have a pressure gauge (manometer) and a built-in damper that may be used to adjust flow as necessary based on pressure

readings (Figure 5-6). The pressure gauges will be used to monitor system performance, in accordance with the future Site Management Plan (see Section 7).

Suction cavities will be cleared around the suction pipe intakes to improve communication (Figure 5-6). High-flow vent fans utilized for SSDS applications are typically able to extract between 300 to 700 cubic feet per minute (cfm) or air, which should provide higher flow rates than were achieved during the communication tests. The high-flow fan utilized in the SSDS design will increase areal coverage below the floor slab.

The communication test indicated that fairly good sub-slab communication can be achieved everywhere in the building, except for the northeast portion which contains a wet sub-slab where no communication is possible. The layout of the SSDS, as proposed by RHS, is shown on Figure 5-7. The design will utilize twelve (12) 3-inch diameter schedule 40 PVC vertical suction riser, which will each connect to a horizontal 4-inch diameter schedule 40 PVC trunk line.

The existing sub slab ventilation system consists of a single suction point riser connected to a fan in the southeast portion of the on-site buildings. There are five (5) floor penetrations with a 2" diameter PVC riser that extends approximately one foot above the floor which allows the indoor air to be drawn below the slab via the suction point and vent the discharge to the outside air above the roof. The remedial action will include removing the five PVC riser pipes, filling the floor penetrations with foam backer and sealing them with flexible caulk. As part of the SSDS installation, the need for the existing suction point will be evaluated. If appropriate, the suction point will remain in place as an additional point to create a negative pressure below the slab. The existing suction point and fan may either be left as is or connected to the piping network and fan of the new SSDS.

At a point to be determined, the 4-inch trunk line will penetrate an exterior wall. If a suitable location on the roof of the building cannot be found to mount the fan, the fan will be mounted on a cement pad on the ground adjacent to the exterior

wall penetration. An exhaust pipe will rise from the fan and terminate above the roof line. The fan will be a single-phase, 220 volt, continuous duty Cincinnati® fan.

A sub-slab depressurization system was installed below the slab of the building expansion in accordance with a March 14, 2011 letter report (SWRNA, 2011), which was approved by NYSDEC. This system was installed by the contractor responsible for building construction, with SWRNA personnel overseeing the work, prior to pouring the concrete slab for the building (Figures 5-8, 5-9A, and 5-9B). Following completion of construction, the sub-slab portion of the system will be connected to the SSDS trunk line, which will run to the vent fan installed as part of the SSDS.

Specific details of system installation will be included in the Final Engineering Report (see Section 6.6), and operation and maintenance details will be included in the Site Management Plan (see Section 7).

5.2.4 Compliance Monitoring. Following the installation of the SSDS, a pressure field extension (PFE) test will be performed, in accordance with NYSDOH guidance, to determine if the system is functioning properly and efficiently.

The PFE test will be conducted similar to the pre-installation communication test, by measuring the pressure differential between indoor air and sub-slab air through 3/8 inch pilot holes. The PFE test will be conducted as the SSDS operates, using a digital micro-manometer or comparable instrument. The PFE test will verify the limit of suction achieved by the system after it is installed, and that the system maintains a minimum vacuum of -0.002 inches of water column (in WC).

If adequate vacuum is not occurring, the reason (e.g. balancing of the system or improper fan operation) will be identified and corrected.

All communication/PFE test holes will be sealed with non-VOC emitting caulk after the tests are done.

A Site Management Plan (SMP) will be provided for NYSDEC/NYSDOH review within 30 days of SSDS start-up. Following NYSDEC/NYSDOH approval, the SMP will be provided to the facility owner, and a copy will be maintained onsite by Syracuse Label management, and a copy placed in the building.

The SMP will describe the respective SSDS design and operation, monitoring and maintenance requirements and schedule, provide troubleshooting guidance, points of contact for service, and manufacturer's information and specifications. Syracuse Label, or the current site owner, will be responsible to maintain the SSDS as outlined in the SMP, including maintaining a copy of the SMP, implementing the OM&M requirements, maintaining OM&M records on-site and completing periodic reports for submittal to the NYSDEC. Syracuse Label or the current owner may retain an environmental professional to complete the OM&M requirements and prepare the periodic review reports.

5.3 SOIL COVERS

The existing buildings, foundations and/or pavement at the site form the site cover; there is currently no exposed surface soil. Based on the Remedial Investigation data the site soils meet Commercial SCOs. A site cover will be maintained as a component of any future site development, which will consist either of the structures such as buildings, pavement, sidewalks comprising the site development or a soil cover in areas where the upper one foot of exposed surface soil exceed the applicable Commercial Soil Cleanup Objectives (SCOs). Where the soil cover is required it will be a minimum of one foot of soil, meeting the SCOs for cover material as set forth in 6 NYCRR Part 375-6.7(d) for Commercial use. The soil cover will be placed over a demarcation layer. Any fill

material brought to the site will meet the requirements for the identified site use as set forth in 6 NYCRR Part 375-6.7(d).

SECTION 6 - REMEDY IMPLEMENTATION

6.1 HEALTH AND SAFETY PLAN

Barricades and caution markers will be installed and maintained to control access to the work area. Only authorized personnel will be allowed within the working area. Project oversight will be provided by a qualified environmental professional. A health and safety plan (HSP) is included as Appendix J of this RAWP. During site remedial actions the HSP will be followed by SWRNA personnel. All contractors will be required to prepare and implement a HSP that conforms to OSHA requirements.

6.2 COMMUNITY AIR MONITORING PLAN

During remedial actions at the site a Community Air Monitoring Plan (CAMP) will be implemented (Appendix G). The purpose of the CAMP is to monitor the potential for contamination in air, including particulates and VOCs, to migrate off-site or beyond the indoor work area, and identify mitigation measures if action levels are reached.

6.3 CONTRACTOR SELECTION

Figure 6-1 provides an outline of the project organization and contacts for each identified entity. Once the RAWP is deemed complete, contractors will be retained, and the project organization chart can be updated with the new contact information as needed.

6.4 PERMITTING

The necessary notification will be made to the United States Environmental Protection Agency (USEPA) in accordance with *Code of Federal Regulations (CFR) Title 40: Protection of Environment, Part 144-Underground Injection Control Program Subparts A through G.* Full scale injection will not occur until USEPA approval is received.

6.5 FINAL ENGINEERING REPORT (FER)

Within approximately 60-days of completing the required engineering controls, a Final Engineering Report (FER) will be prepared and submitted to the NYSDEC/NYSDOH for review and acceptance. In general, the FER will provide a review of the methods and findings of baseline groundwater sampling, full scale injection documentation, and post-injection groundwater sampling, and as-builts for the installed SSDS. In general, the FER will provide a review of the placement of engineering controls, field and laboratory analytical data (if any), and substantiate that the remedial action was completed in accordance with the approved RAWP. The FER will be prepared in accordance with 6 NYCRR Part 375-1.6(c)(6), certified, signed and sealed by a NYS licensed professional engineer.

The FER will include the following elements:

- Description of the remedial activities completed;
- Data Usability Summary Report certifying the data generated was useable and met the remedial requirements;
- Boundary survey defining the site boundaries;
- As-built drawings showing the pertinent location of elements of the remedial action;
- Site Management Plan (SMP) describing engineering controls (EC) and pertinent actions relative to future site activities (see Section 7);
- Description of institutional controls;
- Copy of the recorded Environmental Easement, which incorporates the SMP and description of institutional controls (IC); and
- Copy of the Fact Sheet for the FER and IC/EC controls, and issuance of the Certificate of Completion (COC).

The selected remedy includes systems that will require an Operation, Maintenance, and Monitoring (OM&M) plan, as will be outlined in the SMP. Engineering controls will require annual certification as required by ECL 27-1415, and as will be outlined in the SMP in accordance with 6 NYCRR Part 375-1.8(h)(3).

Once the Environmental Easement has been approved it will be duly recorded with the County of Onondaga County Clerks office. Each local municipal official including County of Onondaga and Town of Salina, will be notified of the Environmental Easement and a copy of the recorded Environmental Easement will be provided.

Upon approval of the FER and recordation/notification of the Environmental Easement, the Certificate of Completion can be issued by the NYSDEC.

SECTION 7 – INSTITUTIONAL CONTROLS

An Institutional Control in the form of an Environmental Easement (EE) for the controlled property will need to be put into place for the Site, as required under the BCA. The EE will be implemented through recording of the EE with the Onondaga County Clerk's office. A notification of the recording of the EE will be provided to local municipal officials, including Onondaga County and the Town of Salina. The EE will identify the Site Institutional Controls (ICs) which will include:

a. requires the remedial party or site owner to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3).
b. allows the use and development of the controlled property for Commercial or industrial use as defined by Part 375-1.8(g), though land use is subject to local zoning laws;
c. restricts the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the Department, NYSDOH or County DOH;
d. prohibits agriculture or vegetable gardens on the controlled property;
e. requires compliance with the Department approved Site Management Plan.

The requirements for the operation, maintenance, and certification of engineering controls will be described in a Site Management Plan (SMP), which will be incorporated into the site Environmental Easement (EE). The SMP will also include a description of procedures to complete the post-implementation groundwater monitoring for ISCR effectiveness, and related reporting requirements to NYSDEC. The SMP will state that additional remedial measures and/or controls may be implemented in the future, if it is determined that the remedial goals established for this project are not met by the remedial actions and engineering controls under this RAWP.

The SMP will also include an Operation, Maintenance, and Monitoring (OM&M) Plan for the continued operation of the SSDS to minimize the potential for soil vapor intrusion

to occur in the on-site building. The SMP will also indicate that for any future buildings to be built on the site, a soil vapor investigation will be performed, or a soil vapor mitigation system installed, to address potential future SVI issues. The SMP will include the requirement to monitor whether there is a change in ownership of the adjacent property currently owned by The Brannock Device Company, located at 116 Luther Avenue. If a change in ownership occurs the current owner will need to be notified of the environmental conditions of the 110 Luther Avenue Site and afforded the option to evaluate the potential for soil vapor intrusion into the building.

The EE will require the on-going annual certification, unless otherwise provided in writing by the NYSDEC, of the engineering controls effectiveness. The annual certification will be signed by a NYS licensed professional engineer, or by a qualified environmental professional, as approved by the NYSDEC.

Specifically the Site Management Plan is required to include the following:

a. an Institutional and Engineering Control Plan that identifies all use restrictions and engineering controls for the site and details the steps and media-specific requirements necessary to ensure the institutional and/or engineering controls remain in place and effective. This plan will include, but may not be limited to:

i. an Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination;
ii. descriptions of the provisions of the environmental easement including any land use, and groundwater use restrictions;
iii. a provision for evaluation of the potential for soil vapor intrusion for any existing and new buildings developed on the site, including provision for implementing actions recommended to address exposures related to soil vapor intrusion.
iv. provisions for the management and inspection of the identified engineering controls;
v. maintaining site access controls and Department notification; and

vi. the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls;

b. A Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:

i. monitoring of groundwater to assess the performance and effectiveness of the remedy;

ii. a schedule of monitoring and frequency of submittals to the Department;

iii. monitoring for vapor intrusion for any buildings occupied or developed on the site, as may be required pursuant for item a.iii. above.

c. An Operation and Maintenance Plan to ensure continued operation, maintenance, monitoring, inspection, and reporting of for any mechanical or physical components of the remedy. The plan includes, but is not limited to:

i. compliance monitoring of treatment systems to ensure proper O and M as well as providing the data for any necessary permit or permit equivalent reporting;

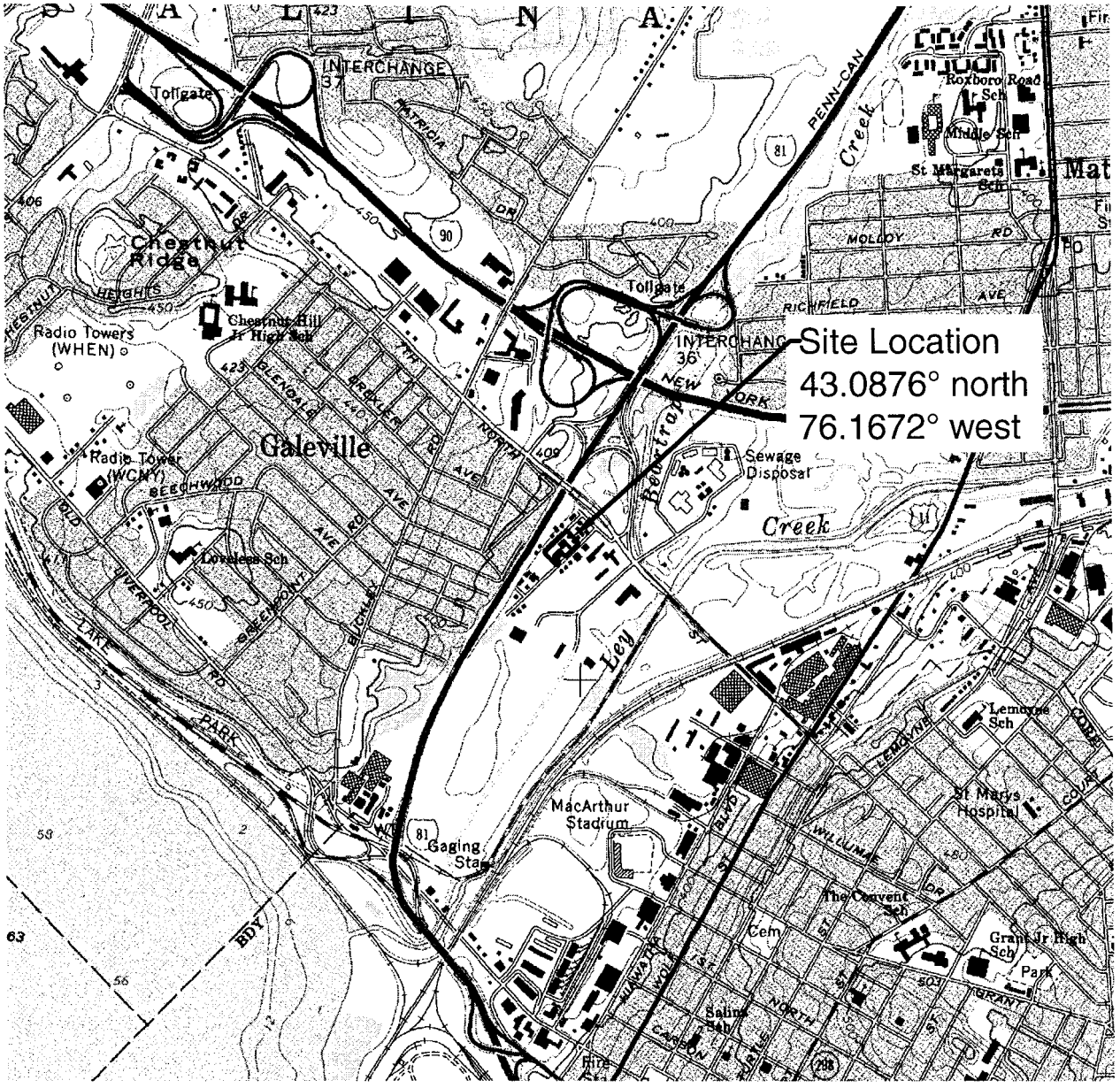
ii. maintaining site access controls and Department notification; and

iii. providing the Department access to the site and O and M records.

SECTION 8 - PROJECT SCHEDULE

The overall project schedule is to complete the remedial action and obtain a Certificate of Completion by December 31, 2011. Syracuse Label is currently expanding their operations and will need to have the remedial activities complete to accommodate the operational needs of the business. Based on this overall goal, a project schedule has been developed. Figure 8-1 presents the Project Schedule

FIGURES



S&W Redevelopment of North America, LLC. Syracuse, New York DATE: 5/2011 JOB No.: N9013	110 Luther Ave. Site (BCP Site #C734118) Remedial Work Plan 110 Luther Ave., Liverpool Onondaga County, New York Figure 1–1 Site Location Map

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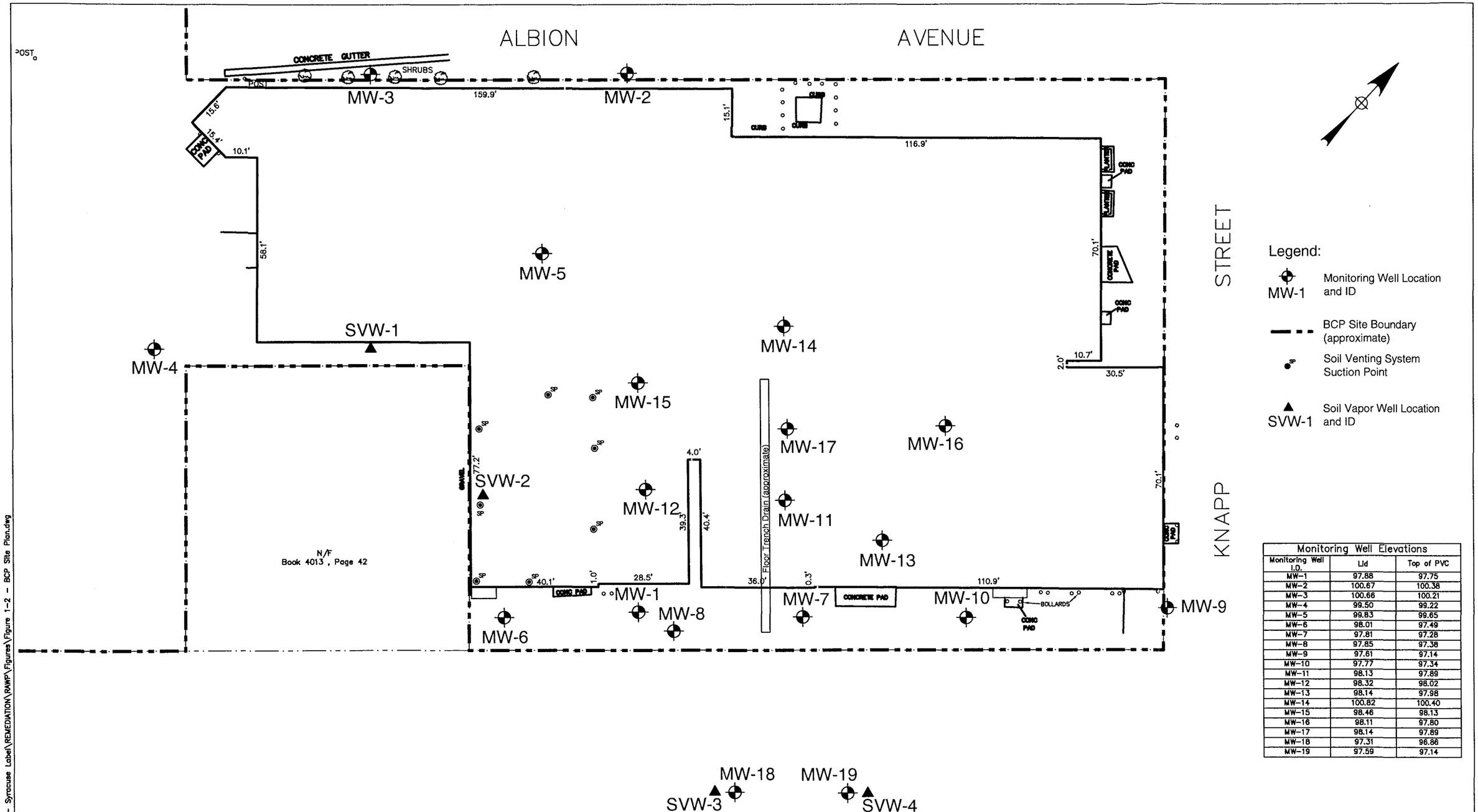

Monitoring Well Elevations		
Monitoring Well I.D.	Lid	Top of PVC
MW-1	97.88	97.75
MW-2	100.67	100.38
MW-3	100.66	100.21
MW-4	99.50	99.22
MW-5	99.83	99.65
MW-6	98.01	97.49
MW-7	97.81	97.28
MW-8	97.85	97.38
MW-9	97.61	97.14
MW-10	97.77	97.34
MW-11	98.13	97.89
MW-12	98.32	98.02
MW-13	98.14	97.98
MW-14	100.82	100.40
MW-15	98.46	98.13
MW-16	98.11	97.80
MW-17	98.14	97.89
MW-18	97.31	96.86
MW-19	97.59	97.14

Features based on site survey by Ianuzi & Romans, P.C. March, 2010 and November, 2010

S&W Redevelopment
of North America, LLC.

Syracuse, NY

DATE: 5/2011 JOB No: N9013

110 Luther Ave. Site (BCP Site #C734118)
Remedial Work Plan
110 Luther Ave., Liverpool
Onondaga County, New York

Figure 1-2
BCP Site Plan

X-REF: NAMES?
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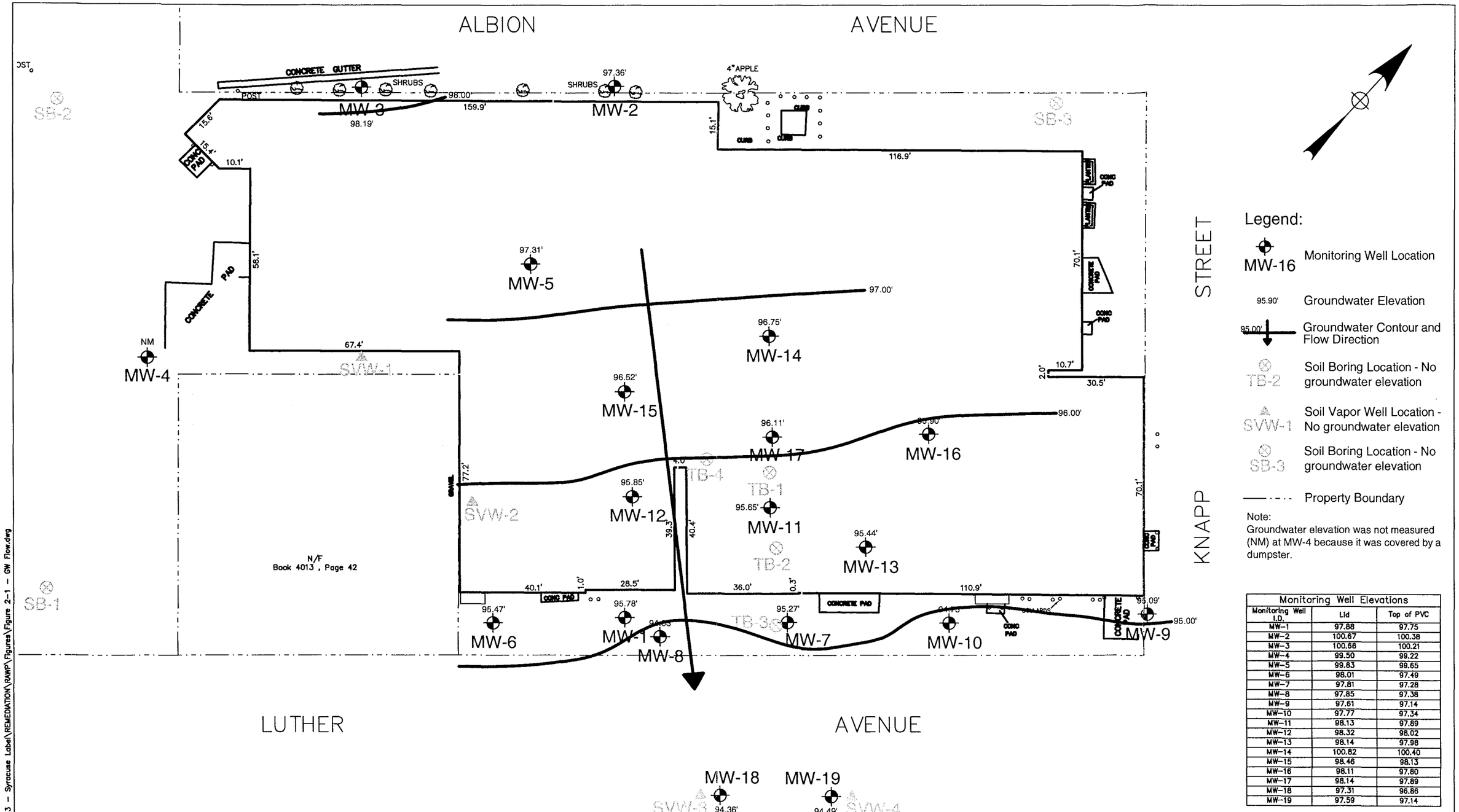

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MW-6	98.01	97.49
MW-7	97.81	97.28
MW-8	97.85	97.38
MW-9	97.61	97.14
MW-10	97.77	97.34
MW-11	98.13	97.89
MW-12	98.32	98.02
MW-13	98.14	97.98
MW-14	100.82	100.40
MW-15	98.46	98.13
MW-16	98.11	97.80
MW-17	98.14	97.89
MW-18	97.31	96.86
MW-19	97.59	97.14

Features based on site survey by Ianuzi & Romans, P.C. March, 2010 and November, 2010

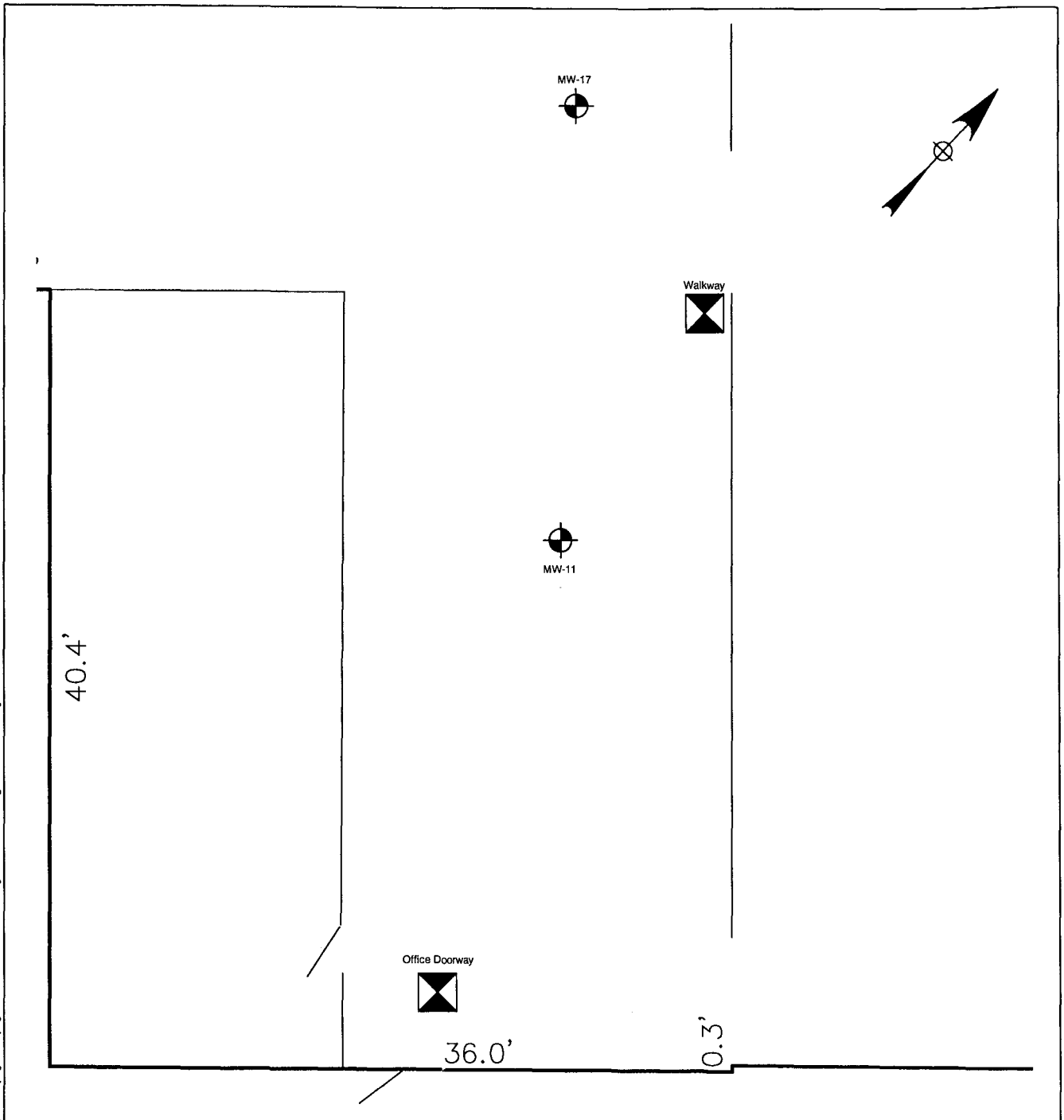
S&W Redevelopment
of North America, LLC.
Syracuse, NY

DATE: 5/2011 JOB No: N9013

110 Luther Ave. Site (BCP Site #C734118)
Remedial Work Plan
110 Luther Ave., Liverpool
Onondaga County, New York

Figure 2-1
October 2010 Groundwater Flow

X-REF: NAMES?
2010/nov/syr/lem
J:\PROJECTS\N-xxxx\N9000\N0913 - Syracuse Label\REMEDIATION\RAWP\Figures\Figure 2-1 - GW Flow.dwg



Legend:

MW-11 Monitoring Well Location

Air Monitoring Station (approximate)

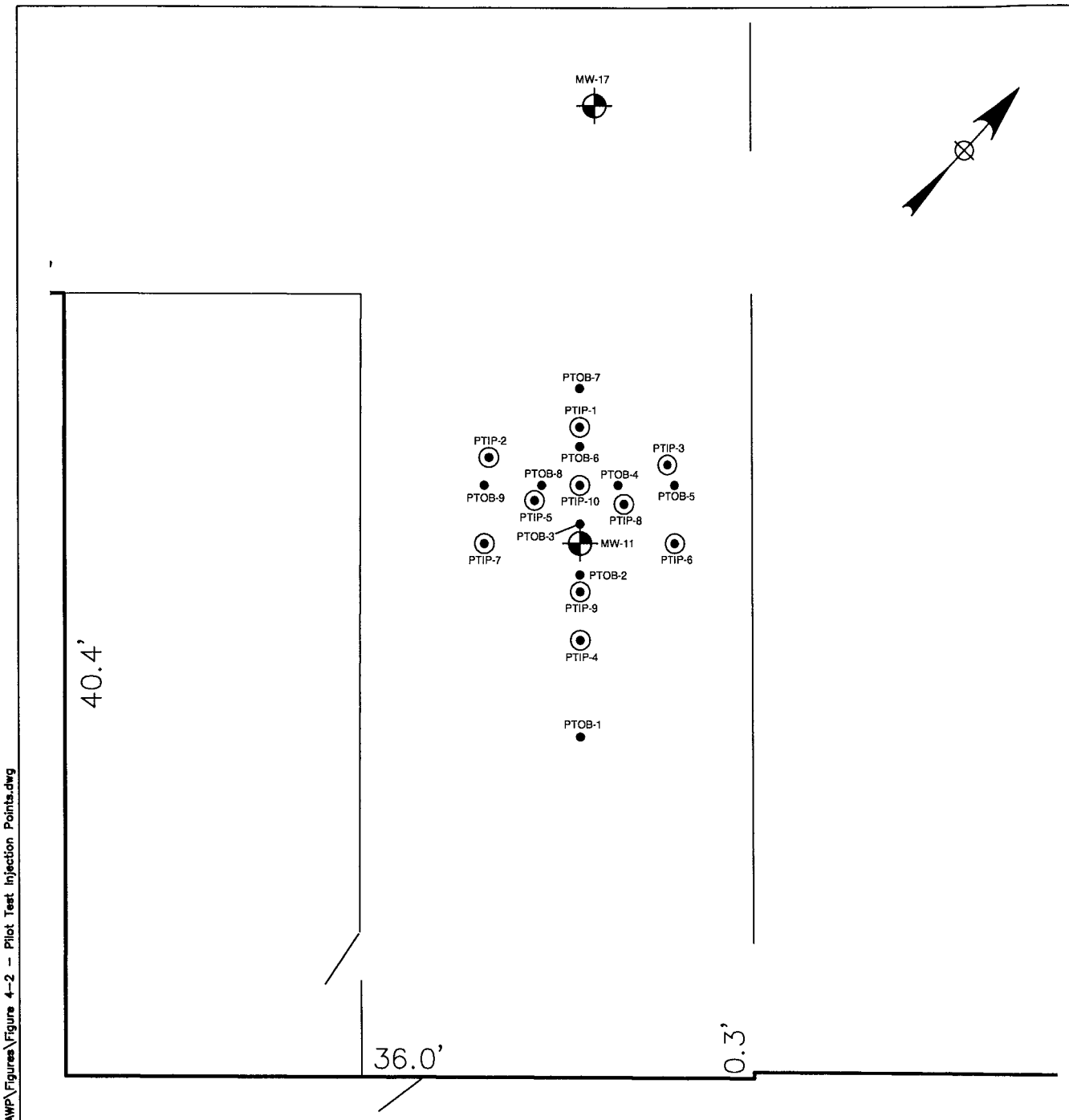
Scale in Feet

4 0 8 16

Note:
Features based on site survey by Ianuzi & Romans, P.C. March 2010 and November 2010.

S&W Redevelopment of North America, LLC. Syracuse, New York DATE: 5/2011 JOB No.: N9013	110 Luther Ave. Site (BCP Site #C734118) Remedial Work Plan 110 Luther Ave., Liverpool Onondaga County, New York Figure 4-1 Pilot Test Air Monitoring Station Locations

X-REF: NAMES?
2010/nov/syr/ilem
J:\PROJECTS\N-xxxx\N9000\N0913 - Syracuse Label\REMEDIATION\RAWP\Figures\Figure 4-1 - Community Air Monitoring Locations.dwg



Legend:

- MW-11 — Monitoring Well Location
- PTIP-1 — Pilot Test Injection Point (approximate)
- PTOB-1 — Pilot Test Observation Boring (approximate)

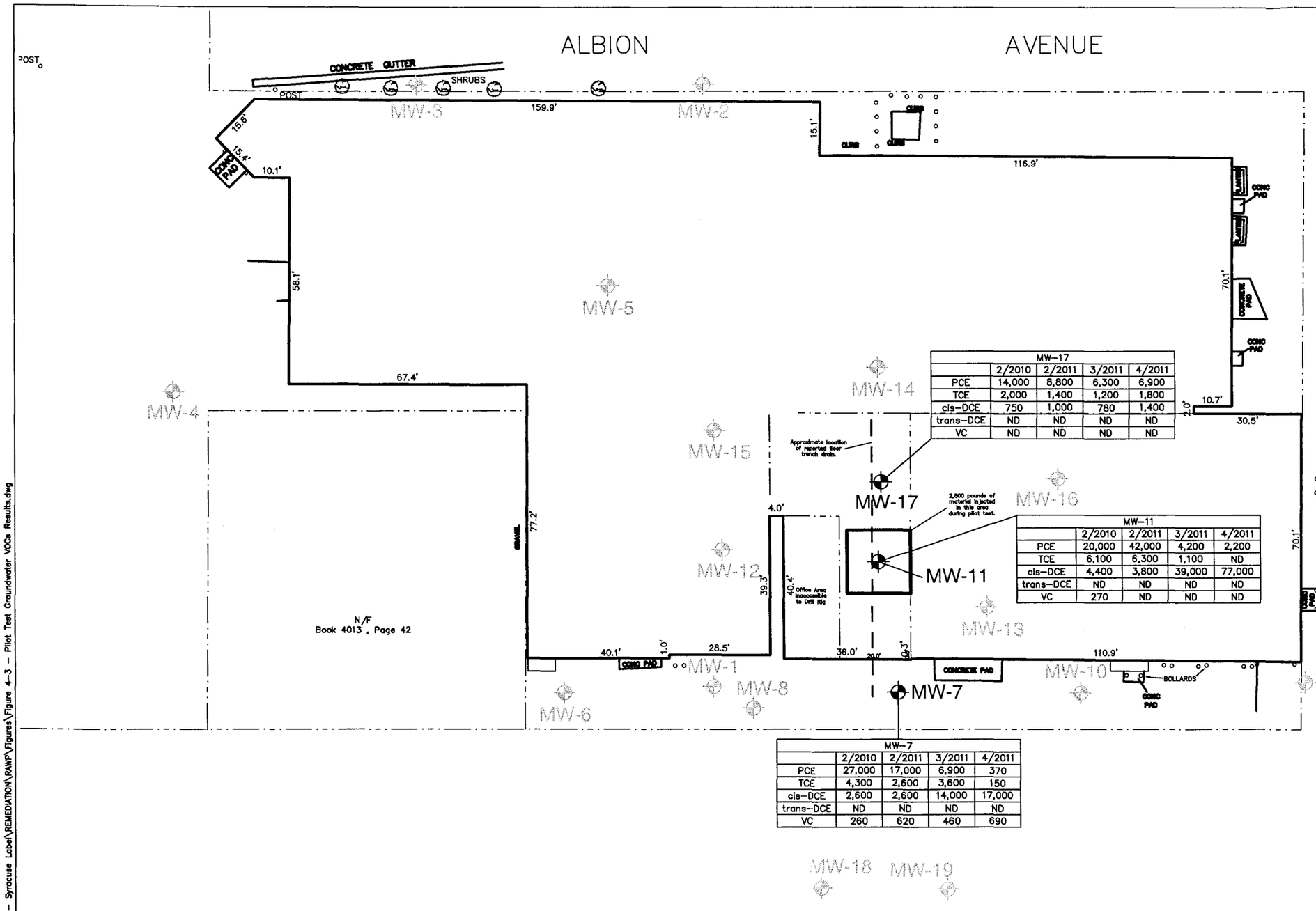
Scale in Feet

4 0 8 16

Note:
Features based on site survey by Ianuzi & Romans, P.C. March 2010 and November 2010.

S&W Redevelopment of North America, LLC. Syracuse, New York DATE: 5/2011 JOB No.: N9013	110 Luther Ave. Site (BCP Site #C734118) Remedial Work Plan 110 Luther Ave., Liverpool Onondaga County, New York Figure 4–2 Pilot Test Injection Points

X-REF: NAMES?
J:\PROJECTS\N-xxxx\N9000\N0913 - Syracuse Label\REMEDIATION\RAWP\Figures\Figure 4-2 - Pilot Test Injection Points.dwg
2010/nov/syr/iem



MW-17				
	2/2010	2/2011	3/2011	4/2011
PCE	14,000	8,800	6,300	6,900
TCE	2,000	1,400	1,200	1,800
cis-DCE	750	1,000	780	1,400
trans-DCE	ND	ND	ND	ND
VC	ND	ND	ND	ND

MW-11				
	2/2010	2/2011	3/2011	4/2011
PCE	20,000	42,000	4,200	2,200
TCE	6,100	6,300	1,100	ND
cis-DCE	4,400	3,800	39,000	77,000
trans-DCE	ND	ND	ND	ND
VC	270	ND	ND	ND

MW-7				
	2/2010	2/2011	3/2011	4/2011
PCE	27,000	17,000	6,900	370
TCE	4,300	2,600	3,600	150
cis-DCE	2,600	2,600	14,000	17,000
trans-DCE	ND	ND	ND	ND
VC	260	620	460	690

Legend:

- MW-11 — Monitoring Well Location and ID Used for pilot test monitoring)
- Monitoring Well ID / Date Sampled / Analyte / Concentration (ug/L) — Pilot Test Groundwater Monitoring Laboratory Results
- Pilot Test Injection Area
- MW-10 — Monitoring Well Location and ID (not used for pilot test monitoring)

Notes:

ND - Non-Detect

PCE - Tetrachloroethene
TCE - Trichloroethene
cis-DCE - cis-1,2-Dichloroethene
trans-DCE - trans-1,2-Dichloroethene
VC - Vinyl chloride

Analyte	Class GA Standard
PCE	5 ug/L
TCE	5 ug/L
cis-DCE	5 ug/L
trans-DCE	5 ug/L
VC	2 ug/L

2/2010 - Historic data from RI
2/2011 - Pre-Pilot test data
3/2011 - 30 days post-pilot test data
4/2011 - 60 days post-pilot test data

Monitoring Well Elevations		
Monitoring Well I.D.	Lid	Top of PVC
MW-1	97.88	97.75
MW-2	100.67	100.38
MW-3	100.66	100.21
MW-4	99.50	99.22
MW-5	99.83	99.65
MW-6	98.01	97.49
MW-7	97.81	97.28
MW-8	97.85	97.38
MW-9	97.61	97.14
MW-10	97.77	97.34
MW-11	98.13	97.89
MW-12	98.32	98.02
MW-13	98.14	97.98
MW-14	100.82	100.40
MW-15	98.46	98.13
MW-16	98.11	97.80
MW-17	98.14	97.89
MW-18	97.31	96.86
MW-19	97.59	97.14

Scale in Feet
15 0 30 60

Features based on site survey by Ianuzi & Romans, P.C. March, 2010 and November, 2010

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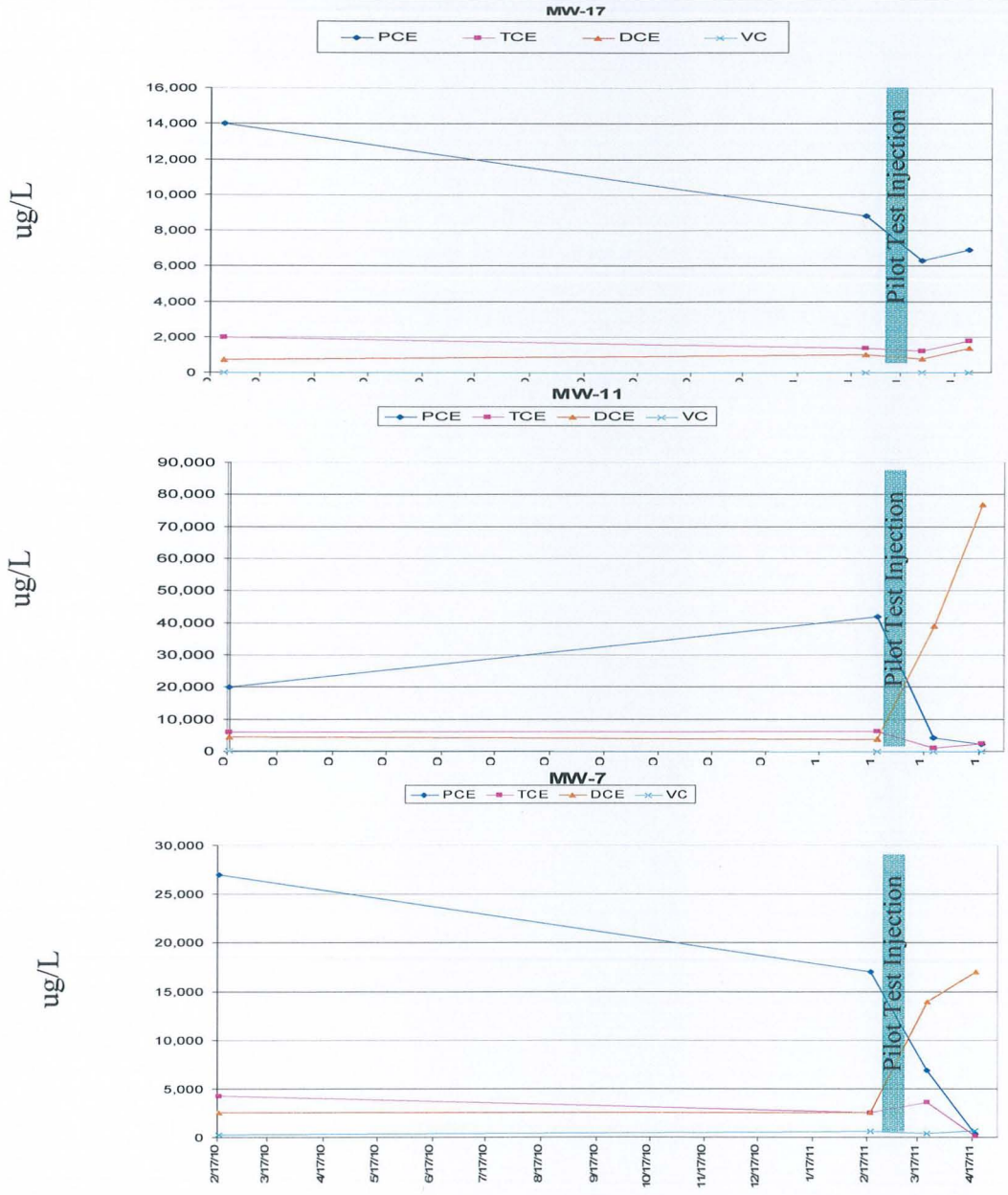
110 Luther Ave. Site (BCP Site #C734118)
Remedial Work Plan
110 Luther Ave., Liverpool
Onondaga County, New York

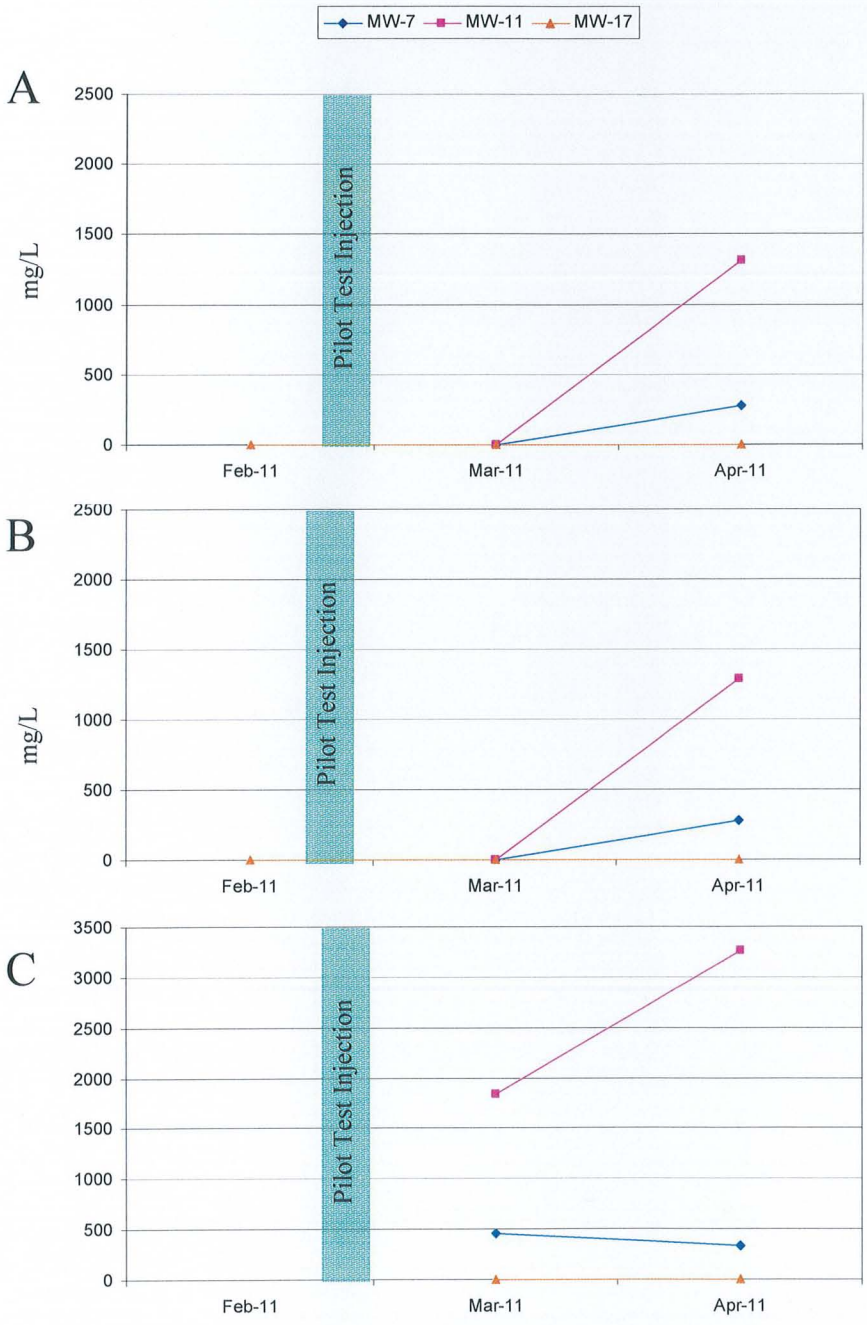
Figure 4-3
Pilot Test Groundwater VOCs Results

X-REF: NAMES?
2010/nov/dyr/lem
J:\PROJECTS\N-xxxx\N9000\N9013 - Syracuse Label\REMEDIATION\RAWP\Figures\Figure 4-3 - Pilot Test Groundwater VOCs Results.dwg



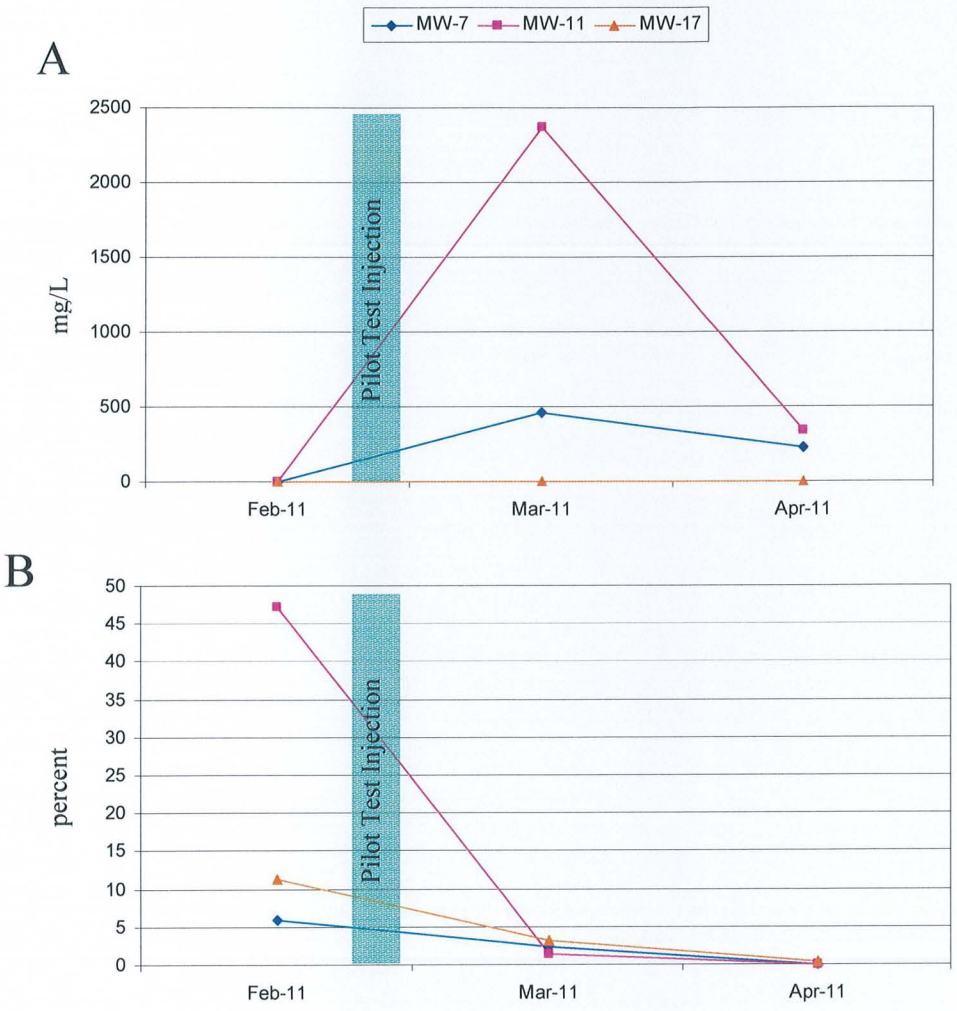
Graphs depict "natural" reductive dechlorinization conditions that exist at the site (MW-17), and the conversion of PCE to DCE initiated by the pilot test injection (MW-11 and MW-7).

S&W Redevelopment of North America, LLC Syracuse, NY	110 Luther Ave. Site (BCP Site #C734118) Remedial Work Plan 110 Luther Ave, Liverpool Onondaga County, New York
DATE: 5/2011 JOB No: N9013	Figure 4-4 Pilot Test Groundwater VOCs Graphs



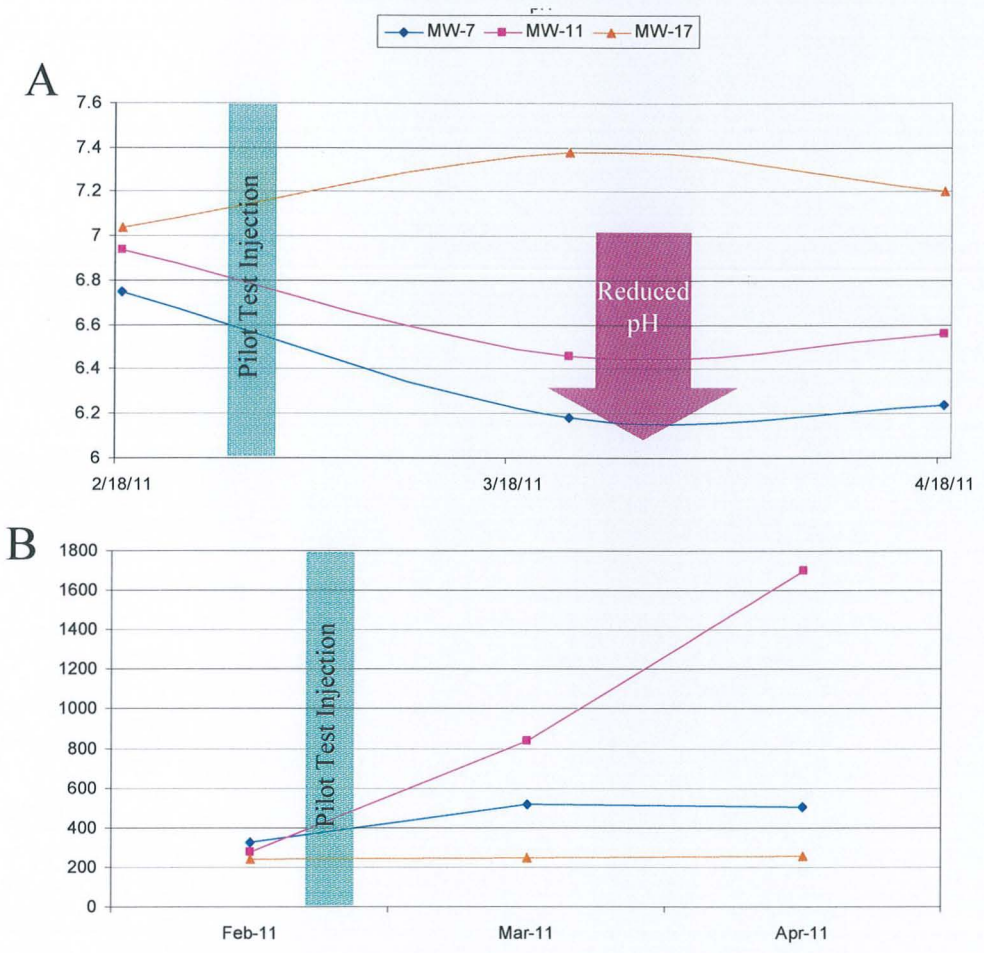
Graphs depict total organic carbon (A), dissolved organic carbon (B), and total volatile fatty acids (C) concentrations in samples. Data indicate increase concentrations in MW-7 and MW-11 following pilot test injection. Volatile fatty acid results were not reported by the laboratory for the February 2011 monitoring event.

S&W Redevelopment of North America, LLC Syracuse, NY	110 Luther Ave. Site (BCP Site #C734118) Remedial Work Plan 110 Luther Ave, Liverpool Onondaga County, New York
DATE: 5/2011 JOB No: N9013	Figure 4-5A Pilot Test Groundwater Indicator Parameters Graphs: TOC, DOC, and VFAs



Graphs depict Biological Oxygen Demand (A), and dissolved oxygen (B) concentrations. Biological oxygen demand increases in wells MW-7 and MW-11 following pilot test injection as a result of increased microbial activity. Dissolved oxygen levels decrease (B) as groundwater approaches anoxic conditions, biological oxygen demand decreases as anaerobic microbes die off.

S&W Redevelopment of North America, LLC Syracuse, NY	110 Luther Ave. Site (BCP Site #C734118) Remedial Work Plan 110 Luther Ave, Liverpool Onondaga County, New York
DATE: 5/2011 JOB No: N9013	Figure 4-5B Pilot Test Groundwater Indicator Parameters Graphs: BOD and DO



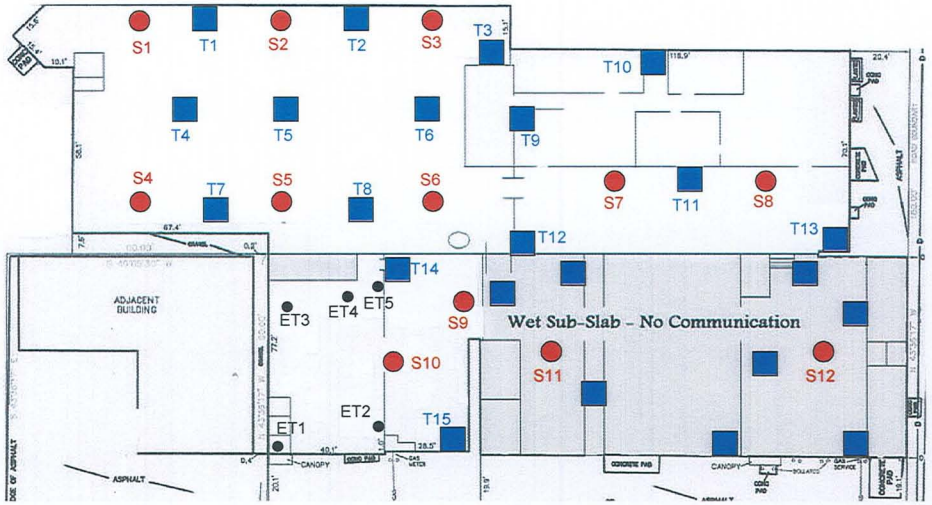
Graphs depict pH (A) and alkalinity (B) versus time. Following pilot test injections, pH is reduced in wells MW-7 and MW-11 due to increased carbon dioxide released as a result of increased aerobic microbe respiration. The reduction in pH causes dissolution of carbonate minerals which increases alkalinity, buffering pH.

S&W Redevelopment of North America, LLC Syracuse, NY	110 Luther Ave. Site (BCP Site #C734118) Remedial Work Plan 110 Luther Ave, Liverpool Onondaga County, New York
DATE: 5/2011 JOB No: N9013	Figure 4-5C Pilot Test Groundwater Indicator Parameters Graphs: pH and Alkalinity

Communication Test Suction Hole (Approximate)

Communication Test Observation (Test) Hole (Approximate)

Existing Communication Test Observation (Test) Hole (Approximate)



Note:
Communication observation (test) holes in grayed area are not number because the sub-slab was found to be wet, which meant that no communication testing could be performed.

SCALE in FEET
15 0 30 60

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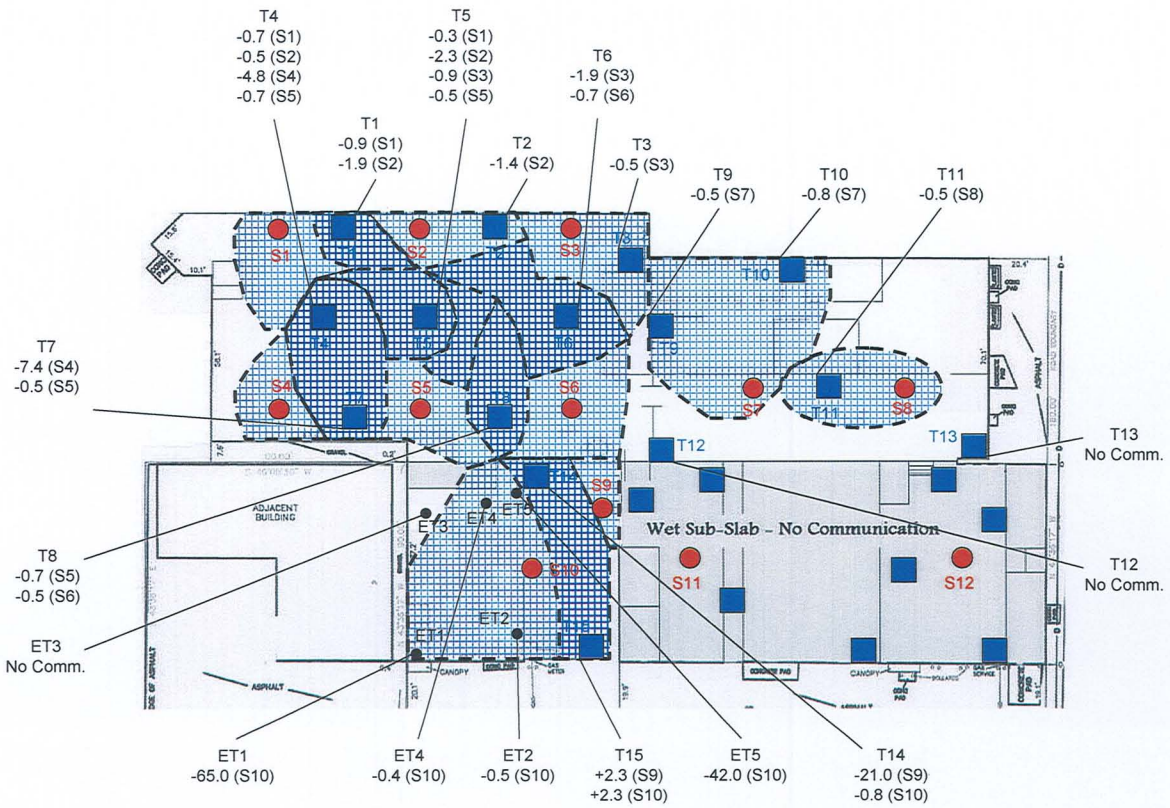
110 Luther Ave. Site (BCP Site #C734118)
Remedial Work Plan
110 Luther Ave., Liverpool
Onondaga County, New York

Figure 4-6
SSDS Communication Test Locations



Communication Test Suction Hole (Approximate)

Communication Test Observation (Test) Hole (Approximate)

Existing Communication Test Observation (Test) Hole (Approximate)

T12 ← Test Hole ID
-0.2 (S2) ← Suction Hole That Produced Pressure Reading
Pressure Reading (in Pascals)

-0.5 Pascals (Pa) = -0.002 inches Water Column (inWC)

Indicates approximate measurable reach of negative pressure field produced during communication test at specified suction holes. Darker coloration indicates estimated overlap of pressure fields from multiple suction holes.

Note:
Communication test observation (test) holes in grayed area are not number because the sub-slab was found to be wet, which meant that no communication testing could be performed.

SCALE in FEET
15 0 30 60

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of North America, LLC
Syracuse, NY

DATE: 5/2011 JOB No: N9013

110 Luther Ave. Site (BCP Site #C734118)
Remedial Work Plan
110 Luther Ave., Liverpool
Onondaga County, New York

Figure 4-7
SSDS Communication Test Results

ALBION AVENUE

KNAPP STREET

POST

CONCRETE GUTTER

SHRUBS

POST

MW-3

MW-3		
Analyte	Concentration (ug/L)	
	7/1998	12/2007
	NA	ND

MW-2

MW-2			
Analyte	Concentration (ug/L)		
	7/1998	12/2007	2/2010
PCE	NA	ND	22
Xylenes	5.5	NA	ND

MW-5

MW-5		
Analyte	Concentration (ug/L)	
	1/2008	2/2010
	ND	ND

MW-11

MW-11			
Analyte	Concentration (ug/L)		
	3/2008	2/2010	2/2011
PCE	14,000	20,000	42,000
TCE	2,400	6,100	6,300
cis-DCE	ND	4,400	3,800
VC	ND	270	ND
MC	ND	110	NA

MW-4

MW-4		
Analyte	Concentration (ug/L)	
	7/1998	12/2007
	NA	ND

MW-15

MW-15	
Analyte	Concentration (ug/L)
	4/2008
	ND

MW-14

MW-14	
Analyte	Concentration (ug/L)
	4/2008
	ND

MW-17

MW-17		
Analyte	Concentration (ug/L)	
	2/2010	2/2011
PCE	14,000	8,800
TCE	2,000	1,400
cis-DCE	750	1,000
Toluene	140	NA
MC	87	NA

MW-16

MW-16		
Analyte	Concentration (ug/L)	
	4/2008	2/2010
cis-DCE	ND	50
VC	2.5	2.3

MW-12

MW-12		
Analyte	Concentration (ug/L)	
	3/2008	2/2010
PCE	1,200	220
TCE	280	79
cis-DCE	ND	670
VC	ND	18
MC	ND	8.6

MW-13

MW-13		
Analyte	Concentration (ug/L)	
	3/2008	2/2010
PCE	900	410
TCE	470	600
cis-DCE	ND	780
VC	ND	29
Acetone	NA	83
trans-DCE	ND	12

MW-6

MW-6	
Analyte	Concentration (ug/L)
	1/2008
	NE

MW-1

MW-1			
Analyte	Concentration (ug/L)		
	7/1998	12/2007	2/2010
PCE	NA	170	60
TCE	NA	NA	39
cis-DCE	NA	NA	150
VC	NA	NA	33

MW-8

MW-8		
Analyte	Concentration (ug/L)	
	1/2008	2/2010
PCE	6,200	3,900
TCE	920	860
cis-DCE	1,600	2,500
VC	290	250
MC	ND	21

MW-7

MW-7			
Analyte	Concentration (ug/L)		
	1/2008	2/2010	2/2011
PCE	14,000	27,000	17,000
TCE	1,700	4,300	2,600
cis-DCE	2,600	2,600	2,600
VC	560	260	620
MC	ND	170	NA

MW-9

MW-9		
Analyte	Concentration (ug/L)	
	3/2008	2/2010
	ND	ND

MW-10

MW-10	
Analyte	Concentration (ug/L)
	3/2008
VC	29

MW-18

MW-18	
Analyte	Concentration (ug/L)
	10/2010
VC	2.7
Xylenes	9.7

MW-19

MW-19	
Analyte	Concentration (ug/L)
	10/2010
EDC	2.8

MW-1 MW-2 MW-3 MW-4 MW-5 MW-6 MW-7 MW-8 MW-9 MW-10 MW-11 MW-12 MW-13 MW-14 MW-15 MW-16 MW-17 MW-18 MW-19

159.9' 15.6' 15.4' 10.1' 58.1' 67.4' 77.2' 15.1' 116.9' 70.1' 10.7' 2.0' 30.5' 4.0' 39.3' 40.4' Office Area Inaccessible to Drill Rig 70.1' 40.1' 1.0' 28.5' 18.0' 20.0' 110.9'

CONC PAD CONCRETE PAD CURB BOLLARDS

N/F
Book 4013 , Page 42

Scale in Feet

15 0 30 60

Features based on site survey by Ianuzi & Romans, P.C. March, 2010 and November, 2010

Legend:

MW-16 Monitoring Well Location

Monitoring Well ID	
Date Sampled	
Analyte	Concentration (ug/L)

Target Treatment Zone

Notes:

NA - Not Analyzed
ND - Non-Detect
NE - No Exceedances

PCE - Tetrachloroethene
TCE - Trichloroethene
cis-DCE - cis-1,2-Dichloroethene
VC - Vinyl chloride
trans-DCE - trans-1,2-Dichloroethene
MC - Methylene chloride
EDC - 1,2-Dichloroethane
1,1-DCA - 1,1-Dichloroethane

2/2011 sampling only including three wells for purposes of pilot test effectiveness monitoring.

Groundwater samples for VOC analysis were not collected from wells MW-3, -4, -6, -10, -14, and -15 during the February 2010 sampling event because previous results identified no exceedances or no detections.

Groundwater samples taken from wells MW-1 through MW-4 during the July 1998 sampling event were not analyzed for chlorinated VOCs.

Monitoring Well Elevations

Monitoring Well I.D.	Lid	Top of PVC
MW-1	97.88	97.75
MW-2	100.67	100.38
MW-3	100.66	100.21
MW-4	99.50	99.22
MW-5	99.83	99.65
MW-6	98.01	97.49
MW-7	97.81	97.28
MW-8	97.85	97.36
MW-9	97.61	97.14
MW-10	97.77	97.34
MW-11	98.13	97.89
MW-12	98.32	98.02
MW-13	98.14	97.98
MW-14	100.82	100.40
MW-15	98.46	98.13
MW-16	98.11	97.80
MW-17	98.14	97.89
MW-18	97.31	96.86
MW-19	97.59	97.14

S&W Redevelopment

of North America, LLC.

Syracuse, NY

DATE: 5/2011 JOB No: N9013

110 Luther Ave. Site (BCP Site #C734118)
Remedial Work Plan
110 Luther Ave., Liverpool
Onondaga County, New York

Figure 5-1 – Target Treatment Zone and Groundwater VOC Concentrations

X-REF: NAMES?
2010/nov/syr/lem
J:\PROJECTS\N-xxxx\N9000\N0913 - Syracuse Label\REMEDIATION\RAWP\Figures\Figure 5-1 - Target Treatment Zone and Groundwater VOC Concentrations.dwg

ALBION AVENUE

STREET

KNAPP

POST

CONCRETE GUTTER

SHRUBS

POST

MW-3

159.9'

MW-2

15.6'

15.4'

CONC PAD

10.1'

58.1'

15.1'

CURB

CURB

CURB

116.9'

LADDER

LADDER

CONC PAD

70.1'

CONCRETE PAD

CONC PAD

10.7'

2.0'

30.5'

MW-5

SVW-1

MW-4

MW-14

MW-15

MW-17

MW-16

4.0'

77.2'

GRAVEL

SVW-2

MW-12

39.3'

40.4'

Floor Trench Drain (approximate)

MW-11

MW-13

70.1'

CONC PAD

N/F
Book 4013, Page 42

40.1'

1.0'

28.5'

CONC PAD

MW-1

MW-8

36.0'

0.3'

MW-7

CONCRETE PAD

110.9'

MW-10

BOLLARDS

CONC PAD

MW-9

MW-6

MW-18

MW-19

SVW-3

SVW-4

Legend:

MW-11 — Monitoring Well Location and ID Used for Effectiveness Monitoring

BCP Site Boundary (approximate)

MW-3 — Monitoring Well Location and ID (not part of post-ISCR monitoring network)

SVW-1 — Soil Vapor Well Location and ID (not part of post-ISCR monitoring network)

Monitoring Well Elevations

Monitoring Well I.D.	Lid	Top of PVC
MW-1	97.88	97.75
MW-2	100.67	100.38
MW-3	100.66	100.21
MW-4	99.50	99.22
MW-5	99.83	99.65
MW-6	98.01	97.49
MW-7	97.81	97.28
MW-8	97.85	97.38
MW-9	97.61	97.14
MW-10	97.77	97.34
MW-11	98.13	97.89
MW-12	98.32	98.02
MW-13	98.14	97.98
MW-14	100.82	100.40
MW-15	98.46	98.13
MW-16	98.11	97.80
MW-17	98.14	97.89
MW-18	97.31	96.86
MW-19	97.59	97.14

Scale in Feet

15 0 30 60

Features based on site survey by Ianuzi & Romans, P.C. March, 2010 and November, 2010

S&W Redevelopment
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Syracuse, NY

DATE: 5/2011 JOB No: N9013

110 Luther Ave. Site (BCP Site #C734118)
Remedial Work Plan
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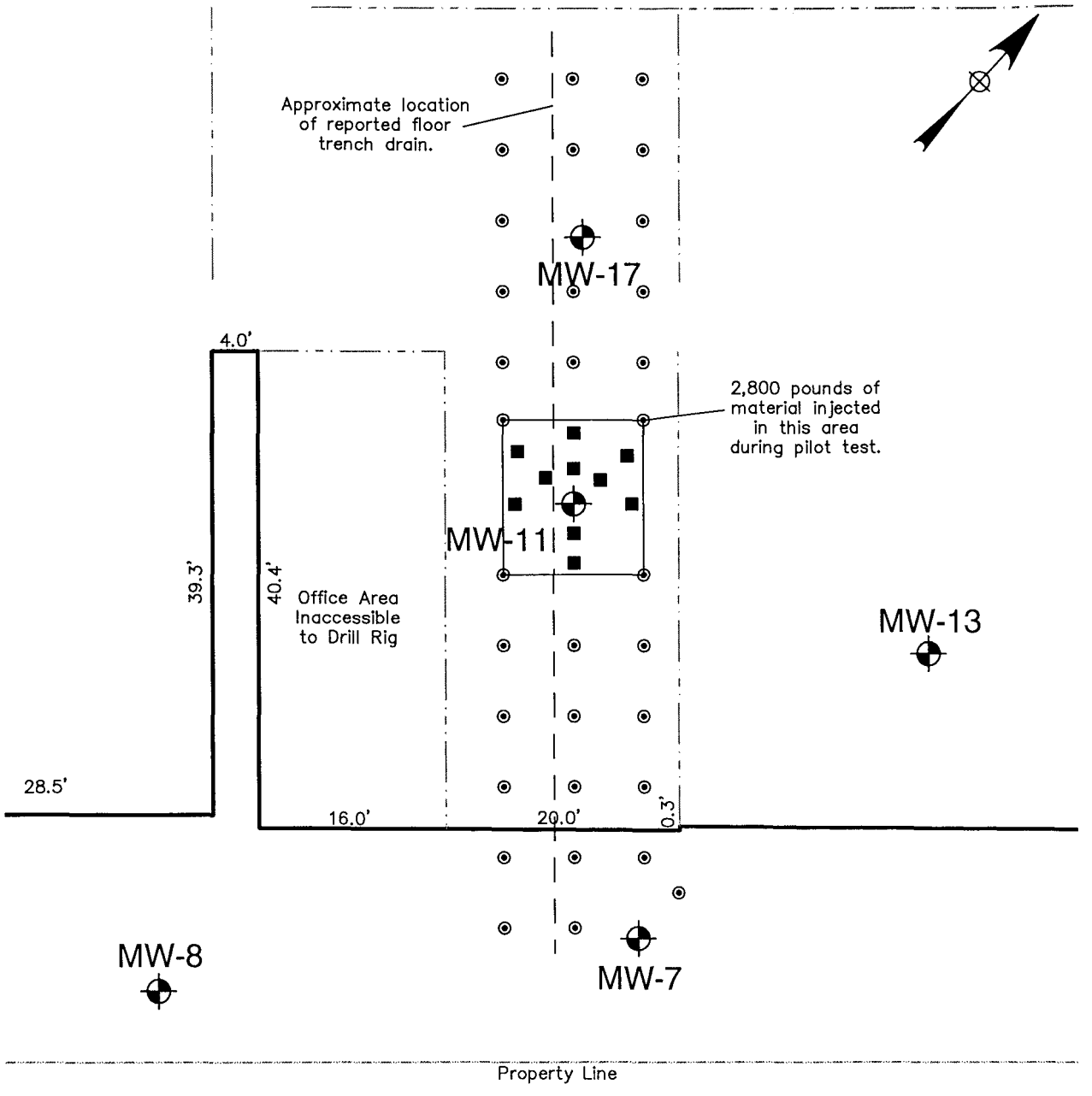
Figure 5-2
ISCR Effectiveness Monitoring Network

X-REF: NAMES?
2010/nov/arr/lem
J:\PROJECTS\N-xxxx\N9000\N9013 - Syracuse Label\REMEDIATION\RAWP\FINAL RAWP\Figures\Figure 5-2 - ISCR Effectiveness Monitoring Network.dwg



Scale in Feet

7 0 14 28

Note:
Features based on site survey by Ianuzi & Romans, P.C. March 2010 and November 2010.

Legend:

MW-11 — Monitoring Well Location and ID

Proposed Injection Location (6-foot grid)

Pilot-Test Injection Location

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DATE: 5/2011 JOB No.: N9013

110 Luther Ave. Site (BCP Site #C734118)
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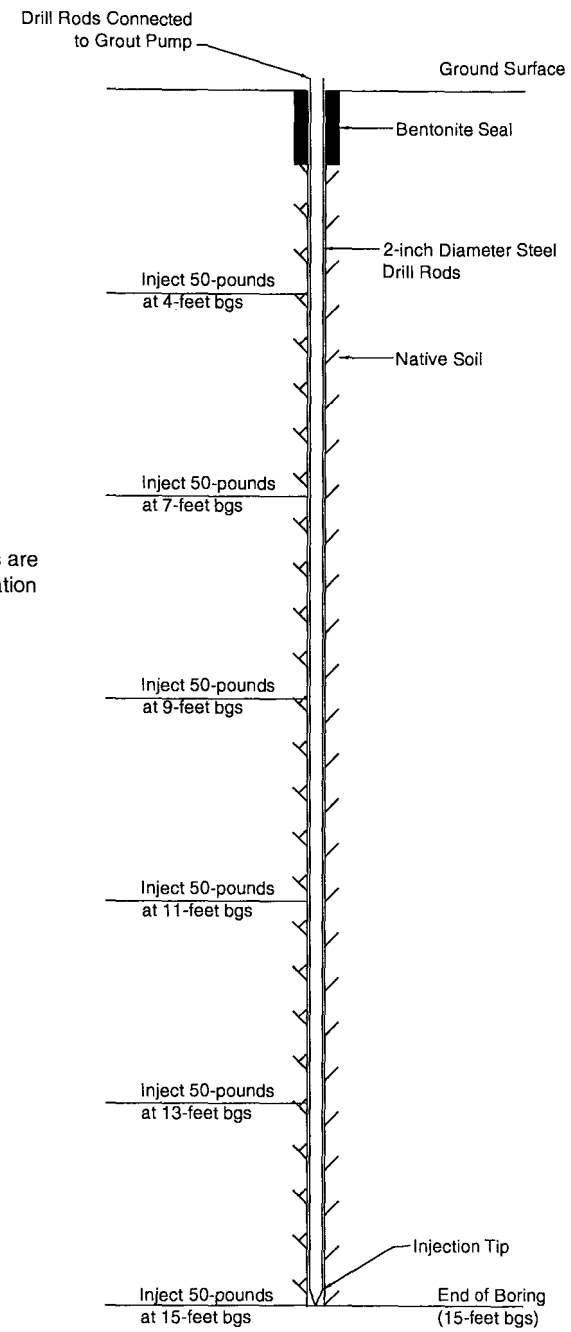
Figure 5-3
Proposed ISCR Injection Array

X-REF: NAMES?
J:\PROJECTS\N-xxxx\N9000\N0913 - Syracuse Label\REMEDIATION\RAWP\Figures\Figure 5-3 - Proposed ISCR Injection Array.dwg
2010/nav/syr/iam



Note:
Ground surface will be restored to pre-boring conditions once injection is complete.

Note:
Injections will occur as rods are being pulled from the formation

Note:
Idealized detail.
Actual injection boring subject to change due to regulatory and/or design requirements as well as field conditions/limitations.

Not to Scale

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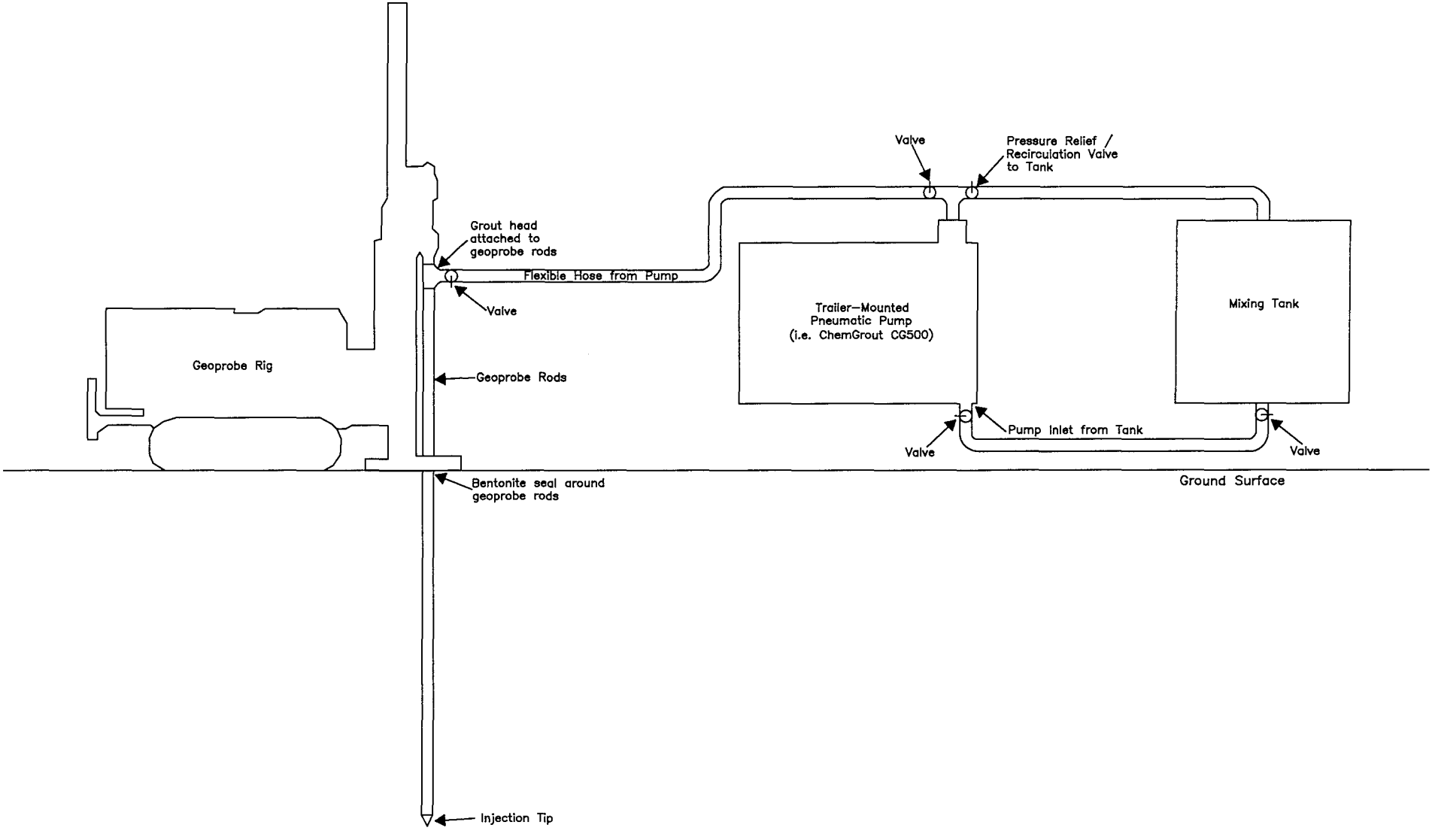
Syracuse, New York

DATE: 5/2011 JOB No.: N9013

110 Luther Ave. Site (BCP Site #C734118)
Remedial Work Plan
110 Luther Ave, Liverpool, Onondaga County, New York

Figure 5-4
Typical Injection Soil Boring

X-REF: NAMES?
J:\PROJECTS\N-xxxx\N9000\N0913 - Syracuse Label\REMEDIATION\RAWP\Figures\Figure 5-4 - Typical Injection Soil Boring.dwg
2011/apr/syr/lem



Conceptualized equipment layout based on description provided in Adventus EHC Direct Injection Installation Procedures.

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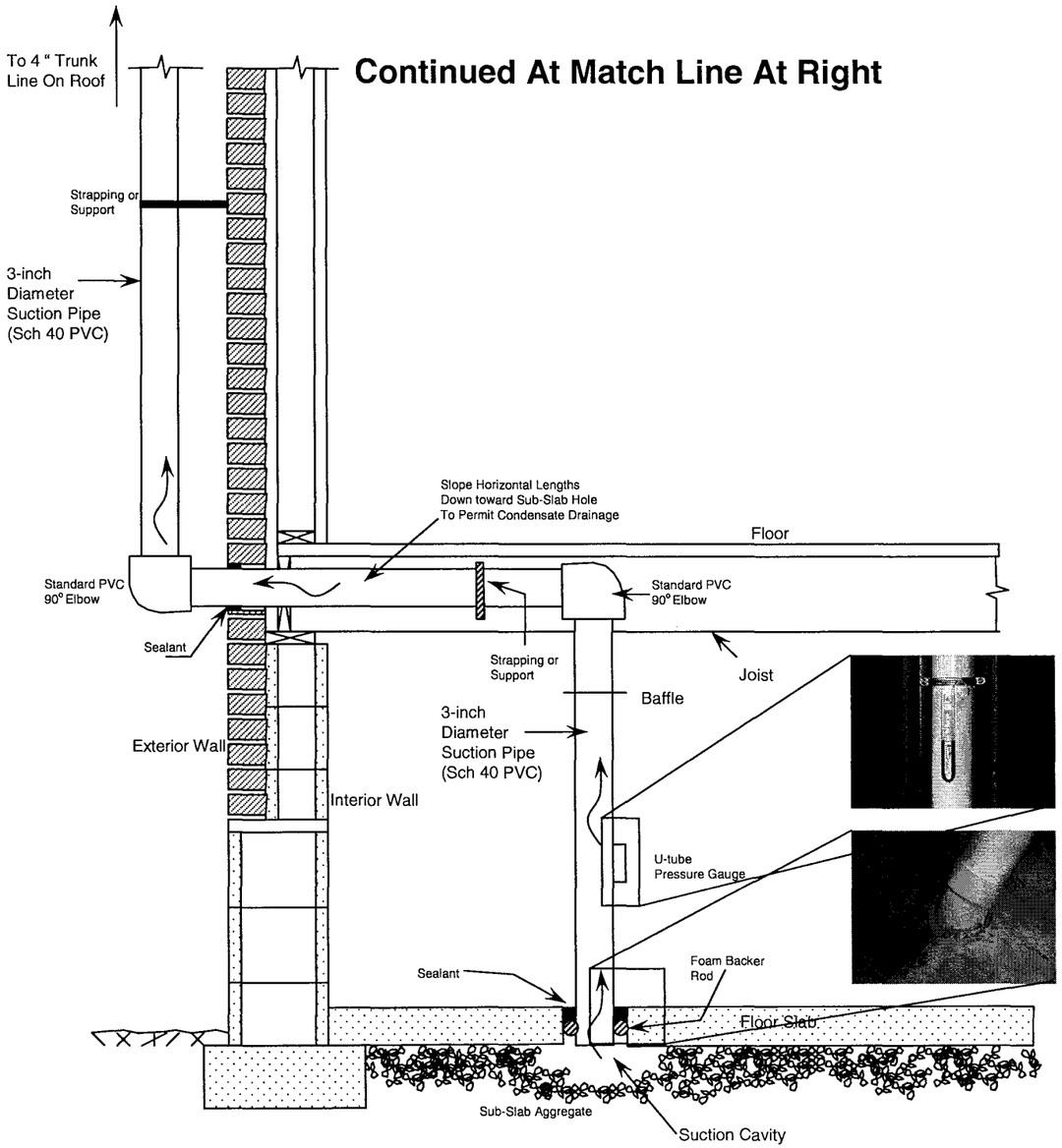
DATE: 5/2011 JOB No: N9013

110 Luther Ave. Site (BCP Site #C734118)
Remedial Work Plan
110 Luther Ave., Liverpool
Onondaga County, New York

Figure 5-5
Injection Equipment Schematic

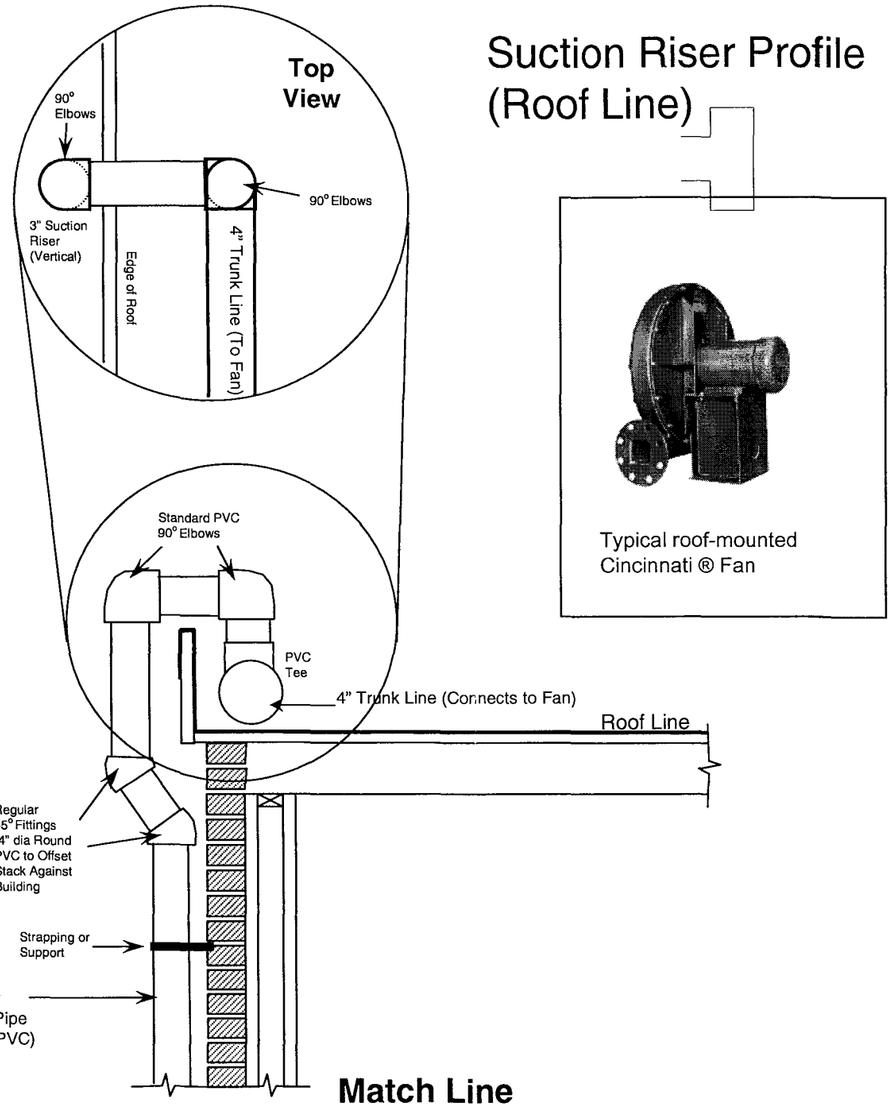
X-REF: NAMES?
2010/dec/syr/iem
J:\PROJECTS\N-xxxx\N9000\N0913 - Syracuse Label\REMEDIATION\RAWP\Figures\Figure 5-5 - Injection Equipment Schematic.dwg

Suction Riser Profile (Exterior Rise)



Continued At Match Line At Right

Suction Riser Profile (Roof Line)



Typical roof-mounted Cincinnati ® Fan

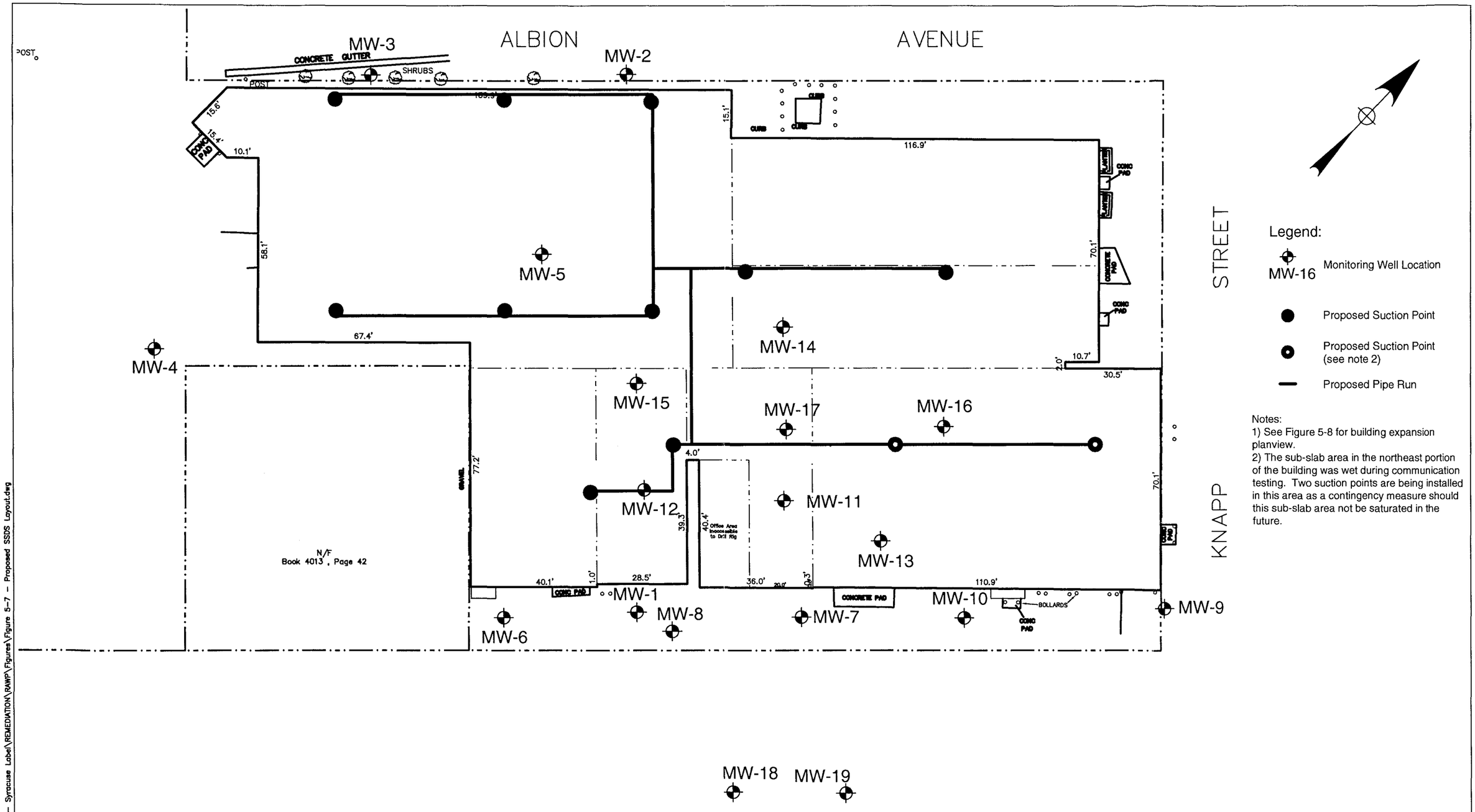
Match Line

S&W Redevelopment
of North America, LLC
Syracuse, NY

DATE: 5/2011 JOB No: N9013

110 Luther Ave. Site (BCP Site #C734118)
Remedial Work Plan
110 Luther Avenue, Liverpool
Onondaga County, New York

Figure 5-6
SSDS Design Details



Notes:
1) See Figure 5-8 for building expansion planview.
2) The sub-slab area in the northeast portion of the building was wet during communication testing. Two suction points are being installed in this area as a contingency measure should this sub-slab area not be saturated in the future.

Features based on site survey by Ianuzi & Romans, P.C. March, 2010 and November, 2010

S&W Redevelopment of North America, LLC. Syracuse, NY DATE: 5/2011 JOB No: N9013	110 Luther Ave. Site (BCP Site #C734118) Remedial Work Plan 110 Luther Ave., Liverpool Onondaga County, New York
	Figure 5-7 Proposed SSDS Layout

X-REF: NAMES?
2010/nov/syr/lem
J:\PROJECTS\N-xxxx\N9000\N0913 - Syracuse Label\REMEDIATION\RAWP\Figures\Figure 5-7 - Proposed SSDS Layout.dwg

ALBION AVENUE

15.1'

116.9'

70.1'

STREET

KNAPP

2.0'

10.7'

30.5'

Legend:

- SSDS Trunk Line
- Sub-Slab Depressurization System Sub-Slab Piping (approximate)
- Area of Building Expansion
- Property Boundary

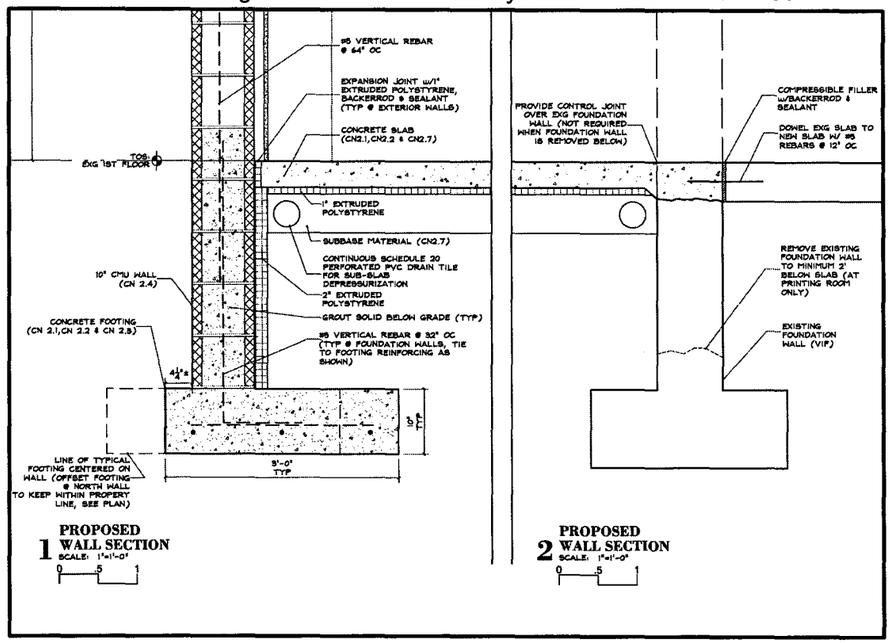
Notes:

Trunk line was extended to 3 feet above grade and capped.

Concrete slab will be poured around trunk line.

Trunk line of building expansion SSDS will be connected to SSDS installed in remainder of building at a later date.

SSDS Design Details from Harmony Architectural Associates



Scale in Feet

8 0 16 32

Features based on site survey by Ianuzi & Romans, P.C. March, 2010 and November, 2010

S&W Redevelopment of North America, LLC. Syracuse, NY DATE: 5/2011 JOB No: N9013	110 Luther Ave. Site (BCP Site #C734118) Remedial Work Plan 110 Luther Ave., Liverpool Onondaga County, New York
	Figure 5-8 Building Expansion SSDS Layout

X-REF: NAMES?
2010/nov/ayr/lem
J:\PROJECTS\N-xxxx\N9000\N0913 - Syracuse Label\REMEDIATION\RAWP\Figures\Figure 5-8 - Building Expansion SSDS.dwg

Sub-slab aggregate was removed so top of pipe would be at an elevation equal to bottom of slab.

Perforated PVC pipe was placed in sub-slab aggregate, wrapped with filter fabric, and aggregate was replaced around pipe.

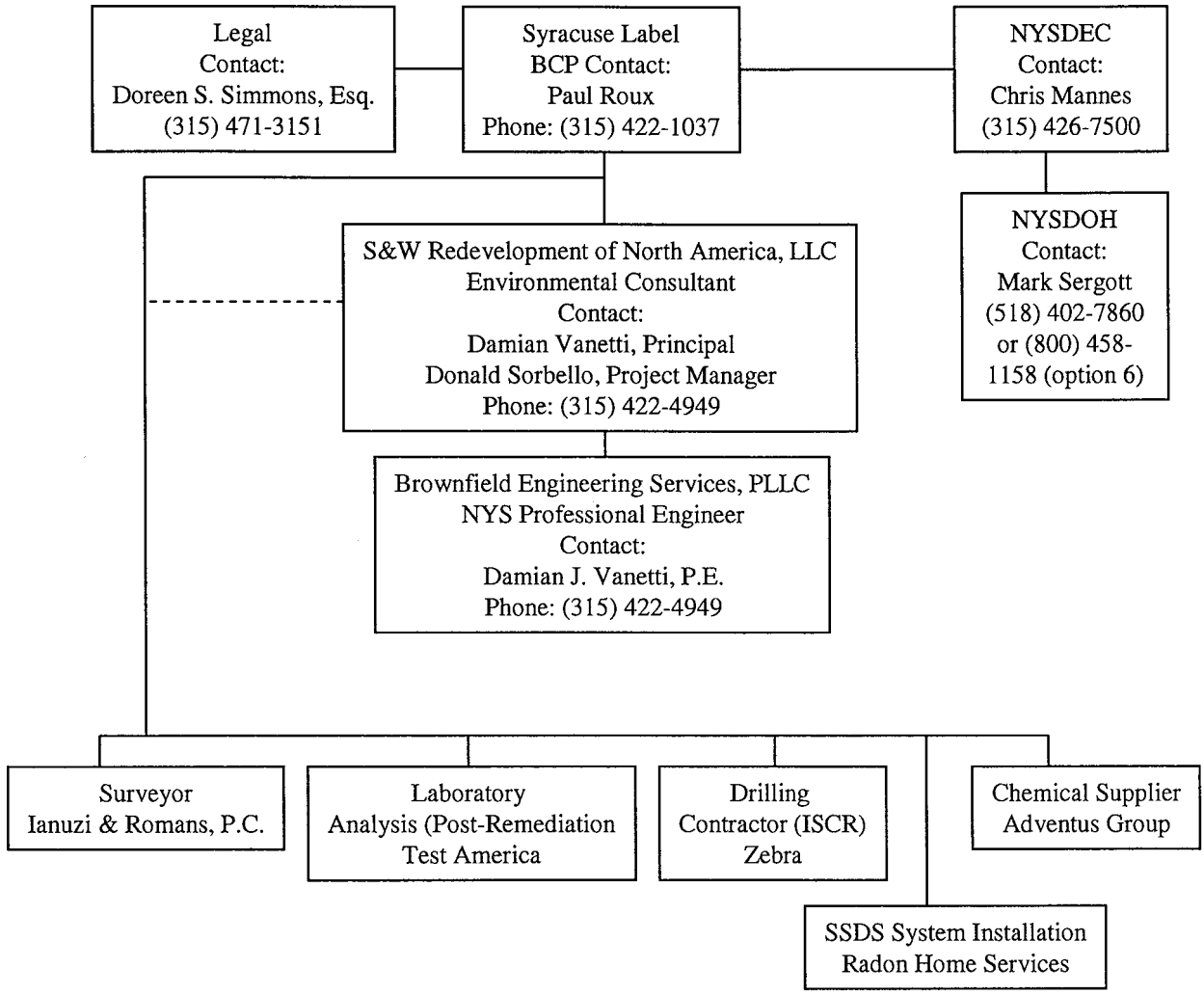
S&W Redevelopment of North America, LLC Syracuse, New York Date: 5/2011 Proj No: N9013	110 Luther Ave. Site (BCP Site #C734118) Remedial Work Plan 110 Luther Ave., Liverpool Onondaga County, New York Figure 5-9A Building Expansion SSDS Photos

Perforated PVC pipe ended in a 90 degree fitting, and a 3 foot, 4 inch diameter, PVC trunk line was left to be connected to the SSDS installed in the remainder of the building at a later date.

Note:
Larger diameter pipe is part of roof drain system.

S&W Redevelopment of North America, LLC Syracuse, New York Date: 5/2011 Proj No: N9013	110 Luther Ave. Site (BCP Site #C734118) Remedial Work Plan 110 Luther Ave., Liverpool Onondaga County, New York Figure 5-9B Building Expansion SSDS Photos

The following outline of project organization is provided. Following approval of the RWP, the project organization chart will be updated to include subcontractors that are selected for the remediation project, if necessary.



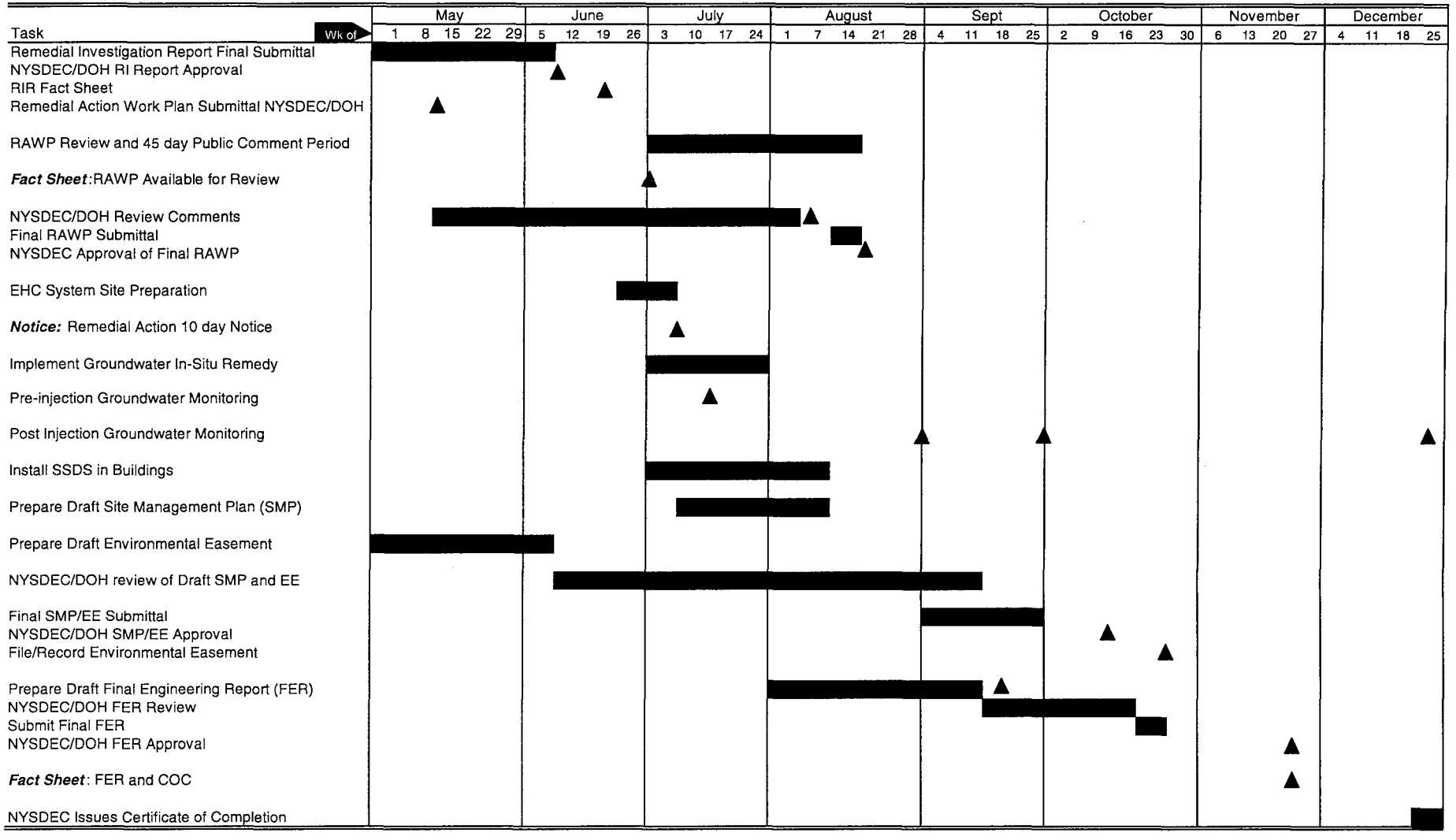
S&W Redevelopment
of North America, LLC
Syracuse, New York

Date: 5/2011 Proj No: N9013

110 Luther Ave. Site (BCP Site #C734118)
Remedial Work Plan
110 Luther Ave., Liverpool
Onondaga County, New York

Figure 6-1
Project Organization

Figure 8-1. BCP Project Schedule for Remediation and COC. 110 Luther Avenue BCP Site.



TABLES

Table 4-1: (Page 1 of 1) Pilot-Test Groundwater Samples, Analytical Results for VOCs, Remedial Work Plan, 110 Luther Ave, Syracuse Label.

Analyte	GW Std^ (ug/L)	Sample Identification															
		MW-7								MW-11							
Date Sampled		Historic Data		D.L.	Feb-11		D.L.	Mar-11	D.L.	Apr-11		D.L.	Historic Data		D.L.	Feb-11		D.L.	Mar-11	D.L.	Apr-11		D.L.
VOCs by EPA Method 8260B																						
Tetrachloroethene	5	27,000			17,000			6,900		370	J		20,000			42,000			4,200		2,200	J	
Trichloroethene	5	4,300			2,600			3,600		150	J		6,100			6,300			1,100			U	2,500
cis-1,2-dichloroethene	5	2,600			2,600			14,000		17,000			4,400			3,800			39,000		77,000		
trans-1,2-dichloroethene	5		U	1,000		U	1,000		U 500		U	1,000		U	500		U	2,500		U	1,000		U	2,500
Vinyl chloride	2	260	J		620	J		460	J	690	J		270	J			U	2,500		U	1,000		U	2,500

Analyte	GW Std^ (ug/L)	Sample Identification													
		MW-17								Duplicate					
Date Sampled		Historic Data		D.L.	Feb-11	D.L.	Mar-11	D.L.	Apr-11	D.L.	Feb-11 (MW-17)	D.L.	Mar-11 (MW-17)	D.L.	Apr-11 (MW-17)	D.L.
VOCs by EPA Method 8260B																
Tetrachloroethene	5	14,000			8,800		6,300		6,900		14,000		4,000		11,000	
Trichloroethene	5	2,000			1,400		1,200		1,800		2,700		1,000		2,000	
cis-1,2-dichloroethene	5	750			1,000		780		1,400		1,900		740		1,200	
trans-1,2-dichloroethene	5		U	500		U 500		U 200		U 250		U	1,000	U 200		U 500
Vinyl chloride	2		U	500		U 500		U 200		U 250		U	1,000	U 200		U 500

All values reported as ug/L

U - Analyzed for but Not Detected

J - Indicates an estimated value

D.L. - Detection Limit

Historic Data collected during the Remedial Investigation (Feb - 2010)

Feb-11 data collected prior to pilot test injection

Bold and boxed results indicate an exceedance of Groundwater Standards

^ - GW Std - Class GA Groundwater Quality Standard or Guidance Value from New York State Department of Environmental Conservation (NYSDEC) Division of Water Technical and Operational Guidance Series (June 1998).

Table 4-2: (Page 1 of 1) Pilot-Test Groundwater Samples, Analytical Results for Indicator Parameters, Remedial Work Plan, 110 Luther Ave, Syracuse Label.

Analyte	Sample Identification																							
	MW-7								MW-11								MW-17							
Date Sampled	Historic Data	Feb-11		D.L.	Mar-11		D.L.	Apr-11		D.L.	Historic Data	Feb-11		D.L.	Mar-11		D.L.	Apr-11		D.L.	Historic Data	Feb-11		D.L.
EPA Method 300																								
Units - mg/L																								
Nitrate as N	NS		U	0.1		U	0.1		U	0.1	NS		U	0.1		U	0.1	0.033	J		NS		U	0.1
Sulfate	NS	106			88.9			55.1			NS	107			40.1			100			NS	97.4		
Chloride	NS	325			280			277			NS	300			404			529			NS	193		
EPA Method SM5310C																								
Units - mg/L																								
Dissolved Organic Carbon - Quad	NS		U	1	280			174			NS		U	1	1,290			2,200			NS		U	1
Total Organic Carbon - Quad	NS		U	1	282			207			NS		U	1	1,310			2,280			NS		U	1
EPA Method 2320B																								
Units - mg/L																								
Alkalinity	NS	326			521			506			NS	281			837			1,700			NS	245		
EPA Method SM2340B																								
Units - mg/L																								
Hardness as Calcium Carbonate	NS	659			1,150			900			NS	701			1,240			1,740			NS	1,160		
EPA Method SM5210B																								
Units - mg/L																								
Biochemical Oxygen Demand	NS		U	2	464			>228.30			NS		U	2	>2367.00			337			NS		U	2
Volatile Fatty Acids by EPA Method AM23G																								
Units - mg/L																								
Acetic acid	NS	NS			240			240			NS	NS			870			1,700			NS	NS		
Butyric acid	NS	NS			100			53			NS	NS			690			1,200			NS	NS		
Hexanoic acid	NS	NS			9.8			8.1	M		NS	NS			16			57			NS	NS		
i-Hexanoic acid	NS	NS				U	0.5		U	0.05	NS	NS				U	0.5	1.8			NS	NS		
i-Pentanoic acid	NS	NS			3.8			3.6			NS	NS				U	1.5	44			NS	NS		
Lactic acid	NS	NS			39			0.22	J		NS	NS			100				U	10	NS	NS		
Pentanoic acid	NS	NS			4.3			1.5			NS	NS			7.2			24			NS	NS		
Propionic acid	NS	NS			61			22			NS	NS			130			200			NS	NS		
Pyruvic acid	NS	NS			3.4			2.2			NS	NS			30			42			NS	NS		
EPA Method RSK-175																								
Units - ug/L																								
Ethane	NS	4.7			8.0			4			NS		U	4		U	4		U	4	NS		U	4
Ethylene	NS	9.9			19			11			NS	5.2				U	3		U	3	NS		U	3
Methane	NS	240			350			160			NS	46			4.8			8.7			NS	11		
EPA Method 6010B																								
Units - ug/L																								
Calcium	181,000	176,000			313,000			253,000			170,000	189,000			361,000			515,000			NS	295,000		
Iron	2,800	3,270			48,300			19,700			34,900	37,300			298,000			459,000			NS	50,000		
Magnesium	56,200	53,200			89,400			65,000			50,800	55,700			82,300			111,000			NS	102,000		
Manganese	150	314			2,270			1,130			233	359			2,270			2,510			NS	2,080		

Analyte	Duplicate							
	Feb-11 (MW-17)			Mar-11 (MW-17)			Apr-11 (MW-17)	
Date Sampled			D.L.			D.L.		D.L.
EPA Method 300								
Units - mg/L								
Nitrate as N		U	0.1		U	0.1		U 0.1
Sulfate	97.8			83.2			99.8	
Chloride	196			209			222	
EPA Method SM5310C								
Units - mg/L								
Dissolved Organic Carbon - Quad		U	1		U	1		U 1
Total Organic Carbon - Quad		U	1		U	1		U 1
EPA Method 2320B								
Units - mg/L								
Alkalinity	251			248			257	
EPA Method SM2340B								
Units - mg/L								
Hardness as Calcium Carbonate	1,200			469			1,220	
EPA Method SM5210B								
Units - mg/L								
Biochemical Oxygen Demand		U	2		U	2		U 2
Volatile Fatty Acids by EPA Method AM23G								
Units - mg/L								
Acetic acid	NS				U	0.07	0.017	JM
Butyric acid	NS				U	0.05	0.085	M
Hexanoic acid	NS				U	0.05		UM 0.05
i-Hexanoic acid	NS				U	0.05		U 0.05
i-Pentanoic acid	NS				U	0.15		UM 0.15
Lactic acid	NS			1.5			0.28	M
Pentanoic acid	NS				U	0.07	0.07	JM
Propionic acid	NS				U	0.05	0.11	M
Pyruvic acid	NS				U	0.15		UM 0.15
EPA Method RSK-175								
Units - ug/L								
Ethane		U	4		U	4		U 4
Ethylene		U	3		U	3		U 3
Methane	23			24			8.7	
EPA Method 6010B								
Units - ug/L								
Calcium	305,000			128,000			324,000	
Iron	52,400			14,100			32,900	
Magnesium	106,000			36,200			100,000	
Manganese	2,160			762			2,100	

U - Analyzed for but Not Detected

J - Indicates an estimated value

NS - Not sampled

M - Recovery/RPD poor for MS/MSD (MW-7) or SAMP/DUP (MW-17)

D.L. - Detection Limit

Historic Data collected during the Remedial Investigation (Feb - 2010)

Feb-11 data collected prior to pilot test injection

Bold and boxed results indicate an exceedance of Groundwater Standards

^ - GW Std - Class GA Groundwater Quality Standard or Guidance Value from New York State Department of Environmental Conservation (NYSDEC) Division of Water Technical and Operational Guidance Series (June 1998). Originally reported as ug/L.

Table 4-3: (Page 1 of 1) Pilot Test Groundwater Elevation Data. Remedial Work Plan. 110 Luther Ave, Syracuse Label.

Monitoring Well I.D.	Date	Reference Point	Reference Elevation (feet)	DTW (feet)	DOW (feet)	Water Elevation (feet)	Volume (gal)
MW-7	2/16/2010	Top of PVC	97.28	2.29	16.42	94.99	2.26
	11/24/2010		97.28	2.01	16.42	95.27	2.31
	2/18/2011		97.28	1.87	16.44	95.41	2.33
	3/22/2011		97.28	3.51	16.19	93.77	2.03
	4/18/2011		97.28	3.30	16.19	93.98	2.06
MW-11	2/16/2010	Top of PVC	97.89	2.37	14.49	95.52	0.48
	11/24/2010		97.89	2.24	14.49	95.65	0.49
	2/18/2011		97.89	1.85	14.53	96.04	0.51
	3/22/2011		97.89	1.85	14.30	96.04	0.50
	4/18/2011		97.89	1.99	14.30	95.90	0.50
MW-17	2/16/2010	Top of PVC	97.89	2.01	12.99	95.88	1.76
	11/24/2010		97.89	1.78	12.99	96.11	1.79
	2/18/2011		97.89	1.40	13.30	96.49	1.90
	3/22/2011		97.89	1.41	13.03	96.48	1.85
	4/18/2011		97.89	1.52	13.03	96.37	1.84

DTW - depth to water
DOW - depth of well

Table 4-4: (Page 1 of 1) Pilot Test Groundwater Field Parameters. Remedial Work Plan. 110 Luther Ave, Syracuse Label.

Well I.D.	Date	Time	Temp (°C)	Conductivity (mmhos/cm)	Dissolved Oxygen (%)	pH (units)	ORP (mV)	Turbidity (NTU)	Amount Purged (gal)	Comments
MW-7	2/16/2010	13:20	6.02	1.138	8.6	6.80	-43.5	1000	7.00	
		13:25	9.4	1.148	0.3	6.93	-84.6	653		
		13:30	10.41	1.209	1.8	6.90	-75.9	error		
		13:35	10.73	1.202	1.3	6.88	-77.6	550		
	2/18/2011	9:42	12.27	0.924	44.9	7.12	8.3	1133.4	13.00	
		9:45	12.90	0.924	6.7	6.81	2.3	579.4		
		9:50	11.19	0.959	4.1	6.44	11.0	349.7		
		9:55	11.08	1.011	4.7	6.57	10.0	262.3		
		10:00	11.53	1.078	5.1	6.76	4.7	178.8		
		10:05	11.79	1.097	5.4	6.78	0.0	154.9		
		10:10	11.86	1.097	5.2	6.77	-2.6	116.3		
		10:20	11.87	1.156	6.7	6.77	0.5	47.3		
		10:25	11.85	1.169	7.5	6.77	2.4	23.5		
		10:30	11.80	1.156	7.4	6.77	3.1	17.9		
		10:35	11.87	1.150	7.3	6.76	3.9	14.6		
		10:40	11.92	1.148	7.5	6.76	4.4	13.8		
		10:45	11.99	1.125	7.3	6.76	4.8	10.1		
		10:50	11.98	1.104	6.8	6.76	5.2	8.5		
		10:55	12.05	1.073	5.9	6.75	5.5	7.7		
	3/22/2011	9:30	11.54	1.410	9.2	6.26	-148.8	1272.1	6.50	Well pressurized, when J-plug was removed water was >7' bgs, quickly rebounded to 3.51' bgs which is closer to normal, water had a bad swampy odor which wasn't recognized during previous sampling events
		9:35	11.65	1.453	1.7	6.10	-218.6	1264.9		
		9:40	11.56	1.482	1.1	6.06	-261.9	1267.2		
		9:45	11.54	1.505	2.5	6.06	-265.5	1270.0		
		9:50	11.57	1.515	5.3	6.12	-254.1	1275.1		
		9:55	11.58	1.515	4.6	6.13	-234.8	1277.8		
		10:00	11.60	1.518	3.8	6.10	-217.0	1211.1		
		10:05	11.50	1.527	3.0	6.18	-200.1	636.4		
		10:10	11.49	1.516	2.7	6.18	-192.9	835.8		
		10:15	11.55	1.511	2.4	6.18	-190.9	995.6		
	4/18/2011	8:53	11.68	1.287	-25.7	8.30	-275.1	698.8	7.50	Well pressurized, when J-plug was removed water was >7' bgs, quickly rebounded to 3.30' bgs which is closer to normal, water still had a bad swampy odor
		9:00	11.78	1.319	-19.0	6.56	-380.5	1042.5		
		9:05	11.76	1.341	-18.6	6.36	-390.0	919.0		
		9:10	11.73	1.342	-18.9	6.29	-390.2	428.0		
		9:15	11.85	1.343	-14.1	6.32	-375.6	331.6		
		9:20	11.94	1.359	-13.5	6.37	-268.4	207.3		
		9:25	11.98	1.362	-15.8	6.23	-220.0	164.9		
		9:30	11.99	1.356	-15.8	6.24	-208.7	54.3		
MW-11	2/16/2010	9:10	16.26	1.208	0.9	6.85	-198.1	360.0	1.00	Well purged dry before parameters could stabilize, water had a bad swampy odor, worse than during previous sampling events
		9:15	16.49	1.302	1.5	6.89	-129.3	300.0		
	2/18/2011	12:40	18.67	1.036	13.3	7.07	-143.6	98.6	0.75	
		12:45	18.70	1.075	47.3	6.94	-109.5	121.6		
	3/22/2011	11:40	17.16	2.770	9.4	6.41	-72.4	505.8	0.75	
		11:45	17.45	2.766	1.5	6.46	-94.9	372.2		
	4/18/2011	10:50	17.86	3.042	-2.2	6.90	-152.9	204.9	0.50	
		10:52	17.97	3.127	-4.8	6.56	-140.4	157.4		
MW-17	2/16/2010	8:45	15.93	1.255	5.4	6.87	-21.2	error	1.50	Well purged dry before parameters could stabilize, water had no odor
		8:50	16.79	1.200	4.6	7.01	-16.6	1000.0		
	2/18/2011	13:58	18.96	0.861	27.4	7.23	18.5	36.3	1.50	
		14:05	19.20	0.850	25.1	7.06	22.0	27.3		
		14:10	18.83	0.882	11.4	7.04	-6.1	133.8		
	3/22/2011	13:50	18.19	1.087	7.2	7.07	-27.1	124.3	1.25	
		13:55	18.27	1.070	1.3	7.32	-63.9	28.2		
		14:00	18.06	1.102	3.1	7.38	-42.8	127.0		
	4/18/2011	13:15	18.12	1.012	2.1	6.90	-16.0	206.6	1.25	
		13:19	18.21	0.967	0.5	7.14	-16.0	27.6		
		13:21	18.21	0.981	0.4	7.20	-14.9	109.3		

Field parameters collected using a YSI 6820 with flow thru cell and Solinst 410 peristaltic pump

error - turbidimeter returned an L Lo Error, which means low light transmission, most likely due to excessive turbidity of the samples

Table 4-5: (Page 1 of 1). Baseline Pressures for SSDS Communication Test.
Remedial Work Plan. 110 Luther Avenue Site.

Hole I.D.	Site Buildings	
	Pa	in WC
T1	0.3	0.0012
T2	0.1	0.0004
T3	0.5	0.0020
T4	1.0	0.0040
T5	0.8	0.0032
T6	0.2	0.0008
T7	1.7	0.0068
T8	0.3	0.0012
T9	0.0	0.0000
T10	0.7	0.0028
T11	0.1	0.0004
T12	0.0	0.0000
T13	8.4	0.0336
T14	-0.1	-0.0004
T15	3.1	0.0124

Hole I.D.	Site Buildings	
	Pa	in WC
ET1	-35.9	-0.1436
ET2	0.1	0.0004
ET3	1.1	0.0044
ET4	0.0	0.0000
ET5	0.4	0.0016
S1	0.3	0.0012
S2	0.1	0.0004
S3	0.3	0.0012
S4	0.2	0.0008
S5	1.1	0.0044
S6	0.6	0.0024
S7	0.0	0.0000
S8	0.6	0.0024
S9	0.8	0.0032
S10	0.1	0.0004

Pressure readings taken below floor slab before communication test

Pa = Pressure in Pascals

in WC = Pressure in Inches of Water Column

Table 4-6: (Page 1 of 1). Sub-Slab Communication Test Pressures. Remedial Work Plan. 110 Luther Avenue Site.

Hole I.D.	Flow (cfm)	T1	T2	T3	T4	T5	T6	T7	T8	T9	T10
S1	41	-0.9			-0.7	-0.3					
S2	86	-1.9	-1.4		-0.5	-2.3					
S3	62			-0.5		-0.9	-1.9				
S4	77				-4.8			-7.4			
S5	43				-0.7	-0.5		-0.5	-0.7		
S6	53						-0.7		-0.5		
S7	69									-0.5	-0.8
S8	67										
S9	110										
S10	131										

Hole I.D.	Flow (cfm)	T11	T12	T13	T14	T15	ET1	ET2	ET3	ET4	ET5
S1	41										
S2	86										
S3	62										
S4	77										
S5	43										
S6	53										
S7	69										
S8	67	-0.5									
S9	110				-21.0	2.3					
S10	131				-0.8	2.3	-65.0	-0.5		-0.4	-42.0

S = Suction hole

T = Test hole

Flow - Flow of vacuum applied to each suction hole in cubic feet per minute.

Pressure readings in Pascals (Pa)

Readings are shown for test (T) holes with measurable vacuum created at suction (S) hole.

Testing associated with each suction hole was stopped when the vacuum was not measurable.

Blank space indicates vacuum was not measurable or was not measured.

APPENDICES

Appendix A

Remedial Investigation
Data Tables

Table 4-1: (Page 1 of 1) Groundwater Elevations. Remedial Investigation Report. 110 Luther Ave, Syracuse Label.

Monitoring Well I.D.	Date	Reference Point	Elevation (feet)	DTW (feet)	DOW (feet)	Water Elevation	Volume (gal)
MW-1	2/16/2010	Top of PVC	97.75	2.55	10.96	95.20	0.34
	11/24/2010		97.75	1.97	10.96	95.78	0.36
MW-2	2/16/2010	Top of PVC	100.38	3.40	10.40	96.98	0.28
	11/24/2010		100.38	3.02	10.40	97.36	0.30
MW-3	2/16/2010	Top of PVC	100.21	-	-	-	-
	11/24/2010		100.21	2.02	-	98.19	-
MW-4	2/16/2010	Top of PVC	99.22	-	-	-	-
	11/24/2010		99.22	-	-	-	-
MW-5	2/16/2010	Top of PVC	99.65	2.60	13.95	97.05	0.45
	11/24/2010		99.65	2.34	13.95	97.31	0.46
MW-6	2/16/2010	Top of PVC	97.49	2.44	14.89	95.05	1.99
	11/24/2010		97.49	2.02	14.89	95.47	2.06
MW-7	2/16/2010	Top of PVC	97.28	2.29	16.42	94.99	2.26
	11/24/2010		97.28	2.01	16.42	95.27	2.31
MW-8	2/16/2010	Top of PVC	97.38	2.64	17.06	94.74	2.31
	11/24/2010		97.38	2.55	17.06	94.83	2.32
MW-9	2/16/2010	Top of PVC	97.14	2.22	16.00	94.92	2.20
	11/24/2010		97.14	2.05	16.00	95.09	2.23
MW-10	2/16/2010	Top of PVC	97.34	2.70	12.00	94.64	1.49
	11/24/2010		97.34	2.61	12.00	94.73	1.50
MW-11	2/16/2010	Top of PVC	97.89	2.37	14.49	95.52	0.48
	11/24/2010		97.89	2.24	14.49	95.65	0.49
MW-12	2/16/2010	Top of PVC	98.02	2.32	15.60	95.70	0.53
	11/24/2010		98.02	2.17	15.60	95.85	0.54
MW-13	2/16/2010	Top of PVC	97.98	2.66	12.30	95.32	0.39
	11/24/2010		97.98	2.54	12.30	95.44	0.39
MW-14	2/16/2010	Top of PVC	100.40	-	-	-	-
	11/24/2010		100.40	3.65	-	96.75	-
MW-15	2/16/2010	Top of PVC	98.13	1.83	12.38	96.30	0.42
	11/24/2010		98.13	1.61	12.38	96.52	0.43
MW-16	2/16/2010	Top of PVC	97.80	1.99	10.40	95.81	0.34
	11/24/2010		97.80	1.90	10.40	95.90	0.34
MW-17	2/16/2010	Top of PVC	97.89	2.01	12.99	95.88	1.76
	11/24/2010		97.89	1.78	12.99	96.11	1.79
MW-18	11/14/2010	Top of PVC	96.86	2.70	12.61	94.16	1.59
	11/24/2010		96.86	2.50	12.61	94.36	1.62
MW-19	11/14/2010	Top of PVC	97.14	2.93	13.07	94.21	1.62
	11/24/2010		97.14	2.65	13.07	94.49	1.67

DTW - depth to water
DOW - depth of well
(-) - Measurements were not recorded

Table 4-2: (Page 1 of 5) Soil Sample Analytical Results. Remedial Investigation Report. February 2010. 110 Luther Ave, Syracuse Label.

Analyte	Soil Cleanup Objectives (mg/kg)		Sample Identification															
	Unrestricted Use	Industrial Use	SB-1		SB-2		SB-3		TB-1		TB-2		TB-3		TB-4		MW-17	
Date Sampled			Feb-10		Feb-10		Feb-10		Feb-10		Feb-10		Feb-10		Feb-10		Feb-10	
Depth of Sample			4 - 7'		4 - 7'		2 - 8'		4 - 6'		2 - 4'		5 - 7'		4 - 7'		6 - 8'	
VOCs by EPA Method 8260B																		
acetone	0.05	1,000	0.011	J*	0.013	J*	0.0037	J*	0.074^	*	0.051^	*	0.034	*	0.02	J*	0.015	J*
benzene	0.06	89		U		U		U		U	0.0016	J		U		U		U
bromodichloromethane				U		U		U		U		U		U		U		U
bromoform				U		U		U		U		U		U		U		U
bromomethane				U		U		U		U		U		U		U		U
methyl ethyl ketone	0.12	1,000		U		U		U		U		U		U		U		U
carbon disulfide				U		U		U		U		U		U		U		U
carbon tetrachloride	0.76	44		U		U		U		U		U		U		U		U
chlorobenzene	1.1	1,000		U		U		U		U		U		U		U		U
chloroethane				U		U		U		U		U		U		U		U
chloroform	0.37	700		U		U		U		U		U		U		U		U
chloromethane				U		U		U		U		U		U		U		U
dibromochloromethane				U		U		U		U		U		U		U		U
1,1-dichloroethane	0.27	480		U		U		U		U		U		U		U		U
1,2-dichloroethane	0.02	60		U		U		U		U		U		U		U		U
1,1-dichloroethene	0.33	1,000		U		U		U		U		U		U		U		U
1,2-dichloropropane				U		U		U		U		U		U		U		U
cis-1,3-dichloropropene				U		U		U		U		U		U		U		U
trans-1,3-dichloropropene				U		U		U		U		U		U		U		U
ethylbenzene	1	780		U		U		U		U		U		U		U		U
2-hexanone				U		U		U		U		U		U		U		U
methylene chloride	0.05	1,000		U		U		U	0.0017	JB	0.0028	JB	0.0021	JB	0.0018	JB		U
methyl isobutyl ketone				U		U		U		U		U		U		U		U
styrene				U		U		U		U		U		U		U		U
1,1,2,2-tetrachloroethane				U		U		U		U		U		U		U		U
tetrachloroethene	1.3	300		U		U		U		U		U	0.0057	J		U	0.17	
toluene	0.7	1,000		U		U		U	0.00021	JB	0.0014	JB	0.00037	JB	0.00021	JB		U
1,1,1-trichloroethane	0.68	1,000		U		U		U		U		U		U		U		U
1,1,2-trichloroethane				U		U		U		U		U		U		U		U
trichloroethene	0.47	400		U		U		U		U		U	0.0089			U	0.015	
vinyl chloride	0.02	27		U		U		U		U	0.02^		0.002	J	0.011			U
xylenes, total	0.26	1,000		U		U		U		U	0.0022	J		U		U		U
cis-1,2-dichloroethene	0.25	1,000		U		U		U		U	0.032		0.059		0.065		0.0033	J
trans-1,2-dichloroethene	0.19	1,000		U		U		U		U		U		U		U		U
Totals			0.011		0.013		0.0037		0.0019		0.0400		0.11207		0.0980		0.2033	

All values reported as mg/kg

U - Analyzed for but Not Detected

J - Indicates an estimated value

B - The analyte was found in an associated blank, as well as in the sample

* - LCS, LCSD, MS, or MSD exceeds the control limits

^ - indicates an exceedance of Unrestricted Use SCOs

Bold and boxed results indicate an exceedance of Industrial Use SCOs

Industrial Use and Unrestricted Use Soil Cleanup Objectives from 6 NYCRR Subpart 375-6 Remedial Program Soil Cleanup Objectives (December 2006).

Table 4-2: (Page 2 of 5) Soil Sample Analytical Results. Remedial Investigation Report. February 2010. 110 Luther Ave, Syracuse Label

Analyte	Soil Cleanup Objectives (mg/kg)		Sample Identification					
	Unrestricted Use	Industrial Use	SB-1		SB-2		SB-3	
Date Sampled			Feb-10		Feb-10		Feb-10	
Depth of Sample			4 - 7'		4 - 7'		2 - 8'	
SVOCs by EPA Method 8270C								
phenol	0.33	1,000		U		U		U
bis(2-chloroethyl)ether				U		U		U
2-chlorophenol				U		U		U
1,3-dichlorobenzene	2.4	560		U		U		U
1,4-dichlorobenzene	1.8	250		U		U		U
benzyl alcohol				U		U		U
1,2-dichlorobenzene	1.1	1,000		U		U		U
2,2'-oxybis[1-chloropropane]				U		U		U
2-methylphenol				U		U		U
hexachloroethane				U		U		U
n-nitrosodi-n-propylamine				U		U		U
4-methylphenol				U		U		U
nitrobenzene				U		U		U
isophorone				U		U		U
2-nitrophenol				U		U		U
2,4-dimethylphenol				U		U		U
bis(2-chloroethoxy)methane				U		U		U
2,4-dichlorophenol				U		U		U
1,2,4-trichlorobenzene				U		U		U
naphthalene	12	1,000		U		U		U
4-chloroaniline				U		U		U
hexachlorobutadiene				U		U		U
4-chloro-3-methylphenol				U		U		U
2-methylnaphthalene				U		U		U
hexachlorocyclopentadiene				U		U		U
2,4,6-trichlorophenol				U		U		U
2,4,5-trichlorophenol				U		U		U
2-chloronaphthalene				U		U		U
2-nitroaniline				U		U		U
acenaphthylene	100	1,000		U		U		U
dimethyl phthalate				U		U		U
2,6-dinitrotoluene				U		U		U
acenaphthene	20	1,000		U		U		U
3-nitroaniline				U		U		U
2,4-dinitrophenol				U		U		U
dibenzofuran				U		U		U
2,4-dinitrotoluene				U		U		U
4-nitrophenol				U		U		U
fluorene	30	1,000		U		U		U
4-chlorophenyl phenyl ether				U		U		U
diethyl phthalate				U		U		U
4-nitroaniline				U		U		U
4,6-dinitro-2-methylphenol				U		U		U
n-nitrosodiphenylamine				U		U		U
4-bromophenyl phenyl ether				U		U		U
hexachlorobenzene	0.33	12		U		U		U
pentachlorophenol	0.8	55		U		U		U
phenanthrene	100	1,000		U		U		U
carbazole				U		U		U
anthracene	100	1,000		U		U		U
di-n-butyl phthalate				U		U		U
fluoranthene	100	1,000		U		U	0.016	J
pyrene	100	1,000		U		U		U
butyl benzyl phthalate				U		U		U
3,3'-dichlorobenzidine				U		U		U
benzo[a]anthracene	1	11		U		U		U
chrysene	1	110		U		U		U
bis(2-ethylhexyl)phthalate			0.120	J	0.190	J	0.300	J
di-n-octyl phthalate				U		U		U
benzo[b]fluoranthene	1	11		U		U		U
benzo[k]fluoranthene	0.8	110		U		U		U
benzo[a]pyrene	1	1.1		U		U		U
indeno[1,2,3-cd]pyrene	0.5	11		U		U		U
dibenz(a,h)anthracene	0.33	1.1		U		U		U
benzo[g,h,i]perylene	100	1,000		U		U		U
Totals			0.12		0.19		0.316	

All values reported as mg/kg

U - Analyzed for but Not Detected

J - Indicates an estimated value

B - The analyte was found in an associated blank, as well as in the sample

NS - Not sampled as part of this sampling event

^ - indicates an exceedance of Unrestricted Use SCOs

Bold and boxed results indicate an exceedance of Industrial Use SCOs

Industrial Use and Unrestricted Use Soil Cleanup Objectives from 6 NYCRR Subpart 375-6 Remedial Program Soil Cleanup Objectives (December 2006).

Table 4-2: (Page 3 of 5) Soil Sample Analytical Results. Remedial Investigation Report. February 2010. 110 Luther Ave, Syracuse Label.

Analyte	Soil Cleanup Objectives (mg/kg)		Sample Identification		
	Unrestricted Use	Industrial Use	SB-1	SB-2	SB-3
Date Sampled			Feb-10	Feb-10	Feb-10
Depth of Sample			4 - 7'	4 - 7'	2 - 8'
PCBs by EPA Method 8082					
Aroclor-1016			U	U	U
Aroclor-1221			U	U	U
Aroclor-1232			U	U	U
Aroclor-1242			U	U	U
Aroclor-1248			U	U	U
Aroclor-1254			U	U	U
Aroclor-1260			U	U	U
Totals	0.1	25	ND	ND	ND

All values reported as mg/kg

U - Analyzed for but Not Detected

J - Indicates an estimated value

NS - Not sampled as part of this sampling event

^ - indicates an exceedance of Unrestricted Use SCOs

Bold and boxed results indicate an exceedance of Industrial Use SCOs

Industrial Use and Unrestricted Use Soil Cleanup Objectives from 6 NYCRR Subpart 375-6 Remedial Program Soil Cleanup Objectives (December 2006).

Table 4-2: (Page 4 of 5) Soil Sample Analytical Results. Remedial Investigation Report. February 2010. 110 Luther Ave, Syracuse Label.

Analyte	Soil Cleanup Objectives (mg/kg)		Sample Identification					
	Unrestricted Use	Industrial Use	SB-1		SB-2		SB-3	
Date Sampled			Feb-10		Feb-10		Feb-10	
Depth of Sample			4 - 7'		4 - 7'		2 - 8'	
Metals by EPA Method 6010 B								
Silver	2	6,800		U		U		U
Aluminum			21,600		17,100		6,680	
Arsenic	13	16	5.9	J	2.8	J		U
Barium	350	10,000	137	J	80.7	J	20.5	J
Beryllium	7.2	2,700	0.30	J	0.32	J	0.14	J
Calcium			3,720		3,560		1,050	
Cadmium	2.5	60		U		U		U
Cobalt			10.6		7.8		3.7	
Chromium	30	800	33.5^	J	25.2	J	9.8	J
Copper	50	10,000	30.0	J	27.0	J	10.7	J
Iron			30,000		24,300		10,400	
Potassium			3,390		2,260		680	
Magnesium			7,610		6,190		2,440	
Manganese	1,600	10,000	436	J	242	J	87.3	J
Sodium			1,640		780		358	
Nickel	30	10,000	33.1^		28.1		10.5	
Lead	63	3,900	9.7		7.1		2	J
Antimony				UJ		UJ		UJ
Selenium	3.9	6,800		UJ		UJ		UJ
Thallium				U		U		U
Vanadium			37.0	J	28.1	J	11.8	J
Zinc	109	10,000	72.0	J	59.0	J	17.7	J
Mercury by EPA Method 7470A								
Mercury	0.18	5.7		U		U		U

All values reported as mg/kg

U - Analyzed for but Not Detected

J - Indicates an estimated value

NS - Not sampled as part of this sampling event

^ - indicates an exceedance of Unrestricted Use SCOs

Bold and boxed results indicate an exceedance of Industrial Use SCOs

Industrial Use and Unrestricted Use Soil Cleanup Objectives from 6 NYCRR Subpart 375-6 Remedial Program Soil Cleanup Objectives (December 2006).

Table 4-2: (Page 5 of 5) Soil Sample Analytical Results. Remedial Investigation Report. February 2010. 110 Luther Ave, Syracuse Label.

General Chemistry	Sample Identification							
	SB-1	SB-2	SB-3	TB-1	TB-2	TB-3	TB-4	MW-17
Date Sampled	Feb-10	Feb-10	Feb-10	Feb-10	Feb-10	Feb-10	Feb-10	Feb-10
Percent Moisture	21.4	17.5	11.5	13.4	18.6	21	16.9	20.8
Percent Solids	78.6	82.5	88.5	86.6	81.4	79	83.1	79.2

Table 4-3: (Page 1 of 1) Groundwater Field Parameters. Remedial Investigation Report. February-October 2010. 110 Luther Ave, Syracuse Label.

Well I.D.	Date	Time	Temp (°C)	Conductivity (mmhos/cm)	Salinity (%)	Dissolved Oxygen (mg/L)	pH (units)	Eh (mV)	Turbidity (NTU)	Amount Purged (gal)
MW-1	2/16/2010	16:30	6.05	6.609	5.84	7.97	6.90	-45.80	1000	0.12
MW-2	2/16/2010	17:00	-	-	-	-	-	-	-	-
MW-3	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-4	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-5	2/16/2010	10:40	17.12	0.685	0.40	2.69	7.53	-11.20	1000	6.00
		10:45	17.45	0.704	0.41	1.33	7.49	-22.70	600	
		10:50	17.51	0.712	0.41	0.97	7.45	-26.50	800	
		10:55	17.55	0.720	0.41	0.86	7.42	-32.30	error	
		11:00	17.56	0.722	0.42	0.81	7.41	-36.30	800	
		11:05	17.56	0.725	0.42	0.77	7.41	-38.70	754	
MW-6	2/16/2010	15:10	9.01	1.559	1.16	7.92	7.09	17.60	1000	7.50
		15:15	8.01	1.392	1.06	2.00	6.94	-58.90	1000	
		15:20	9.36	1.524	1.12	0.66	6.86	-69.80	1000	
		15:25	9.80	1.548	1.13	0.25	6.85	-81.50	1000	
		15:30	9.94	1.591	1.15	0.44	6.88	-85.90	1000	
		15:35	10.24	1.610	1.16	0.82	6.90	-86.20	1000	
MW-7	2/16/2010	13:20	6.02	1.138	0.89	8.60	6.80	-43.50	1000	7.00
		13:25	9.40	1.148	0.83	0.29	6.93	-84.60	653	
		13:30	10.41	1.209	0.85	1.80	6.90	-75.90	error	
		13:35	10.73	1.202	0.84	1.30	6.88	-77.60	550	
MW-8	2/16/2010	14:35	10.41	1.436	1.02	3.19	6.67	28.10	1000	7.00
		14:40	8.73	1.396	1.04	0.30	6.68	11.80	260	
		14:45	9.07	1.426	1.05	0.28	6.68	-2.20	150	
		14:50	9.37	1.440	1.05	0.34	6.68	-11.60	550	
		14:55	9.84	1.480	1.07	0.33	6.69	-22.00	1000	
MW-9	2/16/2010	13:55	9.32	1.724	1.27	3.84	6.78	29.80	1000	7.00
		14:00	7.54	1.658	1.28	0.29	6.75	9.60	650	
		14:05	8.38	1.685	1.28	0.22	6.76	-3.90	750	
		14:10	8.66	1.686	1.27	1.38	6.78	-8.50	1000	
		14:15	8.94	1.676	1.25	1.16	6.79	-13.80	1000	
MW-10	2/16/2010	15:55	8.12	0.775	0.57	4.14	7.04	-19.80	1000	7.00
		16:00	9.10	0.847	0.61	0.62	6.94	-33.50	270	
		16:05	9.62	0.881	0.63	0.52	6.92	-61.70	error	
		16:10	10.59	0.866	0.60	0.72	6.95	-80.30	error	
MW-11	2/16/2010	9:10	16.26	1.208	0.73	0.86	6.85	-198.10	360	1.00
		9:15	16.49	1.302	0.79	1.50	6.89	-129.30	300	
MW-12	2/16/2010	9:30	-	-	-	-	-	-	error	-
MW-13	2/16/2010	11:35	16.31	0.733	0.36	3.23	9.71	-53.10	240	0.75
MW-14	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-15	2/16/2010	9:55	16.98	1.698	1.03	1.17	6.66	-83.80	1000	2.50
		10:00	16.77	1.358	0.83	1.02	6.61	-84.60	1000	
		10:05	16.75	1.648	0.99	0.19	6.65	-102.60	900	
		10:10	16.50	1.477	0.90	0.12	6.61	-106.70	1000	
		10:15	16.39	1.608	0.98	0.16	6.61	-110.50	1000	
		10:20	16.36	1.800	1.11	0.72	6.63	-93.30	1000	
MW-16	2/16/2010	11:55	16.47	1.112	0.67	5.65	7.11	-19.80	1000	3.00
		12:00	16.27	0.789	0.47	1.29	6.91	-87.00	1000	
		12:05	15.98	0.733	0.44	0.87	6.92	-98.10	1000	
		12:10	15.90	0.778	0.47	1.18	6.89	-88.70	1000	
		12:15	15.89	0.808	0.49	5.04	7.05	-63.90	1000	
MW-17	2/16/2010	8:45	15.93	1.255	0.76	5.37	6.87	-21.20	error	1.50
		8:50	16.79	1.200	0.72	4.62	7.01	-16.60	1000	
MW-18	10/14/2010	12:03	16.34	0.970	0.58	6.91	7.29	105.80	error	2.35
MW-19	10/14/2010	11:50	16.97	2.068	1.27	7.46	7.04	102.60	error	2.12

(-) - field parameters not collected due to insufficient volume
Wells with fewer readings went dry before multiple sets of parameters could be recorded.
error - turbidimeter returned an L Lo Error, which means low light transmission, most likely due to excessive turbidity of the samples
Wells purged with a peristaltic pump and YSI flow thru cell. MW-18 and MW-19 were purged with bailers with parameters collected after sample collection.
As a result of visible bubbles the DO readings are likely higher than the actual field conditions.
NS - Well was not sampled and therefore field parameters were not collected

Table 4-4: (Page 1 of 4) Groundwater Sample Analytical Results. Remedial Investigation Report. February-October 2010. 110 Luther Ave, Syracuse Label.

Analyte	GW Std^ (ug/L)	Sample Identification															
		MW-1	MW-2	MW-5	MW-7	MW-8	MW-9	MW-11	MW-12	MW-13	MW-16	MW-17	MW-18	MW-19	Duplicate	
Date Sampled		Feb-10	Feb-10	Feb-10	Feb-10	Feb-10	Feb-10	Feb-10	Feb-10	Feb-10	Feb-10	Feb-10	Oct-10	Oct-10	Feb-10 (MW-8)	Oct-10 (MW-19)
VOCs by EPA Method 8260B																
acetone	50	U	U	U	U	U	U	U	U	**83**	U	U	UJ	UJ	U	UJ
benzene	1	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
bromodichloromethane	50	U*J	U*J	U*J	U	U*J	U	U*J	U*J	U*J	U*J	U	U	U	U	U
bromoform	50	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
bromomethane	5	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
methyl ethyl ketone	50	U*	U*	U*	U	U*	U	U*	U*	U*	U*	U	U	U	U	U
carbon disulfide	60	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
carbon tetrachloride	5	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
chlorobenzene	5	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
chloroethane	5	U	U	U	U	U	U	U	U	U	U	U	UJ	UJ	U	UJ
chloroform	7	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
chloromethane		U	U	U	U	U	U	U	U	U	U	U	UJ	UJ	U	UJ
dibromochloromethane	50	U*J	U*J	U*J	U*J	U*J	U	U*J	U*J	U*J	U*J	U*J	U	U	U*J	U
1,1-dichloroethane	5	1.1 J	U	U	U	U	U	U	U	U	U	U	U	U	U	U
1,2-dichloroethane	0.6	U	U	U	U	U	U	U	U	U	U	U	U	**2.8 J**	U	**2.6 J**
1,1-dichloroethene	5	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
1,2-dichloropropane	5	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
cis-1,3-dichloropropene	0.4	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
trans-1,3-dichloropropene	0.4	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
ethylbenzene	5	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
2-hexanone	50	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
methylene chloride	5	U	U	U	**170 J**	**21 J**	U	**110 J**	**8.6 J**	U	U	**87 J**	U	U	**35 J**	U
methyl isobutyl ketone	50	U	U	U	U*J	U	U	U	U	U	U	U*J	U	U	U*J	U
styrene	5	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
1,1,2,2-tetrachloroethane	5	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
tetrachloroethene	5	**60**	**22**	U	**27,000**	**3,900**	U	**20,000**	**220**	**410**	U	**14,000**	U	U	**3,500**	U
toluene	5	U	U	U	U	U	U	U	U	U	U	**140 J**	0.73 J	U	U	U
1,1,1-trichloroethane	5	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
1,1,2-trichloroethane	1	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
trichloroethene	5	**39**	1.2 J	U	**4,300**	**860**	U	**6,100**	**79**	**600**	U	**2,000**	U	U	**900**	U
vinyl chloride	2	**33**	U	U	**260 J**	**250**	U	**270 J**	**18 J**	**29**	**2.3 J**	U	**2.7 J**	U	**270**	U
xylenes, total	5	U	U	U	U	U	U	U	U	U	U	U	**9.7**	U	U	U
cis-1,2-dichloroethene	5	**150**	U	U	**2,600**	**2,500**	U	**4,400**	**670**	**780**	**50**	**750**	U	U	**2,500**	U
trans-1,2-dichloroethene	5	0.91 J	U	U	U	U	U	U	U	**12 J**	U	U	U	U	U	U
Totals		284.01	23.2	ND	34,330	7,531	ND	30,880	995.6	1,914	52.3	16,977	13.13	2.8	7,205	2.6

All values reported as ug/L

U - Analyzed for but Not Detected

J - Indicates an estimated value

* - LCS or LCSD exceeds the control limits

ND - Non detect

Bold and boxed results indicate an exceedance of Groundwater Standards

^ - GW Std - Class GA Groundwater Quality Standard or Guidance Value from New York State Department of Environmental Conservation (NYSDEC) Division of Water Technical and Operational Guidance Series (June 1998).

Table 4-4: (Page 2 of 4) Groundwater Sample Analytical Results. Remedial Investigation Report. February-October 2010. 110 Luther Ave, Syracuse Label.

Analyte	GW Std^ (ug/L)	Sample Identification									
		MW-6	MW-8	MW-9	MW-11	MW-15	MW-18	MW-19		Duplicate	
Date Sampled		Feb-10	Feb-10	Feb-10	Feb-10	Feb-10	Oct-10	Oct-10		Feb-10 (MW-8)	Oct-10 (MW-19)
SVOCs by EPA Method 8270C											
1,2-dichlorobenzene	3	U	U	U	U	U	U	U		U	U
1,3-dichlorobenzene	3	U	U	U	U	U	U	U		U	U
1,4-dichlorobenzene	3	U	U	U	U	U	U	U		U	U
bis(2-chloroethyl)ether	1	U	U	U	U	U	U	U		U	U
benzyl alcohol		U	U	U	U	U	U	U		U	U
2,2'-oxybis[1-chloropropane]		U	U	U	U	U	U	U		U	U
hexachloroethane	5	U	U	U	U	U	U	U		U	U
hexachlorobutadiene	0.5	U	U	U	U	U	U	U		U	U
hexachlorocyclopentadiene	5	U	U	U	U	U	U	UJ		U	UJ
hexachlorobenzene	0.04	U	U	U	U	U	U	U		U	U
1,2,4-trichlorobenzene	5	U	U	U	U	U	U	U		U	U
2,4,6-trichlorophenol		U	U	U	U	U	U	1.6 J			1.6 J
2,4,5-trichlorophenol		U	U	U	U	U	U	1.6 J			1.6 J
bis(2-chloroethoxy)methane	5	U	U	U	U	U	U	U		U	U
butyl benzyl phthalate	50	U	U	U	0.56 J	U	U	UJ		U	UJ
n-nitrosodi-n-propylamine		U	U	U	U	U	U	U		U	U
nitrobenzene	0.4	U	U	U	U	U	U	U		U	U
isophorone	50	U	U	U	U	U	U	U		U	U
naphthalene	10	U	U	U	U	U	U	U		U	U
4-chloroaniline	5	U	U	U	U	U	U	U		U	U
2-methylnaphthalene		U	U	U	U	U	U	U		U	U
2-chloronaphthalene	10	U	U	U	U	U	U	U		U	U
2-nitroaniline	5	U	U	U	U	U	U	U		U	U
acenaphthylene		U	U	U	U	U	U	U		U	U
dimethyl phthalate	50	U	U	U	U	U	U	U		U	U
2,6-dinitrotoluene	5	U	U	U	U	U	U	U		U	U
acenaphthene	20	U	U	U	U	U	U	U		U	U
3-nitroaniline	5	U	U	U	U	U	U	U		U	U
dibenzofuran		U	U	U	U	U	U	U		U	U
2,4-dinitrotoluene	5	U	U	U	U	U	U	U		U	U
fluorene	50	U	U	U	U	U	U	U		U	U
4-chlorophenyl phenyl ether		U	U	U	U	U	U	U		U	U
diethyl phthalate	50	U	U	U	U	U	U	U		U	U
4-nitroaniline	5	U	U	U	U	U	U	U		U	U
n-nitrosodiphenylamine	50	U	U	U	U	U	U	U		U	U
4-bromophenyl phenyl ether		U	U	U	U	U	U	U		U	U
pentachlorophenol	1	U	U	U	U	U	U	**100**			**110**
phenanthrene	50	U	U	U	U	U	U	U		U	U
carbazole		U	U	U	U	U	U	U		U	U
anthracene	50	U	U	U	U	U	U	U		U	U
di-n-butyl phthalate	50	U	U	U	1.1 J	U	0.45 J	U		U	U
fluoranthene	50	U	U	U	U	U	0.4 J	U		U	U
pyrene	50	U	U	U	U	U	0.38 J	U		U	U
3,3'-dichlorobenzidine	5	U	U	U	U	U	U	UJ		U	UJ
benzo[a]anthracene	0.002	U	U	U	U	U	U	U		U	U
chrysene	0.002	U	U	U	U	U	U	U		U	U
bis(2-ethylhexyl)phthalate	5	3.8 J	UJ	1.2 J	1.4 J	0.76 J	1.6 J	**5.1 J**		1.3 J	**5.6 J**
di-n-octyl phthalate	50	U	U	U	U	U	U	U		U	U
benzo[b]fluoranthene	0.002	U	U	U	U	U	U	U		U	U
benzo[k]fluoranthere	0.002	U	U	U	U	U	U	U		U	U
benzo[a]pyrene	ND	U	U	U	U	U	U	U		U	U
indeno[1,2,3-cd]pyrene	0.002	U	U	U	U	U	U	U		U	U
dibenz(a,h)anthracene	50	U	U	U	U	U	UJ	UJ		U	U
benzo[g,h,i]perylene	5	U	U	U	U	U	U	U		U	U
2-chlorophenol		U	U	U	U	U	U	U		U	U
phenol	1	U	U	U	U	U	U	U		U	U
2-methylphenol		U	U	U	U	U	U	U		U	U
2,4-dimethylphenol	50	U	U	U	U	U	U	U		U	U
2-nitrophenol		U	U	U	U	U	U	U		U	U
2,4-dichlorophenol	5	U	U	U	U	U	U	U		U	U
4-chloro-3-methylphenol		U	U	U	U	U	U	U		U	U
2,4-dinitrophenol	10	UJ	U	U	U	U	U	U		U	U
4-nitrophenol		U	U	U	U	U	U	U		U	U
methylphenol, 3&4		U	U	U	U	U	U	U		U	U
Totals		3.8	ND	1.2	3.06	0.76	2.83	108.3		1.3	118.8

All values reported as ug/L

U - Analyzed for but Not Detected

J - Indicates an estimated value

NS - Not sampled as part of this sampling event

Bold and boxed results indicate an exceedance of Groundwater Standards

^ - GW Std - Class GA Groundwater Quality Standard or Guidance Value from New York State Department of Environmental Conservation (NYSDEC) Division of Water Technical and Operational Guidance Series (June 1998).

Table 4-4: (Page 3 of 4) Groundwater Sample Analytical Results. Remedial Investigation Report. February-October 2010. 110 Luther Ave, Syracuse Label.

Analyte	GW Std^ (ug/L)	Sample Identification															
		MW-1		MW-5		MW-7		MW-10		MW-11		MW-12		MW-13		Duplicate	
Date Sampled		Feb-10		Feb-10		Feb-10		Feb-10		Feb-10		Feb-10		Feb-10		Feb-10 (MW-10)	
Metals by EPA Method 6010B																	
Silver	50	0.35	J		U		U		U		U		U		U		U
Aluminum		585		2,870			U		U		U		U		U	679	
Arsenic	25	6.8	J		U	5.2	J		U		U		U		U	5.6	J
Barium	1,000	274		389		215		398		124		212		36.6		396	
Beryllium	3		U		U		U		U		U		U		U		U
Calcium		229,000		121,000		181,000		141,000		170,000		84,200		21,300		137,000	
Cadmium	5		U		U		U	**13.7**			U		U		U	**15.3**	
Cobalt		1.2	J	0.61	J		U		U		U		U	1.1	J		U
Chromium	50	2.2	J	7			U		U	0.87	J	0.73	J	1.8	J	0.65	J
Copper	200	8.8	J	14.9		2.5	J	2	J	7.6	J	6.3	J	7.6	J	2.5	J
Iron	300	**5,140**		**3,620**		**2,800**		**1,570**		**34,900**		**42,900**		**21,600**		**2,010**	
Potassium		18,700		2,540		1,900		1,970		2,730		70,100		12,200		2,050	
Magnesium	35,000	**64,200**		24,300		**56,200**		**47,300**		**50,800**		22,000		5,280		**46,100**	
Manganese	300	**4,820**		119		150		140		233		**605**		105		146	
Sodium	20,000	**868,000**		**76,100**		**53,200**		**59,700**		**97,200**		**117,000**		**103,000**		**57,800**	
Nickel	100		U	5.8			U		U	11		1.1	J	6			U
Lead	25		U		U		U		U		U		U		U		U
Antimony	3		U		U		U		U		U		U		U		U
Selenium	10		U		U		U		U		U		U		U		U
Thallium	0.5		U		U		U		U		U		U		U		U
Vanadium		6.3		5.6		2.9	J	2.9	J	3.7	J	2.3	J	1.8	J	3.2	J
Zinc	2,000	215		104		52.5		8.2	J	1,200		**3,930**		723		13.4	J
Mercury by EPA Method 7470A																	
Mercury	0.7		U		U		U		U		U		U		U		U

All values reported as ug/L

U - Analyzed for but Not Detected

J - Sample result is greater than the MDL but below the CRDL

Bold and boxed results indicate an exceedance of Groundwater Standards

^ - GW Std - Class GA Groundwater Quality Standard or Guidance Value from New York State Department of Environmental Conservation (NYSDEC) Division of Water Technical and Operational Guidance Series (June 1998).

Groundwater samples were excessively turbid which could lead to anomalously high levels of metals.

Table 4-4: (Page 4 of 4) Groundwater Sample Analytical Results. Remedial Investigation Report. February-October 2010. 110 Luther Ave, Syracuse Label.

Analyte	GW Std^ (ug/L)	Sample Identification		
		MW-15	MW-16	Duplicate
Date Sampled		Feb-10	Feb-10	Feb-10 (MW-16)
Glycols by EPA Method 8015B				
Propylene glycol	1,000	U	U	U
Ethylene glycol	50	U	U	U
Diethylene glycol		U	U	U
Totals		ND	ND	ND

U - Analyzed for but Not Detected

J - Sample result is greater than the MDL but below the CRDL

ND - None detected

Bold and boxed results indicate an exceedance of Groundwater Standards

^ - GW Std - Class GA Groundwater Quality Standard or Guidance Value from New York State Department of Environmental Conservation (NYSDEC) Division of Water Technical and Operational Guidance Series (June 1998).

Table 4-5: (Page 1 of 1) Soil Vapor Sample Analytical Results. Remedial Investigation Report. October 2010. 110 Luther Ave, Syracuse Label.

Analyte	Sample Identification					
	SVW-3		SVW-4		Duplicate	
Date Sampled	Oct-10		Oct-10		Oct-10 SVW-3	
VOCs by EPA Method TO-15						
1,1,1-Trichloroethane		UJ		UJ		UJ
1,1,2,2-Tetrachloroethane		UJ		UJ		UJ
1,1,2-Trichloroethane		UJ		UJ		UJ
1,1-Dichloroethane		U		U		U
1,1-Dichloroethene		U		U		U
1,2,4-Trichlorobenzene		U		U		U
1,2,4-Trimethylbenzene	3.1	J	98		0.60	J
1,2-Dibromoethane		U		U		U
1,2-Dichlorobenzene		U		U		U
1,2-Dichloroethane		U		U		U
1,2-Dichloropropane		U		U		U
1,3,5-Trimethylbenzene	0.95	J	43			UJ
1,3-butadiene		U		U		U
1,3-Dichlorobenzene		U		U		U
1,4-Dichlorobenzene		U	9.4			U
1,4-Dioxane		U		U		U
2,2,4-trimethylpentane	1.4		13,000		1.9	
4-ethyltoluene		U	16			U
Acetone	14	J		U	7.5	J
Allyl chloride		U		U		U
Benzene	0.52		8.4		0.55	
Benzyl chloride		U		U		U
Bromodichloromethane		U		U		U
Bromoform		U		U		U
Bromomethane		U		U		U
Cardon disulfide	0.76	J	5.2			UJ
Carbon tetrachloride	0.45	J		U	0.26	J
Chlorobenzene		U		U		U
Chloroethane		U		U		U
Chloroform	0.55	J		U		UJ
Chloromethane	0.65			U	0.50	
cis-1,2-Dichloroethene	1.1			U	0.69	
cis-1,3-Dichloropropene		U		U		U
Cyclohexane		U	720			U
Dibromochloromethane		U		U		U
Ethyl acetate		U		U		U
Ethylbenzene	0.49	J	19			UJ
Freon 11	1.4	J	0.69	J	0.80	J
Freon 113		U		U		U
Freon 114		U		U		U
Freon 12	2.7		1.4		1.6	
Heptane		U	200			U
Hexachloro-1,3-butadiene		U		U		U
Hexane	1.0		1,900		0.68	
Isopropyl alcohol		UJ		U	0.80	J
m&p-Xylene	0.97	J	68		0.79	J
Methyl Butyl Ketone		U		U		U
Methyl Ethyl Ketone	1.2			U	1.3	
Methyl Isobutyl Ketone		U		U		U
Methyl tert-butyl ether		U		U		U
Methylene chloride	2.6	J		U	0.60	J
o-Xylene	0.57	J	27			UJ
Propylene		U		U		U
Styrene	0.69	J		U		UJ
Tetrachloroethylene	0.97	J	19		0.97	J
Tetrahydrofuran		U		U		U
Toluene	1.6		56		1.8	
trans-1,2-Dichloroethene		U		U		U
trans-1,3-Dichloropropene		U		U		U
Trichloroethene	2.5	J		U	0.49	J
Vinyl acetate		U		U		U
Vinyl Bromide		U		U		U
Vinyl chloride		U		U		U
Total VOCs	40.17		16,191.09		21.83	

All values reported as ug/m^3

U - Analyzed for but not detected at the reporting limit

J - Estimated value (analyte detected at or below quantitaion limit)

N9013

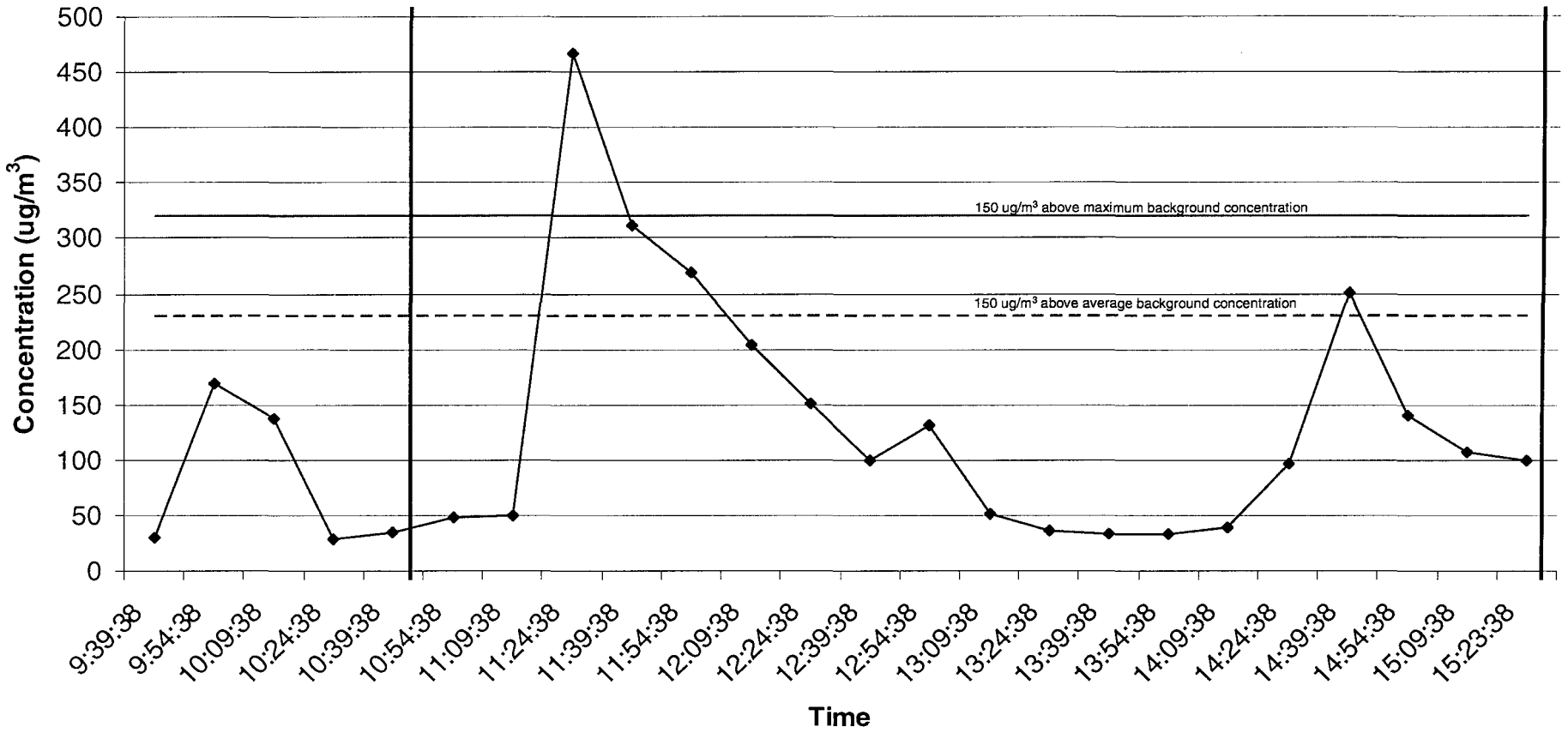
Appendix B

Results of Pilot Test
Community Air Monitoring

Appendix B-1

Office Doorway Monitoring Station
Particulate and VOCs 2-21-2011

15 Minute Average Particulate Concentration Near Office Doorway on 2-21-2011



Brackets time interval when drilling and injecting was occurring. Background levels determined based on readings taken prior to starting drilling each day (9:25 – 10:39).

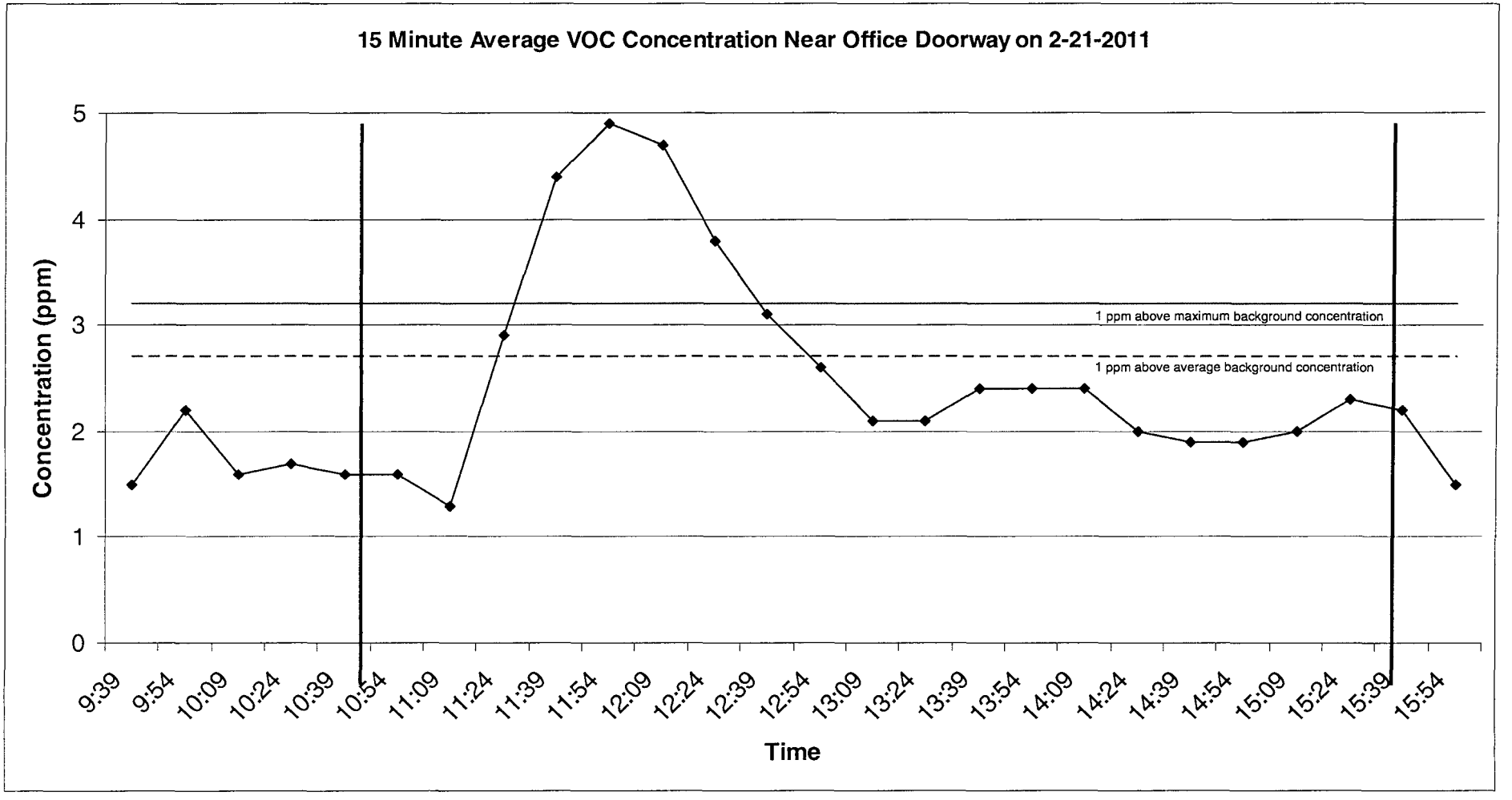
Maximum background concentration = 169.867 ug/m³
Average background concentration = 80.300 ug/m³
150 ug/m³ above maximum background = 319.867 ug/m³
150 ug/m³ above average background = 230.300 ug/m³

S&W REDEVELOPMENT
Syracuse, New York

Date: 5/2011 Proj No.: N9013

110 Luther Ave. Site (BCP Site #C734118)
Remedial Work Plan
110 Luther Ave., Liverpool
Onondaga County, New York

Appendix B-1
Pilot Test Air Monitoring Results



Brackets time interval when drilling and injecting was occurring. Background levels determined based on readings taken prior to starting drilling each day (9:25 – 10:39)

Maximum background concentration = 2.2 ppm
Average background concentration = 1.7 ppm
1 ppm above maximum background = 3.2 ppm
1 ppm above average background = 2.7 ppm

S&W REDEVELOPMENT
Syracuse, New York

Date: 5/2011 Proj No.: N9013

110 Luther Ave. Site (BCP Site #C734118)
Remedial Work Plan
110 Luther Ave., Liverpool
Onondaga County, New York

Appendix B-1
Pilot Test Air Monitoring Results

Community Air Monitoring Data. Particulate Matter Near Office Doorway. February 21, 2011.

Model Number:	pDR-1000	Unit:	Concentration
Serial Number:	10438	Unit Name:	mg/m³
Tag Number:	1	Maximum Display Concentration:	4.653 mg/m³
Start Time:	9:25:38	Time at Maximum:	9:54:28
Start Date:	21-Feb-11	Maximum STEL Concentration:	0.528 mg/m³
Log Period:	00:01:00	Time at Maximum STEL:	11:28:38
Number of Points:	359	Elapsed Time:	5:59:00
Calibration Factor:	100%	Overall Average Concentration:	0.126 mg/m³
Range of 15 Minute Average Background Concentrations:	29.267 ug/m³ to 169.867 ug/m³	Background Time Interval:	9:25 - 10:39

Logged Data:

Point	Date	Time	1 Minute Average Concentration (mg/m³)	1 Minute Average Concentration (ug/m³)	15 Minute Average Concentration (mg/m³)	15 Minute Average Concentration (ug/m³)
1	21-Feb	9:25:38	0.033	33.000		
2	21-Feb	9:26:38	0.035	35.000		
3	21-Feb	9:27:38	0.050	50.000		
4	21-Feb	9:28:38	0.045	45.000		
5	21-Feb	9:29:38	0.028	28.000		
6	21-Feb	9:30:38	0.030	30.000		
7	21-Feb	9:31:38	0.032	32.000		
8	21-Feb	9:32:38	0.026	26.000	0.031	30.733
9	21-Feb	9:33:38	0.028	28.000		
10	21-Feb	9:34:38	0.034	34.000		
11	21-Feb	9:35:38	0.023	23.000		
12	21-Feb	9:36:38	0.028	28.000		
13	21-Feb	9:37:38	0.019	19.000		
14	21-Feb	9:38:38	0.029	29.000		
15	21-Feb	9:39:38	0.021	21.000		
16	21-Feb	9:40:38	0.029	29.000		
17	21-Feb	9:41:38	0.025	25.000		
18	21-Feb	9:42:38	0.028	28.000		
19	21-Feb	9:43:38	0.035	35.000		
20	21-Feb	9:44:38	0.023	23.000		
21	21-Feb	9:45:38	0.025	25.000		
22	21-Feb	9:46:38	0.018	18.000		
23	21-Feb	9:47:38	0.017	17.000	0.170	169.867
24	21-Feb	9:48:38	0.018	18.000		
25	21-Feb	9:49:38	0.017	17.000		
26	21-Feb	9:50:38	0.018	18.000		
27	21-Feb	9:51:38	0.019	19.000		
28	21-Feb	9:52:38	0.340	340.000		
29	21-Feb	9:53:38	0.505	505.000		
30	21-Feb	9:54:38	1.431	1431.000		
31	21-Feb	9:55:38	0.638	638.000		
32	21-Feb	9:56:38	0.332	332.000		
33	21-Feb	9:57:38	0.220	220.000		
34	21-Feb	9:58:38	0.138	138.000		
35	21-Feb	9:59:38	0.092	92.000		
36	21-Feb	10:00:38	0.093	93.000		
37	21-Feb	10:01:38	0.066	66.000		
38	21-Feb	10:02:38	0.068	68.000	0.138	137.533
39	21-Feb	10:03:38	0.082	82.000		
40	21-Feb	10:04:38	0.057	57.000		
41	21-Feb	10:05:38	0.086	86.000		
42	21-Feb	10:06:38	0.062	62.000		
43	21-Feb	10:07:38	0.055	55.000		
44	21-Feb	10:08:38	0.033	33.000		
45	21-Feb	10:09:38	0.041	41.000		
46	21-Feb	10:10:38	0.032	32.000		
47	21-Feb	10:11:38	0.028	28.000		
48	21-Feb	10:12:38	0.031	31.000		
49	21-Feb	10:13:38	0.043	43.000		
50	21-Feb	10:14:38	0.033	33.000		
51	21-Feb	10:15:38	0.029	29.000		
52	21-Feb	10:16:38	0.027	27.000		
53	21-Feb	10:17:38	0.028	28.000	0.029	29.267
54	21-Feb	10:18:38	0.027	27.000		
55	21-Feb	10:19:38	0.027	27.000		
56	21-Feb	10:20:38	0.027	27.000		
57	21-Feb	10:21:38	0.027	27.000		
58	21-Feb	10:22:38	0.026	26.000		
59	21-Feb	10:23:38	0.027	27.000		
60	21-Feb	10:24:38	0.027	27.000		
61	21-Feb	10:25:38	0.026	26.000		
62	21-Feb	10:26:38	0.028	28.000		
63	21-Feb	10:27:38	0.030	30.000		
64	21-Feb	10:28:38	0.031	31.000		
65	21-Feb	10:29:38	0.036	36.000		
66	21-Feb	10:30:38	0.038	38.000		
67	21-Feb	10:31:38	0.037	37.000		
68	21-Feb	10:32:38	0.036	36.000	0.034	34.133
69	21-Feb	10:33:38	0.035	35.000		
70	21-Feb	10:34:38	0.033	33.000		
71	21-Feb	10:35:38	0.034	34.000		
72	21-Feb	10:36:38	0.035	35.000		
73	21-Feb	10:37:38	0.040	40.000		
74	21-Feb	10:38:38	0.038	38.000		
75	21-Feb	10:39:38	0.035	35.000		
76	21-Feb	10:40:38	0.039	39.000		
77	21-Feb	10:41:38	0.038	38.000		
78	21-Feb	10:42:38	0.037	37.000		
79	21-Feb	10:43:38	0.035	35.000		
80	21-Feb	10:44:38	0.038	38.000		
81	21-Feb	10:45:38	0.036	36.000		
82	21-Feb	10:46:38	0.044	44.000		
83	21-Feb	10:47:38	0.045	45.000	0.048	48.400
84	21-Feb	10:48:38	0.052	52.000		
85	21-Feb	10:49:38	0.044	44.000		
86	21-Feb	10:50:38	0.063	63.000		
87	21-Feb	10:51:38	0.058	58.000		
88	21-Feb	10:52:38	0.055	55.000		
89	21-Feb	10:53:38	0.081	81.000		
90	21-Feb	10:54:38	0.061	61.000		

Point	Date	Time	1 Minute Average Concentration (mg/m³)	1 Minute Average Concentration (ug/m³)	15 Minute Average Concentration (mg/m³)	15 Minute Average Concentration (ug/m³)
91	21-Feb	10:55:38	0.061	61.000		
92	21-Feb	10:56:38	0.098	98.000		
93	21-Feb	10:57:38	0.059	59.000		
94	21-Feb	10:58:38	0.043	43.000		
95	21-Feb	10:59:38	0.041	41.000		
96	21-Feb	11:00:38	0.042	42.000		
97	21-Feb	11:01:38	0.043	43.000		
98	21-Feb	11:02:38	0.053	53.000	0.050	50.067
99	21-Feb	11:03:38	0.034	34.000		
100	21-Feb	11:04:38	0.035	35.000		
101	21-Feb	11:05:38	0.040	40.000		
102	21-Feb	11:06:38	0.044	44.000		
103	21-Feb	11:07:38	0.051	51.000		
104	21-Feb	11:08:38	0.051	51.000		
105	21-Feb	11:09:38	0.056	56.000		
106	21-Feb	11:10:38	0.056	56.000		
107	21-Feb	11:11:38	0.069	69.000		
108	21-Feb	11:12:38	0.172	172.000		
109	21-Feb	11:13:38	0.232	232.000		
110	21-Feb	11:14:38	0.619	619.000		
111	21-Feb	11:15:38	0.500	500.000		
112	21-Feb	11:16:38	0.560	560.000		
113	21-Feb	11:17:38	1.191	1191.000	0.467	466.933
114	21-Feb	11:18:38	0.638	638.000		
115	21-Feb	11:19:38	0.519	519.000		
116	21-Feb	11:20:38	0.551	551.000		
117	21-Feb	11:21:38	0.504	504.000		
118	21-Feb	11:22:38	0.466	466.000		
119	21-Feb	11:23:38	0.487	487.000		
120	21-Feb	11:24:38	0.440	440.000		
121	21-Feb	11:25:38	0.345	345.000		
122	21-Feb	11:26:38	0.312	312.000		
123	21-Feb	11:27:38	0.363	363.000		
124	21-Feb	11:28:38	0.419	419.000		
125	21-Feb	11:29:38	0.348	348.000		
126	21-Feb	11:30:38	0.315	315.000		
127	21-Feb	11:31:38	0.269	269.000		
128	21-Feb	11:32:38	0.306	306.000	0.311	310.667
129	21-Feb	11:33:38	0.248	248.000		
130	21-Feb	11:34:38	0.216	216.000		
131	21-Feb	11:35:38	0.236	236.000		
132	21-Feb	11:36:38	0.238	238.000		
133	21-Feb	11:37:38	0.316	316.000		
134	21-Feb	11:38:38	0.355	355.000		
135	21-Feb	11:39:38	0.374	374.000		
136	21-Feb	11:40:38	0.301	301.000		
137	21-Feb	11:41:38	0.166	166.000		
138	21-Feb	11:42:38	0.170	170.000		
139	21-Feb	11:43:38	0.259	259.000		
140	21-Feb	11:44:38	0.250	250.000		
141	21-Feb	11:45:38	0.168	168.000		
142	21-Feb	11:46:38	0.325	325.000		
143	21-Feb	11:47:38	0.272	272.000	0.269	268.600
144	21-Feb	11:48:38	0.183	183.000		
145	21-Feb	11:49:38	0.283	283.000		
146	21-Feb	11:50:38	0.271	271.000		
147	21-Feb	11:51:38	0.391	391.000		
148	21-Feb	11:52:38	0.346	346.000		
149	21-Feb	11:53:38	0.375	375.000		
150	21-Feb	11:54:38	0.269	269.000		
151	21-Feb	11:55:38	0.154	154.000		
152	21-Feb	11:56:38	0.188	188.000		
153	21-Feb	11:57:38	0.194	194.000		
154	21-Feb	11:58:38	0.143	143.000		
155	21-Feb	11:59:38	0.275	275.000		
156	21-Feb	12:00:38	0.249	249.000		
157	21-Feb	12:01:38	0.322	322.000		
158	21-Feb	12:02:38	0.198	198.000	0.205	204.600
159	21-Feb	12:03:38	0.234	234.000		
160	21-Feb	12:04:38	0.163	163.000		
161	21-Feb	12:05:38	0.120	120.000		
162	21-Feb	12:06:38	0.315	315.000		
163	21-Feb	12:07:38	0.180	180.000		
164	21-Feb	12:08:38	0.164	164.000		
165	21-Feb	12:09:38	0.170	170.000		
166	21-Feb	12:10:38	0.244	244.000		
167	21-Feb	12:11:38	0.160	160.000		
168	21-Feb	12:12:38	0.316	316.000		
169	21-Feb	12:13:38	0.257	257.000		
170	21-Feb	12:14:38	0.184	184.000		
171	21-Feb	12:15:38	0.127	127.000		
172	21-Feb	12:16:38	0.112	112.000		
173	21-Feb	12:17:38	0.096	96.000	0.151	150.933
174	21-Feb	12:18:38	0.110	110.000		
175	21-Feb	12:19:38	0.095	95.000		
176	21-Feb	12:20:38	0.097	97.000		
177	21-Feb	12:21:38	0.095	95.000		
178	21-Feb	12:22:38	0.095	95.000		
179	21-Feb	12:23:38	0.129	129.000		
180	21-Feb	12:24:38	0.147	147.000		

Point	Date	Time	1 Minute Average Concentration (mg/m^3)	1 Minute Average Concentration (ug/m^3)	15 Minute Average Concentration (mg/m^3)	15 Minute Average Concentration (ug/m^3)
181	21-Feb	12:25:38	0.119	119.000		
182	21-Feb	12:26:38	0.111	111.000		
183	21-Feb	12:27:38	0.116	116.000		
184	21-Feb	12:28:38	0.113	113.000		
185	21-Feb	12:29:38	0.098	98.000		
186	21-Feb	12:30:38	0.089	89.000		
187	21-Feb	12:31:38	0.097	97.000		
188	21-Feb	12:32:38	0.095	95.000	0.099	99.267
189	21-Feb	12:33:38	0.085	85.000		
190	21-Feb	12:34:38	0.084	84.000		
191	21-Feb	12:35:38	0.080	80.000		
192	21-Feb	12:36:38	0.067	67.000		
193	21-Feb	12:37:38	0.095	95.000		
194	21-Feb	12:38:38	0.107	107.000		
195	21-Feb	12:39:38	0.133	133.000		
196	21-Feb	12:40:38	0.151	151.000		
197	21-Feb	12:41:38	0.162	162.000		
198	21-Feb	12:42:38	0.179	179.000		
199	21-Feb	12:43:38	0.182	182.000		
200	21-Feb	12:44:38	0.174	174.000		
201	21-Feb	12:45:38	0.150	150.000		
202	21-Feb	12:46:38	0.174	174.000		
203	21-Feb	12:47:38	0.131	131.000	0.132	131.600
204	21-Feb	12:48:38	0.110	110.000		
205	21-Feb	12:49:38	0.104	104.000		
206	21-Feb	12:50:38	0.094	94.000		
207	21-Feb	12:51:38	0.102	102.000		
208	21-Feb	12:52:38	0.101	101.000		
209	21-Feb	12:53:38	0.071	71.000		
210	21-Feb	12:54:38	0.089	89.000		
211	21-Feb	12:55:38	0.074	74.000		
212	21-Feb	12:56:38	0.059	59.000		
213	21-Feb	12:57:38	0.059	59.000		
214	21-Feb	12:58:38	0.057	57.000		
215	21-Feb	12:59:38	0.068	68.000		
216	21-Feb	13:00:38	0.054	54.000		
217	21-Feb	13:01:38	0.049	49.000		
218	21-Feb	13:02:38	0.048	48.000	0.052	51.867
219	21-Feb	13:03:38	0.047	47.000		
220	21-Feb	13:04:38	0.049	49.000		
221	21-Feb	13:05:38	0.041	41.000		
222	21-Feb	13:06:38	0.043	43.000		
223	21-Feb	13:07:38	0.046	46.000		
224	21-Feb	13:08:38	0.043	43.000		
225	21-Feb	13:09:38	0.041	41.000		
226	21-Feb	13:10:38	0.045	45.000		
227	21-Feb	13:11:38	0.043	43.000		
228	21-Feb	13:12:38	0.037	37.000		
229	21-Feb	13:13:38	0.040	40.000		
230	21-Feb	13:14:38	0.036	36.000		
231	21-Feb	13:15:38	0.041	41.000		
232	21-Feb	13:16:38	0.033	33.000		
233	21-Feb	13:17:38	0.033	33.000	0.036	36.333
234	21-Feb	13:18:38	0.034	34.000		
235	21-Feb	13:19:38	0.032	32.000		
236	21-Feb	13:20:38	0.033	33.000		
237	21-Feb	13:21:38	0.040	40.000		
238	21-Feb	13:22:38	0.032	32.000		
239	21-Feb	13:23:38	0.029	29.000		
240	21-Feb	13:24:38	0.037	37.000		
241	21-Feb	13:25:38	0.031	31.000		
242	21-Feb	13:26:38	0.031	31.000		
243	21-Feb	13:27:38	0.033	33.000		
244	21-Feb	13:28:38	0.032	32.000		
245	21-Feb	13:29:38	0.028	28.000		
246	21-Feb	13:30:38	0.031	31.000		
247	21-Feb	13:31:38	0.028	28.000		
248	21-Feb	13:32:38	0.031	31.000	0.033	32.733
249	21-Feb	13:33:38	0.037	37.000		
250	21-Feb	13:34:38	0.061	61.000		
251	21-Feb	13:35:38	0.039	39.000		
252	21-Feb	13:36:38	0.025	25.000		
253	21-Feb	13:37:38	0.028	28.000		
254	21-Feb	13:38:38	0.029	29.000		
255	21-Feb	13:39:38	0.027	27.000		
256	21-Feb	13:40:38	0.026	26.000		
257	21-Feb	13:41:38	0.051	51.000		
258	21-Feb	13:42:38	0.045	45.000		
259	21-Feb	13:43:38	0.029	29.000		
260	21-Feb	13:44:38	0.028	28.000		
261	21-Feb	13:45:38	0.034	34.000		
262	21-Feb	13:46:38	0.030	30.000		
263	21-Feb	13:47:38	0.032	32.000	0.033	33.000
264	21-Feb	13:48:38	0.027	27.000		
265	21-Feb	13:49:38	0.031	31.000		
266	21-Feb	13:50:38	0.030	30.000		
267	21-Feb	13:51:38	0.033	33.000		
268	21-Feb	13:52:38	0.032	32.000		
269	21-Feb	13:53:38	0.033	33.000		
270	21-Feb	13:54:38	0.034	34.000		

Point	Date	Time	1 Minute Average Concentration (mg/m^3)	1 Minute Average Concentration (ug/m^3)	15 Minute Average Concentration (mg/m^3)	15 Minute Average Concentration (ug/m^3)
271	21-Feb	13:55:38	0.034	34.000		
272	21-Feb	13:56:38	0.035	35.000		
273	21-Feb	13:57:38	0.031	31.000		
274	21-Feb	13:58:38	0.027	27.000		
275	21-Feb	13:59:38	0.028	28.000		
276	21-Feb	14:00:38	0.031	31.000		
277	21-Feb	14:01:38	0.027	27.000		
278	21-Feb	14:02:38	0.031	31.000	0.034	33.600
279	21-Feb	14:03:38	0.033	33.000		
280	21-Feb	14:04:38	0.034	34.000		
281	21-Feb	14:05:38	0.042	42.000		
282	21-Feb	14:06:38	0.046	46.000		
283	21-Feb	14:07:38	0.035	35.000		
284	21-Feb	14:08:38	0.037	37.000		
285	21-Feb	14:09:38	0.033	33.000		
286	21-Feb	14:10:38	0.035	35.000		
287	21-Feb	14:11:38	0.053	53.000		
288	21-Feb	14:12:38	0.090	90.000		
289	21-Feb	14:13:38	0.074	74.000		
290	21-Feb	14:14:38	0.066	66.000		
291	21-Feb	14:15:38	0.074	74.000		
292	21-Feb	14:16:38	0.087	87.000		
293	21-Feb	14:17:38	0.054	54.000	0.097	96.933
294	21-Feb	14:18:38	0.049	49.000		
295	21-Feb	14:19:38	0.050	50.000		
296	21-Feb	14:20:38	0.096	96.000		
297	21-Feb	14:21:38	0.165	165.000		
298	21-Feb	14:22:38	0.169	169.000		
299	21-Feb	14:23:38	0.202	202.000		
300	21-Feb	14:24:38	0.190	190.000		
301	21-Feb	14:25:38	0.308	308.000		
302	21-Feb	14:26:38	0.247	247.000		
303	21-Feb	14:27:38	0.353	353.000		
304	21-Feb	14:28:38	0.292	292.000		
305	21-Feb	14:29:38	0.280	280.000		
306	21-Feb	14:30:38	0.257	257.000		
307	21-Feb	14:31:38	0.244	244.000		
308	21-Feb	14:32:38	0.259	259.000	0.250	250.467
309	21-Feb	14:33:38	0.225	225.000		
310	21-Feb	14:34:38	0.207	207.000		
311	21-Feb	14:35:38	0.179	179.000		
312	21-Feb	14:36:38	0.194	194.000		
313	21-Feb	14:37:38	0.236	236.000		
314	21-Feb	14:38:38	0.202	202.000		
315	21-Feb	14:39:38	0.274	274.000		
316	21-Feb	14:40:38	0.148	148.000		
317	21-Feb	14:41:38	0.191	191.000		
318	21-Feb	14:42:38	0.195	195.000		
319	21-Feb	14:43:38	0.184	184.000		
320	21-Feb	14:44:38	0.144	144.000		
321	21-Feb	14:45:38	0.140	140.000		
322	21-Feb	14:46:38	0.153	153.000		
323	21-Feb	14:47:38	0.144	144.000	0.141	140.867
324	21-Feb	14:48:38	0.117	117.000		
325	21-Feb	14:49:38	0.123	123.000		
326	21-Feb	14:50:38	0.123	123.000		
327	21-Feb	14:51:38	0.122	122.000		
328	21-Feb	14:52:38	0.105	105.000		
329	21-Feb	14:53:38	0.087	87.000		
330	21-Feb	14:54:38	0.137	137.000		
331	21-Feb	14:55:38	0.112	112.000		
332	21-Feb	14:56:38	0.102	102.000		
333	21-Feb	14:57:38	0.105	105.000		
334	21-Feb	14:58:38	0.085	85.000		
335	21-Feb	14:59:38	0.098	98.000		
336	21-Feb	15:00:38	0.080	80.000		
337	21-Feb	15:01:38	0.075	75.000		
338	21-Feb	15:02:38	0.117	117.000	0.107	106.733
339	21-Feb	15:03:38	0.164	164.000		
340	21-Feb	15:04:38	0.124	124.000		
341	21-Feb	15:05:38	0.103	103.000		
342	21-Feb	15:06:38	0.092	92.000		
343	21-Feb	15:07:38	0.125	125.000		
344	21-Feb	15:08:38	0.117	117.000		
345	21-Feb	15:09:38	0.102	102.000		
346	21-Feb	15:10:38	0.108	108.000		
347	21-Feb	15:11:38	0.086	86.000		
348	21-Feb	15:12:38	0.072	72.000		
349	21-Feb	15:13:38	0.091	91.000		
350	21-Feb	15:14:38	0.178	178.000		
351	21-Feb	15:15:38	0.167	167.000		
352	21-Feb	15:16:38	0.096	96.000	0.100	100.286
353	21-Feb	15:17:38	0.084	84.000		
354	21-Feb	15:18:38	0.073	73.000		
355	21-Feb	15:19:38	0.094	94.000		
356	21-Feb	15:20:38	0.094	94.000		
357	21-Feb	15:21:38	0.103	103.000		
358	21-Feb	15:22:38	0.086	86.000		
359	21-Feb	15:23:38	0.072	72.000		

Highlighted cells indicate exceedance of 150 ug/m^3 over average background concentration

Highlighted thick bordered cells indicate exceedance of 150 ug/m^3 over maximum background concentration

Community Air Monitoring Data. Volatile Organic Compounds Near Office Doorway. February 21, 2011.

Instrument:	MiniRAE 2000	Serial Number:	002164
User ID:	00000001	Site ID:	00000371
Data Points:	381	Sample Period:	60 sec
Last Calibration:	2/21/2011 8:31	Gas Name:	Isobutylene
Range of 15 Minute Average Background Concentrations:	1.5 ppm to 2.2 ppm	Background Time Interval:	9:25 - 10:39

	Avg(ppm)	Max(ppm)
Measurement Type:		
High Alarm Levels:	100	100
Low Alarm Levels:	50	50

Line#	Date	Time	1 Minute Average (ppm)	Alarm	1 Minute Maximum (ppm)	Alarm	15 Minute Average (ppm)
1	2/21/2011	9:25	1.3		1.5		
2	2/21/2011	9:26	1.4		1.5		
3	2/21/2011	9:27	1.4		1.6		
4	2/21/2011	9:28	1.4		1.5		
5	2/21/2011	9:29	1.4		1.5		
6	2/21/2011	9:30	1.5		1.6		
7	2/21/2011	9:31	1.5		1.8		
8	2/21/2011	9:32	1.4		1.7		1.5
9	2/21/2011	9:33	1.4		1.8		
10	2/21/2011	9:34	1.5		1.8		
11	2/21/2011	9:35	1.6		1.9		
12	2/21/2011	9:36	1.4		1.6		
13	2/21/2011	9:37	1.4		1.7		
14	2/21/2011	9:38	1.6		1.9		
15	2/21/2011	9:39	1.6		1.7		
16	2/21/2011	9:40	1.5		1.7		
17	2/21/2011	9:41	1.5		1.8		
18	2/21/2011	9:42	1.3		1.7		
19	2/21/2011	9:43	1.4		1.7		
20	2/21/2011	9:44	1.5		1.8		
21	2/21/2011	9:45	2.0		2.6		
22	2/21/2011	9:46	2.5		3.1		
23	2/21/2011	9:47	2.9		3.4		2.2
24	2/21/2011	9:48	2.7		3.4		
25	2/21/2011	9:49	3.4		3.7		
26	2/21/2011	9:50	3.0		3.5		
27	2/21/2011	9:51	2.6		3.3		
28	2/21/2011	9:52	2.4		2.6		
29	2/21/2011	9:53	2.2		2.4		
30	2/21/2011	9:54	2.1		2.4		
31	2/21/2011	9:55	2.0		2.3		
32	2/21/2011	9:56	1.8		2.1		
33	2/21/2011	9:57	1.7		1.9		
34	2/21/2011	9:58	1.8		1.9		
35	2/21/2011	9:59	1.5		1.9		
36	2/21/2011	10:00	1.4		1.6		
37	2/21/2011	10:01	1.3		1.5		
38	2/21/2011	10:02	1.3		1.5		1.6
39	2/21/2011	10:03	1.4		1.6		
40	2/21/2011	10:04	1.4		1.6		
41	2/21/2011	10:05	1.4		1.6		
42	2/21/2011	10:06	1.5		2.8		
43	2/21/2011	10:07	1.7		3.0		
44	2/21/2011	10:08	1.6		3.0		
45	2/21/2011	10:09	1.6		2.6		
46	2/21/2011	10:10	1.9		2.8		
47	2/21/2011	10:11	1.9		3.2		
48	2/21/2011	10:12	1.7		2.0		
49	2/21/2011	10:13	1.7		2.6		
50	2/21/2011	10:14	1.9		2.6		
51	2/21/2011	10:15	2.0		2.7		
52	2/21/2011	10:16	1.9		2.9		
53	2/21/2011	10:17	1.7		2.2		1.7
54	2/21/2011	10:18	1.8		2.6		
55	2/21/2011	10:19	1.8		2.3		
56	2/21/2011	10:20	1.6		1.9		
57	2/21/2011	10:21	1.5		1.8		
58	2/21/2011	10:22	1.4		1.7		
59	2/21/2011	10:23	1.3		1.6		
60	2/21/2011	10:24	1.3		1.5		
61	2/21/2011	10:25	1.4		1.6		
62	2/21/2011	10:26	1.3		1.5		
63	2/21/2011	10:27	1.4		1.6		
64	2/21/2011	10:28	1.4		1.6		
65	2/21/2011	10:29	1.4		1.8		
66	2/21/2011	10:30	1.4		1.9		
67	2/21/2011	10:31	1.4		1.6		
68	2/21/2011	10:32	1.3		1.6		1.6
69	2/21/2011	10:33	1.2		1.5		
70	2/21/2011	10:34	1.3		1.6		
71	2/21/2011	10:35	1.5		2.1		
72	2/21/2011	10:36	2.0		2.6		
73	2/21/2011	10:37	2.5		3.5		
74	2/21/2011	10:38	2.1		3.4		
75	2/21/2011	10:39	1.9		3.1		
76	2/21/2011	10:40	2.3		3.5		
77	2/21/2011	10:41	1.9		2.7		
78	2/21/2011	10:42	1.7		2.0		
79	2/21/2011	10:43	1.6		1.8		
80	2/21/2011	10:44	1.5		1.7		
81	2/21/2011	10:45	1.4		1.6		
82	2/21/2011	10:46	1.4		1.7		
83	2/21/2011	10:47	1.5		1.8		1.6
84	2/21/2011	10:48	1.6		1.8		
85	2/21/2011	10:49	1.6		1.7		
86	2/21/2011	10:50	1.6		1.8		
87	2/21/2011	10:51	1.7		1.9		
88	2/21/2011	10:52	1.7		1.9		
89	2/21/2011	10:53	1.6		1.9		
90	2/21/2011	10:54	1.6		1.8		

Line#	Date	Time	1 Minute Average (ppm)	Alarm	1 Minute Maximum (ppm)	Alarm	15 Minute Average (ppm)
91	2/21/2011	10:55	1.5		1.8		
92	2/21/2011	10:56	1.4		1.6		
93	2/21/2011	10:57	1.3		1.7		
94	2/21/2011	10:58	1.3		1.8		
95	2/21/2011	10:59	1.4		1.8		
96	2/21/2011	11:00	1.3		1.8		
97	2/21/2011	11:01	1.5		2.0		
98	2/21/2011	11:02	1.3		1.6		1.3
99	2/21/2011	11:03	1.4		2.2		
100	2/21/2011	11:04	1.0		1.2		
101	2/21/2011	11:05	1.1		1.3		
102	2/21/2011	11:06	1.1		1.3		
103	2/21/2011	11:07	1.0		1.2		
104	2/21/2011	11:08	1.1		1.3		
105	2/21/2011	11:09	1.1		1.3		
106	2/21/2011	11:10	1.4		2.1		
107	2/21/2011	11:11	1.4		1.7		
108	2/21/2011	11:12	2.4		7.9		
109	2/21/2011	11:13	2.8		8.7		
110	2/21/2011	11:14	2.4		5.7		
111	2/21/2011	11:15	2.3		4.1		
112	2/21/2011	11:16	2.6		3.7		
113	2/21/2011	11:17	3.3		8.0		2.9
114	2/21/2011	11:18	3.0		5.4		
115	2/21/2011	11:19	4.4		8.2		
116	2/21/2011	11:20	3.2		4.5		
117	2/21/2011	11:21	4.5		8.4		
118	2/21/2011	11:22	4.8		8.5		
119	2/21/2011	11:23	2.7		4.4		
120	2/21/2011	11:24	2.1		2.6		
121	2/21/2011	11:25	2.7		5.4		
122	2/21/2011	11:26	5.0		8.7		
123	2/21/2011	11:27	3.9		7.3		
124	2/21/2011	11:28	4.0		8.5		
125	2/21/2011	11:29	3.1		5.2		
126	2/21/2011	11:30	4.1		8.6		
127	2/21/2011	11:31	4.4		8.4		
128	2/21/2011	11:32	3.2		5.1		4.4
129	2/21/2011	11:33	2.9		4.6		
130	2/21/2011	11:34	4.0		7.4		
131	2/21/2011	11:35	4.0		8.4		
132	2/21/2011	11:36	6.9		11.4		
133	2/21/2011	11:37	6.3		10.3		
134	2/21/2011	11:38	6.1		10.8		
135	2/21/2011	11:39	4.7		9.4		
136	2/21/2011	11:40	3.7		7.1		
137	2/21/2011	11:41	3.1		9.3		
138	2/21/2011	11:42	5.7		8.7		
139	2/21/2011	11:43	4.0		7.8		
140	2/21/2011	11:44	4.3		7.9		
141	2/21/2011	11:45	6.2		9.8		
142	2/21/2011	11:46	4.9		8.8		
143	2/21/2011	11:47	3.9		6.1		4.9
144	2/21/2011	11:48	4.8		7.9		
145	2/21/2011	11:49	6.4		11.1		
146	2/21/2011	11:50	6.0		9.8		
147	2/21/2011	11:51	6.8		9.7		
148	2/21/2011	11:52	5.8		10.4		
149	2/21/2011	11:53	5.3		11.0		
150	2/21/2011	11:54	3.3		4.6		
151	2/21/2011	11:55	4.3		7.2		
152	2/21/2011	11:56	4.1		6.4		
153	2/21/2011	11:57	3.7		7.0		
154	2/21/2011	11:58	5.3		11.6		
155	2/21/2011	11:59	7.0		12.0		
156	2/21/2011	12:00	5.2		10.2		
157	2/21/2011	12:01	4.8		6.9		
158	2/21/2011	12:02	5.0		7.0		4.7
159	2/21/2011	12:03	3.7		4.8		
160	2/21/2011	12:04	3.5		9.7		
161	2/21/2011	12:05	6.3		9.6		
162	2/21/2011	12:06	3.9		5.2		
163	2/21/2011	12:07	4.3		7.9		
164	2/21/2011	12:08	4.9		11.1		
165	2/21/2011	12:09	4.9		8.3		
166	2/21/2011	12:10	3.9		6.3		
167	2/21/2011	12:11	8.8		12.7		
168	2/21/2011	12:12	5.3		10.4		
169	2/21/2011	12:13	5.3		8.1		
170	2/21/2011	12:14	3.6		5.7		
171	2/21/2011	12:15	3.3		4.6		
172	2/21/2011	12:16	3.1		3.7		
173	2/21/2011	12:17	3.2		3.7		3.8
174	2/21/2011	12:18	3.0		3.7		
175	2/21/2011	12:19	2.9		3.4		
176	2/21/2011	12:20	2.9		3.3		
177	2/21/2011	12:21	2.9		3.5		
178	2/21/2011	12:22	3.2		3.8		
179	2/21/2011	12:23	3.2		3.6		
180	2/21/2011	12:24	3.0		3.6		

Line#	Date	Time	1 Minute Average (ppm)	Alarm	1 Minute Maximum (ppm)	Alarm	15 Minute Average (ppm)
181	2/21/2011	12:25	3.0		3.4		
182	2/21/2011	12:26	3.0		3.5		
183	2/21/2011	12:27	3.1		3.5		
184	2/21/2011	12:28	3.0		3.6		
185	2/21/2011	12:29	3.4		4.6		
186	2/21/2011	12:30	3.7		4.8		
187	2/21/2011	12:31	3.4		4.5		
188	2/21/2011	12:32	3.6		4.4		3.1
189	2/21/2011	12:33	3.2		4.3		
190	2/21/2011	12:34	3.3		4.2		
191	2/21/2011	12:35	2.7		3.2		
192	2/21/2011	12:36	2.7		2.9		
193	2/21/2011	12:37	2.5		2.9		
194	2/21/2011	12:38	2.7		3.0		
195	2/21/2011	12:39	2.7		2.9		
196	2/21/2011	12:40	2.5		2.9		
197	2/21/2011	12:41	2.6		2.8		
198	2/21/2011	12:42	2.6		2.8		
199	2/21/2011	12:43	2.5		2.8		
200	2/21/2011	12:44	2.6		2.9		
201	2/21/2011	12:45	2.6		2.9		
202	2/21/2011	12:46	2.4		2.9		
203	2/21/2011	12:47	2.5		2.9		2.6
204	2/21/2011	12:48	2.2		2.6		
205	2/21/2011	12:49	2.5		3.1		
206	2/21/2011	12:50	2.8		3.3		
207	2/21/2011	12:51	3.0		3.8		
208	2/21/2011	12:52	3.1		4.0		
209	2/21/2011	12:53	2.5		3.5		
210	2/21/2011	12:54	2.4		3.6		
211	2/21/2011	12:55	2.8		4.0		
212	2/21/2011	12:56	2.6		3.4		
213	2/21/2011	12:57	2.5		3.4		
214	2/21/2011	12:58	2.4		3.2		
215	2/21/2011	12:59	2.4		3.2		
216	2/21/2011	13:00	2.1		2.5		
217	2/21/2011	13:01	2.0		2.4		
218	2/21/2011	13:02	2.0		2.4		2.1
219	2/21/2011	13:03	1.9		2.3		
220	2/21/2011	13:04	1.8		2.1		
221	2/21/2011	13:05	1.8		2.1		
222	2/21/2011	13:06	2.1		2.4		
223	2/21/2011	13:07	2.0		2.3		
224	2/21/2011	13:08	1.9		2.3		
225	2/21/2011	13:09	1.9		2.3		
226	2/21/2011	13:10	2.0		2.5		
227	2/21/2011	13:11	2.1		2.6		
228	2/21/2011	13:12	2.4		3.2		
229	2/21/2011	13:13	2.3		3.1		
230	2/21/2011	13:14	2.5		3.3		
231	2/21/2011	13:15	2.4		3.3		
232	2/21/2011	13:16	2.1		2.9		
233	2/21/2011	13:17	2.1		2.7		2.1
234	2/21/2011	13:18	1.9		2.1		
235	2/21/2011	13:19	1.7		1.9		
236	2/21/2011	13:20	1.8		2.2		
237	2/21/2011	13:21	1.8		2.2		
238	2/21/2011	13:22	1.8		2.1		
239	2/21/2011	13:23	1.9		2.2		
240	2/21/2011	13:24	2.0		2.3		
241	2/21/2011	13:25	1.9		2.2		
242	2/21/2011	13:26	1.9		2.1		
243	2/21/2011	13:27	2.0		2.3		
244	2/21/2011	13:28	2.1		2.4		
245	2/21/2011	13:29	2.1		2.6		
246	2/21/2011	13:30	2.1		2.4		
247	2/21/2011	13:31	2.3		2.9		
248	2/21/2011	13:32	2.6		3.6		2.4
249	2/21/2011	13:33	2.9		3.6		
250	2/21/2011	13:34	2.9		3.8		
251	2/21/2011	13:35	2.4		3.5		
252	2/21/2011	13:36	2.7		3.8		
253	2/21/2011	13:37	3.2		4.1		
254	2/21/2011	13:38	2.5		3.3		
255	2/21/2011	13:39	2.3		2.8		
256	2/21/2011	13:40	2.3		2.7		
257	2/21/2011	13:41	2.1		2.4		
258	2/21/2011	13:42	2.3		2.7		
259	2/21/2011	13:43	2.3		2.5		
260	2/21/2011	13:44	2.3		2.9		
261	2/21/2011	13:45	2.3		2.7		
262	2/21/2011	13:46	2.5		3.0		
263	2/21/2011	13:47	2.3		2.7		2.4
264	2/21/2011	13:48	2.3		2.6		
265	2/21/2011	13:49	2.3		2.7		
266	2/21/2011	13:50	2.5		3.2		
267	2/21/2011	13:51	2.6		3.1		
268	2/21/2011	13:52	2.7		3.3		
269	2/21/2011	13:53	2.5		3.2		
270	2/21/2011	13:54	2.8		3.7		
271	2/21/2011	13:55	2.6		3.3		
272	2/21/2011	13:56	2.8		3.9		
273	2/21/2011	13:57	2.7		4.1		
274	2/21/2011	13:58	2.4		3.2		
275	2/21/2011	13:59	2.7		3.8		
276	2/21/2011	14:00	2.5		3.5		
277	2/21/2011	14:01	2.7		3.8		
278	2/21/2011	14:02	2.6		3.6		2.4
279	2/21/2011	14:03	2.3		2.7		
280	2/21/2011	14:04	2.2		2.8		
281	2/21/2011	14:05	2.4		2.7		
282	2/21/2011	14:06	2.3		2.5		
283	2/21/2011	14:07	2.0		2.2		
284	2/21/2011	14:08	2.1		2.4		
285	2/21/2011	14:09	2.0		2.4		

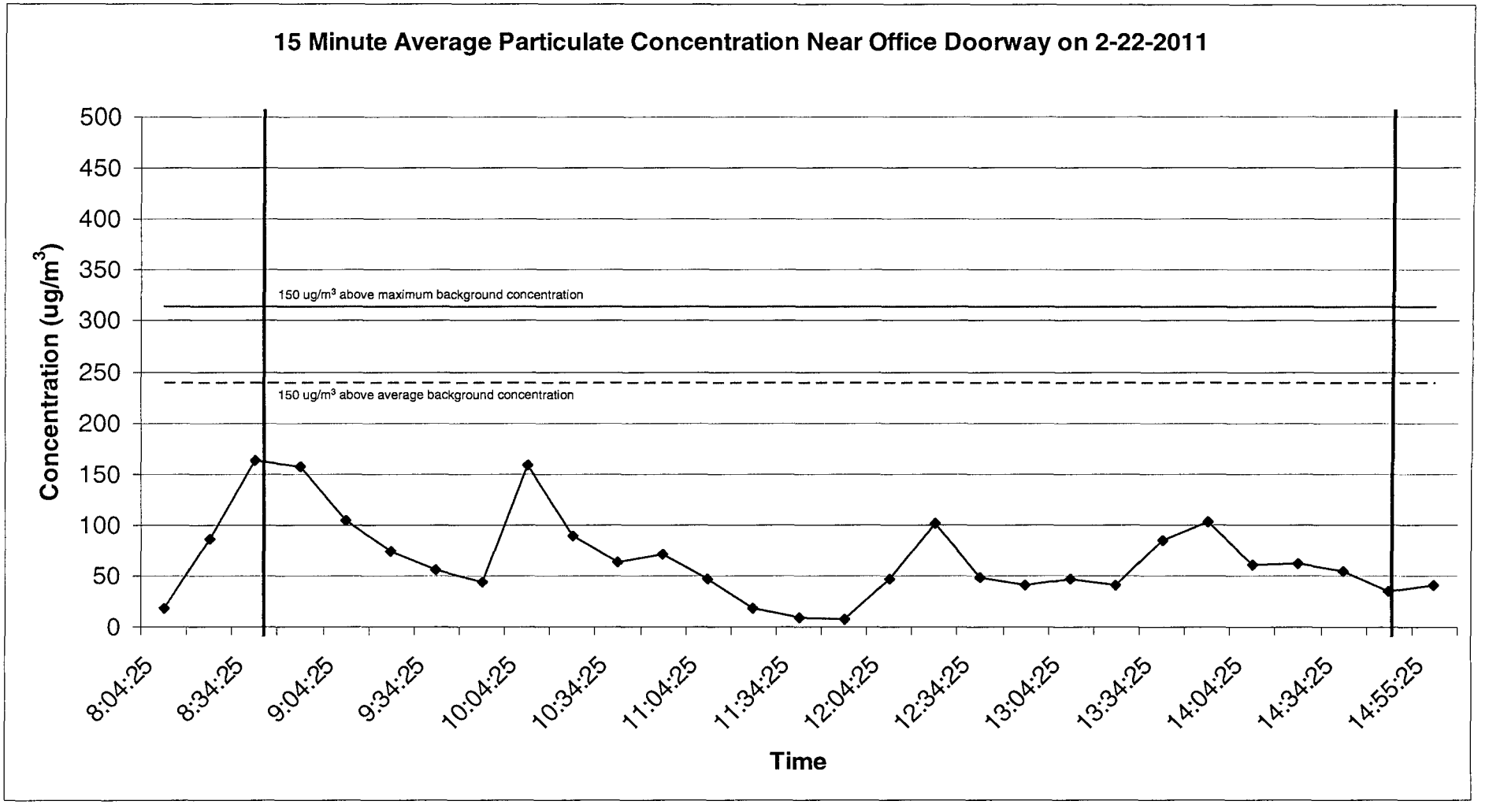
Line#	Date	Time	1 Minute Average (ppm)	Alarm	1 Minute Maximum (ppm)	Alarm	15 Minute Average (ppm)
286	2/21/2011	14:10	1.9		2.2		
287	2/21/2011	14:11	2.1		2.3		
288	2/21/2011	14:12	2.2		2.6		
289	2/21/2011	14:13	2.5		3.0		
290	2/21/2011	14:14	2.5		3.0		
291	2/21/2011	14:15	2.3		2.8		
292	2/21/2011	14:16	2.0		2.7		
293	2/21/2011	14:17	2.0		3.0		2.0
294	2/21/2011	14:18	1.8		2.3		
295	2/21/2011	14:19	1.7		2.4		
296	2/21/2011	14:20	1.7		1.9		
297	2/21/2011	14:21	1.7		2.0		
298	2/21/2011	14:22	1.7		2.0		
299	2/21/2011	14:23	1.7		1.9		
300	2/21/2011	14:24	1.7		1.9		
301	2/21/2011	14:25	1.7		1.9		
302	2/21/2011	14:26	1.7		1.9		
303	2/21/2011	14:27	1.7		1.9		
304	2/21/2011	14:28	1.7		1.9		
305	2/21/2011	14:29	1.7		2.0		
306	2/21/2011	14:30	1.8		2.1		
307	2/21/2011	14:31	2.1		2.7		
308	2/21/2011	14:32	2.0		2.3		1.9
309	2/21/2011	14:33	2.1		3.2		
310	2/21/2011	14:34	2.1		2.9		
311	2/21/2011	14:35	2.0		2.5		
312	2/21/2011	14:36	2.0		2.6		
313	2/21/2011	14:37	1.8		2.0		
314	2/21/2011	14:38	2.1		2.8		
315	2/21/2011	14:39	2.2		2.8		
316	2/21/2011	14:40	1.9		2.2		
317	2/21/2011	14:41	1.9		2.3		
318	2/21/2011	14:42	1.9		2.4		
319	2/21/2011	14:43	2.0		3.3		
320	2/21/2011	14:44	1.9		2.6		
321	2/21/2011	14:45	1.9		2.2		
322	2/21/2011	14:46	1.8		2.2		
323	2/21/2011	14:47	1.9		2.4		1.9
324	2/21/2011	14:48	1.9		2.3		
325	2/21/2011	14:49	1.8		2.0		
326	2/21/2011	14:50	1.9		2.2		
327	2/21/2011	14:51	1.9		2.3		
328	2/21/2011	14:52	1.9		2.2		
329	2/21/2011	14:53	1.9		2.1		
330	2/21/2011	14:54	2.1		2.6		
331	2/21/2011	14:55	2.3		3.2		
332	2/21/2011	14:56	2.3		2.9		
333	2/21/2011	14:57	2.1		2.7		
334	2/21/2011	14:58	2.0		2.5		
335	2/21/2011	14:59	2.1		2.7		
336	2/21/2011	15:00	2.2		2.8		
337	2/21/2011	15:01	2.2		2.9		
338	2/21/2011	15:02	1.9		2.2		2.0
339	2/21/2011	15:03	1.9		2.7		
340	2/21/2011	15:04	2.2		2.8		
341	2/21/2011	15:05	2.1		2.9		
342	2/21/2011	15:06	1.9		2.6		
343	2/21/2011	15:07	1.9		2.1		
344	2/21/2011	15:08	1.8		2.1		
345	2/21/2011	15:09	1.8		2.1		
346	2/21/2011	15:10	1.8		2.0		
347	2/21/2011	15:11	1.8		2.0		
348	2/21/2011	15:12	1.7		2.1		
349	2/21/2011	15:13	1.9		2.1		
350	2/21/2011	15:14	2.0		2.3		
351	2/21/2011	15:15	2.7		3.6		
352	2/21/2011	15:16	2.6		3.4		
353	2/21/2011	15:17	2.6		3.5		2.3
354	2/21/2011	15:18	2.3		2.9		
355	2/21/2011	15:19	2.4		3.5		
356	2/21/2011	15:20	2.7		3.3		
357	2/21/2011	15:21	2.8		3.5		
358	2/21/2011	15:22	2.7		3.5		
359	2/21/2011	15:23	2.4		2.8		
360	2/21/2011	15:24	2.3		2.5		
361	2/21/2011	15:25	2.2		2.4		
362	2/21/2011	15:26	2.3		2.4		
363	2/21/2011	15:27	2.2		2.4		
364	2/21/2011	15:28	2.2		2.3		
365	2/21/2011	15:29	2.1		2.3		
366	2/21/2011	15:30	2.2		2.4		
367	2/21/2011	15:31	2.2		2.7		
368	2/21/2011	15:32	2.0		2.2		2.2
369	2/21/2011	15:33	2.0		2.3		
370	2/21/2011	15:34	2.2		3.0		
371	2/21/2011	15:35	2.3		3.0		
372	2/21/2011	15:36	2.2		3.0		
373	2/21/2011	15:37	2.4		3.1		
374	2/21/2011	15:38	2.5		3.2		
375	2/21/2011	15:39	2.2		3.6		
376	2/21/2011	15:40	1.7		2.4		
377	2/21/2011	15:41	1.8		2.1		
378	2/21/2011	15:42	1.3		2.0		1.5
379	2/21/2011	15:43	1.4		2.0		
380	2/21/2011	15:44	1.2		1.7		
381	2/21/2011	15:45	1.6		1.9		

Highlighted cells indicate exceedance of 1 ppm over average background concentration

Highlighted thick bordered cells indicate exceedance of 1 ppm over maximum background concentration

Appendix B-2

Office Doorway Monitoring Station
Particulate and VOCs 2-22-2011



Brackets time interval when drilling and injecting was occurring. Background levels determined based on readings taken prior to starting drilling each day (7:50 – 8:34).

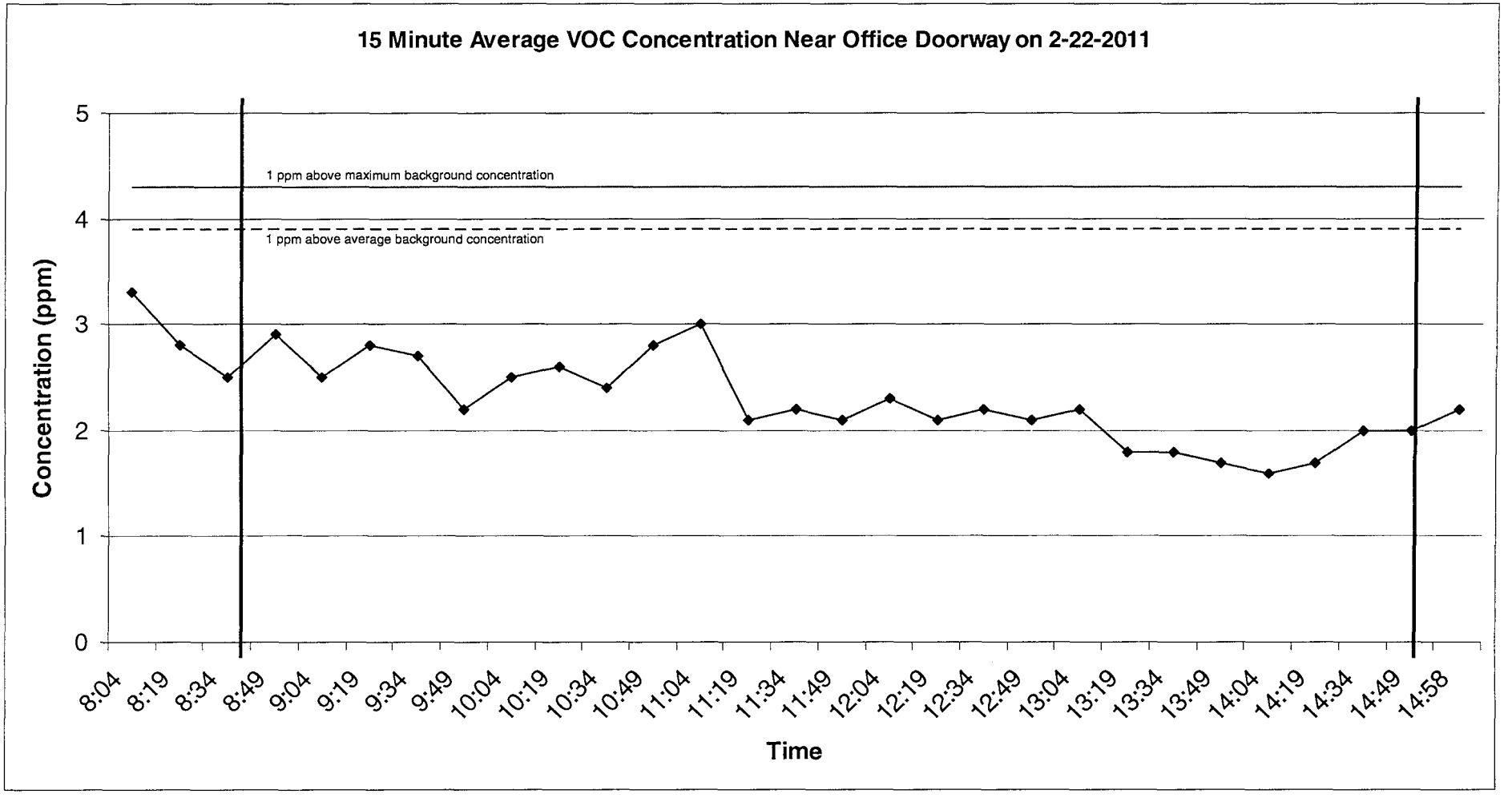
Maximum background concentration = 163.667 ug/m³
Average background concentration = 89.089 ug/m³
150 ug/m³ above maximum background = 313.667 ug/m³
150 ug/m³ above average background = 239.089 ug/m³

S&W REDEVELOPMENT
Syracuse, New York

Date: 5/2011 Proj No.: N9013

110 Luther Ave. Site (BCP Site #C734118)
Remedial Work Plan
110 Luther Ave., Liverpool
Onondaga County, New York

Appendix B-2
Pilot Test Air Monitoring Results



Brackets time interval when drilling and injecting was occurring. Background levels determined based on readings taken prior to starting drilling each day (7:50 – 8:34)

Maximum background concentration = 3.3 ppm
Average background concentration = 2.9 ppm
1 ppm above maximum background = 4.3 ppm
1 ppm above average background = 3.9 ppm

S&W REDEVELOPMENT
Syracuse, New York

Date: 5/2011 Proj No.: N9013

110 Luther Ave. Site (BCP Site #C734118)
Remedial Work Plan
110 Luther Ave., Liverpool
Onondaga County, New York

Appendix B-2
Pilot Test Air Monitoring Results

Community Air Monitoring Data. Particulate Matter Near Office Doorway. February 22, 2011.

Model Number:	pDR-1000	Unit:	Concentration		
Serial Number:	10438	Unit Name:	mg/m^3		
Tag Number:	2	Maximum Display Concentration:	0.500 mg/m^3		
Start Time:	7:50:25	Time at Maximum:	8:33:25		
Start Date:	22-Feb-11	Maximum STEL Concentration:	0.216 mg/m^3		
Log Period:	00:01:00	Time at Maximum STEL:	8:43:25		
Number of Points:	426	Elapsed Time:	7:06:00		
Calibration Factor:	100%	Overall Average Concentration:	0.067 mg/m^3		
Range of 15 Minute Average Background Concentrations:		17.467 ug/m^3 to 163.667 ug/m^3		Background Time Interval:	7:50 - 8:34

Logged Data:

Point	Date	Time	1 Minute Average Concentration (mg/m^3)	1 Minute Average Concentration (ug/m^3)	15 Minute Average Concentration (mg/m^3)	15 Minute Average Concentration (ug/m^3)
1	22-Feb	7:50:25	0.000	0.000		
2	22-Feb	7:51:25	0.001	1.000		
3	22-Feb	7:52:25	0.007	7.000		
4	22-Feb	7:53:25	0.005	5.000		
5	22-Feb	7:54:25	0.004	4.000		
6	22-Feb	7:55:25	0.010	10.000		
7	22-Feb	7:56:25	0.005	5.000		
8	22-Feb	7:57:25	0.001	1.000	0.017	17.467
9	22-Feb	7:58:25	0.005	5.000		
10	22-Feb	7:59:25	0.007	7.000		
11	22-Feb	8:00:25	0.006	6.000		
12	22-Feb	8:01:25	0.018	18.000		
13	22-Feb	8:02:25	0.017	17.000		
14	22-Feb	8:03:25	0.100	100.000		
15	22-Feb	8:04:25	0.076	76.000		
16	22-Feb	8:05:25	0.070	70.000		
17	22-Feb	8:06:25	0.101	101.000		
18	22-Feb	8:07:25	0.095	95.000		
19	22-Feb	8:08:25	0.071	71.000		
20	22-Feb	8:09:25	0.066	66.000		
21	22-Feb	8:10:25	0.083	83.000		
22	22-Feb	8:11:25	0.076	76.000		
23	22-Feb	8:12:25	0.082	82.000	0.086	86.133
24	22-Feb	8:13:25	0.072	72.000		
25	22-Feb	8:14:25	0.075	75.000		
26	22-Feb	8:15:25	0.095	95.000		
27	22-Feb	8:16:25	0.107	107.000		
28	22-Feb	8:17:25	0.103	103.000		
29	22-Feb	8:18:25	0.102	102.000		
30	22-Feb	8:19:25	0.094	94.000		
31	22-Feb	8:20:25	0.131	131.000		
32	22-Feb	8:21:25	0.077	77.000		
33	22-Feb	8:22:25	0.060	60.000		
34	22-Feb	8:23:25	0.068	68.000		
35	22-Feb	8:24:25	0.081	81.000		
36	22-Feb	8:25:25	0.078	78.000		
37	22-Feb	8:26:25	0.092	92.000		
38	22-Feb	8:27:25	0.095	95.000	0.164	163.667
39	22-Feb	8:28:25	0.123	123.000		
40	22-Feb	8:29:25	0.215	215.000		
41	22-Feb	8:30:25	0.263	263.000		
42	22-Feb	8:31:25	0.268	268.000		
43	22-Feb	8:32:25	0.297	297.000		
44	22-Feb	8:33:25	0.322	322.000		
45	22-Feb	8:34:25	0.285	285.000		
46	22-Feb	8:35:25	0.244	244.000		
47	22-Feb	8:36:25	0.169	169.000		
48	22-Feb	8:37:25	0.151	151.000		
49	22-Feb	8:38:25	0.173	173.000		
50	22-Feb	8:39:25	0.181	181.000		
51	22-Feb	8:40:25	0.158	158.000		
52	22-Feb	8:41:25	0.179	179.000		
53	22-Feb	8:42:25	0.145	145.000	0.157	157.000
54	22-Feb	8:43:25	0.187	187.000		
55	22-Feb	8:44:25	0.164	164.000		
56	22-Feb	8:45:25	0.156	156.000		
57	22-Feb	8:46:25	0.124	124.000		
58	22-Feb	8:47:25	0.099	99.000		
59	22-Feb	8:48:25	0.119	119.000		
60	22-Feb	8:49:25	0.106	106.000		
61	22-Feb	8:50:25	0.106	106.000		
62	22-Feb	8:51:25	0.126	126.000		
63	22-Feb	8:52:25	0.137	137.000		
64	22-Feb	8:53:25	0.114	114.000		
65	22-Feb	8:54:25	0.108	108.000		
66	22-Feb	8:55:25	0.115	115.000		
67	22-Feb	8:56:25	0.118	118.000		
68	22-Feb	8:57:25	0.127	127.000	0.105	104.533
69	22-Feb	8:58:25	0.095	95.000		
70	22-Feb	8:59:25	0.081	81.000		
71	22-Feb	9:00:25	0.088	88.000		
72	22-Feb	9:01:25	0.109	109.000		
73	22-Feb	9:02:25	0.089	89.000		
74	22-Feb	9:03:25	0.069	69.000		
75	22-Feb	9:04:25	0.086	86.000		

Point	Date	Time	1 Minute Average Concentration (mg/m^3)	1 Minute Average Concentration (ug/m^3)	15 Minute Average Concentration (mg/m^3)	15 Minute Average Concentration (ug/m^3)
76	22-Feb	9:05:25	0.062	62.000		
77	22-Feb	9:06:25	0.051	51.000		
78	22-Feb	9:07:25	0.074	74.000		
79	22-Feb	9:08:25	0.065	65.000		
80	22-Feb	9:09:25	0.062	62.000		
81	22-Feb	9:10:25	0.078	78.000		
82	22-Feb	9:11:25	0.091	91.000		
83	22-Feb	9:12:25	0.097	97.000	0.074	74.000
84	22-Feb	9:13:25	0.098	98.000		
85	22-Feb	9:14:25	0.081	81.000		
86	22-Feb	9:15:25	0.065	65.000		
87	22-Feb	9:16:25	0.075	75.000		
88	22-Feb	9:17:25	0.073	73.000		
89	22-Feb	9:18:25	0.071	71.000		
90	22-Feb	9:19:25	0.067	67.000		
91	22-Feb	9:20:25	0.051	51.000		
92	22-Feb	9:21:25	0.060	60.000		
93	22-Feb	9:22:25	0.061	61.000		
94	22-Feb	9:23:25	0.075	75.000		
95	22-Feb	9:24:25	0.052	52.000		
96	22-Feb	9:25:25	0.046	46.000		
97	22-Feb	9:26:25	0.048	48.000		
98	22-Feb	9:27:25	0.042	42.000	0.057	56.600
99	22-Feb	9:28:25	0.043	43.000		
100	22-Feb	9:29:25	0.064	64.000		
101	22-Feb	9:30:25	0.055	55.000		
102	22-Feb	9:31:25	0.080	80.000		
103	22-Feb	9:32:25	0.055	55.000		
104	22-Feb	9:33:25	0.057	57.000		
105	22-Feb	9:34:25	0.060	60.000		
106	22-Feb	9:35:25	0.068	68.000		
107	22-Feb	9:36:25	0.054	54.000		
108	22-Feb	9:37:25	0.058	58.000		
109	22-Feb	9:38:25	0.054	54.000		
110	22-Feb	9:39:25	0.035	35.000		
111	22-Feb	9:40:25	0.039	39.000		
112	22-Feb	9:41:25	0.036	36.000		
113	22-Feb	9:42:25	0.033	33.000	0.044	43.800
114	22-Feb	9:43:25	0.029	29.000		
115	22-Feb	9:44:25	0.035	35.000		
116	22-Feb	9:45:25	0.027	27.000		
117	22-Feb	9:46:25	0.029	29.000		
118	22-Feb	9:47:25	0.036	36.000		
119	22-Feb	9:48:25	0.046	46.000		
120	22-Feb	9:49:25	0.078	78.000		
121	22-Feb	9:50:25	0.084	84.000		
122	22-Feb	9:51:25	0.098	98.000		
123	22-Feb	9:52:25	0.125	125.000		
124	22-Feb	9:53:25	0.174	174.000		
125	22-Feb	9:54:25	0.181	181.000		
126	22-Feb	9:55:25	0.207	207.000		
127	22-Feb	9:56:25	0.239	239.000		
128	22-Feb	9:57:25	0.194	194.000	0.159	158.867
129	22-Feb	9:58:25	0.173	173.000		
130	22-Feb	9:59:25	0.186	186.000		
131	22-Feb	10:00:25	0.156	156.000		
132	22-Feb	10:01:25	0.167	167.000		
133	22-Feb	10:02:25	0.137	137.000		
134	22-Feb	10:03:25	0.134	134.000		
135	22-Feb	10:04:25	0.128	128.000		
136	22-Feb	10:05:25	0.128	128.000		
137	22-Feb	10:06:25	0.122	122.000		
138	22-Feb	10:07:25	0.127	127.000		
139	22-Feb	10:08:25	0.101	101.000		
140	22-Feb	10:09:25	0.080	80.000		
141	22-Feb	10:10:25	0.091	91.000		
142	22-Feb	10:11:25	0.078	78.000		
143	22-Feb	10:12:25	0.082	82.000	0.089	89.000
144	22-Feb	10:13:25	0.077	77.000		
145	22-Feb	10:14:25	0.071	71.000		
146	22-Feb	10:15:25	0.079	79.000		
147	22-Feb	10:16:25	0.079	79.000		
148	22-Feb	10:17:25	0.064	64.000		
149	22-Feb	10:18:25	0.076	76.000		
150	22-Feb	10:19:25	0.080	80.000		
151	22-Feb	10:20:25	0.072	72.000		
152	22-Feb	10:21:25	0.075	75.000		
153	22-Feb	10:22:25	0.062	62.000		
154	22-Feb	10:23:25	0.074	74.000		
155	22-Feb	10:24:25	0.054	54.000		
156	22-Feb	10:25:25	0.057	57.000		
157	22-Feb	10:26:25	0.065	65.000		
158	22-Feb	10:27:25	0.067	67.000	0.063	63.333
159	22-Feb	10:28:25	0.061	61.000		
160	22-Feb	10:29:25	0.066	66.000		
161	22-Feb	10:30:25	0.060	60.000		
162	22-Feb	10:31:25	0.069	69.000		
163	22-Feb	10:32:25	0.065	65.000		
164	22-Feb	10:33:25	0.051	51.000		
165	22-Feb	10:34:25	0.052	52.000		

Point	Date	Time	1 Minute Average Concentration (mg/m³)	1 Minute Average Concentration (ug/m³)	15 Minute Average Concentration (mg/m³)	15 Minute Average Concentration (ug/m³)
166	22-Feb	10:35:25	0.062	62.000		
167	22-Feb	10:36:25	0.067	67.000		
168	22-Feb	10:37:25	0.062	62.000		
169	22-Feb	10:38:25	0.085	85.000		
170	22-Feb	10:39:25	0.055	55.000		
171	22-Feb	10:40:25	0.078	78.000		
172	22-Feb	10:41:25	0.080	80.000		
173	22-Feb	10:42:25	0.065	65.000	0.071	71.200
174	22-Feb	10:43:25	0.078	78.000		
175	22-Feb	10:44:25	0.054	54.000		
176	22-Feb	10:45:25	0.057	57.000		
177	22-Feb	10:46:25	0.051	51.000		
178	22-Feb	10:47:25	0.109	109.000		
179	22-Feb	10:48:25	0.082	82.000		
180	22-Feb	10:49:25	0.083	83.000		
181	22-Feb	10:50:25	0.086	86.000		
182	22-Feb	10:51:25	0.069	69.000		
183	22-Feb	10:52:25	0.055	55.000		
184	22-Feb	10:53:25	0.053	53.000		
185	22-Feb	10:54:25	0.056	56.000		
186	22-Feb	10:55:25	0.050	50.000		
187	22-Feb	10:56:25	0.045	45.000		
188	22-Feb	10:57:25	0.041	41.000	0.047	47.000
189	22-Feb	10:58:25	0.043	43.000		
190	22-Feb	10:59:25	0.042	42.000		
191	22-Feb	11:00:25	0.032	32.000		
192	22-Feb	11:01:25	0.036	36.000		
193	22-Feb	11:02:25	0.035	35.000		
194	22-Feb	11:03:25	0.034	34.000		
195	22-Feb	11:04:25	0.028	28.000		
196	22-Feb	11:05:25	0.024	24.000		
197	22-Feb	11:06:25	0.024	24.000		
198	22-Feb	11:07:25	0.027	27.000		
199	22-Feb	11:08:25	0.023	23.000		
200	22-Feb	11:09:25	0.022	22.000		
201	22-Feb	11:10:25	0.013	13.000		
202	22-Feb	11:11:25	0.017	17.000		
203	22-Feb	11:12:25	0.022	22.000	0.019	18.667
204	22-Feb	11:13:25	0.021	21.000		
205	22-Feb	11:14:25	0.018	18.000		
206	22-Feb	11:15:25	0.019	19.000		
207	22-Feb	11:16:25	0.012	12.000		
208	22-Feb	11:17:25	0.019	19.000		
209	22-Feb	11:18:25	0.011	11.000		
210	22-Feb	11:19:25	0.008	8.000		
211	22-Feb	11:20:25	0.010	10.000		
212	22-Feb	11:21:25	0.009	9.000		
213	22-Feb	11:22:25	0.010	10.000		
214	22-Feb	11:23:25	0.009	9.000		
215	22-Feb	11:24:25	0.007	7.000		
216	22-Feb	11:25:25	0.008	8.000		
217	22-Feb	11:26:25	0.005	5.000		
218	22-Feb	11:27:25	0.009	9.000	0.008	8.400
219	22-Feb	11:28:25	0.009	9.000		
220	22-Feb	11:29:25	0.006	6.000		
221	22-Feb	11:30:25	0.009	9.000		
222	22-Feb	11:31:25	0.011	11.000		
223	22-Feb	11:32:25	0.008	8.000		
224	22-Feb	11:33:25	0.007	7.000		
225	22-Feb	11:34:25	0.009	9.000		
226	22-Feb	11:35:25	0.014	14.000		
227	22-Feb	11:36:25	0.006	6.000		
228	22-Feb	11:37:25	0.009	9.000		
229	22-Feb	11:38:25	0.007	7.000		
230	22-Feb	11:39:25	0.005	5.000		
231	22-Feb	11:40:25	0.006	6.000		
232	22-Feb	11:41:25	0.009	9.000		
233	22-Feb	11:42:25	0.009	9.000	0.007	7.067
234	22-Feb	11:43:25	0.006	6.000		
235	22-Feb	11:44:25	0.005	5.000		
236	22-Feb	11:45:25	0.007	7.000		
237	22-Feb	11:46:25	0.004	4.000		
238	22-Feb	11:47:25	0.006	6.000		
239	22-Feb	11:48:25	0.008	8.000		
240	22-Feb	11:49:25	0.005	5.000		
241	22-Feb	11:50:25	0.006	6.000		
242	22-Feb	11:51:25	0.067	67.000		
243	22-Feb	11:52:25	0.014	14.000		
244	22-Feb	11:53:25	0.005	5.000		
245	22-Feb	11:54:25	0.012	12.000		
246	22-Feb	11:55:25	0.009	9.000		
247	22-Feb	11:56:25	0.012	12.000		
248	22-Feb	11:57:25	0.022	22.000	0.046	46.400
249	22-Feb	11:58:25	0.027	27.000		
250	22-Feb	11:59:25	0.036	36.000		
251	22-Feb	12:00:25	0.061	61.000		
252	22-Feb	12:01:25	0.059	59.000		
253	22-Feb	12:02:25	0.078	78.000		
254	22-Feb	12:03:25	0.136	136.000		
255	22-Feb	12:04:25	0.152	152.000		

Point	Date	Time	1 Minute Average Concentration (mg/m^3)	1 Minute Average Concentration (ug/m^3)	15 Minute Average Concentration (mg/m^3)	15 Minute Average Concentration (ug/m^3)
256	22-Feb	12:05:25	0.145	145.000		
257	22-Feb	12:06:25	0.155	155.000		
258	22-Feb	12:07:25	0.133	133.000		
259	22-Feb	12:08:25	0.114	114.000		
260	22-Feb	12:09:25	0.141	141.000		
261	22-Feb	12:10:25	0.111	111.000		
262	22-Feb	12:11:25	0.086	86.000		
263	22-Feb	12:12:25	0.075	75.000	0.102	101.800
264	22-Feb	12:13:25	0.078	78.000		
265	22-Feb	12:14:25	0.087	87.000		
266	22-Feb	12:15:25	0.088	88.000		
267	22-Feb	12:16:25	0.081	81.000		
268	22-Feb	12:17:25	0.088	88.000		
269	22-Feb	12:18:25	0.076	76.000		
270	22-Feb	12:19:25	0.069	69.000		
271	22-Feb	12:20:25	0.065	65.000		
272	22-Feb	12:21:25	0.054	54.000		
273	22-Feb	12:22:25	0.048	48.000		
274	22-Feb	12:23:25	0.055	55.000		
275	22-Feb	12:24:25	0.049	49.000		
276	22-Feb	12:25:25	0.047	47.000		
277	22-Feb	12:26:25	0.053	53.000		
278	22-Feb	12:27:25	0.041	41.000	0.048	47.600
279	22-Feb	12:28:25	0.038	38.000		
280	22-Feb	12:29:25	0.031	31.000		
281	22-Feb	12:30:25	0.031	31.000		
282	22-Feb	12:31:25	0.049	49.000		
283	22-Feb	12:32:25	0.057	57.000		
284	22-Feb	12:33:25	0.044	44.000		
285	22-Feb	12:34:25	0.052	52.000		
286	22-Feb	12:35:25	0.041	41.000		
287	22-Feb	12:36:25	0.043	43.000		
288	22-Feb	12:37:25	0.040	40.000		
289	22-Feb	12:38:25	0.037	37.000		
290	22-Feb	12:39:25	0.035	35.000		
291	22-Feb	12:40:25	0.039	39.000		
292	22-Feb	12:41:25	0.033	33.000		
293	22-Feb	12:42:25	0.027	27.000	0.041	40.933
294	22-Feb	12:43:25	0.036	36.000		
295	22-Feb	12:44:25	0.024	24.000		
296	22-Feb	12:45:25	0.037	37.000		
297	22-Feb	12:46:25	0.052	52.000		
298	22-Feb	12:47:25	0.063	63.000		
299	22-Feb	12:48:25	0.055	55.000		
300	22-Feb	12:49:25	0.052	52.000		
301	22-Feb	12:50:25	0.056	56.000		
302	22-Feb	12:51:25	0.049	49.000		
303	22-Feb	12:52:25	0.034	34.000		
304	22-Feb	12:53:25	0.030	30.000		
305	22-Feb	12:54:25	0.038	38.000		
306	22-Feb	12:55:25	0.041	41.000		
307	22-Feb	12:56:25	0.031	31.000		
308	22-Feb	12:57:25	0.036	36.000	0.047	46.800
309	22-Feb	12:58:25	0.070	70.000		
310	22-Feb	12:59:25	0.117	117.000		
311	22-Feb	13:00:25	0.045	45.000		
312	22-Feb	13:01:25	0.043	43.000		
313	22-Feb	13:02:25	0.046	46.000		
314	22-Feb	13:03:25	0.035	35.000		
315	22-Feb	13:04:25	0.031	31.000		
316	22-Feb	13:05:25	0.033	33.000		
317	22-Feb	13:06:25	0.044	44.000		
318	22-Feb	13:07:25	0.053	53.000		
319	22-Feb	13:08:25	0.048	48.000		
320	22-Feb	13:09:25	0.072	72.000		
321	22-Feb	13:10:25	0.051	51.000		
322	22-Feb	13:11:25	0.047	47.000		
323	22-Feb	13:12:25	0.040	40.000	0.041	40.600
324	22-Feb	13:13:25	0.037	37.000		
325	22-Feb	13:14:25	0.040	40.000		
326	22-Feb	13:15:25	0.033	33.000		
327	22-Feb	13:16:25	0.028	28.000		
328	22-Feb	13:17:25	0.031	31.000		
329	22-Feb	13:18:25	0.022	22.000		
330	22-Feb	13:19:25	0.030	30.000		

Point	Date	Time	1 Minute Average Concentration (mg/m^3)	1 Minute Average Concentration (ug/m^3)	15 Minute Average Concentration (mg/m^3)	15 Minute Average Concentration (ug/m^3)
331	22-Feb	13:20:25	0.037	37.000		
332	22-Feb	13:21:25	0.048	48.000		
333	22-Feb	13:22:25	0.064	64.000		
334	22-Feb	13:23:25	0.059	59.000		
335	22-Feb	13:24:25	0.057	57.000		
336	22-Feb	13:25:25	0.045	45.000		
337	22-Feb	13:26:25	0.072	72.000		
338	22-Feb	13:27:25	0.115	115.000	0.085	85.067
339	22-Feb	13:28:25	0.104	104.000		
340	22-Feb	13:29:25	0.091	91.000		
341	22-Feb	13:30:25	0.095	95.000		
342	22-Feb	13:31:25	0.118	118.000		
343	22-Feb	13:32:25	0.109	109.000		
344	22-Feb	13:33:25	0.122	122.000		
345	22-Feb	13:34:25	0.140	140.000		
346	22-Feb	13:35:25	0.176	176.000		
347	22-Feb	13:36:25	0.130	130.000		
348	22-Feb	13:37:25	0.123	123.000		
349	22-Feb	13:38:25	0.124	124.000		
350	22-Feb	13:39:25	0.100	100.000		
351	22-Feb	13:40:25	0.105	105.000		
352	22-Feb	13:41:25	0.095	95.000		
353	22-Feb	13:42:25	0.081	81.000	0.103	102.733
354	22-Feb	13:43:25	0.079	79.000		
355	22-Feb	13:44:25	0.101	101.000		
356	22-Feb	13:45:25	0.082	82.000		
357	22-Feb	13:46:25	0.099	99.000		
358	22-Feb	13:47:25	0.079	79.000		
359	22-Feb	13:48:25	0.095	95.000		
360	22-Feb	13:49:25	0.072	72.000		
361	22-Feb	13:50:25	0.063	63.000		
362	22-Feb	13:51:25	0.053	53.000		
363	22-Feb	13:52:25	0.054	54.000		
364	22-Feb	13:53:25	0.061	61.000		
365	22-Feb	13:54:25	0.069	69.000		
366	22-Feb	13:55:25	0.061	61.000		
367	22-Feb	13:56:25	0.064	64.000		
368	22-Feb	13:57:25	0.066	66.000	0.060	60.333
369	22-Feb	13:58:25	0.054	54.000		
370	22-Feb	13:59:25	0.055	55.000		
371	22-Feb	14:00:25	0.060	60.000		
372	22-Feb	14:01:25	0.050	50.000		
373	22-Feb	14:02:25	0.054	54.000		
374	22-Feb	14:03:25	0.054	54.000		
375	22-Feb	14:04:25	0.087	87.000		
376	22-Feb	14:05:25	0.078	78.000		
377	22-Feb	14:06:25	0.058	58.000		
378	22-Feb	14:07:25	0.069	69.000		
379	22-Feb	14:08:25	0.058	58.000		
380	22-Feb	14:09:25	0.051	51.000		
381	22-Feb	14:10:25	0.045	45.000		
382	22-Feb	14:11:25	0.039	39.000		
383	22-Feb	14:12:25	0.077	77.000	0.062	62.400
384	22-Feb	14:13:25	0.056	56.000		
385	22-Feb	14:14:25	0.058	58.000		
386	22-Feb	14:15:25	0.052	52.000		
387	22-Feb	14:16:25	0.087	87.000		
388	22-Feb	14:17:25	0.091	91.000		
389	22-Feb	14:18:25	0.063	63.000		
390	22-Feb	14:19:25	0.054	54.000		
391	22-Feb	14:20:25	0.052	52.000		
392	22-Feb	14:21:25	0.049	49.000		
393	22-Feb	14:22:25	0.040	40.000		
394	22-Feb	14:23:25	0.042	42.000		
395	22-Feb	14:24:25	0.051	51.000		
396	22-Feb	14:25:25	0.054	54.000		
397	22-Feb	14:26:25	0.059	59.000		
398	22-Feb	14:27:25	0.121	121.000	0.054	54.200
399	22-Feb	14:28:25	0.054	54.000		
400	22-Feb	14:29:25	0.058	58.000		
401	22-Feb	14:30:25	0.048	48.000		
402	22-Feb	14:31:25	0.055	55.000		
403	22-Feb	14:32:25	0.050	50.000		
404	22-Feb	14:33:25	0.039	39.000		
405	22-Feb	14:34:25	0.041	41.000		
406	22-Feb	14:35:25	0.039	39.000		
407	22-Feb	14:36:25	0.032	32.000		
408	22-Feb	14:37:25	0.047	47.000		
409	22-Feb	14:38:25	0.031	31.000		
410	22-Feb	14:39:25	0.030	30.000		
411	22-Feb	14:40:25	0.035	35.000		
412	22-Feb	14:41:25	0.029	29.000		
413	22-Feb	14:42:25	0.031	31.000	0.034	34.200
414	22-Feb	14:43:25	0.033	33.000		
415	22-Feb	14:44:25	0.030	30.000		
416	22-Feb	14:45:25	0.040	40.000		
417	22-Feb	14:46:25	0.042	42.000		
418	22-Feb	14:47:25	0.035	35.000		
419	22-Feb	14:48:25	0.023	23.000		
420	22-Feb	14:49:25	0.036	36.000		
421	22-Feb	14:50:25	0.032	32.000		
422	22-Feb	14:51:25	0.036	36.000		
423	22-Feb	14:52:25	0.028	28.000	0.041	40.667
424	22-Feb	14:53:25	0.091	91.000		
425	22-Feb	14:54:25	0.031	31.000		
426	22-Feb	14:55:25	0.026	26.000		

Highlighted cells indicate exceedance of 150 ug/m^3 over average background concentration

Highlighted thick bordered cells indicate exceedance of 150 ug/m^3 over maximum background concentration

Community Air Monitoring Data. Volatile Organic Compounds Near Office Doorway. February 22, 2011.

Instrument:	MiniRAE 2000	Serial Number:	002164
User ID:	00000001	Site ID:	00000372
Data Points:	429	Sample Period:	60 sec
Last Calibration:	2/21/2011 8:31	Gas Name:	Isobutylene
Range of 15 Minute Average Background Concentrations:	2.5 ppm to 3.3 ppm	Background Time Interval:	7:50 - 8:34

	Avg(ppm)	Max(ppm)
Measurement Type:		
High Alarm Levels:	100	100
Low Alarm Levels:	50	50

Line#	Date	Time	1 Minute Average (ppm)	Alarm	1 Minute Maximum (ppm)	Alarm	15 Minute Average (ppm)
1	2/22/2011	7:50	3.5		3.8		
2	2/22/2011	7:51	3.6		3.8		
3	2/22/2011	7:52	3.7		3.8		
4	2/22/2011	7:53	3.7		4.0		
5	2/22/2011	7:54	3.9		4.0		
6	2/22/2011	7:55	3.9		4.1		
7	2/22/2011	7:56	3.4		4.1		
8	2/22/2011	7:57	2.8		3.9		3.3
9	2/22/2011	7:58	3.5		3.9		
10	2/22/2011	7:59	3.0		3.7		
11	2/22/2011	8:00	3.4		3.6		
12	2/22/2011	8:01	3.6		3.7		
13	2/22/2011	8:02	2.7		3.7		
14	2/22/2011	8:03	2.4		3.2		
15	2/22/2011	8:04	2.4		3.0		
16	2/22/2011	8:05	1.9		2.9		
17	2/22/2011	8:06	2.3		3.2		
18	2/22/2011	8:07	2.5		3.4		
19	2/22/2011	8:08	3.1		3.6		
20	2/22/2011	8:09	2.9		3.5		
21	2/22/2011	8:10	2.9		3.4		
22	2/22/2011	8:11	2.8		3.3		
23	2/22/2011	8:12	2.9		3.4		2.8
24	2/22/2011	8:13	3.5		4.3		
25	2/22/2011	8:14	3.3		3.8		
26	2/22/2011	8:15	3.0		3.4		
27	2/22/2011	8:16	2.6		3.1		
28	2/22/2011	8:17	2.7		3.3		
29	2/22/2011	8:18	2.7		3.2		
30	2/22/2011	8:19	2.8		3.2		
31	2/22/2011	8:20	2.6		3.0		
32	2/22/2011	8:21	2.5		2.9		
33	2/22/2011	8:22	2.5		2.8		
34	2/22/2011	8:23	2.7		3.6		
35	2/22/2011	8:24	2.7		3.9		
36	2/22/2011	8:25	2.4		3.5		
37	2/22/2011	8:26	2.5		3.2		
38	2/22/2011	8:27	2.2		2.9		2.5
39	2/22/2011	8:28	2.2		2.6		
40	2/22/2011	8:29	2.4		2.8		
41	2/22/2011	8:30	2.4		2.8		
42	2/22/2011	8:31	2.5		2.8		
43	2/22/2011	8:32	2.6		2.8		
44	2/22/2011	8:33	2.6		2.8		
45	2/22/2011	8:34	2.8		3.0		
46	2/22/2011	8:35	2.8		3.0		
47	2/22/2011	8:36	2.9		3.0		
48	2/22/2011	8:37	3.0		3.2		
49	2/22/2011	8:38	3.0		3.2		
50	2/22/2011	8:39	3.4		4.2		
51	2/22/2011	8:40	3.5		4.3		
52	2/22/2011	8:41	3.2		3.9		
53	2/22/2011	8:42	2.9		3.8		2.9
54	2/22/2011	8:43	2.7		3.3		
55	2/22/2011	8:44	2.8		3.1		
56	2/22/2011	8:45	2.6		2.8		
57	2/22/2011	8:46	2.7		3.1		
58	2/22/2011	8:47	2.7		2.9		
59	2/22/2011	8:48	2.6		2.9		
60	2/22/2011	8:49	2.3		2.7		
61	2/22/2011	8:50	2.3		2.7		
62	2/22/2011	8:51	2.3		2.8		
63	2/22/2011	8:52	2.5		2.9		
64	2/22/2011	8:53	2.6		2.9		
65	2/22/2011	8:54	2.4		2.9		
66	2/22/2011	8:55	2.5		2.8		
67	2/22/2011	8:56	2.6		2.8		
68	2/22/2011	8:57	2.6		2.8		2.5
69	2/22/2011	8:58	2.6		3.0		
70	2/22/2011	8:59	2.6		2.8		
71	2/22/2011	9:00	2.7		2.9		
72	2/22/2011	9:01	2.7		2.9		
73	2/22/2011	9:02	2.5		2.8		
74	2/22/2011	9:03	2.5		2.8		
75	2/22/2011	9:04	2.6		3.0		

Line#	Date	Time	1 Minute Average (ppm)	Alarm	1 Minute Maximum (ppm)	Alarm	15 Minute Average (ppm)
76	2/22/2011	9:05	2.7		3.3		
77	2/22/2011	9:06	2.7		3.6		
78	2/22/2011	9:07	2.6		2.9		
79	2/22/2011	9:08	2.9		3.6		
80	2/22/2011	9:09	3.3		3.9		
81	2/22/2011	9:10	2.7		3.8		
82	2/22/2011	9:11	2.6		3.1		
83	2/22/2011	9:12	2.7		3.1		2.8
84	2/22/2011	9:13	2.8		3.7		
85	2/22/2011	9:14	2.8		3.9		
86	2/22/2011	9:15	2.9		3.9		
87	2/22/2011	9:16	2.8		3.4		
88	2/22/2011	9:17	2.7		3.3		
89	2/22/2011	9:18	3.0		4.0		
90	2/22/2011	9:19	2.8		3.6		
91	2/22/2011	9:20	2.7		3.0		
92	2/22/2011	9:21	2.8		3.0		
93	2/22/2011	9:22	2.5		3.0		
94	2/22/2011	9:23	2.6		3.5		
95	2/22/2011	9:24	2.9		3.7		
96	2/22/2011	9:25	2.6		3.3		
97	2/22/2011	9:26	3.0		4.1		
98	2/22/2011	9:27	3.2		4.1		2.7
99	2/22/2011	9:28	2.4		3.5		
100	2/22/2011	9:29	2.3		3.6		
101	2/22/2011	9:30	2.5		3.4		
102	2/22/2011	9:31	2.6		3.4		
103	2/22/2011	9:32	3.0		3.9		
104	2/22/2011	9:33	3.0		3.5		
105	2/22/2011	9:34	2.8		3.3		
106	2/22/2011	9:35	2.6		3.1		
107	2/22/2011	9:36	2.4		3.8		
108	2/22/2011	9:37	2.1		3.1		
109	2/22/2011	9:38	2.2		3.0		
110	2/22/2011	9:39	2.4		3.4		
111	2/22/2011	9:40	2.1		2.4		
112	2/22/2011	9:41	2.0		2.6		
113	2/22/2011	9:42	2.0		2.4		2.2
114	2/22/2011	9:43	2.1		2.6		
115	2/22/2011	9:44	2.2		2.7		
116	2/22/2011	9:45	2.1		2.9		
117	2/22/2011	9:46	2.5		3.2		
118	2/22/2011	9:47	2.4		3.1		
119	2/22/2011	9:48	2.2		2.8		
120	2/22/2011	9:49	2.2		2.7		
121	2/22/2011	9:50	2.1		2.7		
122	2/22/2011	9:51	2.6		3.6		
123	2/22/2011	9:52	2.4		3.7		
124	2/22/2011	9:53	2.1		2.8		
125	2/22/2011	9:54	2.2		2.6		
126	2/22/2011	9:55	2.2		2.5		
127	2/22/2011	9:56	2.1		2.8		
128	2/22/2011	9:57	2.4		3.8		2.5
129	2/22/2011	9:58	2.4		4.2		
130	2/22/2011	9:59	2.3		2.8		
131	2/22/2011	10:00	2.6		3.6		
132	2/22/2011	10:01	3.1		4.7		
133	2/22/2011	10:02	3.4		5.1		
134	2/22/2011	10:03	2.6		3.4		
135	2/22/2011	10:04	3.1		4.7		
136	2/22/2011	10:05	3.0		4.2		
137	2/22/2011	10:06	3.0		4.0		
138	2/22/2011	10:07	3.2		4.7		
139	2/22/2011	10:08	3.0		4.3		
140	2/22/2011	10:09	2.6		4.7		
141	2/22/2011	10:10	2.9		4.7		
142	2/22/2011	10:11	3.3		4.7		
143	2/22/2011	10:12	2.2		2.9		2.6
144	2/22/2011	10:13	2.0		2.6		
145	2/22/2011	10:14	2.3		3.5		
146	2/22/2011	10:15	2.0		2.6		
147	2/22/2011	10:16	2.4		3.9		
148	2/22/2011	10:17	2.2		3.1		
149	2/22/2011	10:18	2.1		3.2		
150	2/22/2011	10:19	2.4		4.4		
151	2/22/2011	10:20	2.5		3.7		
152	2/22/2011	10:21	2.2		3.3		
153	2/22/2011	10:22	2.1		3.1		
154	2/22/2011	10:23	2.5		4.3		
155	2/22/2011	10:24	2.2		3.8		
156	2/22/2011	10:25	2.1		2.7		
157	2/22/2011	10:26	2.5		3.4		
158	2/22/2011	10:27	2.3		3.2		2.4
159	2/22/2011	10:28	2.1		2.6		
160	2/22/2011	10:29	2.4		3.3		
161	2/22/2011	10:30	2.0		2.6		
162	2/22/2011	10:31	2.1		2.4		
163	2/22/2011	10:32	2.2		3.1		
164	2/22/2011	10:33	2.8		4.7		
165	2/22/2011	10:34	3.4		4.8		

Line#	Date	Time	1 Minute Average (ppm)	Alarm	1 Minute Maximum (ppm)	Alarm	15 Minute Average (ppm)
166	2/22/2011	10:35	2.8		4.0		
167	2/22/2011	10:36	2.5		3.9		
168	2/22/2011	10:37	2.4		3.6		
169	2/22/2011	10:38	2.8		4.9		
170	2/22/2011	10:39	2.4		3.3		
171	2/22/2011	10:40	2.6		3.9		
172	2/22/2011	10:41	2.8		3.7		
173	2/22/2011	10:42	3.0		4.5		2.8
174	2/22/2011	10:43	2.5		4.0		
175	2/22/2011	10:44	3.0		4.2		
176	2/22/2011	10:45	2.8		3.3		
177	2/22/2011	10:46	3.0		4.2		
178	2/22/2011	10:47	2.6		3.4		
179	2/22/2011	10:48	3.3		4.3		
180	2/22/2011	10:49	2.9		3.8		
181	2/22/2011	10:50	2.9		3.9		
182	2/22/2011	10:51	3.1		4.5		
183	2/22/2011	10:52	2.5		3.4		
184	2/22/2011	10:53	2.4		3.2		
185	2/22/2011	10:54	2.5		3.5		
186	2/22/2011	10:55	2.9		4.1		
187	2/22/2011	10:56	4.1		4.6		
188	2/22/2011	10:57	4.2		4.9		3.0
189	2/22/2011	10:58	2.9		4.5		
190	2/22/2011	10:59	4.0		4.8		
191	2/22/2011	11:00	3.1		4.4		
192	2/22/2011	11:01	3.2		4.3		
193	2/22/2011	11:02	2.7		4.5		
194	2/22/2011	11:03	2.4		3.9		
195	2/22/2011	11:04	2.2		2.8		
196	2/22/2011	11:05	2.0		2.6		
197	2/22/2011	11:06	2.4		3.6		
198	2/22/2011	11:07	2.2		2.9		
199	2/22/2011	11:08	1.9		2.7		
200	2/22/2011	11:09	1.9		2.9		
201	2/22/2011	11:10	1.8		2.4		
202	2/22/2011	11:11	1.8		2.3		
203	2/22/2011	11:12	1.9		2.3		2.1
204	2/22/2011	11:13	2.0		3.0		
205	2/22/2011	11:14	2.3		3.5		
206	2/22/2011	11:15	2.7		3.6		
207	2/22/2011	11:16	2.3		3.2		
208	2/22/2011	11:17	2.3		3.3		
209	2/22/2011	11:18	2.0		3.2		
210	2/22/2011	11:19	2.2		3.2		
211	2/22/2011	11:20	2.1		2.9		
212	2/22/2011	11:21	2.4		3.5		
213	2/22/2011	11:22	2.5		3.6		
214	2/22/2011	11:23	2.4		3.5		
215	2/22/2011	11:24	2.2		3.2		
216	2/22/2011	11:25	2.5		3.4		
217	2/22/2011	11:26	2.3		3.5		
218	2/22/2011	11:27	2.5		3.4		2.2
219	2/22/2011	11:28	2.1		3.0		
220	2/22/2011	11:29	2.0		2.4		
221	2/22/2011	11:30	2.2		3.0		
222	2/22/2011	11:31	2.0		2.8		
223	2/22/2011	11:32	1.9		2.9		
224	2/22/2011	11:33	2.1		2.3		
225	2/22/2011	11:34	2.1		2.4		
226	2/22/2011	11:35	1.9		2.3		
227	2/22/2011	11:36	1.8		2.2		
228	2/22/2011	11:37	1.8		2.1		
229	2/22/2011	11:38	1.9		2.3		
230	2/22/2011	11:39	2.0		2.3		
231	2/22/2011	11:40	2.0		2.7		
232	2/22/2011	11:41	2.2		2.8		
233	2/22/2011	11:42	2.2		2.9		2.1
234	2/22/2011	11:43	2.0		2.4		
235	2/22/2011	11:44	2.1		2.6		
236	2/22/2011	11:45	2.2		3.0		
237	2/22/2011	11:46	2.2		2.7		
238	2/22/2011	11:47	2.3		2.7		
239	2/22/2011	11:48	2.1		2.5		
240	2/22/2011	11:49	2.1		2.4		
241	2/22/2011	11:50	2.2		3.0		
242	2/22/2011	11:51	2.1		2.6		
243	2/22/2011	11:52	2.2		2.6		
244	2/22/2011	11:53	2.2		2.6		
245	2/22/2011	11:54	2.2		2.8		
246	2/22/2011	11:55	2.3		3.1		
247	2/22/2011	11:56	2.2		2.9		
248	2/22/2011	11:57	2.3		3.0		2.3
249	2/22/2011	11:58	2.5		3.1		
250	2/22/2011	11:59	2.5		3.1		
251	2/22/2011	12:00	2.3		2.7		
252	2/22/2011	12:01	2.2		2.7		
253	2/22/2011	12:02	2.2		2.5		
254	2/22/2011	12:03	2.2		2.6		
255	2/22/2011	12:04	2.2		2.6		
256	2/22/2011	12:05	2.2		2.6		
257	2/22/2011	12:06	2.3		3.1		
258	2/22/2011	12:07	2.2		2.8		
259	2/22/2011	12:08	2.3		3.1		
260	2/22/2011	12:09	1.9		2.2		
261	2/22/2011	12:10	2.0		2.3		
262	2/22/2011	12:11	2.2		2.6		
263	2/22/2011	12:12	2.2		2.7		2.1
264	2/22/2011	12:13	2.1		2.5		
265	2/22/2011	12:14	2.4		2.9		
266	2/22/2011	12:15	2.2		2.6		
267	2/22/2011	12:16	2.1		2.4		
268	2/22/2011	12:17	2.1		2.5		
269	2/22/2011	12:18	2.0		2.3		
270	2/22/2011	12:19	2.0		2.3		

Line#	Date	Time	1 Minute Average (ppm)	Alarm	1 Minute Maximum (ppm)	Alarm	15 Minute Average (ppm)
271	2/22/2011	12:20	2.2		2.7		
272	2/22/2011	12:21	2.2		2.7		
273	2/22/2011	12:22	2.1		2.3		
274	2/22/2011	12:23	2.0		2.2		
275	2/22/2011	12:24	2.1		2.5		
276	2/22/2011	12:25	2.3		2.6		
277	2/22/2011	12:26	2.2		2.7		
278	2/22/2011	12:27	2.3		2.6		2.2
279	2/22/2011	12:28	2.2		2.5		
280	2/22/2011	12:29	2.2		2.7		
281	2/22/2011	12:30	2.2		2.9		
282	2/22/2011	12:31	2.2		3.0		
283	2/22/2011	12:32	2.2		2.7		
284	2/22/2011	12:33	2.1		2.6		
285	2/22/2011	12:34	2.1		2.6		
286	2/22/2011	12:35	2.2		2.5		
287	2/22/2011	12:36	2.0		2.4		
288	2/22/2011	12:37	2.0		2.5		
289	2/22/2011	12:38	2.0		2.5		
290	2/22/2011	12:39	2.3		3.0		
291	2/22/2011	12:40	2.1		2.9		
292	2/22/2011	12:41	2.0		2.3		
293	2/22/2011	12:42	2.0		2.3		2.1
294	2/22/2011	12:43	2.1		2.5		
295	2/22/2011	12:44	2.1		2.7		
296	2/22/2011	12:45	2.1		2.5		
297	2/22/2011	12:46	2.1		2.5		
298	2/22/2011	12:47	2.2		2.6		
299	2/22/2011	12:48	2.1		2.7		
300	2/22/2011	12:49	2.3		2.7		
301	2/22/2011	12:50	2.4		2.9		
302	2/22/2011	12:51	2.3		2.9		
303	2/22/2011	12:52	2.3		2.9		
304	2/22/2011	12:53	2.4		3.0		
305	2/22/2011	12:54	2.2		2.7		
306	2/22/2011	12:55	2.2		2.8		
307	2/22/2011	12:56	2.1		2.7		
308	2/22/2011	12:57	2.2		2.6		2.2
309	2/22/2011	12:58	2.0		2.5		
310	2/22/2011	12:59	2.2		2.7		
311	2/22/2011	13:00	2.2		2.6		
312	2/22/2011	13:01	2.1		2.7		
313	2/22/2011	13:02	2.3		2.7		
314	2/22/2011	13:03	2.0		2.4		
315	2/22/2011	13:04	1.9		2.2		
316	2/22/2011	13:05	2.0		2.4		
317	2/22/2011	13:06	1.9		2.3		
318	2/22/2011	13:07	1.9		2.3		
319	2/22/2011	13:08	1.9		2.3		
320	2/22/2011	13:09	1.8		2.1		
321	2/22/2011	13:10	1.8		2.1		
322	2/22/2011	13:11	1.8		2.1		
323	2/22/2011	13:12	1.9		2.4		1.8
324	2/22/2011	13:13	1.8		2.1		
325	2/22/2011	13:14	1.8		2.0		
326	2/22/2011	13:15	1.8		2.1		
327	2/22/2011	13:16	1.7		1.9		
328	2/22/2011	13:17	1.7		1.8		
329	2/22/2011	13:18	1.8		2.1		
330	2/22/2011	13:19	1.8		2.1		
331	2/22/2011	13:20	1.7		2.0		
332	2/22/2011	13:21	1.7		1.9		
333	2/22/2011	13:22	1.7		2.0		
334	2/22/2011	13:23	1.8		2.1		
335	2/22/2011	13:24	1.7		2.0		
336	2/22/2011	13:25	1.8		2.0		
337	2/22/2011	13:26	1.8		2.0		
338	2/22/2011	13:27	1.8		2.1		1.8
339	2/22/2011	13:28	1.8		2.0		
340	2/22/2011	13:29	1.8		2.0		
341	2/22/2011	13:30	1.7		2.0		
342	2/22/2011	13:31	1.7		1.9		
343	2/22/2011	13:32	1.7		1.9		
344	2/22/2011	13:33	1.8		2.0		
345	2/22/2011	13:34	1.8		2.0		

Line#	Date	Time	1 Minute Average (ppm)	Alarm	1 Minute Maximum (ppm)	Alarm	15 Minute Average (ppm)
346	2/22/2011	13:35	1.7		2.0		
347	2/22/2011	13:36	1.8		2.1		
348	2/22/2011	13:37	1.8		2.1		
349	2/22/2011	13:38	1.8		2.2		
350	2/22/2011	13:39	1.8		2.2		
351	2/22/2011	13:40	1.7		2.0		
352	2/22/2011	13:41	1.8		2.3		
353	2/22/2011	13:42	1.8		2.1		1.7
354	2/22/2011	13:43	1.8		2.1		
355	2/22/2011	13:44	1.8		2.2		
356	2/22/2011	13:45	1.7		1.9		
357	2/22/2011	13:46	1.7		1.8		
358	2/22/2011	13:47	1.6		1.8		
359	2/22/2011	13:48	1.7		1.9		
360	2/22/2011	13:49	1.7		2.0		
361	2/22/2011	13:50	1.7		2.0		
362	2/22/2011	13:51	1.6		1.8		
363	2/22/2011	13:52	1.6		1.8		
364	2/22/2011	13:53	1.6		1.8		
365	2/22/2011	13:54	1.5		1.7		
366	2/22/2011	13:55	1.5		1.8		
367	2/22/2011	13:56	1.5		1.7		
368	2/22/2011	13:57	1.5		1.7		1.6
369	2/22/2011	13:58	1.4		1.6		
370	2/22/2011	13:59	1.5		1.7		
371	2/22/2011	14:00	1.6		1.8		
372	2/22/2011	14:01	1.5		1.9		
373	2/22/2011	14:02	1.5		1.8		
374	2/22/2011	14:03	1.7		2.0		
375	2/22/2011	14:04	1.7		2.0		
376	2/22/2011	14:05	1.6		1.9		
377	2/22/2011	14:06	1.6		1.8		
378	2/22/2011	14:07	1.7		2.0		
379	2/22/2011	14:08	1.7		2.2		
380	2/22/2011	14:09	1.8		2.3		
381	2/22/2011	14:10	1.7		2.1		
382	2/22/2011	14:11	1.8		2.1		
383	2/22/2011	14:12	1.7		2.2		1.7
384	2/22/2011	14:13	1.8		2.1		
385	2/22/2011	14:14	1.7		2.1		
386	2/22/2011	14:15	1.8		2.1		
387	2/22/2011	14:16	1.8		2.0		
388	2/22/2011	14:17	1.8		2.1		
389	2/22/2011	14:18	1.9		2.4		
390	2/22/2011	14:19	1.8		2.1		
391	2/22/2011	14:20	1.9		2.2		
392	2/22/2011	14:21	2.1		2.5		
393	2/22/2011	14:22	2.0		2.5		
394	2/22/2011	14:23	2.0		2.5		
395	2/22/2011	14:24	2.0		2.5		
396	2/22/2011	14:25	2.0		2.3		
397	2/22/2011	14:26	1.9		2.1		
398	2/22/2011	14:27	1.9		2.2		2.0
399	2/22/2011	14:28	1.9		2.1		
400	2/22/2011	14:29	1.9		2.2		
401	2/22/2011	14:30	2.0		2.5		
402	2/22/2011	14:31	2.2		2.7		
403	2/22/2011	14:32	2.0		2.6		
404	2/22/2011	14:33	2.0		2.4		
405	2/22/2011	14:34	2.0		2.6		
406	2/22/2011	14:35	2.0		2.5		
407	2/22/2011	14:36	2.0		2.4		
408	2/22/2011	14:37	2.1		2.7		
409	2/22/2011	14:38	2.1		2.5		
410	2/22/2011	14:39	2.1		2.6		
411	2/22/2011	14:40	1.9		2.3		
412	2/22/2011	14:41	2.0		2.4		
413	2/22/2011	14:42	1.9		2.2		2.0
414	2/22/2011	14:43	1.9		2.5		
415	2/22/2011	14:44	1.9		2.4		
416	2/22/2011	14:45	1.9		2.3		
417	2/22/2011	14:46	2.0		2.4		
418	2/22/2011	14:47	2.1		2.5		
419	2/22/2011	14:48	2.0		2.4		
420	2/22/2011	14:49	2.0		2.5		
421	2/22/2011	14:50	1.9		2.3		
422	2/22/2011	14:51	1.9		2.4		
423	2/22/2011	14:52	1.8		2.5		
424	2/22/2011	14:53	2.3		2.5		
425	2/22/2011	14:54	2.3		2.5		2.2
426	2/22/2011	14:55	2.3		2.5		
427	2/22/2011	14:56	2.3		2.4		
428	2/22/2011	14:57	2.4		2.7		
429	2/22/2011	14:58	2.5		2.8		

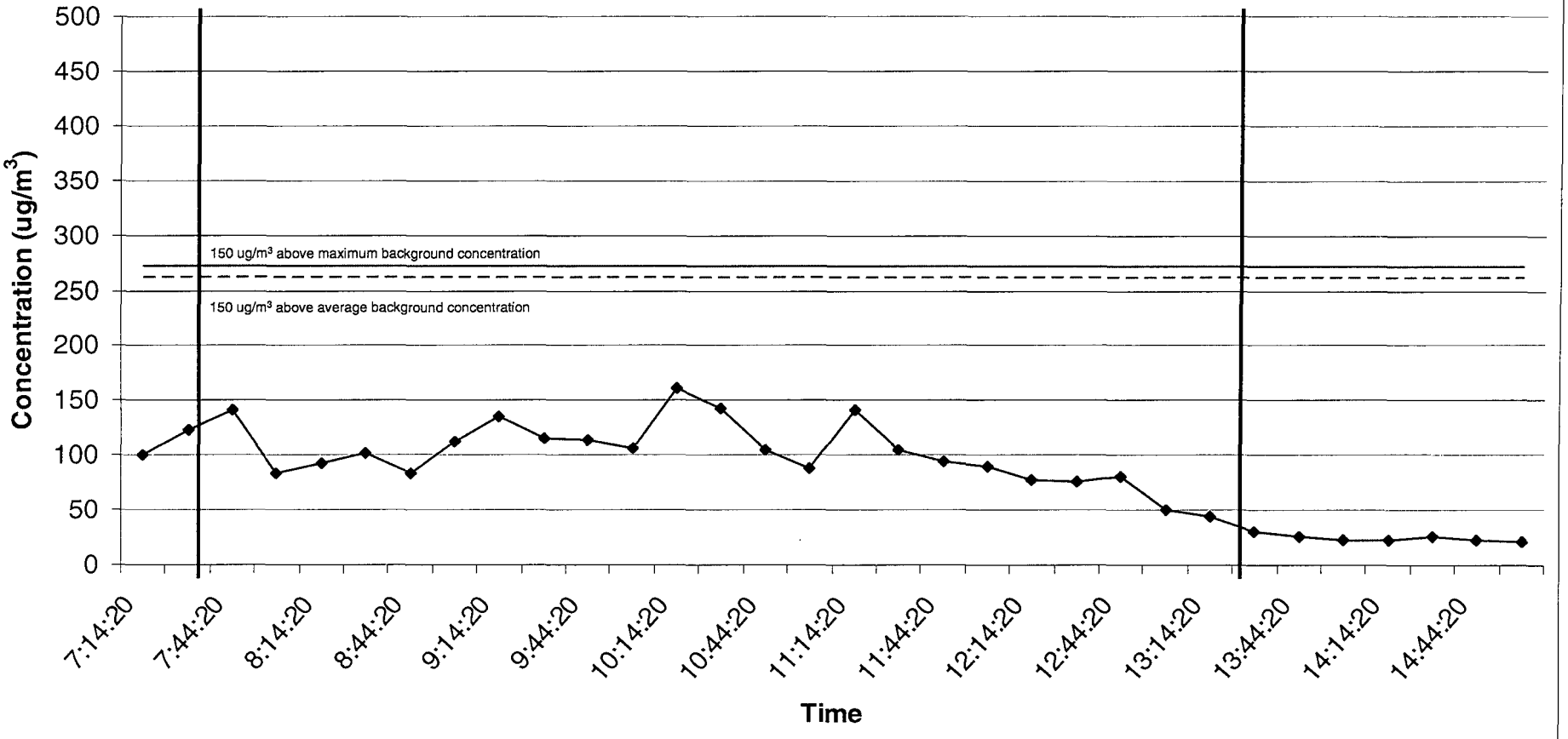
Highlighted cells indicate exceedance of 1 ppm over average background concentration

Highlighted thick bordered cells indicate exceedance of 1 ppm over maximum background concentration

Appendix B-3

Office Doorway Monitoring Station
Particulate and VOCs 2-23-2011

15 Minute Average Particulate Concentration Near Office Doorway on 2-23-2011



Brackets time interval when drilling and injecting was occurring. Background levels determined based on readings taken prior to starting drilling each day (7:00 – 7:29).

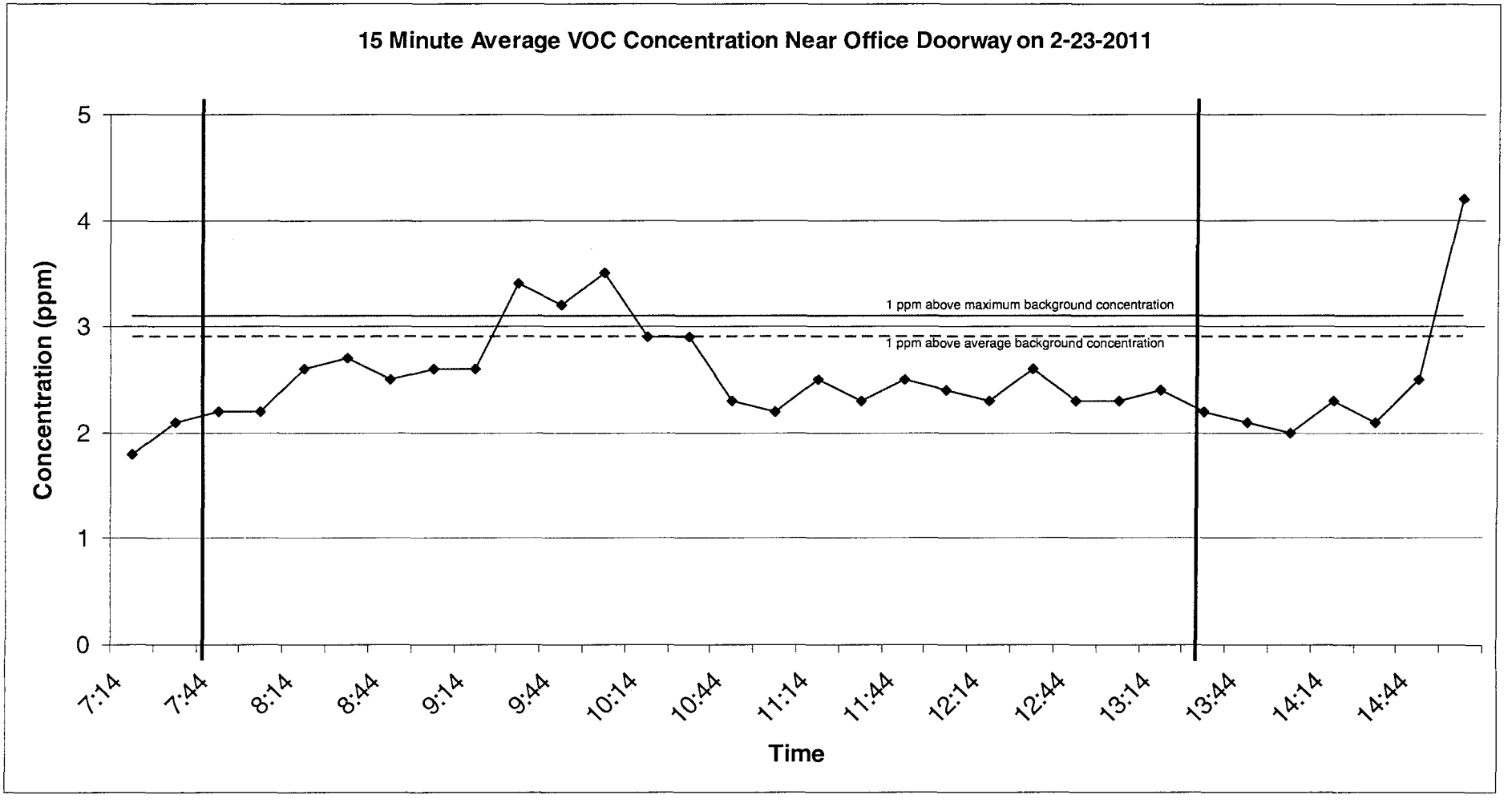
Maximum background concentration = 122.733 ug/m³
Average background concentration = 111.200 ug/m³
150 ug/m³ above maximum background = 272.733 ug/m³
150 ug/m³ above average background = 261.200 ug/m³

S&W REDEVELOPMENT
Syracuse, New York

Date: 5/2011 Proj No.: N9013

110 Luther Ave. Site (BCP Site #C734118)
Remedial Work Plan
110 Luther Ave., Liverpool
Onondaga County, New York

Appendix B-3
Pilot Test Air Monitoring Results



Brackets time interval when drilling and injecting was occurring. Background levels determined based on readings taken prior to starting drilling each day (7:00 – 7:29)

Maximum background concentration = 2.1 ppm
Average background concentration = 1.9 ppm
1 ppm above maximum background = 3.1 ppm
1 ppm above average background = 2.9 ppm

S&W REDEVELOPMENT
Syracuse, New York

Date: 5/2011 Proj No.: N9013

110 Luther Ave. Site (BCP Site #C734118)
Remedial Work Plan
110 Luther Ave., Liverpool
Onondaga County, New York

Appendix B-3
Pilot Test Air Monitoring Results

Community Air Monitoring Data. Particulate Matter Near Office Doorway. February 23, 2011.

Model Number:	pDR-1000	Unit:	Concentration
Serial Number:	10438	Unit Name:	mg/m³
Tag Number:	3	Maximum Display Concentration:	0.414 mg/m³
Start Time:	7:00:20	Time at Maximum:	11:05:59
Start Date:	23-Feb-11	Maximum STEL Concentration:	0.163 mg/m³
Log Period:	00:01:00	Time at Maximum STEL:	7:36:20
Number of Points:	472	Elapsed Time:	7:52:00
Calibration Factor:	100%	Overall Average Concentration:	0.087 mg/m³
Range of 15 Minute Average Background Concentrations:	99.667 ug/m³ to 122.733 ug/m³	Background Time Interval:	7:00 - 7:29

Logged Data:

Point	Date	Time	1 Minute Average Concentration (mg/m³)	1 Minute Average Concentration (ug/m³)	15 Minute Average Concentration (mg/m³)	15 Minute Average Concentration (ug/m³)
1	23-Feb	7:00:20	0.058	58.000		
2	23-Feb	7:01:20	0.037	37.000		
3	23-Feb	7:02:20	0.044	44.000		
4	23-Feb	7:03:20	0.050	50.000		
5	23-Feb	7:04:20	0.063	63.000		
6	23-Feb	7:05:20	0.142	142.000		
7	23-Feb	7:06:20	0.118	118.000		
8	23-Feb	7:07:20	0.153	153.000	0.100	99.667
9	23-Feb	7:08:20	0.132	132.000		
10	23-Feb	7:09:20	0.123	123.000		
11	23-Feb	7:10:20	0.125	125.000		
12	23-Feb	7:11:20	0.128	128.000		
13	23-Feb	7:12:20	0.119	119.000		
14	23-Feb	7:13:20	0.115	115.000		
15	23-Feb	7:14:20	0.088	88.000		
16	23-Feb	7:15:20	0.091	91.000		
17	23-Feb	7:16:20	0.084	84.000		
18	23-Feb	7:17:20	0.073	73.000		
19	23-Feb	7:18:20	0.074	74.000		
20	23-Feb	7:19:20	0.081	81.000		
21	23-Feb	7:20:20	0.100	100.000		
22	23-Feb	7:21:20	0.111	111.000		
23	23-Feb	7:22:20	0.117	117.000	0.123	122.733
24	23-Feb	7:23:20	0.127	127.000		
25	23-Feb	7:24:20	0.130	130.000		
26	23-Feb	7:25:20	0.166	166.000		
27	23-Feb	7:26:20	0.157	157.000		
28	23-Feb	7:27:20	0.170	170.000		
29	23-Feb	7:28:20	0.183	183.000		
30	23-Feb	7:29:20	0.177	177.000		
31	23-Feb	7:30:20	0.233	233.000		
32	23-Feb	7:31:20	0.207	207.000		
33	23-Feb	7:32:20	0.166	166.000		
34	23-Feb	7:33:20	0.170	170.000		
35	23-Feb	7:34:20	0.149	149.000		
36	23-Feb	7:35:20	0.151	151.000		
37	23-Feb	7:36:20	0.142	142.000		
38	23-Feb	7:37:20	0.123	123.000	0.141	141.467
39	23-Feb	7:38:20	0.125	125.000		
40	23-Feb	7:39:20	0.113	113.000		
41	23-Feb	7:40:20	0.106	106.000		
42	23-Feb	7:41:20	0.104	104.000		
43	23-Feb	7:42:20	0.113	113.000		
44	23-Feb	7:43:20	0.117	117.000		
45	23-Feb	7:44:20	0.103	103.000		
46	23-Feb	7:45:20	0.097	97.000		
47	23-Feb	7:46:20	0.097	97.000		
48	23-Feb	7:47:20	0.092	92.000		
49	23-Feb	7:48:20	0.088	88.000		
50	23-Feb	7:49:20	0.086	86.000		
51	23-Feb	7:50:20	0.082	82.000		
52	23-Feb	7:51:20	0.083	83.000		
53	23-Feb	7:52:20	0.081	81.000	0.083	83.400
54	23-Feb	7:53:20	0.079	79.000		
55	23-Feb	7:54:20	0.080	80.000		
56	23-Feb	7:55:20	0.075	75.000		
57	23-Feb	7:56:20	0.073	73.000		
58	23-Feb	7:57:20	0.080	80.000		
59	23-Feb	7:58:20	0.076	76.000		
60	23-Feb	7:59:20	0.082	82.000		
61	23-Feb	8:00:20	0.083	83.000		
62	23-Feb	8:01:20	0.078	78.000		
63	23-Feb	8:02:20	0.104	104.000		
64	23-Feb	8:03:20	0.086	86.000		
65	23-Feb	8:04:20	0.077	77.000		
66	23-Feb	8:05:20	0.087	87.000		
67	23-Feb	8:06:20	0.103	103.000		
68	23-Feb	8:07:20	0.072	72.000	0.092	92.133
69	23-Feb	8:08:20	0.115	115.000		
70	23-Feb	8:09:20	0.090	90.000		
71	23-Feb	8:10:20	0.097	97.000		
72	23-Feb	8:11:20	0.100	100.000		
73	23-Feb	8:12:20	0.092	92.000		
74	23-Feb	8:13:20	0.101	101.000		
75	23-Feb	8:14:20	0.097	97.000		
76	23-Feb	8:15:20	0.088	88.000		
77	23-Feb	8:16:20	0.098	98.000		
78	23-Feb	8:17:20	0.111	111.000		
79	23-Feb	8:18:20	0.116	116.000		
80	23-Feb	8:19:20	0.101	101.000		
81	23-Feb	8:20:20	0.089	89.000		
82	23-Feb	8:21:20	0.091	91.000		
83	23-Feb	8:22:20	0.092	92.000	0.101	101.467
84	23-Feb	8:23:20	0.089	89.000		
85	23-Feb	8:24:20	0.101	101.000		
86	23-Feb	8:25:20	0.113	113.000		
87	23-Feb	8:26:20	0.103	103.000		
88	23-Feb	8:27:20	0.122	122.000		
89	23-Feb	8:28:20	0.111	111.000		
90	23-Feb	8:29:20	0.097	97.000		

Point	Date	Time	1 Minute Average Concentration (mg/m³)	1 Minute Average Concentration (ug/m³)	15 Minute Average Concentration (mg/m³)	15 Minute Average Concentration (ug/m³)
91	23-Feb	8:30:20	0.102	102.000		
92	23-Feb	8:31:20	0.097	97.000		
93	23-Feb	8:32:20	0.084	84.000		
94	23-Feb	8:33:20	0.099	99.000		
95	23-Feb	8:34:20	0.082	82.000		
96	23-Feb	8:35:20	0.098	98.000		
97	23-Feb	8:36:20	0.075	75.000		
98	23-Feb	8:37:20	0.073	73.000	0.084	84.267
99	23-Feb	8:38:20	0.069	69.000		
100	23-Feb	8:39:20	0.073	73.000		
101	23-Feb	8:40:20	0.108	108.000		
102	23-Feb	8:41:20	0.078	78.000		
103	23-Feb	8:42:20	0.077	77.000		
104	23-Feb	8:43:20	0.073	73.000		
105	23-Feb	8:44:20	0.076	76.000		
106	23-Feb	8:45:20	0.073	73.000		
107	23-Feb	8:46:20	0.068	68.000		
108	23-Feb	8:47:20	0.084	84.000		
109	23-Feb	8:48:20	0.076	76.000		
110	23-Feb	8:49:20	0.101	101.000		
111	23-Feb	8:50:20	0.094	94.000		
112	23-Feb	8:51:20	0.107	107.000		
113	23-Feb	8:52:20	0.097	97.000	0.112	112.400
114	23-Feb	8:53:20	0.108	108.000		
115	23-Feb	8:54:20	0.130	130.000		
116	23-Feb	8:55:20	0.129	129.000		
117	23-Feb	8:56:20	0.138	138.000		
118	23-Feb	8:57:20	0.169	169.000		
119	23-Feb	8:58:20	0.161	161.000		
120	23-Feb	8:59:20	0.151	151.000		
121	23-Feb	9:00:20	0.153	153.000		
122	23-Feb	9:01:20	0.124	124.000		
123	23-Feb	9:02:20	0.136	136.000		
124	23-Feb	9:03:20	0.127	127.000		
125	23-Feb	9:04:20	0.129	129.000		
126	23-Feb	9:05:20	0.138	138.000		
127	23-Feb	9:06:20	0.145	145.000		
128	23-Feb	9:07:20	0.148	148.000	0.135	134.933
129	23-Feb	9:08:20	0.145	145.000		
130	23-Feb	9:09:20	0.120	120.000		
131	23-Feb	9:10:20	0.132	132.000		
132	23-Feb	9:11:20	0.131	131.000		
133	23-Feb	9:12:20	0.131	131.000		
134	23-Feb	9:13:20	0.132	132.000		
135	23-Feb	9:14:20	0.133	133.000		
136	23-Feb	9:15:20	0.121	121.000		
137	23-Feb	9:16:20	0.117	117.000		
138	23-Feb	9:17:20	0.137	137.000		
139	23-Feb	9:18:20	0.133	133.000		
140	23-Feb	9:19:20	0.116	116.000		
141	23-Feb	9:20:20	0.107	107.000		
142	23-Feb	9:21:20	0.134	134.000		
143	23-Feb	9:22:20	0.114	114.000	0.116	116.067
144	23-Feb	9:23:20	0.118	118.000		
145	23-Feb	9:24:20	0.105	105.000		
146	23-Feb	9:25:20	0.113	113.000		
147	23-Feb	9:26:20	0.106	106.000		
148	23-Feb	9:27:20	0.099	99.000		
149	23-Feb	9:28:20	0.112	112.000		
150	23-Feb	9:29:20	0.109	109.000		
151	23-Feb	9:30:20	0.106	106.000		
152	23-Feb	9:31:20	0.112	112.000		
153	23-Feb	9:32:20	0.107	107.000		
154	23-Feb	9:33:20	0.113	113.000		
155	23-Feb	9:34:20	0.138	138.000		
156	23-Feb	9:35:20	0.111	111.000		
157	23-Feb	9:36:20	0.106	106.000		
158	23-Feb	9:37:20	0.096	96.000	0.114	114.000
159	23-Feb	9:38:20	0.092	92.000		
160	23-Feb	9:39:20	0.124	124.000		
161	23-Feb	9:40:20	0.109	109.000		
162	23-Feb	9:41:20	0.114	114.000		
163	23-Feb	9:42:20	0.103	103.000		
164	23-Feb	9:43:20	0.123	123.000		
165	23-Feb	9:44:20	0.156	156.000		
166	23-Feb	9:45:20	0.120	120.000		
167	23-Feb	9:46:20	0.107	107.000		
168	23-Feb	9:47:20	0.099	99.000		
169	23-Feb	9:48:20	0.100	100.000		
170	23-Feb	9:49:20	0.102	102.000		
171	23-Feb	9:50:20	0.086	86.000		
172	23-Feb	9:51:20	0.093	93.000		
173	23-Feb	9:52:20	0.092	92.000	0.106	105.800
174	23-Feb	9:53:20	0.095	95.000		
175	23-Feb	9:54:20	0.102	102.000		
176	23-Feb	9:55:20	0.104	104.000		
177	23-Feb	9:56:20	0.099	99.000		
178	23-Feb	9:57:20	0.119	119.000		
179	23-Feb	9:58:20	0.122	122.000		
180	23-Feb	9:59:20	0.147	147.000		

Point	Date	Time	1 Minute Average Concentration (mg/m³)	1 Minute Average Concentration (ug/m³)	15 Minute Average Concentration (mg/m³)	15 Minute Average Concentration (ug/m³)
181	23-Feb	10:00:20	0.192	192.000		
182	23-Feb	10:01:20	0.180	180.000		
183	23-Feb	10:02:20	0.203	203.000		
184	23-Feb	10:03:20	0.149	149.000		
185	23-Feb	10:04:20	0.194	194.000		
186	23-Feb	10:05:20	0.188	188.000		
187	23-Feb	10:06:20	0.176	176.000		
188	23-Feb	10:07:20	0.150	150.000	0.161	161.467
189	23-Feb	10:08:20	0.158	158.000		
190	23-Feb	10:09:20	0.137	137.000		
191	23-Feb	10:10:20	0.131	131.000		
192	23-Feb	10:11:20	0.130	130.000		
193	23-Feb	10:12:20	0.126	126.000		
194	23-Feb	10:13:20	0.143	143.000		
195	23-Feb	10:14:20	0.165	165.000		
196	23-Feb	10:15:20	0.156	156.000		
197	23-Feb	10:16:20	0.212	212.000		
198	23-Feb	10:17:20	0.188	188.000		
199	23-Feb	10:18:20	0.181	181.000		
200	23-Feb	10:19:20	0.137	137.000		
201	23-Feb	10:20:20	0.141	141.000		
202	23-Feb	10:21:20	0.128	128.000		
203	23-Feb	10:22:20	0.111	111.000	0.143	142.667
204	23-Feb	10:23:20	0.124	124.000		
205	23-Feb	10:24:20	0.129	129.000		
206	23-Feb	10:25:20	0.159	159.000		
207	23-Feb	10:26:20	0.120	120.000		
208	23-Feb	10:27:20	0.117	117.000		
209	23-Feb	10:28:20	0.123	123.000		
210	23-Feb	10:29:20	0.114	114.000		
211	23-Feb	10:30:20	0.131	131.000		
212	23-Feb	10:31:20	0.112	112.000		
213	23-Feb	10:32:20	0.099	99.000		
214	23-Feb	10:33:20	0.123	123.000		
215	23-Feb	10:34:20	0.109	109.000		
216	23-Feb	10:35:20	0.086	86.000		
217	23-Feb	10:36:20	0.108	108.000		
218	23-Feb	10:37:20	0.099	99.000	0.105	105.200
219	23-Feb	10:38:20	0.098	98.000		
220	23-Feb	10:39:20	0.125	125.000		
221	23-Feb	10:40:20	0.110	110.000		
222	23-Feb	10:41:20	0.109	109.000		
223	23-Feb	10:42:20	0.090	90.000		
224	23-Feb	10:43:20	0.100	100.000		
225	23-Feb	10:44:20	0.079	79.000		
226	23-Feb	10:45:20	0.069	69.000		
227	23-Feb	10:46:20	0.095	95.000		
228	23-Feb	10:47:20	0.085	85.000		
229	23-Feb	10:48:20	0.108	108.000		
230	23-Feb	10:49:20	0.095	95.000		
231	23-Feb	10:50:20	0.090	90.000		
232	23-Feb	10:51:20	0.126	126.000		
233	23-Feb	10:52:20	0.100	100.000	0.088	87.733
234	23-Feb	10:53:20	0.087	87.000		
235	23-Feb	10:54:20	0.083	83.000		
236	23-Feb	10:55:20	0.079	79.000		
237	23-Feb	10:56:20	0.074	74.000		
238	23-Feb	10:57:20	0.084	84.000		
239	23-Feb	10:58:20	0.074	74.000		
240	23-Feb	10:59:20	0.067	67.000		
241	23-Feb	11:00:20	0.086	86.000		
242	23-Feb	11:01:20	0.079	79.000		
243	23-Feb	11:02:20	0.102	102.000		
244	23-Feb	11:03:20	0.111	111.000		
245	23-Feb	11:04:20	0.098	98.000		
246	23-Feb	11:05:20	0.184	184.000		
247	23-Feb	11:06:20	0.141	141.000		
248	23-Feb	11:07:20	0.165	165.000	0.142	141.867
249	23-Feb	11:08:20	0.158	158.000		
250	23-Feb	11:09:20	0.182	182.000		
251	23-Feb	11:10:20	0.175	175.000		
252	23-Feb	11:11:20	0.150	150.000		
253	23-Feb	11:12:20	0.181	181.000		
254	23-Feb	11:13:20	0.163	163.000		
255	23-Feb	11:14:20	0.153	153.000		
256	23-Feb	11:15:20	0.120	120.000		
257	23-Feb	11:16:20	0.135	135.000		
258	23-Feb	11:17:20	0.116	116.000		
259	23-Feb	11:18:20	0.126	126.000		
260	23-Feb	11:19:20	0.101	101.000		
261	23-Feb	11:20:20	0.080	80.000		
262	23-Feb	11:21:20	0.116	116.000		
263	23-Feb	11:22:20	0.089	89.000	0.104	104.467
264	23-Feb	11:23:20	0.082	82.000		
265	23-Feb	11:24:20	0.092	92.000		
266	23-Feb	11:25:20	0.084	84.000		
267	23-Feb	11:26:20	0.093	93.000		
268	23-Feb	11:27:20	0.110	110.000		
269	23-Feb	11:28:20	0.098	98.000		
270	23-Feb	11:29:20	0.125	125.000		
271	23-Feb	11:30:20	0.112	112.000		
272	23-Feb	11:31:20	0.104	104.000		
273	23-Feb	11:32:20	0.087	87.000		
274	23-Feb	11:33:20	0.099	99.000		
275	23-Feb	11:34:20	0.090	90.000		
276	23-Feb	11:35:20	0.093	93.000		
277	23-Feb	11:36:20	0.106	106.000		
278	23-Feb	11:37:20	0.086	86.000	0.095	94.933
279	23-Feb	11:38:20	0.089	89.000		
280	23-Feb	11:39:20	0.087	87.000		
281	23-Feb	11:40:20	0.096	96.000		
282	23-Feb	11:41:20	0.105	105.000		
283	23-Feb	11:42:20	0.092	92.000		
284	23-Feb	11:43:20	0.084	84.000		
285	23-Feb	11:44:20	0.094	94.000		

Point	Date	Time	1 Minute Average Concentration (mg/m^3)	1 Minute Average Concentration (ug/m^3)	15 Minute Average Concentration (mg/m^3)	15 Minute Average Concentration (ug/m^3)
286	23-Feb	11:45:20	0.081	81.000		
287	23-Feb	11:46:20	0.099	99.000		
288	23-Feb	11:47:20	0.072	72.000		
289	23-Feb	11:48:20	0.084	84.000		
290	23-Feb	11:49:20	0.075	75.000		
291	23-Feb	11:50:20	0.094	94.000		
292	23-Feb	11:51:20	0.088	88.000		
293	23-Feb	11:52:20	0.096	96.000	0.089	89.067
294	23-Feb	11:53:20	0.136	136.000		
295	23-Feb	11:54:20	0.092	92.000		
296	23-Feb	11:55:20	0.092	92.000		
297	23-Feb	11:56:20	0.085	85.000		
298	23-Feb	11:57:20	0.089	89.000		
299	23-Feb	11:58:20	0.072	72.000		
300	23-Feb	11:59:20	0.081	81.000		
301	23-Feb	12:00:20	0.078	78.000		
302	23-Feb	12:01:20	0.078	78.000		
303	23-Feb	12:02:20	0.079	79.000		
304	23-Feb	12:03:20	0.078	78.000		
305	23-Feb	12:04:20	0.075	75.000		
306	23-Feb	12:05:20	0.081	81.000		
307	23-Feb	12:06:20	0.089	89.000		
308	23-Feb	12:07:20	0.080	80.000	0.077	77.467
309	23-Feb	12:08:20	0.077	77.000		
310	23-Feb	12:09:20	0.071	71.000		
311	23-Feb	12:10:20	0.084	84.000		
312	23-Feb	12:11:20	0.075	75.000		
313	23-Feb	12:12:20	0.071	71.000		
314	23-Feb	12:13:20	0.072	72.000		
315	23-Feb	12:14:20	0.074	74.000		
316	23-Feb	12:15:20	0.060	60.000		
317	23-Feb	12:16:20	0.057	57.000		
318	23-Feb	12:17:20	0.057	57.000		
319	23-Feb	12:18:20	0.064	64.000		
320	23-Feb	12:19:20	0.058	58.000		
321	23-Feb	12:20:20	0.069	69.000		
322	23-Feb	12:21:20	0.069	69.000		
323	23-Feb	12:22:20	0.123	123.000	0.076	76.333
324	23-Feb	12:23:20	0.070	70.000		
325	23-Feb	12:24:20	0.066	66.000		
326	23-Feb	12:25:20	0.091	91.000		
327	23-Feb	12:26:20	0.111	111.000		
328	23-Feb	12:27:20	0.083	83.000		
329	23-Feb	12:28:20	0.072	72.000		
330	23-Feb	12:29:20	0.095	95.000		
331	23-Feb	12:30:20	0.085	85.000		
332	23-Feb	12:31:20	0.092	92.000		
333	23-Feb	12:32:20	0.091	91.000		
334	23-Feb	12:33:20	0.102	102.000		
335	23-Feb	12:34:20	0.101	101.000		
336	23-Feb	12:35:20	0.089	89.000		
337	23-Feb	12:36:20	0.047	47.000		
338	23-Feb	12:37:20	0.060	60.000	0.080	80.067
339	23-Feb	12:38:20	0.088	88.000		
340	23-Feb	12:39:20	0.081	81.000		
341	23-Feb	12:40:20	0.077	77.000		
342	23-Feb	12:41:20	0.068	68.000		
343	23-Feb	12:42:20	0.088	88.000		
344	23-Feb	12:43:20	0.070	70.000		
345	23-Feb	12:44:20	0.062	62.000		
346	23-Feb	12:45:20	0.063	63.000		
347	23-Feb	12:46:20	0.053	53.000		
348	23-Feb	12:47:20	0.055	55.000		
349	23-Feb	12:48:20	0.057	57.000		
350	23-Feb	12:49:20	0.051	51.000		
351	23-Feb	12:50:20	0.052	52.000		
352	23-Feb	12:51:20	0.046	46.000		
353	23-Feb	12:52:20	0.054	54.000	0.051	50.867
354	23-Feb	12:53:20	0.054	54.000		
355	23-Feb	12:54:20	0.049	49.000		
356	23-Feb	12:55:20	0.050	50.000		
357	23-Feb	12:56:20	0.040	40.000		
358	23-Feb	12:57:20	0.051	51.000		
359	23-Feb	12:58:20	0.044	44.000		
360	23-Feb	12:59:20	0.044	44.000		
361	23-Feb	13:00:20	0.041	41.000		
362	23-Feb	13:01:20	0.056	56.000		
363	23-Feb	13:02:20	0.044	44.000		
364	23-Feb	13:03:20	0.042	42.000		
365	23-Feb	13:04:20	0.040	40.000		
366	23-Feb	13:05:20	0.060	60.000		
367	23-Feb	13:06:20	0.045	45.000		
368	23-Feb	13:07:20	0.042	42.000	0.044	44.267
369	23-Feb	13:08:20	0.055	55.000		
370	23-Feb	13:09:20	0.040	40.000		
371	23-Feb	13:10:20	0.039	39.000		
372	23-Feb	13:11:20	0.038	38.000		
373	23-Feb	13:12:20	0.048	48.000		
374	23-Feb	13:13:20	0.043	43.000		
375	23-Feb	13:14:20	0.031	31.000		

Point	Date	Time	1 Minute Average Concentration (mg/m³)	1 Minute Average Concentration (ug/m³)	15 Minute Average Concentration (mg/m³)	15 Minute Average Concentration (ug/m³)
376	23-Feb	13:15:20	0.037	37.000		
377	23-Feb	13:16:20	0.041	41.000		
378	23-Feb	13:17:20	0.028	28.000		
379	23-Feb	13:18:20	0.037	37.000		
380	23-Feb	13:19:20	0.041	41.000		
381	23-Feb	13:20:20	0.029	29.000		
382	23-Feb	13:21:20	0.032	32.000		
383	23-Feb	13:22:20	0.034	34.000	0.031	31.067
384	23-Feb	13:23:20	0.029	29.000		
385	23-Feb	13:24:20	0.022	22.000		
386	23-Feb	13:25:20	0.024	24.000		
387	23-Feb	13:26:20	0.025	25.000		
388	23-Feb	13:27:20	0.032	32.000		
389	23-Feb	13:28:20	0.029	29.000		
390	23-Feb	13:29:20	0.026	26.000		
391	23-Feb	13:30:20	0.024	24.000		
392	23-Feb	13:31:20	0.029	29.000		
393	23-Feb	13:32:20	0.026	26.000		
394	23-Feb	13:33:20	0.022	22.000		
395	23-Feb	13:34:20	0.024	24.000		
396	23-Feb	13:35:20	0.027	27.000		
397	23-Feb	13:36:20	0.030	30.000		
398	23-Feb	13:37:20	0.025	25.000	0.026	26.200
399	23-Feb	13:38:20	0.033	33.000		
400	23-Feb	13:39:20	0.021	21.000		
401	23-Feb	13:40:20	0.029	29.000		
402	23-Feb	13:41:20	0.024	24.000		
403	23-Feb	13:42:20	0.024	24.000		
404	23-Feb	13:43:20	0.023	23.000		
405	23-Feb	13:44:20	0.032	32.000		
406	23-Feb	13:45:20	0.024	24.000		
407	23-Feb	13:46:20	0.022	22.000		
408	23-Feb	13:47:20	0.018	18.000		
409	23-Feb	13:48:20	0.022	22.000		
410	23-Feb	13:49:20	0.024	24.000		
411	23-Feb	13:50:20	0.025	25.000		
412	23-Feb	13:51:20	0.023	23.000		
413	23-Feb	13:52:20	0.024	24.000	0.023	23.267
414	23-Feb	13:53:20	0.029	29.000		
415	23-Feb	13:54:20	0.027	27.000		
416	23-Feb	13:55:20	0.023	23.000		
417	23-Feb	13:56:20	0.024	24.000		
418	23-Feb	13:57:20	0.022	22.000		
419	23-Feb	13:58:20	0.023	23.000		
420	23-Feb	13:59:20	0.019	19.000		
421	23-Feb	14:00:20	0.021	21.000		
422	23-Feb	14:01:20	0.032	32.000		
423	23-Feb	14:02:20	0.029	29.000		
424	23-Feb	14:03:20	0.021	21.000		
425	23-Feb	14:04:20	0.021	21.000		
426	23-Feb	14:05:20	0.019	19.000		
427	23-Feb	14:06:20	0.018	18.000		
428	23-Feb	14:07:20	0.022	22.000	0.023	22.533
429	23-Feb	14:08:20	0.033	33.000		
430	23-Feb	14:09:20	0.023	23.000		
431	23-Feb	14:10:20	0.018	18.000		
432	23-Feb	14:11:20	0.020	20.000		
433	23-Feb	14:12:20	0.023	23.000		
434	23-Feb	14:13:20	0.019	19.000		
435	23-Feb	14:14:20	0.019	19.000		
436	23-Feb	14:15:20	0.028	28.000		
437	23-Feb	14:16:20	0.022	22.000		
438	23-Feb	14:17:20	0.019	19.000		
439	23-Feb	14:18:20	0.019	19.000		
440	23-Feb	14:19:20	0.021	21.000		
441	23-Feb	14:20:20	0.018	18.000		
442	23-Feb	14:21:20	0.024	24.000		
443	23-Feb	14:22:20	0.021	21.000	0.026	25.800
444	23-Feb	14:23:20	0.028	28.000		
445	23-Feb	14:24:20	0.031	31.000		
446	23-Feb	14:25:20	0.027	27.000		
447	23-Feb	14:26:20	0.057	57.000		
448	23-Feb	14:27:20	0.024	24.000		
449	23-Feb	14:28:20	0.025	25.000		
450	23-Feb	14:29:20	0.023	23.000		
451	23-Feb	14:30:20	0.033	33.000		
452	23-Feb	14:31:20	0.027	27.000		
453	23-Feb	14:32:20	0.024	24.000		
454	23-Feb	14:33:20	0.021	21.000		
455	23-Feb	14:34:20	0.028	28.000		
456	23-Feb	14:35:20	0.022	22.000		
457	23-Feb	14:36:20	0.018	18.000		
458	23-Feb	14:37:20	0.021	21.000	0.022	22.133
459	23-Feb	14:38:20	0.017	17.000		
460	23-Feb	14:39:20	0.024	24.000		
461	23-Feb	14:40:20	0.018	18.000		
462	23-Feb	14:41:20	0.016	16.000		
463	23-Feb	14:42:20	0.020	20.000		
464	23-Feb	14:43:20	0.021	21.000		
465	23-Feb	14:44:20	0.022	22.000		
466	23-Feb	14:45:20	0.019	19.000		
467	23-Feb	14:46:20	0.025	25.000		
468	23-Feb	14:47:20	0.019	19.000		
469	23-Feb	14:48:20	0.011	11.000	0.022	21.571
470	23-Feb	14:49:20	0.020	20.000		
471	23-Feb	14:50:20	0.022	22.000		
472	23-Feb	14:51:20	0.035	35.000		

Highlighted cells indicate exceedance of 150 ug/m³ over average background concentration

Highlighted thick bordered cells indicate exceedance of 150 ug/m³ over maximum background concentration

Community Air Monitoring Data. Volatile Organic Compounds Near Office Doorway. February 23, 2011.

Instrument:	MiniRAE 2000	Serial Number:	002164
User ID:	00000001	Site ID:	00000373
Data Points:	471	Sample Period:	60 sec
Last Calibration:	2/21/2011 8:31	Gas Name:	Isobutylene
Range of 15 Minute Average Background Concentrations:	1.8 ppm to 2.1 ppm	Background Time Interval:	7:00 - 7:29

Measurement Type:	Avg(ppm)	Max(ppm)
High Alarm Levels:	100	100
Low Alarm Levels:	50	50

Line#	Date	Time	1 Minute Average (ppm)	Alarm	1 Minute Maximum (ppm)	Alarm	15 Minute Average (ppm)
1	2/23/2011	7:00	1.2		1.4		
2	2/23/2011	7:01	1.5		1.8		
3	2/23/2011	7:02	1.5		1.7		
4	2/23/2011	7:03	1.6		1.8		
5	2/23/2011	7:04	1.6		1.8		
6	2/23/2011	7:05	1.7		1.9		
7	2/23/2011	7:06	1.7		1.8		
8	2/23/2011	7:07	1.9		2.1		1.8
9	2/23/2011	7:08	1.9		2.1		
10	2/23/2011	7:09	2.0		2.2		
11	2/23/2011	7:10	2.0		2.3		
12	2/23/2011	7:11	2.0		2.2		
13	2/23/2011	7:12	2.0		2.2		
14	2/23/2011	7:13	2.1		2.3		
15	2/23/2011	7:14	2.0		2.3		
16	2/23/2011	7:15	2.0		2.3		
17	2/23/2011	7:16	2.0		2.3		
18	2/23/2011	7:17	2.0		2.2		
19	2/23/2011	7:18	1.9		2.2		
20	2/23/2011	7:19	2.0		2.3		
21	2/23/2011	7:20	2.2		2.5		
22	2/23/2011	7:21	2.1		2.3		
23	2/23/2011	7:22	2.0		2.2		2.1
24	2/23/2011	7:23	2.1		2.5		
25	2/23/2011	7:24	2.3		2.7		
26	2/23/2011	7:25	2.6		3.2		
27	2/23/2011	7:26	2.5		2.9		
28	2/23/2011	7:27	2.2		2.4		
29	2/23/2011	7:28	2.0		2.2		
30	2/23/2011	7:29	2.1		2.3		
31	2/23/2011	7:30	2.1		2.3		
32	2/23/2011	7:31	2.2		2.4		
33	2/23/2011	7:32	2.2		2.4		
34	2/23/2011	7:33	2.2		2.4		
35	2/23/2011	7:34	2.2		2.3		
36	2/23/2011	7:35	2.2		2.4		
37	2/23/2011	7:36	2.3		2.6		
38	2/23/2011	7:37	2.3		2.5		2.2
39	2/23/2011	7:38	2.3		2.5		
40	2/23/2011	7:39	2.3		2.5		
41	2/23/2011	7:40	2.3		2.7		
42	2/23/2011	7:41	2.2		2.6		
43	2/23/2011	7:42	2.2		2.4		
44	2/23/2011	7:43	2.2		2.4		
45	2/23/2011	7:44	2.0		2.2		
46	2/23/2011	7:45	1.9		2.2		
47	2/23/2011	7:46	1.9		2.2		
48	2/23/2011	7:47	2.1		2.4		
49	2/23/2011	7:48	2.1		2.3		
50	2/23/2011	7:49	2.0		2.2		
51	2/23/2011	7:50	1.9		2.1		
52	2/23/2011	7:51	2.2		2.5		
53	2/23/2011	7:52	2.3		2.6		2.2
54	2/23/2011	7:53	2.3		2.5		
55	2/23/2011	7:54	2.4		2.7		
56	2/23/2011	7:55	2.4		2.6		
57	2/23/2011	7:56	2.4		2.7		
58	2/23/2011	7:57	2.2		2.5		
59	2/23/2011	7:58	2.3		2.5		
60	2/23/2011	7:59	2.4		2.7		
61	2/23/2011	8:00	2.5		2.7		
62	2/23/2011	8:01	2.6		2.7		
63	2/23/2011	8:02	2.7		2.9		
64	2/23/2011	8:03	2.9		3.1		
65	2/23/2011	8:04	2.7		3.0		
66	2/23/2011	8:05	2.6		2.9		
67	2/23/2011	8:06	2.6		2.9		
68	2/23/2011	8:07	2.6		2.9		2.6
69	2/23/2011	8:08	2.6		2.9		
70	2/23/2011	8:09	2.6		2.8		
71	2/23/2011	8:10	2.5		2.8		
72	2/23/2011	8:11	2.4		2.8		
73	2/23/2011	8:12	2.6		2.9		
74	2/23/2011	8:13	2.8		3.0		
75	2/23/2011	8:14	2.8		3.1		
76	2/23/2011	8:15	2.7		3.0		
77	2/23/2011	8:16	2.7		3.0		
78	2/23/2011	8:17	2.6		2.8		
79	2/23/2011	8:18	2.6		2.8		
80	2/23/2011	8:19	2.6		2.8		
81	2/23/2011	8:20	2.7		2.9		
82	2/23/2011	8:21	2.7		3.0		
83	2/23/2011	8:22	2.7		3.0		2.7
84	2/23/2011	8:23	2.8		3.1		
85	2/23/2011	8:24	2.8		3.1		
86	2/23/2011	8:25	2.8		3.0		
87	2/23/2011	8:26	2.6		2.9		
88	2/23/2011	8:27	2.6		3.0		
89	2/23/2011	8:28	2.7		3.0		
90	2/23/2011	8:29	2.7		3.0		

Line#	Date	Time	1 Minute Average (ppm)	Alarm	1 Minute Maximum (ppm)	Alarm	15 Minute Average (ppm)
91	2/23/2011	8:30	2.6		2.9		
92	2/23/2011	8:31	2.5		2.8		
93	2/23/2011	8:32	2.4		2.8		
94	2/23/2011	8:33	2.4		2.7		
95	2/23/2011	8:34	2.5		2.8		
96	2/23/2011	8:35	2.5		2.7		
97	2/23/2011	8:36	2.4		2.7		
98	2/23/2011	8:37	2.4		2.6		2.5
99	2/23/2011	8:38	2.4		2.8		
100	2/23/2011	8:39	2.5		2.7		
101	2/23/2011	8:40	2.5		2.8		
102	2/23/2011	8:41	2.6		2.8		
103	2/23/2011	8:42	2.6		2.8		
104	2/23/2011	8:43	2.6		2.9		
105	2/23/2011	8:44	2.8		3.0		
106	2/23/2011	8:45	2.8		3.2		
107	2/23/2011	8:46	2.7		3.1		
108	2/23/2011	8:47	2.8		3.1		
109	2/23/2011	8:48	2.8		3.4		
110	2/23/2011	8:49	2.7		3.1		
111	2/23/2011	8:50	2.7		3.0		
112	2/23/2011	8:51	2.5		2.9		
113	2/23/2011	8:52	2.6		2.9		2.6
114	2/23/2011	8:53	2.5		2.9		
115	2/23/2011	8:54	2.6		2.8		
116	2/23/2011	8:55	2.5		2.8		
117	2/23/2011	8:56	2.4		2.7		
118	2/23/2011	8:57	2.4		2.6		
119	2/23/2011	8:58	2.5		2.7		
120	2/23/2011	8:59	2.4		2.7		
121	2/23/2011	9:00	2.4		2.6		
122	2/23/2011	9:01	2.3		2.6		
123	2/23/2011	9:02	2.4		2.7		
124	2/23/2011	9:03	2.6		2.9		
125	2/23/2011	9:04	2.6		2.8		
126	2/23/2011	9:05	2.5		2.8		
127	2/23/2011	9:06	2.5		2.7		
128	2/23/2011	9:07	2.5		2.7		2.6
129	2/23/2011	9:08	2.5		2.8		
130	2/23/2011	9:09	2.6		2.8		
131	2/23/2011	9:10	2.6		2.9		
132	2/23/2011	9:11	2.7		2.8		
133	2/23/2011	9:12	2.7		3.0		
134	2/23/2011	9:13	3.0		3.6		
135	2/23/2011	9:14	3.1		3.7		
136	2/23/2011	9:15	2.9		3.3		
137	2/23/2011	9:16	2.8		3.4		
138	2/23/2011	9:17	3.1		3.6		
139	2/23/2011	9:18	3.4		4.0		
140	2/23/2011	9:19	3.7		4.2		
141	2/23/2011	9:20	3.6		4.0		
142	2/23/2011	9:21	3.2		3.6		
143	2/23/2011	9:22	3.0		3.3		3.4
144	2/23/2011	9:23	3.2		3.9		
145	2/23/2011	9:24	3.5		4.3		
146	2/23/2011	9:25	3.5		4.4		
147	2/23/2011	9:26	3.8		4.8		
148	2/23/2011	9:27	3.8		4.9		
149	2/23/2011	9:28	3.9		5.0		
150	2/23/2011	9:29	3.2		4.0		
151	2/23/2011	9:30	3.0		3.5		
152	2/23/2011	9:31	3.0		3.9		
153	2/23/2011	9:32	3.1		3.9		
154	2/23/2011	9:33	3.4		4.7		
155	2/23/2011	9:34	3.2		4.0		
156	2/23/2011	9:35	2.9		3.3		
157	2/23/2011	9:36	3.2		3.7		
158	2/23/2011	9:37	3.2		4.0		3.2
159	2/23/2011	9:38	3.4		4.4		
160	2/23/2011	9:39	3.4		4.2		
161	2/23/2011	9:40	3.4		4.2		
162	2/23/2011	9:41	3.1		3.6		
163	2/23/2011	9:42	3.1		3.5		
164	2/23/2011	9:43	3.5		4.5		
165	2/23/2011	9:44	3.5		4.2		
166	2/23/2011	9:45	3.8		4.4		
167	2/23/2011	9:46	3.9		4.9		
168	2/23/2011	9:47	4.0		5.2		
169	2/23/2011	9:48	4.2		5.3		
170	2/23/2011	9:49	3.5		4.4		
171	2/23/2011	9:50	3.7		4.5		
172	2/23/2011	9:51	3.6		4.5		
173	2/23/2011	9:52	3.7		4.7		3.5
174	2/23/2011	9:53	3.5		4.7		
175	2/23/2011	9:54	3.2		4.1		
176	2/23/2011	9:55	3.1		3.6		
177	2/23/2011	9:56	3.1		3.5		
178	2/23/2011	9:57	3.1		3.6		
179	2/23/2011	9:58	3.2		3.7		
180	2/23/2011	9:59	3.3		4.2		

Line#	Date	Time	1 Minute Average (ppm)	Alarm	1 Minute Maximum (ppm)	Alarm	15 Minute Average (ppm)
181	2/23/2011	10:00	3.3		4.1		
182	2/23/2011	10:01	3.1		3.9		
183	2/23/2011	10:02	3.3		4.2		
184	2/23/2011	10:03	3.3		4.4		
185	2/23/2011	10:04	3.0		3.8		
186	2/23/2011	10:05	3.0		3.7		
187	2/23/2011	10:06	3.2		4.3		
188	2/23/2011	10:07	3.2		4.2		2.9
189	2/23/2011	10:08	3.1		3.9		
190	2/23/2011	10:09	2.7		3.0		
191	2/23/2011	10:10	2.4		2.7		
192	2/23/2011	10:11	2.4		2.7		
193	2/23/2011	10:12	2.4		2.8		
194	2/23/2011	10:13	2.5		2.8		
195	2/23/2011	10:14	2.5		2.8		
196	2/23/2011	10:15	2.6		2.9		
197	2/23/2011	10:16	2.7		3.0		
198	2/23/2011	10:17	2.7		3.0		
199	2/23/2011	10:18	2.8		3.0		
200	2/23/2011	10:19	2.7		3.2		
201	2/23/2011	10:20	2.5		2.9		
202	2/23/2011	10:21	2.6		3.4		
203	2/23/2011	10:22	2.8		4.1		2.9
204	2/23/2011	10:23	3.1		4.2		
205	2/23/2011	10:24	2.7		3.7		
206	2/23/2011	10:25	2.5		3.1		
207	2/23/2011	10:26	2.4		3.5		
208	2/23/2011	10:27	3.6		4.3		
209	2/23/2011	10:28	4.0		4.6		
210	2/23/2011	10:29	3.4		4.5		
211	2/23/2011	10:30	2.8		3.8		
212	2/23/2011	10:31	2.6		3.3		
213	2/23/2011	10:32	2.9		3.8		
214	2/23/2011	10:33	2.6		3.4		
215	2/23/2011	10:34	2.3		2.7		
216	2/23/2011	10:35	2.2		2.5		
217	2/23/2011	10:36	2.4		2.8		
218	2/23/2011	10:37	2.2		2.6		2.3
219	2/23/2011	10:38	2.2		2.6		
220	2/23/2011	10:39	2.3		2.6		
221	2/23/2011	10:40	2.2		2.5		
222	2/23/2011	10:41	2.1		2.4		
223	2/23/2011	10:42	2.1		2.4		
224	2/23/2011	10:43	2.2		2.4		
225	2/23/2011	10:44	2.0		2.5		
226	2/23/2011	10:45	2.1		2.5		
227	2/23/2011	10:46	2.2		2.6		
228	2/23/2011	10:47	2.2		2.8		
229	2/23/2011	10:48	2.1		2.4		
230	2/23/2011	10:49	2.1		2.5		
231	2/23/2011	10:50	2.2		2.6		
232	2/23/2011	10:51	2.2		2.7		
233	2/23/2011	10:52	2.2		2.5		2.2
234	2/23/2011	10:53	2.1		2.6		
235	2/23/2011	10:54	2.3		2.9		
236	2/23/2011	10:55	2.5		3.1		
237	2/23/2011	10:56	2.4		2.9		
238	2/23/2011	10:57	2.2		2.8		
239	2/23/2011	10:58	2.1		2.6		
240	2/23/2011	10:59	2.2		2.8		
241	2/23/2011	11:00	2.7		3.6		
242	2/23/2011	11:01	2.6		3.1		
243	2/23/2011	11:02	2.3		2.6		
244	2/23/2011	11:03	2.3		2.7		
245	2/23/2011	11:04	2.5		3.2		
246	2/23/2011	11:05	3.3		3.9		
247	2/23/2011	11:06	2.9		3.8		
248	2/23/2011	11:07	2.6		3.6		2.5
249	2/23/2011	11:08	2.2		3.3		
250	2/23/2011	11:09	2.2		2.6		
251	2/23/2011	11:10	2.1		2.8		
252	2/23/2011	11:11	2.2		2.9		
253	2/23/2011	11:12	2.3		2.8		
254	2/23/2011	11:13	2.6		3.5		
255	2/23/2011	11:14	2.5		3.0		
256	2/23/2011	11:15	2.5		3.3		
257	2/23/2011	11:16	2.3		2.6		
258	2/23/2011	11:17	2.3		2.9		
259	2/23/2011	11:18	2.2		2.6		
260	2/23/2011	11:19	2.2		3.2		
261	2/23/2011	11:20	2.4		2.8		
262	2/23/2011	11:21	2.3		2.6		
263	2/23/2011	11:22	2.2		2.4		2.3
264	2/23/2011	11:23	2.2		2.8		
265	2/23/2011	11:24	2.1		2.5		
266	2/23/2011	11:25	2.1		2.5		
267	2/23/2011	11:26	2.0		2.3		
268	2/23/2011	11:27	2.0		2.3		
269	2/23/2011	11:28	2.4		3.1		
270	2/23/2011	11:29	2.6		3.2		
271	2/23/2011	11:30	2.5		3.0		
272	2/23/2011	11:31	2.6		3.2		
273	2/23/2011	11:32	2.5		3.3		
274	2/23/2011	11:33	2.6		3.2		
275	2/23/2011	11:34	2.3		2.8		
276	2/23/2011	11:35	2.5		3.1		
277	2/23/2011	11:36	2.5		3.1		
278	2/23/2011	11:37	2.7		3.1		2.5
279	2/23/2011	11:38	2.6		3.2		
280	2/23/2011	11:39	2.2		2.7		
281	2/23/2011	11:40	2.4		2.8		
282	2/23/2011	11:41	2.5		3.1		
283	2/23/2011	11:42	2.8		3.3		
284	2/23/2011	11:43	2.7		3.3		
285	2/23/2011	11:44	2.8		3.3		

Line#	Date	Time	1 Minute Average (ppm)	Alarm	1 Minute Maximum (ppm)	Alarm	15 Minute Average (ppm)
286	2/23/2011	11:45	2.6		3.2		
287	2/23/2011	11:46	2.4		3.1		
288	2/23/2011	11:47	2.5		3.1		
289	2/23/2011	11:48	2.7		3.3		
290	2/23/2011	11:49	3.2		3.7		
291	2/23/2011	11:50	2.7		3.5		
292	2/23/2011	11:51	2.7		3.3		
293	2/23/2011	11:52	2.4		2.9		2.4
294	2/23/2011	11:53	2.4		2.8		
295	2/23/2011	11:54	2.3		2.6		
296	2/23/2011	11:55	2.2		2.5		
297	2/23/2011	11:56	2.3		2.7		
298	2/23/2011	11:57	2.1		2.4		
299	2/23/2011	11:58	2.1		2.4		
300	2/23/2011	11:59	2.0		2.3		
301	2/23/2011	12:00	2.2		2.5		
302	2/23/2011	12:01	2.3		2.6		
303	2/23/2011	12:02	2.2		2.4		
304	2/23/2011	12:03	2.1		2.3		
305	2/23/2011	12:04	2.1		2.3		
306	2/23/2011	12:05	2.2		2.6		
307	2/23/2011	12:06	2.2		2.5		
308	2/23/2011	12:07	2.3		2.6		2.3
309	2/23/2011	12:08	2.2		2.6		
310	2/23/2011	12:09	2.3		2.9		
311	2/23/2011	12:10	2.3		2.5		
312	2/23/2011	12:11	2.2		2.5		
313	2/23/2011	12:12	2.3		2.6		
314	2/23/2011	12:13	2.4		2.7		
315	2/23/2011	12:14	2.5		3.0		
316	2/23/2011	12:15	2.3		3.3		
317	2/23/2011	12:16	2.4		3.1		
318	2/23/2011	12:17	2.4		2.9		
319	2/23/2011	12:18	2.3		2.8		
320	2/23/2011	12:19	2.3		2.9		
321	2/23/2011	12:20	2.6		3.2		
322	2/23/2011	12:21	2.7		3.3		
323	2/23/2011	12:22	2.9		3.5		2.6
324	2/23/2011	12:23	2.8		3.8		
325	2/23/2011	12:24	2.4		3.1		
326	2/23/2011	12:25	2.7		3.9		
327	2/23/2011	12:26	2.6		3.7		
328	2/23/2011	12:27	2.9		4.0		
329	2/23/2011	12:28	2.5		3.5		
330	2/23/2011	12:29	2.6		3.3		
331	2/23/2011	12:30	2.6		3.7		
332	2/23/2011	12:31	2.7		3.6		
333	2/23/2011	12:32	2.7		3.7		
334	2/23/2011	12:33	2.6		3.6		
335	2/23/2011	12:34	2.8		3.4		
336	2/23/2011	12:35	2.4		3.5		
337	2/23/2011	12:36	1.8		2.5		
338	2/23/2011	12:37	1.9		2.2		2.3
339	2/23/2011	12:38	2.0		2.4		
340	2/23/2011	12:39	2.0		2.2		
341	2/23/2011	12:40	2.1		2.5		
342	2/23/2011	12:41	2.2		2.7		
343	2/23/2011	12:42	2.2		2.6		
344	2/23/2011	12:43	2.1		2.6		
345	2/23/2011	12:44	2.1		2.8		
346	2/23/2011	12:45	2.1		2.5		
347	2/23/2011	12:46	2.0		2.4		
348	2/23/2011	12:47	2.0		2.4		
349	2/23/2011	12:48	2.0		2.5		
350	2/23/2011	12:49	1.9		2.2		
351	2/23/2011	12:50	2.3		2.8		
352	2/23/2011	12:51	2.4		3.0		
353	2/23/2011	12:52	2.4		2.8		2.3
354	2/23/2011	12:53	2.5		3.0		
355	2/23/2011	12:54	2.6		3.1		
356	2/23/2011	12:55	2.5		3.1		
357	2/23/2011	12:56	2.4		3.0		
358	2/23/2011	12:57	2.3		2.8		
359	2/23/2011	12:58	2.7		3.3		
360	2/23/2011	12:59	2.5		3.1		
361	2/23/2011	13:00	2.3		2.9		
362	2/23/2011	13:01	2.6		3.3		
363	2/23/2011	13:02	2.5		3.1		
364	2/23/2011	13:03	2.3		2.9		
365	2/23/2011	13:04	2.3		2.9		
366	2/23/2011	13:05	2.4		3.0		
367	2/23/2011	13:06	2.4		3.0		
368	2/23/2011	13:07	2.4		3.0		2.4
369	2/23/2011	13:08	2.4		2.9		
370	2/23/2011	13:09	2.5		3.0		
371	2/23/2011	13:10	2.7		3.2		
372	2/23/2011	13:11	2.4		2.8		
373	2/23/2011	13:12	2.2		2.6		
374	2/23/2011	13:13	2.3		2.7		
375	2/23/2011	13:14	2.1		2.6		

Line#	Date	Time	1 Minute Average (ppm)	Alarm	1 Minute Maximum (ppm)	Alarm	15 Minute Average (ppm)
376	2/23/2011	13:15	2.2		2.7		
377	2/23/2011	13:16	2.4		2.9		
378	2/23/2011	13:17	2.3		2.8		
379	2/23/2011	13:18	2.1		2.5		
380	2/23/2011	13:19	2.1		2.4		
381	2/23/2011	13:20	2.2		2.7		
382	2/23/2011	13:21	2.4		2.9		
383	2/23/2011	13:22	2.2		2.7		2.2
384	2/23/2011	13:23	2.4		2.9		
385	2/23/2011	13:24	2.2		2.7		
386	2/23/2011	13:25	2.2		2.7		
387	2/23/2011	13:26	2.0		2.4		
388	2/23/2011	13:27	2.1		2.6		
389	2/23/2011	13:28	2.2		2.7		
390	2/23/2011	13:29	2.4		2.9		
391	2/23/2011	13:30	2.1		2.7		
392	2/23/2011	13:31	2.1		3.0		
393	2/23/2011	13:32	2.2		3.2		
394	2/23/2011	13:33	2.0		2.4		
395	2/23/2011	13:34	1.9		2.5		
396	2/23/2011	13:35	1.9		2.3		
397	2/23/2011	13:36	2.0		2.8		
398	2/23/2011	13:37	1.9		2.7		2.1
399	2/23/2011	13:38	2.0		2.3		
400	2/23/2011	13:39	2.1		3.0		
401	2/23/2011	13:40	1.9		2.6		
402	2/23/2011	13:41	2.2		3.0		
403	2/23/2011	13:42	2.3		3.3		
404	2/23/2011	13:43	2.4		3.2		
405	2/23/2011	13:44	2.2		2.7		
406	2/23/2011	13:45	2.2		2.8		
407	2/23/2011	13:46	2.1		2.5		
408	2/23/2011	13:47	2.0		2.5		
409	2/23/2011	13:48	2.1		2.6		
410	2/23/2011	13:49	2.0		2.3		
411	2/23/2011	13:50	1.8		2.1		
412	2/23/2011	13:51	1.9		2.1		
413	2/23/2011	13:52	1.9		2.1		2.0
414	2/23/2011	13:53	1.8		2.0		
415	2/23/2011	13:54	1.9		2.0		
416	2/23/2011	13:55	1.8		2.0		
417	2/23/2011	13:56	1.8		2.4		
418	2/23/2011	13:57	2.0		2.3		
419	2/23/2011	13:58	2.5		3.0		
420	2/23/2011	13:59	2.6		3.4		
421	2/23/2011	14:00	2.5		3.4		
422	2/23/2011	14:01	2.7		3.4		
423	2/23/2011	14:02	2.6		3.4		
424	2/23/2011	14:03	2.7		3.3		
425	2/23/2011	14:04	2.4		2.9		
426	2/23/2011	14:05	2.2		2.9		
427	2/23/2011	14:06	2.1		2.5		
428	2/23/2011	14:07	2.0		2.5		2.3
429	2/23/2011	14:08	2.0		2.6		
430	2/23/2011	14:09	2.0		2.4		
431	2/23/2011	14:10	2.1		2.7		
432	2/23/2011	14:11	2.0		2.4		
433	2/23/2011	14:12	2.2		2.6		
434	2/23/2011	14:13	2.7		3.3		
435	2/23/2011	14:14	2.7		3.3		
436	2/23/2011	14:15	2.5		3.0		
437	2/23/2011	14:16	2.7		3.3		
438	2/23/2011	14:17	2.4		3.1		
439	2/23/2011	14:18	2.3		2.9		
440	2/23/2011	14:19	2.5		3.1		
441	2/23/2011	14:20	2.2		2.6		
442	2/23/2011	14:21	2.1		2.8		
443	2/23/2011	14:22	2.2		2.9		2.1
444	2/23/2011	14:23	1.8		2.1		
445	2/23/2011	14:24	1.9		2.4		
446	2/23/2011	14:25	1.7		2.1		
447	2/23/2011	14:26	1.7		2.3		
448	2/23/2011	14:27	1.6		2.1		
449	2/23/2011	14:28	1.9		2.4		
450	2/23/2011	14:29	1.7		2.2		
451	2/23/2011	14:30	2.0		2.5		
452	2/23/2011	14:31	2.1		2.4		
453	2/23/2011	14:32	1.9		2.2		
454	2/23/2011	14:33	2.3		2.7		
455	2/23/2011	14:34	2.3		2.6		
456	2/23/2011	14:35	2.5		2.8		
457	2/23/2011	14:36	2.8		3.1		
458	2/23/2011	14:37	2.7		3.1		2.5
459	2/23/2011	14:38	2.8		3.2		
460	2/23/2011	14:39	2.8		3.4		
461	2/23/2011	14:40	3.0		3.5		
462	2/23/2011	14:41	2.5		2.7		
463	2/23/2011	14:42	2.4		3.2		
464	2/23/2011	14:43	3.1		3.7		
465	2/23/2011	14:44	2.8		3.6		
466	2/23/2011	14:45	2.9		4.2		
467	2/23/2011	14:46	3.7		4.8		
468	2/23/2011	14:47	4.1		5.1		4.2
469	2/23/2011	14:48	4.4		5.3		
470	2/23/2011	14:49	4.8		5.6		
471	2/23/2011	14:50	5.4		5.8		

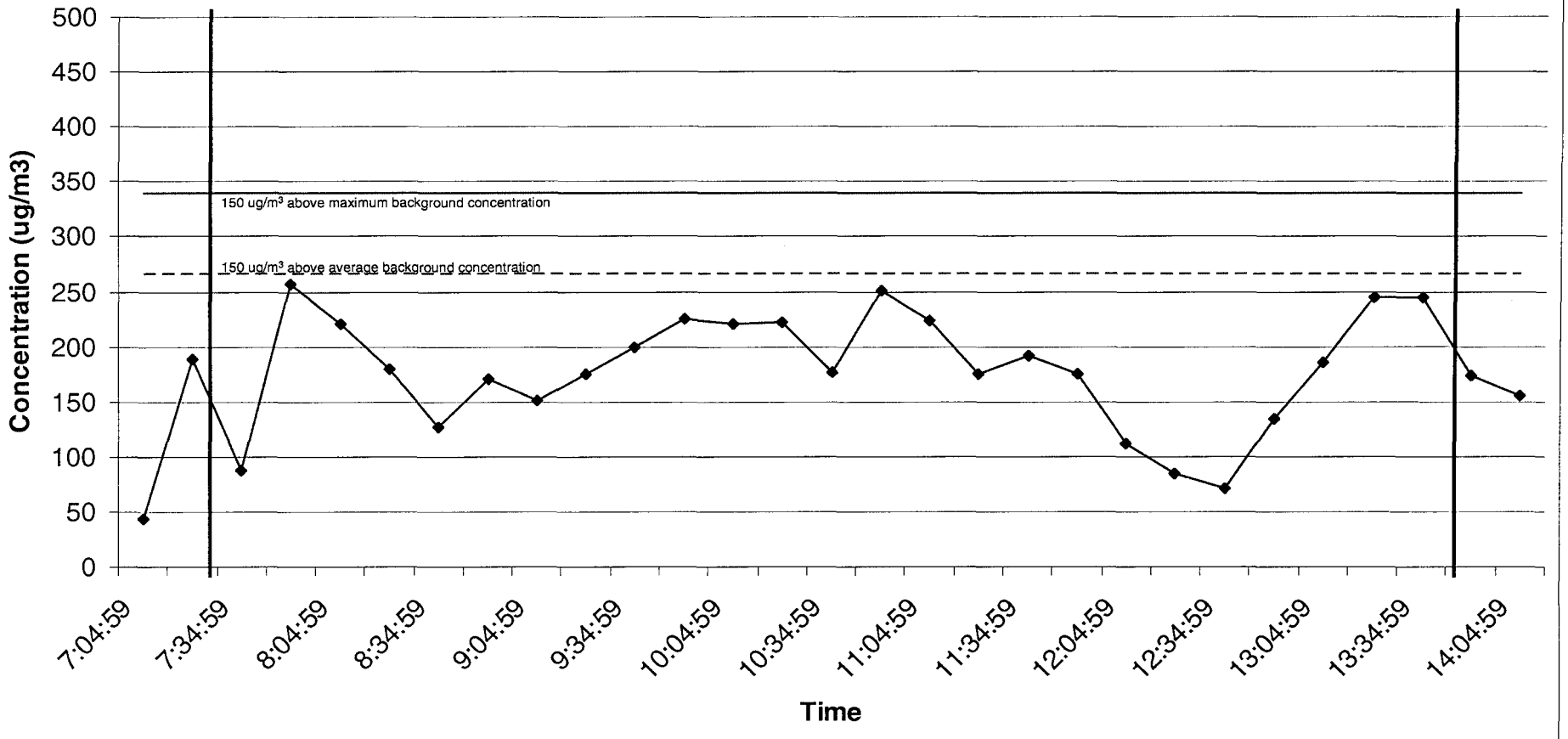
Highlighted cells indicate exceedance of 1 ppm over average background concentration

Highlighted thick bordered cells indicate exceedance of 1 ppm over maximum background concentration

Appendix B-4

Office Doorway Monitoring Station
Particulate and VOCs 2-24-2011

15 Minute Average Particulate Concentration Near Office Doorway on 2-24-2011



Brackets time interval when drilling and injecting was occurring. Background levels determined based on readings taken prior to starting drilling each day (6:50 – 7:19).

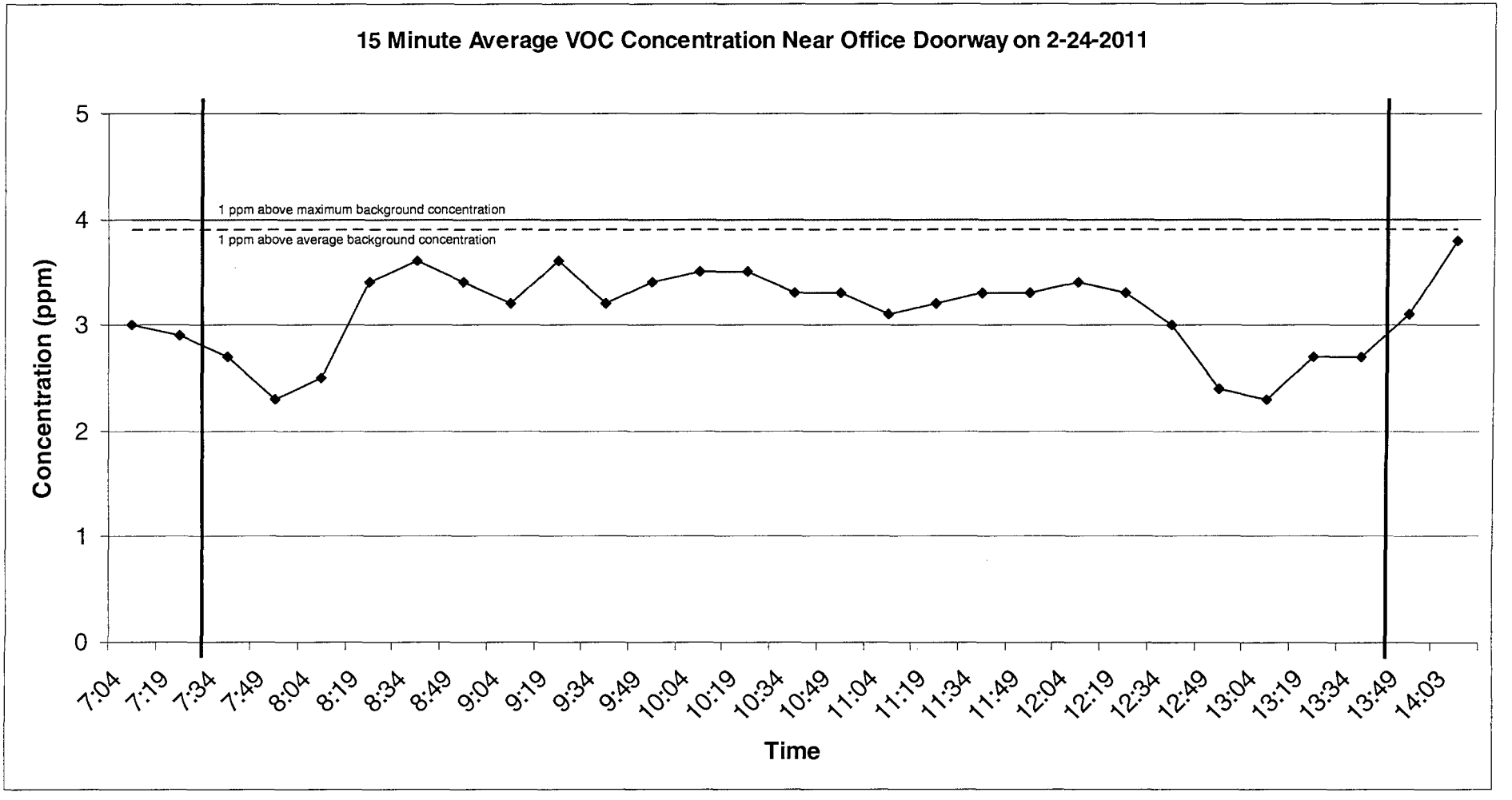
Maximum background concentration = 189.200 ug/m³
Average background concentration = 116.234 ug/m³
150 ug/m³ above maximum background = 339.200 ug/m³
150 ug/m³ above average background = 266.234 ug/m³

S&W REDEVELOPMENT
Syracuse, New York

Date: 5/2011 Proj No.: N9013

110 Luther Ave. Site (BCP Site #C734118)
Remedial Work Plan
110 Luther Ave., Liverpool
Onondaga County, New York

Appendix B-4
Pilot Test Air Monitoring Results



Brackets time interval when drilling and injecting was occurring. Background levels determined based on readings taken prior to starting drilling each day (6:50 – 7:19)

Maximum background concentration = 3.0 ppm
Average background concentration = 2.9 ppm
1 ppm above maximum background = 4.0 ppm
1 ppm above average background = 3.9 ppm

S&W REDEVELOPMENT
Syracuse, New York

Date: 5/2011 Proj No.: N9013

110 Luther Ave. Site (BCP Site #C734118)
Remedial Work Plan
110 Luther Ave., Liverpool
Onondaga County, New York

Appendix B-4
Pilot Test Air Monitoring Results

Community Air Monitoring Data. Particulate Matter Near Office Doorway. February 24, 2011.

Model Number:	pDR-1000	Unit:	Concentration
Serial Number:	10438	Unit Name:	mg/m^3
Tag Number:	4	Maximum Display Concentration:	0.565 mg/m^3
Start Time:	6:50:59	Time at Maximum:	7:40:31
Start Date:	24-Feb-11	Maximum STEL Concentration:	0.280 mg/m^3
Log Period:	00:01:00	Time at Maximum STEL:	7:54:29
Number of Points:	435	Elapsed Time:	7:15:00
Calibration Factor:	100%	Overall Average Concentration:	0.175 mg/m^3
Range of 15 Minute Average Background Concentrations:	43.267 ug/m^3 to 189.200 ug/m^3	Background Time Interval:	6:50 - 7:19

Logged Data:

Point	Date	Time	1 Minute Average Concentration (mg/m^3)	1 Minute Average Concentration (ug/m^3)	15 Minute Average Concentration (mg/m^3)	15 Minute Average Concentration (ug/m^3)
1	24-Feb	6:50:59	0.022	22.000		
2	24-Feb	6:51:59	0.016	16.000		
3	24-Feb	6:52:59	0.021	21.000		
4	24-Feb	6:53:59	0.024	24.000		
5	24-Feb	6:54:59	0.026	26.000		
6	24-Feb	6:55:59	0.030	30.000		
7	24-Feb	6:56:59	0.028	28.000		
8	24-Feb	6:57:59	0.026	26.000	0.043	43.267
9	24-Feb	6:58:59	0.027	27.000		
10	24-Feb	6:59:59	0.049	49.000		
11	24-Feb	7:00:59	0.038	38.000		
12	24-Feb	7:01:59	0.072	72.000		
13	24-Feb	7:02:59	0.093	93.000		
14	24-Feb	7:03:59	0.080	80.000		
15	24-Feb	7:04:59	0.097	97.000		
16	24-Feb	7:05:59	0.099	99.000		
17	24-Feb	7:06:59	0.157	157.000		
18	24-Feb	7:07:59	0.237	237.000		
19	24-Feb	7:08:59	0.240	240.000		
20	24-Feb	7:09:59	0.226	226.000		
21	24-Feb	7:10:59	0.243	243.000		
22	24-Feb	7:11:59	0.246	246.000		
23	24-Feb	7:12:59	0.263	263.000	0.189	189.200
24	24-Feb	7:13:59	0.206	206.000		
25	24-Feb	7:14:59	0.172	172.000		
26	24-Feb	7:15:59	0.168	168.000		
27	24-Feb	7:16:59	0.160	160.000		
28	24-Feb	7:17:59	0.151	151.000		
29	24-Feb	7:18:59	0.148	148.000		
30	24-Feb	7:19:59	0.122	122.000		
31	24-Feb	7:20:59	0.104	104.000		
32	24-Feb	7:21:59	0.129	129.000		
33	24-Feb	7:22:59	0.099	99.000		
34	24-Feb	7:23:59	0.089	89.000		
35	24-Feb	7:24:59	0.081	81.000		
36	24-Feb	7:25:59	0.084	84.000		
37	24-Feb	7:26:59	0.086	86.000		
38	24-Feb	7:27:59	0.086	86.000	0.087	87.133
39	24-Feb	7:28:59	0.075	75.000		
40	24-Feb	7:29:59	0.066	66.000		
41	24-Feb	7:30:59	0.072	72.000		
42	24-Feb	7:31:59	0.072	72.000		
43	24-Feb	7:32:59	0.087	87.000		
44	24-Feb	7:33:59	0.086	86.000		
45	24-Feb	7:34:59	0.091	91.000		
46	24-Feb	7:35:59	0.091	91.000		
47	24-Feb	7:36:59	0.167	167.000		
48	24-Feb	7:37:59	0.130	130.000		
49	24-Feb	7:38:59	0.157	157.000		
50	24-Feb	7:39:59	0.247	247.000		
51	24-Feb	7:40:59	0.393	393.000		
52	24-Feb	7:41:59	0.343	343.000		
53	24-Feb	7:42:59	0.407	407.000	0.257	257.400
54	24-Feb	7:43:59	0.362	362.000		
55	24-Feb	7:44:59	0.286	286.000		
56	24-Feb	7:45:59	0.331	331.000		
57	24-Feb	7:46:59	0.269	269.000		
58	24-Feb	7:47:59	0.217	217.000		
59	24-Feb	7:48:59	0.241	241.000		
60	24-Feb	7:49:59	0.220	220.000		
61	24-Feb	7:50:59	0.224	224.000		
62	24-Feb	7:51:59	0.186	186.000		
63	24-Feb	7:52:59	0.201	201.000		
64	24-Feb	7:53:59	0.216	216.000		
65	24-Feb	7:54:59	0.263	263.000		
66	24-Feb	7:55:59	0.281	281.000		
67	24-Feb	7:56:59	0.263	263.000		
68	24-Feb	7:57:59	0.261	261.000	0.220	220.200
69	24-Feb	7:58:59	0.259	259.000		
70	24-Feb	7:59:59	0.248	248.000		
71	24-Feb	8:00:59	0.231	231.000		
72	24-Feb	8:01:59	0.177	177.000		
73	24-Feb	8:02:59	0.141	141.000		
74	24-Feb	8:03:59	0.173	173.000		
75	24-Feb	8:04:59	0.179	179.000		

Point	Date	Time	1 Minute Average Concentration (mg/m^3)	1 Minute Average Concentration (ug/m^3)	15 Minute Average Concentration (mg/m^3)	15 Minute Average Concentration (ug/m^3)
76	24-Feb	8:05:59	0.136	136.000		
77	24-Feb	8:06:59	0.216	216.000		
78	24-Feb	8:07:59	0.223	223.000		
79	24-Feb	8:08:59	0.200	200.000		
80	24-Feb	8:09:59	0.195	195.000		
81	24-Feb	8:10:59	0.199	199.000		
82	24-Feb	8:11:59	0.222	222.000		
83	24-Feb	8:12:59	0.215	215.000	0.179	179.467
84	24-Feb	8:13:59	0.209	209.000		
85	24-Feb	8:14:59	0.184	184.000		
86	24-Feb	8:15:59	0.160	160.000		
87	24-Feb	8:16:59	0.144	144.000		
88	24-Feb	8:17:59	0.126	126.000		
89	24-Feb	8:18:59	0.135	135.000		
90	24-Feb	8:19:59	0.128	128.000		
91	24-Feb	8:20:59	0.127	127.000		
92	24-Feb	8:21:59	0.103	103.000		
93	24-Feb	8:22:59	0.100	100.000		
94	24-Feb	8:23:59	0.101	101.000		
95	24-Feb	8:24:59	0.138	138.000		
96	24-Feb	8:25:59	0.118	118.000		
97	24-Feb	8:26:59	0.120	120.000		
98	24-Feb	8:27:59	0.140	140.000	0.127	127.400
99	24-Feb	8:28:59	0.133	133.000		
100	24-Feb	8:29:59	0.137	137.000		
101	24-Feb	8:30:59	0.143	143.000		
102	24-Feb	8:31:59	0.146	146.000		
103	24-Feb	8:32:59	0.137	137.000		
104	24-Feb	8:33:59	0.139	139.000		
105	24-Feb	8:34:59	0.129	129.000		
106	24-Feb	8:35:59	0.124	124.000		
107	24-Feb	8:36:59	0.120	120.000		
108	24-Feb	8:37:59	0.154	154.000		
109	24-Feb	8:38:59	0.191	191.000		
110	24-Feb	8:39:59	0.204	204.000		
111	24-Feb	8:40:59	0.189	189.000		
112	24-Feb	8:41:59	0.145	145.000		
113	24-Feb	8:42:59	0.157	157.000	0.171	171.267
114	24-Feb	8:43:59	0.169	169.000		
115	24-Feb	8:44:59	0.175	175.000		
116	24-Feb	8:45:59	0.221	221.000		
117	24-Feb	8:46:59	0.185	185.000		
118	24-Feb	8:47:59	0.181	181.000		
119	24-Feb	8:48:59	0.183	183.000		
120	24-Feb	8:49:59	0.171	171.000		
121	24-Feb	8:50:59	0.156	156.000		
122	24-Feb	8:51:59	0.160	160.000		
123	24-Feb	8:52:59	0.150	150.000		
124	24-Feb	8:53:59	0.146	146.000		
125	24-Feb	8:54:59	0.130	130.000		
126	24-Feb	8:55:59	0.140	140.000		
127	24-Feb	8:56:59	0.136	136.000		
128	24-Feb	8:57:59	0.143	143.000	0.150	150.467
129	24-Feb	8:58:59	0.151	151.000		
130	24-Feb	8:59:59	0.141	141.000		
131	24-Feb	9:00:59	0.153	153.000		
132	24-Feb	9:01:59	0.144	144.000		
133	24-Feb	9:02:59	0.162	162.000		
134	24-Feb	9:03:59	0.208	208.000		
135	24-Feb	9:04:59	0.137	137.000		
136	24-Feb	9:05:59	0.136	136.000		
137	24-Feb	9:06:59	0.135	135.000		
138	24-Feb	9:07:59	0.172	172.000		
139	24-Feb	9:08:59	0.162	162.000		
140	24-Feb	9:09:59	0.161	161.000		
141	24-Feb	9:10:59	0.168	168.000		
142	24-Feb	9:11:59	0.202	202.000		
143	24-Feb	9:12:59	0.180	180.000	0.176	175.600
144	24-Feb	9:13:59	0.202	202.000		
145	24-Feb	9:14:59	0.175	175.000		
146	24-Feb	9:15:59	0.169	169.000		
147	24-Feb	9:16:59	0.211	211.000		
148	24-Feb	9:17:59	0.187	187.000		
149	24-Feb	9:18:59	0.182	182.000		
150	24-Feb	9:19:59	0.192	192.000		
151	24-Feb	9:20:59	0.192	192.000		
152	24-Feb	9:21:59	0.198	198.000		
153	24-Feb	9:22:59	0.172	172.000		
154	24-Feb	9:23:59	0.151	151.000		
155	24-Feb	9:24:59	0.176	176.000		
156	24-Feb	9:25:59	0.151	151.000		
157	24-Feb	9:26:59	0.191	191.000		
158	24-Feb	9:27:59	0.142	142.000	0.199	199.067
159	24-Feb	9:28:59	0.201	201.000		
160	24-Feb	9:29:59	0.201	201.000		
161	24-Feb	9:30:59	0.190	190.000		
162	24-Feb	9:31:59	0.214	214.000		
163	24-Feb	9:32:59	0.328	328.000		
164	24-Feb	9:33:59	0.215	215.000		
165	24-Feb	9:34:59	0.264	264.000		

Point	Date	Time	1 Minute Average Concentration (mg/m³)	1 Minute Average Concentration (ug/m³)	15 Minute Average Concentration (mg/m³)	15 Minute Average Concentration (ug/m³)
166	24-Feb	9:35:59	0.259	259.000		
167	24-Feb	9:36:59	0.202	202.000		
168	24-Feb	9:37:59	0.249	249.000		
169	24-Feb	9:38:59	0.222	222.000		
170	24-Feb	9:39:59	0.235	235.000		
171	24-Feb	9:40:59	0.198	198.000		
172	24-Feb	9:41:59	0.188	188.000		
173	24-Feb	9:42:59	0.169	169.000	0.225	224.733
174	24-Feb	9:43:59	0.226	226.000		
175	24-Feb	9:44:59	0.277	277.000		
176	24-Feb	9:45:59	0.239	239.000		
177	24-Feb	9:46:59	0.256	256.000		
178	24-Feb	9:47:59	0.235	235.000		
179	24-Feb	9:48:59	0.232	232.000		
180	24-Feb	9:49:59	0.184	184.000		
181	24-Feb	9:50:59	0.188	188.000		
182	24-Feb	9:51:59	0.233	233.000		
183	24-Feb	9:52:59	0.238	238.000		
184	24-Feb	9:53:59	0.214	214.000		
185	24-Feb	9:54:59	0.244	244.000		
186	24-Feb	9:55:59	0.249	249.000		
187	24-Feb	9:56:59	0.226	226.000		
188	24-Feb	9:57:59	0.199	199.000	0.220	219.933
189	24-Feb	9:58:59	0.161	161.000		
190	24-Feb	9:59:59	0.210	210.000		
191	24-Feb	10:00:59	0.247	247.000		
192	24-Feb	10:01:59	0.221	221.000		
193	24-Feb	10:02:59	0.204	204.000		
194	24-Feb	10:03:59	0.176	176.000		
195	24-Feb	10:04:59	0.289	289.000		
196	24-Feb	10:05:59	0.213	213.000		
197	24-Feb	10:06:59	0.191	191.000		
198	24-Feb	10:07:59	0.209	209.000		
199	24-Feb	10:08:59	0.215	215.000		
200	24-Feb	10:09:59	0.224	224.000		
201	24-Feb	10:10:59	0.225	225.000		
202	24-Feb	10:11:59	0.240	240.000		
203	24-Feb	10:12:59	0.218	218.000	0.222	222.267
204	24-Feb	10:13:59	0.207	207.000		
205	24-Feb	10:14:59	0.219	219.000		
206	24-Feb	10:15:59	0.249	249.000		
207	24-Feb	10:16:59	0.229	229.000		
208	24-Feb	10:17:59	0.236	236.000		
209	24-Feb	10:18:59	0.245	245.000		
210	24-Feb	10:19:59	0.214	214.000		
211	24-Feb	10:20:59	0.160	160.000		
212	24-Feb	10:21:59	0.163	163.000		
213	24-Feb	10:22:59	0.156	156.000		
214	24-Feb	10:23:59	0.218	218.000		
215	24-Feb	10:24:59	0.197	197.000		
216	24-Feb	10:25:59	0.197	197.000		
217	24-Feb	10:26:59	0.227	227.000		
218	24-Feb	10:27:59	0.233	233.000	0.176	176.267
219	24-Feb	10:28:59	0.188	188.000		
220	24-Feb	10:29:59	0.155	155.000		
221	24-Feb	10:30:59	0.157	157.000		
222	24-Feb	10:31:59	0.155	155.000		
223	24-Feb	10:32:59	0.151	151.000		
224	24-Feb	10:33:59	0.149	149.000		
225	24-Feb	10:34:59	0.138	138.000		
226	24-Feb	10:35:59	0.153	153.000		
227	24-Feb	10:36:59	0.179	179.000		
228	24-Feb	10:37:59	0.255	255.000		
229	24-Feb	10:38:59	0.270	270.000		
230	24-Feb	10:39:59	0.388	388.000		
231	24-Feb	10:40:59	0.292	292.000		
232	24-Feb	10:41:59	0.244	244.000		
233	24-Feb	10:42:59	0.209	209.000	0.251	250.733
234	24-Feb	10:43:59	0.287	287.000		
235	24-Feb	10:44:59	0.300	300.000		
236	24-Feb	10:45:59	0.303	303.000		
237	24-Feb	10:46:59	0.220	220.000		
238	24-Feb	10:47:59	0.192	192.000		
239	24-Feb	10:48:59	0.221	221.000		
240	24-Feb	10:49:59	0.248	248.000		
241	24-Feb	10:50:59	0.267	267.000		
242	24-Feb	10:51:59	0.264	264.000		
243	24-Feb	10:52:59	0.223	223.000		
244	24-Feb	10:53:59	0.212	212.000		
245	24-Feb	10:54:59	0.222	222.000		
246	24-Feb	10:55:59	0.196	196.000		
247	24-Feb	10:56:59	0.166	166.000		
248	24-Feb	10:57:59	0.187	187.000	0.224	223.600
249	24-Feb	10:58:59	0.178	178.000		
250	24-Feb	10:59:59	0.286	286.000		
251	24-Feb	11:00:59	0.238	238.000		
252	24-Feb	11:01:59	0.238	238.000		
253	24-Feb	11:02:59	0.239	239.000		
254	24-Feb	11:03:59	0.229	229.000		
255	24-Feb	11:04:59	0.209	209.000		

Point	Date	Time	1 Minute Average Concentration (mg/m^3)	1 Minute Average Concentration (ug/m^3)	15 Minute Average Concentration (mg/m^3)	15 Minute Average Concentration (ug/m^3)
256	24-Feb	11:05:59	0.219	219.000		
257	24-Feb	11:06:59	0.184	184.000		
258	24-Feb	11:07:59	0.180	180.000		
259	24-Feb	11:08:59	0.171	171.000		
260	24-Feb	11:09:59	0.139	139.000		
261	24-Feb	11:10:59	0.144	144.000		
262	24-Feb	11:11:59	0.140	140.000		
263	24-Feb	11:12:59	0.132	132.000	0.175	174.600
264	24-Feb	11:13:59	0.156	156.000		
265	24-Feb	11:14:59	0.189	189.000		
266	24-Feb	11:15:59	0.164	164.000		
267	24-Feb	11:16:59	0.181	181.000		
268	24-Feb	11:17:59	0.167	167.000		
269	24-Feb	11:18:59	0.218	218.000		
270	24-Feb	11:19:59	0.235	235.000		
271	24-Feb	11:20:59	0.201	201.000		
272	24-Feb	11:21:59	0.194	194.000		
273	24-Feb	11:22:59	0.166	166.000		
274	24-Feb	11:23:59	0.166	166.000		
275	24-Feb	11:24:59	0.199	199.000		
276	24-Feb	11:25:59	0.218	218.000		
277	24-Feb	11:26:59	0.208	208.000		
278	24-Feb	11:27:59	0.203	203.000	0.192	191.867
279	24-Feb	11:28:59	0.199	199.000		
280	24-Feb	11:29:59	0.173	173.000		
281	24-Feb	11:30:59	0.167	167.000		
282	24-Feb	11:31:59	0.169	169.000		
283	24-Feb	11:32:59	0.195	195.000		
284	24-Feb	11:33:59	0.224	224.000		
285	24-Feb	11:34:59	0.196	196.000		
286	24-Feb	11:35:59	0.183	183.000		
287	24-Feb	11:36:59	0.226	226.000		
288	24-Feb	11:37:59	0.197	197.000		
289	24-Feb	11:38:59	0.194	194.000		
290	24-Feb	11:39:59	0.158	158.000		
291	24-Feb	11:40:59	0.169	169.000		
292	24-Feb	11:41:59	0.149	149.000		
293	24-Feb	11:42:59	0.147	147.000	0.175	175.267
294	24-Feb	11:43:59	0.136	136.000		
295	24-Feb	11:44:59	0.162	162.000		
296	24-Feb	11:45:59	0.217	217.000		
297	24-Feb	11:46:59	0.170	170.000		
298	24-Feb	11:47:59	0.201	201.000		
299	24-Feb	11:48:59	0.167	167.000		
300	24-Feb	11:49:59	0.153	153.000		
301	24-Feb	11:50:59	0.137	137.000		
302	24-Feb	11:51:59	0.131	131.000		
303	24-Feb	11:52:59	0.117	117.000		
304	24-Feb	11:53:59	0.133	133.000		
305	24-Feb	11:54:59	0.122	122.000		
306	24-Feb	11:55:59	0.115	115.000		
307	24-Feb	11:56:59	0.117	117.000		
308	24-Feb	11:57:59	0.118	118.000	0.112	112.133
309	24-Feb	11:58:59	0.105	105.000		
310	24-Feb	11:59:59	0.113	113.000		
311	24-Feb	12:00:59	0.093	93.000		
312	24-Feb	12:01:59	0.100	100.000		
313	24-Feb	12:02:59	0.093	93.000		
314	24-Feb	12:03:59	0.097	97.000		
315	24-Feb	12:04:59	0.091	91.000		
316	24-Feb	12:05:59	0.096	96.000		
317	24-Feb	12:06:59	0.108	108.000		
318	24-Feb	12:07:59	0.087	87.000		
319	24-Feb	12:08:59	0.084	84.000		
320	24-Feb	12:09:59	0.086	86.000		
321	24-Feb	12:10:59	0.089	89.000		
322	24-Feb	12:11:59	0.084	84.000		
323	24-Feb	12:12:59	0.088	88.000	0.085	85.267
324	24-Feb	12:13:59	0.088	88.000		
325	24-Feb	12:14:59	0.082	82.000		
326	24-Feb	12:15:59	0.080	80.000		
327	24-Feb	12:16:59	0.078	78.000		
328	24-Feb	12:17:59	0.079	79.000		
329	24-Feb	12:18:59	0.073	73.000		
330	24-Feb	12:19:59	0.077	77.000		
331	24-Feb	12:20:59	0.075	75.000		
332	24-Feb	12:21:59	0.066	66.000		
333	24-Feb	12:22:59	0.084	84.000		
334	24-Feb	12:23:59	0.080	80.000		
335	24-Feb	12:24:59	0.074	74.000		
336	24-Feb	12:25:59	0.074	74.000		
337	24-Feb	12:26:59	0.069	69.000		
338	24-Feb	12:27:59	0.068	68.000	0.071	70.800
339	24-Feb	12:28:59	0.067	67.000		
340	24-Feb	12:29:59	0.070	70.000		
341	24-Feb	12:30:59	0.066	66.000		
342	24-Feb	12:31:59	0.065	65.000		
343	24-Feb	12:32:59	0.074	74.000		
344	24-Feb	12:33:59	0.073	73.000		
345	24-Feb	12:34:59	0.057	57.000		

Point	Date	Time	1 Minute Average Concentration (mg/m³)	1 Minute Average Concentration (ug/m³)	15 Minute Average Concentration (mg/m³)	15 Minute Average Concentration (ug/m³)
346	24-Feb	12:35:59	0.063	63.000		
347	24-Feb	12:36:59	0.066	66.000		
348	24-Feb	12:37:59	0.079	79.000		
349	24-Feb	12:38:59	0.116	116.000		
350	24-Feb	12:39:59	0.109	109.000		
351	24-Feb	12:40:59	0.114	114.000		
352	24-Feb	12:41:59	0.131	131.000		
353	24-Feb	12:42:59	0.136	136.000	0.134	134.267
354	24-Feb	12:43:59	0.158	158.000		
355	24-Feb	12:44:59	0.171	171.000		
356	24-Feb	12:45:59	0.163	163.000		
357	24-Feb	12:46:59	0.151	151.000		
358	24-Feb	12:47:59	0.160	160.000		
359	24-Feb	12:48:59	0.191	191.000		
360	24-Feb	12:49:59	0.206	206.000		
361	24-Feb	12:50:59	0.208	208.000		
362	24-Feb	12:51:59	0.148	148.000		
363	24-Feb	12:52:59	0.154	154.000		
364	24-Feb	12:53:59	0.136	136.000		
365	24-Feb	12:54:59	0.119	119.000		
366	24-Feb	12:55:59	0.174	174.000		
367	24-Feb	12:56:59	0.168	168.000		
368	24-Feb	12:57:59	0.199	199.000	0.186	186.400
369	24-Feb	12:58:59	0.224	224.000		
370	24-Feb	12:59:59	0.211	211.000		
371	24-Feb	13:00:59	0.200	200.000		
372	24-Feb	13:01:59	0.195	195.000		
373	24-Feb	13:02:59	0.186	186.000		
374	24-Feb	13:03:59	0.182	182.000		
375	24-Feb	13:04:59	0.292	292.000		
376	24-Feb	13:05:59	0.262	262.000		
377	24-Feb	13:06:59	0.244	244.000		
378	24-Feb	13:07:59	0.237	237.000		
379	24-Feb	13:08:59	0.232	232.000		
380	24-Feb	13:09:59	0.206	206.000		
381	24-Feb	13:10:59	0.222	222.000		
382	24-Feb	13:11:59	0.214	214.000		
383	24-Feb	13:12:59	0.255	255.000	0.245	245.333
384	24-Feb	13:13:59	0.213	213.000		
385	24-Feb	13:14:59	0.184	184.000		
386	24-Feb	13:15:59	0.205	205.000		
387	24-Feb	13:16:59	0.326	326.000		
388	24-Feb	13:17:59	0.300	300.000		
389	24-Feb	13:18:59	0.278	278.000		
390	24-Feb	13:19:59	0.302	302.000		
391	24-Feb	13:20:59	0.259	259.000		
392	24-Feb	13:21:59	0.275	275.000		
393	24-Feb	13:22:59	0.280	280.000		
394	24-Feb	13:23:59	0.283	283.000		
395	24-Feb	13:24:59	0.263	263.000		
396	24-Feb	13:25:59	0.265	265.000		
397	24-Feb	13:26:59	0.248	248.000		
398	24-Feb	13:27:59	0.241	241.000	0.245	245.067
399	24-Feb	13:28:59	0.222	222.000		
400	24-Feb	13:29:59	0.259	259.000		
401	24-Feb	13:30:59	0.232	232.000		
402	24-Feb	13:31:59	0.223	223.000		
403	24-Feb	13:32:59	0.211	211.000		
404	24-Feb	13:33:59	0.217	217.000		
405	24-Feb	13:34:59	0.198	198.000		
406	24-Feb	13:35:59	0.214	214.000		
407	24-Feb	13:36:59	0.170	170.000		
408	24-Feb	13:37:59	0.167	167.000		
409	24-Feb	13:38:59	0.164	164.000		
410	24-Feb	13:39:59	0.226	226.000		
411	24-Feb	13:40:59	0.218	218.000		
412	24-Feb	13:41:59	0.179	179.000		
413	24-Feb	13:42:59	0.180	180.000	0.174	174.200
414	24-Feb	13:43:59	0.174	174.000		
415	24-Feb	13:44:59	0.150	150.000		
416	24-Feb	13:45:59	0.154	154.000		
417	24-Feb	13:46:59	0.161	161.000		
418	24-Feb	13:47:59	0.160	160.000		
419	24-Feb	13:48:59	0.153	153.000		
420	24-Feb	13:49:59	0.143	143.000		
421	24-Feb	13:50:59	0.133	133.000		
422	24-Feb	13:51:59	0.137	137.000		
423	24-Feb	13:52:59	0.139	139.000		
424	24-Feb	13:53:59	0.123	123.000		
425	24-Feb	13:54:59	0.239	239.000		
426	24-Feb	13:55:59	0.183	183.000		
427	24-Feb	13:56:59	0.176	176.000		
428	24-Feb	13:57:59	0.192	192.000	0.155	155.267
429	24-Feb	13:58:59	0.181	181.000		
430	24-Feb	13:59:59	0.146	146.000		
431	24-Feb	14:00:59	0.155	155.000		
432	24-Feb	14:01:59	0.129	129.000		
433	24-Feb	14:02:59	0.122	122.000		
434	24-Feb	14:03:59	0.164	164.000		
435	24-Feb	14:04:59	0.110	110.000		

Highlighted cells indicate exceedance of 150 ug/m³ over average background concentration

Highlighted thick bordered cells indicate exceedance of 150 ug/m³ over maximum background concentration

Community Air Monitoring Data. Volatile Organic Compounds Near Office Doorway. February 24, 2011.

Instrument:	MiniRAE 2000	Serial Number:	002164
User ID:	00000001	Site ID:	00000374
Data Points:	434	Sample Period:	60 sec
Last Calibration:	2/21/2011 8:31	Gas Name:	Isobutylene
Range of 15 Minute Average Background Concentrations:	2.9 ppm to 3.0 ppm	Background Time Interval:	6:50 - 7:19

	Avg(ppm)	Max(ppm)
Measurement Type:		
High Alarm Levels:	100	100
Low Alarm Levels:	50	50

Line#	Date	Time	1 Minute Average (ppm)	Alarm	1 Minute Maximum (ppm)	Alarm	15 Minute Average (ppm)
1	2/24/2011	6:50	3.6		3.8		
2	2/24/2011	6:51	3.6		4.0		
3	2/24/2011	6:52	3.5		3.6		
4	2/24/2011	6:53	3.5		3.7		
5	2/24/2011	6:54	3.5		3.7		
6	2/24/2011	6:55	3.4		3.9		
7	2/24/2011	6:56	2.0		3.3		
8	2/24/2011	6:57	2.7		3.4		3.0
9	2/24/2011	6:58	2.9		3.5		
10	2/24/2011	6:59	2.7		3.5		
11	2/24/2011	7:00	2.8		3.4		
12	2/24/2011	7:01	2.7		3.0		
13	2/24/2011	7:02	2.7		3.2		
14	2/24/2011	7:03	2.7		3.0		
15	2/24/2011	7:04	2.7		2.9		
16	2/24/2011	7:05	2.9		3.3		
17	2/24/2011	7:06	3.0		3.2		
18	2/24/2011	7:07	3.0		3.2		
19	2/24/2011	7:08	2.8		3.2		
20	2/24/2011	7:09	2.9		3.2		
21	2/24/2011	7:10	2.9		3.2		
22	2/24/2011	7:11	2.8		3.1		
23	2/24/2011	7:12	2.9		3.2		2.9
24	2/24/2011	7:13	2.8		3.0		
25	2/24/2011	7:14	2.9		3.2		
26	2/24/2011	7:15	2.9		3.2		
27	2/24/2011	7:16	2.7		3.0		
28	2/24/2011	7:17	2.9		3.4		
29	2/24/2011	7:18	2.9		3.3		
30	2/24/2011	7:19	2.9		3.5		
31	2/24/2011	7:20	3.1		3.6		
32	2/24/2011	7:21	3.1		3.6		
33	2/24/2011	7:22	2.8		3.5		
34	2/24/2011	7:23	2.8		3.4		
35	2/24/2011	7:24	2.9		3.3		
36	2/24/2011	7:25	2.7		2.9		
37	2/24/2011	7:26	2.7		3.0		
38	2/24/2011	7:27	2.6		2.9		2.7
39	2/24/2011	7:28	2.7		3.1		
40	2/24/2011	7:29	2.8		3.4		
41	2/24/2011	7:30	2.8		3.0		
42	2/24/2011	7:31	2.5		2.9		
43	2/24/2011	7:32	2.2		2.6		
44	2/24/2011	7:33	2.4		2.9		
45	2/24/2011	7:34	2.2		2.6		
46	2/24/2011	7:35	2.1		2.5		
47	2/24/2011	7:36	2.2		2.4		
48	2/24/2011	7:37	2.1		2.4		
49	2/24/2011	7:38	2.2		2.5		
50	2/24/2011	7:39	2.0		2.3		
51	2/24/2011	7:40	1.9		2.3		
52	2/24/2011	7:41	2.2		2.4		
53	2/24/2011	7:42	2.3		2.5		2.3
54	2/24/2011	7:43	2.4		2.6		
55	2/24/2011	7:44	2.6		2.9		
56	2/24/2011	7:45	2.5		2.8		
57	2/24/2011	7:46	2.4		2.7		
58	2/24/2011	7:47	2.3		2.7		
59	2/24/2011	7:48	2.4		2.8		
60	2/24/2011	7:49	2.4		2.6		
61	2/24/2011	7:50	2.4		2.7		
62	2/24/2011	7:51	2.3		2.6		
63	2/24/2011	7:52	2.4		2.9		
64	2/24/2011	7:53	2.4		2.6		
65	2/24/2011	7:54	2.5		2.7		
66	2/24/2011	7:55	2.5		2.7		
67	2/24/2011	7:56	2.5		2.7		
68	2/24/2011	7:57	2.5		2.7		2.5
69	2/24/2011	7:58	2.5		2.7		
70	2/24/2011	7:59	2.6		2.9		
71	2/24/2011	8:00	2.6		2.9		
72	2/24/2011	8:01	2.6		2.9		
73	2/24/2011	8:02	2.6		3.0		
74	2/24/2011	8:03	2.8		3.3		
75	2/24/2011	8:04	2.8		3.1		

Line#	Date	Time	1 Minute Average (ppm)	Alarm	1 Minute Maximum (ppm)	Alarm	15 Minute Average (ppm)
76	2/24/2011	8:05	2.8		3.1		
77	2/24/2011	8:06	2.9		3.2		
78	2/24/2011	8:07	3.0		3.2		
79	2/24/2011	8:08	3.0		3.3		
80	2/24/2011	8:09	3.1		3.4		
81	2/24/2011	8:10	3.1		3.5		
82	2/24/2011	8:11	3.2		3.5		
83	2/24/2011	8:12	3.2		3.5		3.4
84	2/24/2011	8:13	3.3		3.6		
85	2/24/2011	8:14	3.5		3.8		
86	2/24/2011	8:15	3.8		4.9		
87	2/24/2011	8:16	4.1		5.1		
88	2/24/2011	8:17	4.3		5.0		
89	2/24/2011	8:18	4.1		5.1		
90	2/24/2011	8:19	4.1		4.8		
91	2/24/2011	8:20	3.8		4.3		
92	2/24/2011	8:21	4.0		4.6		
93	2/24/2011	8:22	3.8		4.3		
94	2/24/2011	8:23	3.9		4.8		
95	2/24/2011	8:24	3.8		4.6		
96	2/24/2011	8:25	3.9		4.9		
97	2/24/2011	8:26	4.3		5.1		
98	2/24/2011	8:27	3.3		3.9		3.6
99	2/24/2011	8:28	3.4		3.7		
100	2/24/2011	8:29	3.3		3.7		
101	2/24/2011	8:30	3.2		4.0		
102	2/24/2011	8:31	3.4		4.3		
103	2/24/2011	8:32	3.4		4.3		
104	2/24/2011	8:33	3.3		4.0		
105	2/24/2011	8:34	3.4		4.1		
106	2/24/2011	8:35	3.9		4.4		
107	2/24/2011	8:36	3.8		4.6		
108	2/24/2011	8:37	3.4		4.4		
109	2/24/2011	8:38	3.3		4.0		
110	2/24/2011	8:39	3.5		4.2		
111	2/24/2011	8:40	3.6		4.2		
112	2/24/2011	8:41	3.7		4.7		
113	2/24/2011	8:42	2.9		3.7		3.4
114	2/24/2011	8:43	3.5		4.3		
115	2/24/2011	8:44	3.4		3.9		
116	2/24/2011	8:45	3.4		4.1		
117	2/24/2011	8:46	3.7		4.3		
118	2/24/2011	8:47	3.1		3.7		
119	2/24/2011	8:48	3.0		3.6		
120	2/24/2011	8:49	3.0		3.4		
121	2/24/2011	8:50	3.1		4.0		
122	2/24/2011	8:51	3.8		4.2		
123	2/24/2011	8:52	3.2		4.1		
124	2/24/2011	8:53	3.4		3.9		
125	2/24/2011	8:54	3.1		3.8		
126	2/24/2011	8:55	3.1		3.6		
127	2/24/2011	8:56	3.0		3.4		
128	2/24/2011	8:57	3.0		3.4		3.2
129	2/24/2011	8:58	3.0		3.6		
130	2/24/2011	8:59	3.5		4.0		
131	2/24/2011	9:00	3.5		3.8		
132	2/24/2011	9:01	3.1		3.4		
133	2/24/2011	9:02	2.9		3.5		
134	2/24/2011	9:03	3.1		4.0		
135	2/24/2011	9:04	3.5		4.2		
136	2/24/2011	9:05	3.8		4.3		
137	2/24/2011	9:06	3.1		3.9		
138	2/24/2011	9:07	3.0		3.3		
139	2/24/2011	9:08	3.1		3.7		
140	2/24/2011	9:09	3.8		4.2		
141	2/24/2011	9:10	3.7		4.1		
142	2/24/2011	9:11	3.4		3.7		
143	2/24/2011	9:12	3.4		3.8		3.6
144	2/24/2011	9:13	3.6		4.0		
145	2/24/2011	9:14	3.9		4.2		
146	2/24/2011	9:15	3.7		4.1		
147	2/24/2011	9:16	3.7		4.0		
148	2/24/2011	9:17	3.9		4.4		
149	2/24/2011	9:18	4.0		4.4		
150	2/24/2011	9:19	3.8		4.1		
151	2/24/2011	9:20	3.6		3.9		
152	2/24/2011	9:21	3.5		4.1		
153	2/24/2011	9:22	3.6		4.0		
154	2/24/2011	9:23	3.7		4.0		
155	2/24/2011	9:24	3.4		3.9		
156	2/24/2011	9:25	3.2		3.6		
157	2/24/2011	9:26	3.0		3.4		
158	2/24/2011	9:27	2.7		3.4		3.2
159	2/24/2011	9:28	2.8		3.3		
160	2/24/2011	9:29	3.0		3.4		
161	2/24/2011	9:30	3.2		3.5		
162	2/24/2011	9:31	3.3		3.6		
163	2/24/2011	9:32	3.0		3.5		
164	2/24/2011	9:33	2.9		3.3		
165	2/24/2011	9:34	3.0		3.2		

Line#	Date	Time	1 Minute Average (ppm)	Alarm	1 Minute Maximum (ppm)	Alarm	15 Minute Average (ppm)
166	2/24/2011	9:35	3.3		3.6		
167	2/24/2011	9:36	3.5		4.1		
168	2/24/2011	9:37	3.9		4.2		
169	2/24/2011	9:38	3.5		4.2		
170	2/24/2011	9:39	3.1		3.7		
171	2/24/2011	9:40	3.6		4.1		
172	2/24/2011	9:41	3.7		4.4		
173	2/24/2011	9:42	3.4		4.1		3.4
174	2/24/2011	9:43	3.4		3.9		
175	2/24/2011	9:44	3.3		3.7		
176	2/24/2011	9:45	3.2		3.5		
177	2/24/2011	9:46	3.2		3.6		
178	2/24/2011	9:47	3.3		3.7		
179	2/24/2011	9:48	3.4		3.8		
180	2/24/2011	9:49	3.6		4.2		
181	2/24/2011	9:50	3.7		4.1		
182	2/24/2011	9:51	3.4		3.7		
183	2/24/2011	9:52	3.3		3.8		
184	2/24/2011	9:53	3.3		3.7		
185	2/24/2011	9:54	3.3		3.6		
186	2/24/2011	9:55	3.2		3.5		
187	2/24/2011	9:56	3.3		3.7		
188	2/24/2011	9:57	3.4		3.9		3.5
189	2/24/2011	9:58	3.4		4.2		
190	2/24/2011	9:59	3.4		3.7		
191	2/24/2011	10:00	3.4		3.7		
192	2/24/2011	10:01	3.7		4.1		
193	2/24/2011	10:02	4.2		5.0		
194	2/24/2011	10:03	4.3		5.0		
195	2/24/2011	10:04	3.6		3.9		
196	2/24/2011	10:05	3.5		3.9		
197	2/24/2011	10:06	3.5		4.1		
198	2/24/2011	10:07	3.5		3.9		
199	2/24/2011	10:08	3.4		3.9		
200	2/24/2011	10:09	3.4		3.7		
201	2/24/2011	10:10	3.4		3.7		
202	2/24/2011	10:11	3.4		4.1		
203	2/24/2011	10:12	4.0		4.4		3.5
204	2/24/2011	10:13	4.2		4.4		
205	2/24/2011	10:14	3.6		4.2		
206	2/24/2011	10:15	3.4		3.6		
207	2/24/2011	10:16	3.4		3.8		
208	2/24/2011	10:17	3.3		3.9		
209	2/24/2011	10:18	3.4		4.0		
210	2/24/2011	10:19	3.5		3.9		
211	2/24/2011	10:20	3.4		4.0		
212	2/24/2011	10:21	3.4		4.1		
213	2/24/2011	10:22	3.5		4.1		
214	2/24/2011	10:23	3.3		3.7		
215	2/24/2011	10:24	3.3		3.8		
216	2/24/2011	10:25	3.1		3.5		
217	2/24/2011	10:26	3.1		3.7		
218	2/24/2011	10:27	3.1		3.7		3.3
219	2/24/2011	10:28	3.4		3.9		
220	2/24/2011	10:29	3.3		3.8		
221	2/24/2011	10:30	3.5		3.9		
222	2/24/2011	10:31	3.3		3.8		
223	2/24/2011	10:32	3.2		3.7		
224	2/24/2011	10:33	3.1		3.8		
225	2/24/2011	10:34	3.2		3.8		
226	2/24/2011	10:35	3.4		4.1		
227	2/24/2011	10:36	3.4		3.7		
228	2/24/2011	10:37	3.4		3.7		
229	2/24/2011	10:38	3.3		3.5		
230	2/24/2011	10:39	3.2		3.6		
231	2/24/2011	10:40	3.4		3.8		
232	2/24/2011	10:41	3.5		4.3		
233	2/24/2011	10:42	3.4		4.0		3.3
234	2/24/2011	10:43	3.2		3.5		
235	2/24/2011	10:44	3.2		3.5		
236	2/24/2011	10:45	3.3		3.5		
237	2/24/2011	10:46	3.1		3.5		
238	2/24/2011	10:47	3.2		3.9		
239	2/24/2011	10:48	3.5		4.4		
240	2/24/2011	10:49	3.2		3.5		
241	2/24/2011	10:50	3.1		3.4		
242	2/24/2011	10:51	3.1		3.4		
243	2/24/2011	10:52	3.1		3.6		
244	2/24/2011	10:53	2.9		3.2		
245	2/24/2011	10:54	2.9		3.2		
246	2/24/2011	10:55	3.1		3.6		
247	2/24/2011	10:56	3.2		3.8		
248	2/24/2011	10:57	3.5		4.3		3.1
249	2/24/2011	10:58	3.2		3.8		
250	2/24/2011	10:59	3.1		3.5		
251	2/24/2011	11:00	3.0		3.2		
252	2/24/2011	11:01	2.9		3.1		
253	2/24/2011	11:02	2.9		3.3		
254	2/24/2011	11:03	2.9		3.2		
255	2/24/2011	11:04	3.0		3.2		

Line#	Date	Time	1 Minute Average (ppm)	Alarm	1 Minute Maximum (ppm)	Alarm	15 Minute Average (ppm)
256	2/24/2011	11:05	3.2		3.7		
257	2/24/2011	11:06	3.1		3.7		
258	2/24/2011	11:07	3.0		3.5		
259	2/24/2011	11:08	3.1		3.8		
260	2/24/2011	11:09	3.6		4.1		
261	2/24/2011	11:10	3.3		3.9		
262	2/24/2011	11:11	3.2		3.9		
263	2/24/2011	11:12	3.4		4.0		3.2
264	2/24/2011	11:13	3.4		4.0		
265	2/24/2011	11:14	3.1		3.3		
266	2/24/2011	11:15	3.0		3.2		
267	2/24/2011	11:16	3.2		3.6		
268	2/24/2011	11:17	3.1		3.4		
269	2/24/2011	11:18	3.0		3.4		
270	2/24/2011	11:19	3.2		3.5		
271	2/24/2011	11:20	3.1		3.5		
272	2/24/2011	11:21	3.1		3.8		
273	2/24/2011	11:22	3.5		4.3		
274	2/24/2011	11:23	3.6		4.2		
275	2/24/2011	11:24	3.1		3.4		
276	2/24/2011	11:25	3.3		3.6		
277	2/24/2011	11:26	3.1		3.4		
278	2/24/2011	11:27	3.2		3.5		3.3
279	2/24/2011	11:28	3.2		3.5		
280	2/24/2011	11:29	2.9		3.2		
281	2/24/2011	11:30	3.3		4.1		
282	2/24/2011	11:31	3.5		4.3		
283	2/24/2011	11:32	3.2		3.5		
284	2/24/2011	11:33	3.5		3.7		
285	2/24/2011	11:34	3.3		3.7		
286	2/24/2011	11:35	3.2		3.6		
287	2/24/2011	11:36	3.4		3.6		
288	2/24/2011	11:37	3.2		3.7		
289	2/24/2011	11:38	3.2		3.7		
290	2/24/2011	11:39	3.2		3.7		
291	2/24/2011	11:40	3.5		4.0		
292	2/24/2011	11:41	3.4		3.8		
293	2/24/2011	11:42	3.5		3.8		3.3
294	2/24/2011	11:43	3.1		3.7		
295	2/24/2011	11:44	3.0		3.4		
296	2/24/2011	11:45	3.0		3.3		
297	2/24/2011	11:46	3.1		3.6		
298	2/24/2011	11:47	3.5		3.7		
299	2/24/2011	11:48	3.6		3.8		
300	2/24/2011	11:49	3.5		3.8		
301	2/24/2011	11:50	3.5		3.7		
302	2/24/2011	11:51	3.4		3.7		
303	2/24/2011	11:52	3.4		3.6		
304	2/24/2011	11:53	3.5		3.6		
305	2/24/2011	11:54	3.2		3.6		
306	2/24/2011	11:55	3.3		3.5		
307	2/24/2011	11:56	3.5		3.7		
308	2/24/2011	11:57	3.7		3.8		3.4
309	2/24/2011	11:58	3.4		3.7		
310	2/24/2011	11:59	3.3		3.6		
311	2/24/2011	12:00	3.2		3.5		
312	2/24/2011	12:01	3.4		3.5		
313	2/24/2011	12:02	3.3		3.6		
314	2/24/2011	12:03	3.4		3.5		
315	2/24/2011	12:04	3.4		3.5		
316	2/24/2011	12:05	3.3		3.6		
317	2/24/2011	12:06	3.3		3.5		
318	2/24/2011	12:07	3.4		3.6		
319	2/24/2011	12:08	3.4		3.6		
320	2/24/2011	12:09	3.4		3.5		
321	2/24/2011	12:10	3.3		3.5		
322	2/24/2011	12:11	3.4		3.6		
323	2/24/2011	12:12	3.4		3.5		3.3
324	2/24/2011	12:13	3.3		3.5		
325	2/24/2011	12:14	3.4		3.5		
326	2/24/2011	12:15	3.3		3.5		
327	2/24/2011	12:16	3.3		3.5		
328	2/24/2011	12:17	3.3		3.5		
329	2/24/2011	12:18	3.2		3.5		
330	2/24/2011	12:19	3.2		3.4		
331	2/24/2011	12:20	3.3		3.4		
332	2/24/2011	12:21	3.1		3.4		
333	2/24/2011	12:22	3.0		3.3		
334	2/24/2011	12:23	3.1		3.3		
335	2/24/2011	12:24	3.0		3.3		
336	2/24/2011	12:25	3.0		3.3		
337	2/24/2011	12:26	3.0		3.2		
338	2/24/2011	12:27	2.9		3.2		3.0
339	2/24/2011	12:28	2.9		3.2		
340	2/24/2011	12:29	2.9		3.2		
341	2/24/2011	12:30	3.0		3.2		
342	2/24/2011	12:31	3.0		3.2		
343	2/24/2011	12:32	2.9		3.2		
344	2/24/2011	12:33	3.0		3.2		
345	2/24/2011	12:34	3.0		3.2		

Line#	Date	Time	1 Minute Average (ppm)	Alarm	1 Minute Maximum (ppm)	Alarm	15 Minute Average (ppm)
346	2/24/2011	12:35	2.9		3.2		
347	2/24/2011	12:36	2.9		3.2		
348	2/24/2011	12:37	2.9		3.1		
349	2/24/2011	12:38	2.5		3.1		
350	2/24/2011	12:39	2.3		2.8		
351	2/24/2011	12:40	2.2		2.7		
352	2/24/2011	12:41	2.2		2.7		
353	2/24/2011	12:42	2.1		2.5		2.4
354	2/24/2011	12:43	2.2		2.7		
355	2/24/2011	12:44	2.1		2.4		
356	2/24/2011	12:45	2.1		2.5		
357	2/24/2011	12:46	2.0		2.4		
358	2/24/2011	12:47	2.2		2.6		
359	2/24/2011	12:48	2.4		2.7		
360	2/24/2011	12:49	2.4		2.8		
361	2/24/2011	12:50	2.3		2.7		
362	2/24/2011	12:51	2.0		2.6		
363	2/24/2011	12:52	2.1		2.4		
364	2/24/2011	12:53	2.0		2.4		
365	2/24/2011	12:54	1.8		2.2		
366	2/24/2011	12:55	2.2		2.5		
367	2/24/2011	12:56	2.2		2.6		
368	2/24/2011	12:57	2.3		2.6		2.3
369	2/24/2011	12:58	2.3		2.6		
370	2/24/2011	12:59	2.3		2.6		
371	2/24/2011	13:00	2.4		2.7		
372	2/24/2011	13:01	2.7		2.9		
373	2/24/2011	13:02	2.8		2.9		
374	2/24/2011	13:03	2.9		3.0		
375	2/24/2011	13:04	2.9		3.1		
376	2/24/2011	13:05	2.9		3.1		
377	2/24/2011	13:06	2.6		2.9		
378	2/24/2011	13:07	2.7		3.0		
379	2/24/2011	13:08	2.6		3.0		
380	2/24/2011	13:09	2.8		3.1		
381	2/24/2011	13:10	2.7		3.0		
382	2/24/2011	13:11	2.8		3.1		
383	2/24/2011	13:12	2.8		3.1		2.7
384	2/24/2011	13:13	2.6		2.9		
385	2/24/2011	13:14	2.7		3.1		
386	2/24/2011	13:15	2.6		3.0		
387	2/24/2011	13:16	2.6		3.0		
388	2/24/2011	13:17	2.7		3.1		
389	2/24/2011	13:18	2.7		3.1		
390	2/24/2011	13:19	3.0		3.3		
391	2/24/2011	13:20	2.5		2.9		
392	2/24/2011	13:21	2.5		3.0		
393	2/24/2011	13:22	2.8		3.2		
394	2/24/2011	13:23	2.7		3.1		
395	2/24/2011	13:24	2.5		2.9		
396	2/24/2011	13:25	2.5		2.8		
397	2/24/2011	13:26	2.5		3.0		
398	2/24/2011	13:27	3.0		3.3		2.7
399	2/24/2011	13:28	3.0		3.3		
400	2/24/2011	13:29	2.8		3.1		
401	2/24/2011	13:30	2.7		3.1		
402	2/24/2011	13:31	2.7		3.2		
403	2/24/2011	13:32	2.5		2.7		
404	2/24/2011	13:33	2.6		3.0		
405	2/24/2011	13:34	2.6		3.1		
406	2/24/2011	13:35	2.7		3.2		
407	2/24/2011	13:36	2.7		3.2		
408	2/24/2011	13:37	2.7		3.1		
409	2/24/2011	13:38	2.8		3.2		
410	2/24/2011	13:39	2.6		3.0		
411	2/24/2011	13:40	2.9		3.3		
412	2/24/2011	13:41	2.9		3.4		
413	2/24/2011	13:42	3.0		3.6		3.1
414	2/24/2011	13:43	3.4		3.7		
415	2/24/2011	13:44	3.3		3.6		
416	2/24/2011	13:45	3.3		3.6		
417	2/24/2011	13:46	3.6		3.8		
418	2/24/2011	13:47	3.6		3.8		
419	2/24/2011	13:48	3.6		3.8		
420	2/24/2011	13:49	3.7		3.8		
421	2/24/2011	13:50	3.4		3.8		
422	2/24/2011	13:51	3.6		3.8		
423	2/24/2011	13:52	3.7		3.9		
424	2/24/2011	13:53	3.7		3.9		
425	2/24/2011	13:54	3.8		4.0		
426	2/24/2011	13:55	3.8		4.0		
427	2/24/2011	13:56	3.9		4.1		
428	2/24/2011	13:57	3.7		4.1		3.8
429	2/24/2011	13:58	3.8		4.1		
430	2/24/2011	13:59	3.7		4.1		
431	2/24/2011	14:00	3.9		4.2		
432	2/24/2011	14:01	3.9		4.2		
433	2/24/2011	14:02	4.0		4.3		
434	2/24/2011	14:03	4.1		4.3		

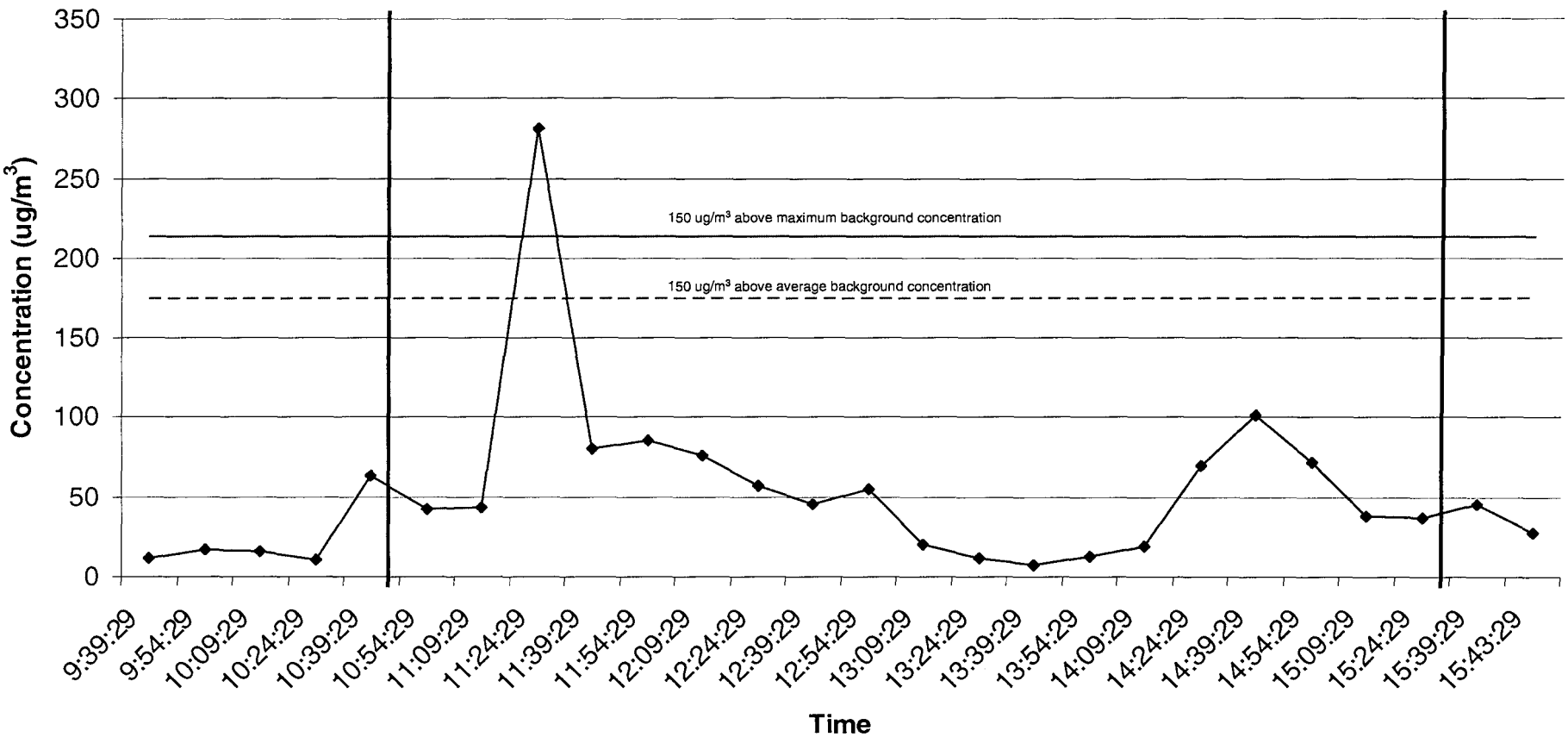
Highlighted cells indicate exceedance of 1 ppm over average background concentration

Highlighted thick bordered cells indicate exceedance of 1 ppm over maximum background concentration

Appendix B-5

Walkway Monitoring Station
Particulate and VOCs 2-21-2011

15 Minute Average Particulate Concentration Near Walkway on 2-21-2011



Brackets time interval when drilling and injecting was occurring. Background levels determined based on readings taken prior to starting drilling each day (9:25 – 10:39).

Maximum background concentration = 63.867 ug/m³
Average background concentration = 24.013 ug/m³
150 ug/m³ above maximum background = 213.867 ug/m³
150 ug/m³ above average background = 174.013 ug/m³

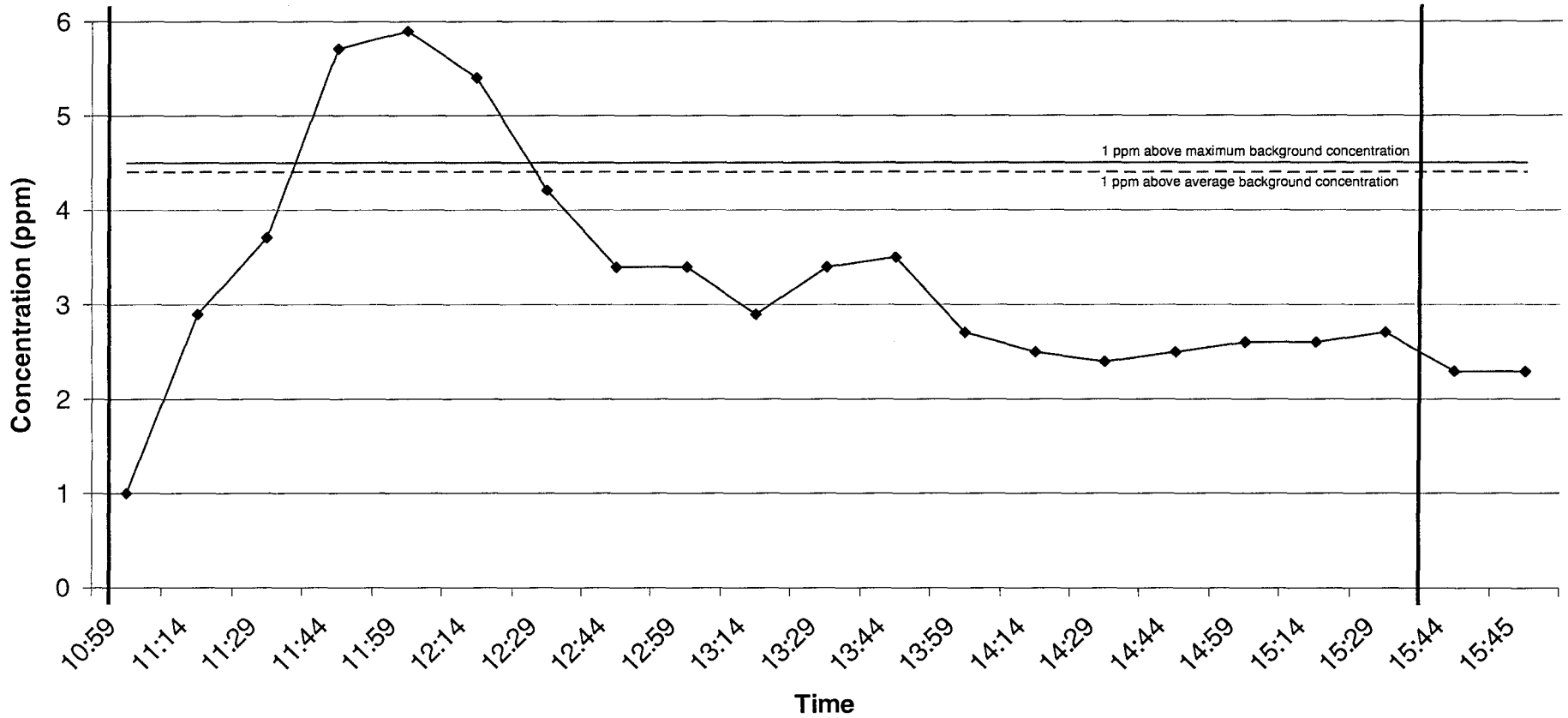
S&W REDEVELOPMENT
Syracuse, New York

Date: 5/2011 Proj No.: N9013

110 Luther Ave. Site (BCP Site #C734118)
Remedial Work Plan
110 Luther Ave., Liverpool
Onondaga County, New York

Appendix B-5
Pilot Test Air Monitoring Results

15 Minute Average VOC Concentration Near Walkway on 2-21-2011



Brackets time interval when drilling and injecting was occurring. Background levels determined based on readings taken prior to starting drilling each day (13:15 – 13:44)

Maximum background concentration = 3.5 ppm
Average background concentration = 3.4 ppm
1 ppm above maximum background = 4.5 ppm
1 ppm above average background = 4.4 ppm

Note: Background concentration determined during lunch because PID wasn't functioning properly when first started in the morning.

S&W REDEVELOPMENT
Syracuse, New York

Date: 5/2011 Proj No.: N9013

110 Luther Ave. Site (BCP Site #C734118)
Remedial Work Plan
110 Luther Ave., Liverpool
Onondaga County, New York

Appendix B-5
Pilot Test Air Monitoring Results

Community Air Monitoring Data. Particulate Matter Near Walkway. February 21, 2011.

Model Number:	pDR-1000	Unit:	Concentration
Serial Number:	07057	Unit Name:	mg/m^3
Tag Number:	1	Maximum Display Concentration:	0.799 mg/m^3
Start Time:	9:25:29	Time at Maximum:	10:25:29
Start Date:	21-Feb-11	Maximum STEL Concentration:	0.283 mg/m^3
Log Period:	00:01:00	Time at Maximum STEL:	11:24:59
Number of Points:	379	Elapsed Time:	6:19:00
Calibration Factor:	100%	Overall Average Concentration:	0.053 mg/m^3
Range of 15 Minute Average Background Concentrations:		11.067 ug/m^3 to 63.867 ug/m^3	Background Time Interval: 9:25 - 10:39

Logged Data:

Point	Date	Time	1 Minute Average Concentration (mg/m^3)	1 Minute Average Concentration (ug/m^3)	15 Minute Average Concentration (mg/m^3)	15 Minute Average Concentration (ug/m^3)
1	21-Feb	9:25:29	0.013	13.000		
2	21-Feb	9:26:29	0.010	10.000		
3	21-Feb	9:27:29	0.021	21.000		
4	21-Feb	9:28:29	0.014	14.000		
5	21-Feb	9:29:29	0.009	9.000		
6	21-Feb	9:30:29	0.009	9.000		
7	21-Feb	9:31:29	0.015	15.000		
8	21-Feb	9:32:29	0.013	13.000	0.012	12.133
9	21-Feb	9:33:29	0.013	13.000		
10	21-Feb	9:34:29	0.011	11.000		
11	21-Feb	9:35:29	0.011	11.000		
12	21-Feb	9:36:29	0.009	9.000		
13	21-Feb	9:37:29	0.013	13.000		
14	21-Feb	9:38:29	0.011	11.000		
15	21-Feb	9:39:29	0.010	10.000		
16	21-Feb	9:40:29	0.007	7.000		
17	21-Feb	9:41:29	0.006	6.000		
18	21-Feb	9:42:29	0.008	8.000		
19	21-Feb	9:43:29	0.008	8.000		
20	21-Feb	9:44:29	0.008	8.000		
21	21-Feb	9:45:29	0.006	6.000		
22	21-Feb	9:46:29	0.008	8.000		
23	21-Feb	9:47:29	0.005	5.000	0.017	16.867
24	21-Feb	9:48:29	0.005	5.000		
25	21-Feb	9:49:29	0.007	7.000		
26	21-Feb	9:50:29	0.006	6.000		
27	21-Feb	9:51:29	0.023	23.000		
28	21-Feb	9:52:29	0.080	80.000		
29	21-Feb	9:53:29	0.046	46.000		
30	21-Feb	9:54:29	0.030	30.000		
31	21-Feb	9:55:29	0.021	21.000		
32	21-Feb	9:56:29	0.021	21.000		
33	21-Feb	9:57:29	0.020	20.000		
34	21-Feb	9:58:29	0.018	18.000		
35	21-Feb	9:59:29	0.017	17.000		
36	21-Feb	10:00:29	0.013	13.000		
37	21-Feb	10:01:29	0.016	16.000		
38	21-Feb	10:02:29	0.022	22.000	0.016	16.133
39	21-Feb	10:03:29	0.013	13.000		
40	21-Feb	10:04:29	0.015	15.000		
41	21-Feb	10:05:29	0.010	10.000		
42	21-Feb	10:06:29	0.016	16.000		
43	21-Feb	10:07:29	0.015	15.000		
44	21-Feb	10:08:29	0.011	11.000		
45	21-Feb	10:09:29	0.014	14.000		
46	21-Feb	10:10:29	0.010	10.000		
47	21-Feb	10:11:29	0.009	9.000		
48	21-Feb	10:12:29	0.009	9.000		
49	21-Feb	10:13:29	0.010	10.000		
50	21-Feb	10:14:29	0.017	17.000		
51	21-Feb	10:15:29	0.008	8.000		
52	21-Feb	10:16:29	0.010	10.000		
53	21-Feb	10:17:29	0.009	9.000	0.011	11.067
54	21-Feb	10:18:29	0.013	13.000		
55	21-Feb	10:19:29	0.011	11.000		
56	21-Feb	10:20:29	0.012	12.000		
57	21-Feb	10:21:29	0.010	10.000		
58	21-Feb	10:22:29	0.009	9.000		
59	21-Feb	10:23:29	0.008	8.000		
60	21-Feb	10:24:29	0.021	21.000		
61	21-Feb	10:25:29	0.261	261.000		
62	21-Feb	10:26:29	0.181	181.000		
63	21-Feb	10:27:29	0.071	71.000		
64	21-Feb	10:28:29	0.034	34.000		
65	21-Feb	10:29:29	0.049	49.000		
66	21-Feb	10:30:29	0.028	28.000		
67	21-Feb	10:31:29	0.030	30.000		
68	21-Feb	10:32:29	0.026	26.000	0.064	63.867
69	21-Feb	10:33:29	0.020	20.000		
70	21-Feb	10:34:29	0.080	80.000		
71	21-Feb	10:35:29	0.041	41.000		
72	21-Feb	10:36:29	0.029	29.000		
73	21-Feb	10:37:29	0.045	45.000		
74	21-Feb	10:38:29	0.029	29.000		
75	21-Feb	10:39:29	0.034	34.000		
76	21-Feb	10:40:29	0.031	31.000		
77	21-Feb	10:41:29	0.045	45.000		
78	21-Feb	10:42:29	0.028	28.000		
79	21-Feb	10:43:29	0.028	28.000		
80	21-Feb	10:44:29	0.037	37.000		
81	21-Feb	10:45:29	0.047	47.000		
82	21-Feb	10:46:29	0.044	44.000		
83	21-Feb	10:47:29	0.052	52.000	0.042	41.867
84	21-Feb	10:48:29	0.042	42.000		
85	21-Feb	10:49:29	0.035	35.000		
86	21-Feb	10:50:29	0.048	48.000		
87	21-Feb	10:51:29	0.066	66.000		
88	21-Feb	10:52:29	0.054	54.000		
89	21-Feb	10:53:29	0.039	39.000		
90	21-Feb	10:54:29	0.032	32.000		

Point	Date	Time	1 Minute Average Concentration (mg/m^3)	1 Minute Average Concentration (ug/m^3)	15 Minute Average Concentration (mg/m^3)	15 Minute Average Concentration (ug/m^3)
91	21-Feb	10:55:29	0.042	42.000		
92	21-Feb	10:56:29	0.051	51.000		
93	21-Feb	10:57:29	0.009	9.000		
94	21-Feb	10:58:29	0.011	11.000		
95	21-Feb	10:59:29	0.007	7.000		
96	21-Feb	11:00:29	0.011	11.000		
97	21-Feb	11:01:29	0.011	11.000		
98	21-Feb	11:02:29	0.007	7.000	0.043	43.067
99	21-Feb	11:03:29	0.188	188.000		
100	21-Feb	11:04:29	0.121	121.000		
101	21-Feb	11:05:29	0.034	34.000		
102	21-Feb	11:06:29	0.036	36.000		
103	21-Feb	11:07:29	0.030	30.000		
104	21-Feb	11:08:29	0.038	38.000		
105	21-Feb	11:09:29	0.050	50.000		
106	21-Feb	11:10:29	0.086	86.000		
107	21-Feb	11:11:29	0.125	125.000		
108	21-Feb	11:12:29	0.250	250.000		
109	21-Feb	11:13:29	0.358	358.000		
110	21-Feb	11:14:29	0.446	446.000		
111	21-Feb	11:15:29	0.345	345.000		
112	21-Feb	11:16:29	0.672	672.000		
113	21-Feb	11:17:29	0.474	474.000	0.281	281.133
114	21-Feb	11:18:29	0.346	346.000		
115	21-Feb	11:19:29	0.285	285.000		
116	21-Feb	11:20:29	0.208	208.000		
117	21-Feb	11:21:29	0.184	184.000		
118	21-Feb	11:22:29	0.147	147.000		
119	21-Feb	11:23:29	0.156	156.000		
120	21-Feb	11:24:29	0.135	135.000		
121	21-Feb	11:25:29	0.102	102.000		
122	21-Feb	11:26:29	0.083	83.000		
123	21-Feb	11:27:29	0.100	100.000		
124	21-Feb	11:28:29	0.097	97.000		
125	21-Feb	11:29:29	0.092	92.000		
126	21-Feb	11:30:29	0.088	88.000		
127	21-Feb	11:31:29	0.069	69.000		
128	21-Feb	11:32:29	0.081	81.000	0.080	80.067
129	21-Feb	11:33:29	0.065	65.000		
130	21-Feb	11:34:29	0.074	74.000		
131	21-Feb	11:35:29	0.065	65.000		
132	21-Feb	11:36:29	0.080	80.000		
133	21-Feb	11:37:29	0.060	60.000		
134	21-Feb	11:38:29	0.071	71.000		
135	21-Feb	11:39:29	0.074	74.000		
136	21-Feb	11:40:29	0.073	73.000		
137	21-Feb	11:41:29	0.077	77.000		
138	21-Feb	11:42:29	0.129	129.000		
139	21-Feb	11:43:29	0.116	116.000		
140	21-Feb	11:44:29	0.090	90.000		
141	21-Feb	11:45:29	0.066	66.000		
142	21-Feb	11:46:29	0.072	72.000		
143	21-Feb	11:47:29	0.093	93.000	0.085	85.133
144	21-Feb	11:48:29	0.062	62.000		
145	21-Feb	11:49:29	0.079	79.000		
146	21-Feb	11:50:29	0.066	66.000		
147	21-Feb	11:51:29	0.066	66.000		
148	21-Feb	11:52:29	0.068	68.000		
149	21-Feb	11:53:29	0.117	117.000		
150	21-Feb	11:54:29	0.103	103.000		
151	21-Feb	11:55:29	0.072	72.000		
152	21-Feb	11:56:29	0.077	77.000		
153	21-Feb	11:57:29	0.070	70.000		
154	21-Feb	11:58:29	0.071	71.000		
155	21-Feb	11:59:29	0.070	70.000		
156	21-Feb	12:00:29	0.083	83.000		
157	21-Feb	12:01:29	0.063	63.000		
158	21-Feb	12:02:29	0.062	62.000	0.076	76.400
159	21-Feb	12:03:29	0.065	65.000		
160	21-Feb	12:04:29	0.074	74.000		
161	21-Feb	12:05:29	0.126	126.000		
162	21-Feb	12:06:29	0.104	104.000		
163	21-Feb	12:07:29	0.058	58.000		
164	21-Feb	12:08:29	0.077	77.000		
165	21-Feb	12:09:29	0.074	74.000		
166	21-Feb	12:10:29	0.054	54.000		
167	21-Feb	12:11:29	0.062	62.000		
168	21-Feb	12:12:29	0.061	61.000		
169	21-Feb	12:13:29	0.060	60.000		
170	21-Feb	12:14:29	0.044	44.000		
171	21-Feb	12:15:29	0.052	52.000		
172	21-Feb	12:16:29	0.055	55.000		
173	21-Feb	12:17:29	0.092	92.000	0.058	57.600
174	21-Feb	12:18:29	0.076	76.000		
175	21-Feb	12:19:29	0.047	47.000		
176	21-Feb	12:20:29	0.048	48.000		
177	21-Feb	12:21:29	0.051	51.000		
178	21-Feb	12:22:29	0.068	68.000		
179	21-Feb	12:23:29	0.048	48.000		
180	21-Feb	12:24:29	0.046	46.000		

Point	Date	Time	1 Minute Average Concentration (mg/m^3)	1 Minute Average Concentration (ug/m^3)	15 Minute Average Concentration (mg/m^3)	15 Minute Average Concentration (ug/m^3)
181	21-Feb	12:25:29	0.047	47.000		
182	21-Feb	12:26:29	0.049	49.000		
183	21-Feb	12:27:29	0.037	37.000		
184	21-Feb	12:28:29	0.026	26.000		
185	21-Feb	12:29:29	0.033	33.000		
186	21-Feb	12:30:29	0.033	33.000		
187	21-Feb	12:31:29	0.029	29.000		
188	21-Feb	12:32:29	0.031	31.000	0.046	45.667
189	21-Feb	12:33:29	0.023	23.000		
190	21-Feb	12:34:29	0.029	29.000		
191	21-Feb	12:35:29	0.087	87.000		
192	21-Feb	12:36:29	0.078	78.000		
193	21-Feb	12:37:29	0.088	88.000		
194	21-Feb	12:38:29	0.054	54.000		
195	21-Feb	12:39:29	0.041	41.000		
196	21-Feb	12:40:29	0.161	161.000		
197	21-Feb	12:41:29	0.099	99.000		
198	21-Feb	12:42:29	0.064	64.000		
199	21-Feb	12:43:29	0.071	71.000		
200	21-Feb	12:44:29	0.048	48.000		
201	21-Feb	12:45:29	0.051	51.000		
202	21-Feb	12:46:29	0.044	44.000		
203	21-Feb	12:47:29	0.045	45.000	0.055	54.600
204	21-Feb	12:48:29	0.042	42.000		
205	21-Feb	12:49:29	0.032	32.000		
206	21-Feb	12:50:29	0.041	41.000		
207	21-Feb	12:51:29	0.027	27.000		
208	21-Feb	12:52:29	0.025	25.000		
209	21-Feb	12:53:29	0.037	37.000		
210	21-Feb	12:54:29	0.032	32.000		
211	21-Feb	12:55:29	0.024	24.000		
212	21-Feb	12:56:29	0.023	23.000		
213	21-Feb	12:57:29	0.029	29.000		
214	21-Feb	12:58:29	0.022	22.000		
215	21-Feb	12:59:29	0.024	24.000		
216	21-Feb	13:00:29	0.024	24.000		
217	21-Feb	13:01:29	0.022	22.000		
218	21-Feb	13:02:29	0.019	19.000	0.020	20.067
219	21-Feb	13:03:29	0.023	23.000		
220	21-Feb	13:04:29	0.014	14.000		
221	21-Feb	13:05:29	0.018	18.000		
222	21-Feb	13:06:29	0.018	18.000		
223	21-Feb	13:07:29	0.015	15.000		
224	21-Feb	13:08:29	0.013	13.000		
225	21-Feb	13:09:29	0.013	13.000		
226	21-Feb	13:10:29	0.018	18.000		
227	21-Feb	13:11:29	0.014	14.000		
228	21-Feb	13:12:29	0.013	13.000		
229	21-Feb	13:13:29	0.012	12.000		
230	21-Feb	13:14:29	0.011	11.000		
231	21-Feb	13:15:29	0.009	9.000		
232	21-Feb	13:16:29	0.010	10.000		
233	21-Feb	13:17:29	0.010	10.000	0.012	12.000
234	21-Feb	13:18:29	0.008	8.000		
235	21-Feb	13:19:29	0.009	9.000		
236	21-Feb	13:20:29	0.012	12.000		
237	21-Feb	13:21:29	0.019	19.000		
238	21-Feb	13:22:29	0.011	11.000		
239	21-Feb	13:23:29	0.010	10.000		
240	21-Feb	13:24:29	0.014	14.000		
241	21-Feb	13:25:29	0.012	12.000		
242	21-Feb	13:26:29	0.009	9.000		
243	21-Feb	13:27:29	0.007	7.000		
244	21-Feb	13:28:29	0.006	6.000		
245	21-Feb	13:29:29	0.010	10.000		
246	21-Feb	13:30:29	0.009	9.000		
247	21-Feb	13:31:29	0.006	6.000		
248	21-Feb	13:32:29	0.006	6.000	0.008	7.867
249	21-Feb	13:33:29	0.008	8.000		
250	21-Feb	13:34:29	0.009	9.000		
251	21-Feb	13:35:29	0.007	7.000		
252	21-Feb	13:36:29	0.009	9.000		
253	21-Feb	13:37:29	0.006	6.000		
254	21-Feb	13:38:29	0.006	6.000		
255	21-Feb	13:39:29	0.008	8.000		
256	21-Feb	13:40:29	0.007	7.000		
257	21-Feb	13:41:29	0.005	5.000		
258	21-Feb	13:42:29	0.009	9.000		
259	21-Feb	13:43:29	0.012	12.000		
260	21-Feb	13:44:29	0.016	16.000		
261	21-Feb	13:45:29	0.015	15.000		
262	21-Feb	13:46:29	0.016	16.000		
263	21-Feb	13:47:29	0.020	20.000	0.013	12.733
264	21-Feb	13:48:29	0.023	23.000		
265	21-Feb	13:49:29	0.014	14.000		
266	21-Feb	13:50:29	0.008	8.000		
267	21-Feb	13:51:29	0.015	15.000		
268	21-Feb	13:52:29	0.009	9.000		
269	21-Feb	13:53:29	0.016	16.000		
270	21-Feb	13:54:29	0.006	6.000		
271	21-Feb	13:55:29	0.009	9.000		
272	21-Feb	13:56:29	0.013	13.000		
273	21-Feb	13:57:29	0.020	20.000		
274	21-Feb	13:58:29	0.013	13.000		
275	21-Feb	13:59:29	0.011	11.000		
276	21-Feb	14:00:29	0.014	14.000		
277	21-Feb	14:01:29	0.015	15.000		
278	21-Feb	14:02:29	0.008	8.000	0.019	18.933
279	21-Feb	14:03:29	0.011	11.000		
280	21-Feb	14:04:29	0.029	29.000		
281	21-Feb	14:05:29	0.034	34.000		
282	21-Feb	14:06:29	0.021	21.000		
283	21-Feb	14:07:29	0.027	27.000		
284	21-Feb	14:08:29	0.014	14.000		
285	21-Feb	14:09:29	0.045	45.000		

Point	Date	Time	1 Minute Average Concentration (mg/m^3)	1 Minute Average Concentration (ug/m^3)	15 Minute Average Concentration (mg/m^3)	15 Minute Average Concentration (ug/m^3)
286	21-Feb	14:10:29	0.068	68.000		
287	21-Feb	14:11:29	0.070	70.000		
288	21-Feb	14:12:29	0.041	41.000		
289	21-Feb	14:13:29	0.029	29.000		
290	21-Feb	14:14:29	0.021	21.000		
291	21-Feb	14:15:29	0.022	22.000		
292	21-Feb	14:16:29	0.023	23.000		
293	21-Feb	14:17:29	0.015	15.000	0.070	69.533
294	21-Feb	14:18:29	0.049	49.000		
295	21-Feb	14:19:29	0.095	95.000		
296	21-Feb	14:20:29	0.087	87.000		
297	21-Feb	14:21:29	0.114	114.000		
298	21-Feb	14:22:29	0.128	128.000		
299	21-Feb	14:23:29	0.160	160.000		
300	21-Feb	14:24:29	0.121	121.000		
301	21-Feb	14:25:29	0.108	108.000		
302	21-Feb	14:26:29	0.145	145.000		
303	21-Feb	14:27:29	0.145	145.000		
304	21-Feb	14:28:29	0.088	88.000		
305	21-Feb	14:29:29	0.082	82.000		
306	21-Feb	14:30:29	0.085	85.000		
307	21-Feb	14:31:29	0.066	66.000		
308	21-Feb	14:32:29	0.085	85.000	0.102	101.733
309	21-Feb	14:33:29	0.079	79.000		
310	21-Feb	14:34:29	0.114	114.000		
311	21-Feb	14:35:29	0.094	94.000		
312	21-Feb	14:36:29	0.111	111.000		
313	21-Feb	14:37:29	0.091	91.000		
314	21-Feb	14:38:29	0.099	99.000		
315	21-Feb	14:39:29	0.134	134.000		
316	21-Feb	14:40:29	0.139	139.000		
317	21-Feb	14:41:29	0.089	89.000		
318	21-Feb	14:42:29	0.098	98.000		
319	21-Feb	14:43:29	0.064	64.000		
320	21-Feb	14:44:29	0.059	59.000		
321	21-Feb	14:45:29	0.048	48.000		
322	21-Feb	14:46:29	0.044	44.000		
323	21-Feb	14:47:29	0.106	106.000	0.072	71.600
324	21-Feb	14:48:29	0.073	73.000		
325	21-Feb	14:49:29	0.072	72.000		
326	21-Feb	14:50:29	0.043	43.000		
327	21-Feb	14:51:29	0.061	61.000		
328	21-Feb	14:52:29	0.091	91.000		
329	21-Feb	14:53:29	0.045	45.000		
330	21-Feb	14:54:29	0.042	42.000		
331	21-Feb	14:55:29	0.033	33.000		
332	21-Feb	14:56:29	0.032	32.000		
333	21-Feb	14:57:29	0.038	38.000		
334	21-Feb	14:58:29	0.032	32.000		
335	21-Feb	14:59:29	0.034	34.000		
336	21-Feb	15:00:29	0.028	28.000		
337	21-Feb	15:01:29	0.065	65.000		
338	21-Feb	15:02:29	0.066	66.000	0.038	38.000
339	21-Feb	15:03:29	0.044	44.000		
340	21-Feb	15:04:29	0.038	38.000		
341	21-Feb	15:05:29	0.036	36.000		
342	21-Feb	15:06:29	0.044	44.000		
343	21-Feb	15:07:29	0.028	28.000		
344	21-Feb	15:08:29	0.025	25.000		
345	21-Feb	15:09:29	0.027	27.000		
346	21-Feb	15:10:29	0.023	23.000		
347	21-Feb	15:11:29	0.024	24.000		
348	21-Feb	15:12:29	0.021	21.000		
349	21-Feb	15:13:29	0.112	112.000		
350	21-Feb	15:14:29	0.072	72.000		
351	21-Feb	15:15:29	0.036	36.000		
352	21-Feb	15:16:29	0.029	29.000		
353	21-Feb	15:17:29	0.039	39.000	0.037	36.667
354	21-Feb	15:18:29	0.033	33.000		
355	21-Feb	15:19:29	0.034	34.000		
356	21-Feb	15:20:29	0.034	34.000		
357	21-Feb	15:21:29	0.026	26.000		
358	21-Feb	15:22:29	0.018	18.000		
359	21-Feb	15:23:29	0.021	21.000		
360	21-Feb	15:24:29	0.028	28.000		
361	21-Feb	15:25:29	0.040	40.000		
362	21-Feb	15:26:29	0.042	42.000		
363	21-Feb	15:27:29	0.041	41.000		
364	21-Feb	15:28:29	0.065	65.000		
365	21-Feb	15:29:29	0.099	99.000		
366	21-Feb	15:30:29	0.081	81.000		
367	21-Feb	15:31:29	0.047	47.000		
368	21-Feb	15:32:29	0.037	37.000	0.046	45.867
369	21-Feb	15:33:29	0.046	46.000		
370	21-Feb	15:34:29	0.035	35.000		
371	21-Feb	15:35:29	0.031	31.000		
372	21-Feb	15:36:29	0.035	35.000		
373	21-Feb	15:37:29	0.027	27.000		
374	21-Feb	15:38:29	0.029	29.000		
375	21-Feb	15:39:29	0.033	33.000		
376	21-Feb	15:40:29	0.030	30.000		
377	21-Feb	15:41:29	0.031	31.000	0.027	27.250
378	21-Feb	15:42:29	0.030	30.000		
379	21-Feb	15:43:29	0.018	18.000		

Highlighted cells indicate exceedance of 150 ug/m^3 over average background concentration

Highlighted thick bordered cells indicate exceedance of 150 ug/m^3 over maximum background concentration

Community Air Monitoring Data. Volatile Organic Compounds Near Walkway. February 21, 2011.

Instrument:	MiniRAE 2000	Serial Number:	014075
User ID:	00000001	Site ID:	00000370
Data Points:	301	Sample Period:	60 sec
Last Calibration:	2/18/2011 8:45	Gas Name:	Isobutylene
Range of 15 Minute Average Background Concentrations:	3.4 ppm to 3.5 ppm	Background Time Interval:	13:15 - 13:44

	Avg(ppm)	Max(ppm)
Measurement Type:		
High Alarm Levels:	100	100
Low Alarm Levels:	50	50

Line#	Date	Time	1 Minute Average (ppm)	Alarm	1 Minute Maximum (ppm)	Alarm	15 Minute Average (ppm)
1	2/21/2011	10:45	0.8		1.0		
2	2/21/2011	10:46	1.0		1.1		
3	2/21/2011	10:47	0.9		1.1		
4	2/21/2011	10:48	0.9		1.1		
5	2/21/2011	10:49	1.0		1.2		
6	2/21/2011	10:50	0.9		1.2		
7	2/21/2011	10:51	0.8		1.0		
8	2/21/2011	10:52	0.7		1.3		1.0
9	2/21/2011	10:53	1.2		1.6		
10	2/21/2011	10:54	1.0		1.2		
11	2/21/2011	10:55	1.1		1.2		
12	2/21/2011	10:56	1.4		1.8		
13	2/21/2011	10:57	1.3		1.8		
14	2/21/2011	10:58	1.1		1.2		
15	2/21/2011	10:59	1.3		2.2		
16	2/21/2011	11:00	1.3		1.8		
17	2/21/2011	11:01	1.8		2.8		
18	2/21/2011	11:02	2.2		2.7		
19	2/21/2011	11:03	1.8		2.7		
20	2/21/2011	11:04	2.0		2.2		
21	2/21/2011	11:05	2.0		2.2		
22	2/21/2011	11:06	2.9		3.7		
23	2/21/2011	11:07	4.4		6.0		2.9
24	2/21/2011	11:08	3.5		4.2		
25	2/21/2011	11:09	3.3		3.5		
26	2/21/2011	11:10	3.6		5.0		
27	2/21/2011	11:11	4.7		5.8		
28	2/21/2011	11:12	3.6		4.6		
29	2/21/2011	11:13	3.2		3.6		
30	2/21/2011	11:14	3.1		3.7		
31	2/21/2011	11:15	3.7		4.9		
32	2/21/2011	11:16	4.2		4.6		
33	2/21/2011	11:17	4.3		5.1		
34	2/21/2011	11:18	3.7		4.5		
35	2/21/2011	11:19	3.1		3.5		
36	2/21/2011	11:20	3.0		3.7		
37	2/21/2011	11:21	3.9		5.1		
38	2/21/2011	11:22	4.0		5.0		3.7
39	2/21/2011	11:23	4.0		4.4		
40	2/21/2011	11:24	3.8		4.7		
41	2/21/2011	11:25	4.0		4.5		
42	2/21/2011	11:26	3.6		4.2		
43	2/21/2011	11:27	3.6		4.0		
44	2/21/2011	11:28	3.2		3.6		
45	2/21/2011	11:29	3.8		4.4		
46	2/21/2011	11:30	4.0		4.8		
47	2/21/2011	11:31	5.2		6.1		
48	2/21/2011	11:32	5.6		6.1		
49	2/21/2011	11:33	5.7		6.9		
50	2/21/2011	11:34	5.6		5.9		
51	2/21/2011	11:35	5.5		6.6		
52	2/21/2011	11:36	7.5		8.0		
53	2/21/2011	11:37	6.7		7.4		5.7
54	2/21/2011	11:38	5.8		6.4		
55	2/21/2011	11:39	6.0		6.5		
56	2/21/2011	11:40	6.2		7.8		
57	2/21/2011	11:41	5.1		6.7		
58	2/21/2011	11:42	5.6		5.9		
59	2/21/2011	11:43	5.4		6.1		
60	2/21/2011	11:44	5.0		6.0		
61	2/21/2011	11:45	5.5		5.9		
62	2/21/2011	11:46	6.1		7.6		
63	2/21/2011	11:47	5.4		6.6		
64	2/21/2011	11:48	4.7		5.7		
65	2/21/2011	11:49	5.0		5.7		
66	2/21/2011	11:50	5.6		6.0		
67	2/21/2011	11:51	6.1		6.6		
68	2/21/2011	11:52	6.3		6.7		5.9
69	2/21/2011	11:53	5.9		7.6		
70	2/21/2011	11:54	6.4		8.8		
71	2/21/2011	11:55	5.8		6.2		
72	2/21/2011	11:56	6.2		6.6		
73	2/21/2011	11:57	5.8		6.2		
74	2/21/2011	11:58	5.5		7.9		
75	2/21/2011	11:59	8.0		8.7		

N9013

Line#	Date	Time	1 Minute Average (ppm)	Alarm	1 Minute Maximum (ppm)	Alarm	15 Minute Average (ppm)
76	2/21/2011	12:00	6.1		7.6		
77	2/21/2011	12:01	5.9		6.3		
78	2/21/2011	12:02	4.9		5.4		
79	2/21/2011	12:03	4.6		5.1		
80	2/21/2011	12:04	5.5		6.0		
81	2/21/2011	12:05	6.1		6.7		
82	2/21/2011	12:06	6.1		6.9		
83	2/21/2011	12:07	6.0		6.9		5.4
84	2/21/2011	12:08	6.8		7.1		
85	2/21/2011	12:09	6.6		7.0		
86	2/21/2011	12:10	5.6		7.0		
87	2/21/2011	12:11	4.3		4.8		
88	2/21/2011	12:12	4.4		5.6		
89	2/21/2011	12:13	3.9		5.0		
90	2/21/2011	12:14	4.7		6.1		
91	2/21/2011	12:15	4.8		5.8		
92	2/21/2011	12:16	4.9		6.0		
93	2/21/2011	12:17	4.6		5.2		
94	2/21/2011	12:18	5.3		6.0		
95	2/21/2011	12:19	4.6		5.1		
96	2/21/2011	12:20	3.8		4.5		
97	2/21/2011	12:21	3.6		4.0		
98	2/21/2011	12:22	3.6		4.2		4.2
99	2/21/2011	12:23	3.8		4.4		
100	2/21/2011	12:24	3.9		4.4		
101	2/21/2011	12:25	4.1		4.7		
102	2/21/2011	12:26	4.0		4.3		
103	2/21/2011	12:27	4.2		4.6		
104	2/21/2011	12:28	3.8		4.3		
105	2/21/2011	12:29	3.4		4.1		
106	2/21/2011	12:30	3.5		4.0		
107	2/21/2011	12:31	3.8		5.0		
108	2/21/2011	12:32	3.6		4.4		
109	2/21/2011	12:33	3.6		4.3		
110	2/21/2011	12:34	3.5		4.1		
111	2/21/2011	12:35	3.5		4.3		
112	2/21/2011	12:36	3.3		4.1		
113	2/21/2011	12:37	2.9		3.2		3.4
114	2/21/2011	12:38	3.4		4.1		
115	2/21/2011	12:39	3.8		4.3		
116	2/21/2011	12:40	3.9		4.3		
117	2/21/2011	12:41	3.5		4.0		
118	2/21/2011	12:42	2.7		3.1		
119	2/21/2011	12:43	3.2		3.7		
120	2/21/2011	12:44	2.9		3.6		
121	2/21/2011	12:45	2.9		3.5		
122	2/21/2011	12:46	3.1		3.3		
123	2/21/2011	12:47	2.9		3.4		
124	2/21/2011	12:48	3.5		4.0		
125	2/21/2011	12:49	3.6		4.2		
126	2/21/2011	12:50	3.4		3.9		
127	2/21/2011	12:51	3.9		4.5		
128	2/21/2011	12:52	4.2		4.8		3.4
129	2/21/2011	12:53	4.4		4.8		
130	2/21/2011	12:54	3.5		3.9		
131	2/21/2011	12:55	2.7		3.0		
132	2/21/2011	12:56	3.0		3.8		
133	2/21/2011	12:57	3.4		3.8		
134	2/21/2011	12:58	3.3		3.8		
135	2/21/2011	12:59	3.2		3.8		
136	2/21/2011	13:00	3.9		4.3		
137	2/21/2011	13:01	3.3		4.1		
138	2/21/2011	13:02	2.9		3.8		
139	2/21/2011	13:03	2.2		2.5		
140	2/21/2011	13:04	2.4		3.0		
141	2/21/2011	13:05	2.4		2.9		
142	2/21/2011	13:06	3.0		3.3		
143	2/21/2011	13:07	2.8		3.2		2.9
144	2/21/2011	13:08	2.7		3.2		
145	2/21/2011	13:09	2.8		3.1		
146	2/21/2011	13:10	2.8		3.1		
147	2/21/2011	13:11	2.4		3.1		
148	2/21/2011	13:12	2.7		4.0		
149	2/21/2011	13:13	3.8		4.5		
150	2/21/2011	13:14	3.4		3.9		

Line#	Date	Time	1 Minute Average (ppm)	Alarm	1 Minute Maximum (ppm)	Alarm	15 Minute Average (ppm)
151	2/21/2011	13:15	3.7		4.0		
152	2/21/2011	13:16	3.8		4.7		
153	2/21/2011	13:17	3.6		4.4		
154	2/21/2011	13:18	3.6		4.3		
155	2/21/2011	13:19	3.8		4.5		
156	2/21/2011	13:20	3.4		4.6		
157	2/21/2011	13:21	4.1		4.7		
158	2/21/2011	13:22	3.6		4.7		3.4
159	2/21/2011	13:23	3.0		4.0		
160	2/21/2011	13:24	3.3		3.9		
161	2/21/2011	13:25	3.0		3.4		
162	2/21/2011	13:26	3.3		3.9		
163	2/21/2011	13:27	2.4		2.9		
164	2/21/2011	13:28	2.9		3.3		
165	2/21/2011	13:29	3.4		4.1		
166	2/21/2011	13:30	3.1		3.7		
167	2/21/2011	13:31	3.1		3.6		
168	2/21/2011	13:32	2.9		3.6		
169	2/21/2011	13:33	3.6		4.5		
170	2/21/2011	13:34	4.2		5.2		
171	2/21/2011	13:35	4.3		5.0		
172	2/21/2011	13:36	3.6		4.8		
173	2/21/2011	13:37	3.4		4.5		3.5
174	2/21/2011	13:38	4.2		5.3		
175	2/21/2011	13:39	4.6		5.1		
176	2/21/2011	13:40	3.4		3.9		
177	2/21/2011	13:41	2.7		3.5		
178	2/21/2011	13:42	2.8		3.8		
179	2/21/2011	13:43	3.3		4.3		
180	2/21/2011	13:44	3.3		4.7		
181	2/21/2011	13:45	2.6		3.0		
182	2/21/2011	13:46	2.6		2.9		
183	2/21/2011	13:47	2.6		3.1		
184	2/21/2011	13:48	2.5		2.8		
185	2/21/2011	13:49	2.5		2.8		
186	2/21/2011	13:50	2.4		2.7		
187	2/21/2011	13:51	2.8		3.4		
188	2/21/2011	13:52	2.7		3.2		2.7
189	2/21/2011	13:53	2.7		3.2		
190	2/21/2011	13:54	2.9		3.5		
191	2/21/2011	13:55	2.9		4.0		
192	2/21/2011	13:56	2.7		3.0		
193	2/21/2011	13:57	2.7		2.9		
194	2/21/2011	13:58	2.7		3.3		
195	2/21/2011	13:59	2.5		2.8		
196	2/21/2011	14:00	2.3		2.9		
197	2/21/2011	14:01	3.5		4.7		
198	2/21/2011	14:02	3.2		4.5		
199	2/21/2011	14:03	2.7		2.9		
200	2/21/2011	14:04	2.7		2.8		
201	2/21/2011	14:05	2.6		2.8		
202	2/21/2011	14:06	2.7		3.1		
203	2/21/2011	14:07	2.2		2.8		2.5
204	2/21/2011	14:08	2.3		2.5		
205	2/21/2011	14:09	2.1		2.5		
206	2/21/2011	14:10	2.0		2.5		
207	2/21/2011	14:11	2.1		2.4		
208	2/21/2011	14:12	2.2		2.5		
209	2/21/2011	14:13	2.5		2.6		
210	2/21/2011	14:14	2.4		2.6		
211	2/21/2011	14:15	2.4		2.5		
212	2/21/2011	14:16	2.4		2.6		
213	2/21/2011	14:17	2.4		2.6		
214	2/21/2011	14:18	2.5		2.6		
215	2/21/2011	14:19	2.4		2.6		
216	2/21/2011	14:20	2.4		2.6		
217	2/21/2011	14:21	2.4		3.0		
218	2/21/2011	14:22	2.8		3.6		2.4
219	2/21/2011	14:23	2.6		3.4		
220	2/21/2011	14:24	2.1		2.3		
221	2/21/2011	14:25	2.0		2.2		
222	2/21/2011	14:26	2.4		2.9		
223	2/21/2011	14:27	2.3		2.7		
224	2/21/2011	14:28	2.2		2.4		
225	2/21/2011	14:29	2.3		2.6		

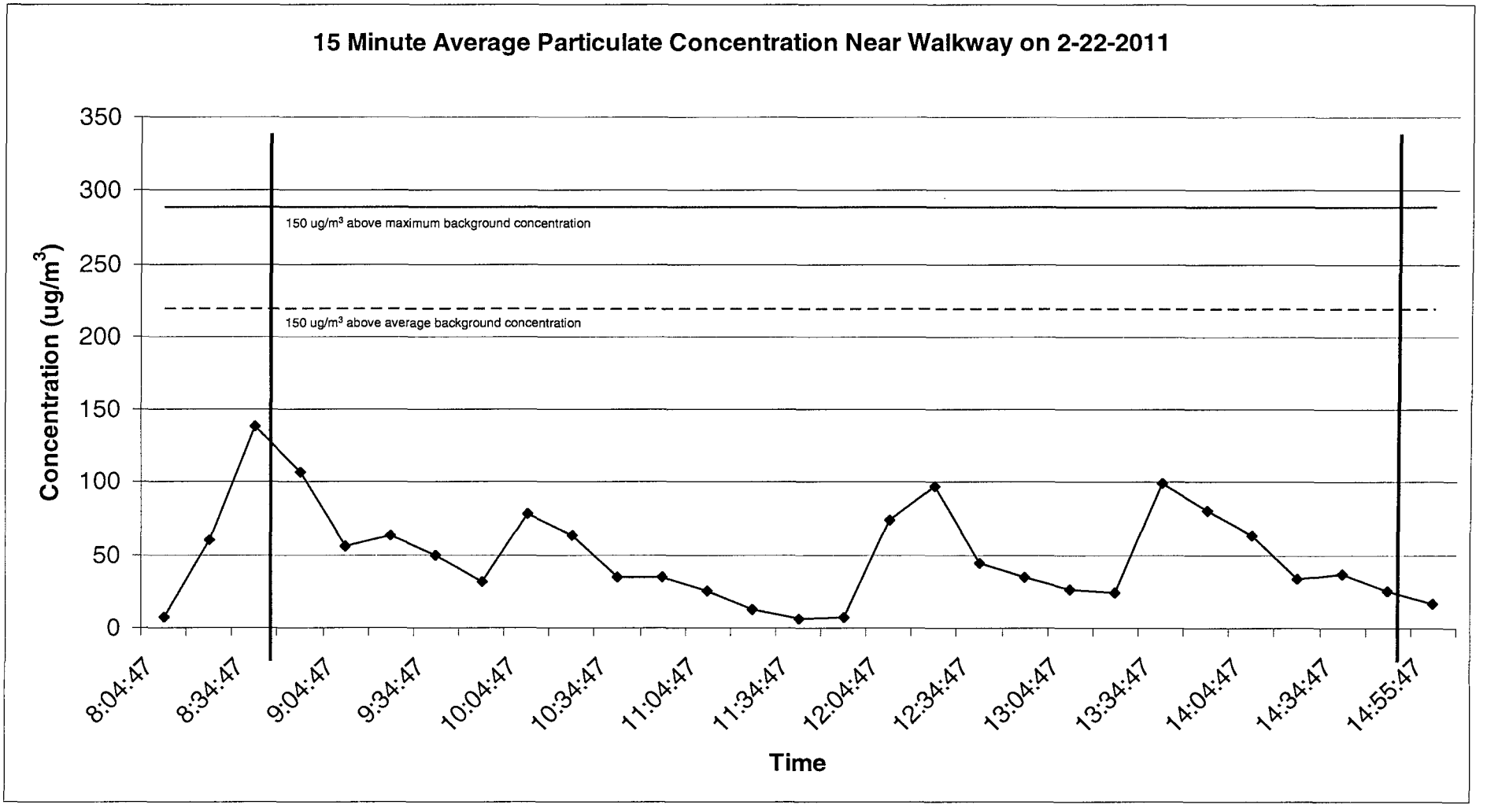
Line#	Date	Time	1 Minute Average (ppm)	Alarm	1 Minute Maximum (ppm)	Alarm	15 Minute Average (ppm)
226	2/21/2011	14:30	2.6		2.8		
227	2/21/2011	14:31	2.6		2.9		
228	2/21/2011	14:32	2.4		2.6		
229	2/21/2011	14:33	2.4		2.5		
230	2/21/2011	14:34	2.3		2.6		
231	2/21/2011	14:35	2.3		2.5		
232	2/21/2011	14:36	2.6		3.1		
233	2/21/2011	14:37	2.7		3.4		2.5
234	2/21/2011	14:38	2.8		3.6		
235	2/21/2011	14:39	2.5		3.1		
236	2/21/2011	14:40	2.4		2.6		
237	2/21/2011	14:41	2.4		2.7		
238	2/21/2011	14:42	2.3		2.5		
239	2/21/2011	14:43	2.3		2.5		
240	2/21/2011	14:44	2.3		2.8		
241	2/21/2011	14:45	2.5		3.2		
242	2/21/2011	14:46	2.9		3.2		
243	2/21/2011	14:47	2.7		3.2		
244	2/21/2011	14:48	2.6		2.8		
245	2/21/2011	14:49	2.4		2.6		
246	2/21/2011	14:50	2.5		2.7		
247	2/21/2011	14:51	2.5		2.9		
248	2/21/2011	14:52	2.7		3.1		2.6
249	2/21/2011	14:53	2.4		3.0		
250	2/21/2011	14:54	2.4		2.6		
251	2/21/2011	14:55	2.5		2.7		
252	2/21/2011	14:56	2.5		2.7		
253	2/21/2011	14:57	2.5		3.0		
254	2/21/2011	14:58	3.0		3.5		
255	2/21/2011	14:59	3.3		3.8		
256	2/21/2011	15:00	3.0		3.7		
257	2/21/2011	15:01	3.0		3.9		
258	2/21/2011	15:02	3.1		4.1		
259	2/21/2011	15:03	2.2		2.6		
260	2/21/2011	15:04	2.6		3.5		
261	2/21/2011	15:05	3.0		3.7		
262	2/21/2011	15:06	2.7		3.3		
263	2/21/2011	15:07	2.5		2.7		2.6
264	2/21/2011	15:08	2.3		2.9		
265	2/21/2011	15:09	2.6		3.1		
266	2/21/2011	15:10	2.2		2.7		
267	2/21/2011	15:11	2.3		2.6		
268	2/21/2011	15:12	2.3		2.7		
269	2/21/2011	15:13	2.4		2.7		
270	2/21/2011	15:14	3.1		3.8		
271	2/21/2011	15:15	3.4		3.8		
272	2/21/2011	15:16	3.4		4.1		
273	2/21/2011	15:17	3.7		4.3		
274	2/21/2011	15:18	2.9		3.2		
275	2/21/2011	15:19	2.8		3.0		
276	2/21/2011	15:20	2.9		3.1		
277	2/21/2011	15:21	2.9		3.2		
278	2/21/2011	15:22	2.7		2.9		2.7
279	2/21/2011	15:23	2.6		2.9		
280	2/21/2011	15:24	2.1		2.4		
281	2/21/2011	15:25	2.0		2.2		
282	2/21/2011	15:26	2.1		2.4		
283	2/21/2011	15:27	2.2		2.8		
284	2/21/2011	15:28	2.2		2.6		
285	2/21/2011	15:29	2.4		3.0		
286	2/21/2011	15:30	2.2		2.6		
287	2/21/2011	15:31	2.5		3.1		
288	2/21/2011	15:32	2.5		3.2		
289	2/21/2011	15:33	2.3		2.8		
290	2/21/2011	15:34	2.1		2.8		
291	2/21/2011	15:35	2.5		3.5		
292	2/21/2011	15:36	1.9		2.7		
293	2/21/2011	15:37	2.5		3.3		2.3
294	2/21/2011	15:38	1.8		2.3		
295	2/21/2011	15:39	2.1		2.4		
296	2/21/2011	15:40	2.2		2.7		
297	2/21/2011	15:41	2.5		2.6		
298	2/21/2011	15:42	2.5		4.4		
299	2/21/2011	15:43	2.4		2.6		
300	2/21/2011	15:44	2.5		3.0		
301	2/21/2011	15:45	2.3		5.0		2.3

Highlighted cells indicate exceedance of 1 ppm over average background concentration

Highlighted thick bordered cells indicate exceedance of 1 ppm over maximum background concentration

Appendix B-6

Walkway Monitoring Station
Particulate and VOCs 2-22-2011



Brackets time interval when drilling and injecting was occurring. Background levels determined based on readings taken prior to starting drilling each day (7:50 – 8:34).

Maximum background concentration = 138.667 ug/m³
Average background concentration = 68.844 ug/m³
150 ug/m³ above maximum background = 288.667 ug/m³
150 ug/m³ above average background = 218.844 ug/m³

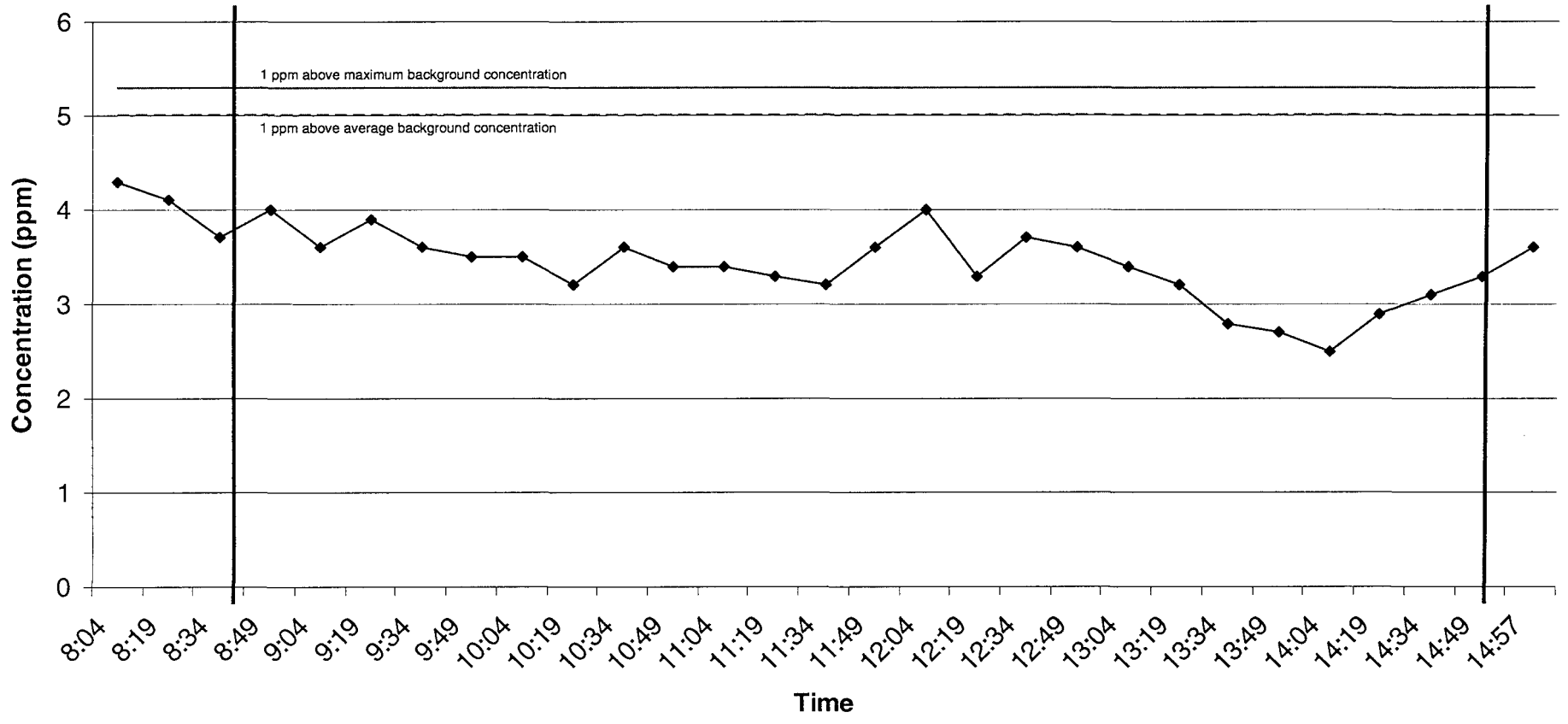
S&W REDEVELOPMENT
Syracuse, New York

Date: 5/2011 Proj No.: N9013

110 Luther Ave. Site (BCP Site #C734118)
Remedial Work Plan
110 Luther Ave., Liverpool
Onondaga County, New York

Appendix B-6
Pilot Test Air Monitoring Results

15 Minute Average VOC Concentration Near Walkway on 2-22-2011



Brackets time interval when drilling and injecting was occurring. Background levels determined based on readings taken prior to starting drilling each day (7:50 – 8:34)

Maximum background concentration = 4.3 ppm
Average background concentration = 4.0 ppm
1 ppm above maximum background = 5.3 ppm
1 ppm above average background = 5.0 ppm

S&W REDEVELOPMENT
Syracuse, New York

Date: 5/2011 Proj No.: N9013

110 Luther Ave. Site (BCP Site #C734118)
Remedial Work Plan
110 Luther Ave., Liverpool
Onondaga County, New York

Appendix B-6
Pilot Test Air Monitoring Results

Community Air Monitoring Data. Particulate Matter Near Walkway. February 22, 2011.

Model Number:	pDR-1000	Unit:	Concentration
Serial Number:	07057	Unit Name:	mg/m^3
Tag Number:	2	Maximum Display Concentration:	0.942 mg/m^3
Start Time:	7:50:47	Time at Maximum:	12:31:50
Start Date:	22-Feb-11	Maximum STEL Concentration:	0.158 mg/m^3
Log Period:	00:01:00	Time at Maximum STEL:	8:43:17
Number of Points:	426	Elapsed Time:	7:06:00
Calibration Factor:	100%	Overall Average Concentration:	0.050 mg/m^3
Range of 15 Minute Average Background Concentrations:		7.133 ug/m^3 to 138.667 ug/m^3	Background Time Interval: 7:50 - 8:34

Logged Data:

Point	Date	Time	1 Minute Average Concentration (mg/m^3)	1 Minute Average Concentration (ug/m^3)	15 Minute Average Concentration (mg/m^3)	15 Minute Average Concentration (ug/m^3)
1	22-Feb	7:50:47	0.014	14.000		
2	22-Feb	7:51:47	0.006	6.000		
3	22-Feb	7:52:47	0.007	7.000		
4	22-Feb	7:53:47	0.005	5.000		
5	22-Feb	7:54:47	0.009	9.000		
6	22-Feb	7:55:47	0.007	7.000		
7	22-Feb	7:56:47	0.006	6.000		
8	22-Feb	7:57:47	0.004	4.000	0.007	7.133
9	22-Feb	7:58:47	0.007	7.000		
10	22-Feb	7:59:47	0.008	8.000		
11	22-Feb	8:00:47	0.005	5.000		
12	22-Feb	8:01:47	0.009	9.000		
13	22-Feb	8:02:47	0.008	8.000		
14	22-Feb	8:03:47	0.004	4.000		
15	22-Feb	8:04:47	0.008	8.000		
16	22-Feb	8:05:47	0.088	88.000		
17	22-Feb	8:06:47	0.047	47.000		
18	22-Feb	8:07:47	0.056	56.000		
19	22-Feb	8:08:47	0.033	33.000		
20	22-Feb	8:09:47	0.041	41.000		
21	22-Feb	8:10:47	0.031	31.000		
22	22-Feb	8:11:47	0.042	42.000		
23	22-Feb	8:12:47	0.064	64.000	0.061	60.733
24	22-Feb	8:13:47	0.065	65.000		
25	22-Feb	8:14:47	0.079	79.000		
26	22-Feb	8:15:47	0.065	65.000		
27	22-Feb	8:16:47	0.051	51.000		
28	22-Feb	8:17:47	0.101	101.000		
29	22-Feb	8:18:47	0.084	84.000		
30	22-Feb	8:19:47	0.064	64.000		
31	22-Feb	8:20:47	0.075	75.000		
32	22-Feb	8:21:47	0.051	51.000		
33	22-Feb	8:22:47	0.050	50.000		
34	22-Feb	8:23:47	0.039	39.000		
35	22-Feb	8:24:47	0.035	35.000		
36	22-Feb	8:25:47	0.166	166.000		
37	22-Feb	8:26:47	0.061	61.000		
38	22-Feb	8:27:47	0.058	58.000	0.139	138.667
39	22-Feb	8:28:47	0.104	104.000		
40	22-Feb	8:29:47	0.349	349.000		
41	22-Feb	8:30:47	0.401	401.000		
42	22-Feb	8:31:47	0.191	191.000		
43	22-Feb	8:32:47	0.247	247.000		
44	22-Feb	8:33:47	0.162	162.000		
45	22-Feb	8:34:47	0.091	91.000		
46	22-Feb	8:35:47	0.121	121.000		
47	22-Feb	8:36:47	0.110	110.000		
48	22-Feb	8:37:47	0.093	93.000		
49	22-Feb	8:38:47	0.063	63.000		
50	22-Feb	8:39:47	0.072	72.000		
51	22-Feb	8:40:47	0.082	82.000		
52	22-Feb	8:41:47	0.131	131.000		
53	22-Feb	8:42:47	0.126	126.000	0.107	106.933
54	22-Feb	8:43:47	0.134	134.000		
55	22-Feb	8:44:47	0.155	155.000		
56	22-Feb	8:45:47	0.177	177.000		
57	22-Feb	8:46:47	0.105	105.000		
58	22-Feb	8:47:47	0.083	83.000		
59	22-Feb	8:48:47	0.084	84.000		
60	22-Feb	8:49:47	0.068	68.000		
61	22-Feb	8:50:47	0.040	40.000		
62	22-Feb	8:51:47	0.033	33.000		
63	22-Feb	8:52:47	0.162	162.000		
64	22-Feb	8:53:47	0.086	86.000		
65	22-Feb	8:54:47	0.072	72.000		
66	22-Feb	8:55:47	0.059	59.000		
67	22-Feb	8:56:47	0.047	47.000		
68	22-Feb	8:57:47	0.049	49.000	0.056	55.667
69	22-Feb	8:58:47	0.050	50.000		
70	22-Feb	8:59:47	0.047	47.000		
71	22-Feb	9:00:47	0.060	60.000		
72	22-Feb	9:01:47	0.037	37.000		
73	22-Feb	9:02:47	0.031	31.000		
74	22-Feb	9:03:47	0.030	30.000		
75	22-Feb	9:04:47	0.032	32.000		

Point	Date	Time	1 Minute Average Concentration (mg/m^3)	1 Minute Average Concentration (ug/m^3)	15 Minute Average Concentration (mg/m^3)	15 Minute Average Concentration (ug/m^3)
76	22-Feb	9:05:47	0.034	34.000		
77	22-Feb	9:06:47	0.028	28.000		
78	22-Feb	9:07:47	0.027	27.000		
79	22-Feb	9:08:47	0.066	66.000		
80	22-Feb	9:09:47	0.114	114.000		
81	22-Feb	9:10:47	0.080	80.000		
82	22-Feb	9:11:47	0.070	70.000		
83	22-Feb	9:12:47	0.080	80.000	0.064	63.733
84	22-Feb	9:13:47	0.124	124.000		
85	22-Feb	9:14:47	0.086	86.000		
86	22-Feb	9:15:47	0.068	68.000		
87	22-Feb	9:16:47	0.027	27.000		
88	22-Feb	9:17:47	0.034	34.000		
89	22-Feb	9:18:47	0.024	24.000		
90	22-Feb	9:19:47	0.094	94.000		
91	22-Feb	9:20:47	0.044	44.000		
92	22-Feb	9:21:47	0.067	67.000		
93	22-Feb	9:22:47	0.054	54.000		
94	22-Feb	9:23:47	0.035	35.000		
95	22-Feb	9:24:47	0.048	48.000		
96	22-Feb	9:25:47	0.030	30.000		
97	22-Feb	9:26:47	0.030	30.000		
98	22-Feb	9:27:47	0.032	32.000	0.050	50.200
99	22-Feb	9:28:47	0.020	20.000		
100	22-Feb	9:29:47	0.024	24.000		
101	22-Feb	9:30:47	0.060	60.000		
102	22-Feb	9:31:47	0.124	124.000		
103	22-Feb	9:32:47	0.069	69.000		
104	22-Feb	9:33:47	0.068	68.000		
105	22-Feb	9:34:47	0.048	48.000		
106	22-Feb	9:35:47	0.045	45.000		
107	22-Feb	9:36:47	0.056	56.000		
108	22-Feb	9:37:47	0.035	35.000		
109	22-Feb	9:38:47	0.033	33.000		
110	22-Feb	9:39:47	0.023	23.000		
111	22-Feb	9:40:47	0.018	18.000		
112	22-Feb	9:41:47	0.019	19.000		
113	22-Feb	9:42:47	0.017	17.000	0.032	31.667
114	22-Feb	9:43:47	0.018	18.000		
115	22-Feb	9:44:47	0.022	22.000		
116	22-Feb	9:45:47	0.017	17.000		
117	22-Feb	9:46:47	0.025	25.000		
118	22-Feb	9:47:47	0.046	46.000		
119	22-Feb	9:48:47	0.050	50.000		
120	22-Feb	9:49:47	0.051	51.000		
121	22-Feb	9:50:47	0.113	113.000		
122	22-Feb	9:51:47	0.061	61.000		
123	22-Feb	9:52:47	0.057	57.000		
124	22-Feb	9:53:47	0.038	38.000		
125	22-Feb	9:54:47	0.065	65.000		
126	22-Feb	9:55:47	0.059	59.000		
127	22-Feb	9:56:47	0.137	137.000		
128	22-Feb	9:57:47	0.152	152.000	0.079	78.600
129	22-Feb	9:58:47	0.069	69.000		
130	22-Feb	9:59:47	0.075	75.000		
131	22-Feb	10:00:47	0.087	87.000		
132	22-Feb	10:01:47	0.066	66.000		
133	22-Feb	10:02:47	0.079	79.000		
134	22-Feb	10:03:47	0.066	66.000		
135	22-Feb	10:04:47	0.055	55.000		
136	22-Feb	10:05:47	0.056	56.000		
137	22-Feb	10:06:47	0.055	55.000		
138	22-Feb	10:07:47	0.090	90.000		
139	22-Feb	10:08:47	0.068	68.000		
140	22-Feb	10:09:47	0.095	95.000		
141	22-Feb	10:10:47	0.101	101.000		
142	22-Feb	10:11:47	0.087	87.000		
143	22-Feb	10:12:47	0.077	77.000	0.064	63.933
144	22-Feb	10:13:47	0.048	48.000		
145	22-Feb	10:14:47	0.048	48.000		
146	22-Feb	10:15:47	0.064	64.000		
147	22-Feb	10:16:47	0.049	49.000		
148	22-Feb	10:17:47	0.037	37.000		
149	22-Feb	10:18:47	0.040	40.000		
150	22-Feb	10:19:47	0.044	44.000		
151	22-Feb	10:20:47	0.039	39.000		
152	22-Feb	10:21:47	0.029	29.000		
153	22-Feb	10:22:47	0.033	33.000		
154	22-Feb	10:23:47	0.032	32.000		
155	22-Feb	10:24:47	0.029	29.000		
156	22-Feb	10:25:47	0.038	38.000		
157	22-Feb	10:26:47	0.023	23.000		
158	22-Feb	10:27:47	0.024	24.000	0.035	34.867
159	22-Feb	10:28:47	0.032	32.000		
160	22-Feb	10:29:47	0.055	55.000		
161	22-Feb	10:30:47	0.040	40.000		
162	22-Feb	10:31:47	0.044	44.000		
163	22-Feb	10:32:47	0.040	40.000		
164	22-Feb	10:33:47	0.035	35.000		
165	22-Feb	10:34:47	0.030	30.000		

Point	Date	Time	1 Minute Average Concentration (mg/m³)	1 Minute Average Concentration (ug/m³)	15 Minute Average Concentration (mg/m³)	15 Minute Average Concentration (ug/m³)
166	22-Feb	10:35:47	0.028	28.000		
167	22-Feb	10:36:47	0.035	35.000		
168	22-Feb	10:37:47	0.034	34.000		
169	22-Feb	10:38:47	0.040	40.000		
170	22-Feb	10:39:47	0.030	30.000		
171	22-Feb	10:40:47	0.028	28.000		
172	22-Feb	10:41:47	0.035	35.000		
173	22-Feb	10:42:47	0.035	35.000	0.035	35.000
174	22-Feb	10:43:47	0.036	36.000		
175	22-Feb	10:44:47	0.028	28.000		
176	22-Feb	10:45:47	0.024	24.000		
177	22-Feb	10:46:47	0.029	29.000		
178	22-Feb	10:47:47	0.042	42.000		
179	22-Feb	10:48:47	0.052	52.000		
180	22-Feb	10:49:47	0.049	49.000		
181	22-Feb	10:50:47	0.047	47.000		
182	22-Feb	10:51:47	0.042	42.000		
183	22-Feb	10:52:47	0.042	42.000		
184	22-Feb	10:53:47	0.031	31.000		
185	22-Feb	10:54:47	0.021	21.000		
186	22-Feb	10:55:47	0.022	22.000		
187	22-Feb	10:56:47	0.023	23.000		
188	22-Feb	10:57:47	0.022	22.000	0.025	25.000
189	22-Feb	10:58:47	0.016	16.000		
190	22-Feb	10:59:47	0.015	15.000		
191	22-Feb	11:00:47	0.018	18.000		
192	22-Feb	11:01:47	0.019	19.000		
193	22-Feb	11:02:47	0.022	22.000		
194	22-Feb	11:03:47	0.018	18.000		
195	22-Feb	11:04:47	0.017	17.000		
196	22-Feb	11:05:47	0.015	15.000		
197	22-Feb	11:06:47	0.021	21.000		
198	22-Feb	11:07:47	0.016	16.000		
199	22-Feb	11:08:47	0.019	19.000		
200	22-Feb	11:09:47	0.010	10.000		
201	22-Feb	11:10:47	0.013	13.000		
202	22-Feb	11:11:47	0.012	12.000		
203	22-Feb	11:12:47	0.008	8.000	0.013	12.533
204	22-Feb	11:13:47	0.012	12.000		
205	22-Feb	11:14:47	0.015	15.000		
206	22-Feb	11:15:47	0.016	16.000		
207	22-Feb	11:16:47	0.008	8.000		
208	22-Feb	11:17:47	0.008	8.000		
209	22-Feb	11:18:47	0.007	7.000		
210	22-Feb	11:19:47	0.008	8.000		
211	22-Feb	11:20:47	0.007	7.000		
212	22-Feb	11:21:47	0.005	5.000		
213	22-Feb	11:22:47	0.007	7.000		
214	22-Feb	11:23:47	0.007	7.000		
215	22-Feb	11:24:47	0.006	6.000		
216	22-Feb	11:25:47	0.008	8.000		
217	22-Feb	11:26:47	0.007	7.000		
218	22-Feb	11:27:47	0.004	4.000	0.006	6.000
219	22-Feb	11:28:47	0.005	5.000		
220	22-Feb	11:29:47	0.004	4.000		
221	22-Feb	11:30:47	0.004	4.000		
222	22-Feb	11:31:47	0.007	7.000		
223	22-Feb	11:32:47	0.006	6.000		
224	22-Feb	11:33:47	0.006	6.000		
225	22-Feb	11:34:47	0.007	7.000		
226	22-Feb	11:35:47	0.007	7.000		
227	22-Feb	11:36:47	0.007	7.000		
228	22-Feb	11:37:47	0.008	8.000		
229	22-Feb	11:38:47	0.006	6.000		
230	22-Feb	11:39:47	0.007	7.000		
231	22-Feb	11:40:47	0.007	7.000		
232	22-Feb	11:41:47	0.004	4.000		
233	22-Feb	11:42:47	0.009	9.000	0.007	7.267
234	22-Feb	11:43:47	0.006	6.000		
235	22-Feb	11:44:47	0.008	8.000		
236	22-Feb	11:45:47	0.004	4.000		
237	22-Feb	11:46:47	0.006	6.000		
238	22-Feb	11:47:47	0.005	5.000		
239	22-Feb	11:48:47	0.004	4.000		
240	22-Feb	11:49:47	0.021	21.000		
241	22-Feb	11:50:47	0.004	4.000		
242	22-Feb	11:51:47	0.005	5.000		
243	22-Feb	11:52:47	0.008	8.000		
244	22-Feb	11:53:47	0.006	6.000		
245	22-Feb	11:54:47	0.006	6.000		
246	22-Feb	11:55:47	0.006	6.000		
247	22-Feb	11:56:47	0.010	10.000		
248	22-Feb	11:57:47	0.007	7.000	0.074	74.400
249	22-Feb	11:58:47	0.044	44.000		
250	22-Feb	11:59:47	0.049	49.000		
251	22-Feb	12:00:47	0.093	93.000		
252	22-Feb	12:01:47	0.130	130.000		
253	22-Feb	12:02:47	0.231	231.000		
254	22-Feb	12:03:47	0.336	336.000		
255	22-Feb	12:04:47	0.181	181.000		

Point	Date	Time	1 Minute Average Concentration (mg/m^3)	1 Minute Average Concentration (ug/m^3)	15 Minute Average Concentration (mg/m^3)	15 Minute Average Concentration (ug/m^3)
256	22-Feb	12:05:47	0.307	307.000		
257	22-Feb	12:06:47	0.216	216.000		
258	22-Feb	12:07:47	0.160	160.000		
259	22-Feb	12:08:47	0.046	46.000		
260	22-Feb	12:09:47	0.060	60.000		
261	22-Feb	12:10:47	0.052	52.000		
262	22-Feb	12:11:47	0.036	36.000		
263	22-Feb	12:12:47	0.027	27.000	0.097	96.800
264	22-Feb	12:13:47	0.032	32.000		
265	22-Feb	12:14:47	0.228	228.000		
266	22-Feb	12:15:47	0.102	102.000		
267	22-Feb	12:16:47	0.063	63.000		
268	22-Feb	12:17:47	0.051	51.000		
269	22-Feb	12:18:47	0.044	44.000		
270	22-Feb	12:19:47	0.028	28.000		
271	22-Feb	12:20:47	0.035	35.000		
272	22-Feb	12:21:47	0.037	37.000		
273	22-Feb	12:22:47	0.029	29.000		
274	22-Feb	12:23:47	0.032	32.000		
275	22-Feb	12:24:47	0.026	26.000		
276	22-Feb	12:25:47	0.021	21.000		
277	22-Feb	12:26:47	0.014	14.000		
278	22-Feb	12:27:47	0.020	20.000	0.044	44.067
279	22-Feb	12:28:47	0.014	14.000		
280	22-Feb	12:29:47	0.019	19.000		
281	22-Feb	12:30:47	0.023	23.000		
282	22-Feb	12:31:47	0.164	164.000		
283	22-Feb	12:32:47	0.146	146.000		
284	22-Feb	12:33:47	0.051	51.000		
285	22-Feb	12:34:47	0.030	30.000		
286	22-Feb	12:35:47	0.030	30.000		
287	22-Feb	12:36:47	0.026	26.000		
288	22-Feb	12:37:47	0.018	18.000		
289	22-Feb	12:38:47	0.020	20.000		
290	22-Feb	12:39:47	0.019	19.000		
291	22-Feb	12:40:47	0.015	15.000		
292	22-Feb	12:41:47	0.014	14.000		
293	22-Feb	12:42:47	0.017	17.000	0.035	34.867
294	22-Feb	12:43:47	0.016	16.000		
295	22-Feb	12:44:47	0.012	12.000		
296	22-Feb	12:45:47	0.012	12.000		
297	22-Feb	12:46:47	0.192	192.000		
298	22-Feb	12:47:47	0.069	69.000		
299	22-Feb	12:48:47	0.039	39.000		
300	22-Feb	12:49:47	0.024	24.000		
301	22-Feb	12:50:47	0.031	31.000		
302	22-Feb	12:51:47	0.016	16.000		
303	22-Feb	12:52:47	0.017	17.000		
304	22-Feb	12:53:47	0.015	15.000		
305	22-Feb	12:54:47	0.020	20.000		
306	22-Feb	12:55:47	0.008	8.000		
307	22-Feb	12:56:47	0.012	12.000		
308	22-Feb	12:57:47	0.012	12.000	0.027	26.733
309	22-Feb	12:58:47	0.105	105.000		
310	22-Feb	12:59:47	0.062	62.000		
311	22-Feb	13:00:47	0.028	28.000		
312	22-Feb	13:01:47	0.020	20.000		
313	22-Feb	13:02:47	0.024	24.000		
314	22-Feb	13:03:47	0.016	16.000		
315	22-Feb	13:04:47	0.015	15.000		
316	22-Feb	13:05:47	0.017	17.000		
317	22-Feb	13:06:47	0.011	11.000		
318	22-Feb	13:07:47	0.063	63.000		
319	22-Feb	13:08:47	0.074	74.000		
320	22-Feb	13:09:47	0.026	26.000		
321	22-Feb	13:10:47	0.024	24.000		
322	22-Feb	13:11:47	0.028	28.000		
323	22-Feb	13:12:47	0.025	25.000	0.024	24.067
324	22-Feb	13:13:47	0.016	16.000		
325	22-Feb	13:14:47	0.014	14.000		
326	22-Feb	13:15:47	0.012	12.000		
327	22-Feb	13:16:47	0.014	14.000		
328	22-Feb	13:17:47	0.012	12.000		
329	22-Feb	13:18:47	0.011	11.000		
330	22-Feb	13:19:47	0.014	14.000		

Point	Date	Time	1 Minute Average Concentration (mg/m^3)	1 Minute Average Concentration (ug/m^3)	15 Minute Average Concentration (mg/m^3)	15 Minute Average Concentration (ug/m^3)
331	22-Feb	13:20:47	0.210	210.000		
332	22-Feb	13:21:47	0.107	107.000		
333	22-Feb	13:22:47	0.040	40.000		
334	22-Feb	13:23:47	0.024	24.000		
335	22-Feb	13:24:47	0.018	18.000		
336	22-Feb	13:25:47	0.019	19.000		
337	22-Feb	13:26:47	0.026	26.000		
338	22-Feb	13:27:47	0.044	44.000	0.100	99.667
339	22-Feb	13:28:47	0.034	34.000		
340	22-Feb	13:29:47	0.097	97.000		
341	22-Feb	13:30:47	0.065	65.000		
342	22-Feb	13:31:47	0.205	205.000		
343	22-Feb	13:32:47	0.232	232.000		
344	22-Feb	13:33:47	0.210	210.000		
345	22-Feb	13:34:47	0.164	164.000		
346	22-Feb	13:35:47	0.221	221.000		
347	22-Feb	13:36:47	0.170	170.000		
348	22-Feb	13:37:47	0.171	171.000		
349	22-Feb	13:38:47	0.071	71.000		
350	22-Feb	13:39:47	0.042	42.000		
351	22-Feb	13:40:47	0.031	31.000		
352	22-Feb	13:41:47	0.031	31.000		
353	22-Feb	13:42:47	0.030	30.000	0.080	80.133
354	22-Feb	13:43:47	0.030	30.000		
355	22-Feb	13:44:47	0.025	25.000		
356	22-Feb	13:45:47	0.146	146.000		
357	22-Feb	13:46:47	0.083	83.000		
358	22-Feb	13:47:47	0.051	51.000		
359	22-Feb	13:48:47	0.064	64.000		
360	22-Feb	13:49:47	0.036	36.000		
361	22-Feb	13:50:47	0.039	39.000		
362	22-Feb	13:51:47	0.034	34.000		
363	22-Feb	13:52:47	0.027	27.000		
364	22-Feb	13:53:47	0.036	36.000		
365	22-Feb	13:54:47	0.255	255.000		
366	22-Feb	13:55:47	0.079	79.000		
367	22-Feb	13:56:47	0.040	40.000		
368	22-Feb	13:57:47	0.046	46.000	0.063	63.467
369	22-Feb	13:58:47	0.028	28.000		
370	22-Feb	13:59:47	0.036	36.000		
371	22-Feb	14:00:47	0.029	29.000		
372	22-Feb	14:01:47	0.025	25.000		
373	22-Feb	14:02:47	0.020	20.000		
374	22-Feb	14:03:47	0.041	41.000		
375	22-Feb	14:04:47	0.217	217.000		
376	22-Feb	14:05:47	0.073	73.000		
377	22-Feb	14:06:47	0.037	37.000		
378	22-Feb	14:07:47	0.031	31.000		
379	22-Feb	14:08:47	0.025	25.000		
380	22-Feb	14:09:47	0.025	25.000		
381	22-Feb	14:10:47	0.022	22.000		
382	22-Feb	14:11:47	0.022	22.000		
383	22-Feb	14:12:47	0.020	20.000	0.033	33.333
384	22-Feb	14:13:47	0.021	21.000		
385	22-Feb	14:14:47	0.077	77.000		
386	22-Feb	14:15:47	0.051	51.000		
387	22-Feb	14:16:47	0.029	29.000		
388	22-Feb	14:17:47	0.024	24.000		
389	22-Feb	14:18:47	0.024	24.000		
390	22-Feb	14:19:47	0.019	19.000		
391	22-Feb	14:20:47	0.017	17.000		
392	22-Feb	14:21:47	0.021	21.000		
393	22-Feb	14:22:47	0.018	18.000		
394	22-Feb	14:23:47	0.015	15.000		
395	22-Feb	14:24:47	0.015	15.000		
396	22-Feb	14:25:47	0.193	193.000		
397	22-Feb	14:26:47	0.067	67.000		
398	22-Feb	14:27:47	0.045	45.000	0.037	37.200
399	22-Feb	14:28:47	0.026	26.000		
400	22-Feb	14:29:47	0.042	42.000		
401	22-Feb	14:30:47	0.023	23.000		
402	22-Feb	14:31:47	0.027	27.000		
403	22-Feb	14:32:47	0.017	17.000		
404	22-Feb	14:33:47	0.016	16.000		
405	22-Feb	14:34:47	0.016	16.000		
406	22-Feb	14:35:47	0.023	23.000		
407	22-Feb	14:36:47	0.017	17.000		
408	22-Feb	14:37:47	0.019	19.000		
409	22-Feb	14:38:47	0.014	14.000		
410	22-Feb	14:39:47	0.018	18.000		
411	22-Feb	14:40:47	0.022	22.000		
412	22-Feb	14:41:47	0.029	29.000		
413	22-Feb	14:42:47	0.032	32.000	0.026	25.533
414	22-Feb	14:43:47	0.077	77.000		
415	22-Feb	14:44:47	0.034	34.000		
416	22-Feb	14:45:47	0.023	23.000		
417	22-Feb	14:46:47	0.025	25.000		
418	22-Feb	14:47:47	0.018	18.000		
419	22-Feb	14:48:47	0.017	17.000		
420	22-Feb	14:49:47	0.015	15.000		
421	22-Feb	14:50:47	0.019	19.000		
422	22-Feb	14:51:47	0.016	16.000		
423	22-Feb	14:52:47	0.013	13.000	0.017	16.500
424	22-Feb	14:53:47	0.021	21.000		
425	22-Feb	14:54:47	0.013	13.000		
426	22-Feb	14:55:47	0.017	17.000		

Highlighted cells indicate exceedance of 150 ug/m^3 over average background concentration

Highlighted thick bordered cells indicate exceedance of 150 ug/m^3 over maximum background concentration

N9013

Community Air Monitoring Data. Volatile Organic Compounds Near Walkway. February 22, 2011.

Instrument:	MiniRAE 2000	Serial Number:	014075
User ID:	00000001	Site ID:	00000371
Data Points:	428	Sample Period:	60 sec
Last Calibration:	2/18/2011 8:45	Gas Name:	Isobutylene
Range of 15 Minute Average Background Concentrations:	3.7 ppm to 4.3 ppm	Background Time Interval:	7:50 - 8:34

	Avg(ppm)	Max(ppm)
Measurement Type:		
High Alarm Levels:	100	100
Low Alarm Levels:	50	50

Line#	Date	Time	1 Minute Average (ppm)	Alarm	1 Minute Maximum (ppm)	Alarm	15 Minute Average (ppm)
1	2/22/2011	7:50	4.4		5.2		
2	2/22/2011	7:51	4.3		5.2		
3	2/22/2011	7:52	4.2		4.4		
4	2/22/2011	7:53	4.3		4.5		
5	2/22/2011	7:54	4.3		4.5		
6	2/22/2011	7:55	4.5		4.6		
7	2/22/2011	7:56	4.4		4.6		
8	2/22/2011	7:57	4.4		4.6		4.3
9	2/22/2011	7:58	4.3		4.6		
10	2/22/2011	7:59	4.2		4.7		
11	2/22/2011	8:00	4.3		4.6		
12	2/22/2011	8:01	4.3		4.6		
13	2/22/2011	8:02	4.5		4.8		
14	2/22/2011	8:03	4.3		5.2		
15	2/22/2011	8:04	3.8		4.5		
16	2/22/2011	8:05	4.1		5.7		
17	2/22/2011	8:06	5.1		6.1		
18	2/22/2011	8:07	3.6		4.2		
19	2/22/2011	8:08	3.9		4.3		
20	2/22/2011	8:09	3.9		4.2		
21	2/22/2011	8:10	3.9		4.5		
22	2/22/2011	8:11	3.9		4.2		
23	2/22/2011	8:12	3.8		4.1		4.1
24	2/22/2011	8:13	4.0		4.8		
25	2/22/2011	8:14	4.9		5.2		
26	2/22/2011	8:15	4.3		4.8		
27	2/22/2011	8:16	4.0		4.1		
28	2/22/2011	8:17	3.9		4.2		
29	2/22/2011	8:18	4.0		4.4		
30	2/22/2011	8:19	3.6		3.9		
31	2/22/2011	8:20	3.7		4.2		
32	2/22/2011	8:21	3.7		3.9		
33	2/22/2011	8:22	3.9		4.3		
34	2/22/2011	8:23	3.8		4.2		
35	2/22/2011	8:24	3.8		4.4		
36	2/22/2011	8:25	4.0		4.4		
37	2/22/2011	8:26	3.7		4.3		
38	2/22/2011	8:27	3.3		3.5		3.7
39	2/22/2011	8:28	3.9		5.0		
40	2/22/2011	8:29	4.0		4.8		
41	2/22/2011	8:30	3.4		3.6		
42	2/22/2011	8:31	3.4		3.7		
43	2/22/2011	8:32	3.5		3.7		
44	2/22/2011	8:33	3.5		3.7		
45	2/22/2011	8:34	3.6		4.0		
46	2/22/2011	8:35	4.8		7.8		
47	2/22/2011	8:36	4.6		4.9		
48	2/22/2011	8:37	4.4		4.7		
49	2/22/2011	8:38	4.0		4.5		
50	2/22/2011	8:39	4.1		4.4		
51	2/22/2011	8:40	4.1		4.6		
52	2/22/2011	8:41	4.0		4.2		
53	2/22/2011	8:42	4.0		4.4		4.0
54	2/22/2011	8:43	3.7		4.4		
55	2/22/2011	8:44	3.8		4.0		
56	2/22/2011	8:45	4.3		9.7		
57	2/22/2011	8:46	3.6		4.5		
58	2/22/2011	8:47	3.4		3.6		
59	2/22/2011	8:48	3.4		8.6		
60	2/22/2011	8:49	3.7		4.5		
61	2/22/2011	8:50	3.5		3.7		
62	2/22/2011	8:51	3.5		3.9		
63	2/22/2011	8:52	4.0		5.3		
64	2/22/2011	8:53	3.7		4.8		
65	2/22/2011	8:54	3.3		3.5		
66	2/22/2011	8:55	3.3		3.5		
67	2/22/2011	8:56	3.3		3.5		
68	2/22/2011	8:57	3.5		4.3		3.6
69	2/22/2011	8:58	3.6		3.9		
70	2/22/2011	8:59	3.6		4.0		
71	2/22/2011	9:00	3.8		4.8		
72	2/22/2011	9:01	3.8		4.2		
73	2/22/2011	9:02	3.8		4.2		
74	2/22/2011	9:03	3.5		3.7		
75	2/22/2011	9:04	3.7		3.9		

Line#	Date	Time	1 Minute Average (ppm)	Alarm	1 Minute Maximum (ppm)	Alarm	15 Minute Average (ppm)
76	2/22/2011	9:05	3.7		4.2		
77	2/22/2011	9:06	3.8		4.2		
78	2/22/2011	9:07	3.9		4.1		
79	2/22/2011	9:08	4.0		4.3		
80	2/22/2011	9:09	3.9		4.2		
81	2/22/2011	9:10	3.7		4.2		
82	2/22/2011	9:11	3.6		3.8		
83	2/22/2011	9:12	3.6		4.0		3.9
84	2/22/2011	9:13	3.6		3.7		
85	2/22/2011	9:14	3.8		4.3		
86	2/22/2011	9:15	4.2		4.5		
87	2/22/2011	9:16	4.1		4.3		
88	2/22/2011	9:17	4.3		5.6		
89	2/22/2011	9:18	4.5		5.2		
90	2/22/2011	9:19	4.3		5.0		
91	2/22/2011	9:20	3.6		4.2		
92	2/22/2011	9:21	3.6		4.2		
93	2/22/2011	9:22	3.6		4.0		
94	2/22/2011	9:23	3.6		4.0		
95	2/22/2011	9:24	3.7		4.1		
96	2/22/2011	9:25	3.7		4.1		
97	2/22/2011	9:26	3.7		3.9		
98	2/22/2011	9:27	3.8		4.2		3.6
99	2/22/2011	9:28	3.6		3.9		
100	2/22/2011	9:29	3.6		3.9		
101	2/22/2011	9:30	3.7		4.0		
102	2/22/2011	9:31	3.8		4.1		
103	2/22/2011	9:32	3.5		4.0		
104	2/22/2011	9:33	3.5		3.7		
105	2/22/2011	9:34	3.6		3.7		
106	2/22/2011	9:35	3.4		3.6		
107	2/22/2011	9:36	3.3		3.5		
108	2/22/2011	9:37	3.3		3.6		
109	2/22/2011	9:38	3.1		3.3		
110	2/22/2011	9:39	3.0		3.3		
111	2/22/2011	9:40	3.2		3.6		
112	2/22/2011	9:41	3.4		4.4		
113	2/22/2011	9:42	3.8		4.4		3.5
114	2/22/2011	9:43	3.7		4.5		
115	2/22/2011	9:44	3.7		4.2		
116	2/22/2011	9:45	3.6		4.1		
117	2/22/2011	9:46	4.0		4.4		
118	2/22/2011	9:47	3.9		4.1		
119	2/22/2011	9:48	3.6		3.9		
120	2/22/2011	9:49	3.4		3.7		
121	2/22/2011	9:50	3.4		3.7		
122	2/22/2011	9:51	3.2		3.7		
123	2/22/2011	9:52	3.3		3.7		
124	2/22/2011	9:53	3.2		3.6		
125	2/22/2011	9:54	3.5		3.8		
126	2/22/2011	9:55	3.6		4.1		
127	2/22/2011	9:56	3.4		3.8		
128	2/22/2011	9:57	3.4		3.7		3.5
129	2/22/2011	9:58	3.5		4.0		
130	2/22/2011	9:59	3.9		4.4		
131	2/22/2011	10:00	3.9		4.4		
132	2/22/2011	10:01	3.8		4.2		
133	2/22/2011	10:02	3.5		3.9		
134	2/22/2011	10:03	3.2		3.4		
135	2/22/2011	10:04	3.0		3.5		
136	2/22/2011	10:05	3.1		3.4		
137	2/22/2011	10:06	3.0		3.2		
138	2/22/2011	10:07	3.0		3.7		
139	2/22/2011	10:08	3.6		4.1		
140	2/22/2011	10:09	4.1		4.7		
141	2/22/2011	10:10	3.6		4.4		
142	2/22/2011	10:11	3.3		3.5		
143	2/22/2011	10:12	2.9		3.4		3.2
144	2/22/2011	10:13	2.7		2.9		
145	2/22/2011	10:14	2.6		2.8		
146	2/22/2011	10:15	2.5		2.8		
147	2/22/2011	10:16	2.7		3.2		
148	2/22/2011	10:17	3.0		3.4		
149	2/22/2011	10:18	3.6		4.4		
150	2/22/2011	10:19	3.9		4.4		
151	2/22/2011	10:20	3.3		4.1		
152	2/22/2011	10:21	3.2		3.3		
153	2/22/2011	10:22	3.9		4.6		
154	2/22/2011	10:23	4.2		4.6		
155	2/22/2011	10:24	4.1		4.4		
156	2/22/2011	10:25	3.6		4.1		
157	2/22/2011	10:26	3.8		4.5		
158	2/22/2011	10:27	3.5		4.0		3.6
159	2/22/2011	10:28	3.5		4.2		
160	2/22/2011	10:29	4.1		4.8		
161	2/22/2011	10:30	3.4		3.9		
162	2/22/2011	10:31	3.4		4.0		
163	2/22/2011	10:32	3.2		3.7		
164	2/22/2011	10:33	3.1		3.7		
165	2/22/2011	10:34	3.0		3.1		

Line#	Date	Time	1 Minute Average (ppm)	Alarm	1 Minute Maximum (ppm)	Alarm	15 Minute Average (ppm)
166	2/22/2011	10:35	3.0		3.5		
167	2/22/2011	10:36	3.0		3.3		
168	2/22/2011	10:37	3.3		3.9		
169	2/22/2011	10:38	3.6		4.0		
170	2/22/2011	10:39	3.5		4.4		
171	2/22/2011	10:40	3.8		4.5		
172	2/22/2011	10:41	3.9		4.5		
173	2/22/2011	10:42	3.7		4.5		3.4
174	2/22/2011	10:43	3.4		4.4		
175	2/22/2011	10:44	3.5		3.9		
176	2/22/2011	10:45	3.4		4.0		
177	2/22/2011	10:46	3.3		4.2		
178	2/22/2011	10:47	2.8		3.1		
179	2/22/2011	10:48	2.9		3.1		
180	2/22/2011	10:49	3.3		3.9		
181	2/22/2011	10:50	3.8		4.2		
182	2/22/2011	10:51	3.7		4.2		
183	2/22/2011	10:52	3.7		4.0		
184	2/22/2011	10:53	3.4		3.9		
185	2/22/2011	10:54	2.8		3.1		
186	2/22/2011	10:55	3.3		3.8		
187	2/22/2011	10:56	3.6		4.4		
188	2/22/2011	10:57	3.3		3.7		3.4
189	2/22/2011	10:58	3.3		3.6		
190	2/22/2011	10:59	3.4		4.0		
191	2/22/2011	11:00	3.4		3.7		
192	2/22/2011	11:01	3.0		3.8		
193	2/22/2011	11:02	3.6		4.1		
194	2/22/2011	11:03	3.2		3.4		
195	2/22/2011	11:04	3.3		3.8		
196	2/22/2011	11:05	3.3		3.6		
197	2/22/2011	11:06	3.2		3.7		
198	2/22/2011	11:07	3.3		4.1		
199	2/22/2011	11:08	3.1		4.0		
200	2/22/2011	11:09	3.5		4.3		
201	2/22/2011	11:10	3.0		3.7		
202	2/22/2011	11:11	2.9		3.8		
203	2/22/2011	11:12	4.1		4.6		3.3
204	2/22/2011	11:13	3.7		4.4		
205	2/22/2011	11:14	3.4		3.7		
206	2/22/2011	11:15	2.9		3.1		
207	2/22/2011	11:16	2.9		3.2		
208	2/22/2011	11:17	3.3		3.9		
209	2/22/2011	11:18	3.3		3.9		
210	2/22/2011	11:19	3.3		4.0		
211	2/22/2011	11:20	3.0		3.3		
212	2/22/2011	11:21	3.1		3.5		
213	2/22/2011	11:22	3.0		3.2		
214	2/22/2011	11:23	3.1		3.4		
215	2/22/2011	11:24	3.2		3.5		
216	2/22/2011	11:25	3.5		3.8		
217	2/22/2011	11:26	3.3		3.5		
218	2/22/2011	11:27	3.7		4.1		3.2
219	2/22/2011	11:28	3.6		4.1		
220	2/22/2011	11:29	3.2		3.7		
221	2/22/2011	11:30	3.0		3.2		
222	2/22/2011	11:31	3.0		3.3		
223	2/22/2011	11:32	3.1		3.7		
224	2/22/2011	11:33	3.2		3.6		
225	2/22/2011	11:34	3.2		3.5		
226	2/22/2011	11:35	3.0		3.3		
227	2/22/2011	11:36	3.4		4.0		
228	2/22/2011	11:37	3.5		4.1		
229	2/22/2011	11:38	4.0		4.3		
230	2/22/2011	11:39	4.0		4.4		
231	2/22/2011	11:40	3.7		4.6		
232	2/22/2011	11:41	3.3		4.1		
233	2/22/2011	11:42	3.5		4.2		3.6
234	2/22/2011	11:43	4.0		4.5		
235	2/22/2011	11:44	3.7		4.7		
236	2/22/2011	11:45	4.0		4.6		
237	2/22/2011	11:46	3.5		4.1		
238	2/22/2011	11:47	3.6		4.3		
239	2/22/2011	11:48	3.8		4.9		
240	2/22/2011	11:49	3.6		4.6		
241	2/22/2011	11:50	3.7		4.5		
242	2/22/2011	11:51	3.9		4.4		
243	2/22/2011	11:52	4.0		4.8		
244	2/22/2011	11:53	4.4		5.1		
245	2/22/2011	11:54	4.7		5.2		
246	2/22/2011	11:55	4.6		5.3		
247	2/22/2011	11:56	4.0		5.4		
248	2/22/2011	11:57	4.0		5.0		4.0
249	2/22/2011	11:58	4.7		5.5		
250	2/22/2011	11:59	4.3		5.0		
251	2/22/2011	12:00	4.1		4.9		
252	2/22/2011	12:01	4.0		4.8		
253	2/22/2011	12:02	3.3		3.8		
254	2/22/2011	12:03	3.0		3.3		
255	2/22/2011	12:04	3.0		3.2		

Line#	Date	Time	1 Minute Average (ppm)	Alarm	1 Minute Maximum (ppm)	Alarm	15 Minute Average (ppm)
256	2/22/2011	12:05	2.9		3.2		
257	2/22/2011	12:06	3.0		3.2		
258	2/22/2011	12:07	2.9		3.1		
259	2/22/2011	12:08	2.9		3.2		
260	2/22/2011	12:09	3.1		3.9		
261	2/22/2011	12:10	3.6		4.5		
262	2/22/2011	12:11	3.9		4.8		
263	2/22/2011	12:12	4.0		4.9		3.3
264	2/22/2011	12:13	4.2		5.1		
265	2/22/2011	12:14	4.0		5.2		
266	2/22/2011	12:15	3.3		4.0		
267	2/22/2011	12:16	3.1		3.2		
268	2/22/2011	12:17	3.0		3.2		
269	2/22/2011	12:18	2.8		3.5		
270	2/22/2011	12:19	3.2		4.0		
271	2/22/2011	12:20	3.6		4.4		
272	2/22/2011	12:21	3.3		4.6		
273	2/22/2011	12:22	3.1		3.3		
274	2/22/2011	12:23	3.1		3.5		
275	2/22/2011	12:24	3.5		4.5		
276	2/22/2011	12:25	3.9		4.6		
277	2/22/2011	12:26	3.5		4.8		
278	2/22/2011	12:27	3.5		4.3		3.7
279	2/22/2011	12:28	4.2		4.8		
280	2/22/2011	12:29	4.4		4.9		
281	2/22/2011	12:30	4.3		4.8		
282	2/22/2011	12:31	4.3		4.7		
283	2/22/2011	12:32	4.2		4.6		
284	2/22/2011	12:33	3.7		4.7		
285	2/22/2011	12:34	3.3		3.9		
286	2/22/2011	12:35	3.7		4.3		
287	2/22/2011	12:36	3.8		4.3		
288	2/22/2011	12:37	3.4		4.0		
289	2/22/2011	12:38	3.6		4.3		
290	2/22/2011	12:39	4.1		4.4		
291	2/22/2011	12:40	3.5		4.0		
292	2/22/2011	12:41	3.5		3.8		
293	2/22/2011	12:42	3.8		4.2		3.6
294	2/22/2011	12:43	3.7		4.1		
295	2/22/2011	12:44	3.8		4.3		
296	2/22/2011	12:45	3.4		3.6		
297	2/22/2011	12:46	3.5		3.9		
298	2/22/2011	12:47	3.6		4.1		
299	2/22/2011	12:48	3.1		3.7		
300	2/22/2011	12:49	3.0		3.7		
301	2/22/2011	12:50	3.1		3.7		
302	2/22/2011	12:51	3.3		3.8		
303	2/22/2011	12:52	3.7		4.1		
304	2/22/2011	12:53	3.7		4.1		
305	2/22/2011	12:54	3.5		3.9		
306	2/22/2011	12:55	3.4		3.8		
307	2/22/2011	12:56	3.5		4.0		
308	2/22/2011	12:57	3.8		4.3		3.4
309	2/22/2011	12:58	3.7		4.0		
310	2/22/2011	12:59	3.8		4.0		
311	2/22/2011	13:00	3.0		3.7		
312	2/22/2011	13:01	3.2		3.7		
313	2/22/2011	13:02	3.5		3.8		
314	2/22/2011	13:03	2.9		3.4		
315	2/22/2011	13:04	3.2		3.6		
316	2/22/2011	13:05	3.4		3.8		
317	2/22/2011	13:06	3.3		3.7		
318	2/22/2011	13:07	3.3		3.7		
319	2/22/2011	13:08	3.2		3.6		
320	2/22/2011	13:09	2.6		3.0		
321	2/22/2011	13:10	2.8		3.6		
322	2/22/2011	13:11	3.4		3.6		
323	2/22/2011	13:12	3.3		3.7		3.2
324	2/22/2011	13:13	3.2		3.4		
325	2/22/2011	13:14	3.2		3.5		
326	2/22/2011	13:15	3.2		3.6		
327	2/22/2011	13:16	3.1		3.7		
328	2/22/2011	13:17	3.1		3.6		
329	2/22/2011	13:18	3.2		3.8		
330	2/22/2011	13:19	3.5		3.8		

Line#	Date	Time	1 Minute Average (ppm)	Alarm	1 Minute Maximum (ppm)	Alarm	15 Minute Average (ppm)
331	2/22/2011	13:20	3.5		3.8		
332	2/22/2011	13:21	3.1		3.4		
333	2/22/2011	13:22	3.1		3.6		
334	2/22/2011	13:23	2.4		3.1		
335	2/22/2011	13:24	2.4		3.0		
336	2/22/2011	13:25	2.5		3.1		
337	2/22/2011	13:26	2.8		3.5		
338	2/22/2011	13:27	3.0		3.5		2.8
339	2/22/2011	13:28	2.8		3.5		
340	2/22/2011	13:29	2.5		3.1		
341	2/22/2011	13:30	2.9		3.9		
342	2/22/2011	13:31	2.9		3.7		
343	2/22/2011	13:32	2.7		3.0		
344	2/22/2011	13:33	2.7		2.9		
345	2/22/2011	13:34	2.7		3.1		
346	2/22/2011	13:35	2.8		2.9		
347	2/22/2011	13:36	2.9		3.2		
348	2/22/2011	13:37	2.8		3.0		
349	2/22/2011	13:38	2.8		2.9		
350	2/22/2011	13:39	2.6		2.9		
351	2/22/2011	13:40	2.4		3.1		
352	2/22/2011	13:41	2.8		3.3		
353	2/22/2011	13:42	3.0		3.6		2.7
354	2/22/2011	13:43	2.8		3.4		
355	2/22/2011	13:44	2.6		3.2		
356	2/22/2011	13:45	2.9		3.5		
357	2/22/2011	13:46	2.6		3.4		
358	2/22/2011	13:47	2.5		2.9		
359	2/22/2011	13:48	2.5		3.3		
360	2/22/2011	13:49	2.5		3.0		
361	2/22/2011	13:50	2.9		3.2		
362	2/22/2011	13:51	2.9		3.4		
363	2/22/2011	13:52	2.6		2.9		
364	2/22/2011	13:53	2.2		2.7		
365	2/22/2011	13:54	2.2		2.8		
366	2/22/2011	13:55	2.5		3.2		
367	2/22/2011	13:56	2.2		2.7		
368	2/22/2011	13:57	2.5		3.2		2.5
369	2/22/2011	13:58	2.4		2.7		
370	2/22/2011	13:59	2.2		3.1		
371	2/22/2011	14:00	2.2		2.8		
372	2/22/2011	14:01	2.1		2.7		
373	2/22/2011	14:02	2.8		3.1		
374	2/22/2011	14:03	3.0		3.4		
375	2/22/2011	14:04	3.3		3.7		
376	2/22/2011	14:05	2.9		3.4		
377	2/22/2011	14:06	2.6		3.1		
378	2/22/2011	14:07	2.5		2.9		
379	2/22/2011	14:08	2.8		3.4		
380	2/22/2011	14:09	2.8		3.3		
381	2/22/2011	14:10	3.0		3.4		
382	2/22/2011	14:11	2.8		3.4		
383	2/22/2011	14:12	3.2		3.5		2.9
384	2/22/2011	14:13	3.2		3.6		
385	2/22/2011	14:14	2.8		3.2		
386	2/22/2011	14:15	3.1		3.5		
387	2/22/2011	14:16	3.2		3.6		
388	2/22/2011	14:17	2.9		3.5		
389	2/22/2011	14:18	3.1		3.5		
390	2/22/2011	14:19	2.8		3.4		
391	2/22/2011	14:20	2.9		3.5		
392	2/22/2011	14:21	3.1		3.7		
393	2/22/2011	14:22	3.2		3.7		
394	2/22/2011	14:23	3.0		3.3		
395	2/22/2011	14:24	3.4		3.8		
396	2/22/2011	14:25	3.4		3.8		
397	2/22/2011	14:26	3.0		3.4		
398	2/22/2011	14:27	3.2		3.7		3.1
399	2/22/2011	14:28	3.1		3.5		
400	2/22/2011	14:29	2.9		3.3		
401	2/22/2011	14:30	2.9		3.6		
402	2/22/2011	14:31	2.7		3.3		
403	2/22/2011	14:32	2.9		3.8		
404	2/22/2011	14:33	3.7		4.1		
405	2/22/2011	14:34	3.0		3.7		
406	2/22/2011	14:35	3.2		3.8		
407	2/22/2011	14:36	3.0		3.5		
408	2/22/2011	14:37	3.1		4.0		
409	2/22/2011	14:38	2.9		3.7		
410	2/22/2011	14:39	3.1		3.9		
411	2/22/2011	14:40	3.2		3.7		
412	2/22/2011	14:41	3.0		3.3		
413	2/22/2011	14:42	3.5		4.1		3.3
414	2/22/2011	14:43	3.8		4.1		
415	2/22/2011	14:44	3.5		4.0		
416	2/22/2011	14:45	3.0		3.6		
417	2/22/2011	14:46	2.9		3.6		
418	2/22/2011	14:47	3.3		4.2		
419	2/22/2011	14:48	3.8		4.5		
420	2/22/2011	14:49	3.5		4.2		
421	2/22/2011	14:50	3.6		4.4		
422	2/22/2011	14:51	3.8		4.4		
423	2/22/2011	14:52	3.7		4.6		
424	2/22/2011	14:53	3.8		4.7		3.6
425	2/22/2011	14:54	3.3		3.9		
426	2/22/2011	14:55	3.3		4.0		
427	2/22/2011	14:56	3.5		4.3		
428	2/22/2011	14:57	3.7		4.2		

Highlighted cells indicate exceedance of 1 ppm over average background concentration

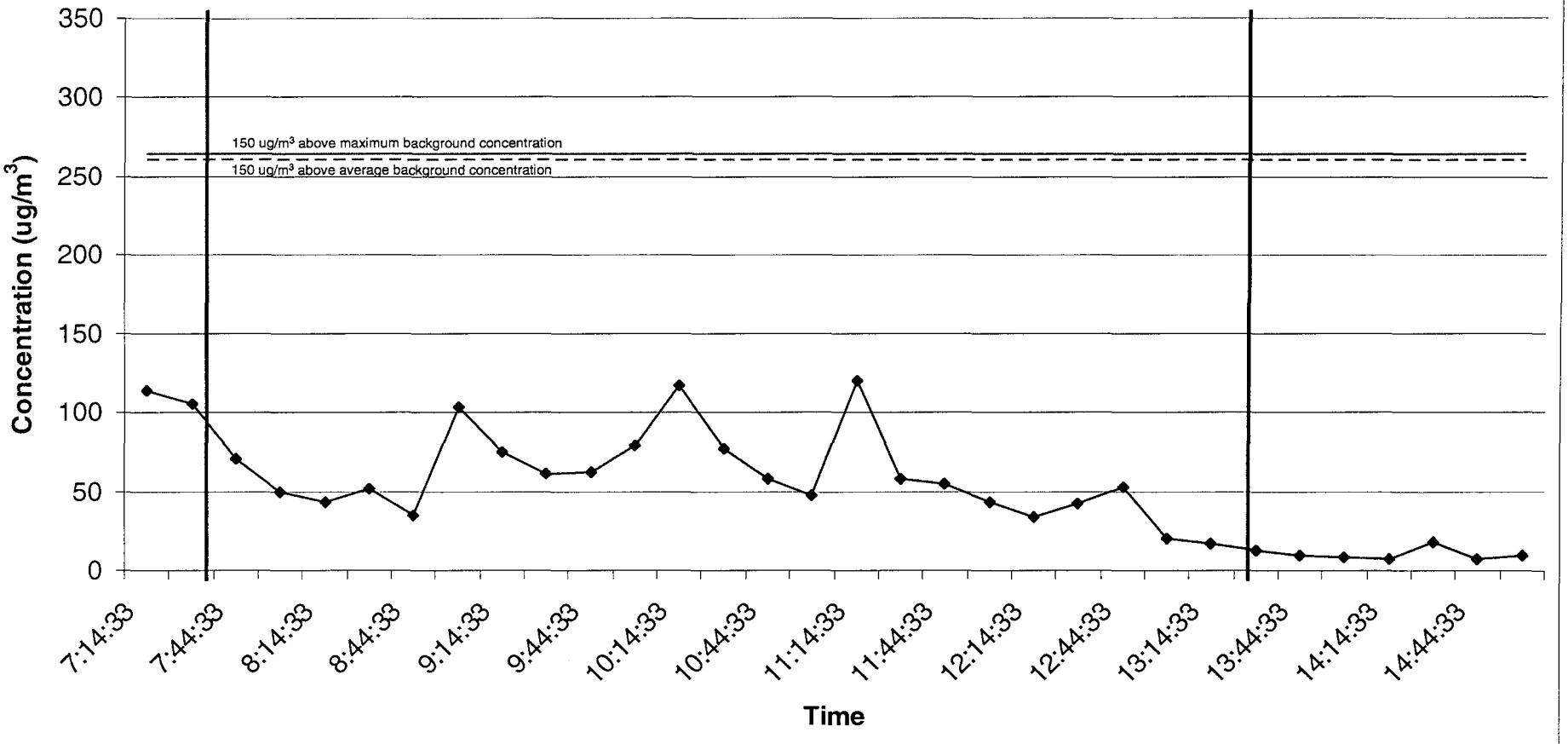
Highlighted thick bordered cells indicate exceedance of 1 ppm over maximum background concentration

N9013

Appendix B-7

Walkway Monitoring Station
Particulate and VOCs 2-23-2011

15 Minute Average Particulate Concentration Near Walkway on 2-23-2011



Brackets time interval when drilling and injecting was occurring. Background levels determined based on readings taken prior to starting drilling each day (7:00 – 7:29).

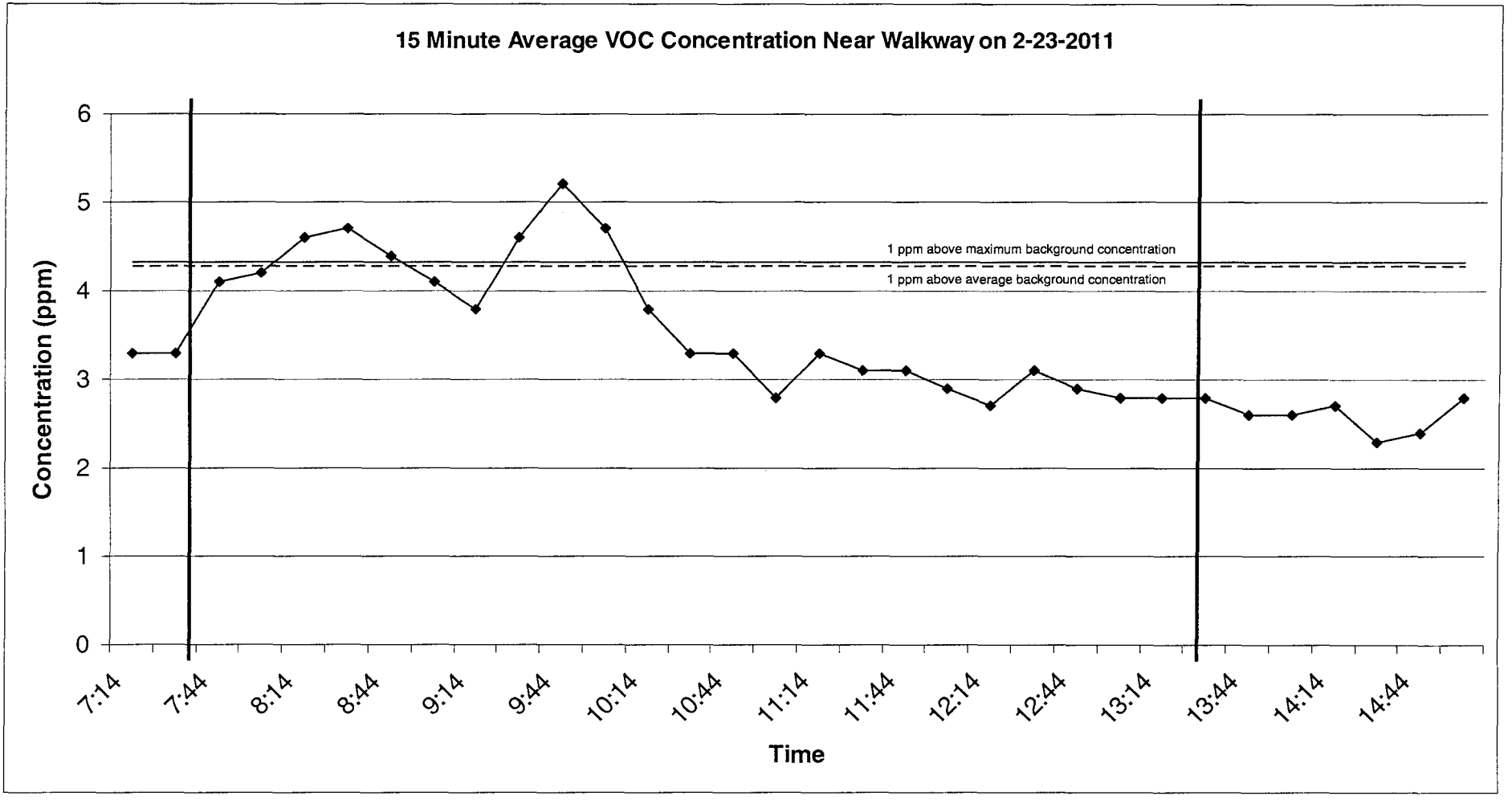
Maximum background concentration = 113.867 ug/m³
Average background concentration = 110.067 ug/m³
150 ug/m³ above maximum background = 263.867 ug/m³
150 ug/m³ above average background = 260.067 ug/m³

S&W REDEVELOPMENT
Syracuse, New York

Date: 5/2011 Proj No.: N9013

110 Luther Ave. Site (BCP Site #C734118)
Remedial Work Plan
110 Luther Ave., Liverpool
Onondaga County, New York

Appendix B-7
Pilot Test Air Monitoring Results



Brackets time interval when drilling and injecting was occurring. Background levels determined based on readings taken prior to starting drilling each day (7:00 – 7:29)

Maximum background concentration = 3.3 ppm
Average background concentration = 3.3 ppm
1 ppm above maximum background = 4.3 ppm
1 ppm above average background = 4.3 ppm

S&W REDEVELOPMENT
Syracuse, New York

Date: 5/2011 Proj No.: N9013

110 Luther Ave. Site (BCP Site #C734118)
Remedial Work Plan
110 Luther Ave., Liverpool
Onondaga County, New York

Appendix B-7
Pilot Test Air Monitoring Results

Community Air Monitoring Data. Particulate Matter Near Walkway. February 23, 2011.

Model Number:	pDR-1000	Unit:	Concentration
Serial Number:	07057	Unit Name:	mg/m^3
Tag Number:	3	Maximum Display Concentration:	1.251 mg/m^3
Start Time:	7:00:33	Time at Maximum:	7:04:16
Start Date:	23-Feb-11	Maximum STEL Concentration:	0.135 mg/m^3
Log Period:	00:01:00	Time at Maximum STEL:	10:13:03
Number of Points:	473	Elapsed Time:	7:53:00
Calibration Factor:	100%	Overall Average Concentration:	0.053 mg/m^3
Range of 15 Minute Average Background Concentrations:	106.267 ug/m^3 to 113.867 ug/m^3	Background Time Interval:	7:00 - 7:29

Logged Data:

Point	Date	Time	1 Minute Average Concentration (mg/m^3)	1 Minute Average Concentration (ug/m^3)	15 Minute Average Concentration (mg/m^3)	15 Minute Average Concentration (ug/m^3)
1	23-Feb	7:00:33	0.082	82.000		
2	23-Feb	7:01:33	0.091	91.000		
3	23-Feb	7:02:33	0.112	112.000		
4	23-Feb	7:03:33	0.107	107.000		
5	23-Feb	7:04:33	0.575	575.000		
6	23-Feb	7:05:33	0.200	200.000		
7	23-Feb	7:06:33	0.109	109.000		
8	23-Feb	7:07:33	0.063	63.000	0.114	113.867
9	23-Feb	7:08:33	0.049	49.000		
10	23-Feb	7:09:33	0.050	50.000		
11	23-Feb	7:10:33	0.084	84.000		
12	23-Feb	7:11:33	0.038	38.000		
13	23-Feb	7:12:33	0.052	52.000		
14	23-Feb	7:13:33	0.056	56.000		
15	23-Feb	7:14:33	0.040	40.000		
16	23-Feb	7:15:33	0.044	44.000		
17	23-Feb	7:16:33	0.035	35.000		
18	23-Feb	7:17:33	0.034	34.000		
19	23-Feb	7:18:33	0.093	93.000		
20	23-Feb	7:19:33	0.052	52.000		
21	23-Feb	7:20:33	0.158	158.000		
22	23-Feb	7:21:33	0.177	177.000		
23	23-Feb	7:22:33	0.111	111.000	0.106	106.267
24	23-Feb	7:23:33	0.157	157.000		
25	23-Feb	7:24:33	0.157	157.000		
26	23-Feb	7:25:33	0.142	142.000		
27	23-Feb	7:26:33	0.134	134.000		
28	23-Feb	7:27:33	0.124	124.000		
29	23-Feb	7:28:33	0.074	74.000		
30	23-Feb	7:29:33	0.102	102.000		
31	23-Feb	7:30:33	0.110	110.000		
32	23-Feb	7:31:33	0.081	81.000		
33	23-Feb	7:32:33	0.080	80.000		
34	23-Feb	7:33:33	0.073	73.000		
35	23-Feb	7:34:33	0.056	56.000		
36	23-Feb	7:35:33	0.083	83.000		
37	23-Feb	7:36:33	0.059	59.000		
38	23-Feb	7:37:33	0.057	57.000	0.071	70.933
39	23-Feb	7:38:33	0.047	47.000		
40	23-Feb	7:39:33	0.053	53.000		
41	23-Feb	7:40:33	0.042	42.000		
42	23-Feb	7:41:33	0.129	129.000		
43	23-Feb	7:42:33	0.080	80.000		
44	23-Feb	7:43:33	0.061	61.000		
45	23-Feb	7:44:33	0.053	53.000		
46	23-Feb	7:45:33	0.051	51.000		
47	23-Feb	7:46:33	0.057	57.000		
48	23-Feb	7:47:33	0.048	48.000		
49	23-Feb	7:48:33	0.039	39.000		
50	23-Feb	7:49:33	0.050	50.000		
51	23-Feb	7:50:33	0.048	48.000		
52	23-Feb	7:51:33	0.035	35.000		
53	23-Feb	7:52:33	0.051	51.000	0.050	49.867
54	23-Feb	7:53:33	0.042	42.000		
55	23-Feb	7:54:33	0.042	42.000		
56	23-Feb	7:55:33	0.034	34.000		
57	23-Feb	7:56:33	0.056	56.000		
58	23-Feb	7:57:33	0.108	108.000		
59	23-Feb	7:58:33	0.042	42.000		
60	23-Feb	7:59:33	0.045	45.000		
61	23-Feb	8:00:33	0.030	30.000		
62	23-Feb	8:01:33	0.034	34.000		
63	23-Feb	8:02:33	0.032	32.000		
64	23-Feb	8:03:33	0.036	36.000		
65	23-Feb	8:04:33	0.031	31.000		
66	23-Feb	8:05:33	0.028	28.000		
67	23-Feb	8:06:33	0.042	42.000		
68	23-Feb	8:07:33	0.021	21.000	0.043	43.133
69	23-Feb	8:08:33	0.075	75.000		
70	23-Feb	8:09:33	0.089	89.000		
71	23-Feb	8:10:33	0.076	76.000		
72	23-Feb	8:11:33	0.050	50.000		
73	23-Feb	8:12:33	0.033	33.000		
74	23-Feb	8:13:33	0.033	33.000		
75	23-Feb	8:14:33	0.037	37.000		
76	23-Feb	8:15:33	0.037	37.000		
77	23-Feb	8:16:33	0.085	85.000		
78	23-Feb	8:17:33	0.070	70.000		
79	23-Feb	8:18:33	0.040	40.000		
80	23-Feb	8:19:33	0.033	33.000		
81	23-Feb	8:20:33	0.037	37.000		
82	23-Feb	8:21:33	0.037	37.000		
83	23-Feb	8:22:33	0.036	36.000	0.052	52.333
84	23-Feb	8:23:33	0.040	40.000		
85	23-Feb	8:24:33	0.099	99.000		
86	23-Feb	8:25:33	0.080	80.000		
87	23-Feb	8:26:33	0.071	71.000		
88	23-Feb	8:27:33	0.047	47.000		
89	23-Feb	8:28:33	0.035	35.000		
90	23-Feb	8:29:33	0.038	38.000		

Point	Date	Time	1 Minute Average Concentration (mg/m³)	1 Minute Average Concentration (ug/m³)	15 Minute Average Concentration (mg/m³)	15 Minute Average Concentration (ug/m³)
91	23-Feb	8:30:33	0.042	42.000		
92	23-Feb	8:31:33	0.035	35.000		
93	23-Feb	8:32:33	0.030	30.000		
94	23-Feb	8:33:33	0.045	45.000		
95	23-Feb	8:34:33	0.041	41.000		
96	23-Feb	8:35:33	0.031	31.000		
97	23-Feb	8:36:33	0.029	29.000		
98	23-Feb	8:37:33	0.031	31.000	0.035	34.533
99	23-Feb	8:38:33	0.033	33.000		
100	23-Feb	8:39:33	0.037	37.000		
101	23-Feb	8:40:33	0.033	33.000		
102	23-Feb	8:41:33	0.039	39.000		
103	23-Feb	8:42:33	0.028	28.000		
104	23-Feb	8:43:33	0.034	34.000		
105	23-Feb	8:44:33	0.030	30.000		
106	23-Feb	8:45:33	0.038	38.000		
107	23-Feb	8:46:33	0.038	38.000		
108	23-Feb	8:47:33	0.029	29.000		
109	23-Feb	8:48:33	0.028	28.000		
110	23-Feb	8:49:33	0.129	129.000		
111	23-Feb	8:50:33	0.081	81.000		
112	23-Feb	8:51:33	0.039	39.000		
113	23-Feb	8:52:33	0.160	160.000	0.104	104.067
114	23-Feb	8:53:33	0.121	121.000		
115	23-Feb	8:54:33	0.104	104.000		
116	23-Feb	8:55:33	0.245	245.000		
117	23-Feb	8:56:33	0.153	153.000		
118	23-Feb	8:57:33	0.128	128.000		
119	23-Feb	8:58:33	0.194	194.000		
120	23-Feb	8:59:33	0.074	74.000		
121	23-Feb	9:00:33	0.076	76.000		
122	23-Feb	9:01:33	0.055	55.000		
123	23-Feb	9:02:33	0.057	57.000		
124	23-Feb	9:03:33	0.051	51.000		
125	23-Feb	9:04:33	0.053	53.000		
126	23-Feb	9:05:33	0.194	194.000		
127	23-Feb	9:06:33	0.106	106.000		
128	23-Feb	9:07:33	0.099	99.000	0.075	74.733
129	23-Feb	9:08:33	0.062	62.000		
130	23-Feb	9:09:33	0.059	59.000		
131	23-Feb	9:10:33	0.063	63.000		
132	23-Feb	9:11:33	0.062	62.000		
133	23-Feb	9:12:33	0.070	70.000		
134	23-Feb	9:13:33	0.060	60.000		
135	23-Feb	9:14:33	0.054	54.000		
136	23-Feb	9:15:33	0.046	46.000		
137	23-Feb	9:16:33	0.069	69.000		
138	23-Feb	9:17:33	0.107	107.000		
139	23-Feb	9:18:33	0.068	68.000		
140	23-Feb	9:19:33	0.055	55.000		
141	23-Feb	9:20:33	0.051	51.000		
142	23-Feb	9:21:33	0.055	55.000		
143	23-Feb	9:22:33	0.046	46.000	0.061	61.400
144	23-Feb	9:23:33	0.044	44.000		
145	23-Feb	9:24:33	0.045	45.000		
146	23-Feb	9:25:33	0.041	41.000		
147	23-Feb	9:26:33	0.043	43.000		
148	23-Feb	9:27:33	0.047	47.000		
149	23-Feb	9:28:33	0.143	143.000		
150	23-Feb	9:29:33	0.061	61.000		
151	23-Feb	9:30:33	0.060	60.000		
152	23-Feb	9:31:33	0.052	52.000		
153	23-Feb	9:32:33	0.058	58.000		
154	23-Feb	9:33:33	0.063	63.000		
155	23-Feb	9:34:33	0.047	47.000		
156	23-Feb	9:35:33	0.050	50.000		
157	23-Feb	9:36:33	0.041	41.000		
158	23-Feb	9:37:33	0.036	36.000	0.062	62.000
159	23-Feb	9:38:33	0.039	39.000		
160	23-Feb	9:39:33	0.177	177.000		
161	23-Feb	9:40:33	0.087	87.000		
162	23-Feb	9:41:33	0.063	63.000		
163	23-Feb	9:42:33	0.048	48.000		
164	23-Feb	9:43:33	0.053	53.000		
165	23-Feb	9:44:33	0.056	56.000		
166	23-Feb	9:45:33	0.058	58.000		
167	23-Feb	9:46:33	0.040	40.000		
168	23-Feb	9:47:33	0.041	41.000		
169	23-Feb	9:48:33	0.045	45.000		
170	23-Feb	9:49:33	0.042	42.000		
171	23-Feb	9:50:33	0.039	39.000		
172	23-Feb	9:51:33	0.039	39.000		
173	23-Feb	9:52:33	0.038	38.000	0.079	79.467
174	23-Feb	9:53:33	0.041	41.000		
175	23-Feb	9:54:33	0.043	43.000		
176	23-Feb	9:55:33	0.104	104.000		
177	23-Feb	9:56:33	0.121	121.000		
178	23-Feb	9:57:33	0.087	87.000		
179	23-Feb	9:58:33	0.200	200.000		
180	23-Feb	9:59:33	0.254	254.000		

Point	Date	Time	1 Minute Average Concentration (mg/m³)	1 Minute Average Concentration (ug/m³)	15 Minute Average Concentration (mg/m³)	15 Minute Average Concentration (ug/m³)
181	23-Feb	10:00:33	0.215	215.000		
182	23-Feb	10:01:33	0.159	159.000		
183	23-Feb	10:02:33	0.136	136.000		
184	23-Feb	10:03:33	0.138	138.000		
185	23-Feb	10:04:33	0.171	171.000		
186	23-Feb	10:05:33	0.078	78.000		
187	23-Feb	10:06:33	0.103	103.000		
188	23-Feb	10:07:33	0.087	87.000	0.118	117.533
189	23-Feb	10:08:33	0.070	70.000		
190	23-Feb	10:09:33	0.065	65.000		
191	23-Feb	10:10:33	0.069	69.000		
192	23-Feb	10:11:33	0.063	63.000		
193	23-Feb	10:12:33	0.181	181.000		
194	23-Feb	10:13:33	0.135	135.000		
195	23-Feb	10:14:33	0.093	93.000		
196	23-Feb	10:15:33	0.083	83.000		
197	23-Feb	10:16:33	0.124	124.000		
198	23-Feb	10:17:33	0.120	120.000		
199	23-Feb	10:18:33	0.063	63.000		
200	23-Feb	10:19:33	0.048	48.000		
201	23-Feb	10:20:33	0.058	58.000		
202	23-Feb	10:21:33	0.069	69.000		
203	23-Feb	10:22:33	0.053	53.000	0.077	76.800
204	23-Feb	10:23:33	0.132	132.000		
205	23-Feb	10:24:33	0.121	121.000		
206	23-Feb	10:25:33	0.076	76.000		
207	23-Feb	10:26:33	0.056	56.000		
208	23-Feb	10:27:33	0.052	52.000		
209	23-Feb	10:28:33	0.049	49.000		
210	23-Feb	10:29:33	0.048	48.000		
211	23-Feb	10:30:33	0.055	55.000		
212	23-Feb	10:31:33	0.046	46.000		
213	23-Feb	10:32:33	0.045	45.000		
214	23-Feb	10:33:33	0.037	37.000		
215	23-Feb	10:34:33	0.114	114.000		
216	23-Feb	10:35:33	0.138	138.000		
217	23-Feb	10:36:33	0.070	70.000		
218	23-Feb	10:37:33	0.074	74.000	0.059	58.667
219	23-Feb	10:38:33	0.054	54.000		
220	23-Feb	10:39:33	0.041	41.000		
221	23-Feb	10:40:33	0.041	41.000		
222	23-Feb	10:41:33	0.040	40.000		
223	23-Feb	10:42:33	0.038	38.000		
224	23-Feb	10:43:33	0.041	41.000		
225	23-Feb	10:44:33	0.046	46.000		
226	23-Feb	10:45:33	0.036	36.000		
227	23-Feb	10:46:33	0.031	31.000		
228	23-Feb	10:47:33	0.118	118.000		
229	23-Feb	10:48:33	0.061	61.000		
230	23-Feb	10:49:33	0.056	56.000		
231	23-Feb	10:50:33	0.053	53.000		
232	23-Feb	10:51:33	0.046	46.000		
233	23-Feb	10:52:33	0.043	43.000	0.048	47.867
234	23-Feb	10:53:33	0.048	48.000		
235	23-Feb	10:54:33	0.042	42.000		
236	23-Feb	10:55:33	0.027	27.000		
237	23-Feb	10:56:33	0.028	28.000		
238	23-Feb	10:57:33	0.035	35.000		
239	23-Feb	10:58:33	0.070	70.000		
240	23-Feb	10:59:33	0.024	24.000		
241	23-Feb	11:00:33	0.161	161.000		
242	23-Feb	11:01:33	0.120	120.000		
243	23-Feb	11:02:33	0.059	59.000		
244	23-Feb	11:03:33	0.113	113.000		
245	23-Feb	11:04:33	0.119	119.000		
246	23-Feb	11:05:33	0.204	204.000		
247	23-Feb	11:06:33	0.134	134.000		
248	23-Feb	11:07:33	0.158	158.000	0.120	120.400
249	23-Feb	11:08:33	0.187	187.000		
250	23-Feb	11:09:33	0.111	111.000		
251	23-Feb	11:10:33	0.113	113.000		
252	23-Feb	11:11:33	0.090	90.000		
253	23-Feb	11:12:33	0.081	81.000		
254	23-Feb	11:13:33	0.088	88.000		
255	23-Feb	11:14:33	0.068	68.000		
256	23-Feb	11:15:33	0.065	65.000		
257	23-Feb	11:16:33	0.058	58.000		
258	23-Feb	11:17:33	0.054	54.000		
259	23-Feb	11:18:33	0.075	75.000		
260	23-Feb	11:19:33	0.079	79.000		
261	23-Feb	11:20:33	0.046	46.000		
262	23-Feb	11:21:33	0.037	37.000		
263	23-Feb	11:22:33	0.039	39.000	0.058	58.200
264	23-Feb	11:23:33	0.039	39.000		
265	23-Feb	11:24:33	0.039	39.000		
266	23-Feb	11:25:33	0.059	59.000		
267	23-Feb	11:26:33	0.101	101.000		
268	23-Feb	11:27:33	0.053	53.000		
269	23-Feb	11:28:33	0.057	57.000		
270	23-Feb	11:29:33	0.072	72.000		
271	23-Feb	11:30:33	0.052	52.000		
272	23-Feb	11:31:33	0.043	43.000		
273	23-Feb	11:32:33	0.044	44.000		
274	23-Feb	11:33:33	0.053	53.000		
275	23-Feb	11:34:33	0.051	51.000		
276	23-Feb	11:35:33	0.035	35.000		
277	23-Feb	11:36:33	0.159	159.000		
278	23-Feb	11:37:33	0.077	77.000	0.054	54.467
279	23-Feb	11:38:33	0.057	57.000		
280	23-Feb	11:39:33	0.043	43.000		
281	23-Feb	11:40:33	0.035	35.000		
282	23-Feb	11:41:33	0.044	44.000		
283	23-Feb	11:42:33	0.037	37.000		
284	23-Feb	11:43:33	0.039	39.000		
285	23-Feb	11:44:33	0.048	48.000		

Point	Date	Time	1 Minute Average Concentration (mg/m^3)	1 Minute Average Concentration (ug/m^3)	15 Minute Average Concentration (mg/m^3)	15 Minute Average Concentration (ug/m^3)
286	23-Feb	11:45:33	0.043	43.000		
287	23-Feb	11:46:33	0.040	40.000		
288	23-Feb	11:47:33	0.037	37.000		
289	23-Feb	11:48:33	0.032	32.000		
290	23-Feb	11:49:33	0.082	82.000		
291	23-Feb	11:50:33	0.059	59.000		
292	23-Feb	11:51:33	0.053	53.000		
293	23-Feb	11:52:33	0.057	57.000	0.043	42.933
294	23-Feb	11:53:33	0.041	41.000		
295	23-Feb	11:54:33	0.044	44.000		
296	23-Feb	11:55:33	0.030	30.000		
297	23-Feb	11:56:33	0.039	39.000		
298	23-Feb	11:57:33	0.035	35.000		
299	23-Feb	11:58:33	0.028	28.000		
300	23-Feb	11:59:33	0.024	24.000		
301	23-Feb	12:00:33	0.027	27.000		
302	23-Feb	12:01:33	0.028	28.000		
303	23-Feb	12:02:33	0.074	74.000		
304	23-Feb	12:03:33	0.048	48.000		
305	23-Feb	12:04:33	0.026	26.000		
306	23-Feb	12:05:33	0.049	49.000		
307	23-Feb	12:06:33	0.034	34.000		
308	23-Feb	12:07:33	0.040	40.000	0.034	34.133
309	23-Feb	12:08:33	0.034	34.000		
310	23-Feb	12:09:33	0.029	29.000		
311	23-Feb	12:10:33	0.030	30.000		
312	23-Feb	12:11:33	0.022	22.000		
313	23-Feb	12:12:33	0.020	20.000		
314	23-Feb	12:13:33	0.023	23.000		
315	23-Feb	12:14:33	0.028	28.000		
316	23-Feb	12:15:33	0.021	21.000		
317	23-Feb	12:16:33	0.027	27.000		
318	23-Feb	12:17:33	0.027	27.000		
319	23-Feb	12:18:33	0.029	29.000		
320	23-Feb	12:19:33	0.023	23.000		
321	23-Feb	12:20:33	0.028	28.000		
322	23-Feb	12:21:33	0.056	56.000		
323	23-Feb	12:22:33	0.085	85.000	0.043	42.533
324	23-Feb	12:23:33	0.040	40.000		
325	23-Feb	12:24:33	0.050	50.000		
326	23-Feb	12:25:33	0.033	33.000		
327	23-Feb	12:26:33	0.044	44.000		
328	23-Feb	12:27:33	0.042	42.000		
329	23-Feb	12:28:33	0.054	54.000		
330	23-Feb	12:29:33	0.079	79.000		
331	23-Feb	12:30:33	0.146	146.000		
332	23-Feb	12:31:33	0.067	67.000		
333	23-Feb	12:32:33	0.047	47.000		
334	23-Feb	12:33:33	0.048	48.000		
335	23-Feb	12:34:33	0.062	62.000		
336	23-Feb	12:35:33	0.037	37.000		
337	23-Feb	12:36:33	0.058	58.000		
338	23-Feb	12:37:33	0.065	65.000	0.052	52.467
339	23-Feb	12:38:33	0.047	47.000		
340	23-Feb	12:39:33	0.028	28.000		
341	23-Feb	12:40:33	0.046	46.000		
342	23-Feb	12:41:33	0.038	38.000		
343	23-Feb	12:42:33	0.035	35.000		
344	23-Feb	12:43:33	0.033	33.000		
345	23-Feb	12:44:33	0.030	30.000		
346	23-Feb	12:45:33	0.027	27.000		
347	23-Feb	12:46:33	0.035	35.000		
348	23-Feb	12:47:33	0.025	25.000		
349	23-Feb	12:48:33	0.026	26.000		
350	23-Feb	12:49:33	0.021	21.000		
351	23-Feb	12:50:33	0.018	18.000		
352	23-Feb	12:51:33	0.017	17.000		
353	23-Feb	12:52:33	0.019	19.000	0.020	20.333
354	23-Feb	12:53:33	0.023	23.000		
355	23-Feb	12:54:33	0.016	16.000		
356	23-Feb	12:55:33	0.017	17.000		
357	23-Feb	12:56:33	0.017	17.000		
358	23-Feb	12:57:33	0.017	17.000		
359	23-Feb	12:58:33	0.015	15.000		
360	23-Feb	12:59:33	0.012	12.000		
361	23-Feb	13:00:33	0.015	15.000		
362	23-Feb	13:01:33	0.021	21.000		
363	23-Feb	13:02:33	0.018	18.000		
364	23-Feb	13:03:33	0.023	23.000		
365	23-Feb	13:04:33	0.019	19.000		
366	23-Feb	13:05:33	0.017	17.000		
367	23-Feb	13:06:33	0.014	14.000		
368	23-Feb	13:07:33	0.016	16.000	0.017	17.200
369	23-Feb	13:08:33	0.019	19.000		
370	23-Feb	13:09:33	0.018	18.000		
371	23-Feb	13:10:33	0.013	13.000		
372	23-Feb	13:11:33	0.019	19.000		
373	23-Feb	13:12:33	0.016	16.000		
374	23-Feb	13:13:33	0.017	17.000		
375	23-Feb	13:14:33	0.013	13.000		

Point	Date	Time	1 Minute Average Concentration (mg/m^3)	1 Minute Average Concentration (ug/m^3)	15 Minute Average Concentration (mg/m^3)	15 Minute Average Concentration (ug/m^3)
376	23-Feb	13:15:33	0.015	15.000		
377	23-Feb	13:16:33	0.015	15.000		
378	23-Feb	13:17:33	0.012	12.000		
379	23-Feb	13:18:33	0.016	16.000		
380	23-Feb	13:19:33	0.021	21.000		
381	23-Feb	13:20:33	0.016	16.000		
382	23-Feb	13:21:33	0.010	10.000		
383	23-Feb	13:22:33	0.012	12.000	0.013	13.067
384	23-Feb	13:23:33	0.016	16.000		
385	23-Feb	13:24:33	0.013	13.000		
386	23-Feb	13:25:33	0.008	8.000		
387	23-Feb	13:26:33	0.012	12.000		
388	23-Feb	13:27:33	0.012	12.000		
389	23-Feb	13:28:33	0.011	11.000		
390	23-Feb	13:29:33	0.007	7.000		
391	23-Feb	13:30:33	0.008	8.000		
392	23-Feb	13:31:33	0.008	8.000		
393	23-Feb	13:32:33	0.009	9.000		
394	23-Feb	13:33:33	0.010	10.000		
395	23-Feb	13:34:33	0.007	7.000		
396	23-Feb	13:35:33	0.012	12.000		
397	23-Feb	13:36:33	0.015	15.000		
398	23-Feb	13:37:33	0.012	12.000	0.010	9.867
399	23-Feb	13:38:33	0.009	9.000		
400	23-Feb	13:39:33	0.009	9.000		
401	23-Feb	13:40:33	0.013	13.000		
402	23-Feb	13:41:33	0.010	10.000		
403	23-Feb	13:42:33	0.010	10.000		
404	23-Feb	13:43:33	0.010	10.000		
405	23-Feb	13:44:33	0.006	6.000		
406	23-Feb	13:45:33	0.009	9.000		
407	23-Feb	13:46:33	0.013	13.000		
408	23-Feb	13:47:33	0.008	8.000		
409	23-Feb	13:48:33	0.008	8.000		
410	23-Feb	13:49:33	0.008	8.000		
411	23-Feb	13:50:33	0.009	9.000		
412	23-Feb	13:51:33	0.006	6.000		
413	23-Feb	13:52:33	0.009	9.000	0.009	8.533
414	23-Feb	13:53:33	0.008	8.000		
415	23-Feb	13:54:33	0.007	7.000		
416	23-Feb	13:55:33	0.007	7.000		
417	23-Feb	13:56:33	0.007	7.000		
418	23-Feb	13:57:33	0.008	8.000		
419	23-Feb	13:58:33	0.009	9.000		
420	23-Feb	13:59:33	0.012	12.000		
421	23-Feb	14:00:33	0.007	7.000		
422	23-Feb	14:01:33	0.008	8.000		
423	23-Feb	14:02:33	0.009	9.000		
424	23-Feb	14:03:33	0.009	9.000		
425	23-Feb	14:04:33	0.006	6.000		
426	23-Feb	14:05:33	0.006	6.000		
427	23-Feb	14:06:33	0.007	7.000		
428	23-Feb	14:07:33	0.007	7.000	0.008	7.867
429	23-Feb	14:08:33	0.010	10.000		
430	23-Feb	14:09:33	0.007	7.000		
431	23-Feb	14:10:33	0.008	8.000		
432	23-Feb	14:11:33	0.009	9.000		
433	23-Feb	14:12:33	0.015	15.000		
434	23-Feb	14:13:33	0.005	5.000		
435	23-Feb	14:14:33	0.005	5.000		
436	23-Feb	14:15:33	0.036	36.000		
437	23-Feb	14:16:33	0.026	26.000		
438	23-Feb	14:17:33	0.013	13.000		
439	23-Feb	14:18:33	0.007	7.000		
440	23-Feb	14:19:33	0.029	29.000		
441	23-Feb	14:20:33	0.008	8.000		
442	23-Feb	14:21:33	0.007	7.000		
443	23-Feb	14:22:33	0.015	15.000	0.018	17.533
444	23-Feb	14:23:33	0.022	22.000		
445	23-Feb	14:24:33	0.019	19.000		
446	23-Feb	14:25:33	0.014	14.000		
447	23-Feb	14:26:33	0.022	22.000		
448	23-Feb	14:27:33	0.017	17.000		
449	23-Feb	14:28:33	0.013	13.000		
450	23-Feb	14:29:33	0.015	15.000		
451	23-Feb	14:30:33	0.010	10.000		
452	23-Feb	14:31:33	0.008	8.000		
453	23-Feb	14:32:33	0.011	11.000		
454	23-Feb	14:33:33	0.010	10.000		
455	23-Feb	14:34:33	0.007	7.000		
456	23-Feb	14:35:33	0.004	4.000		
457	23-Feb	14:36:33	0.004	4.000		
458	23-Feb	14:37:33	0.007	7.000	0.008	7.867
459	23-Feb	14:38:33	0.007	7.000		
460	23-Feb	14:39:33	0.006	6.000		
461	23-Feb	14:40:33	0.007	7.000		
462	23-Feb	14:41:33	0.009	9.000		
463	23-Feb	14:42:33	0.010	10.000		
464	23-Feb	14:43:33	0.007	7.000		
465	23-Feb	14:44:33	0.011	11.000		
466	23-Feb	14:45:33	0.007	7.000		
467	23-Feb	14:46:33	0.006	6.000		
468	23-Feb	14:47:33	0.008	8.000		
469	23-Feb	14:48:33	0.007	7.000	0.009	9.000
470	23-Feb	14:49:33	0.021	21.000		
471	23-Feb	14:50:33	0.012	12.000		
472	23-Feb	14:51:33	0.005	5.000		
473	23-Feb	14:52:33	0.006	6.000		

Highlighted cells indicate exceedance of 150 ug/m^3 over average background concentration

Highlighted thick bordered cells indicate exceedance of 150 ug/m^3 over maximum background concentration

Community Air Monitoring Data. Volatile Organic Compounds Near Walkway. February 23, 2011.

Instrument:	MiniRAE 2000	Serial Number:	014075
User ID:	00000001	Site ID:	00000372
Data Points:	472	Sample Period:	60 sec
Last Calibration:	2/18/2011 8:45	Gas Name:	Isobutylene
Range of 15 Minute Average Background Concentrations:	3.3 ppm	Background Time Interval:	7:00 - 7:29

	Avg(ppm)	Max(ppm)
Measurement Type:		
High Alarm Levels:	100	100
Low Alarm Levels:	50	50

Line#	Date	Time	1 Minute Average (ppm)	Alarm	1 Minute Maximum (ppm)	Alarm	15 Minute Average (ppm)
1	2/23/2011	7:00	2.0		3.4		
2	2/23/2011	7:01	2.8		3.5		
3	2/23/2011	7:02	2.5		2.7		
4	2/23/2011	7:03	3.0		3.6		
5	2/23/2011	7:04	2.7		2.8		
6	2/23/2011	7:05	2.9		3.7		
7	2/23/2011	7:06	3.9		4.6		
8	2/23/2011	7:07	3.9		5.1		3.3
9	2/23/2011	7:08	4.4		5.1		
10	2/23/2011	7:09	3.9		4.9		
11	2/23/2011	7:10	3.8		4.8		
12	2/23/2011	7:11	3.7		4.3		
13	2/23/2011	7:12	3.0		3.7		
14	2/23/2011	7:13	3.3		3.9		
15	2/23/2011	7:14	3.7		4.2		
16	2/23/2011	7:15	4.1		4.3		
17	2/23/2011	7:16	3.7		4.4		
18	2/23/2011	7:17	3.7		4.2		
19	2/23/2011	7:18	3.7		4.3		
20	2/23/2011	7:19	3.7		4.3		
21	2/23/2011	7:20	3.6		3.9		
22	2/23/2011	7:21	3.2		3.9		
23	2/23/2011	7:22	3.0		3.2		3.3
24	2/23/2011	7:23	2.9		3.1		
25	2/23/2011	7:24	2.9		3.1		
26	2/23/2011	7:25	3.0		3.2		
27	2/23/2011	7:26	3.0		3.3		
28	2/23/2011	7:27	3.1		3.2		
29	2/23/2011	7:28	3.1		3.2		
30	2/23/2011	7:29	3.1		3.5		
31	2/23/2011	7:30	3.9		4.7		
32	2/23/2011	7:31	4.0		4.7		
33	2/23/2011	7:32	4.9		5.9		
34	2/23/2011	7:33	4.6		5.5		
35	2/23/2011	7:34	4.2		4.8		
36	2/23/2011	7:35	4.6		5.0		
37	2/23/2011	7:36	4.6		5.1		
38	2/23/2011	7:37	4.5		5.0		4.1
39	2/23/2011	7:38	4.6		4.9		
40	2/23/2011	7:39	5.0		5.4		
41	2/23/2011	7:40	3.7		5.0		
42	2/23/2011	7:41	3.0		3.3		
43	2/23/2011	7:42	3.2		3.3		
44	2/23/2011	7:43	3.0		3.3		
45	2/23/2011	7:44	3.4		3.9		
46	2/23/2011	7:45	3.2		3.7		
47	2/23/2011	7:46	3.2		3.9		
48	2/23/2011	7:47	3.9		4.5		
49	2/23/2011	7:48	3.8		4.3		
50	2/23/2011	7:49	3.9		4.4		
51	2/23/2011	7:50	4.6		7.4		
52	2/23/2011	7:51	5.0		7.2		
53	2/23/2011	7:52	4.5		5.5		4.2
54	2/23/2011	7:53	4.0		4.6		
55	2/23/2011	7:54	4.3		5.4		
56	2/23/2011	7:55	5.0		6.0		
57	2/23/2011	7:56	3.8		5.3		
58	2/23/2011	7:57	4.4		5.2		
59	2/23/2011	7:58	5.1		5.6		
60	2/23/2011	7:59	5.0		5.7		
61	2/23/2011	8:00	4.6		5.7		
62	2/23/2011	8:01	5.3		5.7		
63	2/23/2011	8:02	5.6		6.2		
64	2/23/2011	8:03	5.5		6.2		
65	2/23/2011	8:04	5.0		5.5		
66	2/23/2011	8:05	5.1		5.6		
67	2/23/2011	8:06	3.7		4.9		
68	2/23/2011	8:07	3.2		3.7		4.6
69	2/23/2011	8:08	3.3		3.5		
70	2/23/2011	8:09	3.3		3.6		
71	2/23/2011	8:10	4.2		5.4		
72	2/23/2011	8:11	4.9		5.7		
73	2/23/2011	8:12	5.1		5.7		
74	2/23/2011	8:13	5.1		5.8		
75	2/23/2011	8:14	5.1		5.7		
76	2/23/2011	8:15	4.8		5.6		
77	2/23/2011	8:16	3.7		4.4		
78	2/23/2011	8:17	4.5		5.4		
79	2/23/2011	8:18	4.9		5.6		
80	2/23/2011	8:19	4.9		6.1		
81	2/23/2011	8:20	5.5		6.2		
82	2/23/2011	8:21	5.7		7.1		
83	2/23/2011	8:22	6.5		9.0		4.7
84	2/23/2011	8:23	5.1		7.1		
85	2/23/2011	8:24	3.4		3.7		
86	2/23/2011	8:25	3.4		3.5		
87	2/23/2011	8:26	4.0		5.7		
88	2/23/2011	8:27	5.4		6.7		
89	2/23/2011	8:28	4.7		6.1		
90	2/23/2011	8:29	3.8		4.4		

Line#	Date	Time	1 Minute Average (ppm)	Alarm	1 Minute Maximum (ppm)	Alarm	15 Minute Average (ppm)
91	2/23/2011	8:30	3.6		4.7		
92	2/23/2011	8:31	3.7		4.6		
93	2/23/2011	8:32	3.7		4.6		
94	2/23/2011	8:33	3.8		4.5		
95	2/23/2011	8:34	3.2		3.8		
96	2/23/2011	8:35	2.9		3.5		
97	2/23/2011	8:36	4.1		5.8		
98	2/23/2011	8:37	4.7		5.6		4.4
99	2/23/2011	8:38	5.1		5.9		
100	2/23/2011	8:39	4.9		6.0		
101	2/23/2011	8:40	4.9		5.6		
102	2/23/2011	8:41	5.4		8.7		
103	2/23/2011	8:42	5.3		7.8		
104	2/23/2011	8:43	6.2		9.0		
105	2/23/2011	8:44	4.8		6.4		
106	2/23/2011	8:45	5.5		6.8		
107	2/23/2011	8:46	5.3		7.1		
108	2/23/2011	8:47	4.6		5.6		
109	2/23/2011	8:48	4.5		6.2		
110	2/23/2011	8:49	3.9		4.6		
111	2/23/2011	8:50	3.7		4.3		
112	2/23/2011	8:51	3.4		3.7		
113	2/23/2011	8:52	3.8		4.6		4.1
114	2/23/2011	8:53	3.9		4.7		
115	2/23/2011	8:54	3.7		4.1		
116	2/23/2011	8:55	3.7		4.2		
117	2/23/2011	8:56	3.6		4.0		
118	2/23/2011	8:57	3.6		4.2		
119	2/23/2011	8:58	4.2		4.7		
120	2/23/2011	8:59	3.5		3.9		
121	2/23/2011	9:00	3.4		3.7		
122	2/23/2011	9:01	3.4		3.9		
123	2/23/2011	9:02	3.8		4.5		
124	2/23/2011	9:03	3.9		4.7		
125	2/23/2011	9:04	3.7		4.3		
126	2/23/2011	9:05	3.3		3.7		
127	2/23/2011	9:06	3.6		3.7		
128	2/23/2011	9:07	3.5		3.8		3.8
129	2/23/2011	9:08	3.8		4.3		
130	2/23/2011	9:09	3.7		4.8		
131	2/23/2011	9:10	4.1		5.6		
132	2/23/2011	9:11	4.4		5.6		
133	2/23/2011	9:12	4.5		5.0		
134	2/23/2011	9:13	4.2		4.8		
135	2/23/2011	9:14	3.9		4.3		
136	2/23/2011	9:15	4.1		4.6		
137	2/23/2011	9:16	3.7		4.0		
138	2/23/2011	9:17	3.9		4.3		
139	2/23/2011	9:18	4.5		5.8		
140	2/23/2011	9:19	5.0		5.8		
141	2/23/2011	9:20	4.6		6.5		
142	2/23/2011	9:21	4.9		6.4		
143	2/23/2011	9:22	5.7		6.7		4.6
144	2/23/2011	9:23	6.0		8.9		
145	2/23/2011	9:24	4.8		5.4		
146	2/23/2011	9:25	4.5		5.5		
147	2/23/2011	9:26	4.0		4.4		
148	2/23/2011	9:27	4.5		5.6		
149	2/23/2011	9:28	4.6		5.5		
150	2/23/2011	9:29	4.7		5.2		
151	2/23/2011	9:30	4.2		4.6		
152	2/23/2011	9:31	4.5		5.1		
153	2/23/2011	9:32	4.3		4.5		
154	2/23/2011	9:33	5.2		6.4		
155	2/23/2011	9:34	5.3		7.0		
156	2/23/2011	9:35	6.6		7.5		
157	2/23/2011	9:36	6.9		7.7		
158	2/23/2011	9:37	7.3		8.1		5.2
159	2/23/2011	9:38	6.1		7.8		
160	2/23/2011	9:39	4.8		6.1		
161	2/23/2011	9:40	4.6		5.2		
162	2/23/2011	9:41	4.7		5.3		
163	2/23/2011	9:42	4.4		4.9		
164	2/23/2011	9:43	4.8		5.6		
165	2/23/2011	9:44	4.5		4.7		
166	2/23/2011	9:45	4.9		5.9		
167	2/23/2011	9:46	5.4		6.5		
168	2/23/2011	9:47	5.0		5.5		
169	2/23/2011	9:48	5.2		5.8		
170	2/23/2011	9:49	5.1		5.9		
171	2/23/2011	9:50	5.2		5.7		
172	2/23/2011	9:51	4.9		5.3		
173	2/23/2011	9:52	4.8		5.0		4.7
174	2/23/2011	9:53	4.7		5.1		
175	2/23/2011	9:54	4.6		5.5		
176	2/23/2011	9:55	4.7		5.2		
177	2/23/2011	9:56	4.0		4.3		
178	2/23/2011	9:57	3.8		4.5		
179	2/23/2011	9:58	4.0		4.5		
180	2/23/2011	9:59	3.9		4.7		

Line#	Date	Time	1 Minute Average (ppm)	Alarm	1 Minute Maximum (ppm)	Alarm	15 Minute Average (ppm)
181	2/23/2011	10:00	3.8		4.4		
182	2/23/2011	10:01	3.9		4.6		
183	2/23/2011	10:02	3.8		4.2		
184	2/23/2011	10:03	3.7		4.1		
185	2/23/2011	10:04	4.1		4.7		
186	2/23/2011	10:05	4.1		4.6		
187	2/23/2011	10:06	3.7		4.1		
188	2/23/2011	10:07	3.9		4.6		3.8
189	2/23/2011	10:08	3.7		4.1		
190	2/23/2011	10:09	4.0		4.9		
191	2/23/2011	10:10	4.0		4.7		
192	2/23/2011	10:11	3.9		4.5		
193	2/23/2011	10:12	3.3		3.8		
194	2/23/2011	10:13	3.4		3.9		
195	2/23/2011	10:14	3.4		3.7		
196	2/23/2011	10:15	3.4		3.7		
197	2/23/2011	10:16	3.4		3.7		
198	2/23/2011	10:17	3.6		4.3		
199	2/23/2011	10:18	3.6		4.2		
200	2/23/2011	10:19	3.9		4.6		
201	2/23/2011	10:20	3.7		4.7		
202	2/23/2011	10:21	3.0		3.5		
203	2/23/2011	10:22	2.9		3.2		3.3
204	2/23/2011	10:23	3.2		3.4		
205	2/23/2011	10:24	3.3		3.6		
206	2/23/2011	10:25	3.0		3.4		
207	2/23/2011	10:26	2.9		3.1		
208	2/23/2011	10:27	2.9		3.4		
209	2/23/2011	10:28	3.3		3.6		
210	2/23/2011	10:29	3.0		3.6		
211	2/23/2011	10:30	3.2		3.4		
212	2/23/2011	10:31	3.5		4.2		
213	2/23/2011	10:32	3.5		3.8		
214	2/23/2011	10:33	3.6		4.2		
215	2/23/2011	10:34	3.2		3.5		
216	2/23/2011	10:35	3.1		3.3		
217	2/23/2011	10:36	3.0		3.4		
218	2/23/2011	10:37	3.4		4.5		3.3
219	2/23/2011	10:38	3.9		4.4		
220	2/23/2011	10:39	3.4		4.2		
221	2/23/2011	10:40	3.2		3.6		
222	2/23/2011	10:41	3.4		4.1		
223	2/23/2011	10:42	3.5		4.0		
224	2/23/2011	10:43	2.9		3.3		
225	2/23/2011	10:44	2.7		3.0		
226	2/23/2011	10:45	2.8		3.2		
227	2/23/2011	10:46	2.9		3.2		
228	2/23/2011	10:47	2.9		3.4		
229	2/23/2011	10:48	2.9		3.1		
230	2/23/2011	10:49	2.8		3.0		
231	2/23/2011	10:50	2.6		2.8		
232	2/23/2011	10:51	2.7		3.2		
233	2/23/2011	10:52	2.7		3.1		2.8
234	2/23/2011	10:53	3.0		3.9		
235	2/23/2011	10:54	3.2		3.7		
236	2/23/2011	10:55	2.8		3.1		
237	2/23/2011	10:56	2.6		3.1		
238	2/23/2011	10:57	2.4		2.6		
239	2/23/2011	10:58	2.9		3.7		
240	2/23/2011	10:59	2.8		3.2		
241	2/23/2011	11:00	3.5		4.1		
242	2/23/2011	11:01	3.2		3.5		
243	2/23/2011	11:02	3.8		5.5		
244	2/23/2011	11:03	3.2		3.7		
245	2/23/2011	11:04	3.1		3.5		
246	2/23/2011	11:05	3.1		3.3		
247	2/23/2011	11:06	3.0		3.2		
248	2/23/2011	11:07	3.1		3.3		3.3
249	2/23/2011	11:08	3.1		3.4		
250	2/23/2011	11:09	3.4		3.7		
251	2/23/2011	11:10	3.3		4.0		
252	2/23/2011	11:11	3.2		3.5		
253	2/23/2011	11:12	3.5		4.0		
254	2/23/2011	11:13	3.6		3.9		
255	2/23/2011	11:14	3.4		3.9		
256	2/23/2011	11:15	3.8		4.4		
257	2/23/2011	11:16	3.3		3.7		
258	2/23/2011	11:17	3.1		3.3		
259	2/23/2011	11:18	3.1		3.4		
260	2/23/2011	11:19	3.2		3.5		
261	2/23/2011	11:20	3.3		4.0		
262	2/23/2011	11:21	3.0		3.4		
263	2/23/2011	11:22	2.6		2.9		3.1
264	2/23/2011	11:23	3.0		3.4		
265	2/23/2011	11:24	3.5		4.1		
266	2/23/2011	11:25	2.9		3.2		
267	2/23/2011	11:26	2.8		3.0		
268	2/23/2011	11:27	2.9		3.1		
269	2/23/2011	11:28	3.0		3.4		
270	2/23/2011	11:29	3.3		3.8		
271	2/23/2011	11:30	3.1		3.6		
272	2/23/2011	11:31	3.1		3.3		
273	2/23/2011	11:32	3.4		3.9		
274	2/23/2011	11:33	3.3		3.9		
275	2/23/2011	11:34	3.1		3.5		
276	2/23/2011	11:35	3.0		3.5		
277	2/23/2011	11:36	3.0		3.4		
278	2/23/2011	11:37	3.1		3.5		3.1
279	2/23/2011	11:38	3.0		3.5		
280	2/23/2011	11:39	3.1		3.4		
281	2/23/2011	11:40	2.9		3.2		
282	2/23/2011	11:41	3.0		3.2		
283	2/23/2011	11:42	2.9		3.0		
284	2/23/2011	11:43	2.9		3.2		
285	2/23/2011	11:44	3.0		3.1		

Line#	Date	Time	1 Minute Average (ppm)	Alarm	1 Minute Maximum (ppm)	Alarm	15 Minute Average (ppm)
286	2/23/2011	11:45	3.0		3.3		
287	2/23/2011	11:46	3.0		3.3		
288	2/23/2011	11:47	2.9		3.1		
289	2/23/2011	11:48	2.9		3.2		
290	2/23/2011	11:49	3.1		3.6		
291	2/23/2011	11:50	3.2		3.3		
292	2/23/2011	11:51	3.2		3.4		
293	2/23/2011	11:52	3.1		3.5		2.9
294	2/23/2011	11:53	2.9		3.0		
295	2/23/2011	11:54	2.8		3.0		
296	2/23/2011	11:55	2.9		3.3		
297	2/23/2011	11:56	2.9		3.3		
298	2/23/2011	11:57	2.8		3.0		
299	2/23/2011	11:58	2.5		2.8		
300	2/23/2011	11:59	2.4		2.6		
301	2/23/2011	12:00	2.5		2.9		
302	2/23/2011	12:01	2.8		3.1		
303	2/23/2011	12:02	2.9		3.4		
304	2/23/2011	12:03	2.6		3.3		
305	2/23/2011	12:04	2.3		2.5		
306	2/23/2011	12:05	2.5		2.8		
307	2/23/2011	12:06	3.2		3.4		
308	2/23/2011	12:07	3.3		3.5		2.7
309	2/23/2011	12:08	3.2		3.5		
310	2/23/2011	12:09	3.2		3.5		
311	2/23/2011	12:10	2.7		3.1		
312	2/23/2011	12:11	2.5		2.8		
313	2/23/2011	12:12	2.4		2.5		
314	2/23/2011	12:13	2.4		2.5		
315	2/23/2011	12:14	2.6		3.1		
316	2/23/2011	12:15	2.7		3.3		
317	2/23/2011	12:16	3.1		3.6		
318	2/23/2011	12:17	2.9		3.3		
319	2/23/2011	12:18	2.5		3.0		
320	2/23/2011	12:19	2.8		3.1		
321	2/23/2011	12:20	2.8		3.1		
322	2/23/2011	12:21	3.3		3.7		
323	2/23/2011	12:22	3.6		4.1		3.1
324	2/23/2011	12:23	3.4		3.5		
325	2/23/2011	12:24	3.2		3.4		
326	2/23/2011	12:25	3.3		3.5		
327	2/23/2011	12:26	3.3		3.6		
328	2/23/2011	12:27	3.2		3.4		
329	2/23/2011	12:28	3.3		3.6		
330	2/23/2011	12:29	3.3		4.1		
331	2/23/2011	12:30	3.4		3.7		
332	2/23/2011	12:31	3.1		3.4		
333	2/23/2011	12:32	3.1		3.5		
334	2/23/2011	12:33	3.1		3.3		
335	2/23/2011	12:34	3.3		3.8		
336	2/23/2011	12:35	3.3		4.0		
337	2/23/2011	12:36	2.7		3.1		
338	2/23/2011	12:37	2.5		2.9		2.9
339	2/23/2011	12:38	2.8		3.1		
340	2/23/2011	12:39	2.9		3.0		
341	2/23/2011	12:40	2.6		2.9		
342	2/23/2011	12:41	2.6		3.0		
343	2/23/2011	12:42	2.8		3.1		
344	2/23/2011	12:43	2.9		3.2		
345	2/23/2011	12:44	2.7		3.0		
346	2/23/2011	12:45	2.7		2.9		
347	2/23/2011	12:46	2.7		2.9		
348	2/23/2011	12:47	2.4		2.7		
349	2/23/2011	12:48	2.4		2.7		
350	2/23/2011	12:49	2.5		2.8		
351	2/23/2011	12:50	2.8		3.2		
352	2/23/2011	12:51	2.7		2.9		
353	2/23/2011	12:52	2.8		3.2		2.8
354	2/23/2011	12:53	3.0		3.2		
355	2/23/2011	12:54	3.3		3.5		
356	2/23/2011	12:55	3.3		3.5		
357	2/23/2011	12:56	2.9		3.4		
358	2/23/2011	12:57	2.7		2.9		
359	2/23/2011	12:58	2.9		3.1		
360	2/23/2011	12:59	3.0		3.3		
361	2/23/2011	13:00	3.0		3.3		
362	2/23/2011	13:01	3.1		3.3		
363	2/23/2011	13:02	2.8		3.1		
364	2/23/2011	13:03	2.8		3.3		
365	2/23/2011	13:04	2.7		3.1		
366	2/23/2011	13:05	2.7		3.1		
367	2/23/2011	13:06	3.1		3.4		
368	2/23/2011	13:07	2.7		3.2		2.8
369	2/23/2011	13:08	2.8		3.2		
370	2/23/2011	13:09	2.8		3.0		
371	2/23/2011	13:10	2.8		3.1		
372	2/23/2011	13:11	2.6		2.7		
373	2/23/2011	13:12	2.6		3.1		
374	2/23/2011	13:13	2.7		2.9		
375	2/23/2011	13:14	2.6		2.8		

Line#	Date	Time	1 Minute Average (ppm)	Alarm	1 Minute Maximum (ppm)	Alarm	15 Minute Average (ppm)
376	2/23/2011	13:15	2.9		3.3		
377	2/23/2011	13:16	2.7		3.0		
378	2/23/2011	13:17	3.0		3.5		
379	2/23/2011	13:18	2.9		3.4		
380	2/23/2011	13:19	2.6		2.9		
381	2/23/2011	13:20	2.5		2.8		
382	2/23/2011	13:21	2.8		3.2		
383	2/23/2011	13:22	2.8		3.2		2.8
384	2/23/2011	13:23	2.9		3.1		
385	2/23/2011	13:24	3.0		3.3		
386	2/23/2011	13:25	2.9		3.3		
387	2/23/2011	13:26	2.9		3.2		
388	2/23/2011	13:27	2.7		3.1		
389	2/23/2011	13:28	3.0		3.3		
390	2/23/2011	13:29	2.9		3.0		
391	2/23/2011	13:30	3.0		3.2		
392	2/23/2011	13:31	3.0		3.2		
393	2/23/2011	13:32	2.7		3.0		
394	2/23/2011	13:33	3.1		3.4		
395	2/23/2011	13:34	2.8		3.5		
396	2/23/2011	13:35	2.4		2.7		
397	2/23/2011	13:36	2.4		2.7		
398	2/23/2011	13:37	2.3		2.5		2.6
399	2/23/2011	13:38	2.4		2.8		
400	2/23/2011	13:39	2.4		2.7		
401	2/23/2011	13:40	2.5		2.9		
402	2/23/2011	13:41	2.2		2.3		
403	2/23/2011	13:42	2.4		2.8		
404	2/23/2011	13:43	2.6		2.9		
405	2/23/2011	13:44	3.0		3.6		
406	2/23/2011	13:45	2.5		2.7		
407	2/23/2011	13:46	2.4		2.7		
408	2/23/2011	13:47	2.6		3.2		
409	2/23/2011	13:48	2.7		3.5		
410	2/23/2011	13:49	3.0		3.4		
411	2/23/2011	13:50	2.8		3.2		
412	2/23/2011	13:51	3.2		3.4		
413	2/23/2011	13:52	3.1		3.3		2.6
414	2/23/2011	13:53	2.8		3.0		
415	2/23/2011	13:54	2.6		2.8		
416	2/23/2011	13:55	2.4		2.7		
417	2/23/2011	13:56	2.2		2.3		
418	2/23/2011	13:57	2.1		2.4		
419	2/23/2011	13:58	2.4		2.9		
420	2/23/2011	13:59	2.8		3.3		
421	2/23/2011	14:00	2.7		3.0		
422	2/23/2011	14:01	2.9		3.3		
423	2/23/2011	14:02	2.7		3.0		
424	2/23/2011	14:03	2.6		2.8		
425	2/23/2011	14:04	2.6		3.0		
426	2/23/2011	14:05	2.4		2.6		
427	2/23/2011	14:06	2.4		2.6		
428	2/23/2011	14:07	2.8		3.2		2.7
429	2/23/2011	14:08	3.1		3.4		
430	2/23/2011	14:09	2.6		3.3		
431	2/23/2011	14:10	2.2		2.4		
432	2/23/2011	14:11	2.5		2.9		
433	2/23/2011	14:12	3.0		3.4		
434	2/23/2011	14:13	3.2		3.8		
435	2/23/2011	14:14	2.7		3.0		
436	2/23/2011	14:15	2.4		2.6		
437	2/23/2011	14:16	2.5		2.9		
438	2/23/2011	14:17	3.0		3.2		
439	2/23/2011	14:18	2.8		3.0		
440	2/23/2011	14:19	2.6		2.8		
441	2/23/2011	14:20	2.7		2.9		
442	2/23/2011	14:21	2.4		2.8		
443	2/23/2011	14:22	1.9		2.0		2.3
444	2/23/2011	14:23	1.8		2.0		
445	2/23/2011	14:24	1.8		2.1		
446	2/23/2011	14:25	2.0		2.4		
447	2/23/2011	14:26	2.0		2.4		
448	2/23/2011	14:27	2.2		2.4		
449	2/23/2011	14:28	2.0		2.6		
450	2/23/2011	14:29	1.9		2.1		
451	2/23/2011	14:30	2.0		2.4		
452	2/23/2011	14:31	2.4		2.6		
453	2/23/2011	14:32	2.4		2.8		
454	2/23/2011	14:33	2.4		2.7		
455	2/23/2011	14:34	2.6		2.9		
456	2/23/2011	14:35	2.7		2.9		
457	2/23/2011	14:36	2.7		2.9		
458	2/23/2011	14:37	2.6		2.9		2.4
459	2/23/2011	14:38	2.5		2.8		
460	2/23/2011	14:39	2.4		2.7		
461	2/23/2011	14:40	2.4		2.7		
462	2/23/2011	14:41	2.5		2.7		
463	2/23/2011	14:42	2.3		2.4		
464	2/23/2011	14:43	2.2		2.4		
465	2/23/2011	14:44	2.4		2.7		
466	2/23/2011	14:45	2.3		2.7		
467	2/23/2011	14:46	2.5		2.8		
468	2/23/2011	14:47	2.5		2.6		
469	2/23/2011	14:48	2.7		3.2		2.8
470	2/23/2011	14:49	3.1		3.4		
471	2/23/2011	14:50	3.2		3.5		
472	2/23/2011	14:51	3.4		3.7		

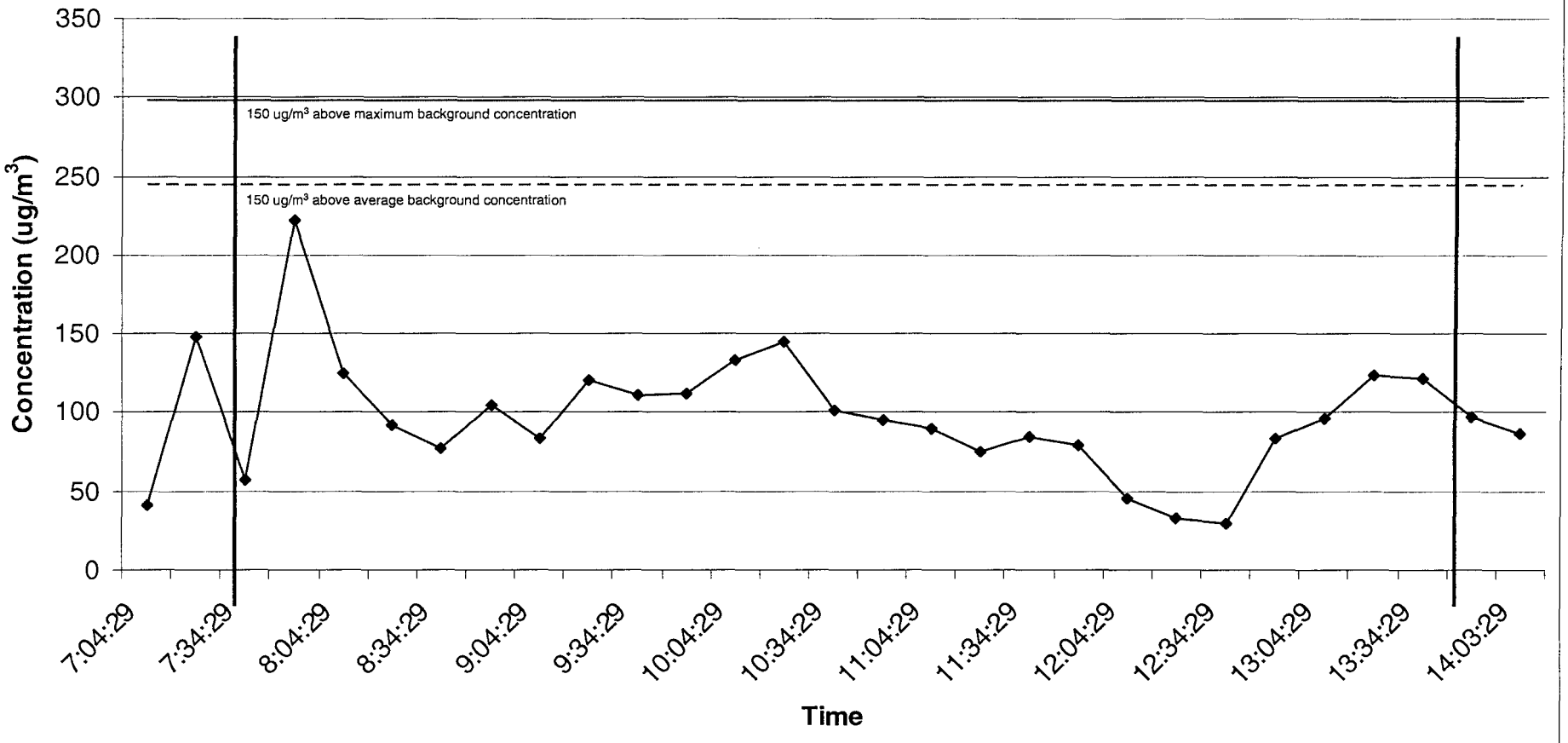
Highlighted cells indicate exceedance of 1 ppm over average background concentration

Highlighted thick bordered cells indicate exceedance of 1 ppm over maximum background concentration

Appendix B-8

Walkway Monitoring Station
Particulate and VOCs 2-24-2011

15 Minute Average Particulate Concentration Near Walkway on 2-24-2011



Brackets time interval when drilling and injecting was occurring. Background levels determined based on readings taken prior to starting drilling each day (6:50 – 7:19).

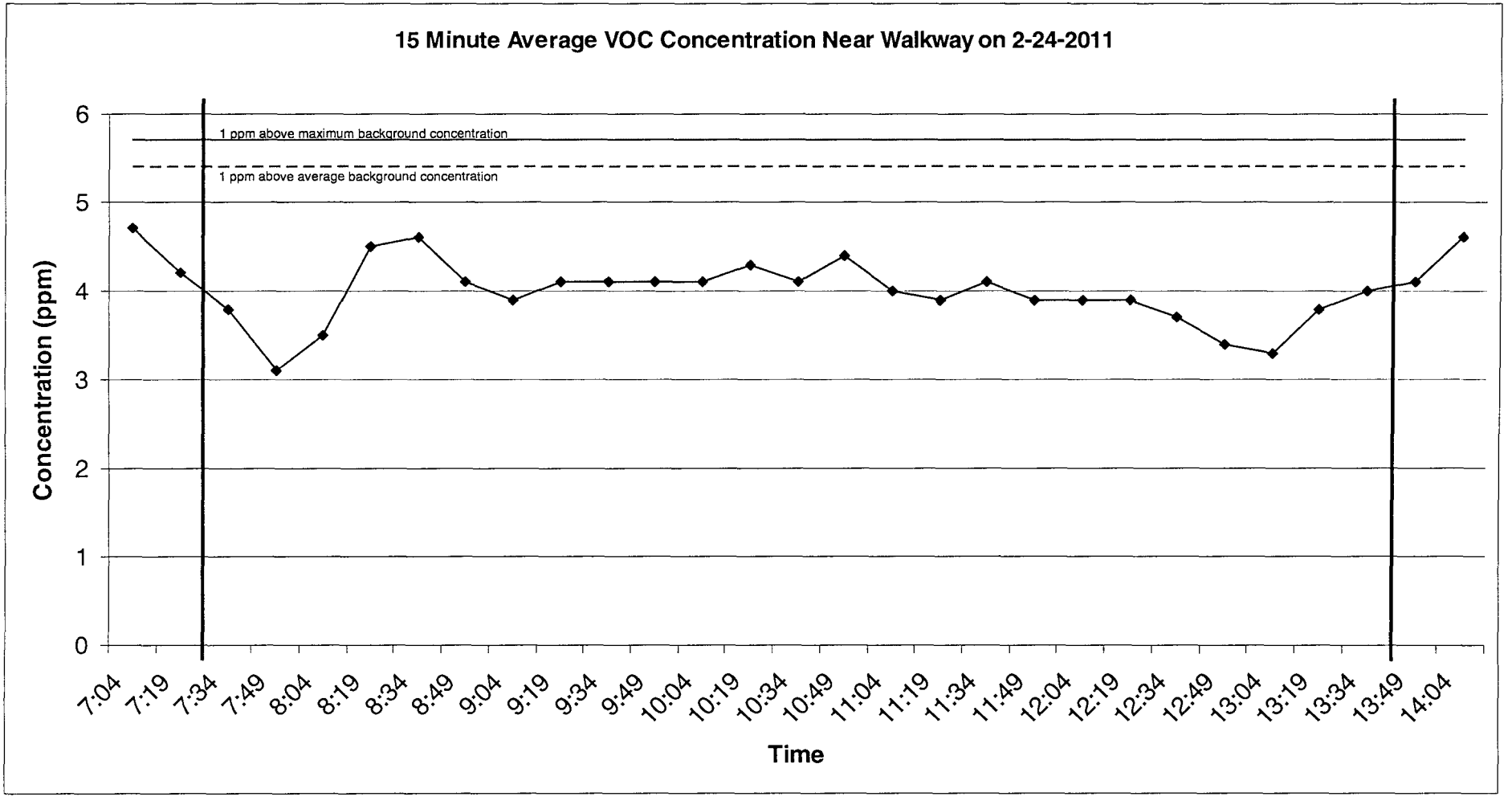
Maximum background concentration = 147.933 ug/m³
Average background concentration = 94.400 ug/m³
150 ug/m³ above maximum background = 297.933 ug/m³
150 ug/m³ above average background = 244.400 ug/m³

S&W Redevelopment
Syracuse, New York

Date: 5/2011 Proj No.: N9013

110 Luther Ave. Site (BCP Site #C734118)
Remedial Work Plan
110 Luther Ave., Liverpool
Onondaga County, New York

Appendix B-8
Pilot Test Air Monitoring Results



Brackets time interval when drilling and injecting was occurring. Background levels determined based on readings taken prior to starting drilling each day (6:50 – 7:19)

Maximum background concentration = 4.7 ppm
Average background concentration = 4.4 ppm
1 ppm above maximum background = 5.7 ppm
1 ppm above average background = 5.4 ppm

S&W REDEVELOPMENT
Syracuse, New York

Date: 5/2011 Proj No.: N9013

110 Luther Ave. Site (BCP Site #C734118)
Remedial Work Plan
110 Luther Ave., Liverpool
Onondaga County, New York

Appendix B-8
Pilot Test Air Monitoring Results

Community Air Monitoring Data. Particulate Matter Near Walkway. February 24, 2011.

Model Number:	pDR-1000	Unit:	Concentration
Serial Number:	07057	Unit Name:	mg/m^3
Tag Number:	4	Maximum Display Concentration:	1.284 mg/m^3
Start Time:	6:50:29	Time at Maximum:	7:07:41
Start Date:	24-Feb-11	Maximum STEL Concentration:	0.227 mg/m^3
Log Period:	00:01:00	Time at Maximum STEL:	7:44:59
Number of Points:	434	Elapsed Time:	7:14:00
Calibration Factor:	100%	Overall Average Concentration:	0.097 mg/m^3
Range of 15 Minute Average Background Concentrations:	40.867 ug/m^3 to 147.933 ug/m^3		Background Time Interval: 6:50 - 7:19

Logged Data:

Point	Date	Time	1 Minute Average Concentration (mg/m^3)	1 Minute Average Concentration (ug/m^3)	15 Minute Average Concentration (mg/m^3)	15 Minute Average Concentration (ug/m^3)
1	24-Feb	6:50:29	0.020	20.000		
2	24-Feb	6:51:29	0.019	19.000		
3	24-Feb	6:52:29	0.016	16.000		
4	24-Feb	6:53:29	0.017	17.000		
5	24-Feb	6:54:29	0.014	14.000		
6	24-Feb	6:55:29	0.010	10.000		
7	24-Feb	6:56:29	0.024	24.000		
8	24-Feb	6:57:29	0.018	18.000	0.041	40.867
9	24-Feb	6:58:29	0.011	11.000		
10	24-Feb	6:59:29	0.013	13.000		
11	24-Feb	7:00:29	0.019	19.000		
12	24-Feb	7:01:29	0.058	58.000		
13	24-Feb	7:02:29	0.042	42.000		
14	24-Feb	7:03:29	0.103	103.000		
15	24-Feb	7:04:29	0.229	229.000		
16	24-Feb	7:05:29	0.246	246.000		
17	24-Feb	7:06:29	0.426	426.000		
18	24-Feb	7:07:29	0.705	705.000		
19	24-Feb	7:08:29	0.116	116.000		
20	24-Feb	7:09:29	0.078	78.000		
21	24-Feb	7:10:29	0.093	93.000		
22	24-Feb	7:11:29	0.079	79.000		
23	24-Feb	7:12:29	0.064	64.000	0.148	147.933
24	24-Feb	7:13:29	0.058	58.000		
25	24-Feb	7:14:29	0.070	70.000		
26	24-Feb	7:15:29	0.061	61.000		
27	24-Feb	7:16:29	0.058	58.000		
28	24-Feb	7:17:29	0.072	72.000		
29	24-Feb	7:18:29	0.047	47.000		
30	24-Feb	7:19:29	0.046	46.000		
31	24-Feb	7:20:29	0.041	41.000		
32	24-Feb	7:21:29	0.048	48.000		
33	24-Feb	7:22:29	0.034	34.000		
34	24-Feb	7:23:29	0.029	29.000		
35	24-Feb	7:24:29	0.031	31.000		
36	24-Feb	7:25:29	0.030	30.000		
37	24-Feb	7:26:29	0.036	36.000		
38	24-Feb	7:27:29	0.039	39.000	0.057	57.067
39	24-Feb	7:28:29	0.030	30.000		
40	24-Feb	7:29:29	0.034	34.000		
41	24-Feb	7:30:29	0.209	209.000		
42	24-Feb	7:31:29	0.128	128.000		
43	24-Feb	7:32:29	0.080	80.000		
44	24-Feb	7:33:29	0.034	34.000		
45	24-Feb	7:34:29	0.053	53.000		
46	24-Feb	7:35:29	0.494	494.000		
47	24-Feb	7:36:29	0.190	190.000		
48	24-Feb	7:37:29	0.183	183.000		
49	24-Feb	7:38:29	0.429	429.000		
50	24-Feb	7:39:29	0.671	671.000		
51	24-Feb	7:40:29	0.316	316.000		
52	24-Feb	7:41:29	0.217	217.000		
53	24-Feb	7:42:29	0.139	139.000	0.222	221.600
54	24-Feb	7:43:29	0.106	106.000		
55	24-Feb	7:44:29	0.134	134.000		
56	24-Feb	7:45:29	0.089	89.000		
57	24-Feb	7:46:29	0.087	87.000		
58	24-Feb	7:47:29	0.082	82.000		
59	24-Feb	7:48:29	0.101	101.000		
60	24-Feb	7:49:29	0.086	86.000		
61	24-Feb	7:50:29	0.086	86.000		
62	24-Feb	7:51:29	0.116	116.000		
63	24-Feb	7:52:29	0.177	177.000		
64	24-Feb	7:53:29	0.198	198.000		
65	24-Feb	7:54:29	0.216	216.000		
66	24-Feb	7:55:29	0.216	216.000		
67	24-Feb	7:56:29	0.151	151.000		
68	24-Feb	7:57:29	0.142	142.000	0.125	124.800
69	24-Feb	7:58:29	0.125	125.000		
70	24-Feb	7:59:29	0.101	101.000		
71	24-Feb	8:00:29	0.084	84.000		
72	24-Feb	8:01:29	0.063	63.000		
73	24-Feb	8:02:29	0.073	73.000		
74	24-Feb	8:03:29	0.058	58.000		
75	24-Feb	8:04:29	0.066	66.000		

Point	Date	Time	1 Minute Average Concentration (mg/m^3)	1 Minute Average Concentration (ug/m^3)	15 Minute Average Concentration (mg/m^3)	15 Minute Average Concentration (ug/m^3)
76	24-Feb	8:05:29	0.162	162.000		
77	24-Feb	8:06:29	0.146	146.000		
78	24-Feb	8:07:29	0.138	138.000		
79	24-Feb	8:08:29	0.125	125.000		
80	24-Feb	8:09:29	0.121	121.000		
81	24-Feb	8:10:29	0.102	102.000		
82	24-Feb	8:11:29	0.097	97.000		
83	24-Feb	8:12:29	0.096	96.000	0.092	92.133
84	24-Feb	8:13:29	0.084	84.000		
85	24-Feb	8:14:29	0.072	72.000		
86	24-Feb	8:15:29	0.054	54.000		
87	24-Feb	8:16:29	0.042	42.000		
88	24-Feb	8:17:29	0.041	41.000		
89	24-Feb	8:18:29	0.059	59.000		
90	24-Feb	8:19:29	0.043	43.000		
91	24-Feb	8:20:29	0.039	39.000		
92	24-Feb	8:21:29	0.044	44.000		
93	24-Feb	8:22:29	0.054	54.000		
94	24-Feb	8:23:29	0.140	140.000		
95	24-Feb	8:24:29	0.107	107.000		
96	24-Feb	8:25:29	0.107	107.000		
97	24-Feb	8:26:29	0.088	88.000		
98	24-Feb	8:27:29	0.103	103.000	0.077	77.067
99	24-Feb	8:28:29	0.088	88.000		
100	24-Feb	8:29:29	0.077	77.000		
101	24-Feb	8:30:29	0.054	54.000		
102	24-Feb	8:31:29	0.070	70.000		
103	24-Feb	8:32:29	0.046	46.000		
104	24-Feb	8:33:29	0.037	37.000		
105	24-Feb	8:34:29	0.102	102.000		
106	24-Feb	8:35:29	0.118	118.000		
107	24-Feb	8:36:29	0.119	119.000		
108	24-Feb	8:37:29	0.100	100.000		
109	24-Feb	8:38:29	0.081	81.000		
110	24-Feb	8:39:29	0.086	86.000		
111	24-Feb	8:40:29	0.061	61.000		
112	24-Feb	8:41:29	0.069	69.000		
113	24-Feb	8:42:29	0.213	213.000	0.105	105.067
114	24-Feb	8:43:29	0.107	107.000		
115	24-Feb	8:44:29	0.120	120.000		
116	24-Feb	8:45:29	0.125	125.000		
117	24-Feb	8:46:29	0.115	115.000		
118	24-Feb	8:47:29	0.117	117.000		
119	24-Feb	8:48:29	0.089	89.000		
120	24-Feb	8:49:29	0.056	56.000		
121	24-Feb	8:50:29	0.061	61.000		
122	24-Feb	8:51:29	0.072	72.000		
123	24-Feb	8:52:29	0.051	51.000		
124	24-Feb	8:53:29	0.049	49.000		
125	24-Feb	8:54:29	0.072	72.000		
126	24-Feb	8:55:29	0.153	153.000		
127	24-Feb	8:56:29	0.086	86.000		
128	24-Feb	8:57:29	0.106	106.000	0.084	83.733
129	24-Feb	8:58:29	0.099	99.000		
130	24-Feb	8:59:29	0.088	88.000		
131	24-Feb	9:00:29	0.095	95.000		
132	24-Feb	9:01:29	0.092	92.000		
133	24-Feb	9:02:29	0.088	88.000		
134	24-Feb	9:03:29	0.072	72.000		
135	24-Feb	9:04:29	0.072	72.000		
136	24-Feb	9:05:29	0.066	66.000		
137	24-Feb	9:06:29	0.164	164.000		
138	24-Feb	9:07:29	0.172	172.000		
139	24-Feb	9:08:29	0.135	135.000		
140	24-Feb	9:09:29	0.105	105.000		
141	24-Feb	9:10:29	0.113	113.000		
142	24-Feb	9:11:29	0.082	82.000		
143	24-Feb	9:12:29	0.072	72.000	0.121	120.667
144	24-Feb	9:13:29	0.164	164.000		
145	24-Feb	9:14:29	0.136	136.000		
146	24-Feb	9:15:29	0.135	135.000		
147	24-Feb	9:16:29	0.142	142.000		
148	24-Feb	9:17:29	0.112	112.000		
149	24-Feb	9:18:29	0.107	107.000		
150	24-Feb	9:19:29	0.105	105.000		
151	24-Feb	9:20:29	0.083	83.000		
152	24-Feb	9:21:29	0.063	63.000		
153	24-Feb	9:22:29	0.059	59.000		
154	24-Feb	9:23:29	0.108	108.000		
155	24-Feb	9:24:29	0.279	279.000		
156	24-Feb	9:25:29	0.120	120.000		
157	24-Feb	9:26:29	0.098	98.000		
158	24-Feb	9:27:29	0.068	68.000	0.111	111.400
159	24-Feb	9:28:29	0.096	96.000		
160	24-Feb	9:29:29	0.080	80.000		
161	24-Feb	9:30:29	0.050	50.000		
162	24-Feb	9:31:29	0.180	180.000		
163	24-Feb	9:32:29	0.133	133.000		
164	24-Feb	9:33:29	0.137	137.000		
165	24-Feb	9:34:29	0.117	117.000		

Point	Date	Time	1 Minute Average Concentration (mg/m^3)	1 Minute Average Concentration (ug/m^3)	15 Minute Average Concentration (mg/m^3)	15 Minute Average Concentration (ug/m^3)
166	24-Feb	9:35:29	0.110	110.000		
167	24-Feb	9:36:29	0.097	97.000		
168	24-Feb	9:37:29	0.106	106.000		
169	24-Feb	9:38:29	0.120	120.000		
170	24-Feb	9:39:29	0.077	77.000		
171	24-Feb	9:40:29	0.086	86.000		
172	24-Feb	9:41:29	0.074	74.000		
173	24-Feb	9:42:29	0.128	128.000	0.112	111.667
174	24-Feb	9:43:29	0.166	166.000		
175	24-Feb	9:44:29	0.182	182.000		
176	24-Feb	9:45:29	0.128	128.000		
177	24-Feb	9:46:29	0.121	121.000		
178	24-Feb	9:47:29	0.124	124.000		
179	24-Feb	9:48:29	0.081	81.000		
180	24-Feb	9:49:29	0.075	75.000		
181	24-Feb	9:50:29	0.169	169.000		
182	24-Feb	9:51:29	0.138	138.000		
183	24-Feb	9:52:29	0.167	167.000		
184	24-Feb	9:53:29	0.154	154.000		
185	24-Feb	9:54:29	0.110	110.000		
186	24-Feb	9:55:29	0.112	112.000		
187	24-Feb	9:56:29	0.100	100.000		
188	24-Feb	9:57:29	0.079	79.000	0.134	133.733
189	24-Feb	9:58:29	0.130	130.000		
190	24-Feb	9:59:29	0.112	112.000		
191	24-Feb	10:00:29	0.094	94.000		
192	24-Feb	10:01:29	0.056	56.000		
193	24-Feb	10:02:29	0.113	113.000		
194	24-Feb	10:03:29	0.253	253.000		
195	24-Feb	10:04:29	0.219	219.000		
196	24-Feb	10:05:29	0.118	118.000		
197	24-Feb	10:06:29	0.149	149.000		
198	24-Feb	10:07:29	0.164	164.000		
199	24-Feb	10:08:29	0.232	232.000		
200	24-Feb	10:09:29	0.184	184.000		
201	24-Feb	10:10:29	0.134	134.000		
202	24-Feb	10:11:29	0.103	103.000		
203	24-Feb	10:12:29	0.110	110.000	0.145	144.667
204	24-Feb	10:13:29	0.153	153.000		
205	24-Feb	10:14:29	0.137	137.000		
206	24-Feb	10:15:29	0.195	195.000		
207	24-Feb	10:16:29	0.171	171.000		
208	24-Feb	10:17:29	0.127	127.000		
209	24-Feb	10:18:29	0.117	117.000		
210	24-Feb	10:19:29	0.076	76.000		
211	24-Feb	10:20:29	0.053	53.000		
212	24-Feb	10:21:29	0.109	109.000		
213	24-Feb	10:22:29	0.172	172.000		
214	24-Feb	10:23:29	0.154	154.000		
215	24-Feb	10:24:29	0.162	162.000		
216	24-Feb	10:25:29	0.120	120.000		
217	24-Feb	10:26:29	0.129	129.000		
218	24-Feb	10:27:29	0.119	119.000	0.101	101.333
219	24-Feb	10:28:29	0.079	79.000		
220	24-Feb	10:29:29	0.065	65.000		
221	24-Feb	10:30:29	0.069	69.000		
222	24-Feb	10:31:29	0.073	73.000		
223	24-Feb	10:32:29	0.059	59.000		
224	24-Feb	10:33:29	0.042	42.000		
225	24-Feb	10:34:29	0.115	115.000		
226	24-Feb	10:35:29	0.115	115.000		
227	24-Feb	10:36:29	0.080	80.000		
228	24-Feb	10:37:29	0.090	90.000		
229	24-Feb	10:38:29	0.119	119.000		
230	24-Feb	10:39:29	0.110	110.000		
231	24-Feb	10:40:29	0.062	62.000		
232	24-Feb	10:41:29	0.085	85.000		
233	24-Feb	10:42:29	0.127	127.000	0.095	94.800
234	24-Feb	10:43:29	0.116	116.000		
235	24-Feb	10:44:29	0.111	111.000		
236	24-Feb	10:45:29	0.087	87.000		
237	24-Feb	10:46:29	0.053	53.000		
238	24-Feb	10:47:29	0.061	61.000		
239	24-Feb	10:48:29	0.099	99.000		
240	24-Feb	10:49:29	0.107	107.000		
241	24-Feb	10:50:29	0.103	103.000		
242	24-Feb	10:51:29	0.095	95.000		
243	24-Feb	10:52:29	0.089	89.000		
244	24-Feb	10:53:29	0.097	97.000		
245	24-Feb	10:54:29	0.085	85.000		
246	24-Feb	10:55:29	0.071	71.000		
247	24-Feb	10:56:29	0.081	81.000		
248	24-Feb	10:57:29	0.081	81.000	0.090	89.533
249	24-Feb	10:58:29	0.085	85.000		
250	24-Feb	10:59:29	0.106	106.000		
251	24-Feb	11:00:29	0.111	111.000		
252	24-Feb	11:01:29	0.077	77.000		
253	24-Feb	11:02:29	0.092	92.000		
254	24-Feb	11:03:29	0.087	87.000		
255	24-Feb	11:04:29	0.083	83.000		

Point	Date	Time	1 Minute Average Concentration (mg/m³)	1 Minute Average Concentration (ug/m³)	15 Minute Average Concentration (mg/m³)	15 Minute Average Concentration (ug/m³)
256	24-Feb	11:05:29	0.083	83.000		
257	24-Feb	11:06:29	0.068	68.000		
258	24-Feb	11:07:29	0.049	49.000		
259	24-Feb	11:08:29	0.055	55.000		
260	24-Feb	11:09:29	0.057	57.000		
261	24-Feb	11:10:29	0.050	50.000		
262	24-Feb	11:11:29	0.048	48.000		
263	24-Feb	11:12:29	0.066	66.000	0.075	74.667
264	24-Feb	11:13:29	0.074	74.000		
265	24-Feb	11:14:29	0.089	89.000		
266	24-Feb	11:15:29	0.077	77.000		
267	24-Feb	11:16:29	0.100	100.000		
268	24-Feb	11:17:29	0.098	98.000		
269	24-Feb	11:18:29	0.097	97.000		
270	24-Feb	11:19:29	0.109	109.000		
271	24-Feb	11:20:29	0.065	65.000		
272	24-Feb	11:21:29	0.060	60.000		
273	24-Feb	11:22:29	0.091	91.000		
274	24-Feb	11:23:29	0.085	85.000		
275	24-Feb	11:24:29	0.098	98.000		
276	24-Feb	11:25:29	0.101	101.000		
277	24-Feb	11:26:29	0.097	97.000		
278	24-Feb	11:27:29	0.096	96.000	0.085	84.867
279	24-Feb	11:28:29	0.075	75.000		
280	24-Feb	11:29:29	0.072	72.000		
281	24-Feb	11:30:29	0.077	77.000		
282	24-Feb	11:31:29	0.097	97.000		
283	24-Feb	11:32:29	0.084	84.000		
284	24-Feb	11:33:29	0.095	95.000		
285	24-Feb	11:34:29	0.080	80.000		
286	24-Feb	11:35:29	0.100	100.000		
287	24-Feb	11:36:29	0.088	88.000		
288	24-Feb	11:37:29	0.068	68.000		
289	24-Feb	11:38:29	0.085	85.000		
290	24-Feb	11:39:29	0.090	90.000		
291	24-Feb	11:40:29	0.097	97.000		
292	24-Feb	11:41:29	0.068	68.000		
293	24-Feb	11:42:29	0.077	77.000	0.079	78.800
294	24-Feb	11:43:29	0.085	85.000		
295	24-Feb	11:44:29	0.066	66.000		
296	24-Feb	11:45:29	0.071	71.000		
297	24-Feb	11:46:29	0.080	80.000		
298	24-Feb	11:47:29	0.087	87.000		
299	24-Feb	11:48:29	0.059	59.000		
300	24-Feb	11:49:29	0.061	61.000		
301	24-Feb	11:50:29	0.052	52.000		
302	24-Feb	11:51:29	0.051	51.000		
303	24-Feb	11:52:29	0.048	48.000		
304	24-Feb	11:53:29	0.055	55.000		
305	24-Feb	11:54:29	0.051	51.000		
306	24-Feb	11:55:29	0.050	50.000		
307	24-Feb	11:56:29	0.042	42.000		
308	24-Feb	11:57:29	0.047	47.000	0.046	45.533
309	24-Feb	11:58:29	0.044	44.000		
310	24-Feb	11:59:29	0.041	41.000		
311	24-Feb	12:00:29	0.041	41.000		
312	24-Feb	12:01:29	0.039	39.000		
313	24-Feb	12:02:29	0.041	41.000		
314	24-Feb	12:03:29	0.045	45.000		
315	24-Feb	12:04:29	0.036	36.000		
316	24-Feb	12:05:29	0.034	34.000		
317	24-Feb	12:06:29	0.035	35.000		
318	24-Feb	12:07:29	0.041	41.000		
319	24-Feb	12:08:29	0.032	32.000		
320	24-Feb	12:09:29	0.034	34.000		
321	24-Feb	12:10:29	0.035	35.000		
322	24-Feb	12:11:29	0.034	34.000		
323	24-Feb	12:12:29	0.032	32.000	0.033	33.133
324	24-Feb	12:13:29	0.032	32.000		
325	24-Feb	12:14:29	0.032	32.000		
326	24-Feb	12:15:29	0.030	30.000		
327	24-Feb	12:16:29	0.031	31.000		
328	24-Feb	12:17:29	0.031	31.000		
329	24-Feb	12:18:29	0.031	31.000		
330	24-Feb	12:19:29	0.033	33.000		
331	24-Feb	12:20:29	0.029	29.000		
332	24-Feb	12:21:29	0.029	29.000		
333	24-Feb	12:22:29	0.036	36.000		
334	24-Feb	12:23:29	0.032	32.000		
335	24-Feb	12:24:29	0.034	34.000		
336	24-Feb	12:25:29	0.028	28.000		
337	24-Feb	12:26:29	0.027	27.000		
338	24-Feb	12:27:29	0.031	31.000	0.030	29.800
339	24-Feb	12:28:29	0.027	27.000		
340	24-Feb	12:29:29	0.031	31.000		
341	24-Feb	12:30:29	0.034	34.000		
342	24-Feb	12:31:29	0.030	30.000		
343	24-Feb	12:32:29	0.026	26.000		
344	24-Feb	12:33:29	0.027	27.000		
345	24-Feb	12:34:29	0.026	26.000		

Point	Date	Time	1 Minute Average Concentration (mg/m^3)	1 Minute Average Concentration (ug/m^3)	15 Minute Average Concentration (mg/m^3)	15 Minute Average Concentration (ug/m^3)
346	24-Feb	12:35:29	0.025	25.000		
347	24-Feb	12:36:29	0.030	30.000		
348	24-Feb	12:37:29	0.085	85.000		
349	24-Feb	12:38:29	0.053	53.000		
350	24-Feb	12:39:29	0.108	108.000		
351	24-Feb	12:40:29	0.087	87.000		
352	24-Feb	12:41:29	0.082	82.000		
353	24-Feb	12:42:29	0.101	101.000	0.084	83.800
354	24-Feb	12:43:29	0.081	81.000		
355	24-Feb	12:44:29	0.104	104.000		
356	24-Feb	12:45:29	0.104	104.000		
357	24-Feb	12:46:29	0.081	81.000		
358	24-Feb	12:47:29	0.114	114.000		
359	24-Feb	12:48:29	0.096	96.000		
360	24-Feb	12:49:29	0.106	106.000		
361	24-Feb	12:50:29	0.093	93.000		
362	24-Feb	12:51:29	0.082	82.000		
363	24-Feb	12:52:29	0.091	91.000		
364	24-Feb	12:53:29	0.109	109.000		
365	24-Feb	12:54:29	0.119	119.000		
366	24-Feb	12:55:29	0.097	97.000		
367	24-Feb	12:56:29	0.088	88.000		
368	24-Feb	12:57:29	0.101	101.000	0.097	96.533
369	24-Feb	12:58:29	0.104	104.000		
370	24-Feb	12:59:29	0.093	93.000		
371	24-Feb	13:00:29	0.091	91.000		
372	24-Feb	13:01:29	0.080	80.000		
373	24-Feb	13:02:29	0.082	82.000		
374	24-Feb	13:03:29	0.110	110.000		
375	24-Feb	13:04:29	0.108	108.000		
376	24-Feb	13:05:29	0.096	96.000		
377	24-Feb	13:06:29	0.095	95.000		
378	24-Feb	13:07:29	0.094	94.000		
379	24-Feb	13:08:29	0.100	100.000		
380	24-Feb	13:09:29	0.103	103.000		
381	24-Feb	13:10:29	0.096	96.000		
382	24-Feb	13:11:29	0.102	102.000		
383	24-Feb	13:12:29	0.098	98.000	0.124	124.200
384	24-Feb	13:13:29	0.098	98.000		
385	24-Feb	13:14:29	0.079	79.000		
386	24-Feb	13:15:29	0.167	167.000		
387	24-Feb	13:16:29	0.201	201.000		
388	24-Feb	13:17:29	0.190	190.000		
389	24-Feb	13:18:29	0.194	194.000		
390	24-Feb	13:19:29	0.150	150.000		
391	24-Feb	13:20:29	0.161	161.000		
392	24-Feb	13:21:29	0.104	104.000		
393	24-Feb	13:22:29	0.138	138.000		
394	24-Feb	13:23:29	0.123	123.000		
395	24-Feb	13:24:29	0.141	141.000		
396	24-Feb	13:25:29	0.113	113.000		
397	24-Feb	13:26:29	0.110	110.000		
398	24-Feb	13:27:29	0.110	110.000	0.122	121.933
399	24-Feb	13:28:29	0.152	152.000		
400	24-Feb	13:29:29	0.117	117.000		
401	24-Feb	13:30:29	0.126	126.000		
402	24-Feb	13:31:29	0.116	116.000		
403	24-Feb	13:32:29	0.101	101.000		
404	24-Feb	13:33:29	0.114	114.000		
405	24-Feb	13:34:29	0.103	103.000		
406	24-Feb	13:35:29	0.104	104.000		
407	24-Feb	13:36:29	0.098	98.000		
408	24-Feb	13:37:29	0.086	86.000		
409	24-Feb	13:38:29	0.105	105.000		
410	24-Feb	13:39:29	0.121	121.000		
411	24-Feb	13:40:29	0.114	114.000		
412	24-Feb	13:41:29	0.098	98.000		
413	24-Feb	13:42:29	0.099	99.000	0.097	97.133
414	24-Feb	13:43:29	0.087	87.000		
415	24-Feb	13:44:29	0.088	88.000		
416	24-Feb	13:45:29	0.089	89.000		
417	24-Feb	13:46:29	0.133	133.000		
418	24-Feb	13:47:29	0.077	77.000		
419	24-Feb	13:48:29	0.080	80.000		
420	24-Feb	13:49:29	0.078	78.000		
421	24-Feb	13:50:29	0.083	83.000		
422	24-Feb	13:51:29	0.076	76.000		
423	24-Feb	13:52:29	0.068	68.000		
424	24-Feb	13:53:29	0.113	113.000		
425	24-Feb	13:54:29	0.102	102.000		
426	24-Feb	13:55:29	0.094	94.000		
427	24-Feb	13:56:29	0.096	96.000	0.087	86.571
428	24-Feb	13:57:29	0.112	112.000		
429	24-Feb	13:58:29	0.092	92.000		
430	24-Feb	13:59:29	0.093	93.000		
431	24-Feb	14:00:29	0.069	69.000		
432	24-Feb	14:01:29	0.073	73.000		
433	24-Feb	14:02:29	0.074	74.000		
434	24-Feb	14:03:29	0.067	67.000		

Highlighted cells indicate exceedance of 150 ug/m^3 over average background concentration

Highlighted thick bordered cells indicate exceedance of 150 ug/m^3 over maximum background concentration

Community Air Monitoring Data. Volatile Organic Compounds Near Walkway. February 24, 2011.

Instrument:	MiniRAE 2000	Serial Number:	014075
User ID:	00000001	Site ID:	00000373
Data Points:	435	Sample Period:	60 sec
Last Calibration:	2/18/2011 8:45	Gas Name:	Isobutylene
Range of 15 Minute Average Background Concentrations:	4.2 ppm to 4.7 ppm	Background Time Interval:	6:50 - 7:19

	Avg(ppm)	Max(ppm)
Measurement Type:		
High Alarm Levels:	100	100
Low Alarm Levels:	50	50

Line#	Date	Time	1 Minute Average (ppm)	Alarm	1 Minute Maximum (ppm)	Alarm	15 Minute Average (ppm)
1	2/24/2011	6:50	4.3		5.4		
2	2/24/2011	6:51	4.8		5.5		
3	2/24/2011	6:52	4.8		5.0		
4	2/24/2011	6:53	4.8		4.9		
5	2/24/2011	6:54	4.9		5.2		
6	2/24/2011	6:55	4.9		5.1		
7	2/24/2011	6:56	4.9		5.2		
8	2/24/2011	6:57	5.0		5.3		4.7
9	2/24/2011	6:58	4.8		5.2		
10	2/24/2011	6:59	4.9		5.2		
11	2/24/2011	7:00	4.3		4.8		
12	2/24/2011	7:01	4.8		5.0		
13	2/24/2011	7:02	5.0		5.3		
14	2/24/2011	7:03	4.7		5.1		
15	2/24/2011	7:04	4.2		4.8		
16	2/24/2011	7:05	4.4		6.5		
17	2/24/2011	7:06	4.1		4.3		
18	2/24/2011	7:07	4.3		4.6		
19	2/24/2011	7:08	4.4		4.7		
20	2/24/2011	7:09	4.5		4.7		
21	2/24/2011	7:10	4.4		4.8		
22	2/24/2011	7:11	4.4		4.7		
23	2/24/2011	7:12	4.4		4.6		4.2
24	2/24/2011	7:13	4.3		4.8		
25	2/24/2011	7:14	4.2		4.5		
26	2/24/2011	7:15	4.1		4.3		
27	2/24/2011	7:16	4.1		4.2		
28	2/24/2011	7:17	4.0		4.2		
29	2/24/2011	7:18	4.0		4.2		
30	2/24/2011	7:19	3.9		4.1		
31	2/24/2011	7:20	4.0		4.3		
32	2/24/2011	7:21	4.1		4.5		
33	2/24/2011	7:22	3.8		4.0		
34	2/24/2011	7:23	3.8		4.2		
35	2/24/2011	7:24	4.0		4.4		
36	2/24/2011	7:25	3.9		4.2		
37	2/24/2011	7:26	3.8		4.1		
38	2/24/2011	7:27	3.9		4.4		3.8
39	2/24/2011	7:28	3.9		4.4		
40	2/24/2011	7:29	4.0		4.4		
41	2/24/2011	7:30	3.8		4.0		
42	2/24/2011	7:31	3.7		4.0		
43	2/24/2011	7:32	3.0		3.3		
44	2/24/2011	7:33	3.2		3.9		
45	2/24/2011	7:34	3.4		4.1		
46	2/24/2011	7:35	3.3		4.1		
47	2/24/2011	7:36	2.9		3.0		
48	2/24/2011	7:37	2.8		3.0		
49	2/24/2011	7:38	2.8		3.0		
50	2/24/2011	7:39	2.8		3.0		
51	2/24/2011	7:40	2.8		2.9		
52	2/24/2011	7:41	3.0		3.2		
53	2/24/2011	7:42	3.1		3.2		3.1
54	2/24/2011	7:43	3.3		3.7		
55	2/24/2011	7:44	3.4		3.7		
56	2/24/2011	7:45	3.3		3.7		
57	2/24/2011	7:46	3.5		4.2		
58	2/24/2011	7:47	3.4		4.0		
59	2/24/2011	7:48	3.4		4.0		
60	2/24/2011	7:49	3.2		3.4		
61	2/24/2011	7:50	3.1		3.4		
62	2/24/2011	7:51	3.2		3.4		
63	2/24/2011	7:52	3.2		3.4		
64	2/24/2011	7:53	3.3		3.4		
65	2/24/2011	7:54	3.4		3.6		
66	2/24/2011	7:55	3.4		3.6		
67	2/24/2011	7:56	3.4		3.5		
68	2/24/2011	7:57	3.5		3.7		3.5
69	2/24/2011	7:58	3.8		4.0		
70	2/24/2011	7:59	3.8		4.0		
71	2/24/2011	8:00	3.6		3.8		
72	2/24/2011	8:01	3.6		4.1		
73	2/24/2011	8:02	3.7		3.9		
74	2/24/2011	8:03	3.9		4.0		
75	2/24/2011	8:04	4.1		4.6		

Line#	Date	Time	1 Minute Average (ppm)	Alarm	1 Minute Maximum (ppm)	Alarm	15 Minute Average (ppm)
76	2/24/2011	8:05	4.0		4.3		
77	2/24/2011	8:06	3.9		4.1		
78	2/24/2011	8:07	4.0		4.2		
79	2/24/2011	8:08	4.1		4.5		
80	2/24/2011	8:09	4.3		4.6		
81	2/24/2011	8:10	4.3		4.7		
82	2/24/2011	8:11	4.4		4.9		
83	2/24/2011	8:12	4.7		5.4		4.5
84	2/24/2011	8:13	5.4		6.4		
85	2/24/2011	8:14	4.9		5.8		
86	2/24/2011	8:15	4.8		5.8		
87	2/24/2011	8:16	4.2		4.8		
88	2/24/2011	8:17	4.2		5.7		
89	2/24/2011	8:18	4.7		6.3		
90	2/24/2011	8:19	5.3		6.3		
91	2/24/2011	8:20	5.1		5.8		
92	2/24/2011	8:21	5.5		5.9		
93	2/24/2011	8:22	5.2		6.0		
94	2/24/2011	8:23	4.7		5.0		
95	2/24/2011	8:24	4.6		5.3		
96	2/24/2011	8:25	4.4		4.9		
97	2/24/2011	8:26	4.3		4.5		
98	2/24/2011	8:27	4.2		4.4		4.6
99	2/24/2011	8:28	4.1		4.6		
100	2/24/2011	8:29	4.4		5.3		
101	2/24/2011	8:30	4.2		5.0		
102	2/24/2011	8:31	4.4		4.7		
103	2/24/2011	8:32	4.6		5.2		
104	2/24/2011	8:33	4.5		5.0		
105	2/24/2011	8:34	4.4		5.0		
106	2/24/2011	8:35	4.4		5.2		
107	2/24/2011	8:36	4.0		4.4		
108	2/24/2011	8:37	4.3		5.2		
109	2/24/2011	8:38	4.2		4.7		
110	2/24/2011	8:39	4.2		4.6		
111	2/24/2011	8:40	4.1		5.0		
112	2/24/2011	8:41	4.2		5.0		
113	2/24/2011	8:42	4.0		4.5		4.1
114	2/24/2011	8:43	3.9		4.3		
115	2/24/2011	8:44	4.0		4.4		
116	2/24/2011	8:45	3.9		4.3		
117	2/24/2011	8:46	3.9		4.1		
118	2/24/2011	8:47	3.9		4.5		
119	2/24/2011	8:48	4.0		4.6		
120	2/24/2011	8:49	4.3		4.7		
121	2/24/2011	8:50	4.2		5.0		
122	2/24/2011	8:51	4.0		4.2		
123	2/24/2011	8:52	3.9		4.0		
124	2/24/2011	8:53	4.4		5.1		
125	2/24/2011	8:54	4.3		5.4		
126	2/24/2011	8:55	4.1		4.4		
127	2/24/2011	8:56	3.7		4.0		
128	2/24/2011	8:57	3.6		3.8		3.9
129	2/24/2011	8:58	3.8		4.1		
130	2/24/2011	8:59	3.6		3.8		
131	2/24/2011	9:00	3.8		4.0		
132	2/24/2011	9:01	3.8		4.2		
133	2/24/2011	9:02	3.8		4.1		
134	2/24/2011	9:03	3.6		3.8		
135	2/24/2011	9:04	4.0		4.3		
136	2/24/2011	9:05	3.9		4.1		
137	2/24/2011	9:06	4.0		4.3		
138	2/24/2011	9:07	3.9		4.5		
139	2/24/2011	9:08	3.8		4.0		
140	2/24/2011	9:09	3.8		4.0		
141	2/24/2011	9:10	3.8		4.1		
142	2/24/2011	9:11	4.0		4.2		
143	2/24/2011	9:12	3.9		4.4		4.1
144	2/24/2011	9:13	4.5		4.8		
145	2/24/2011	9:14	4.7		5.3		
146	2/24/2011	9:15	4.1		4.7		
147	2/24/2011	9:16	4.1		4.3		
148	2/24/2011	9:17	4.1		4.3		
149	2/24/2011	9:18	4.2		4.5		
150	2/24/2011	9:19	4.2		4.5		
151	2/24/2011	9:20	4.3		4.6		
152	2/24/2011	9:21	4.4		5.0		
153	2/24/2011	9:22	5.0		5.2		
154	2/24/2011	9:23	4.8		5.1		
155	2/24/2011	9:24	4.7		4.9		
156	2/24/2011	9:25	4.5		5.0		
157	2/24/2011	9:26	3.7		4.1		
158	2/24/2011	9:27	3.5		3.9		4.1
159	2/24/2011	9:28	3.5		3.8		
160	2/24/2011	9:29	3.6		3.8		
161	2/24/2011	9:30	3.8		4.5		
162	2/24/2011	9:31	4.2		4.6		
163	2/24/2011	9:32	3.7		4.2		
164	2/24/2011	9:33	3.6		4.1		
165	2/24/2011	9:34	3.7		4.3		

Line#	Date	Time	1 Minute Average (ppm)	Alarm	1 Minute Maximum (ppm)	Alarm	15 Minute Average (ppm)
166	2/24/2011	9:35	3.8		4.1		
167	2/24/2011	9:36	4.1		4.4		
168	2/24/2011	9:37	4.2		5.0		
169	2/24/2011	9:38	3.9		4.3		
170	2/24/2011	9:39	4.0		4.8		
171	2/24/2011	9:40	4.2		4.5		
172	2/24/2011	9:41	4.3		4.6		
173	2/24/2011	9:42	4.6		5.9		4.1
174	2/24/2011	9:43	4.2		5.0		
175	2/24/2011	9:44	4.0		4.3		
176	2/24/2011	9:45	3.9		4.1		
177	2/24/2011	9:46	3.8		4.0		
178	2/24/2011	9:47	3.8		4.1		
179	2/24/2011	9:48	4.0		4.2		
180	2/24/2011	9:49	4.0		4.2		
181	2/24/2011	9:50	4.0		4.4		
182	2/24/2011	9:51	4.0		5.0		
183	2/24/2011	9:52	4.0		4.3		
184	2/24/2011	9:53	3.9		4.2		
185	2/24/2011	9:54	3.9		4.1		
186	2/24/2011	9:55	3.9		4.1		
187	2/24/2011	9:56	3.9		4.1		
188	2/24/2011	9:57	4.0		4.3		4.1
189	2/24/2011	9:58	4.4		5.5		
190	2/24/2011	9:59	3.9		4.3		
191	2/24/2011	10:00	4.2		4.5		
192	2/24/2011	10:01	4.3		5.3		
193	2/24/2011	10:02	4.6		5.8		
194	2/24/2011	10:03	4.6		5.1		
195	2/24/2011	10:04	4.6		4.8		
196	2/24/2011	10:05	4.5		4.7		
197	2/24/2011	10:06	4.5		4.7		
198	2/24/2011	10:07	4.4		4.9		
199	2/24/2011	10:08	4.4		4.7		
200	2/24/2011	10:09	4.2		4.5		
201	2/24/2011	10:10	4.2		4.5		
202	2/24/2011	10:11	4.2		4.6		
203	2/24/2011	10:12	4.3		4.7		4.3
204	2/24/2011	10:13	4.6		4.9		
205	2/24/2011	10:14	4.5		4.8		
206	2/24/2011	10:15	4.3		4.5		
207	2/24/2011	10:16	4.3		4.6		
208	2/24/2011	10:17	4.2		4.6		
209	2/24/2011	10:18	4.1		4.3		
210	2/24/2011	10:19	4.1		4.4		
211	2/24/2011	10:20	4.0		4.1		
212	2/24/2011	10:21	4.1		4.8		
213	2/24/2011	10:22	4.1		5.0		
214	2/24/2011	10:23	4.1		4.3		
215	2/24/2011	10:24	4.1		4.3		
216	2/24/2011	10:25	4.1		4.4		
217	2/24/2011	10:26	4.0		4.3		
218	2/24/2011	10:27	3.9		4.2		4.1
219	2/24/2011	10:28	4.0		4.2		
220	2/24/2011	10:29	4.1		4.5		
221	2/24/2011	10:30	4.1		4.4		
222	2/24/2011	10:31	4.1		4.3		
223	2/24/2011	10:32	3.9		4.1		
224	2/24/2011	10:33	4.3		4.7		
225	2/24/2011	10:34	4.2		4.8		
226	2/24/2011	10:35	4.0		4.6		
227	2/24/2011	10:36	4.0		4.6		
228	2/24/2011	10:37	4.1		4.4		
229	2/24/2011	10:38	4.3		4.5		
230	2/24/2011	10:39	4.4		4.6		
231	2/24/2011	10:40	4.3		4.9		
232	2/24/2011	10:41	5.2		5.6		
233	2/24/2011	10:42	4.5		5.5		4.4
234	2/24/2011	10:43	4.5		4.7		
235	2/24/2011	10:44	4.5		4.7		
236	2/24/2011	10:45	4.5		4.8		
237	2/24/2011	10:46	4.5		4.9		
238	2/24/2011	10:47	4.7		5.7		
239	2/24/2011	10:48	4.3		5.0		
240	2/24/2011	10:49	4.3		4.7		
241	2/24/2011	10:50	4.1		4.5		
242	2/24/2011	10:51	4.1		4.5		
243	2/24/2011	10:52	4.0		4.2		
244	2/24/2011	10:53	4.2		4.5		
245	2/24/2011	10:54	4.3		4.5		
246	2/24/2011	10:55	4.0		4.5		
247	2/24/2011	10:56	3.8		4.3		
248	2/24/2011	10:57	3.6		4.1		4.0
249	2/24/2011	10:58	3.8		4.1		
250	2/24/2011	10:59	3.9		4.2		
251	2/24/2011	11:00	3.9		4.2		
252	2/24/2011	11:01	4.0		4.3		
253	2/24/2011	11:02	4.1		4.3		
254	2/24/2011	11:03	4.2		4.4		
255	2/24/2011	11:04	4.3		4.5		

Line#	Date	Time	1 Minute Average (ppm)	Alarm	1 Minute Maximum (ppm)	Alarm	15 Minute Average (ppm)
256	2/24/2011	11:05	4.1		4.3		
257	2/24/2011	11:06	3.8		4.3		
258	2/24/2011	11:07	3.5		3.7		
259	2/24/2011	11:08	3.8		4.4		
260	2/24/2011	11:09	3.8		4.6		
261	2/24/2011	11:10	3.6		3.9		
262	2/24/2011	11:11	3.5		3.8		
263	2/24/2011	11:12	3.8		4.8		3.9
264	2/24/2011	11:13	4.2		5.0		
265	2/24/2011	11:14	4.3		4.5		
266	2/24/2011	11:15	4.2		4.4		
267	2/24/2011	11:16	4.0		4.8		
268	2/24/2011	11:17	4.0		4.2		
269	2/24/2011	11:18	4.1		4.3		
270	2/24/2011	11:19	4.2		4.3		
271	2/24/2011	11:20	4.2		4.4		
272	2/24/2011	11:21	4.1		4.9		
273	2/24/2011	11:22	3.7		4.2		
274	2/24/2011	11:23	3.9		4.3		
275	2/24/2011	11:24	4.2		4.4		
276	2/24/2011	11:25	4.2		4.4		
277	2/24/2011	11:26	4.2		4.4		
278	2/24/2011	11:27	4.2		4.4		4.1
279	2/24/2011	11:28	4.2		4.5		
280	2/24/2011	11:29	3.9		4.2		
281	2/24/2011	11:30	3.8		4.7		
282	2/24/2011	11:31	4.1		4.5		
283	2/24/2011	11:32	4.4		4.6		
284	2/24/2011	11:33	4.3		4.5		
285	2/24/2011	11:34	4.4		4.6		
286	2/24/2011	11:35	4.4		4.5		
287	2/24/2011	11:36	4.4		4.6		
288	2/24/2011	11:37	4.3		4.6		
289	2/24/2011	11:38	3.8		4.1		
290	2/24/2011	11:39	3.6		4.0		
291	2/24/2011	11:40	3.6		3.8		
292	2/24/2011	11:41	3.8		4.2		
293	2/24/2011	11:42	3.9		4.2		3.9
294	2/24/2011	11:43	3.8		4.2		
295	2/24/2011	11:44	4.0		4.6		
296	2/24/2011	11:45	3.9		4.3		
297	2/24/2011	11:46	3.8		4.2		
298	2/24/2011	11:47	3.8		4.1		
299	2/24/2011	11:48	3.9		4.2		
300	2/24/2011	11:49	3.9		4.2		
301	2/24/2011	11:50	4.0		4.2		
302	2/24/2011	11:51	3.9		4.2		
303	2/24/2011	11:52	4.0		4.1		
304	2/24/2011	11:53	4.0		4.2		
305	2/24/2011	11:54	4.0		4.1		
306	2/24/2011	11:55	3.9		4.1		
307	2/24/2011	11:56	3.9		4.1		
308	2/24/2011	11:57	3.9		4.2		3.9
309	2/24/2011	11:58	3.9		4.3		
310	2/24/2011	11:59	3.9		4.1		
311	2/24/2011	12:00	3.9		4.1		
312	2/24/2011	12:01	3.9		4.1		
313	2/24/2011	12:02	4.0		4.1		
314	2/24/2011	12:03	4.0		4.2		
315	2/24/2011	12:04	3.9		4.1		
316	2/24/2011	12:05	3.9		4.1		
317	2/24/2011	12:06	3.9		4.1		
318	2/24/2011	12:07	3.9		4.1		
319	2/24/2011	12:08	3.9		4.1		
320	2/24/2011	12:09	3.8		4.1		
321	2/24/2011	12:10	3.9		4.2		
322	2/24/2011	12:11	3.9		4.1		
323	2/24/2011	12:12	3.8		4.0		3.9
324	2/24/2011	12:13	3.8		4.0		
325	2/24/2011	12:14	3.8		4.0		
326	2/24/2011	12:15	3.9		4.1		
327	2/24/2011	12:16	3.9		4.2		
328	2/24/2011	12:17	3.9		4.2		
329	2/24/2011	12:18	3.9		4.2		
330	2/24/2011	12:19	3.9		4.2		
331	2/24/2011	12:20	3.8		4.2		
332	2/24/2011	12:21	3.8		4.2		
333	2/24/2011	12:22	3.8		4.0		
334	2/24/2011	12:23	3.8		4.1		
335	2/24/2011	12:24	3.7		3.9		
336	2/24/2011	12:25	3.7		3.9		
337	2/24/2011	12:26	3.7		3.9		
338	2/24/2011	12:27	3.6		3.8		3.7
339	2/24/2011	12:28	3.6		3.8		
340	2/24/2011	12:29	3.6		3.8		
341	2/24/2011	12:30	3.6		3.8		
342	2/24/2011	12:31	3.6		3.9		
343	2/24/2011	12:32	3.7		3.9		
344	2/24/2011	12:33	3.6		3.9		
345	2/24/2011	12:34	3.7		3.9		

Line#	Date	Time	1 Minute Average (ppm)	Alarm	1 Minute Maximum (ppm)	Alarm	15 Minute Average (ppm)
346	2/24/2011	12:35	3.6		3.8		
347	2/24/2011	12:36	3.6		3.7		
348	2/24/2011	12:37	3.6		3.8		
349	2/24/2011	12:38	3.6		3.8		
350	2/24/2011	12:39	3.5		3.7		
351	2/24/2011	12:40	3.4		3.6		
352	2/24/2011	12:41	3.3		3.6		
353	2/24/2011	12:42	3.3		3.6		3.4
354	2/24/2011	12:43	3.5		3.6		
355	2/24/2011	12:44	3.5		3.6		
356	2/24/2011	12:45	3.4		3.6		
357	2/24/2011	12:46	3.1		3.4		
358	2/24/2011	12:47	3.1		3.3		
359	2/24/2011	12:48	3.2		3.4		
360	2/24/2011	12:49	3.2		3.3		
361	2/24/2011	12:50	3.1		3.3		
362	2/24/2011	12:51	3.2		3.3		
363	2/24/2011	12:52	3.1		3.3		
364	2/24/2011	12:53	3.0		3.2		
365	2/24/2011	12:54	3.0		3.2		
366	2/24/2011	12:55	3.2		3.3		
367	2/24/2011	12:56	3.2		3.5		
368	2/24/2011	12:57	3.4		3.5		3.3
369	2/24/2011	12:58	3.4		3.6		
370	2/24/2011	12:59	3.4		3.6		
371	2/24/2011	13:00	3.5		3.7		
372	2/24/2011	13:01	3.3		3.5		
373	2/24/2011	13:02	3.4		3.6		
374	2/24/2011	13:03	3.4		3.6		
375	2/24/2011	13:04	3.6		3.8		
376	2/24/2011	13:05	3.7		3.9		
377	2/24/2011	13:06	3.8		4.1		
378	2/24/2011	13:07	3.8		4.2		
379	2/24/2011	13:08	3.8		4.0		
380	2/24/2011	13:09	3.7		3.9		
381	2/24/2011	13:10	3.8		4.0		
382	2/24/2011	13:11	3.9		4.0		
383	2/24/2011	13:12	3.9		4.2		3.8
384	2/24/2011	13:13	3.8		4.1		
385	2/24/2011	13:14	3.7		3.8		
386	2/24/2011	13:15	3.7		4.0		
387	2/24/2011	13:16	3.8		3.9		
388	2/24/2011	13:17	3.7		4.0		
389	2/24/2011	13:18	3.8		4.1		
390	2/24/2011	13:19	3.8		4.1		
391	2/24/2011	13:20	4.0		4.2		
392	2/24/2011	13:21	3.9		4.1		
393	2/24/2011	13:22	3.9		4.3		
394	2/24/2011	13:23	3.9		4.1		
395	2/24/2011	13:24	3.9		4.2		
396	2/24/2011	13:25	4.0		4.1		
397	2/24/2011	13:26	4.1		4.3		
398	2/24/2011	13:27	3.8		4.0		4.0
399	2/24/2011	13:28	3.9		4.1		
400	2/24/2011	13:29	4.1		4.2		
401	2/24/2011	13:30	4.2		4.4		
402	2/24/2011	13:31	4.1		4.4		
403	2/24/2011	13:32	4.2		4.5		
404	2/24/2011	13:33	4.2		4.4		
405	2/24/2011	13:34	4.2		4.5		
406	2/24/2011	13:35	4.2		4.6		
407	2/24/2011	13:36	3.9		4.1		
408	2/24/2011	13:37	4.0		4.2		
409	2/24/2011	13:38	4.0		4.2		
410	2/24/2011	13:39	4.1		4.2		
411	2/24/2011	13:40	4.0		4.2		
412	2/24/2011	13:41	4.0		4.2		
413	2/24/2011	13:42	4.1		4.4		4.1
414	2/24/2011	13:43	4.2		4.3		
415	2/24/2011	13:44	4.2		4.4		
416	2/24/2011	13:45	4.2		4.4		
417	2/24/2011	13:46	4.2		4.4		
418	2/24/2011	13:47	4.2		4.5		
419	2/24/2011	13:48	4.3		4.5		
420	2/24/2011	13:49	4.3		4.5		
421	2/24/2011	13:50	4.3		4.5		
422	2/24/2011	13:51	4.4		4.5		
423	2/24/2011	13:52	4.4		4.6		
424	2/24/2011	13:53	4.3		4.6		
425	2/24/2011	13:54	4.5		4.7		
426	2/24/2011	13:55	4.4		4.6		
427	2/24/2011	13:56	4.6		4.7		
428	2/24/2011	13:57	4.5		4.8		4.6
429	2/24/2011	13:58	4.6		4.7		
430	2/24/2011	13:59	4.6		4.9		
431	2/24/2011	14:00	4.8		5.0		
432	2/24/2011	14:01	4.8		5.1		
433	2/24/2011	14:02	4.8		5.1		
434	2/24/2011	14:03	4.8		5.0		
435	2/24/2011	14:04	4.8		5.0		

Highlighted cells indicate exceedance of 1 ppm over average background concentration

Highlighted thick bordered cells indicate exceedance of 1 ppm over maximum background concentration

Appendix C
Pilot Test Boring Logs

Pilot test injection summary. Injected a total of 2,800 pounds of chemical over 3 days (9:40)

Injection Point	Date	Start Time	End Time	Amount Injected*	Injection Depth (feet bgs)	Total Amount Injected*	Total Injection Time	Comments
PTIP-1	2/21/2011	11:40	11:55	50	15	300	1:25	
		12:00	12:07	50	13			
		12:10	12:17	50	11			
		12:21	12:28	50	9			
		12:35	12:45	50	7			
		15:57	13:05	50	3			
PTIP-2	2/21/2011	14:42	14:47	50	15	250	0:54	Tried to inject 50 lbs at 3' bgs but pressure was to high and chemical surfaced.
		14:52	14:58	50	13			
		15:03	15:12	50	11			
		15:17	15:23	50	9			
		15:30	15:36	50	7			
		15:40	-	-	3			
PTIP-3	2/22/2011	8:45	8:50	50	15	300	1:11	Liquid was pushed out of PTIP-1 while injecting at third interval, sealed point with more bentonite, which fixed the problem.
		8:54	9:00	50	13			
		9:05	9:17	50	11			
		9:21	9:27	50	9			
		9:32	9:40	50	7			
		9:44	9:56	50	3			
PTIP-4	2/22/2011	10:10	10:15	50	15	300	0:56	Water was pushed out of MW-11 while injecting at the third, fourth, fifth, and sixth intervals.
		10:19	10:24	50	13			
		10:29	10:35	50	11			
		10:39	10:45	50	9			
		10:50	10:56	50	7			
		11:00	11:06	50	3			
PTIP-5	2/22/2011	12:16	12:22	50	15	300	1:14	
		12:26	12:39	50	13			
		12:44	12:55	50	11			
		13:00	13:05	50	9			
		13:10	13:16	50	7			
		13:20	13:30	50	3			
PTIP-6	2/22/2011	13:48	13:53	50	15	300	0:57	Water was pushed out of MW-11 while injecting at every interval.
		13:56	14:02	50	13			
		14:06	14:12	50	11			
		14:16	14:23	50	9			
		14:27	14:34	50	7			
		14:38	14:45	50	3			
PTIP-7	2/23/2011	7:42	7:50	50	15	250	1:14	
		7:54	8:04	50	12			
		8:10	8:17	50	9			
		8:21	8:32	50	6			
		8:40	8:56	50	4			
PTIP-8	2/23/2011	9:07	9:13	50	15	250	0:55	Water was pushed out of MW-11 while injecting at the second, third, fourth, and fifth intervals.
		9:18	9:24	50	12			
		9:30	9:36	50	9			
		9:41	9:47	50	6			
		9:51	10:03	50	4			
PTIP-9	2/23/2011	10:14	10:21	50	15	250	0:53	Water was pushed out of MW-11 while injecting at every interval.
		10:25	10:32	50	12			
		10:37	10:43	50	9			
		10:49	10:55	50	6			
		11:00	11:08	50	4			
PTIP-10	2/23/2011	11:17	11:33	50	15	300	2:01	Pressure buildup blew the bentonite seal out of one of the injection points while injecting at last interval. Lost around 30 gallons of EHC slurry. Stopped injecting while trying to clean up and putting more bentonite into the boring to prevent anymore slurry from coming out.
		11:38	11:44	50	13			
		11:51	11:57	50	11			
		12:02	12:09	50	9			
		12:14	12:29	50	7			
		12:35	13:18	50	5			

bgs - below ground surface

* - amount in pounds of dry chemical

S&W REDEVELOPMENT

LOG OF BORING PTOB-1

110 Luther Avenue Site
BCP Site #C734118
110 Luther Avenue, Liverpool
Onondaga County, New York

Job No. N9013

Date Completed	: 2-24-2011	Company Rep.	: IEM
Depth of Boring	: 16-feet bgs	Survey By	: N/A
Contractor	: Zebra Environmental Corp.	Weather	: Indoors
Operator	: Joe Hutchins	Boring Location	: 5' SE of PTIP-4
Equipment Type	: Mini-Track		

Depth in Feet	Recovery (inches)	DESCRIPTION	Depth in Feet	REMARKS
0		Concrete floor, two slabs	0	
		Black SILT and ORGANICS, some fine gravel, med-stiff, moist		
2	12	Brown CLAY, little SILT, moist to wet, stiff	2	
4			4	
6	48		6	
8			8	
10	48		10	Orange discoloration due to EHC
12		SAA, saturated, soft	12	
14	20		14	1/4" thick vein of EHC
16		End of Boring	16	

05-05-2011 J:\PROJECTS\N-xxxx\N9000\N0913 - Syracuse Label\REMEDIATION\RAWP\Appendices\Appendix C - Pilot Test Boring Logs\PTOB-1.bor

S&W REDEVELOPMENT

LOG OF BORING PTOB-2

110 Luther Avenue Site
BCP Site #C734118
110 Luther Avenue, Liverpool
Onondaga County, New York

Job No. N9013

Date Completed	: 2-24-2011	Company Rep.	: IEM
Depth of Boring	: 16-feet bgs	Survey By	: N/A
Contractor	: Zebra Environmental Corp.	Weather	: Indoors
Operator	: Joe Hutchins	Boring Location	: 2' SE of MW-11
Equipment Type	: Mini-Track		

Depth in Feet	Recovery (inches)	DESCRIPTION	Depth in Feet	REMARKS
0		Concrete floor, two slabs	0	
		Black SILT, some fine gravel, wet		
2	4		2	
		Brown SILT and CLAY, moist to wet, med-stiff, mottled		
4			4	
6	48		6	
8			8	
10	36		10	Slight orange discoloration due to EHC
12		Gray-brown, SILT and CLAY	12	
14	24		14	
		SAA, saturated, soft		
16		End of Boring	16	

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S&W REDEVELOPMENT

LOG OF BORING PTOB-3

110 Luther Avenue Site
BCP Site #C734118
110 Luther Avenue, Liverpool
Onondaga County, New York

Job No. N9013

Date Completed	: 2-24-2011	Company Rep.	: IEM
Depth of Boring	: 16-feet bgs	Survey By	: N/A
Contractor	: Zebra Environmental Corp.	Weather	: Indoors
Operator	: Joe Hutchins	Boring Location	: 1' NW of MW-11
Equipment Type	: Mini-Track		

Depth in Feet	Recovery (inches)	DESCRIPTION	Depth in Feet	REMARKS
0		Concrete floor, two slabs	0	
		Black SILT and CLAY, med-stiff, moist		
2	20		2	
		Brown CLAY and SILT, moist to wet, med-stiff, mottled		
4			4	
6	40		6	4" thick vein of EHC
8			8	1/4" thick vein of EHC
10	36		10	Slight orange discoloration due to EHC
		Gray-brown, SILT and CLAY		
12		SAA, saturated, soft	12	
14	20		14	Vein of EHC
16		End of Boring	16	

05-05-2011 J:\PROJECTS\N-xxxx\N9000\N0913 - Syracuse Label\REMEDIATION\RAWP\Appendices\Appendix C - Pilot Test Boring Logs\PTOB-3.bor

S&W REDEVELOPMENT

LOG OF BORING PTOB-4

110 Luther Avenue Site
BCP Site #C734118
110 Luther Avenue, Liverpool
Onondaga County, New York
Job No. N9013

Date Completed	: 2-24-2011	Company Rep.	: IEM
Depth of Boring	: 16-feet bgs	Survey By	: N/A
Contractor	: Zebra Environmental Corp.	Weather	: Indoors
Operator	: Joe Hutchins	Boring Location	: 2' NE of PTIP-10
Equipment Type	: Mini-Track		

Depth in Feet	Recovery (inches)	DESCRIPTION	Depth in Feet	REMARKS
0		Concrete floor, two slabs	0	
		Black SILT, med-stiff, moist		
2	36		2	
		Brown CLAY and SILT, moist, med-stiff, mottled		
4			4	
		SAA, wet		1/4" thick vein of EHC
6	48		6	
				1/4" thick vein of EHC
8			8	
10	36	Gray, SILT and CLAY, wet, med-stiff to soft	10	1/4" thick vein of EHC and slight orange discoloration
				Orange discoloration due to EHC
12			12	Orange discoloration due to EHC
		SAA, saturated, soft		
14	24		14	
				1/2" thick vein of EHC
16		End of Boring	16	

05-05-2011 J:\PROJECTS\N-xxxx\N9000\N0913 - Syracuse Label\REMEDIATION\RAWP\Appendices\Appendix C - Pilot Test Boring Logs\PTOB-4.bor

S&W REDEVELOPMENT

LOG OF BORING PTOB-5

110 Luther Avenue Site
BCP Site #C734118
110 Luther Avenue, Liverpool
Onondaga County, New York

Job No. N9013

Date Completed	: 2-24-2011	Company Rep.	: IEM
Depth of Boring	: 16-feet bgs	Survey By	: N/A
Contractor	: Zebra Environmental Corp.	Weather	: Indoors
Operator	: Joe Hutchins	Boring Location	: 5' NE of PTIP-10
Equipment Type	: Mini-Track		

Depth in Feet	Recovery (inches)	DESCRIPTION	Depth in Feet	REMARKS
0		Concrete floor, two slabs	0	
		Black SILT, med-stiff, moist		
2	20		2	
		Brown CLAY and SILT, moist, stiff, mottled		
4			4	
6	48		6	1/4" thick vein of EHC
8			8	
10	40	Gray, SILT and CLAY, moist, med-stiff	10	
12			12	
		SAA, saturated, soft		
14	24		14	1/4" thick vein of EHC
16		End of Boring	16	

05-05-2011 J:\PROJECTS\N-xxxx\N9000\N0913 - Syracuse Labe\REMEDIATION\RAWP\Appendices\Appendix C - Pilot Test Boring Logs\PTOB-5.bor

S&W REDEVELOPMENT

LOG OF BORING PTOB-6

110 Luther Avenue Site
BCP Site #C734118
110 Luther Avenue, Liverpool
Onondaga County, New York

Job No. N9013

Date Completed	: 2-24-2011	Company Rep.	: IEM
Depth of Boring	: 16-feet bgs	Survey By	: N/A
Contractor	: Zebra Environmental Corp.	Weather	: Indoors
Operator	: Joe Hutchins	Boring Location	: 2' NW of PTIP-10
Equipment Type	: Mini-Track		

Depth in Feet	Recovery (inches)	DESCRIPTION	Depth in Feet	REMARKS
0		Concrete floor, two slabs	0	
		Brown CLAY and SILT, moist, stiff, mottled		
2	36		2	
4			4	
6	48		6	
8		SAA, wet	8	
10	40	Gray, SILT and CLAY, moist, med-stiff	10	1/2" thick vein of EHC and orange color extending down to 12' bgs
12		SAA, saturated, soft	12	
14	24		14	
16		End of Boring	16	1/2" thick vein of EHC

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S&W REDEVELOPMENT

LOG OF BORING PTOB-7

110 Luther Avenue Site
BCP Site #C734118
110 Luther Avenue, Liverpool
Onondaga County, New York

Job No. N9013

Date Completed	: 2-24-2011	Company Rep.	: IEM
Depth of Boring	: 16-feet bgs	Survey By	: N/A
Contractor	: Zebra Environmental Corp.	Weather	: Indoors
Operator	: Joe Hutchins	Boring Location	: 5' NW of PTIP-10
Equipment Type	: Mini-Track		

Depth in Feet	Recovery (inches)	DESCRIPTION	Depth in Feet	REMARKS
0		Concrete floor, two slabs	0	
		Black SILT and CLAY, med-stiff, moist		No sign of EHC or orange color due to EHC in the soil core
2	8		2	
		Brown CLAY and SILT, moist, stiff, mottled		
4			4	
6	48		6	
8		SAA, med-stiff, wet	8	
10	42		10	
		Gray, SILT and CLAY, med-stiff to soft, moist to wet		
12			12	
		SAA, saturated, soft		
14	30		14	
16		End of Boring	16	

05-05-2011 J:\PROJECTS\N-xxxx\N9000\N0913 - Syracuse Label\REMEDIATION\RAWP\Appendices\Appendix C - Pilot Test Boring Logs\PTOB-7.bor

S&W REDEVELOPMENT

LOG OF BORING PTOB-8

110 Luther Avenue Site
BCP Site #C734118
110 Luther Avenue, Liverpool
Onondaga County, New York

Job No. N9013

Date Completed	: 2-24-2011	Company Rep.	: IEM
Depth of Boring	: 16-feet bgs	Survey By	: N/A
Contractor	: Zebra Environmental Corp.	Weather	: Indoors
Operator	: Joe Hutchins	Boring Location	: 2' SW of PTIP-10
Equipment Type	: Mini-Track		

Depth in Feet	Recovery (inches)	DESCRIPTION	Depth in Feet	REMARKS
0		Concrete floor, two slabs	0	
		Black SILT and CLAY, med-stiff, moist		
2	6		2	
		Brown CLAY and SILT, moist to wet, med-stiff		
4			4	
6	46		6	
8		SAA, soft, wet	8	
10	36	Gray, SILT and CLAY, soft, wet	10	1/4" thick vein of EHC and slight orange color
12		SAA, soft, wet	12	
14	24		14	1/2" thick vein of EHC 1/2" thick vein of EHC
16		End of Boring	16	

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S&W REDEVELOPMENT

LOG OF BORING PTOB-9

110 Luther Avenue Site
BCP Site #C734118
110 Luther Avenue, Liverpool
Onondaga County, New York

Job No. N9013

Date Completed	: 2-24-2011	Company Rep.	: IEM
Depth of Boring	: 16-feet bgs	Survey By	: N/A
Contractor	: Zebra Environmental Corp.	Weather	: Indoors
Operator	: Joe Hutchins	Boring Location	: 5' SW of PTIP-10
Equipment Type	: Mini-Track		

Depth in Feet	Recovery (inches)	DESCRIPTION	Depth in Feet	REMARKS
0		Concrete floor, two slabs	0	
		Black SILT and CLAY, med-stiff, moist		
2	34		2	
		Brown CLAY and SILT, med-stiff, moist		
4			4	
6	48		6	
				1/4" thick vein of EHC and slight orange color
8		SAA, moist to wet	8	
10	40	SAA, soft, wet	10	Slight orange color due to EHC
		Gray SILT and CLAY, med-stiff, wet		
12			12	
14	24		14	
				Slight orange color due to EHC
16		End of Boring	16	

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Appendix D

Pilot Test Groundwater Sample
Laboratory Reports

Appendix D-1

Baseline Groundwater Samples
(February 2011)

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 220-14770-1

Job Description: 110 Luther Ave. - Syracuse Label

For:
S & W Redevelopment LLC
430 East Genesee Street
Suite 401
Syracuse, NY 13202

Attention: Mr. Don Sorbello

Joan Widomski

Approved for release.
Joan Widomski
Project Manager I
3/4/2011 2:43 PM

Designee for
Johanna Dubauskas
Project Manager II
johanna.dubauskas@testamericainc.com
03/04/2011

The test results in this report meet all NELAP requirements unless specified within the case narrative. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. All questions regarding this report should be directed to the TestAmerica Project Manager.

TestAmerica Connecticut Certifications and Approvals: CTDOH PH-047, MADEP CT023, RIDOH A43, NYDOH 10602, NY NELAP 10602, NHDES 2528, NJDEP CT410, ME DOH CT023, UT DOH 2032614458

TestAmerica Laboratories, Inc.
TestAmerica Connecticut 128 Long Hill Cross Road, Shelton, CT 06484
Tel (203) 929-8140 Fax (203) 929-8142 www.testamericainc.com

ACCREDITED IN ACCORDANCE WITH nelac

Job Number: 220-14770-1

Job Description: 110 Luther Ave. - Syracuse Label

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed within the body of this report. Release of the data contained in this sample data package and in the electronic data deliverable has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Joan Widomski

Approved for release.
Joan Widomski
Project Manager I
3/4/2011 2:43 PM

Designee for
Johanna Dubauskas

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Job Narrative
220-14770-1

Comments
No additional comments.

Receipt
The following field QC samples were received at the laboratory without sample collection times documented on the chain of custody: DUPLICATE (220-14770-4), TRIP BLANK (220-14770-5). As a result, a sample collection time of 12:00am, on the date of collection, has been used.

The following volatile sample was received with headspace in 1 of 3 sample vials and was not used for analysis: TRIP BLANK (220-14770-5) (Container 220-14770-A-5).

All other samples were received in good condition within temperature requirements.

GC/MS VOA
No analytical or quality issues were noted.

GC VOA
No analytical or quality issues were noted.

Metals
No analytical or quality issues were noted.

General Chemistry
No analytical or quality issues were noted.

FORMULAS FOR NYSDEC SAMPLE CALCULATIONS

Volatiles

(Ax)(IS)(DF)
(AIS)(RRF)(V)(% solids) = C

(AX)(IS)(VT)(1000)(DF)
(AIS)(RRF)(VA)(V)(% solids) = C (for medium level soils)

SemiVolatiles

(AX)(IS)(VE)(DF)(GPC factor is 2 if needed)
(AIS)(RRF)(volume injected)(V)(% solids) = C

Pesticides

(AX)(VE)(DF)
(RRF)(V)(% solids)(volume injected) = C

PCBs for compound/retention time

(AX)(VE)(DF)
(RRF of compound at the stated retention time)(V)(% solids)(volume injected) = C

DRO/CTETPH

(AX)(VE)(DF)
(RRF)(V)(% solids)(volume injected) = C

AX = area of the target Ion
AIS = Area of Internal standard
C = concentration as ug/L or ug/Kg
DF = dilution
IS = Internal standard concentration (ng)
RRF = average RF (from initial cal except CLP methods from continuing cal)
V = sample volume for liquids in mls or sample weight for solids in grams
VA = volume of aliquot for medium level soils
VE = volume of concentrated extract
VT = volume of methanol for volatile medium level soils

SAMPLE SUMMARY

Client: S & W Redevelopment LLC

Job Number: 220-14770-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
220-14770-1	MW-7	Water	02/18/2011 1100	02/19/2011 1020
220-14770-1MS	MW-7	Water	02/18/2011 1100	02/19/2011 1020
220-14770-1MSD	MW-7	Water	02/18/2011 1100	02/19/2011 1020
220-14770-2	MW-11	Water	02/18/2011 1255	02/19/2011 1020
220-14770-3	MW-17	Water	02/18/2011 1420	02/19/2011 1020
220-14770-4	DUPLICATE	Water	02/18/2011 0000	02/19/2011 1020
220-14770-5TB	TRIP BLANK	Water	02/18/2011 0000	02/19/2011 1020

EXECUTIVE SUMMARY - Detections

Client: S & W Redevelopment LLC

Job Number: 220-14770-1

Lab Sample ID / Analyte	Client Sample ID	Result / Qualifier		Reporting Limit	Units	Method
220-14770-1	**MW-7**					
Vinyl chloride		620	J	1000	ug/L	8260B
cis-1,2-Dichloroethene		2600		1000	ug/L	8260B
Trichloroethene		2600		1000	ug/L	8260B
Tetrachloroethene		17000		1000	ug/L	8260B
Methane		240		2.0	ug/L	RSK-175
Ethane		4.7		4.0	ug/L	RSK-175
Ethylene		9.9		3.0	ug/L	RSK-175
Calcium		176000		1000	ug/L	6010B
Iron		3270		250	ug/L	6010B
Magnesium		53200		1000	ug/L	6010B
Manganese		314		16.0	ug/L	6010B
Hardness as calcium carbonate		659		1.0	mg/L	SM 2340B
Chloride		325		10.0	mg/L	300.0
Sulfate		106		2.0	mg/L	300.0
Alkalinity		326		2.0	mg/L	SM 2320B
220-14770-2	**MW-11**					
cis-1,2-Dichloroethene		3800		2500	ug/L	8260B
Trichloroethene		6300		2500	ug/L	8260B
Tetrachloroethene		42000		2500	ug/L	8260B
Methane		46		2.0	ug/L	RSK-175
Ethylene		5.2		3.0	ug/L	RSK-175
Calcium		189000		1000	ug/L	6010B
Iron		37300		250	ug/L	6010B
Magnesium		55700		1000	ug/L	6010B
Manganese		359		16.0	ug/L	6010B
Hardness as calcium carbonate		701		1.0	mg/L	SM 2340B
Chloride		300		10.0	mg/L	300.0
Sulfate		107		2.0	mg/L	300.0
Alkalinity		281		2.0	mg/L	SM 2320B

EXECUTIVE SUMMARY - Detections

Client: S & W Redevelopment LLC

Job Number: 220-14770-1

Lab Sample ID / Analyte	Client Sample ID	Result / Qualifier	Reporting Limit	Units	Method
220-14770-3	**MW-17**				
cis-1,2-Dichloroethene		1000	500	ug/L	8260B
Trichloroethene		1400	500	ug/L	8260B
Tetrachloroethene		8800	500	ug/L	8260B
Methane		11	2.0	ug/L	RSK-175
Calcium		295000	1000	ug/L	6010B
Iron		50000	250	ug/L	6010B
Magnesium		102000	1000	ug/L	6010B
Manganese		2080	16.0	ug/L	6010B
Hardness as calcium carbonate		1160	1.0	mg/L	SM 2340B
Chloride		193	10.0	mg/L	300.0
Sulfate		97.4	2.0	mg/L	300.0
Alkalinity		245	2.0	mg/L	SM 2320B
220-14770-4	**DUPLICATE**				
cis-1,2-Dichloroethene		1900	1000	ug/L	8260B
Trichloroethene		2700	1000	ug/L	8260B
Tetrachloroethene		14000	1000	ug/L	8260B
Methane		23	2.0	ug/L	RSK-175
Calcium		305000	1000	ug/L	6010B
Iron		52400	250	ug/L	6010B
Magnesium		106000	1000	ug/L	6010B
Manganese		2160	16.0	ug/L	6010B
Hardness as calcium carbonate		1200	1.0	mg/L	SM 2340B
Chloride		196	10.0	mg/L	300.0
Sulfate		97.8	2.0	mg/L	300.0
Alkalinity		251	2.0	mg/L	SM 2320B

METHOD SUMMARY

Client: S & W Redevelopment LLC

Job Number: 220-14770-1

Description	Lab Location	Method	Preparation Method
Matrix: Water			
Volatile Organic Compounds (GC/MS)	TAL CT	SW846 8260B	
Purge and Trap	TAL CT		SW846 5030B
Metals (ICP)	TAL CT	SW846 6010B	
Preparation, Total Metals	TAL CT		SW846 3010A
Hardness, Calculation	TAL CT	SM SM 2340B	
Anions, Ion Chromatography	TAL CT	MCAWW 300.0	
Alkalinity	TAL CT	SM SM 2320B	
BOD, 5-Day	TAL CT	SM SM 5210B	
Organic Carbon, Dissolved (DOC)	TAL CT	SM SM 5310C	
Sample Filtration, Field			FIELD_FLTRD
TOC	TAL CT	SM SM 5310C	
Dissolved Gases (GC)	TAL BUR	RSK RSK-175	

Lab References:

TAL BUR = TestAmerica Burlington

TAL CT = TestAmerica Connecticut

Method References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

RSK = Sample Prep And Calculations For Dissolved Gas Analysis In Water Samples Using A GC Headspace Equilibration Technique, RSKSOP-175, Rev. 0, 8/11/94, USEPA Research Lab

SM = "Standard Methods For The Examination Of Water And Wastewater",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

METHOD / ANALYST SUMMARY

Client: S & W Redevelopment LLC

Job Number: 220-14770-1

Method	Analyst	Analyst ID
SW846 8260B	Kostrzewska, Barbara	BK
RSK RSK-175	Veilleux, Michael R	MRV
SW846 6010B	Petronchak, Nestor	NP
SM SM 2340B	Petronchak, Nestor	NP
MCAWW 300.0	Keene, Angela H	AHK
SM SM 2320B	Keene, Angela H	AHK
SM SM 5210B	Keene, Angela H	AHK
SM SM 5310C	Madumadu, Dave	DM

Client: S & W Redevelopment LLC

Job Number: 220-14770-1

Client Sample ID: **MW-7**

Lab Sample ID: 220-14770-1
Client Matrix: Water

Date Sampled: 02/18/2011 1100
Date Received: 02/19/2011 1020

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B
Preparation: 5030B
Dilution: 200
Date Analyzed: 02/25/2011 1239
Date Prepared: 02/25/2011 1239

Analysis Batch: 220-48333

Instrument ID: MSW
Lab File ID: W9583.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Vinyl chloride	620	J	200	1000
trans-1,2-Dichloroethene	1000	U	150	1000
cis-1,2-Dichloroethene	2600		200	1000
Trichloroethene	2600		120	1000
Tetrachloroethene	17000		160	1000

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	92		65 - 136
4-Bromofluorobenzene	87		51 - 142
Dibromofluoromethane	92		68 - 132
Toluene-d8 (Surr)	94		63 - 127

Client: S & W Redevelopment LLC

Job Number: 220-14770-1

Client Sample ID: **MW-11**

Lab Sample ID: 220-14770-2
Client Matrix: Water

Date Sampled: 02/18/2011 1255
Date Received: 02/19/2011 1020

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B
Preparation: 5030B
Dilution: 500
Date Analyzed: 02/25/2011 1512
Date Prepared: 02/25/2011 1512

Analysis Batch: 220-48333

Instrument ID: MSW
Lab File ID: W9589.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Vinyl chloride	2500	U	500	2500
trans-1,2-Dichloroethene	2500	U	380	2500
cis-1,2-Dichloroethene	3800		500	2500
Trichloroethene	6300		310	2500
Tetrachloroethene	42000		400	2500

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	92		65 - 136
4-Bromofluorobenzene	84		51 - 142
Dibromofluoromethane	93		68 - 132
Toluene-d8 (Surr)	93		63 - 127

Client: S & W Redevelopment LLC

Job Number: 220-14770-1

Client Sample ID: **MW-17**

Lab Sample ID: 220-14770-3
Client Matrix: Water

Date Sampled: 02/18/2011 1420
Date Received: 02/19/2011 1020

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B
Preparation: 5030B
Dilution: 100
Date Analyzed: 02/25/2011 1538
Date Prepared: 02/25/2011 1538

Analysis Batch: 220-48333

Instrument ID: MSW
Lab File ID: W9590.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Vinyl chloride	500	U	99	500
trans-1,2-Dichloroethene	500	U	76	500
cis-1,2-Dichloroethene	1000		99	500
Trichloroethene	1400		62	500
Tetrachloroethene	8800		81	500

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	92		65 - 136
4-Bromofluorobenzene	84		51 - 142
Dibromofluoromethane	93		68 - 132
Toluene-d8 (Surr)	93		63 - 127

Client: S & W Redevelopment LLC

Job Number: 220-14770-1

Client Sample ID: **DUPLICATE**

Lab Sample ID: 220-14770-4
Client Matrix: Water

Date Sampled: 02/18/2011 0000
Date Received: 02/19/2011 1020

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B
Preparation: 5030B
Dilution: 200
Date Analyzed: 02/24/2011 1840
Date Prepared: 02/24/2011 1840

Analysis Batch: 220-48278

Instrument ID: MSW
Lab File ID: W9552.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Vinyl chloride	1000	U	200	1000
trans-1,2-Dichloroethene	1000	U	150	1000
cis-1,2-Dichloroethene	1900		200	1000
Trichloroethene	2700		120	1000
Tetrachloroethene	14000		160	1000

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	91		65 - 136
4-Bromofluorobenzene	87		51 - 142
Dibromofluoromethane	93		68 - 132
Toluene-d8 (Surr)	91		63 - 127

Client: S & W Redevelopment LLC

Job Number: 220-14770-1

Client Sample ID: **TRIP BLANK**

Lab Sample ID: 220-14770-5TB
Client Matrix: Water

Date Sampled: 02/18/2011 0000
Date Received: 02/19/2011 1020

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B
Preparation: 5030B
Dilution: 1.0
Date Analyzed: 02/24/2011 1659
Date Prepared: 02/24/2011 1659

Analysis Batch: 220-48278

Instrument ID: MSW
Lab File ID: W9548.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Vinyl chloride	5.0	U	0.99	5.0
trans-1,2-Dichloroethene	5.0	U	0.76	5.0
cis-1,2-Dichloroethene	5.0	U	0.99	5.0
Trichloroethene	5.0	U	0.62	5.0
Tetrachloroethene	5.0	U	0.81	5.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	91		65 - 136
4-Bromofluorobenzene	84		51 - 142
Dibromofluoromethane	92		68 - 132
Toluene-d8 (Surr)	91		63 - 127

Client: S & W Redevelopment LLC

Job Number: 220-14770-1

Client Sample ID: **MW-7**

Lab Sample ID: 220-14770-1
Client Matrix: Water

Date Sampled: 02/18/2011 1100
Date Received: 02/19/2011 1020

RSK-175 Dissolved Gases (GC)

Method: RSK-175
Preparation: N/A
Dilution: 1.0
Date Analyzed: 02/22/2011 1258
Date Prepared:

Analysis Batch: 200-14040

Instrument ID: 2866.i
Initial Weight/Volume: 18 mL
Final Weight/Volume: 18 mL
Injection Volume: 100 uL
Result Type: PRIMARY

Analyte	Result (ug/L)	Qualifier	RL	RL
Methane	240		2.0	2.0
Ethane	4.7		4.0	4.0
Ethylene	9.9		3.0	3.0

Client: S & W Redevelopment LLC

Job Number: 220-14770-1

Client Sample ID: **MW-11**

Lab Sample ID: 220-14770-2
Client Matrix: Water

Date Sampled: 02/18/2011 1255
Date Received: 02/19/2011 1020

RSK-175 Dissolved Gases (GC)

Method:	RSK-175	Analysis Batch: 200-14040	Instrument ID: 2866.i
Preparation:	N/A		Initial Weight/Volume: 18 mL
Dilution:	1.0		Final Weight/Volume: 18 mL
Date Analyzed:	02/22/2011 1303		Injection Volume: 100 uL
Date Prepared:			Result Type: PRIMARY

Analyte	Result (ug/L)	Qualifier	RL	RL
Methane	46		2.0	2.0
Ethane	4.0	U	4.0	4.0
Ethylene	5.2		3.0	3.0

Client: S & W Redevelopment LLC

Job Number: 220-14770-1

Client Sample ID: **MW-17**

Lab Sample ID: 220-14770-3
Client Matrix: Water

Date Sampled: 02/18/2011 1420
Date Received: 02/19/2011 1020

RSK-175 Dissolved Gases (GC)

Method:	RSK-175	Analysis Batch: 200-14040	Instrument ID: 2866.i
Preparation:	N/A		Initial Weight/Volume: 18 mL
Dilution:	1.0		Final Weight/Volume: 18 mL
Date Analyzed:	02/22/2011 1307		Injection Volume: 100 uL
Date Prepared:			Result Type: PRIMARY

Analyte	Result (ug/L)	Qualifier	RL	RL
Methane	11		2.0	2.0
Ethane	4.0	U	4.0	4.0
Ethylene	3.0	U	3.0	3.0

Client: S & W Redevelopment LLC

Job Number: 220-14770-1

Client Sample ID: **DUPLICATE**

Lab Sample ID: 220-14770-4
Client Matrix: Water

Date Sampled: 02/18/2011 0000
Date Received: 02/19/2011 1020

RSK-175 Dissolved Gases (GC)

Method:	RSK-175	Analysis Batch: 200-14040	Instrument ID: 2866.i
Preparation:	N/A		Initial Weight/Volume: 18 mL
Dilution:	1.0		Final Weight/Volume: 18 mL
Date Analyzed:	02/22/2011 1313		Injection Volume: 100 uL
Date Prepared:			Result Type: PRIMARY

Analyte	Result (ug/L)	Qualifier	RL	RL
Methane	23		2.0	2.0
Ethane	4.0	U	4.0	4.0
Ethylene	3.0	U	3.0	3.0

Client: S & W Redevelopment LLC

Job Number: 220-14770-1

Client Sample ID: **MW-7**

Lab Sample ID: 220-14770-1
Client Matrix: Water

Date Sampled: 02/18/2011 1100
Date Received: 02/19/2011 1020

6010B Metals (ICP)

Method: 6010B
Preparation: 3010A
Dilution: 1.0
Date Analyzed: 02/23/2011 1338
Date Prepared: 02/21/2011 1047

Analysis Batch: 220-48236
Prep Batch: 220-48164

Instrument ID: ICAP3
Lab File ID: 022311d.prn
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Calcium	176000		100	1000
Iron	3270		30.0	250
Magnesium	53200		10.0	1000
Manganese	314		0.50	16.0

SM 2340B Hardness, Calculation

Method: SM 2340B
Preparation: N/A
Dilution: 1.0
Date Analyzed: 02/23/2011 1338
Date Prepared:

Analysis Batch: 220-48263

Instrument ID: NOEQUIP
Lab File ID: N/A
Initial Weight/Volume:
Final Weight/Volume: 1.0 mL

Analyte	Result (mg/L)	Qualifier	MDL	RL
Hardness as calcium carbonate	659		1.0	1.0

Client: S & W Redevelopment LLC

Job Number: 220-14770-1

Client Sample ID: **MW-11**

Lab Sample ID: 220-14770-2
Client Matrix: Water

Date Sampled: 02/18/2011 1255
Date Received: 02/19/2011 1020

6010B Metals (ICP)

Method: 6010B
Preparation: 3010A
Dilution: 1.0
Date Analyzed: 02/23/2011 1353
Date Prepared: 02/21/2011 1047

Analysis Batch: 220-48236
Prep Batch: 220-48164

Instrument ID: ICAP3
Lab File ID: 022311d.prn
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Calcium	189000		100	1000
Iron	37300		30.0	250
Magnesium	55700		10.0	1000
Manganese	359		0.50	16.0

SM 2340B Hardness, Calculation

Method: SM 2340B
Preparation: N/A
Dilution: 1.0
Date Analyzed: 02/23/2011 1353
Date Prepared:

Analysis Batch: 220-48263

Instrument ID: NOEQUIP
Lab File ID: N/A
Initial Weight/Volume:
Final Weight/Volume: 1.0 mL

Analyte	Result (mg/L)	Qualifier	MDL	RL
Hardness as calcium carbonate	701		1.0	1.0

Client: S & W Redevelopment LLC

Job Number: 220-14770-1

Client Sample ID: **MW-17**

Lab Sample ID: 220-14770-3
Client Matrix: Water

Date Sampled: 02/18/2011 1420
Date Received: 02/19/2011 1020

6010B Metals (ICP)

Method:	6010B	Analysis Batch: 220-48236	Instrument ID: ICAP3
Preparation:	3010A	Prep Batch: 220-48164	Lab File ID: 022311d.prn
Dilution:	1.0		Initial Weight/Volume: 50 mL
Date Analyzed:	02/23/2011 1403		Final Weight/Volume: 50 mL
Date Prepared:	02/21/2011 1047		

Analyte	Result (ug/L)	Qualifier	MDL	RL
Calcium	295000		100	1000
Iron	50000		30.0	250
Magnesium	102000		10.0	1000
Manganese	2080		0.50	16.0

SM 2340B Hardness, Calculation

Method:	SM 2340B	Analysis Batch: 220-48263	Instrument ID: NOEQUIP
Preparation:	N/A		Lab File ID: N/A
Dilution:	1.0		Initial Weight/Volume:
Date Analyzed:	02/23/2011 1403		Final Weight/Volume: 1.0 mL
Date Prepared:			

Analyte	Result (mg/L)	Qualifier	MDL	RL
Hardness as calcium carbonate	1160		1.0	1.0

Client: S & W Redevelopment LLC

Job Number: 220-14770-1

Client Sample ID: DUPLICATE

Lab Sample ID: 220-14770-4
Client Matrix: Water

Date Sampled: 02/18/2011 0000
Date Received: 02/19/2011 1020

6010B Metals (ICP)

Method:	6010B	Analysis Batch: 220-48236		Instrument ID:	ICAP3
Preparation:	3010A	Prep Batch: 220-48164		Lab File ID:	022311d.prn
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	02/23/2011 1406			Final Weight/Volume:	50 mL
Date Prepared:	02/21/2011 1047				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Calcium	305000		100	1000
Iron	52400		30.0	250
Magnesium	106000		10.0	1000
Manganese	2160		0.50	16.0

SM 2340B Hardness, Calculation

Method:	SM 2340B	Analysis Batch: 220-48263		Instrument ID:	NOEQUIP
Preparation:	N/A			Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	
Date Analyzed:	02/23/2011 1406			Final Weight/Volume:	1.0 mL
Date Prepared:					

Analyte	Result (mg/L)	Qualifier	MDL	RL
Hardness as calcium carbonate	1200		1.0	1.0

General Chemistry

Client Sample ID: MW-7

Lab Sample ID: 220-14770-1 Date Sampled: 02/18/2011 1100
Client Matrix: Water Date Received: 02/19/2011 1020

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Chloride	325		mg/L	3.3	10.0	10	300.0
Analysis Batch: 220-48317	Date Analyzed: 02/23/2011 1356						
Nitrate as N	0.10	U	mg/L	0.033	0.10	1.0	300.0
Analysis Batch: 220-48318	Date Analyzed: 02/19/2011 1325						
Sulfate	106		mg/L	0.67	2.0	2.0	300.0
Analysis Batch: 220-48317	Date Analyzed: 02/23/2011 1301						
Alkalinity	326		mg/L	0.16	2.0	1.0	SM 2320B
Analysis Batch: 220-48309	Date Analyzed: 02/24/2011 1311						
Biochemical Oxygen Demand	2.0	U	mg/L	0.65	2.0	1.0	SM 5210B
Analysis Batch: 220-48150	Date Analyzed: 02/19/2011 1400						
Dissolved Organic Carbon - Quad-Dissolved	1.0	U	mg/L	0.23	1.0	1.0	SM 5310C
Analysis Batch: 220-48469	Date Analyzed: 03/01/2011 1952						
Total Organic Carbon - Quad	1.0	U	mg/L	0.23	1.0	1.0	SM 5310C
Analysis Batch: 220-48468	Date Analyzed: 03/01/2011 1625						

General Chemistry

Client Sample ID: MW-11

Lab Sample ID: 220-14770-2 Date Sampled: 02/18/2011 1255
Client Matrix: Water Date Received: 02/19/2011 1020

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Chloride	300		mg/L	3.3	10.0	10	300.0
Analysis Batch: 220-48317	Date Analyzed: 02/23/2011 1508						
Nitrate as N	0.10	U	mg/L	0.033	0.10	1.0	300.0
Analysis Batch: 220-48318	Date Analyzed: 02/19/2011 1420						
Sulfate	107		mg/L	0.67	2.0	2.0	300.0
Analysis Batch: 220-48317	Date Analyzed: 02/23/2011 1450						
Alkalinity	281		mg/L	0.16	2.0	1.0	SM 2320B
Analysis Batch: 220-48309	Date Analyzed: 02/24/2011 1326						
Biochemical Oxygen Demand	2.0	U	mg/L	0.65	2.0	1.0	SM 5210B
Analysis Batch: 220-48150	Date Analyzed: 02/19/2011 1400						
Dissolved Organic Carbon - Quad-Dissolved	1.0	U	mg/L	0.23	1.0	1.0	SM 5310C
Analysis Batch: 220-48469	Date Analyzed: 03/01/2011 2345						
Total Organic Carbon - Quad	1.0	U	mg/L	0.23	1.0	1.0	SM 5310C
Analysis Batch: 220-48468	Date Analyzed: 03/01/2011 2318						

General Chemistry

Client Sample ID: MW-17

Lab Sample ID: 220-14770-3 Date Sampled: 02/18/2011 1420
Client Matrix: Water Date Received: 02/19/2011 1020

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Chloride	193		mg/L	3.3	10.0	10	300.0
Analysis Batch: 220-48317	Date Analyzed: 02/23/2011 1544						
Nitrate as N	0.10	U	mg/L	0.033	0.10	1.0	300.0
Analysis Batch: 220-48318	Date Analyzed: 02/19/2011 1438						
Sulfate	97.4		mg/L	0.67	2.0	2.0	300.0
Analysis Batch: 220-48317	Date Analyzed: 02/23/2011 1526						
Alkalinity	245		mg/L	0.16	2.0	1.0	SM 2320B
Analysis Batch: 220-48309	Date Analyzed: 02/24/2011 1334						
Biochemical Oxygen Demand	2.0	U	mg/L	0.65	2.0	1.0	SM 5210B
Analysis Batch: 220-48150	Date Analyzed: 02/19/2011 1400						
Dissolved Organic Carbon - Quad-Dissolved	1.0	U	mg/L	0.23	1.0	1.0	SM 5310C
Analysis Batch: 220-48469	Date Analyzed: 03/02/2011 0205						
Total Organic Carbon - Quad	1.0	U	mg/L	0.23	1.0	1.0	SM 5310C
Analysis Batch: 220-48468	Date Analyzed: 03/02/2011 0137						

General Chemistry

Client Sample ID: DUPLICATE

Lab Sample ID: 220-14770-4
Client Matrix: Water

Date Sampled: 02/18/2011 0000
Date Received: 02/19/2011 1020

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Chloride	196		mg/L	3.3	10.0	10	300.0
Analysis Batch: 220-48317	Date Analyzed: 02/23/2011 1657						
Nitrate as N	0.10	U	mg/L	0.033	0.10	1.0	300.0
Analysis Batch: 220-48318	Date Analyzed: 02/19/2011 1456						
Sulfate	97.8		mg/L	0.67	2.0	2.0	300.0
Analysis Batch: 220-48317	Date Analyzed: 02/23/2011 1639						
Alkalinity	251		mg/L	0.16	2.0	1.0	SM 2320B
Analysis Batch: 220-48309	Date Analyzed: 02/24/2011 1341						
Biochemical Oxygen Demand	2.0	U	mg/L	0.65	2.0	1.0	SM 5210B
Analysis Batch: 220-48150	Date Analyzed: 02/19/2011 1400						
Dissolved Organic Carbon - Quad-Dissolved	1.0	U	mg/L	0.23	1.0	1.0	SM 5310C
Analysis Batch: 220-48469	Date Analyzed: 03/02/2011 0301						
Total Organic Carbon - Quad	1.0	U	mg/L	0.23	1.0	1.0	SM 5310C
Analysis Batch: 220-48468	Date Analyzed: 03/02/2011 0233						

Appendix D-2

First Post-ISCR Groundwater Samples
(March 2011)

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 220-14991-1

Job Description: 110 Luther Ave. - Syracuse Label

For:
S & W Redevelopment LLC
430 East Genesee Street
Suite 401
Syracuse, NY 13202

Attention: Mr. Don Sorbello

Joan Widomski

Approved for release.
Joan Widomski
Project Manager I
4/6/2011 4:26 PM

Designee for
Jackie Trudell
Project Manager I
jackie.trudell@testamericainc.com
04/06/2011

The test results in this report meet all NELAP requirements unless specified within the case narrative. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. All questions regarding this report should be directed to the TestAmerica Project Manager.

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TestAmerica Laboratories, Inc.
TestAmerica Connecticut 128 Long Hill Cross Road, Shelton, CT 06484
Tel (203) 929-8140 Fax (203) 929-8142 www.testamericainc.com

ACCREDITED IN ACCORDANCE WITH nelac

Job Number: 220-14991-1

Job Description: 110 Luther Ave. - Syracuse Label

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed within the body of this report. Release of the data contained in this sample data package and in the electronic data deliverable has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Joan Widomski

Approved for release.
Joan Widomski
Project Manager I
4/6/2011 4:26 PM

Designee for
Jackie Trudell

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Job Narrative
220-14991-1

Comments
No additional comments.

Receipt
All samples were received in good condition within temperature requirements.

GC/MS VOA
No analytical or quality issues were noted.

GC VOA
No analytical or quality issues were noted.

Metals
No analytical or quality issues were noted.

General Chemistry
Method(s) SM 5210B: The following sample's collection time was listed as 03/22/11 at 0:00 on the client's Chain Of Custody:DUPLICATE (220-14991-4). The collection times for the remainder of the samples listed were between 10:30-14:05 on 03/22/11. Because the Field Duplicate's collection time was not listed within the actual range of sampling times, the sample was flagged as out of hold for BOD. The 'H' flag was removed for this sample for this analysis.

Method(s) SM 5210B: All of the dilutions overdepleted for the following sample: MW-11 (220-14991-2). Only a "greater than" result could be calculated from the most dilute preparation.

No other analytical or quality issues were noted.

FORMULAS FOR NYSDEC SAMPLE CALCULATIONS

Volatiles

(Ax)(IS)(DF)
(AIS)(RRF)(V)(% solids) = C

(AX)(IS)(VT)(1000)(DF)
(AIS)(RRF)(VA)(V)(% solids) = C (for medium level soils)

SemiVolatiles

(AX)(IS)(VE)(DF)(GPC factor is 2 if needed)
(AIS)(RRF)(volume injected)(V)(% solids) = C

Pesticides

(AX)(VE)(DF)
(RRF)(V)(% solids)(volume injected) = C

PCBs for compound/retention time

(AX)(VE)(DF)
(RRF of compound at the stated retention time)(V)(% solids)(volume injected) = C

DRO/CTETPH

(AX)(VE)(DF)
(RRF)(V)(% solids)(volume injected) = C

AX = area of the target Ion
AIS = Area of Internal standard
C = concentration as ug/L or ug/Kg
DF = dilution
IS = Internal standard concentration (ng)
RRF = average RF (from initial cal except CLP methods from continuing cal)
V = sample volume for liquids in mls or sample weight for solids in grams
VA = volume of aliquot for medium level soils
VE = volume of concentrated extract
VT = volume of methanol for volatile medium level soils

SAMPLE SUMMARY

Client: S & W Redevelopment LLC

Job Number: 220-14991-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
220-14991-1	MW-7	Water	03/22/2011 1030	03/23/2011 1020
220-14991-1MS	MW-7	Water	03/22/2011 1030	03/23/2011 1020
220-14991-1MSD	MW-7	Water	03/22/2011 1030	03/23/2011 1020
220-14991-2	MW-11	Water	03/22/2011 1155	03/23/2011 1020
220-14991-3	MW-17	Water	03/22/2011 1405	03/23/2011 1020
220-14991-4	DUPLICATE	Water	03/22/2011 0000	03/23/2011 1020
220-14991-5TB	TRIP BLANK	Water	03/22/2011 0000	03/23/2011 1020

EXECUTIVE SUMMARY - Detections

Client: S & W Redevelopment LLC

Job Number: 220-14991-1

Lab Sample ID / Analyte	Client Sample ID	Result / Qualifier		Reporting Limit	Units	Method
220-14991-1	**MW-7**					
Vinyl chloride		460	J	500	ug/L	8260B
cis-1,2-Dichloroethene		14000		500	ug/L	8260B
Trichloroethene		3600		500	ug/L	8260B
Tetrachloroethene		6900		500	ug/L	8260B
Methane		350		4.0	ug/L	RSK-175
Ethane		8.0		8.0	ug/L	RSK-175
Ethylene		19		6.0	ug/L	RSK-175
Calcium		313000		1000	ug/L	6010B
Iron		48300		250	ug/L	6010B
Magnesium		89400		1000	ug/L	6010B
Manganese		2270		16.0	ug/L	6010B
Hardness as calcium carbonate		1150		1.0	mg/L	SM 2340B
Chloride		280		25.0	mg/L	300.0
Sulfate		88.9		1.0	mg/L	300.0
Alkalinity		521		2.0	mg/L	SM 2320B
Biochemical Oxygen Demand		464		2.0	mg/L	SM 5210B
Total Organic Carbon - Quad		282		10.0	mg/L	SM 5310C
Dissolved						
Dissolved Organic Carbon - Quad-Dissolved		280		10.0	mg/L	SM 5310C
220-14991-2	**MW-11**					
cis-1,2-Dichloroethene		39000		1000	ug/L	8260B
Trichloroethene		1100		1000	ug/L	8260B
Tetrachloroethene		4200		1000	ug/L	8260B
Methane		4.8		2.0	ug/L	RSK-175
Calcium		361000		1000	ug/L	6010B
Iron		298000		250	ug/L	6010B
Magnesium		82300		1000	ug/L	6010B
Manganese		2270		16.0	ug/L	6010B
Hardness as calcium carbonate		1240		1.0	mg/L	SM 2340B
Chloride		404		25.0	mg/L	300.0
Sulfate		40.1		1.0	mg/L	300.0
Alkalinity		837		2.0	mg/L	SM 2320B
Biochemical Oxygen Demand		>2367.00		2.0	mg/L	SM 5210B
Total Organic Carbon - Quad		1310		100	mg/L	SM 5310C
Dissolved						
Dissolved Organic Carbon - Quad-Dissolved		1290		100	mg/L	SM 5310C

EXECUTIVE SUMMARY - Detections

Client: S & W Redevelopment LLC Job Number: 220-14991-1

Lab Sample ID / Analyte	Client Sample ID	Result / Qualifier	Reporting Limit	Units	Method
220-14991-3	**MW-17**				
cis-1,2-Dichloroethene		780	200	ug/L	8260B
Trichloroethene		1200	200	ug/L	8260B
Tetrachloroethene		6300	200	ug/L	8260B
Methane		27	2.0	ug/L	RSK-175
Calcium		126000	1000	ug/L	6010B
Iron		13200	250	ug/L	6010B
Magnesium		35500	1000	ug/L	6010B
Manganese		737	16.0	ug/L	6010B
Hardness as calcium carbonate		461	1.0	mg/L	SM 2340B
Chloride		213	10.0	mg/L	300.0
Sulfate		84.2	10.0	mg/L	300.0
Alkalinity		249	2.0	mg/L	SM 2320B
220-14991-4	**DUPLICATE**				
cis-1,2-Dichloroethene		740	200	ug/L	8260B
Trichloroethene		1000	200	ug/L	8260B
Tetrachloroethene		4000	200	ug/L	8260B
Methane		24	2.0	ug/L	RSK-175
Calcium		128000	1000	ug/L	6010B
Iron		14100	250	ug/L	6010B
Magnesium		36200	1000	ug/L	6010B
Manganese		762	16.0	ug/L	6010B
Hardness as calcium carbonate		469	1.0	mg/L	SM 2340B
Chloride		209	10.0	mg/L	300.0
Sulfate		83.2	10.0	mg/L	300.0
Alkalinity		248	2.0	mg/L	SM 2320B

METHOD SUMMARY

Client: S & W Redevelopment LLC

Job Number: 220-14991-1

Description	Lab Location	Method	Preparation Method
Matrix: Water			
Volatile Organic Compounds (GC/MS)	TAL CT	SW846 8260B	
Purge and Trap	TAL CT		SW846 5030B
Metals (ICP)	TAL CT	SW846 6010B	
Preparation, Total Metals	TAL CT		SW846 3010A
Hardness, Calculation	TAL CT	SM SM 2340B	
Anions, Ion Chromatography	TAL CT	MCAWW 300.0	
Alkalinity	TAL CT	SM SM 2320B	
BOD, 5-Day	TAL CT	SM SM 5210B	
Organic Carbon, Dissolved (DOC)	TAL CT	SM SM 5310C	
Sample Filtration, Field			FIELD_FLTRD
TOC	TAL CT	SM SM 5310C	
Dissolved Gases (GC)	TAL BUR	RSK RSK-175	

Lab References:

TAL BUR = TestAmerica Burlington

TAL CT = TestAmerica Connecticut

Method References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

RSK = Sample Prep And Calculations For Dissolved Gas Analysis In Water Samples Using A GC Headspace Equilibration Technique, RSKSOP-175, Rev. 0, 8/11/94, USEPA Research Lab

SM = "Standard Methods For The Examination Of Water And Wastewater",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

METHOD / ANALYST SUMMARY

Client: S & W Redevelopment LLC

Job Number: 220-14991-1

Method	Analyst	Analyst ID
SW846 8260B	Humbert, Dave	DH
SW846 8260B	Lynch, Eon	EL
RSK RSK-175	Veilleux, Michael R	MRV
SW846 6010B	Petronchak, Nestor	NP
SM SM 2340B	Petronchak, Nestor	NP
MCAWW 300.0	Keene, Angela H	AHK
SM SM 2320B	Bouthot, Agnieszka	AB
SM SM 5210B	Keene, Angela H	AHK
SM SM 5310C	Madumadu, Dave	DM

Client: S & W Redevelopment LLC

Job Number: 220-14991-1

Client Sample ID: **MW-7**

Lab Sample ID: 220-14991-1
Client Matrix: Water

Date Sampled: 03/22/2011 1030
Date Received: 03/23/2011 1020

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	220-49289	Instrument ID:	MSL
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	L8721.D
Dilution:	100			Initial Weight/Volume:	5 mL
Analysis Date:	03/31/2011 0045			Final Weight/Volume:	5 mL
Prep Date:	03/31/2011 0045				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Vinyl chloride	460	J	99	500
trans-1,2-Dichloroethene	500	U	76	500
cis-1,2-Dichloroethene	14000		99	500
Trichloroethene	3600		62	500
Tetrachloroethene	6900		81	500

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	118		65 - 136
4-Bromofluorobenzene	82		51 - 142
Dibromofluoromethane	122		68 - 132
Toluene-d8 (Surr)	114		63 - 127

Client: S & W Redevelopment LLC

Job Number: 220-14991-1

Client Sample ID: **MW-11**

Lab Sample ID: 220-14991-2
Client Matrix: Water

Date Sampled: 03/22/2011 1155
Date Received: 03/23/2011 1020

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	220-49303	Instrument ID:	MSL
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	L8785.D
Dilution:	200			Initial Weight/Volume:	5 mL
Analysis Date:	04/01/2011 1343			Final Weight/Volume:	5 mL
Prep Date:	04/01/2011 1343				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Vinyl chloride	1000	U	200	1000
trans-1,2-Dichloroethene	1000	U	150	1000
cis-1,2-Dichloroethene	39000		200	1000
Trichloroethene	1100		120	1000
Tetrachloroethene	4200		160	1000

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	109		65 - 136
4-Bromofluorobenzene	80		51 - 142
Dibromofluoromethane	114		68 - 132
Toluene-d8 (Surr)	108		63 - 127

Client: S & W Redevelopment LLC

Job Number: 220-14991-1

Client Sample ID: **MW-17**

Lab Sample ID: 220-14991-3
Client Matrix: Water

Date Sampled: 03/22/2011 1405
Date Received: 03/23/2011 1020

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	220-49289	Instrument ID:	MSL
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	L8718.D
Dilution:	40			Initial Weight/Volume:	5 mL
Analysis Date:	03/30/2011 2332			Final Weight/Volume:	5 mL
Prep Date:	03/30/2011 2332				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Vinyl chloride	200	U	40	200
trans-1,2-Dichloroethene	200	U	30	200
cis-1,2-Dichloroethene	780		40	200
Trichloroethene	1200		25	200
Tetrachloroethene	6300		32	200

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	110		65 - 136
4-Bromofluorobenzene	80		51 - 142
Dibromofluoromethane	113		68 - 132
Toluene-d8 (Surr)	107		63 - 127

Client: S & W Redevelopment LLC

Job Number: 220-14991-1

Client Sample ID: **DUPLICATE**

Lab Sample ID: 220-14991-4
Client Matrix: Water

Date Sampled: 03/22/2011 0000
Date Received: 03/23/2011 1020

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	220-49289	Instrument ID:	MSL
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	L8719.D
Dilution:	40			Initial Weight/Volume:	5 mL
Analysis Date:	03/30/2011 2356			Final Weight/Volume:	5 mL
Prep Date:	03/30/2011 2356				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Vinyl chloride	200	U	40	200
trans-1,2-Dichloroethene	200	U	30	200
cis-1,2-Dichloroethene	740		40	200
Trichloroethene	1000		25	200
Tetrachloroethene	4000		32	200

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	117		65 - 136
4-Bromofluorobenzene	83		51 - 142
Dibromofluoromethane	117		68 - 132
Toluene-d8 (Surr)	112		63 - 127

Client: S & W Redevelopment LLC

Job Number: 220-14991-1

Client Sample ID: **TRIP BLANK**

Lab Sample ID: 220-14991-5TB
Client Matrix: Water

Date Sampled: 03/22/2011 0000
Date Received: 03/23/2011 1020

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	220-49381	Instrument ID:	MSN
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	N2038.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	04/04/2011 1402			Final Weight/Volume:	5 mL
Prep Date:	04/04/2011 1402				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Vinyl chloride	5.0	U	0.99	5.0
trans-1,2-Dichloroethene	5.0	U	0.76	5.0
cis-1,2-Dichloroethene	5.0	U	0.99	5.0
Trichloroethene	5.0	U	0.62	5.0
Tetrachloroethene	5.0	U	0.81	5.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	92		65 - 136
4-Bromofluorobenzene	120		51 - 142
Dibromofluoromethane	92		68 - 132
Toluene-d8 (Surr)	98		63 - 127

Client: S & W Redevelopment LLC

Job Number: 220-14991-1

Client Sample ID: **MW-7**

Lab Sample ID: 220-14991-1
Client Matrix: Water

Date Sampled: 03/22/2011 1030
Date Received: 03/23/2011 1020

RSK-175 Dissolved Gases (GC)

Analysis Method:	RSK-175	Analysis Batch:	200-15813	Instrument ID:	2866.i
	N/A		N/A	Initial Weight/Volume:	18 mL
Dilution:	2.0			Final Weight/Volume:	18 mL
Analysis Date:	03/29/2011 1617			Injection Volume:	100 uL
Prep Date:	N/A			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	RL	RL
Methane	350		4.0	4.0
Ethane	8.0		8.0	8.0
Ethylene	19		6.0	6.0

Client: S & W Redevelopment LLC

Job Number: 220-14991-1

Client Sample ID: **MW-11**

Lab Sample ID: 220-14991-2
Client Matrix: Water

Date Sampled: 03/22/2011 1155
Date Received: 03/23/2011 1020

RSK-175 Dissolved Gases (GC)

Analysis Method:	RSK-175	Analysis Batch:	200-15813	Instrument ID:	2866.i
	N/A		N/A	Initial Weight/Volume:	18 mL
Dilution:	1.0			Final Weight/Volume:	18 mL
Analysis Date:	03/29/2011 1541			Injection Volume:	100 uL
Prep Date:	N/A			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	RL	RL
Methane	4.8		2.0	2.0
Ethane	4.0	U	4.0	4.0
Ethylene	3.0	U	3.0	3.0

Client: S & W Redevelopment LLC

Job Number: 220-14991-1

Client Sample ID: **MW-17**

Lab Sample ID: 220-14991-3
Client Matrix: Water

Date Sampled: 03/22/2011 1405
Date Received: 03/23/2011 1020

RSK-175 Dissolved Gases (GC)

Analysis Method:	RSK-175	Analysis Batch:	200-15813	Instrument ID:	2866.i
	N/A		N/A	Initial Weight/Volume:	18 mL
Dilution:	1.0			Final Weight/Volume:	18 mL
Analysis Date:	03/29/2011 1545			Injection Volume:	100 uL
Prep Date:	N/A			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	RL	RL
Methane	27		2.0	2.0
Ethane	4.0	U	4.0	4.0
Ethylene	3.0	U	3.0	3.0

Client: S & W Redevelopment LLC

Job Number: 220-14991-1

Client Sample ID: **DUPLICATE**

Lab Sample ID: 220-14991-4
Client Matrix: Water

Date Sampled: 03/22/2011 0000
Date Received: 03/23/2011 1020

RSK-175 Dissolved Gases (GC)

Analysis Method:	RSK-175	Analysis Batch:	200-15813	Instrument ID:	2866.i
	N/A		N/A	Initial Weight/Volume:	18 mL
Dilution:	1.0			Final Weight/Volume:	18 mL
Analysis Date:	03/29/2011 1551			Injection Volume:	100 uL
Prep Date:	N/A			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	RL	RL
Methane	24		2.0	2.0
Ethane	4.0	U	4.0	4.0
Ethylene	3.0	U	3.0	3.0

Client: S & W Redevelopment LLC

Job Number: 220-14991-1

Client Sample ID: **MW-7**

Lab Sample ID: 220-14991-1
Client Matrix: Water

Date Sampled: 03/22/2011 1030
Date Received: 03/23/2011 1020

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	220-49269	Instrument ID:	ICAP3
Prep Method:	3010A	Prep Batch:	220-48994	Lab File ID:	033111d.prn
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	03/31/2011 1441			Final Weight/Volume:	50 mL
Prep Date:	03/24/2011 0948				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Calcium	313000		100	1000
Iron	48300		30.0	250
Magnesium	89400		10.0	1000
Manganese	2270		0.50	16.0

SM 2340B Hardness, Calculation

Analysis Method:	SM 2340B	Analysis Batch:	220-49347	Instrument ID:	NOEQUIP
	N/A		N/A	Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	
Analysis Date:	03/31/2011 1441			Final Weight/Volume:	1.0 mL
Prep Date:	N/A				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Hardness as calcium carbonate	1150		1.0	1.0

Client: S & W Redevelopment LLC

Job Number: 220-14991-1

Client Sample ID: **MW-11**

Lab Sample ID: 220-14991-2
Client Matrix: Water

Date Sampled: 03/22/2011 1155
Date Received: 03/23/2011 1020

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	220-49269	Instrument ID:	ICAP3
Prep Method:	3010A	Prep Batch:	220-48994	Lab File ID:	033111d.prn
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	03/31/2011 1456			Final Weight/Volume:	50 mL
Prep Date:	03/24/2011 0948				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Calcium	361000		100	1000
Iron	298000		30.0	250
Magnesium	82300		10.0	1000
Manganese	2270		0.50	16.0

SM 2340B Hardness, Calculation

Analysis Method:	SM 2340B	Analysis Batch:	220-49347	Instrument ID:	NOEQUIP
	N/A		N/A	Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	
Analysis Date:	03/31/2011 1456			Final Weight/Volume:	1.0 mL
Prep Date:	N/A				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Hardness as calcium carbonate	1240		1.0	1.0

Client: S & W Redevelopment LLC

Job Number: 220-14991-1

Client Sample ID: **MW-17**

Lab Sample ID: 220-14991-3
Client Matrix: Water

Date Sampled: 03/22/2011 1405
Date Received: 03/23/2011 1020

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	220-49269	Instrument ID:	ICAP3
Prep Method:	3010A	Prep Batch:	220-48994	Lab File ID:	033111d.prn
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	03/31/2011 1500			Final Weight/Volume:	50 mL
Prep Date:	03/24/2011 0948				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Calcium	126000		100	1000
Iron	13200		30.0	250
Magnesium	35500		10.0	1000
Manganese	737		0.50	16.0

SM 2340B Hardness, Calculation

Analysis Method:	SM 2340B	Analysis Batch:	220-49347	Instrument ID:	NOEQUIP
	N/A		N/A	Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	
Analysis Date:	03/31/2011 1500			Final Weight/Volume:	1.0 mL
Prep Date:	N/A				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Hardness as calcium carbonate	461		1.0	1.0

Client: S & W Redevelopment LLC

Job Number: 220-14991-1

Client Sample ID: **DUPLICATE**

Lab Sample ID: 220-14991-4
Client Matrix: Water

Date Sampled: 03/22/2011 0000
Date Received: 03/23/2011 1020

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	220-49269	Instrument ID:	ICAP3
Prep Method:	3010A	Prep Batch:	220-48994	Lab File ID:	033111d.prn
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	03/31/2011 1503			Final Weight/Volume:	50 mL
Prep Date:	03/24/2011 0948				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Calcium	128000		100	1000
Iron	14100		30.0	250
Magnesium	36200		10.0	1000
Manganese	762		0.50	16.0

SM 2340B Hardness, Calculation

Analysis Method:	SM 2340B	Analysis Batch:	220-49347	Instrument ID:	NOEQUIP
	N/A		N/A	Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	
Analysis Date:	03/31/2011 1503			Final Weight/Volume:	1.0 mL
Prep Date:	N/A				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Hardness as calcium carbonate	469		1.0	1.0

General Chemistry

Client Sample ID: MW-7

Lab Sample ID: 220-14991-1 Date Sampled: 03/22/2011 1030
Client Matrix: Water Date Received: 03/23/2011 1020

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Chloride	280		mg/L	8.3	25.0	25	300.0
Analysis Batch: 220-49034	Analysis Date: 03/24/2011 1526						
Nitrate as N	0.10	U	mg/L	0.033	0.10	1.0	300.0
Analysis Batch: 220-49035	Analysis Date: 03/23/2011 1628						
Sulfate	88.9		mg/L	0.33	1.0	1.0	300.0
Analysis Batch: 220-49034	Analysis Date: 03/23/2011 1628						
Alkalinity	521		mg/L	0.16	2.0	1.0	SM 2320B
Analysis Batch: 220-49101	Analysis Date: 03/25/2011 1439						
Biochemical Oxygen Demand	464		mg/L	0.65	2.0	1.0	SM 5210B
Analysis Batch: 220-48999	Analysis Date: 03/24/2011 1000						
Dissolved Organic Carbon - Quad-Dissolved	280		mg/L	2.3	10.0	10	SM 5310C
Analysis Batch: 220-49317	Analysis Date: 03/30/2011 1859						
Total Organic Carbon - Quad	282		mg/L	2.3	10.0	10	SM 5310C
Analysis Batch: 220-49316	Analysis Date: 03/30/2011 1525						

General Chemistry

Client Sample ID: MW-11

Lab Sample ID: 220-14991-2
Client Matrix: Water

Date Sampled: 03/22/2011 1155
Date Received: 03/23/2011 1020

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Chloride	404		mg/L	8.3	25.0	25	300.0
Analysis Batch: 220-49034	Analysis Date: 03/24/2011 1656						
Nitrate as N	0.10	U	mg/L	0.033	0.10	1.0	300.0
Analysis Batch: 220-49035	Analysis Date: 03/23/2011 1723						
Sulfate	40.1		mg/L	0.33	1.0	1.0	300.0
Analysis Batch: 220-49034	Analysis Date: 03/23/2011 1723						
Alkalinity	837		mg/L	0.16	2.0	1.0	SM 2320B
Analysis Batch: 220-49101	Analysis Date: 03/25/2011 1451						
Biochemical Oxygen Demand	>2367.00		mg/L	0.65	2.0	1.0	SM 5210B
Analysis Batch: 220-48999	Analysis Date: 03/24/2011 1000						
Dissolved Organic Carbon - Quad-Dissolved	1290		mg/L	23.2	100	100	SM 5310C
Analysis Batch: 220-49317	Analysis Date: 03/31/2011 1259						
Total Organic Carbon - Quad	1310		mg/L	23.2	100	100	SM 5310C
Analysis Batch: 220-49316	Analysis Date: 03/31/2011 1043						

General Chemistry

Client Sample ID: MW-17

Lab Sample ID: 220-14991-3 Date Sampled: 03/22/2011 1405
Client Matrix: Water Date Received: 03/23/2011 1020

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Chloride	213		mg/L	3.3	10.0	10	300.0
Analysis Batch: 220-49034	Analysis Date: 03/24/2011 1715						
Nitrate as N	0.10	U	mg/L	0.033	0.10	1.0	300.0
Analysis Batch: 220-49035	Analysis Date: 03/23/2011 1817						
Sulfate	84.2		mg/L	3.3	10.0	10	300.0
Analysis Batch: 220-49034	Analysis Date: 03/24/2011 1715						
Alkalinity	249		mg/L	0.16	2.0	1.0	SM 2320B
Analysis Batch: 220-49101	Analysis Date: 03/25/2011 1459						
Biochemical Oxygen Demand	2.0	U	mg/L	0.65	2.0	1.0	SM 5210B
Analysis Batch: 220-48999	Analysis Date: 03/24/2011 1000						
Dissolved Organic Carbon - Quad-Dissolved	1.0	U	mg/L	0.23	1.0	1.0	SM 5310C
Analysis Batch: 220-49317	Analysis Date: 03/31/2011 0441						
Total Organic Carbon - Quad	1.0	U	mg/L	0.23	1.0	1.0	SM 5310C
Analysis Batch: 220-49316	Analysis Date: 03/31/2011 0405						

General Chemistry

Client Sample ID: DUPLICATE

Lab Sample ID: 220-14991-4
Client Matrix: Water

Date Sampled: 03/22/2011 0000
Date Received: 03/23/2011 1020

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Chloride	209		mg/L	3.3	10.0	10	300.0
Analysis Batch: 220-49034	Analysis Date: 03/24/2011 1733						
Nitrate as N	0.10	U	mg/L	0.033	0.10	1.0	300.0
Analysis Batch: 220-49035	Analysis Date: 03/23/2011 1835						
Sulfate	83.2		mg/L	3.3	10.0	10	300.0
Analysis Batch: 220-49034	Analysis Date: 03/24/2011 1733						
Alkalinity	248		mg/L	0.16	2.0	1.0	SM 2320B
Analysis Batch: 220-49101	Analysis Date: 03/25/2011 1506						
Biochemical Oxygen Demand	2.0	U	mg/L	0.65	2.0	1.0	SM 5210B
Analysis Batch: 220-48999	Analysis Date: 03/24/2011 1000						
Dissolved Organic Carbon - Quad-Dissolved	1.0	U	mg/L	0.23	1.0	1.0	SM 5310C
Analysis Batch: 220-49317	Analysis Date: 03/31/2011 0536						
Total Organic Carbon - Quad	1.0	U	mg/L	0.23	1.0	1.0	SM 5310C
Analysis Batch: 220-49316	Analysis Date: 03/31/2011 0508						

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 220-14991-2

Job Description: 110 Luther Ave. - Syracuse Label

For:
S & W Redevelopment LLC
430 East Genesee Street
Suite 401
Syracuse, NY 13202

Attention: Mr. Don Sorbello

Joan Widomski

Approved for release.
Joan Widomski
Project Manager I
4/11/2011 2:58 PM

Designee for
Jackie Trudell
Project Manager I
jackie.trudell@testamericainc.com
04/11/2011

The test results in this report meet all NELAP requirements unless specified within the case narrative. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. All questions regarding this report should be directed to the TestAmerica Project Manager.

TestAmerica Connecticut Certifications and Approvals: CTDOH PH-047, MADEP CT023, RIDOH A43, NYDOH 10602, NY NELAP 10602, NHDES 2528, NJDEP CT410, ME DOH CT023, UT DOH 2032614458

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- Client Chain of Custody 16
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Comments
No additional comments.

Receipt
No analytical or quality issues were noted.

Subcontract Work
Method(s) Total Volatile Fatty Acids: The sample has been subcontracted to Microseeps the subcontract certifications are different from those listed on the TestAmerica cover page of this final report.

SAMPLE SUMMARY

Client: S & W Redevelopment LLC

Job Number: 220-14991-2

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
220-14991-1	MW-7	Water	03/22/2011 1030	03/23/2011 1020
220-14991-1MSMS	MW-7 MS	Water	03/22/2011 1030	03/23/2011 1020
220-14991-1MSDMSD	MW-7 MSD	Water	03/22/2011 1030	03/23/2011 1020
220-14991-2	MW-11	Water	03/22/2011 1155	03/23/2011 1020
220-14991-3	MW-17	Water	03/22/2011 1405	03/23/2011 1020
220-14991-4	DUPLICATE	Water	03/22/2011 0000	03/23/2011 1020

METHOD SUMMARY

Client: S & W Redevelopment LLC

Job Number: 220-14991-2

Description	Lab Location	Method	Preparation Method
Matrix: Water			
General Sub Contract Method	SC0015	Subcontract	

Lab References:

SC0015 = Microseeps

Method References:

SUBCONTRACTED DATA

Client Name: Test America
Contact: Jackie Trudell
Address: 128 Long Hill Cross Road
Shelton, CT 06484

Page: Page 1 of 7
Lab Proj #: P1103289
Report Date: 04/08/11
Client Proj Name: 110 Luther Ave. - Syracuse Label
Client Proj #: 220-14991-1

Laboratory Results

Total pages in data package: 14

Lab Sample #	Client Sample ID
P1103289-01	MW-7(220-14991-1)
P1103289-02	MW-7(220-14991-1MS)
P1103289-03	MW-7(220-14991-1MSD)
P1103289-04	MW-11(220-14991-2)
P1103289-05	MW-17(220-14991-3)
P1103289-06	DUPLICATE (220-14991-4)

Microseeps test results meet all the requirements of the NELAC standards or provide reasons and/or justification if they do not.

Approved By: Robbin Robl ***Date:*** 4/11/11

Project Manager: Robbin Robl

The analytical results reported here are reliable and usable to the precision expressed in this report. As required by some regulating authorities, a full discussion of the uncertainty in our analytical results can be obtained at our web site or through customer service. Unless otherwise specified, all results are reported on a wet weight basis.

As a valued client we would appreciate your comments on our service.
Please call customer service at (412)826-5245 or email customerservice@microseeps.com.

Case Narrative: The percent recoveries for the MS/MSD analyses could not be determined due to the high sample concentrations.

Client Name: Test America
Contact: Jackie Trudell
Address: 128 Long Hill Cross Road
Shelton, CT 06484

Page: Page 2 of 7
Lab Proj #: P1103289
Report Date: 04/08/11
Client Proj Name: 110 Luther Ave. - Syracuse Label
Client Proj #: 220-14991-1

Sample Description	Matrix	Lab Sample #	Sampled Date/Time	Received
MW-7(220-14991-1)	Water	P1103289-01	22 Mar. 11 10:30	24 Mar. 11 8:50

Analyte(s)	Result	PQL	Units	Method #	Analysis Date	By
SemiVolatiles						
N Acetic Acid	240.000	7.000	mg/L	AM23G	4/5/11	kb
N Butyric Acid	100.000	5.000	mg/L	AM23G	4/5/11	kb
N Hexanoic Acid	9.800	0.500	mg/L	AM23G	4/5/11	kb
N i-Hexanoic Acid	<0.500	0.500	mg/L	AM23G	4/5/11	kb
N i-Pentanoic Acid	3.800	1.500	mg/L	AM23G	4/5/11	kb
N Lactic Acid	39.000	10.000	mg/L	AM23G	4/5/11	kb
N Pentanoic Acid	4.300	0.700	mg/L	AM23G	4/5/11	kb
N Propionic Acid	61.000	5.000	mg/L	AM23G	4/5/11	kb
N Pyruvic Acid	3.400	1.500	mg/L	AM23G	4/5/11	kb

N - NELAC certified analysis
PA02-00538

Client Name: Test America
Contact: Jackie Trudell
Address: 128 Long Hill Cross Road
Shelton, CT 06484

Page: Page 3 of 7
Lab Proj #: P1103289
Report Date: 04/08/11
Client Proj Name: 110 Luther Ave. - Syracuse Label
Client Proj #: 220-14991-1

Sample Description	Matrix	Lab Sample #	Sampled Date/Time	Received
MW-7(220-14991-1MS)	Water	P1103289-02	22 Mar. 11 10:30	24 Mar. 11 8:50

Analyte(s)	Result	PQL	Units	Method #	Analysis Date	By
SemiVolatiles						
N Acetic Acid	200.000	7.000	mg/L	AM23G	4/5/11	kb
N Butyric Acid	84.000	5.000	mg/L	AM23G	4/5/11	kb
N Hexanoic Acid	9.100	0.500	mg/L	AM23G	4/5/11	kb
N i-Hexanoic Acid	2.500	0.500	mg/L	AM23G	4/5/11	kb
N i-Pentanoic Acid	5.000	1.500	mg/L	AM23G	4/5/11	kb
N Lactic Acid	32.000	10.000	mg/L	AM23G	4/5/11	kb
N Pentanoic Acid	5.400	0.700	mg/L	AM23G	4/5/11	kb
N Propionic Acid	56.000	5.000	mg/L	AM23G	4/5/11	kb
N Pyruvic Acid	5.700	1.500	mg/L	AM23G	4/5/11	kb

N - NELAC certified analysis
PA02-00538

Client Name: Test America
Contact: Jackie Trudell
Address: 128 Long Hill Cross Road
Shelton, CT 06484

Page: Page 4 of 7
Lab Proj #: P1103289
Report Date: 04/08/11
Client Proj Name: 110 Luther Ave. - Syracuse Label
Client Proj #: 220-14991-1

Sample Description	Matrix	Lab Sample #	Sampled Date/Time	Received
MW-7(220-14991-1MSD)	Water	P1103289-03	22 Mar. 11 10:30	24 Mar. 11 8:50

Analyte(s)	Result	PQL	Units	Method #	Analysis Date	By
SemiVolatiles						
N Acetic Acid	200.000	7.000	mg/L	AM23G	4/5/11	kb
N Butyric Acid	82.000	5.000	mg/L	AM23G	4/5/11	kb
N Hexanoic Acid	14.000	0.500	mg/L	AM23G	4/5/11	kb
N i-Hexanoic Acid	3.100	0.500	mg/L	AM23G	4/5/11	kb
N i-Pentanoic Acid	5.000	1.500	mg/L	AM23G	4/5/11	kb
N Lactic Acid	44.000	10.000	mg/L	AM23G	4/5/11	kb
N Pentanoic Acid	5.200	0.700	mg/L	AM23G	4/5/11	kb
N Propionic Acid	50.000	5.000	mg/L	AM23G	4/5/11	kb
N Pyruvic Acid	6.300	1.500	mg/L	AM23G	4/5/11	kb

N - NELAC certified analysis
PA02-00538

Client Name: Test America
Contact: Jackie Trudell
Address: 128 Long Hill Cross Road
Shelton, CT 06484

Page: Page 5 of 7
Lab Proj #: P1103289
Report Date: 04/08/11
Client Proj Name: 110 Luther Ave. - Syracuse Label
Client Proj #: 220-14991-1

Sample Description	Matrix	Lab Sample #	Sampled Date/Time	Received
MW-11(220-14991-2)	Water	P1103289-04	22 Mar. 11 11:55	24 Mar. 11 8:50

Analyte(s)	Result	PQL	Units	Method #	Analysis Date	By
SemiVolatiles						
N Acetic Acid	870.000	7.000	mg/L	AM23G	4/5/11	kb
N Butyric Acid	690.000	5.000	mg/L	AM23G	4/5/11	kb
N Hexanoic Acid	16.000	0.500	mg/L	AM23G	4/5/11	kb
N i-Hexanoic Acid	<0.500	0.500	mg/L	AM23G	4/5/11	kb
N i-Pentanoic Acid	<1.500	1.500	mg/L	AM23G	4/5/11	kb
N Lactic Acid	100.000	10.000	mg/L	AM23G	4/5/11	kb
N Pentanoic Acid	7.200	0.700	mg/L	AM23G	4/5/11	kb
N Propionic Acid	130.000	5.000	mg/L	AM23G	4/5/11	kb
N Pyruvic Acid	30.000	1.500	mg/L	AM23G	4/5/11	kb

N - NELAC certified analysis
PA02-00538

Client Name: Test America
Contact: Jackie Trudell
Address: 128 Long Hill Cross Road
Shelton, CT 06484

Page: Page 6 of 7
Lab Proj #: P1103289
Report Date: 04/08/11
Client Proj Name: 110 Luther Ave. - Syracuse Label
Client Proj #: 220-14991-1

Sample Description	Matrix	Lab Sample #	Sampled Date/Time	Received
MW-17(220-14991-3)	Water	P1103289-05	22 Mar. 11 14:05	24 Mar. 11 8:50

Analyte(s)	Result	PQL	Units	Method #	Analysis Date	By
SemiVolatiles						
N Acetic Acid	0.110	0.070	mg/L	AM23G	4/4/11	kb
N Butyric Acid	0.110	0.050	mg/L	AM23G	4/4/11	kb
N Hexanoic Acid	<0.050	0.050	mg/L	AM23G	4/4/11	kb
N i-Hexanoic Acid	<0.050	0.050	mg/L	AM23G	4/4/11	kb
N i-Pentanoic Acid	<0.150	0.150	mg/L	AM23G	4/4/11	kb
N Lactic Acid	<0.100	0.100	mg/L	AM23G	4/4/11	kb
N Pentanoic Acid	<0.070	0.070	mg/L	AM23G	4/4/11	kb
N Propionic Acid	0.260	0.050	mg/L	AM23G	4/4/11	kb
N Pyruvic Acid	<0.150	0.150	mg/L	AM23G	4/4/11	kb

N - NELAC certified analysis
PA02-00538

Client Name: Test America
Contact: Jackie Trudell
Address: 128 Long Hill Cross Road
Shelton, CT 06484

Lab Proj #: P1103289
Report Date: 04/08/11
Client Proj Name: 110 Luther Ave. - Syracuse Label
Client Proj #: 220-14991-1

4/11/2011

Sample Description	Matrix	Lab Sample #	Sampled Date/Time	Received
DUPLICATE (220-14991-4)	Water	P1103289-06	22 Mar. 11 0:00	24 Mar. 11 8:50

Analyte(s)	Result	PQL	Units	Method #	Analysis Date	By
SemiVolatiles						
N Acetic Acid	<0.070	0.070	mg/L	AM23G	4/5/11	kb
N Butyric Acid	<0.050	0.050	mg/L	AM23G	4/5/11	kb
N Hexanoic Acid	<0.050	0.050	mg/L	AM23G	4/5/11	kb
N i-Hexanoic Acid	<0.050	0.050	mg/L	AM23G	4/5/11	kb
N i-Pentanoic Acid	<0.150	0.150	mg/L	AM23G	4/5/11	kb
N Lactic Acid	1.500	0.100	mg/L	AM23G	4/5/11	kb
N Pentanoic Acid	<0.070	0.070	mg/L	AM23G	4/5/11	kb
N Propionic Acid	<0.050	0.050	mg/L	AM23G	4/5/11	kb
N Pyruvic Acid	<0.150	0.150	mg/L	AM23G	4/5/11	kb

N - NELAC certified analysis
PA02-00538

TestAmerica Connecticut
128 Long Hill Cross Road
Shelton, CT 06484
Phone (203) 929-8140 Fax (203) 929-8142

P1103289

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Trudell, Jackie	Carrier Tracking No(s):	COC No: 220-7861.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: jackie.trudell@testamericainc.com		Page: Page 1 of 1
Company: Microseeps		Analysis Requested		Job #: 220-14991-1
Address: 220 William Pitt Way,	Due Date Requested: 4/1/2011			Preservation Codes: A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2SO3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)
City: Pittsburgh	TAT Requested (days):			
State, Zip: PA, 15238				
Phone: 412-826-5245(Tel)	PO #:			Other:
Email:	WO #:			
Project Name: 110 Luther Ave. - Syracuse Label	Project #: 22002823			
Site:	SSOW#:			

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=wasteoil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUBCONTRACT	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MW-7 (220-14991-1)	3/22/11	10:30 Eastern		Water			X		
MW-7 MS (220-14991-1MS)	3/22/11	10:30 Eastern	MS	Water			X		
MW-7 MSD (220-14991-1MSD)	3/22/11	10:30 Eastern	MSD	Water			X		
MW-11 (220-14991-2)	3/22/11	11:55 Eastern		Water			X		
MW-17 (220-14991-3)	3/22/11	14:05 Eastern		Water			X		
DUPLICATE (220-14991-4)	3/22/11	Eastern		Water			X		

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

4°C

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:		
Relinquished by:	Date/Time: 3-23-11 1410	Company TAL	Received by:	Date/Time: 3/24/11	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks:

04/11/2011

Shipping and Receiving Documents

TestAmerica Connecticut
128 Long Hill Cross Road
Shelton, CT 06484
Phone (203) 929-8140 Fax (203) 929-8142

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Contact: IAN MCNAMARA	**Field Sampler:** IEM	**TAT Required (business days):** STANDARD	**Lab PM/Contact:** JACKIE T.
Company: SWRNA	**Mobile/Field Number:**		**Lab Job Number (Lab Use Only):** 14991
Address: 430 E GENESEE ST SUITE 401	**E-Mail:**	**Deliverable Type (Report/EDD):** REPORT	**Passed Rad Screen (Lab Use Only):** [X] Yes [ ] No
City, State, Zip: SYRACUSE NY 13202	**PO #:**	**Sample Disposal:** [ ] Return to Client [X] Disposal by Lab [ ] Archive for __ Months (A fee may be assessed if samples are retained for longer than 1 month)	**Cooler Temperatures (Lab Use Only):** 0.8°C / 1.2°C CUBE 3
Phone: 315-422-4949	**WO #:**		
Email: inemanara@swredev.com	**Project #:** N9013	**State Regulatory QC Criteria Requirements:** CAT B	
Project Name/Site Location (State): SYRACUSE LABEL NY	**SSOW#:**		

Samples Shipped to TestAmerica will be Subject to TestAmerica's Terms and Conditions

TA #	Field Sample Identification (Containers for each sample may be combined on one line)	Collection Date	Collection Time (24-Hour Clock)	Matrix (Aq=Aqueous, S=Solid, W=Waste/Oil, O=Other)	MS/ MSD (Yes or No)	No. of Containers/Preservatives: Unpreserved	H2SO4	HNO3	HCL	NaOH	ZnAc/NaOH	Other	RSK-175	6010B (mod)	HARDNESS	8260B (mod)	5210C	SM5310-D or C	5210B	300.0-28D (mod)	300-48HR	Comments
(1)	MW-7	3-22-11	10:30	Aq	Y	5	4	1	6				X	X	X	X	X	X	X	X	X	
	MW-7 MS		10:30		Y				6													
	MW-7 MSD		10:30		Y																	
(2)	MW-11		11:55		N																	
(3)	MW-17		14:05																			
(4)	DUPLICATE		0:00																			
(5)	TRIP BLANK		0:00						3													

Relinquished by: IEM	Date/Time: 3-22-11 16:12	Company: SWRNA	Received by:	Date/Time: 3-22-11	Company: 16:15
Relinquished by: 3-22-11	Date/Time: 21:30	Company: TALSyr	Received by:	Date/Time: 3-23-11 1020	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Comments:

DISTRIBUTION: WHITE - Stays with the Samples; CANARY - Returned to Client with Report; PINK - Field Copy

Field Sampling / Shipping Instructions and Laboratory Sample Receipt Policy included on Reverse Side of COC

TAL-0015 (0609)

TestAmerica Connecticut
128 Long Hill Cross Road
Shelton, CT 06484
Phone (203) 929-8140 Fax (203) 929-8142

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Contact: IAN MCNAMARA	Field Sampler: IEM	TAT Required (business days): STANDARD	Lab PM/Contact: JACKIE T	COC Number: 18141
Company: SWRNA	Mobile/Field Number:		Lab Job Number (Lab Use Only): 14991	Page 2 of 2
Address: 430 E GENESEE ST SUITE 401	E-Mail:	Deliverable Type (Report/EDD): REPORT	Passed Rad Screen (Lab Use Only): [X] Yes [ ] No	Carrier Tracking Notes:
City, State, Zip: SYRACUSE, NY 13202	PO #:	Sample Disposal: [ ] Return to Client [X] Disposal by Lab [ ] Archive for __ Months (A fee may be assessed if samples are retained for longer than 1 month)	Cooler Temperatures (Lab Use Only): 0.8°C 1.2°C Gun# 3	
Phone: 315-422-4949	WO #:			
Email: imcnamara@swrcdev.com	Project #: N9013	State Regulatory QC Criteria Requirements: CAT B		
Project Name/Site Location (State): SYRACUSE LABEL NY	SSOW#:			

Samples submitted for analysis will be subject to TestAmerica Terms and Conditions

TA #	Field Sample Identification (Containers for each sample may be combined on one line)	Collection Date	Collection Time (24-Hour Clock)	Matrix Aq=Aqueous, S=Solid, W=Waste/Oil, O=Other	MS/ MSD (Yes or No)	Unpreserved	H2SO4	HNO3	HCL	NaOH	ZnAc/NaOH	Other	2320B	VFA-IC STAND.								Comments
	MW-7	3-22-11	10:30	Aq	Y	5	4	1	6				X	X								
	MW-7MS		10:30		Y																	
	MW-7MSD		10:30		Y																	
	MW-11		11:55		N																	
	MW-17		14:05		N																	
	DUPLICATE		0:00		N																	

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
IEM [signature]	3-22-11 16:12	SWRNA	[signature] TAL Syr	3-22-11	1815
[signature] 3-22-11	18:30 TAL Syr		[signature]	3-23-11 1020	

Comments:

DISTRIBUTION: WHITE - Stays with the Samples; CANARY - Returned to Client with Report; PINK - Field Copy

Field Sampling / Shipping Instructions and Laboratory Sample Receipt Policy included on Reverse Side of COC

TAL-0015 (0609)

04/11/2011

Login Sample Receipt Checklist

Client: S & W Redevelopment LLC

Job Number: 220-14991-2

Login Number: 14991
List Number: 1
Creator: Teixeira, Maria L

List Source: TestAmerica Connecticut

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.8C/1.2C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	

Appendix D-3

Second Post-ISCR Groundwater Samples
(April 2011)

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 220-15251-1

Job Description: 110 Luther Ave. - Syracuse Label

For:
S & W Redevelopment LLC
430 East Genesee Street
Suite 401
Syracuse, NY 13202

Attention: Mr. Don Sorbello

Approved for release.
Kristina Blocker
Project Manager I
5/4/2011 12:56 PM

Designee for
Jackie Trudell
Project Manager I
jackie.trudell@testamericainc.com
05/04/2011

cc: Mr. Ian E. McNamara

The test results in this report meet all NELAP requirements unless specified within the case narrative. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. All questions regarding this report should be directed to the TestAmerica Project Manager.

TestAmerica Connecticut Certifications and Approvals: CTDOH PH-047, MADEP CT023, RIDOH A43, NYDOH 10602, NY NELAP 10602, NHDES 2528, NJDEP CT410, ME DOH CT023, UT DOH 2032614458

TestAmerica Laboratories, Inc.
TestAmerica Connecticut 128 Long Hill Cross Road, Shelton, CT 06484
Tel (203) 929-8140 Fax (203) 929-8142 www.testamericainc.com

ACCREDITED IN ACCORDANCE WITH nelac

Job Number: 220-15251-1

Job Description: 110 Luther Ave. - Syracuse Label

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed within the body of this report. Release of the data contained in this sample data package and in the electronic data deliverable has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Approved for release.
Kristina Blocker
Project Manager I
5/4/2011 12:56 PM

Designee for
Jackie Trudell

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Job Narrative
220-15251-1

Comments
No additional comments.

Receipt
The following RKS175 sample was received with headspace in 1 of 3 sample vials and was not used for analysis: MW-11 (220-15251-2)

The following sample(s) was received at the laboratory without a sample collection time documented on the chain of custody: DUPLICATE (220-15251-4), TRIP BLANK (220-15251-5). The client was contacted, and the laboratory was instructed to use a sample collection time of 12:00am.

All other samples were received in good condition within temperature requirements.

GC/MS VOA
No analytical or quality issues were noted.

GC VOA
No analytical or quality issues were noted.

Metals
No analytical or quality issues were noted.

General Chemistry
Method(s) SM 5210B: The following sample's collect time was listed as 04/18/11 at 0:00 on the Chain of CustodyDUPLICATE (220-15251-4). The collection times for the remainder of the samples listed were 09:40-13:30 on 04/18/11. Because the Field Duplicate's collection time was not listed within the actual range of the sampling times, the sample flagged as out of hold for BOD. The 'H' flag was removed for this sample analysis.

Method(s) SM 5210B: All of the dilutions overdepleted for the following sample: MW-7 (220-15251-1). Only a "greater than" result could be calculated from the most dilute preparation.

No other analytical or quality issues were noted.

FORMULAS FOR NYSDEC SAMPLE CALCULATIONS

Volatiles

(Ax)(IS)(DF)
(AIS)(RRF)(V)(% solids) = C

(AX)(IS)(VT)(1000)(DF)
(AIS)(RRF)(VA)(V)(% solids) = C (for medium level soils)

SemiVolatiles

(AX)(IS)(VE)(DF)(GPC factor is 2 if needed)
(AIS)(RRF)(volume injected)(V)(% solids) = C

Pesticides

(AX)(VE)(DF)
(RRF)(V)(% solids)(volume injected) = C

PCBs for compound/retention time

(AX)(VE)(DF)
(RRF of compound at the stated retention time)(V)(% solids)(volume injected) = C

DRO/CTETPH

(AX)(VE)(DF)
(RRF)(V)(% solids)(volume injected) = C

AX = area of the target Ion
AIS = Area of Internal standard
C = concentration as ug/L or ug/Kg
DF = dilution
IS = Internal standard concentration (ng)
RRF = average RF (from initial cal except CLP methods from continuing cal)
V = sample volume for liquids in mls or sample weight for solids in grams
VA = volume of aliquot for medium level soils
VE = volume of concentrated extract
VT = volume of methanol for volatile medium level soils

SAMPLE SUMMARY

Client: S & W Redevelopment LLC

Job Number: 220-15251-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
220-15251-1	MW-7	Water	04/18/2011 0940	04/19/2011 1010
220-15251-1MS	MW-7	Water	04/18/2011 0940	04/19/2011 1010
220-15251-1MSD	MW-7	Water	04/18/2011 0940	04/19/2011 1010
220-15251-2	MW-11	Water	04/18/2011 1100	04/19/2011 1010
220-15251-3	MW-17	Water	04/18/2011 1330	04/19/2011 1010
220-15251-4	DUPLICATE	Water	04/18/2011 0000	04/19/2011 1010
220-15251-5	TRIP BLANK	Water	04/18/2011 0000	04/19/2011 1010

EXECUTIVE SUMMARY - Detections

Client: S & W Redevelopment LLC

Job Number: 220-15251-1

Lab Sample ID / Analyte	Client Sample ID	Result / Qualifier		Reporting Limit	Units	Method
220-15251-1	**MW-7**					
Vinyl chloride		690	J	1000	ug/L	8260B
cis-1,2-Dichloroethene		17000		1000	ug/L	8260B
Trichloroethene		150	J	1000	ug/L	8260B
Tetrachloroethene		370	J	1000	ug/L	8260B
Methane		160		2.0	ug/L	RSK-175
Ethane		4.0		4.0	ug/L	RSK-175
Ethylene		11		3.0	ug/L	RSK-175
Calcium		253000		1000	ug/L	6010B
Iron		19700		250	ug/L	6010B
Magnesium		65000		1000	ug/L	6010B
Manganese		1130		16.0	ug/L	6010B
Hardness as calcium carbonate		900		1.0	mg/L	SM 2340B
Chloride		277		10.0	mg/L	300.0
Sulfate		55.1		1.0	mg/L	300.0
Alkalinity		506		2.0	mg/L	SM 2320B
Biochemical Oxygen Demand		>228.30		2.0	mg/L	SM 5210B
Total Organic Carbon - Quad		207		5.0	mg/L	SM 5310C
Dissolved						
Dissolved Organic Carbon - Quad-Dissolved		174		5.0	mg/L	SM 5310C
220-15251-2	**MW-11**					
cis-1,2-Dichloroethene		77000		2500	ug/L	8260B
Tetrachloroethene		2200	J	2500	ug/L	8260B
Methane		8.7		2.0	ug/L	RSK-175
Calcium		515000		5000	ug/L	6010B
Iron		459000		1250	ug/L	6010B
Magnesium		111000		5000	ug/L	6010B
Manganese		2510		80.0	ug/L	6010B
Hardness as calcium carbonate		1740		1.0	mg/L	SM 2340B
Chloride		529		25.0	mg/L	300.0
Nitrate as N		0.033	J	0.10	mg/L	300.0
Sulfate		100		5.0	mg/L	300.0
Alkalinity		1700		2.0	mg/L	SM 2320B
Biochemical Oxygen Demand		337		2.0	mg/L	SM 5210B
Total Organic Carbon - Quad		2280		50.0	mg/L	SM 5310C
Dissolved						
Dissolved Organic Carbon - Quad-Dissolved		2200		50.0	mg/L	SM 5310C

EXECUTIVE SUMMARY - Detections

Client: S & W Redevelopment LLC

Job Number: 220-15251-1

Lab Sample ID / Analyte	Client Sample ID	Result / Qualifier	Reporting Limit	Units	Method
220-15251-3	**MW-17**				
cis-1,2-Dichloroethene		1400	250	ug/L	8260B
Trichloroethene		1800	250	ug/L	8260B
Tetrachloroethene		6900	250	ug/L	8260B
Methane		9.5	2.0	ug/L	RSK-175
Calcium		341000	1000	ug/L	6010B
Iron		36400	250	ug/L	6010B
Magnesium		110000	1000	ug/L	6010B
Manganese		2210	16.0	ug/L	6010B
Hardness as calcium carbonate		1300	1.0	mg/L	SM 2340B
Chloride		222	10.0	mg/L	300.0
Sulfate		101	2.0	mg/L	300.0
Alkalinity		258	2.0	mg/L	SM 2320B
220-15251-4	**DUPLICATE**				
cis-1,2-Dichloroethene		1200	500	ug/L	8260B
Trichloroethene		2000	500	ug/L	8260B
Tetrachloroethene		11000	500	ug/L	8260B
Methane		8.7	2.0	ug/L	RSK-175
Calcium		324000	1000	ug/L	6010B
Iron		32900	250	ug/L	6010B
Magnesium		100000	1000	ug/L	6010B
Manganese		2100	16.0	ug/L	6010B
Hardness as calcium carbonate		1220	1.0	mg/L	SM 2340B
Chloride		222	10.0	mg/L	300.0
Sulfate		99.8	2.0	mg/L	300.0
Alkalinity		257	2.0	mg/L	SM 2320B

METHOD SUMMARY

Client: S & W Redevelopment LLC

Job Number: 220-15251-1

Description	Lab Location	Method	Preparation Method
Matrix: Water			
Volatile Organic Compounds (GC/MS)	TAL CT	SW846 8260B	
Purge and Trap	TAL CT		SW846 5030B
Metals (ICP)	TAL CT	SW846 6010B	
Preparation, Total Metals	TAL CT		SW846 3010A
Hardness, Calculation	TAL CT	SM SM 2340B	
Anions, Ion Chromatography	TAL CT	MCAWW 300.0	
Alkalinity	TAL CT	SM SM 2320B	
BOD, 5-Day	TAL CT	SM SM 5210B	
Organic Carbon, Dissolved (DOC)	TAL CT	SM SM 5310C	
Sample Filtration, Field			FIELD_FLTRD
TOC	TAL CT	SM SM 5310C	
Dissolved Gases (GC)	TAL BUR	RSK RSK-175	

Lab References:

TAL BUR = TestAmerica Burlington

TAL CT = TestAmerica Connecticut

Method References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

RSK = Sample Prep And Calculations For Dissolved Gas Analysis In Water Samples Using A GC Headspace Equilibration Technique, RSKSOP-175, Rev. 0, 8/11/94, USEPA Research Lab

SM = "Standard Methods For The Examination Of Water And Wastewater",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

METHOD / ANALYST SUMMARY

Client: S & W Redevelopment LLC

Job Number: 220-15251-1

Method	Analyst	Analyst ID
SW846 8260B	Kostrzewska, Barbara	BK
RSK RSK-175	Veilleux, Michael R	MRV
SW846 6010B	Petronchak, Nestor	NP
SM SM 2340B	Petronchak, Nestor	NP
MCAWW 300.0	Keene, Angela H	AHK
SM SM 2320B	Keene, Angela H	AHK
SM SM 5210B	Mendoza, Julia	JM
SM SM 5310C	Madumadu, Dave	DM

Client: S & W Redevelopment LLC

Job Number: 220-15251-1

Client Sample ID: **MW-7**

Lab Sample ID: 220-15251-1
Client Matrix: Water

Date Sampled: 04/18/2011 0940
Date Received: 04/19/2011 1010

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	220-50210	Instrument ID:	MSW
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	W1260.D
Dilution:	200			Initial Weight/Volume:	5 mL
Analysis Date:	04/27/2011 1547			Final Weight/Volume:	5 mL
Prep Date:	04/27/2011 1547				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Vinyl chloride	690	J	200	1000
trans-1,2-Dichloroethene	1000	U	150	1000
cis-1,2-Dichloroethene	17000		200	1000
Trichloroethene	150	J	120	1000
Tetrachloroethene	370	J	160	1000

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	107		65 - 136
4-Bromofluorobenzene	95		51 - 142
Dibromofluoromethane	107		68 - 132
Toluene-d8 (Surr)	97		63 - 127

Client: S & W Redevelopment LLC

Job Number: 220-15251-1

Client Sample ID: **MW-11**

Lab Sample ID: 220-15251-2
Client Matrix: Water

Date Sampled: 04/18/2011 1100
Date Received: 04/19/2011 1010

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	220-50073	Instrument ID:	MSL
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	L9267.D
Dilution:	500			Initial Weight/Volume:	5 mL
Analysis Date:	04/25/2011 1438			Final Weight/Volume:	5 mL
Prep Date:	04/25/2011 1438				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Vinyl chloride	2500	U	500	2500
trans-1,2-Dichloroethene	2500	U	380	2500
cis-1,2-Dichloroethene	77000		500	2500
Trichloroethene	2500	U	310	2500
Tetrachloroethene	2200	J	400	2500

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	82		65 - 136
4-Bromofluorobenzene	82		51 - 142
Dibromofluoromethane	85		68 - 132
Toluene-d8 (Surr)	83		63 - 127

Client: S & W Redevelopment LLC

Job Number: 220-15251-1

Client Sample ID: **MW-17**

Lab Sample ID: 220-15251-3
Client Matrix: Water

Date Sampled: 04/18/2011 1330
Date Received: 04/19/2011 1010

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	220-50073	Instrument ID:	MSL
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	L9268.D
Dilution:	50			Initial Weight/Volume:	5 mL
Analysis Date:	04/25/2011 1502			Final Weight/Volume:	5 mL
Prep Date:	04/25/2011 1502				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Vinyl chloride	250	U	50	250
trans-1,2-Dichloroethene	250	U	38	250
cis-1,2-Dichloroethene	1400		50	250
Trichloroethene	1800		31	250
Tetrachloroethene	6900		40	250

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	78		65 - 136
4-Bromofluorobenzene	80		51 - 142
Dibromofluoromethane	85		68 - 132
Toluene-d8 (Surr)	80		63 - 127

Client: S & W Redevelopment LLC

Job Number: 220-15251-1

Client Sample ID: **DUPLICATE**

Lab Sample ID: 220-15251-4
Client Matrix: Water

Date Sampled: 04/18/2011 0000
Date Received: 04/19/2011 1010

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	220-50073	Instrument ID:	MSL
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	L9277.D
Dilution:	100			Initial Weight/Volume:	5 mL
Analysis Date:	04/25/2011 1840			Final Weight/Volume:	5 mL
Prep Date:	04/25/2011 1840				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Vinyl chloride	500	U	99	500
trans-1,2-Dichloroethene	500	U	76	500
cis-1,2-Dichloroethene	1200		99	500
Trichloroethene	2000		62	500
Tetrachloroethene	11000		81	500

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	76		65 - 136
4-Bromofluorobenzene	78		51 - 142
Dibromofluoromethane	82		68 - 132
Toluene-d8 (Surr)	75		63 - 127

Client: S & W Redevelopment LLC

Job Number: 220-15251-1

Client Sample ID: **TRIP BLANK**

Lab Sample ID: 220-15251-5
Client Matrix: Water

Date Sampled: 04/18/2011 0000
Date Received: 04/19/2011 1010

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	220-50073	Instrument ID:	MSL
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	L9275.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	04/25/2011 1751			Final Weight/Volume:	5 mL
Prep Date:	04/25/2011 1751				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Vinyl chloride	5.0	U	0.99	5.0
trans-1,2-Dichloroethene	5.0	U	0.76	5.0
cis-1,2-Dichloroethene	5.0	U	0.99	5.0
Trichloroethene	5.0	U	0.62	5.0
Tetrachloroethene	5.0	U	0.81	5.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	83		65 - 136
4-Bromofluorobenzene	89		51 - 142
Dibromofluoromethane	87		68 - 132
Toluene-d8 (Surr)	84		63 - 127

Client: S & W Redevelopment LLC

Job Number: 220-15251-1

Client Sample ID: **MW-7**

Lab Sample ID: 220-15251-1
Client Matrix: Water

Date Sampled: 04/18/2011 0940
Date Received: 04/19/2011 1010

RSK-175 Dissolved Gases (GC)

Analysis Method:	RSK-175	Analysis Batch:	200-17101	Instrument ID:	2866.i
	N/A		N/A	Initial Weight/Volume:	18 mL
Dilution:	1.0			Final Weight/Volume:	18 mL
Analysis Date:	04/27/2011 1134			Injection Volume:	100 uL
Prep Date:	N/A			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	RL	RL
Methane	160		2.0	2.0
Ethane	4.0		4.0	4.0
Ethylene	11		3.0	3.0

Client: S & W Redevelopment LLC

Job Number: 220-15251-1

Client Sample ID: **MW-11**

Lab Sample ID: 220-15251-2
Client Matrix: Water

Date Sampled: 04/18/2011 1100
Date Received: 04/19/2011 1010

RSK-175 Dissolved Gases (GC)

Analysis Method:	RSK-175	Analysis Batch:	200-17101	Instrument ID:	2866.i
	N/A		N/A	Initial Weight/Volume:	18 mL
Dilution:	1.0			Final Weight/Volume:	18 mL
Analysis Date:	04/27/2011 1139			Injection Volume:	100 uL
Prep Date:	N/A			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	RL	RL
Methane	8.7		2.0	2.0
Ethane	4.0	U	4.0	4.0
Ethylene	3.0	U	3.0	3.0

Client: S & W Redevelopment LLC

Job Number: 220-15251-1

Client Sample ID: **MW-17**

Lab Sample ID: 220-15251-3
Client Matrix: Water

Date Sampled: 04/18/2011 1330
Date Received: 04/19/2011 1010

RSK-175 Dissolved Gases (GC)

Analysis Method:	RSK-175	Analysis Batch:	200-17101	Instrument ID:	2866.i
	N/A		N/A	Initial Weight/Volume:	18 mL
Dilution:	1.0			Final Weight/Volume:	18 mL
Analysis Date:	04/27/2011 1144			Injection Volume:	100 uL
Prep Date:	N/A			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	RL	RL
Methane	9.5		2.0	2.0
Ethane	4.0	U	4.0	4.0
Ethylene	3.0	U	3.0	3.0

Client: S & W Redevelopment LLC

Job Number: 220-15251-1

Client Sample ID: **DUPLICATE**

Lab Sample ID: 220-15251-4

Client Matrix: Water

Date Sampled: 04/18/2011 0000

Date Received: 04/19/2011 1010

RSK-175 Dissolved Gases (GC)

Analysis Method:	RSK-175	Analysis Batch:	200-17101	Instrument ID:	2866.i
	N/A		N/A	Initial Weight/Volume:	18 mL
Dilution:	1.0			Final Weight/Volume:	18 mL
Analysis Date:	04/27/2011 1150			Injection Volume:	100 uL
Prep Date:	N/A			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	RL	RL
Methane	8.7		2.0	2.0
Ethane	4.0	U	4.0	4.0
Ethylene	3.0	U	3.0	3.0

Client: S & W Redevelopment LLC

Job Number: 220-15251-1

Client Sample ID: **MW-7**

Lab Sample ID: 220-15251-1
Client Matrix: Water

Date Sampled: 04/18/2011 0940
Date Received: 04/19/2011 1010

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	220-50033	Instrument ID:	ICAP3
Prep Method:	3010A	Prep Batch:	220-49948	Lab File ID:	042211d.prn
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	04/22/2011 1233			Final Weight/Volume:	50 mL
Prep Date:	04/21/2011 0845				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Calcium	253000		100	1000
Iron	19700		30.0	250
Magnesium	65000		10.0	1000
Manganese	1130		0.50	16.0

SM 2340B Hardness, Calculation

Analysis Method:	SM 2340B	Analysis Batch:	220-50082	Instrument ID:	NOEQUIP
	N/A		N/A	Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	
Analysis Date:	04/22/2011 1233			Final Weight/Volume:	1.0 mL
Prep Date:	N/A				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Hardness as calcium carbonate	900		1.0	1.0

Client: S & W Redevelopment LLC

Job Number: 220-15251-1

Client Sample ID: **MW-11**

Lab Sample ID: 220-15251-2
Client Matrix: Water

Date Sampled: 04/18/2011 1100
Date Received: 04/19/2011 1010

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	220-50033	Instrument ID:	ICAP3
Prep Method:	3010A	Prep Batch:	220-49948	Lab File ID:	042211d.prn
Dilution:	5.0			Initial Weight/Volume:	50 mL
Analysis Date:	04/22/2011 1417			Final Weight/Volume:	50 mL
Prep Date:	04/21/2011 0845				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Calcium	515000		500	5000
Iron	459000		150	1250
Magnesium	111000		50.0	5000
Manganese	2510		2.5	80.0

SM 2340B Hardness, Calculation

Analysis Method:	SM 2340B	Analysis Batch:	220-50082	Instrument ID:	NOEQUIP
	N/A		N/A	Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	
Analysis Date:	04/22/2011 1417			Final Weight/Volume:	1.0 mL
Prep Date:	N/A				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Hardness as calcium carbonate	1740		1.0	1.0

Client: S & W Redevelopment LLC

Job Number: 220-15251-1

Client Sample ID: **MW-17**

Lab Sample ID: 220-15251-3
Client Matrix: Water

Date Sampled: 04/18/2011 1330
Date Received: 04/19/2011 1010

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	220-50033	Instrument ID:	ICAP3
Prep Method:	3010A	Prep Batch:	220-49948	Lab File ID:	042211d.prn
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	04/22/2011 1249			Final Weight/Volume:	50 mL
Prep Date:	04/21/2011 0845				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Calcium	341000		100	1000
Iron	36400		30.0	250
Magnesium	110000		10.0	1000
Manganese	2210		0.50	16.0

SM 2340B Hardness, Calculation

Analysis Method:	SM 2340B	Analysis Batch:	220-50082	Instrument ID:	NOEQUIP
	N/A		N/A	Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	
Analysis Date:	04/22/2011 1249			Final Weight/Volume:	1.0 mL
Prep Date:	N/A				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Hardness as calcium carbonate	1300		1.0	1.0

Client: S & W Redevelopment LLC

Job Number: 220-15251-1

Client Sample ID: **DUPLICATE**

Lab Sample ID: 220-15251-4
Client Matrix: Water

Date Sampled: 04/18/2011 0000
Date Received: 04/19/2011 1010

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	220-50033	Instrument ID:	ICAP3
Prep Method:	3010A	Prep Batch:	220-49948	Lab File ID:	042211d.prn
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	04/22/2011 1252			Final Weight/Volume:	50 mL
Prep Date:	04/21/2011 0845				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Calcium	324000		100	1000
Iron	32900		30.0	250
Magnesium	100000		10.0	1000
Manganese	2100		0.50	16.0

SM 2340B Hardness, Calculation

Analysis Method:	SM 2340B	Analysis Batch:	220-50082	Instrument ID:	NOEQUIP
	N/A		N/A	Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	
Analysis Date:	04/22/2011 1252			Final Weight/Volume:	1.0 mL
Prep Date:	N/A				

Analyte	Result (mg/L)	Qualifier	MDL	RL
Hardness as calcium carbonate	1220		1.0	1.0

General Chemistry

Client Sample ID: **MW-7**

Lab Sample ID: 220-15251-1 Date Sampled: 04/18/2011 0940
Client Matrix: Water Date Received: 04/19/2011 1010

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Chloride	277		mg/L	3.3	10.0	10	300.0
Analysis Batch: 220-49921	Analysis Date: 04/19/2011 2254						
Nitrate as N	0.10	U	mg/L	0.033	0.10	1.0	300.0
Analysis Batch: 220-49922	Analysis Date: 04/19/2011 1538						
Sulfate	55.1		mg/L	0.33	1.0	1.0	300.0
Analysis Batch: 220-49921	Analysis Date: 04/19/2011 1538						
Alkalinity	506		mg/L	0.16	2.0	1.0	SM 2320B
Analysis Batch: 220-49907	Analysis Date: 04/19/2011 1915						
Biochemical Oxygen Demand	>228.30		mg/L	0.65	2.0	1.0	SM 5210B
Analysis Batch: 220-49906	Analysis Date: 04/20/2011 0910						
Dissolved Organic Carbon - Quad-Dissolved	174		mg/L	1.2	5.0	5.0	SM 5310C
Analysis Batch: 220-50014	Analysis Date: 04/21/2011 0951						
Total Organic Carbon - Quad	207		mg/L	1.2	5.0	5.0	SM 5310C
Analysis Batch: 220-50013	Analysis Date: 04/21/2011 2028						

General Chemistry

Client Sample ID: **MW-11**

Lab Sample ID: 220-15251-2
Client Matrix: Water

Date Sampled: 04/18/2011 1100
Date Received: 04/19/2011 1010

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Chloride	529		mg/L	8.3	25.0	25	300.0
Analysis Batch: 220-49921	Analysis Date: 04/20/2011 0007						
Nitrate as N	0.033	J	mg/L	0.033	0.10	1.0	300.0
Analysis Batch: 220-49922	Analysis Date: 04/19/2011 1633						
Sulfate	100		mg/L	1.7	5.0	5.0	300.0
Analysis Batch: 220-49921	Analysis Date: 04/19/2011 2349						
Alkalinity	1700		mg/L	0.16	2.0	1.0	SM 2320B
Analysis Batch: 220-49907	Analysis Date: 04/19/2011 1943						
Biochemical Oxygen Demand	337		mg/L	0.65	2.0	1.0	SM 5210B
Analysis Batch: 220-49906	Analysis Date: 04/20/2011 0910						
Dissolved Organic Carbon - Quad-Dissolved	2200		mg/L	11.6	50.0	50	SM 5310C
Analysis Batch: 220-50014	Analysis Date: 04/21/2011 1910						
Total Organic Carbon - Quad	2280		mg/L	11.6	50.0	50	SM 5310C
Analysis Batch: 220-50013	Analysis Date: 04/22/2011 0051						

General Chemistry

Client Sample ID: **MW-17**

Lab Sample ID: 220-15251-3
Client Matrix: Water

Date Sampled: 04/18/2011 1330
Date Received: 04/19/2011 1010

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Chloride	222		mg/L	3.3	10.0	10	300.0
Analysis Batch: 220-49921	Analysis Date: 04/20/2011 0043						
Nitrate as N	0.10	U	mg/L	0.033	0.10	1.0	300.0
Analysis Batch: 220-49922	Analysis Date: 04/19/2011 1651						
Sulfate	101		mg/L	0.67	2.0	2.0	300.0
Analysis Batch: 220-49921	Analysis Date: 04/20/2011 0025						
Alkalinity	258		mg/L	0.16	2.0	1.0	SM 2320B
Analysis Batch: 220-49907	Analysis Date: 04/19/2011 1950						
Biochemical Oxygen Demand	2.0	U	mg/L	0.65	2.0	1.0	SM 5210B
Analysis Batch: 220-49906	Analysis Date: 04/20/2011 0910						
Dissolved Organic Carbon - Quad-Dissolved	1.0	U	mg/L	0.23	1.0	1.0	SM 5310C
Analysis Batch: 220-50014	Analysis Date: 04/21/2011 1830						
Total Organic Carbon - Quad	1.0	U	mg/L	0.23	1.0	1.0	SM 5310C
Analysis Batch: 220-50013	Analysis Date: 04/22/2011 0157						

General Chemistry

Client Sample ID: **DUPLICATE**

Lab Sample ID: 220-15251-4
Client Matrix: Water

Date Sampled: 04/18/2011 0000
Date Received: 04/19/2011 1010

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Chloride	222		mg/L	3.3	10.0	10	300.0
Analysis Batch: 220-49921	Analysis Date: 04/20/2011 0119						
Nitrate as N	0.10	U	mg/L	0.033	0.10	1.0	300.0
Analysis Batch: 220-49922	Analysis Date: 04/19/2011 1709						
Sulfate	99.8		mg/L	0.67	2.0	2.0	300.0
Analysis Batch: 220-49921	Analysis Date: 04/20/2011 0101						
Alkalinity	257		mg/L	0.16	2.0	1.0	SM 2320B
Analysis Batch: 220-49907	Analysis Date: 04/19/2011 1958						
Biochemical Oxygen Demand	2.0	U	mg/L	0.65	2.0	1.0	SM 5210B
Analysis Batch: 220-49906	Analysis Date: 04/20/2011 0910						
Dissolved Organic Carbon - Quad-Dissolved	1.0	U	mg/L	0.23	1.0	1.0	SM 5310C
Analysis Batch: 220-50014	Analysis Date: 04/21/2011 1802						
Total Organic Carbon - Quad	1.0	U	mg/L	0.23	1.0	1.0	SM 5310C
Analysis Batch: 220-50013	Analysis Date: 04/22/2011 0224						

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 220-15251-2

Job Description: 110 Luther Ave. - Syracuse Label

For:
S & W Redevelopment LLC
430 East Genesee Street
Suite 401
Syracuse, NY 13202

Attention: Mr. Don Sorbello

Joan Widomski

Approved for release.
Joan Widomski
Project Manager I
5/6/2011 5:43 PM

Designee for
Jackie Trudell
Project Manager I
jackie.trudell@testamericainc.com
05/06/2011

cc: Mr. Ian E. McNamara

The test results in this report meet all NELAP requirements unless specified within the case narrative. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. All questions regarding this report should be directed to the TestAmerica Project Manager.

TestAmerica Connecticut Certifications and Approvals: CTDOH PH-047, MADEP CT023, RIDOH A43, NYDOH 10602, NY NELAP 10602, NHDES 2528, NJDEP CT410, ME DOH CT023, UT DOH 2032614458

TestAmerica Laboratories, Inc.
TestAmerica Connecticut 128 Long Hill Cross Road, Shelton, CT 06484
Tel (203) 929-8140 Fax (203) 929-8142 www.testamericainc.com

ACCREDITED IN ACCORDANCE WITH nelac

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- Sample Receipt Checklist 22
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Job Narrative
220-15251-2

Comments
No additional comments.

Receipt
The following sample(s) was received at the laboratory without a sample collection time documented on the chain of custody: DUPLICATE (220-15251-4). The client was contacted, and the laboratory was instructed to use a sample collection time of 12:00am.

No other analytical or quality issues were noted.

Subcontract Work
Method Total Volatile Fatty Acids: This method was subcontracted to Microseeps. The subcontract certification is different from those listed on the TestAmerica cover page of this final report.

SAMPLE SUMMARY

Client: S & W Redevelopment LLC

Job Number: 220-15251-2

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
220-15251-1	MW-7	Water	04/18/2011 0940	04/19/2011 1010
220-15251-2	MW-11	Water	04/18/2011 1100	04/19/2011 1010
220-15251-3	MW-17	Water	04/18/2011 1330	04/19/2011 1010
220-15251-4	DUPLICATE	Water	04/18/2011 0000	04/19/2011 1010

METHOD SUMMARY

Client: S & W Redevelopment LLC

Job Number: 220-15251-2

Description	Lab Location	Method	Preparation Method
Matrix: Water			
General Sub Contract Method	SC0015	Subcontract	

Lab References:

SC0015 = Microseeps

Method References:

SUBCONTRACTED DATA

Client Name: Test America
Contact: Jackie Trudell
Address: 128 Long Hill Cross Road
Shelton, CT 06484

Page: Page 1 of 11
Lab Proj #: P1104225
Report Date: 05/06/11
Client Proj Name: 110 Luther Ave. - Syracuse Label
Client Proj #: 220-15251-1

Laboratory Results

Total pages in data package: 14

Lab Sample #	Client Sample ID
P1104225-01	MW-7 (220-15251-1)
P1104225-02	MW-7 (220-15251-1) MS
P1104225-03	MW-7 (220-15251-1) MSD
P1104225-04	MW-11 (220-15251-2)
P1104225-05	MW-17 (220-15251-3)
P1104225-06	DUPLICATE (220-15251-4)

Microseeps test results meet all the requirements of the NELAC standards or provide reasons and/or justification if they do not.

Approved By: Robbin Robl (fax) ***Date:*** 5.6.11

Project Manager: Robbin Robl

The analytical results reported here are reliable and usable to the precision expressed in this report. As required by some regulating authorities, a full discussion of the uncertainty in our analytical results can be obtained at our web site or through customer service. Unless otherwise specified, all results are reported on a wet weight basis.

As a valued client we would appreciate your comments on our service.
Please call customer service at (412)826-5245 or email customerservice@microseeps.com.

Client Name: Test America
Contact: Jackie Trudell
Address: 128 Long Hill Cross Road
Shelton, CT 06484

Page: Page 2 of 11
Lab Proj #: P1104225
Report Date: 05/06/11
Client Proj Name: 110 Luther Ave. - Syracuse Label
Client Proj #: 220-15251-1

05/06/2011

Case Narrative: The samples were received in vials with the incorrect preservative.
The percent recoveries for the MS/MSD analyses for volatile fatty acid analyses could not be calculated because of the sample matrix.

Client Name: Test America
Contact: Jackie Trudell
Address: 128 Long Hill Cross Road
Shelton, CT 06484

Page: Page 3 of 11
Lab Proj #: P1104225
Report Date: 05/06/11
Client Proj Name: 110 Luther Ave. - Syracuse Label
Client Proj #: 220-15251-1

Sample Description	Matrix	Lab Sample #	Sampled Date/Time	Received
MW-7 (220-15251-1)	Water	P1104225-01	18 Apr. 11 9:40	21 Apr. 11 12:30

Analyte(s)	Flag	Result	PQL	Units	Method #	Analysis Date	By
SemiVolatiles							
N Acetic Acid		240.000	7.000	mg/L	AM23G	5/4/11	kb
N Butyric Acid		53.000	5.000	mg/L	AM23G	5/4/11	kb
N Hexanoic Acid	M	8.100	0.050	mg/L	AM23G	5/3/11	kb
N i-Hexanoic Acid	U	< 0.050	0.050	mg/L	AM23G	5/3/11	kb
N i-Pentanoic Acid		3.600	1.500	mg/L	AM23G	5/4/11	kb
N Lactic Acid	J	0.220	1.000	mg/L	AM23G	5/4/11	kb
N Pentanoic Acid		1.500	0.070	mg/L	AM23G	5/3/11	kb
N Propionic Acid		22.000	5.000	mg/L	AM23G	5/4/11	kb
N Pyruvic Acid		2.200	1.500	mg/L	AM23G	5/4/11	kb

PA02-00538

Data Qualifiers: J - estimated value, U - Non detect, R - Poor surrogate recovery, M - Recovery/RPD poor for MS/MSD, SAMP/DUP, B - detected in blank, S - field sample as received did not meet NELAC sample acceptance criteria, L - Subcontracted Lab used, N - NELAC certified analysis

Client Name: Test America
Contact: Jackie Trudell
Address: 128 Long Hill Cross Road
Shelton, CT 06484

Page: Page 4 of 11
Lab Proj #: P1104225
Report Date: 05/06/11
Client Proj Name: 110 Luther Ave. - Syracuse Label
Client Proj #: 220-15251-1

Sample Description	Matrix	Lab Sample #	Sampled Date/Time	Received
MW-7 (220-15251-1) MS	Water	P1104225-02	18 Apr. 11 9:40	21 Apr. 11 12:30

Analyte(s)	Flag	Result	PQL	Units	Method #	Analysis Date	By
SemiVolatiles							
N Acetic Acid		180.000	7.000	mg/L	AM23G	5/4/11	kb
N Butyric Acid		37.000	5.000	mg/L	AM23G	5/4/11	kb
N Hexanoic Acid	M	7.900	0.050	mg/L	AM23G	5/4/11	kb
N i-Hexanoic Acid		1.600	0.050	mg/L	AM23G	5/4/11	kb
N i-Pentanoic Acid		4.300	1.500	mg/L	AM23G	5/4/11	kb
N Lactic Acid	J	0.820	1.000	mg/L	AM23G	5/4/11	kb
N Pentanoic Acid		2.900	0.070	mg/L	AM23G	5/4/11	kb
N Propionic Acid		19.000	5.000	mg/L	AM23G	5/4/11	kb
N Pyruvic Acid		3.700	1.500	mg/L	AM23G	5/4/11	kb

PA02-00538

Data Qualifiers: J - estimated value, U - Non detect, R - Poor surrogate recovery, M - Recovery/RPD poor for MS/MSD, SAMP/DUP, B - detected in blank, S - field sample as received did not meet NELAC sample acceptance criteria, L - Subcontracted Lab used, N - NELAC certified analysis

Client Name: Test America
Contact: Jackie Trudell
Address: 128 Long Hill Cross Road
Shelton, CT 06484

Page: Page 5 of 11
Lab Proj #: P1104225
Report Date: 05/06/11
Client Proj Name: 110 Luther Ave. - Syracuse Label
Client Proj #: 220-15251-1

05/06/2011

Sample Description	Matrix	Lab Sample #	Sampled Date/Time	Received
MW-7 (220-15251-1) MSD	Water	P1104225-03	18 Apr. 11 9:40	21 Apr. 11 12:30

Analyte(s)	Flag	Result	PQL	Units	Method #	Analysis Date	By
SemiVolatiles							
N Acetic Acid		170.000	7.000	mg/L	AM23G	5/4/11	kb
N Butyric Acid		40.000	5.000	mg/L	AM23G	5/4/11	kb
N Hexanoic Acid	M	9.600	0.050	mg/L	AM23G	5/4/11	kb
N i-Hexanoic Acid		1.700	0.050	mg/L	AM23G	5/4/11	kb
N i-Pentanoic Acid		4.400	1.500	mg/L	AM23G	5/4/11	kb
N Lactic Acid	J	0.910	1.000	mg/L	AM23G	5/4/11	kb
N Pentanoic Acid		3.100	0.070	mg/L	AM23G	5/4/11	kb
N Propionic Acid		19.000	5.000	mg/L	AM23G	5/4/11	kb
N Pyruvic Acid		3.900	1.500	mg/L	AM23G	5/4/11	kb

PA02-00538

Data Qualifiers: J - estimated value, U - Non detect, R - Poor surrogate recovery, M - Recovery/RPD poor for MS/MSD, SAMP/DUP, B - detected in blank, S - field sample as received did not meet NELAC sample acceptance criteria, L - Subcontracted Lab used, N - NELAC certified analysis

Client Name: Test America
Contact: Jackie Trudell
Address: 128 Long Hill Cross Road
Shelton, CT 06484

Page: Page 6 of 11
Lab Proj #: P1104225
Report Date: 05/06/11
Client Proj Name: 110 Luther Ave. - Syracuse Label
Client Proj #: 220-15251-1

Sample Description	Matrix	Lab Sample #	Sampled Date/Time	Received
MW-11 (220-15251-2)	Water	P1104225-04	18 Apr. 11 11:00	21 Apr. 11 12:30

Analyte(s)	Flag	Result	PQL	Units	Method #	Analysis Date	By
SemiVolatiles							
N Acetic Acid		1700.000	70.000	mg/L	AM23G	5/4/11	kb
N Butyric Acid		1200.000	50.000	mg/L	AM23G	5/4/11	kb
N Hexanoic Acid		57.000	0.500	mg/L	AM23G	5/4/11	kb
N i-Hexanoic Acid		1.800	0.500	mg/L	AM23G	5/4/11	kb
N i-Pentanoic Acid		44.000	15.000	mg/L	AM23G	5/4/11	kb
N Lactic Acid	U	< 10.000	10.000	mg/L	AM23G	5/4/11	kb
N Pentanoic Acid		24.000	7.000	mg/L	AM23G	5/4/11	kb
N Propionic Acid		200.000	50.000	mg/L	AM23G	5/4/11	kb
N Pyruvic Acid		42.000	15.000	mg/L	AM23G	5/4/11	kb

PA02-00538

Data Qualifiers: J - estimated value, U - Non detect, R - Poor surrogate recovery, M - Recovery/RPD poor for MS/MSD, SAMP/DUP, B - detected in blank, S - field sample as received did not meet NELAC sample acceptance criteria, L - Subcontracted Lab used, N - NELAC certified analysis

Client Name: Test America
Contact: Jackie Trudell
Address: 128 Long Hill Cross Road
Shelton, CT 06484

Page: Page 7 of 11
Lab Proj #: P1104225
Report Date: 05/06/11
Client Proj Name: 110 Luther Ave. - Syracuse Lab
Client Proj #: 220-15251-1

Sample Description	Matrix	Lab Sample #	Sampled Date/Time	Received
MW-17 (220-15251-3)	Water	P1104225-05	18 Apr. 11 13:30	21 Apr. 11 12:30

Analyte(s)	Flag	Result	PQL	Units	Method #	Analysis Date	By
SemiVolatiles							
N Acetic Acid	M	0.160	0.070	mg/L	AM23G	5/4/11	kb
N Butyric Acid	M	0.110	0.050	mg/L	AM23G	5/4/11	kb
N Hexanoic Acid	UM	< 0.050	0.050	mg/L	AM23G	5/4/11	kb
N i-Hexanoic Acid	U	< 0.050	0.050	mg/L	AM23G	5/4/11	kb
N i-Pentanoic Acid	UM	< 0.150	0.150	mg/L	AM23G	5/4/11	kb
N Lactic Acid	M	0.350	0.100	mg/L	AM23G	5/4/11	kb
N Pentanoic Acid	U	< 0.070	0.070	mg/L	AM23G	5/4/11	kb
N Propionic Acid	M	0.130	0.050	mg/L	AM23G	5/4/11	kb
N Pyruvic Acid	UM	< 0.150	0.150	mg/L	AM23G	5/4/11	kb

PA02-00538

Data Qualifiers: J - estimated value, U - Non detect, R - Poor surrogate recovery, M - Recovery/RPD poor for MS/MSD, SAMP/DUP, B - detected in blank, S - field sample as received did not meet NELAC sample acceptance criteria, L - Subcontracted Lab used, N - NELAC certified analysis

Client Name: Test America
Contact: Jackie Trudell
Address: 128 Long Hill Cross Road
Shelton, CT 06484

Page: Page 8 of 11
Lab Proj #: P1104225
Report Date: 05/06/11
Client Proj Name: 110 Luther Ave. - Syracuse Label
Client Proj #: 220-15251-1

Sample Description	Matrix	Lab Sample #	Sampled Date/Time	Received
DUPLICATE (220-15251-4)	Water	P1104225-06	18 Apr. 11 0:00	21 Apr. 11 12:30

Analyte(s)	Flag	Result	PQL	Units	Method #	Analysis Date	By
SemiVolatiles							
N Acetic Acid	JM	0.017	0.070	mg/L	AM23G	5/4/11	kb
N Butyric Acid	M	0.085	0.050	mg/L	AM23G	5/4/11	kb
N Hexanoic Acid	UM	< 0.050	0.050	mg/L	AM23G	5/4/11	kb
N i-Hexanoic Acid	U	< 0.050	0.050	mg/L	AM23G	5/4/11	kb
N i-Pentanoic Acid	UM	< 0.150	0.150	mg/L	AM23G	5/4/11	kb
N Lactic Acid	M	0.280	0.100	mg/L	AM23G	5/4/11	kb
N Pentanoic Acid	J	0.070	0.070	mg/L	AM23G	5/4/11	kb
N Propionic Acid	M	0.110	0.050	mg/L	AM23G	5/4/11	kb
N Pyruvic Acid	UM	< 0.150	0.150	mg/L	AM23G	5/4/11	kb

PA02-00538

Data Qualifiers: J - estimated value, U - Non detect, R - Poor surrogate recovery, M - Recovery/RPD poor for MS/MSD, SAMP/DUP, B - detected in blank, S - field sample as received did not meet NELAC sample acceptance criteria, L - Subcontracted Lab used, N - NELAC certified analysis

Client Name: Test America
Contact: Jackie Trudell
Address: 128 Long Hill Cross Road
Shelton, CT 06484

Lab Proj #: P1104225
Report Date: 05/06/11
Client Proj Name: 110 Luther Ave. - Syracuse Label
Client Proj #: 220-15251-1

Prep Method: Volatile Fatty Acids by Ion Chromatography
Analysis Method: Volatile Fatty Acids by Ion Chromatography

M110429018-MB

	Result		TrueSpikeConc.	RDL	%Recovery	Ctl Limits
Acetic Acid	0.023	mg/L		0.070		- NA
Propionic Acid	< 0.050	mg/L		0.050		- NA
Butyric Acid	< 0.050	mg/L		0.050		- NA
Lactic Acid	< 0.100	mg/L		0.100		- NA
Pyruvic Acid	< 0.150	mg/L		0.150		- NA
i-Pentanoic Acid	< 0.150	mg/L		0.150		- NA
Pentanoic Acid	< 0.070	mg/L		0.070		- NA
i-Hexanoic Acid	< 0.050	mg/L		0.050		- NA
Hexanoic Acid	< 0.050	mg/L		0.050		- NA

M110429018-LCS

	Result		TrueSpikeConc.	%Recovery	Ctl Limits
Acetic Acid	1.900	mg/L	2.00	95.00	70 - 130
Propionic Acid	1.700	mg/L	2.00	85.00	70 - 130
Butyric Acid	1.600	mg/L	2.00	80.00	70 - 130
Lactic Acid	1.700	mg/L	2.00	85.00	70 - 130
Pyruvic Acid	1.800	mg/L	2.00	90.00	70 - 130
i-Pentanoic Acid	1.700	mg/L	2.00	85.00	70 - 130
Pentanoic Acid	1.400	mg/L	2.00	70.00	70 - 130
i-Hexanoic Acid	1.600	mg/L	2.00	80.00	70 - 130
Hexanoic Acid	1.400	mg/L	2.00	70.00	70 - 130

P1104225-01A-MS

	Result		TrueSpikeConc.	%Recovery	Ctl Limits
Pentanoic Acid	2.900	mg/L	2.00	70.00	70 - 130
i-Hexanoic Acid	1.600	mg/L	2.00	80.00	70 - 130
Hexanoic Acid	7.900	mg/L	2.00	10.00	70 - 130

P1104225-01A-MSD

	Result		TrueSpikeConc.	%Recovery	Ctl Limits	RPD	RPD Ctl Limits
Pentanoic Acid	3.100	mg/L	2.00	80.00	70 - 130	6.67	0 - 30
i-Hexanoic Acid	1.700	mg/L	2.00	85.00	70 - 130	6.06	0 - 30

Data Qualifiers: J - estimated value, U - Non detect, R - Poor surrogate recovery, M - Recovery/RPD poor for MS/MSD, SAMP/DUP, B - detected in blank, S - field sample as received did not meet NELAC sample acceptance criteria, L - Subcontracted Lab used, N - NELAC certified analysis

PA02-00538

Client Name: Test America
Contact: Jackie Trudell
Address: 128 Long Hill Cross Road
Shelton, CT 06484

Lab Proj #: P1104225
Report Date: 05/06/11
Client Proj Name: 110 Luther Ave. - Syracuse Label
Client Proj #: 220-15251-1

P1104225-01A-MSD

	Result		TrueSpikeConc.	%Recovery	Ctl Limits	RPD	RPD Ctl Limits
Hexanoic Acid	9.600	mg/L	2.00	75.00	70 - 130	19.43	0 - 30

Outlined Results indicate results outside of Control limits

Data Qualifiers: J - estimated value, U - Non detect, R - Poor surrogate recovery, M - Recovery/RPD poor for MS/MSD, SAMP/DUP, B - detected in blank, S - field sample as received did not meet NELAC sample acceptance criteria, L - Subcontracted Lab used, N - NELAC certified analysis

Client Name: Test America
Contact: Jackie Trudell
Address: 128 Long Hill Cross Road
Shelton, CT 06484

Lab Proj #: P1104225
Report Date: 05/06/11
Client Proj Name: 110 Luther Ave. - Syracuse Label
Client Proj #: 220-15251-1

Prep Method: Volatile Fatty Acids by Ion Chromatography

Analysis Method: Volatile Fatty Acids by Ion Chromatography

M110505019-MB

	Result		TrueSpikeConc.	RDL	%Recovery	Ctl Limits
Acetic Acid	< 0.070	mg/L		0.070		- NA
Propionic Acid	< 0.050	mg/L		0.050		- NA
Butyric Acid	< 0.050	mg/L		0.050		- NA
Lactic Acid	< 0.100	mg/L		0.100		- NA
Pyruvic Acid	< 0.150	mg/L		0.150		- NA
i-Pentanoic Acid	< 0.150	mg/L		0.150		- NA
Pentanoic Acid	< 0.070	mg/L		0.070		- NA
i-Hexanoic Acid	< 0.050	mg/L		0.050		- NA
Hexanoic Acid	< 0.050	mg/L		0.050		- NA

M110505019-LCS

	Result		TrueSpikeConc.	%Recovery	Ctl Limits
Acetic Acid	1.900	mg/L	2.00	95.00	70 - 130
Propionic Acid	1.800	mg/L	2.00	90.00	70 - 130
Butyric Acid	1.700	mg/L	2.00	85.00	70 - 130
Lactic Acid	1.700	mg/L	2.00	85.00	70 - 130
Pyruvic Acid	1.800	mg/L	2.00	90.00	70 - 130
i-Pentanoic Acid	1.700	mg/L	2.00	85.00	70 - 130
Pentanoic Acid	1.500	mg/L	2.00	75.00	70 - 130
i-Hexanoic Acid	1.700	mg/L	2.00	85.00	70 - 130
Hexanoic Acid	1.500	mg/L	2.00	75.00	70 - 130

Outlined Results indicate results outside of Control limits

PA02-00538

Data Qualifiers: J - estimated value, U - Non detect, R - Poor surrogate recovery, M - Recovery/RPD poor for MS/MSD, SAMP/DUP, B - detected in blank, S - field sample as received did not meet NELAC sample acceptance criteria, L - Subcontracted Lab used, N - NELAC certified analysis

TestAmerica Connecticut
128 Long Hill Cross Road
Shelton, CT 06484
Phone (203) 929-8140 Fax (203) 929-8142

P110425

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Trudell, Jackie	Carrier Tracking No(s):	COC No: 220-8078.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: jackie.trudell@testamericainc.com		Page: Page 1 of 1
Company: Microseeps				Job #: 220-15251-1
Address: 220 William Pitt Way,	Due Date Requested: 4/28/2011			
City: Pittsburgh	TAT Requested (days):			
State, Zip: PA, 15238				
Phone: 412-826-5245(Tel)	PO #:			
Email:	WO #:			
Project Name: 110 Luther Ave. - Syracuse Label	Project #: 22002823			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2SO3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUBCONTRACT	Total Number of containers	Special Instructions/Note:
			Preservation Codes:						
123 MW-7 (220-15251-1)	4/18/11	09:40 Eastern		Water			X		
4 MW-11 (220-15251-2)	4/18/11	11:00 Eastern		Water			X		
7 MW-17 (220-15251-3)	4/18/11	13:30 Eastern		Water			X		
10 DUPLICATE (220-15251-4)	4/18/11	Eastern		Water			X		

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time: 4-19-11 1600	Company TAECT	Received by:	Date/Time: 4/21/11	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks:

05/06/2011

NON-CONFORMANCE FORM

Microseeps Project Number: P1104225

Date: 4/21/11 Time of Receipt: _____ Receiver: DD

Client: Test

REASON FOR NON-CONFORMANCE:

Rec 3 unpres 40ml vials per sample

ACTION TAKEN:

Client name: Jackie Trudell Date: 4/21/11 Time: _____

OK to proceed per attached email

Customer Service Initials: CW Date: 4/21/11

Ruth Welsh

From: Trudell, Jacqueline <Jackie.Trudell@testamericainc.com>
Sent: Thursday, April 21, 2011 3:42 PM
To: Ruth Welsh
Subject: RE: Project 220-15251-1

Yes please. Can you send us some bottles witht he benzylalkonium chloride preservative?

Thanks,
Jackie

From: Ruth Welsh [mailto:ruthw@microseeps.com]
Sent: Thursday, April 21, 2011 3:33 PM
To: Trudell, Jacqueline
Subject: Project 220-15251-1

We received unpreserved vials for the analyses for this project today. Routinely we request that these samples be preserved with benzylalkonium chloride. We can still perform the requested analyses but will have to mark the report as being the wrong preservative.

Do you still want us to proceed?

Thanks
Ruth

Ruth Welsh
Microseeps, Inc.
220 William Pitt Way
Pittsburgh, PA 15238
412-826-5245
412-826-3433 fax

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Shipping and Receiving Documents

Login Sample Receipt Checklist

Client: S & W Redevelopment LLC

Job Number: 220-15251-2

Login Number: 15251

List Source: TestAmerica Connecticut

List Number: 1

Creator: Teixeira, Maria L

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.7C/2.1C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	False	See Narrative
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	

TestAmerica Connecticut
128 Long Hill Cross Road
Shelton, CT 06484
Phone (203) 929-8140 Fax (203) 929-8142

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Contact: IAN McNAMARA	Field Sampler: IEM	TAT Required (business days): STANDARD	Lab PM/Contact: JACKIE T	COC Number: 18831
Company: SWRNA	Mobile/Field Number:		Lab Job Number (Lab Use Only): 15251-2	Page 1 of 2
Address: 430 E. GENESEE ST SUITE 401	E-Mail:	Deliverable Type (Report/EDD): REPORT	Passed Rad Screen (Lab Use Only): [X] Yes [ ] No	Carrier Tracking Notes:
City, State, Zip: SYRACUSE, NY 13202	PO #:	Sample Disposal: [ ] Return to Client [X] Disposal by Lab [ ] Archive for __ Months (A fee may be assessed if samples are retained for longer than 1 month)	Cooler Temperatures (Lab Use Only): 1.7°C 2.1°C Gun# 3	
Phone: 315-422-4949	WO #:			
Email: imcnamara@swredev.com	Project #: N9013	State Regulatory QC Criteria Requirements: CAT B		
Project Name/Site Location (State): 110 LUTHER AVE NY	SSOW#:			

Samples submitted for analysis will be subject to TestAmerica Terms and Conditions

No. of Containers/Preservatives

Analysis (Attach list if more space is needed)

TA #	Field Sample Identification (Containers for each sample may be combined on one line)	Collection Date	Collection Time (24-Hour Clock)	Matrix Aq=Aqueous, S=Solid, W=Waste/Oil, O=Other	MS/ MSD (Yes or No)	Unpreserved	H2SO4	HNO3	HCL	NaOH	ZnAc/NaOH	Other	RSK-175	6010B (MOD)	HARDNESS	8260B (MOD)	5310C	SM-5310_DOC-C	VFA (SUBCONTRACT)	5210B	300.0_280 (MOD)	Comments
1	MW-7 (1)	4-18-11	9:40	Aq	Y	5	4	1	6				X	X	X	X	X	X	X	X	X	
2	MW-7 MS		9:40		Y																	
3	MW-7 MSD		9:40		Y																	
4	MW-11 (2)		11:00		N																	
5	MW-17 (3)		13:30																			
	DUPLICATE (4)		0:00																			
	TRIP BLANK (5)		0:00						3													

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
IEM [signature]	4-18-11 15:20	SWRNA	R English	04-18-11 15:20	SyR
R English	4-18-11 19:00	SyR	[signature]	4-19-11 10:10	

Comments: INVOICE TO SYRACUSE LABEL ATTN: PAUL ROUX (COPY INVOICE TO DON SORBELLO AT SWRNA)

DISTRIBUTION: WHITE - Stays with the Samples; CANARY - Returned to Client with Report; PINK - Field Copy

Field Sampling / Shipping Instructions and Laboratory Sample Receipt Policy included on Reverse Side of COC

TAL-0015 (0609)

Appendix E

Pilot Test Groundwater
Sampling Logs

GROUNDWATER FIELD SAMPLING RECORD

S&W Redevelopment of NA, LLC

Site Identification: 110 Luther Ave, Syracuse Label | **Date:** 2/18/2011 | **Job #** N9013

Sampler(s): IEM | **Sample ID:** MW-7

Well Information:

Depth of Well (Top of PVC): 16.44'
Initial Static Water Level (Top of PVC): 1.87'
Depth to LNAPL/DNAPL:
LNAPL/DNAPL Thickness (inches):

Well Volume Calculation:

1 in. casing: ft. of water X .041 =
2 in. casing: 14.57 ft. of water X .16 = 2.33 gal

Evacuation Method:

Submersible: Centrifugal X
Airlift Pos. Displ.:
Bailer Ded. Pump

Volume of Water Removed: 13 gallons
> 3 volumes: yes no
dry: yes no

Field Tests:

Sample Temp.	12.05	°C	Turbidity:	7.7	NTU
pH:	6.75		DO:	5.9	ml/L
ORP:	5.5	mV	Spec. Conductivity:	1.073	uS/cm

Sampling:

Time: 11:00

Sampling Method:

Stainless Bailer
Teflon Bailer 3/4" (for VOCs)
Pos. Disp. Pump Solinst 410
Dis. Bailer
Ded. Pump.
Other

Analyses:

Baseline
Routine
Other: 8260B, 6010B, RSK-175, 300.0_28D
2320B, SM5310_DOC, SM2340B, SM5210B
5310C, 300_48HR

Observations:

Weather/Temperature: 50°, Overcast, Occasional Sprinkle

Physical appearance and odor of Sample: Water clear, organic sheen

Comments: Field parameters were collected while purging well using a YSI 6820 with flow thru cell and a Solinst 410.

MS/MSD collected at this location at 11:00.

GROUNDWATER FIELD SAMPLING RECORD

S&W Redevelopment of NA, LLC

Site Identification: 110 Luther Ave, Syracuse Label **Date:** 2/18/2011 **Job #** N9013

Sampler(s): IEM **Sample ID:** MW-11

Well Information:

Depth of Well (Top of PVC): 14.53'
Initial Static Water Level (Top of PVC): 1.85'
Depth to LNAPL/DNAPL:
LNAPL/DNAPL Thickness (inches):

Well Volume Calculation:

1 in. casing: 12.68 ft. of water X .041 = 0.51 gal
2 in. casing: ft. of water X .16 =

Evacuation Method:

Submersible: Centrifugal X
Airlift Pos. Displ.:
Bailer Ded. Pump

Volume of Water Removed: 0.75 gallons
> 3 volumes: yes no
dry: yes no

Field Tests:

Sample Temp.	18.70	°C	Turbidity:	121.6 NTU
pH:	6.94		DO:	47.3 ml/L
ORP:	-109.5	mV	Spec. Conductivity:	1.075 uS/cm

Sampling:

Time: 12:55

Sampling Method:

Stainless Bailer
Teflon Bailer 3/4" (for VOCs)
Pos. Disp. Pump Solinst 410
Dis. Bailer
Ded. Pump.
Other

Analyses:

Baseline
Routine
Other: 8260B, 6010B, RSK-175, 300.0_28D
2320B, SM5310_DOC, SM2340B, SM5210B
5310C, 300_48HR

Observations:

Weather/Temperature: Indoors

Physical appearance and odor of Sample: Water turbid, floaters, swampy odor, slight organic sheen

Comments: Field parameters were collected while purging well using a YSI 6820 with flow thru cell and a Solinst 410.

Field parameters not representative of true groundwater conditions since well was purged dry after a small volume of water.

Had to keep waiting for well to recover during sampling.

GROUNDWATER FIELD SAMPLING RECORD

S&W Redevelopment of NA, LLC

Site Identification: 110 Luther Ave, Syracuse Label **Date:** 2/18/2011 **Job #** N9013

Sampler(s): IEM **Sample ID:** MW-17

Well Information:

Depth of Well (Top of PVC): 13.30'
Initial Static Water Level (Top of PVC): 1.40'
Depth to LNAPL/DNAPL:
LNAPL/DNAPL Thickness (inches):

Well Volume Calculation:

1 in. casing: 11.9 ft. of water X .041 = 0.48 gal
2 in. casing: ft. of water X .16 =

Evacuation Method:

Submersible: Centrifugal X
Airlift Pos. Displ.:
Bailer Ded. Pump

Volume of Water Removed: 1.5 gallons
> 3 volumes: yes no
dry: yes no

Field Tests:

Sample Temp.	18.83	°C	Turbidity:	133.8	NTU
pH:	7.04		DO:	11.4	ml/L
ORP:	-6.1	mV	Spec. Conductivity:	0.882	uS/cm

Sampling:

Time: 14:20

Sampling Method:

Stainless Bailer
Teflon Bailer 3/4" (for VOCs)
Pos. Disp. Pump Solinst 410
Dis. Bailer
Ded. Pump.
Other

Analyses:

Baseline
Routine
Other: 8260B, 6010B, RSK-175, 300.0_28D
2320B, SM5310_DOC, SM2340B, SM5210B
5310C, 300_48HR

Observations:

Weather/Temperature: Indoors

Physical appearance and odor of Sample: Water turbid, no odor, no sheen

Comments: Field parameters were collected while purging well using a YSI 6820 with flow thru cell and a Solinst 410.

Field parameters not representative of true groundwater conditions since well was purged dry after a small volume of water.

Had to keep waiting for well to recover during sampling. Duplicate collected at this location at 14:20.

GROUNDWATER FIELD SAMPLING RECORD

S&W Redevelopment of NA, LLC

Site Identification: 110 Luther Ave, Syracuse Label | **Date:** 3/22/2011 | **Job #** N9013

Sampler(s): IEM | **Sample ID:** MW-7

Well Information:

Depth of Well (Top of PVC): 16.19'
Initial Static Water Level (Top of PVC): 3.51'
Depth to LNAPL/DNAPL:
LNAPL/DNAPL Thickness (inches):

Well Volume Calculation:

1 in. casing: ft. of water X .041 =
2 in. casing: 12.68 ft. of water X .16 = 2.03 gal

Evacuation Method:

Submersible: Centrifugal X
Airlift Pos. Displ.:
Bailer Ded. Pump

Volume of Water Removed: 6.5 gallons
> 3 volumes: yes no
dry: yes no

Field Tests:

Sample Temp.	11.55	°C	Turbidity:	995.6	NTU
pH:	6.18		DO:	2.4	ml/L
ORP:	-190.9	mV	Spec. Conductivity:	1.511	uS/cm

Sampling:

Time: 10:30

Sampling Method:

Stainless Bailer
Teflon Bailer 3/4" (for VOCs)
Pos. Disp. Pump Solinst 410
Dis. Bailer
Ded. Pump.
Other

Analyses:

Baseline
Routine
Other: 8260B, 6010B, RSK-175, 300.0_28D
2320B, SM5310_DOC, SM2340B, SM5210B
5310C, 300_48HR, VFA_IC

Observations:

Weather/Temperature: 37°, Overcast

Physical appearance and odor of Sample: Water turbid, brown, strong swampy odor, heavy organic sheen

Comments: Field parameters were collected while purging well using a YSI 6820 with flow thru cell and a Solinst 410.

MS/MSD collected at this location at 10:30.

GROUNDWATER FIELD SAMPLING RECORD

S&W Redevelopment of NA, LLC

Site Identification: 110 Luther Ave, Syracuse Label | **Date:** 3/22/2011 | **Job #** N9013

Sampler(s): IEM | **Sample ID:** MW-11

Well Information:

Depth of Well (Top of PVC): 14.30'
Initial Static Water Level (Top of PVC): 1.85'
Depth to LNAPL/DNAPL:
LNAPL/DNAPL Thickness (inches):

Well Volume Calculation:

1 in. casing: 12.45 ft. of water X .041 = 0.50 gal
2 in. casing: ft. of water X .16 =

Evacuation Method:

Submersible: Centrifugal X
Airlift Pos. Displ.:
Bailer Ded. Pump

Volume of Water Removed: 0.75 gallons
> 3 volumes: yes no
dry: yes no

Field Tests:

Sample Temp.	17.45	°C	Turbidity:	372.2	NTU
pH:	6.46		DO:	1.47	ml/L
ORP:	-94.9	mV	Spec. Conductivity:	2.766	uS/cm

Sampling:

Time: 11:55

Sampling Method:

Stainless Bailer
Teflon Bailer 3/4" (for VOCs)
Pos. Disp. Pump Solinst 410
Dis. Bailer
Ded. Pump.
Other

Analyses:

Baseline
Routine
Other: 8260B, 6010B, RSK-175, 300.0_28D
2320B, SM5310_DOC, SM2340B, SM5210B
5310C, 300_48HR, VFA_IC

Observations:

Weather/Temperature: Indoors

Physical appearance and odor of Sample: Water turbid, brown, swampy odor, slight organic sheen

Comments: Field parameters were collected while purging well using a YSI 6820 with flow thru cell and a Solinst 410.

Field parameters not representative of true groundwater conditions since well was purged dry after a small volume of water.

Had to keep waiting for well to recover during sampling.

GROUNDWATER FIELD SAMPLING RECORD

S&W Redevelopment of NA, LLC

Site Identification: 110 Luther Ave, Syracuse Label **Date:** 3/22/2011 **Job #** N9013

Sampler(s): IEM **Sample ID:** MW-17

Well Information:

Depth of Well (Top of PVC): 13.03'
Initial Static Water Level (Top of PVC): 1.41'
Depth to LNAPL/DNAPL:
LNAPL/DNAPL Thickness (inches):

Well Volume Calculation:

1 in. casing: 11.62 ft. of water X .041 = 0.46 gal
2 in. casing: ft. of water X .16 =

Evacuation Method:

Submersible: Centrifugal X
Airlift Pos. Displ.:
Bailer Ded. Pump

Volume of Water Removed: 1.25 gallons
> 3 volumes: yes no
dry: yes no

Field Tests:

Sample Temp.	18.27	°C	Turbidity:	127.0 NTU
pH:	7.38		DO:	3.09 ml/L
ORP:	-42.8	mV	Spec. Conductivity:	1.102 uS/cm

Sampling:

Time: 14:05

Sampling Method:

Stainless Bailer
Teflon Bailer 3/4" (for VOCs)
Pos. Disp. Pump Solinst 410
Dis. Bailer
Ded. Pump.
Other

Analyses:

Baseline
Routine
Other: 8260B, 6010B, RSK-175, 300.0_28D
2320B, SM5310_DOC, SM2340B, SM5210B
5310C, 300_48HR, VFA_IC

Observations:

Weather/Temperature: Indoors

Physical appearance and odor of Sample: Water turbid, no odor, no sheen

Comments: Field parameters were collected while purging well using a YSI 6820 with flow thru cell and a Solinst 410.

Field parameters not representative of true groundwater conditions since well was purged dry after a small volume of water.

Had to keep waiting for well to recover during sampling. Duplicate collected at this location at 14:05.

GROUNDWATER FIELD SAMPLING RECORD

S&W Redevelopment of NA, LLC

Site Identification: 110 Luther Ave, Syracuse Label **Date:** 4/18/2011 **Job #** N9013

Sampler(s): IEM **Sample ID:** MW-7

Well Information:

Depth of Well (Top of PVC): 16.19'
Initial Static Water Level (Top of PVC): 3.51'
Depth to LNAPL/DNAPL:
LNAPL/DNAPL Thickness (inches):

Well Volume Calculation:

1 in. casing: ft. of water X .041 =
2 in. casing: 12.68 ft. of water X .16 = 2.03 gal

Evacuation Method:

Submersible: Centrifugal X
Airlift Pos. Displ.:
Bailer Ded. Pump

Volume of Water Removed: 6.5 gallons
> 3 volumes: yes no
dry: yes no

Field Tests:

Sample Temp.	11.55	°C	Turbidity:	995.6 NTU
pH:	6.18		DO:	2.4 ml/L
ORP:	-190.9	mV	Spec. Conductivity:	1.511 uS/cm

Sampling:

Time: 10:30

Sampling Method:

Stainless Bailer
Teflon Bailer 3/4" (for VOCs)
Pos. Disp. Pump Solinst 410
Dis. Bailer
Ded. Pump.
Other

Analyses:

Baseline
Routine
Other: 8260B, 6010B, RSK-175, 300.0_28D
2320B, SM5310_DOC, SM2340B, SM5210B
5310C, 300_48HR, VFA_IC

Observations:

Weather/Temperature: 37°, Overcast

Physical appearance and odor of Sample: Water turbid, brown, strong swampy odor, heavy organic sheen

Comments: Field parameters were collected while purging well using a YSI 6820 with flow thru cell and a Solinst 410.

MS/MSD collected at this location at 10:30.

GROUNDWATER FIELD SAMPLING RECORD

S&W Redevelopment of NA, LLC

Site Identification: 110 Luther Ave, Syracuse Label **Date:** 4/18/2011 **Job #** N9013

Sampler(s): IEM **Sample ID:** MW-11

Well Information:

Depth of Well (Top of PVC): 14.30'
Initial Static Water Level (Top of PVC): 1.85'
Depth to LNAPL/DNAPL: _____
LNAPL/DNAPL Thickness (inches): _____

Well Volume Calculation:

1 in. casing: 12.45 ft. of water X .041 = 0.50 gal
2 in. casing: _____ ft. of water X .16 = _____

Evacuation Method:

Submersible: _____ Centrifugal X
Airlift _____ Pos. Displ.: _____
Bailer _____ Ded. Pump _____

Volume of Water Removed: 0.75 gallons
> 3 volumes: yes no
dry: yes no

Field Tests:

Sample Temp.	17.45	°C	Turbidity:	372.2 NTU
pH:	6.46		DO:	1.47 ml/L
ORP:	-94.9	mV	Spec. Conductivity:	2.766 uS/cm

Sampling:

Time: 11:55

Sampling Method:

Stainless Bailer _____
Teflon Bailer 3/4" (for VOCs)
Pos. Disp. Pump Solinst 410
Dis. Bailer _____
Ded. Pump. _____
Other _____

Analyses:

Baseline _____
Routine _____
Other: 8260B, 6010B, RSK-175, 300.0_28D
2320B, SM5310_DOC, SM2340B, SM5210B
5310C, 300_48HR, VFA_IC

Observations:

Weather/Temperature: Indoors

Physical appearance and odor of Sample: Water turbid, brown, swampy odor, slight organic sheen

Comments: Field parameters were collected while purging well using a YSI 6820 with flow thru cell and a Solinst 410.

Field parameters not representative of true groundwater conditions since well was purged dry after a small volume of water.

Had to keep waiting for well to recover during sampling.

GROUNDWATER FIELD SAMPLING RECORD

S&W Redevelopment of NA, LLC

Site Identification: 110 Luther Ave, Syracuse Label **Date:** 4/18/2011 **Job #** N9013

Sampler(s): IEM **Sample ID:** MW-17

Well Information:

Depth of Well (Top of PVC): 13.03'
Initial Static Water Level (Top of PVC): 1.41'
Depth to LNAPL/DNAPL:
LNAPL/DNAPL Thickness (inches):

Well Volume Calculation:

1 in. casing: 11.62 ft. of water X .041 = 0.46 gal
2 in. casing: ft. of water X .16 =

Evacuation Method:

Submersible: Centrifugal X
Airlift Pos. Displ.:
Bailer Ded. Pump

Volume of Water Removed: 1.25 gallons
> 3 volumes: yes no
dry: yes no

Field Tests:

Sample Temp.	18.27	°C	Turbidity:	127.0 NTU
pH:	7.38		DO:	3.09 ml/L
ORP:	-42.8	mV	Spec. Conductivity:	1.102 uS/cm

Sampling:

Time: 14:05

Sampling Method:

Stainless Bailer
Teflon Bailer 3/4" (for VOCs)
Pos. Disp. Pump Solinst 410
Dis. Bailer
Ded. Pump.
Other

Analyses:

Baseline
Routine
Other: 8260B, 6010B, RSK-175, 300.0_28D
2320B, SM5310_DOC, SM2340B, SM5210B
5310C, 300_48HR, VFA_IC

Observations:

Weather/Temperature: Indoors

Physical appearance and odor of Sample: Water turbid, no odor, no sheen

Comments: Field parameters were collected while purging well using a YSI 6820 with flow thru cell and a Solinst 410.

Field parameters not representative of true groundwater conditions since well was purged dry after a small volume of water.

Had to keep waiting for well to recover during sampling. Duplicate collected at this location at 14:05.

Appendix F

Adventus Group's Full Scale Proposal and EHC® MSDS

ADVENTUS

Proven Soil, Sediment, and Groundwater Remediation Technologies

VIA E-MAIL: dsorbello@swredev.com

April 14, 2011

EHC®
The Original Injectable ISCR Reagent for Groundwater Applications

Donald S. Sorbello
S&W Redevelopment of North America, LLC
Syracuse, New York 13202

Subject: Treatment of CVOCs using ISCR Technology
Syracuse Label and Printing Facility, Liverpool, New York
Adventus Proposal No. AAI10-812-Full Scale

Dear Mr. Sorbello:

Please find herewith a conceptual remedial design and cost estimate for employing EHC® *in situ* chemical reduction (ISCR™) technology to remove chlorinated volatile organic compounds (CVOCs) from groundwater at the above referenced site (the Site). The cost estimate includes EHC amendments and delivery (estimated); Adventus on-site field support for the initiation of the project is presented as a recommended option.

TECHNOLOGY BACKGROUND

EHC® is the original, patented combination of controlled-release carbon and zero valent iron (ZVI) particles used for stimulating *in situ* chemical reduction (ISCR) of otherwise persistent organic compounds in groundwater. Variations of these materials have been used to treat over 9,000,000 tons of soil/sediment impacted by recalcitrant compounds as part of the company's DARAMEND® bioremediation technology. Both EHC and DARAMEND are proven, established technologies that have been used at hundreds of sites to date throughout the world. The technologies have been accepted and many Federal, State and regional regulatory authorities within the USA/Canada (**Figure 1a**) Europe (**Figure 1b**) and other places around the world.

EHC is available as a **solid or liquid** material that can be easily injected into the subsurface environment in a variety of ways, based on site-specific designs. Application methods include direct mixing, hydraulic fracturing, pneumatic fracturing, and injection of slurries or liquids. Direct placement in trenches and excavations are also reliable application methods.

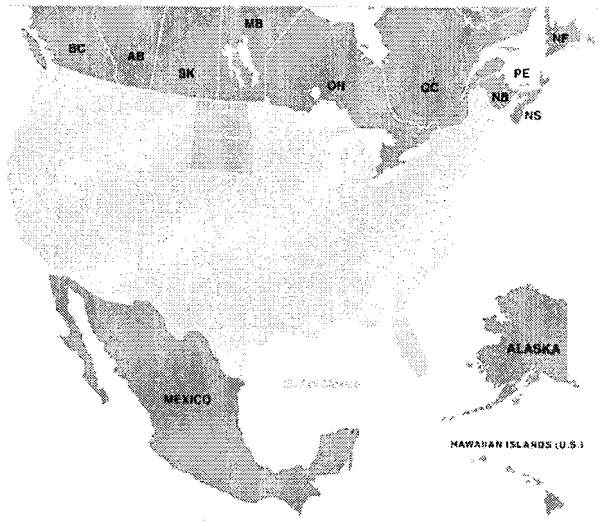


Figure 1a. Adventus Projects - North America
5 Provinces, 48 States > 2,000 projects

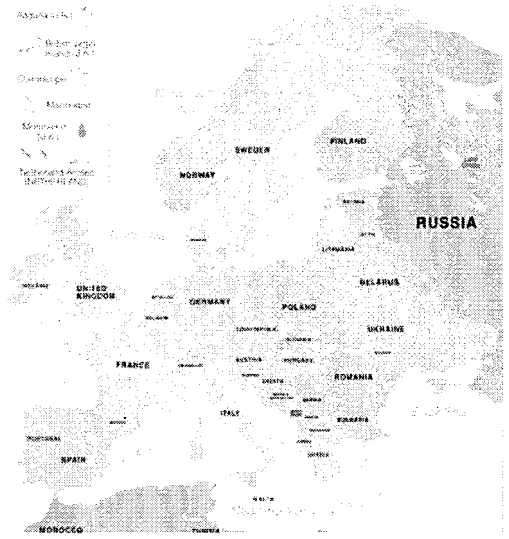


Figure 1b. Adventus Projects – "Europe"
17 Countries ca. 100 projects

Following placement of EHC into the subsurface environment, a number of physical, chemical and microbiological processes combine to create very strong reducing conditions that stimulate rapid and complete dechlorination of organic solvents and other recalcitrant compounds. First, the organic component of EHC (fibrous organic material) is nutrient rich, **hydrophilic** and has high surface area; thus, it is an ideal support for growth of bacteria in the groundwater environment. As they grow on EHC particle surfaces, indigenous heterotrophic bacteria consume dissolved oxygen thereby reducing the redox potential in groundwater. In addition, as the bacteria grow on the organic particles, they ferment carbon and release a variety of volatile fatty acids (acetic, propionic, butyric) which diffuse from the site of fermentation into the groundwater plume and serve as electron donors for other bacteria, including dehalogenators and halorespiring species. Finally, the small ZVI particles (ca. <5 to 45 μm) provide substantial reactive surface area that stimulates direct chemical dechlorination and an additional drop in the redox potential of the groundwater via chemical oxygen scavenging.

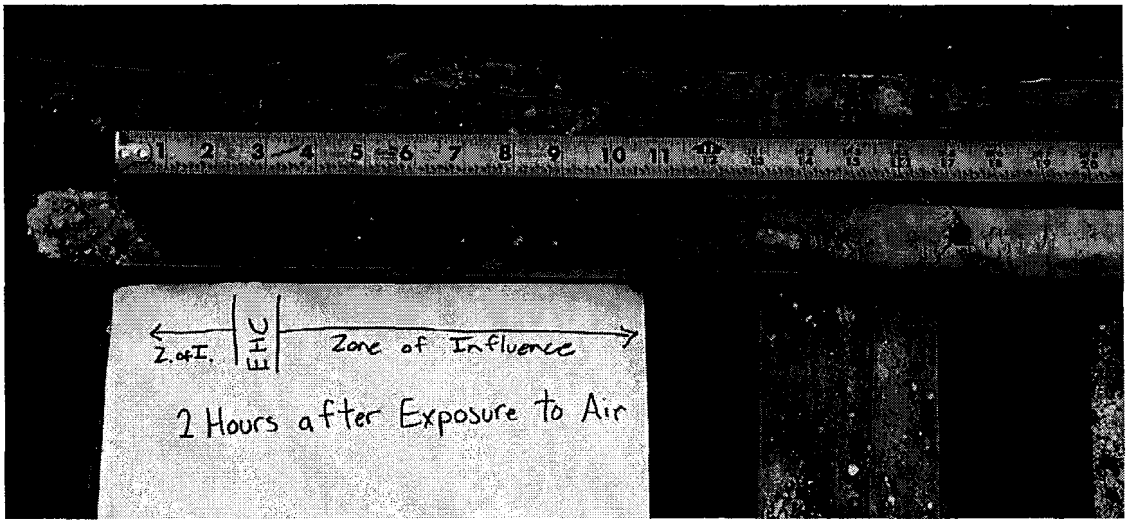
These physical, chemical and biological processes combine to create an extremely reduced environment that stimulates chemical and microbiological dechlorination of otherwise persistent compounds. Redox potentials as low as –550 mV are commonly observed in groundwater after EHC application. At these Eh levels, many organic constituents of interest (COI) are thermodynamically unstable and they will readily degrade via pathways more typical of physical destruction processes (minimum production and no accumulation of typically recognized biodegradation intermediates such as DCE for TCE). Hence, the ISCR technology is microbiologically based in that we rely on indigenous microbes to biodegrade

the EHC carbon (refined plant materials), but we do not require the presence or activity of special or otherwise unique bacteria for complete and effective remediation.

The type of EHC used for a given site depends, in part, on the construction method employed to emplace the material into the subsurface. If a direct mixing or direct placement method is used, the standard slow release, solid EHC material would likely be utilized. If an injection method is used, however, a combination of fast and slow release EHC may be preferred. If the material is to be placed through an existing well network, then a water-soluble, aqueous formulation (EHC-L) may be utilized.

In either event, the fibrous organic carbon and ZVI or other reduced metal that comprises the slow release EHC will remain in the location where it is injected. It will not only treat COI that migrates into the treated area, but it will also have a 'halo' or 'zone of influence' of low redox conditions that will extend beyond its physical space, greatly increasing its effectiveness. **Figure 2** shows how EHC injection creates a wide zone of influence outside of its immediate location. The native soil color is the yellow visible on the right hand side of the core. The orange discoloration is due to the low redox conditions created by the EHC, which became apparent after exposure to the air for 2 hours.

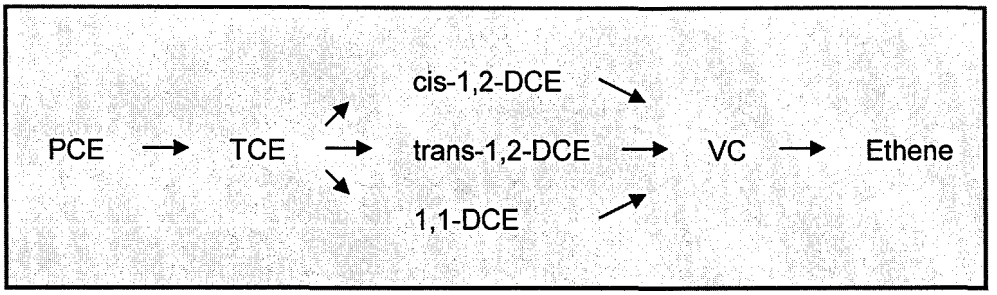
Figure 2: Photograph of a soil core, from 30 ft to 33 ft bgs, showing a 1-inch seam.



MODE OF ACTION – ISCR FOR CVOCs

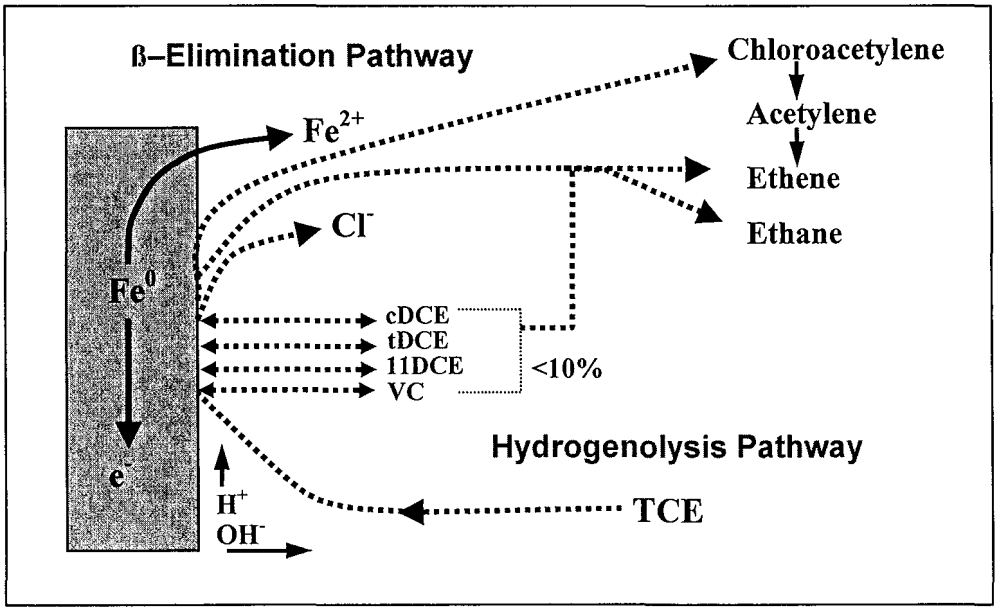
It is critical to understand that the processes of COI destruction under ISCR conditions are different from the typical pathways. The primary COIs in the Site groundwater are PCE/TCE and the recognized daughter products of reductive dehalogenation reactions that occur under normal anaerobic conditions (**Figure 3**).

Figure 3: PCE /TCE Degradation Schematic – Sequential Reductive Dehalogenation under Typical Anaerobic Conditions.



Under ISCR conditions (Eh <-550 mV), these pathways are avoided and terminal destruction / mineralization proceeds along the lines of the recognized *beta*-elimination pathways (**Figure 4**). These differences have been described by various experts in the field of biotransformation processes (*e.g.*, Dr. John Wilson, US EPA as reported in the AFCEE Technology Transfer Seminar, 2003; Dr. Mark Ferry, MPCAA; J, Szecsody and J. Fruchter *et al.*, Battelle Pacific Northwest National Laboratory).

Figure 4: PCE /TCE Degradation Schematic – Representative Reactions for Mineralization under ISCR Conditions.



CASE STUDIES

EHC treatment has effectively removed a range of CVOCs under full-scale field conditions without generation of potentially problematic catabolites (**Appendix A**):

- EHC for source area treatment in clayey lithology (PCE and catabolites), Former dry cleaner, Oregon
- EHC-M for isolated hotspot treatment (TCE and Cr(VI)), NW USA
- EHC for source area mass reduction (TCE, TCA and catabolites), Cherry Point, North Carolina
- EHC for complete plume treatment using multiple reactive barriers (CF, TCE and OCPs), Confidential site, Southeast USA
- EHC injection PRB for plume management (CT, CF), confidential site, Kansas
- EHC injection PRB for plume management (cis-DCE and VC), confidential site, Ohio
- EHC trench PRB and excavation backfill (PCE and daughters), confidential site, Texas
- EHC applied via hydraulic fracturing into partially weathered rock, confidential site, Manufacturing facility, North Carolina

EHC has been accepted by the State of New York and many other regulatory agencies. The product is made in the USA and supplied in 50 lb bags as a powder which can be mixed with soil or slurried in water. Installation techniques vary widely depending on the application. For example, the powder can be mixed with soil and placed at the bottom of an excavation where prior soil removal had been conducted. A slurry can be made and the mixture can be injected into the subsurface using techniques such as direct injection through GeoProbe rods or hydraulic fracturing.

POTENTIAL ADVANTAGES OF USING EHC ISCR TECHNOLOGY

The patented combination of controlled-release organic carbon plus ZVI uniquely yields ISCR conditions which give EHC powerful technical advantages over other materials that provide only carbon (*i.e.*, emulsified oils, molasses or lactate-based substrates) or only ZVI. These include:

- **Health and Safety**. Safe handling and easy application with no bulky or hazardous material disposal issues;
- **Minimal Methane Production**. The presence of ZVI and the complex, controlled-release carbon source help minimize production of potentially problematic fermentation end-products, such as methane;
- **Predictable Performance**. EHC uniquely integrated chemical and microbiological degradation processes which allows treatment to proceed at a predictable rate;

- **Constructability**. EHC is easily and quickly injected using conventional construction technologies;
- **No Mobilization of Contaminants.** Optimal volume of EHC slurry is injected **without the need for extensive water flushing**, which avoids potential displacement and mobilization issues;
- **Accelerated Site Closure** due to the ability of the EHC system to rapidly remove COI mass via a combination of biogeochemical degradation processes **without relying on physical sorption / sequestration as a major "removal" mechanism, ala oils;**
- **ISCR**. Combined chemical and biological oxygen scavenging facilitates rapid oxygen consumption and establishment of reduced Eh; Generation of significantly lowered reducing conditions usually eliminates any requirement for specialty microorganisms or inoculants;
- **No Dead-End Intermediates**. Rapid COI removal without accumulation of potentially problematic catabolites, such as *cis* DCE from TCE or chloroform (CF) from carbon tetrachloride (CT) (see Dolfing *et al*, 2008; Liu *et al.*, 2000)
- **Applicability**. Demonstrated effective on a wide range of COI, including chlorinated solvents, Freons, pesticides, perchlorate and other energetic compounds (explosives);
- **Longevity with no Rebound**. EHC remains active in the environmental for 12 to 60 months hence COI rebound phenomena are not observed (rebound is common when using readily biodegradable, liquid substrates);
- **Complete Technology.** Provision of major, minor and micronutrients that are essential to the activity of fastidious anaerobic bacteria involved in recognized dechlorination reactions;
- **Buffering Capacity**. *Provision of substantial pH buffering capacity (i.e., different EHC products are designed to release alkalinity, acidity or to maintain a neutral pH). In contrast, the addition of conventional organic substrates (e.g., emulsified oils, molasses or lactate-based materials) to promote COI biodegradation can lead to aquifer acidification*;
- **Facilitates Natural Attenuation Processes**. For all the reasons summarized above, EHC enhances the natural biological processes. Other technologies may offer short term COI reduction via sorption reactions, etc. but they can alter the environmental conditions such that natural attenuation mechanisms are adversely influenced; and
- **Simultaneous Immobilization of Heavy Metals.** EHC will not mobilize arsenic, and EHC-M will simultaneously immobilize many other heavy metals, which may be present as other potential COIs.

UNDERSTANDING SITE CONDITIONS AND GOALS

Groundwater at the site flows to the north/northwest through a sandy/clayey aquifer. Groundwater is impacted by cVOCs including high concentrations of PCE, TCE and daughter products. Historic on-site operations are the suspected source of impacts in groundwater. **Table 1** summarizes site conditions below:

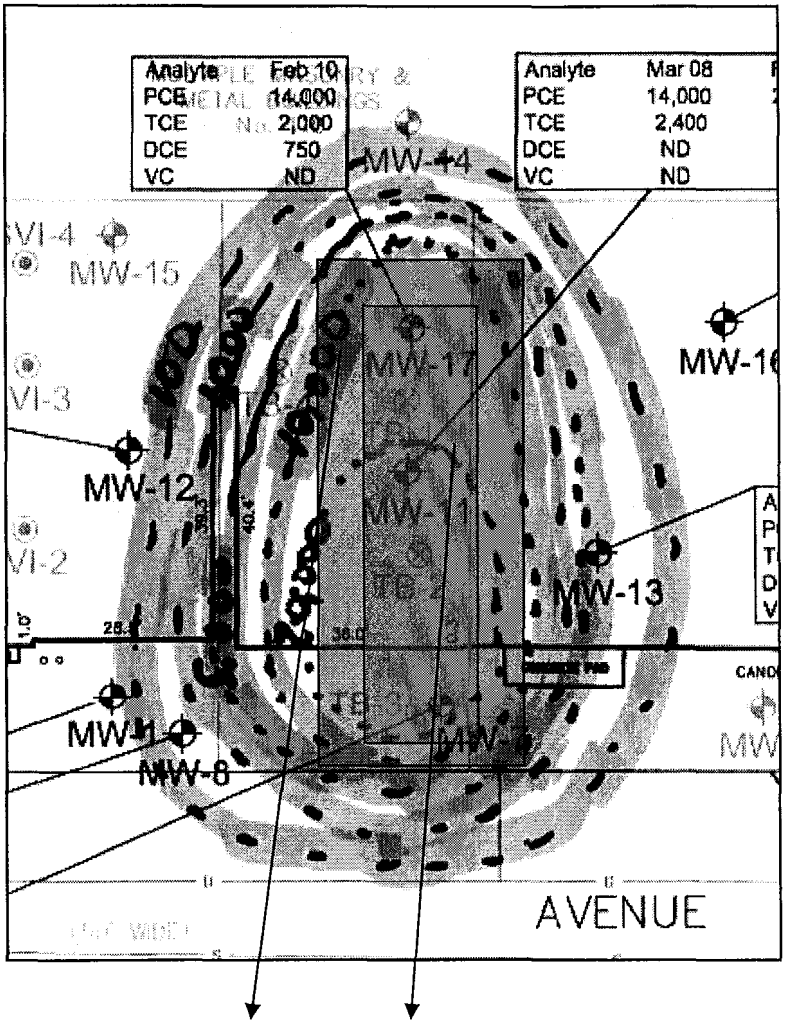
Table 1: Site Overview

Project	Syracuse Printing and Label, **Liverpool, New York**
Pilot test	A pilot test was performed in Feb 2011 around MW-11 to demonstrate the efficacy of ISCR, uniquely induced via the use of the EHC. Groundwater data after 1 month show > 80% reduction in PCE/TCE concentrations in MW-11. Monitoring well MW-7 downgradient of MW-11 also show reductions (>60%) in PCE concentrations after the first sampling event. In addition, the geochemical parameters indicate that ISCR conditions are being established as shown below: DO< 2 mg/L ORP< -100 mV pH: 6.5-7 TOC> 1,300 mg/L
Full Scale Area Dimensions	It is our understanding that the client would like to proceed with a full scale application targeting the entire area of interest from MW 17-MW-7 (**Figure 5).** The area of the targeted full-scale application is 2,300 ft^2. Depth to water table is 3-5 ft bgs and the thickness of the saturated zone is 14 ft.
Constituents of Concern	Monitoring well MW-17 PCE : 14,000 ug/L TCE: 4,300 ug/L Vinyl Chloride (VC): ND Cis1,2 DCE:2,600 ug/L Monitoring well MW-7 PCE : 27,000 ug/LTCE: 2,000 ug/L Vinyl Chloride (VC): 260 ug/L Cis1,2 DCE:750 ug/L
Geology/ Hydrogeology	Overburden is described as sandy clay Depth to water table is 3-5 feet bgs. Assumed Ave. hydraulic Conductivity:0.55 ft/day Assigned porosity: 24 %

CONCEPTUAL REMEDIAL DESIGN

The project goal is to reduce the concentration of COIs in groundwater and to restore the groundwater to full beneficial use via ISCR, uniquely induced via the use of the EHC. For the purpose of this design, the whole plume has been divided into two areas and addressed separately. **Figure 5** shows the proposed treatment areas.

Figure 5: EHC Injections in the area of interest (not to scale)



EHC Application for "Plume" Treatment:

To facilitate mass removal and facilitate long term attenuation of the entire plume, EHC can be injected into the suspected hot spot areas. The dosage for EHC is based on COI concentrations, existing geochemical conditions incorporating sufficient safety factors. The following engineering and design assumptions have been made in order to calculate the requirements:

- Dimensions:
  - Area 1: 1,300 ft^2 * 14 ft thickness of saturated zone
  - Area 2: 1,000 ft^2 * 14 ft thickness of saturated zone
  - Soil bulk density = 125 lb/ft^3
  - Porosity = 24%
- EHC is not designed to treat free product, unless it is residual NAPL which are usually present as discreet globules instead of a big pool of product.
- Application rates for EHC (by weight to mass of solids) was chosen based on maximum concentration of COIs and assumed given conditions (within the aquifer. The application rate also incorporates an estimate for demand arising from unknown sinks in the saturated zone. **Table 2** provides the EHC requirements and injection details.

Table 2: EHC mass requirements and injection details for source area treatment

	Area 1	Area 2	Unit
Treatment Area Dimensions:			
Length of treatment zone	60	63	ft
Width of treatment zone	22	16	ft
Depth to top of treatment zone	3	3	ft
Depth to bottom of treatment zone	17	17	ft
Treatment zone thickness	14	14	ft
Treatment zone volume	18,060	14,112	ft3
Mass of soil in treatment zone	1,129	882	U.S. tons
Estimated total porosity	24%	24%	
Volume pore space	4,414	3,449	ft3
EHC mass calculations:			
Percentage EHC by soil mass	0.25%	0.40%	
Mass of EHC required	5,650	7,100	lbs
Preparation of EHC Slurry:			
Percent solids in slurry (can be altered)	29%	29%	
Volume water required	1,696	2,131	U.S. gallons
Slurry volume to inject	2,061	2,590	U.S. gallons
Injection details:			
Injection spacing	8	6	ft
Number of injection points	20	28	points
Mass EHC per point	283	254	lbs
Water volume per point	85	76	U.S. gallons
Slurry volume per point	103	92	U.S. gallons
Mass EHC vertical distribution	20	18	lbs/ vertical ft
Application rates for reference:			
Slurry volume to pore space volume	6.2%	10.0%	
EHC concentration in groundwater	1.3	2.1	lbs/ft3
Optional Hole Blok for filling boreholes:			
Mass Hole Blok required, assuming 2" diameter bores	600	850	lbs

Please note that the typical injection solution to pore volume ratio for EHC injections do not exceed 15% in order to avoid plume displacement and surfacing issues. A second application may be required in isolated pockets to reach regulatory standards to account for high concentrations of cVOCs in the saturated zone, inefficiencies in distribution and unknown sinks in the aquifer which typically amounts to 10-20% of EHC injected during the first application.

TABLE 2 NOTES: If the estimated amount of slurry per point is problematic, the dimensions, mass requirements, mixing and other injection details presented above can be readily modified in the field based on site specific conditions (for example, the density of the slurry can be changed to modify the total injection volume or the injection layout/number of injection points could be altered depending on recommendations from the contractor).

OPTIONAL USE OF REACTIVE BOREHOLE SEALANT

It is very important to effectively seal the DPT bore holes, and HoleBlok+ provides an excellent, reactive sealant to enhance overall remedial performance which should be prescribed for the injection contractor. A total of 1,450 lbs of HoleBlok+ would be required for the hot-spot areas.

OPTIONAL USE OF INOCULANTS FOR RAPID DCE DEGRADATION

The accumulation of DCE and other catabolites may indicate that the naturally occurring microbial population may be catabolically limited and that the remedial process might benefit from the addition of inoculants with known abilities to rapidly biodegrade DCE and related compounds. Although not typically required for ISCR as defined above, inoculants have been useful for these situations. Therefore once favorable redox conditions (ORP < -75 mV, DO <0.2 mg/L, pH between 6 and 8.5) have been attained following EHC addition, dehalococcoides (DHC) cultures could be added if DCE or VC are still present at high concentrations.

The DHC inoculant will contain at least 1x10E10 cfu/ml of live bacteria including high numbers of dehalococcoides species with known abilities to biodegrade DCE. The target density of DHC cells in the treated aquifer areas will be 5x10E6 cfu/ml. A total of 26 L of inoculum are required for Areas 1 and 2, respectively.

DISTRIBUTION OF RESPONSIBILITIES

For field scale work at the Site, Adventus will provide environmental biotechnology and design support. It is our intention and understanding that S& W Redevelopment (Client) will be responsible for remedial construction, permitting, performance monitoring and reporting. The distribution of responsibilities envisioned is as follows:

1. Adventus will provide and arrange delivery of EHC to the Site.
2. Client will be responsible for remedial construction contracting.
3. It is highly recommended that Adventus personnel be on site during project start-up to support Client's field staff.
4. Adventus will provide data interpretation to Client upon request.
5. Adventus will provide technical writing support to Client, upon request.
6. Client will provide manpower for receiving shipments, monitoring treatment performance and collecting samples.
7. Client will maintain overall project responsibility, and will maintain all client contact and control of the Site.
8. Client will be responsible for all health and safety, permitting and approvals, sampling and analytical costs along with all data management and reporting costs.

COST ESTIMATE

AAI's material and delivery costs for the proposed applications are presented below (**Table 3**). These costs include EHC and estimated delivery to the Site. Adventus oversight, labor and travel are presented as highly recommended options. These costs do not include the remedial construction or services assigned to Client. This pricing is valid for 30 days.

Table 3: EHC mass requirements and cost (USD).

Item	Area 1	Area 2
EHC Mass (lb)	7,100	5,650
EHC Unit Price [1]	$ 2.50/lb	$ 2.50/lb
EHC Cost	$17,750	$ 14,125
Small Order Handling Fee [2]	$ 0	$ 0
Shipping Estimate [3]	$1,200	
OPTIONAL Adventus technical support, field oversight and travel (3-4 days on site) [4]	($ 4,000)	
OPTIONAL Inoculum	(13 L)	(13 L)
OPTIONAL Inoculum cost ($ 115 /L + delivery)	($1,495)	($1,495)
OPTIONAL HolePlug+ (lbs)	(600)	(850)
OPTIONAL HolePlug+ cost [6] ($37/50 lbs excluding delivery)	($444)	($629)
TOTAL COST [5]	**$33,075**	

1) Price valid for 30 days. Volume discount applied where appropriate and assumes payment within 45 days. Any applicable taxes not included. Please provide a copy of your tax exempt certificate or resale tax number when placing your order.
2) Warehousing and additional handling fee billed at 5% of material orders <5,000 lbs.
3) Shipping billed at actual cost plus 8%. Transportation quotes assume 5 to 7 day delivery time via truck, no lift gate, no pallet jack.
4) Field oversight is presented as a recommended option and not included in the total cost. The Adventus performance warranty (below) is predicated on our oversight to verify material emplacement conditions. If additional field oversight is desired, it can be provided on a time and expense basis.
5) General terms and conditions for product sales can be found at www.adventusgroup.com/pdfs/pricing/Product_Sales_Terms_General_Conditions_APR10.pdf
6) Reactive Hole Blok (ZVI amended) is presented as a recommended option for filling injection boreholes, and is not included in the total cost. Borehole diameter of 2 inches assumed.

Adventus will provide copies of our patents and written, full indemnification backed by insurance coverage to Client and the end-user / client from any lawsuits purporting patent infringement or other technology violations.

Adventus warrants the performance of its technology. In the event that the prescribed EHC injections do not yield at least 80% reduction in overall CVOC concentrations in groundwater within the treatment zone within 9 to 12 months, then we will provide an equivalent amount of EHC at 50% of the listed price (plus delivery costs). Adventus' field installation oversight would also be provided at no cost. This performance guarantee requires that a representative from Adventus is on site for the initiation of the project and that the injections are conducted according with Adventus' recommendations.

On behalf of Adventus, I thank you for your interest in our products and technologies. Please contact me by email at Ravi.Srirangam@adventusgroup.com or call me at 908.688.8543 if you have any questions regarding this proposal.

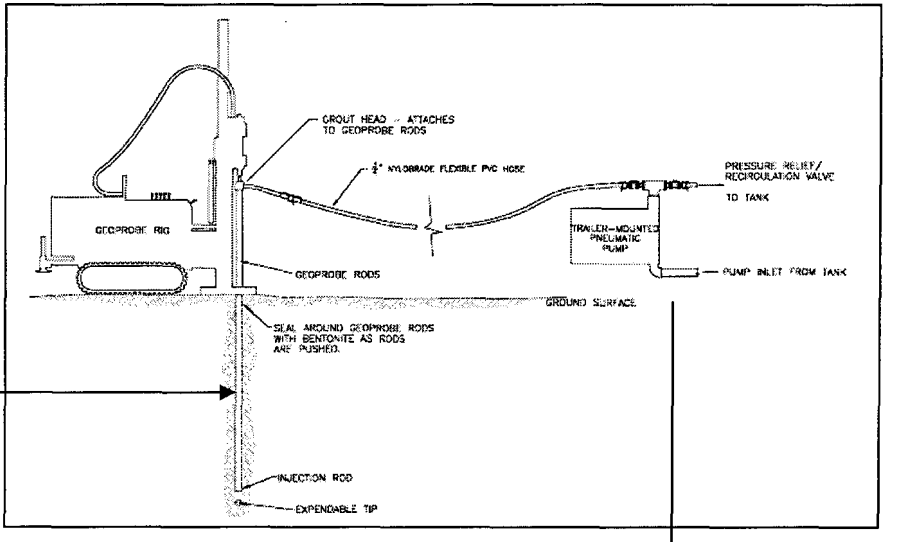
Yours truly,
Adventus Americas, Inc.

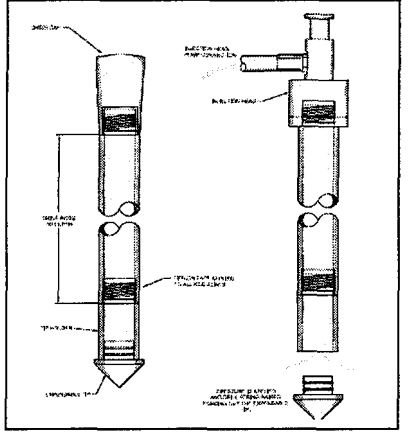
Ravikumar Srirangam
Environmental Engineer

cc: Jim Mueller, Chris Mullen- Adventus
Fayaz Lakhwala- Adventus

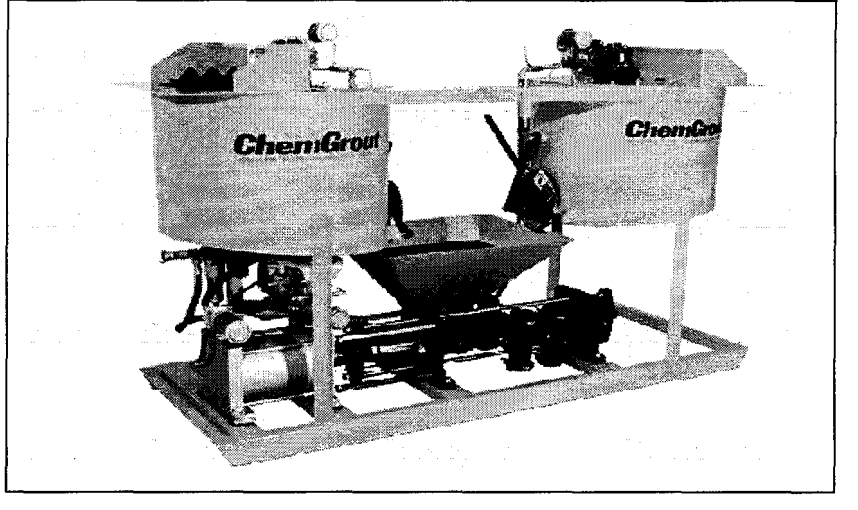
EHC® is a registered trademark of Adventus Intellectual Property Inc and its affiliates.

SCHEMATIC DIAGRAM FOR EHC INJECTIONS USING CHEM GROUT CG500 PUMP UNIT AND TRACK MOUNTED GEOPROBE (procedures found on next page)





Bottom Out Injection Diagram



Chem Grout CG500 High Pressure Air Operated Pump Unit

Procedures for injection of EHC

1. Inspect all hoses, air and injection lines for any cracks or potential spots that could break and leak.
2. Read EHC and EHC-A MSDS sheets prior to chemical handling for any risks involved and advised PPE by chemical manufacturer.
3. Inspect tank for any residual chemicals. If needed flush out tank prior to injections to mitigate any adverse chemical reactions.
4. When attaching air hoses use whip-stops on both connections at the compressor and the pump.
5. While attaching injection lines check for locking cam locks. If the cam locks are not locking wrap connections in duct tape to keep attachments from coming loose.
6. The Chem Grout unit, associated valves, gauges, injection hose, injection head, and Geoprobe rods have all been reviewed and approved by a Professional Engineer. Use of additional injection hardware, piping, or hoses are not allowed unless approved by a Professional Engineer.
7. Don level D PPE and a respirator prior to adding chemicals to the tank.
8. Add EHC/EHC-A to one of the two 50-gal tanks.
9. Add water to the EHC/EHC-A in first tank. Wear all proper PPE and safety glasses during this process. Splashing will occur if mixing paddles are rotated too quickly. Keep hands away from the mixing paddles
10. Mix the chemicals using the mixing paddles adjusting the rotation with the control level. Once complete, reduce rotation revolutions.
11. Prepare for injection by closing off the re-circulating valve and opening up the valve to the injection line. Typical injection pressures range from 40-100 psi; however, based on the lithology of Site and depth of the injections, it is anticipated that injections pressures may range from 200-300 psi. Due to the high pressures, all working personnel will wear safety glasses at all times.
12. Open the valve at the injection head and charge the line at approx 20 to 60 psi. The pump will not stop when the line is charged; therefore, control the pressure by strokes of the piston pump (2-3 strokes). Once the line is charged lift the

Geoprobe rods and continue injections. If tight conditions are encountered, fracture the soil. Increase the pressure with the pump control until injections begin. Once injection is steady, reduce the pressure back to proper level (i.e. maintenance pressure). In the event of mechanical failure of the hose and piping, pumping can be discontinued by turning the hydraulic control lever on the piston pump or remotely by shutting down the air supply (air compressor).

13. In between injection intervals, shut off the pump using the control level to stop injections.
14. Relieve any backpressure by opening the injection valves and the re-circulation valves together to relieve any pressure back into the tank.
15. Once the backpressure has been relieved close the re-circulation lines and wait for the drillers signal to resume injections.
16. Continue mixing the EHC solution with the mixing paddles. Mix the EHC in the second tank while the injections are occurring in the first tank.
17. Upon completion of all injections of a single chemical, clean out the tank, lines, pump and plumbing before adding a new chemical to the tank. This is best done by rinsing the tank as the last injection is finishing, the water will clean the insides of the tank and will flush the lines. Once this is complete, drain the lines and the pumps of all residual liquids in an approved area.
18. When all injection activities are completed, completely decontaminate all equipment prior to leaving the site.
19. All decontamination rinse liquids and related materials will be drummed and left on site for disposal by ANL. The drums can be sealed but must be vented to avoid generation of pressure resulting from EHC reaction.

Borehole Plugging Procedure

1. Upon completion of injection activities and removal of the Geoprobe injection rods, fill the borehole with bentonite Hole Plug. Note: Bentonite Hole Plug does not hydrate very quickly and is dense enough to fall below the water table surface and will provide a good seal. Cement grout should be avoided since it is possible to displace the grout in subsequent injections nearby.

2. Bentonite granular material may be placed in the borehole above the water table surface and is preferred when a fast-hydration is needed. Do not use below the water table because bridging will occur.
3. Fill the last few inches of the borehole with native soils or asphalt patch or cement patch in paved areas.

ADVENTUS
Proven Soil, Sediment, and Groundwater Remediation Technologies

Safety Data

MATERIAL SAFETY DATA SHEET: **EHC®**

1. PRODUCT IDENTIFICATION:

EHC®

PRODUCT USE:

Bioremediation product for the remediation of contaminated soil and groundwater only. Not for use in potable drinking water.

MANUFACTURER:

Adventus Americas Inc.
2871 W. Forest Rd, Suite 2
Freeport, IL
61032

EMERGENCY PHONE:

Office Hours: 815-235-3503
After Hours: 630-309-1175

TRANSPORTATION OF DANGEROUS GOOD CLASSIFICATION:

Not Regulated

WHMIS CLASSIFICATION:

Not Regulated

CONTAINMENT HAZARD:

Any vessel that contains wet EHC or EHC and water must be vented due to potential pressure build up from fermentation gasses.

2. INGREDIENTS

CHEMICAL NAME:	CAS#	TLV (mg/m3)	LD low (mg/Kg)	% in Product
Organic Amendment	N/D	N/E	N/E	52 - 82
Iron	7439-89-6	5 (as iron oxide fume)	N/E	18 - 48

3. PHYSICAL DATA

Physical state	Solid	Melting point	1371-1480°F
Odour threshold	N/A	Boiling point	3000°C
Density	0.80 Kg/L	Vapour pressure (mm Hg)	1 @ 1787°C
pH	5.6	Vapour density (air=1)	N/A
Solubility in water	Insoluble	Evaporation rate	N/A
Coeff. of water/oil	N/A		
Appearance & odour	Tan/Grey Powder, Odourless		

4. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Deg. C PMCC): N/A

	LOWER	UPPER
FLAMMABLE LIMITS IN AIR % BY VOLUME:	N/A	N/A
AUTO IGNITION TEMP (Deg. C):	N/A	

EXTINGUISHING MEDIA: Dry chemicals or sand or universal type foam.

SPECIAL PROCEDURES:
Firefighters should wear SCBA and protective clothing.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

Dust can present fire and explosion hazards when exposed to fire, chemical reaction, or contact with powerful oxidizers.

5. REACTIVITY DATA

STABILITY (NORMAL COND.):
Stable: X **Unstable:**

CONDITIONS TO AVOID:	Contact with powerful oxidizers such as strong acids.
INCOMPATIBILITY (Materials to Avoid):	Powerful oxidizers such as strong acids.
HAZARDOUS DECOMPOSITION PRODUCTS:	Hydrogen, Carbon monoxide, Carbon dioxide.

6. TOXICOLOGICAL PROPERTIES

ROUTE OF ENTRY:
Inhalation
Ingestion (not likely)

HEALTH HAZARDS:

Acute overexposure may cause eye, nose, mouth and skin irritation.

Carcinogenicity:	No Information Available
Signs and Symptoms of Exposure:	No Information Available
Medical Conditions Generally Aggravated by Exposure:	No Information Available

7. PREVENTIVE MEASURES

PERSONAL PROTECTIVE EQUIPMENT:

Eye Protection: X **Gloves:** X **Clothing:**

RESPIRATORY PROTECTION:
Use dust mask in severe conditions.

Use good housekeeping practices to keep dust to a minimum.

VENTILATION REQUIREMENTS:
Not normally required.

SPILL AND LEAK PROCEDURES:
Sweep up and return to container.

WASTE DISPOSAL:
Sanitary landfill. Follow Federal, State and Local guidelines.

HANDLING PROCEDURES:
Wear safety glasses for normal use. Avoid generating excessive dust, wear dust mask in severe conditions.

STORAGE REQUIREMENTS:
Do not store near powerful oxidizers such as strong acids.
Keep dry.
Any vessel that contains wet EHC or EHC and water must be vented due to potential pressure build up from fermentation gasses.

SPECIAL HANDLING INFORMATION:
Treat as a nuisance dust

8. FIRST AID MEASURES

INHALATION: Remove to fresh air. Seek medical attention.
INGESTION: Seek medical attention.
SKIN CONTACT: Brush off excess. Wash with soap and water.
EYE CONTACT: Flush with running water. Seek medical attention.

9. OTHER INFORMATION

None

10. PREPARATION INFORMATION

Prepared By: Adventus Remediation Technologies
1345 Fewster Drive
Mississauga, Ontario
L4W 2A5

Date Prep./Rev.: 12/4/09
Print Date: 12/4/09
Phone: 905-273-5374
Fax: 905-273-4367

Definitions:
N/D - No Data N/A - Not Applicable N/E - Not Established

EHC® is a registered trademark of Adventus Intellectual Property Inc.

Appendix G

Community Air Monitoring Plan (CAMP)

COMMUNITY AIR MONITORING PLAN

I. INTRODUCTION

The 110 Luther Ave site (the 'Site') occupies approximately 1.4 acres along the west side of Luther Avenue in the Town of Salina, Onondaga County, New York. The Site is owned by Syracuse Label whose office, light manufacturing, and warehousing operations are housed within the one story building which occupies the majority of the parcel. The remainder of the site consists primarily of paved parking areas. The site is located in a commercial/industrial area just east of Interstate 81 and is bordered by Albion Ave to the west, Knapp Ave to the north, Luther Ave to the east, and an open lot and maintenance garage to the west.

Syracuse Label is interested in investigating and remediating the 110 Luther Ave Site in the New York State Brownfield Cleanup Program (BCP) under agreement with the NYSDEC. Under the BCP, a Remedial Investigation was completed in accordance with the NYSDEC's Department of Environmental Remediation (DER) DER-10 Technical Guidance for Site Investigation and Remediation (NYSDEC, May 2010) to provide a systematic assessment of environmental conditions at the Site. The Remedial Investigation filled data gaps from previous Phase II investigations and assessed potential remedial approaches.

The Remedial Investigation (RI) defined the extent of contamination to the central/eastern portion of the site along a historic floor trench drain. As a result of the RI, a remedial strategy was proposed to remediate site groundwater. This Community Air Monitoring Plan (CAMP) describes the measures that will be undertaken during field work to monitor ambient air at the downwind site perimeter.

II. OBJECTIVES

The objective of this CAMP is to provide a measure of protection for the downwind community, and site employees during work completed indoors, from potential airborne contaminant releases that might arise as a result of the planned field work that penetrates the ground surface, which will include soil borings and injection points.

III. METHODS

The CAMP will include monitoring for volatile organic compounds (VOCs) and particulate matter (e.g. airborne "dust"). Readings will be recorded and will be available for State (DEC and DOH) personnel to review, as requested.

A. VOC MONITORING

A MiniRAE photoionization detector (PID) will be used to measure VOCs in air. VOCs will be monitored at the downwind perimeter of the site, based on the prevailing wind direction as determined at the beginning of each workday. The site perimeter is defined as the existing property boundary. When remedial activities occur inside the existing buildings during operating hours, VOC's will be monitored continuously adjacent to the work in the direction of potentially exposed individuals and at air intake vents, if any.

Upwind and/or indoor concentrations of VOCs will be measured at the beginning of every workday to establish background conditions. VOC concentrations will be measured at the property boundary directly downwind of the work area during work completed outdoors. VOC concentrations will be measured adjacent to the work area in the direction of potentially exposed individuals during work completed indoors. Data will be checked as to provide a measure of assurance that contaminants are not being spread off site or beyond the indoor work area through the air.

- If the ambient air concentration for total organic vapors at the downwind property boundary exceeds 5 parts per million (ppm) above background for a 15-minute average, work activity will be halted and monitoring will continue until levels decline to below 5 ppm over background. If the indoor air concentration for total organic vapors adjacent to the work area exceeds 1 parts per million (ppm) above background for a 15-minute average, work activity will be halted and monitoring will continue until levels decline to below 1 ppm over background. At this point, work will resume and monitoring will continue.

- If total organic vapor levels at the downwind property boundary persist at levels above 5 ppm over background but less than 25 ppm; or at levels above 1 ppm over background for indoor work; work activities will be halted, the source of the vapors will be identified,

and corrective actions will be taken to abate emissions. Work will resume after organic vapor levels fall to below 5 ppm over background at the downwind property boundary or below 1 ppm adjacent to the indoor work area.

- If organic vapor levels exceed 25 ppm at the downwind property boundary activities will be shut down. An appropriate course of action to abate emissions in order to resume work will be discussed with NYSDEC personnel.

B. PARTICULATE MONITORING

Particulate (e.g. "dust") emissions will be measured continuously at the upwind (background) and downwind property boundaries when work activities are being completed outside of site buildings. Particulate emissions will be measured continuously adjacent to the work area in the direction of potentially exposed individuals when remedial activities are being completed inside of site buildings during operating hours. Real time monitoring equipment (e.g. MiniRAM or equivalent), with audible alarms and capable of measuring particulate matter less than 10 micrometers in size, will be used.

- If the downwind particulate level is 100 micrograms per cubic meter (ug/m^3) greater than background (upwind) for a 15-minute period, then dust suppression techniques will be employed. Work will continue with dust suppression provided that downwind particulate levels do not exceed 150 ug/m^3 above upwind levels, and provided that no visible dust is migrating from the work area.

- If, after dust suppression techniques, downwind particulate levels are greater than 150 ug/m^3 above upwind levels, work will be stopped and a re-evaluation of activities will be initiated. Work will resume provided that dust suppression measures and other controls are successful in reducing downwind particulate concentrations to within 150 ug/m^3 of the background level and in preventing visible dust migration.

During work activities that are conducted within site buildings, perimeter air monitoring for dust and VOCs will be suspended unless visible dust is observed migrating from the building work area. During work activities that are conducted within site buildings that require the use of combustion motor equipment, the exhaust will be vented to the outdoor air.

Appendix H

Radon Home Services Radon
Mitigation Certification

Richard A. Kornbluth
Radon Home Services, Inc

Has satisfactorily fulfilled the requirements set forth by the
National Radon Proficiency Program and is therefore certified as a:

Residential Mitigation Provider
NRPP ID # 100038RMT Expires 7/31/2012

In Witness Whereof,
I have subscribed my name and affixed the
Seal of the Association

Angel Anderson Price
NEHA-NRPP Executive Director

Valid for specific activities or measurement devices, which can be verified with NEHA.
State and local agencies may have additional requirements.

Appendix I

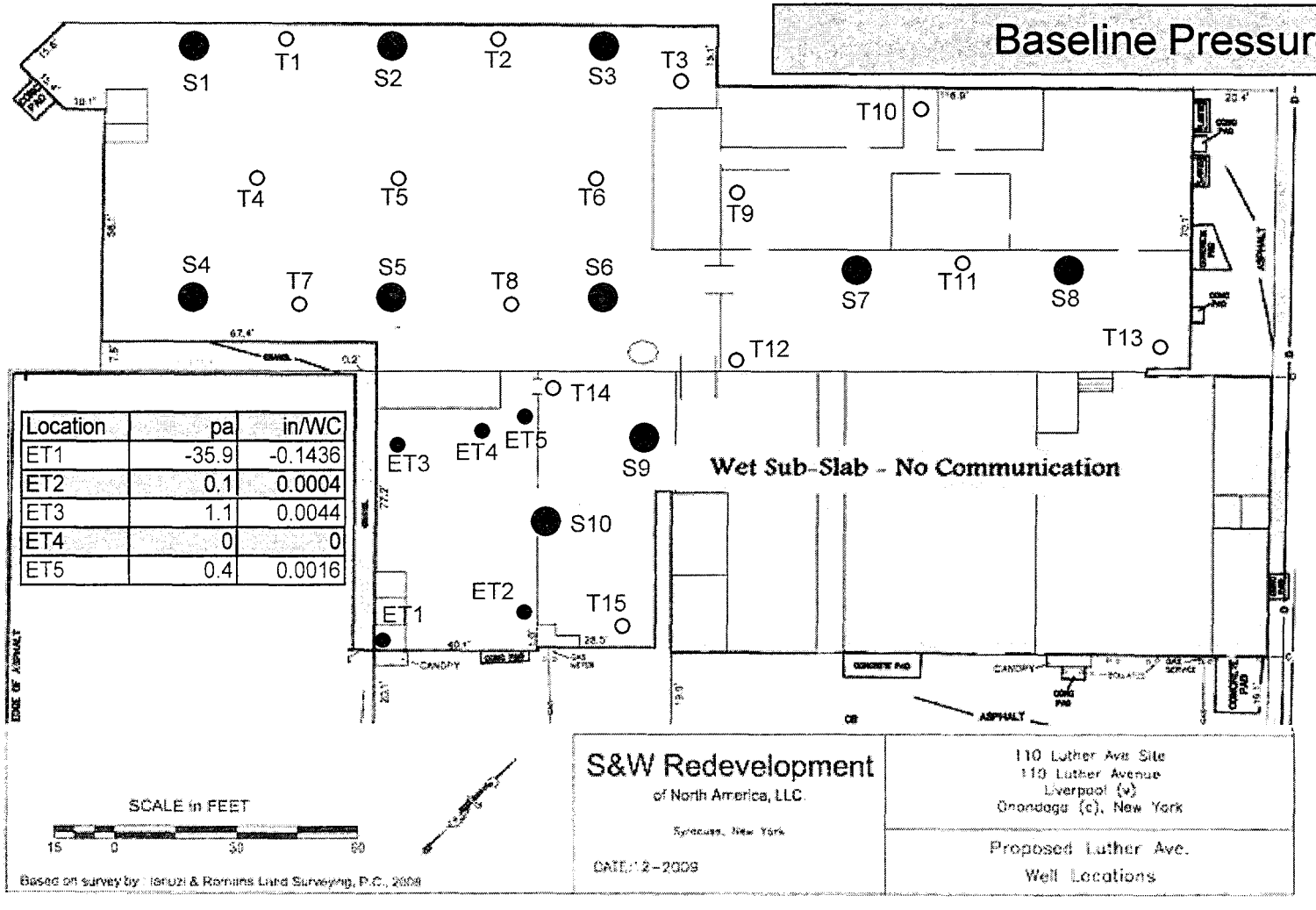
Radon Home Services Sub-Slab
Communication Test Report

Sub-Slab Communication Test
Syracuse Label
Syracuse, NY

Test Date: December 2009

Radon Home Services, Inc.
Po Box 8048, Teall Ave Station
Syracuse NY, 13217
(315) 422-6000

Baseline Pressures



Location	pa	in/WC
ET1	-35.9	-0.1436
ET2	0.1	0.0004
ET3	1.1	0.0044
ET4	0	0
ET5	0.4	0.0016

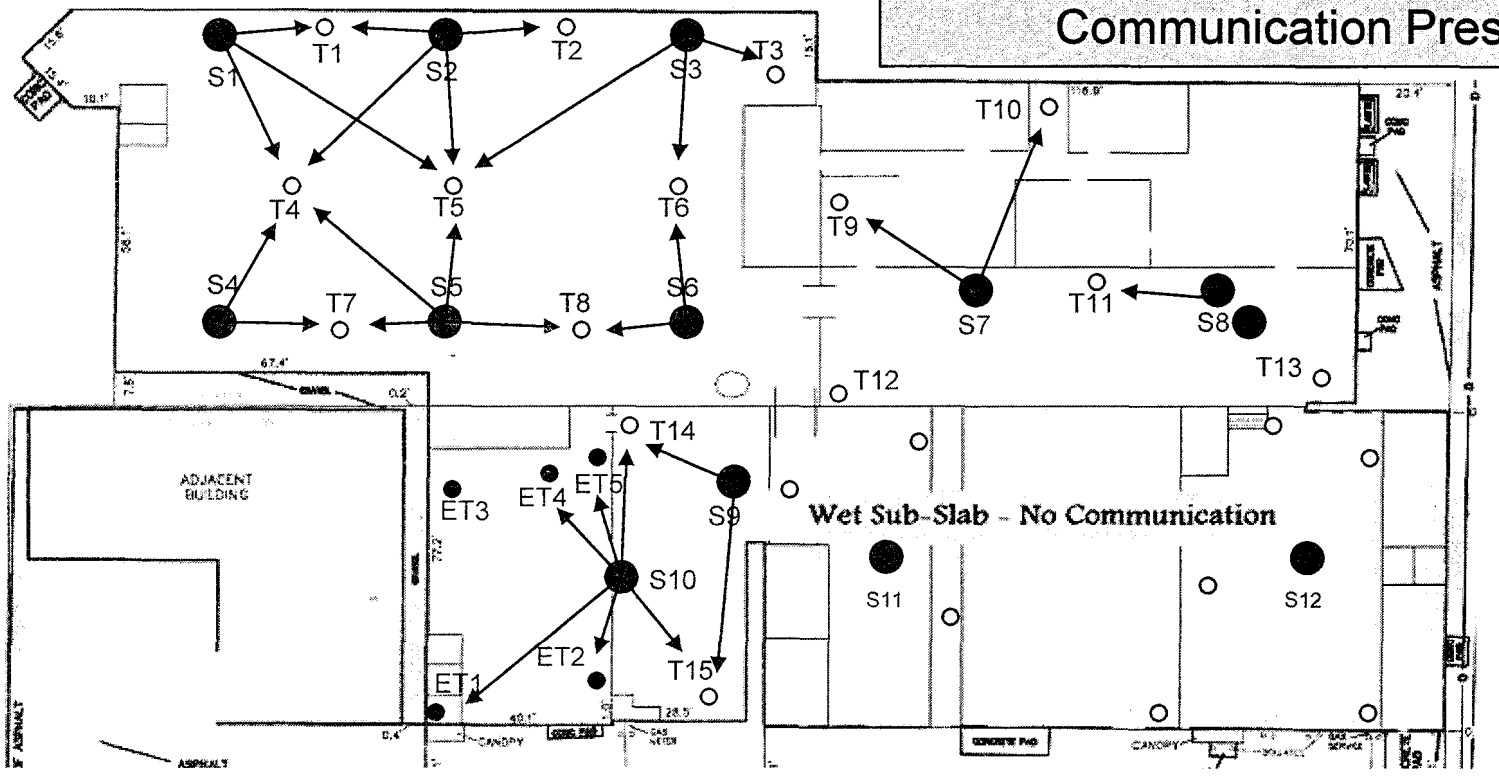
Baseline pressures were generally nominal with notable exceptions at T13 in the Nilpeter Press Room, and ET1 in the existing system in the Letter Press South Room.

Location	pa	in/WC	Location	pa	in/WC	Location	pa	in/WC	Location	pa	in/WC	Location	pa	in/WC
S1	0.3	0.0012	S6	0.6	0.0024	T1	0.3	0.0012	T6	0.2	0.0008	T11	0.1	0.0004
S2	0.1	0.0004	S7	0	0	T2	0.1	0.0004	T7	1.7	0.0068	T12	0	0
S3	0.3	0.0012	S8	0.6	0.0024	T3	0.5	0.002	T8	0.3	0.0012	T13	8.4	0.0336
S4	0.2	0.0008	S9	0.8	0.0032	T4	1	0.004	T9	0	0	T14	-0.1	-0.0004
S5	1.1	0.0044	S10	0.1	0.0004	T5	0.8	0.0032	T10	0.7	0.0028	T15	3.1	0.0124

Sub-Slab Communication Test – Syracuse Label Co. – Syracuse, NY

Radon Home Services, Inc. – Test Date: 12/09

Communication Pressures



Communication was very good in the warehouse, and letter press rooms. There was some communication in office area. The northeast section of the building contained water in the sub-slab, no communication possible throughout grayed area.

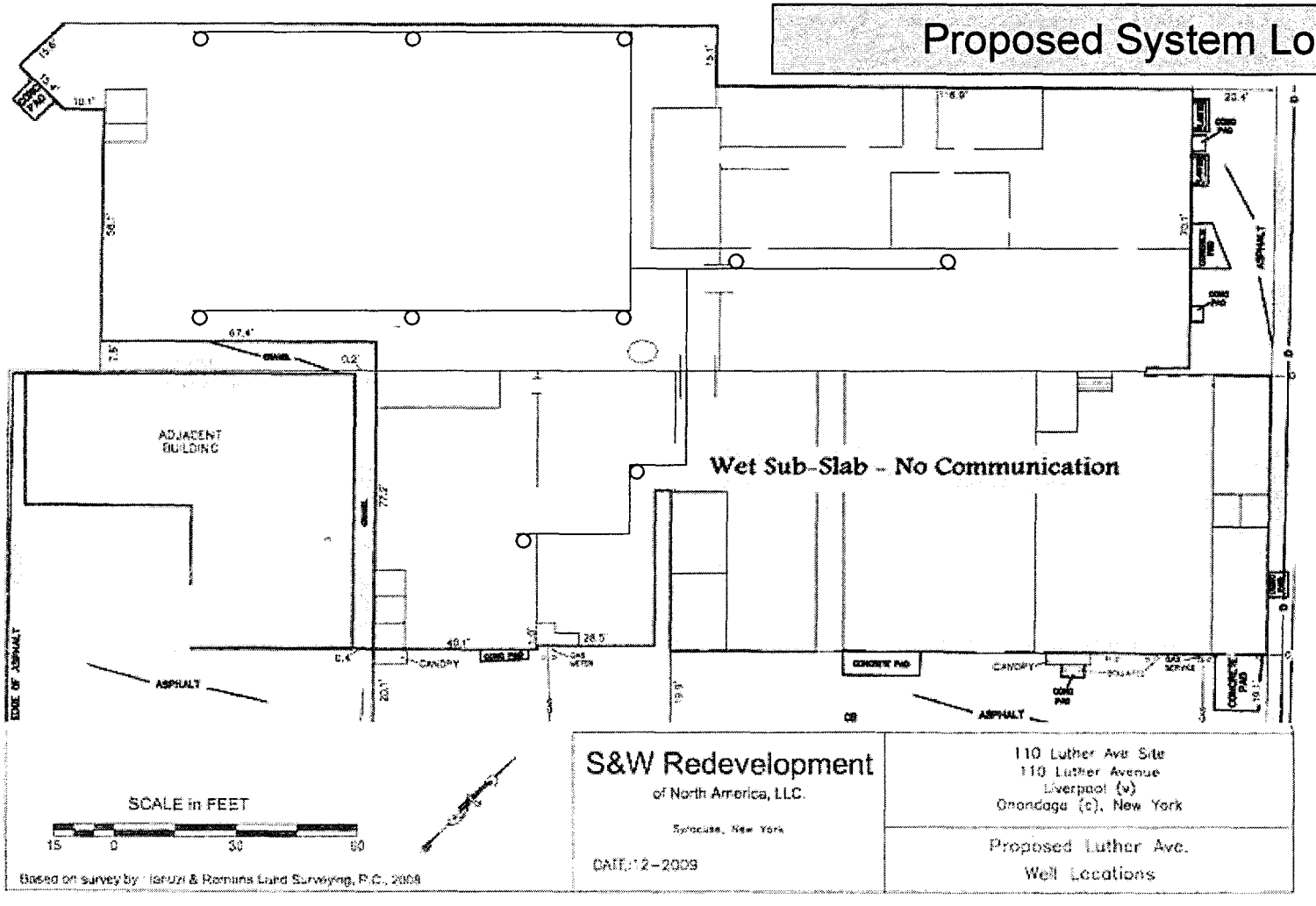
● Suction point
○ Test hole

COMMUNICATION PRESSURES IN PASCALS (pa)																					
	Flow(cfm)	T1	T2	T3	T4	T5	T6	T7	T8	T9	T10	T11	T12	T13	T14	T15	ET1	ET2	ET3	ET4	ET5
S1	41	-0.9			-0.7	-0.3															
S2	86	-1.9	-1.4		-0.5	-2.3															
S3	62			-0.5		-0.9	-1.9														
S4	77				-4.8			-7.4													
S5	43				-0.7	-0.5		-0.5	-0.7												
S6	53						-0.7		-0.5												
S7	69									-0.5	-0.8										
S8	67											-0.5									
S9	110														-21	2.3					
S10	131														-0.8	2.3	-65	-0.5		-0.4	-42

Sub-Slab Communication Test – Syracuse Label Co. – Syracuse, NY

Radon Home Services, Inc. – Test Date: 12/09

Proposed System Location



We propose to install a standard sub-slab vapor mitigation system using the general locations of the suction points from the communication test. The existing system in the southeastern section of the building would be untouched, as it appears to have some limited functionality. However, with the addition of a new penetration, full coverage of that room will be achieved. Main trunk lines will be 4 inch PVC, with all drops utilizing 3 inch PVC.

Summary

- Existing system does have limited communication, however, optimum communication would best be achieved by closing off all stop-cocks in existing system and adding a single penetration connected to new system.
- Proposed system would cover mitigation for approximately 32,000 square feet of space.
- Exact location of fan would need to be discussed if we were to move forward with proposed system.
- Cost for proposed system would be: $43,000.00

Appendix J

Site-Specific Health and
Safety Plan (SHSP)

110 LUTHER AVENUE BCP SITE HEALTH AND SAFETY PLAN

I. SITE DESCRIPTION

Date ..... Date: May 2, 2011 Revised:
Location ..... 110 Luther Ave
Liverpool, New York
Hazards ..... Volatile organic compounds in groundwater. EHC® used in injection.
Area Affected ..... Groundwater
Surrounding Population ..... Mixed commercial and industrial
Topography ..... Flat at site, with flat to moderate slopes surrounding
Weather Conditions ..... Usually partly sunny to overcast, south winds

II. ENTRY OBJECTIVES: The objective of site entry is to treat groundwater contamination using in-situ chemical reduction, and to collect groundwater samples.

III. ON-SITE ORGANIZATION AND COORDINATION. The following SWRNA personnel are designated to carry out the stated job functions on site. (Note: One person may carry out more than one job function.)

Project Manager:	Donald Sorbello or designee	(315) 422-4949
Field Team Leader:	Ian McNamara or designee	(315) 422-4949
Field Sampling Team Member	Ian McNamara or designee	(315) 422-4949
Project Safety Officer	Donald Sorbello or designee	(315) 422-4949

IV. ON-SITE CONTROL. Syracuse Label or its designated agent will coordinate access control and security for the work area for each day of on site work. No unauthorized personnel should be within the established work area. EHC® will be secured at a location within the Syracuse Label building under the control of Syracuse Label. All contractors will be responsible to assure appropriate health and safety plans are available and have been reviewed with their workers and subcontractors.

V. HAZARD EVALUATION.

A. Chemical Hazards. It is anticipated that a number of different chemical contaminants may be encountered during site activities. Previous investigations conducted at the Site have determined the Contaminants of Concern (COCs) to be tetrachloroethene (PCE), trichloroethene (TCE), cis and trans-1,2-dichloroethene (DCE), and vinyl chloride (VC). The locations with the highest concentration of these contaminants are monitoring wells MW-11 and MW-7.

Exposure to EHC® that might occur while handling during completion of the full scale injection is another potential hazard at the site. The exposure risks and mitigative measures are included in the attached material safety data sheet (MSDS).

The primary hazards of each known or suspected chemical contaminant are identified below. The main potential exposure route is associated primarily with direct skin contact and inhalation.

SUBSTANCE	PRIMARY HAZARDS
Volatile Organics	
Tetrachloroethene	Irrit eyes, nore, throat, nausea, dizziness, vomiting
Trichloroethene	Eye & skin irritation, nausea, vomiting, headache
1,2 Dichloroethene	Eye irrit, respiratory irrit, central nervous system
Vinyl chloride	Eye irrit, soar throat, dizziness, headache, nausea

B. Physical Hazards. Physical hazards for this project relate to mechanical exposure associated with working around heavy equipment and vehicles, noise exposure, and heat or cold stress. Basic safety guidelines for the above noted main physical hazards are included below.

1. **Drilling.** Site activities will involve advancing soil borings into the subsurface beneath and outside of the building slab. The estimated location of all underground utilities must be determined before drilling begins. Necessary clearances must be observed. Appropriate engineering controls will be implemented during drilling to protect site workers and the public.

2. **Utility Clearances.** Prior to any intrusive activities (e.g. drilling, excavating, probing) New York State Dig Safe shall be contacted to mark underground lines before any work is started. Personnel directly involved in intrusive work shall determine the minimum distance from marked utilities which work can be conducted with the assistance of the locator line service. For those utilities that may be located beneath the building slab, those performing intrusive work will obtain clearance for work areas with Syracuse Label.

3. **Heavy Lifting Method.** Personnel conducting work that may require lifting of heavy objects should use the following proper lifting techniques:

    - Feet must be parted, with one foot alongside the object being lifted and one foot behind. When the feet are comfortably spread a more stable lift can occur and the rear foot is in a better position for the upward thrust of the lift.
    - Use the squat position and keep the back straight. A straight back means the spine, back muscles, and organs of the body in correct alignment.
    - To grip the item being lifted, the fingers and the hand are extended around the object being lifted, using the full palm. Fingers have very little power – use the strength of the entire hand.
    - The load must be drawn close, and the arms and elbows must be tucked into the side of the body. Holding the arms away from

the body increases the strain on the arms and elbows. Keeping the arms tucked in helps keep the body weight centered.

- The body must be positioned so that the weight of the body is centered over the feet. This provides a more powerful line of thrust and also ensures better balance. Start the lift with a thrust of the rear foot. Do not twist.

4. **Slip/Trip/Hit/Fall.** These injuries are the most frequent of all injuries to workers. They occur for a wide variety of reasons, but can be minimized by the following practices:

    - Spot-check the work area to identify hazards;
    - Establish and utilize pathways that are most free of slip and trip hazards. Avoid pathways that are more hazardous;
    - Beware of trip hazards such as wet floors, slippery floors, and uneven terrain;
    - Carry only loads you can see over;
    - Keep work areas clean and free of clutter, especially in storage areas and walkways;
    - Communicate observed hazards to site personnel.

5. **Heat Stress.** All field personnel engaged in site work shall have completed training to recognize and avoid heat related illness. Proper training and preventive measures will aid in averting loss of worker productivity and serious illness. Heat stress prevention is particularly important because once a person suffers from heat stroke or heat exhaustion, that person may be predisposed to additional heat-related illness. To avoid heat stress, the following steps may be taken:

    - Adjust work schedules.
        Modify work/rest schedules according to monitoring requirements.
        Mandate work slowdowns as needed.
        Perform work during cooler hours of the day if possible or at night if adequate lighting can be provided.
    - Provide shelter (air conditioned, if possible) or shaded areas to protect personnel during rest periods.
    - Maintain worker's body fluids at normal levels. This is necessary to ensure that the cardiovascular system functions adequately. Daily fluid intake must approximately equal the amount of water lost in sweat, i.e., eight fluid ounces (0.23 liters) of water must be ingested for approximately every eight ounces (0.23 kg) of weight lost. The normal thirst mechanism is not sensitive enough to

ensure that enough water will be drunk to replace lost sweat. When heavy sweating occurs, encourage the worker to drink more.

- Members of each Work Crew shall be properly trained by each Crew's respective employer to recognize the symptoms of heat-related illnesses.

6. **Adverse Weather Conditions.** The Field Leader for each Work Crew will be responsible for deciding on the continuation or discontinuation of work for his/her Crew based on current and pending weather conditions. Electrical storms, tornado warnings, and strong winds are examples of conditions that would call for the discontinuation of work and evacuation of the site. Site operations should not be permitted during an electrical storm.

7. **Vehicle Traffic.** As the scope of work includes the transport and disposal of material, there is a potential to encounter a temporarily high volume of vehicular traffic. Project Work Crews that have the potential to be exposed to vehicle traffic should wear a high visibility safety vest. The excavation and or drilling contractor Work Crew will provide proper signage, flagging, and barricades to maintain a safe flow of traffic.

POTENTIAL HAZARD	PREVENTATIVE MEASURES
Slip/Trip/Falls	Use three points of contact to mount and dismount equipment. Continuously inspect work areas for slip, trip, & fall hazards. Be aware of surroundings. Practice good housekeeping.
Noise	Wear appropriate hearing protection.
Pinch Points	Keep hands, feet, & clothing away from moving parts/devices.
Utilities	Maintain proper utility clearances. All utilities should be properly located and marked out prior to start of work.
Heavy Lifting	Follow safe lifting practices. Lift items within your capabilities and assigned project role. Ask for assistance if necessary.
Proximity to Heavy Equipment and Vehicles	Maintain adequate distance from trucks/equipment. Obey barriers and/or signage
Heat/Cold Stress	Dress appropriately and follow HASP guidelines
Dangerous Weather Conditions	Consult local weather reports daily, watch for signs of severe weather, etc. Suspend or reduce work during severe weather.
Chemical hazards	Use PID as indicated in HASP. Wear specified PPE. No smoking.

POTENTIAL HAZARD	PREVENTATIVE MEASURES
Biological Hazards – Insects, Snakes, Poison Plants, etc.	Wear appropriate PPE and keep necessary first aid supplies readily available. Use insect repellant and snake chaps as needed. Learn to identify poisonous plants.

C. Biological Hazards. Biological hazards may include contact with biting insects, reptiles, and poisonous plants.

1. Tick-Borne Diseases. Lyme disease is caused by a bacterial parasite called spirochete, and is spread by infected ticks that live in and near wooded areas, tall grass, and brush. Once the tick deposits the spirochete, it must feed on the host blood for 12 to 24 hours before it can transmit the disease. The ticks that cause the disease in the Northeast and Midwest are often no bigger than a poppy seed or a comma in a newsprint. The peak months for human infection are June through October. There are many other tick borne diseases such as Rocky Mountain spotted fever, which can be carried by a variety of ticks. The prevention and treatment of these diseases are similar to those of Lyme disease.

Ticks hang on blades of grass or shrub waiting for a host to come by. When a host brushes against the vegetation, the tick grabs on. They usually first climb onto a persons legs and then crawl up looking for a place to attach. Preventative measures include wearing light-colored clothing, keeping clothing buttoned, tucking pant legs in socks, and keeping shirt tails tucked in. Periodic checks for ticks should be made during the day, and especially at night. Hair should also be checked by parting it and combing through it to make sure that no ticks have attached to the scalp. Also, check clothing when it is first removed, before ticks have a chance to crawl off.

The most common repellent recommended for ticks is n,n-dimethyl-m-toluamide, or DEET. It is important to follow the manufacturer's instructions found on the container. for use with all insecticides especially those containing DEET.

In general, DEET insect repellent should only be applied to clothing, not directly on the skin. Do not apply to sunburns, cuts or abrasions. Use soap and water to remove DEET once indoors.

The best way to remove a tick is removal by tweezers. If tweezers are not available, cover your fingers (tissue paper) while grasping the tick. It is important to grasp the tick as close as possible to the Site of attachment and use a firm steady pull to remove it. When removing the tick, be certain to remove all the mouth parts from your skin so as not to cause irritation or infection. Wash hands immediately after with soap and water, and apply antiseptic to the area where tick was removed.

A variety of tests exist for determining Lyme Disease infection. However, most of these tests are not exact. The first symptoms of Lyme Disease usually appear from 2

days to a few weeks after a person is bitten by an infected tick. Symptoms usually consist of a ring-like red rash on the skin where the tick attached. The rash is often bull's eye-like with red on the outside and clear in the center. The rash may be warm, itchy, tender, and/or "doughy." Unfortunately, this rash appears in only 60 to 80 percent of infected persons. An infected person also has flu-like symptoms of fever, fatigue, chills, headaches, a stiff neck, and muscle aches and pains (especially knees). Rashes may be found some distance away from original rash. These symptoms often disappear after a few weeks.

2. Mosquitos. Mosquitoes are known to carry diseases including encephalitis and West Nile virus, which can be passed on to humans through the bite of the mosquito. Mosquito bites can also cause itching and swelling. Prevention of mosquito bites is recommended to avoid these diseases. When possible, avoid activity near stagnant water bodies or in deep woods. Mosquitoes are most active later in the day. The most common repellent recommended for mosquitoes is n,n-dimethyl-m-toluamide, or DEET. It is important to follow the manufacturer's instructions found on the container for use with all insecticides especially those containing DEET.

In general, DEET insect repellent should only be applied to clothing, not directly on the skin. Do not apply to sunburns, cuts or abrasions. Use soap and water to remove DEET once indoors.

3. Bees and Wasps. The insects most likely to cause strong allergic reactions are wasps, honeybees, hornets, and yellow jackets. Although they differ in appearance and reside in different habitats, all stinging insects have one thing in common -- when upset, they will attack.

Yellow Jackets and honeybees make their nests in the ground, in old tree stumps, or in walls. Wasps nest in trees, in bushes, under the house, or on buildings. Hornets construct a gray or brown paper football shaped nest in trees and shrubs, 5 to 10 feet above the ground. All of the above may also be found in above ground protective well casings.

Insect sting reactions can be classified into three types -- a normal reaction, a toxic reaction, and an allergic reaction. A normal reaction usually lasts only a few hours.

If you have had an allergic reaction to an insect sting before, an allergist should be consulted. There is a treatment, venom immunotherapy, which is 97 percent effective in preventing future allergic reactions to insect stings.

If stung by a honeybee, the only bee to leave its stinger, instant removal of the stinger and sac usually reduces harmful effects. To remove the stinger, never try to use the thumb and forefinger or tweezers to pinch it out, instead with a fingernail

or flat object, scrape it away with one quick scrape in a sideways movement. This method prevents more venom from being injected into the wound.

Other helpful tips would be to take a rapid acting antihistamine to reduce itching; apply ice or cold compresses to the area to reduce swelling; and rest, because physical activity hastens the absorption of the venom.

People with severe allergic reactions should be given a dose of epinephrine immediately following the insect sting. They should also be taken to the hospital for further evaluation. Severe or even life threatening reactions to insect stings, if treated properly usually clear up in one or two hours after treatment.

4. Poisonous Plants. Common Poison Ivy (Rhus radicans) grows as a small plant, a vine, and a shrub. Poison Ivy occurs in every state. The leaves always consist of three glossy leaflets. Poison Sumac (Rhus vernix) grows as a woody shrub or small tree 5 to 25 feet tall. It usually contains nine leaves, with eight paired leaves and one on top, and is common in swampy areas. The plants are potent sensitizes and can cause a mild to severe allergic reaction. This reaction is called contact dermatitis.

Dermatitis, in Rhus-sensitive persons, can result from contact with the milky sap found in the roots, stems, leaves, and fruit. The sap may retain its potency for months or years in a dry atmosphere, and can occur during any time of the year. The sap may also be carried by animals, equipment, or apparel.

VI. PERSONAL PROTECTIVE EQUIPMENT.

Based on evaluation of potential hazards, the following levels of personal protection have been designated for the applicable work areas or tasks:

LOCATION	JOB FUNCTION	LEVEL OF PROTECTION
Work zone	Site investigation	A B C (D) Other

Specific protective equipment for each level of protection is as follows:

Level A	Fully-encapsulating suit SCBA (disposable coveralls)
Level B	Splash gear (saranax-coated Tyvek suit) SCBA or airline respirators
Level C	Splash gear (Tyvek suit) Half-face canister respirator Safety glasses Boots Gloves Hard hat

Level D	**Work boots** **Gloves (latex)** **Hard hat**

Action Levels. Action levels shall be determined by monitoring of work zone breathing space with a portable photoionization detector (PID) or comparable instrument. Measurement of a sustained concentration above ambient (background) conditions shall initiate action. The following criteria shall be used to determine appropriate action:

VOLATILE ORGANICS IN BREATHING ZONE (SUSTAINED AND ABOVE BACKGROUND)	LEVEL OF RESPIRATORY PROTECTION
0-5 ppm	Level D
5-200 ppm	Level C
200-1000 ppm	Level B - air line
1000+ ppm	Level B - SCBA

% LOWER EXPLOSIVE LIMIT (LEL)	ACTION
Above 10	Discontinue work and take remedial action

NO CHANGE TO THE SPECIFIED LEVELS OF PROTECTION SHALL BE MADE WITHOUT THE APPROVAL OF THE SITE SAFETY OFFICER AND THE PROJECT TEAM LEADER.

If the above criteria indicate the need to increase from Level D to a higher level of personal protection, work will be immediately suspended in that particular site area until the required personal protective equipment is made available, or until Level D conditions return.

VII. ON-SITE WORK PLANS. The following personnel or designated alternate(s) will perform the field investigation.

Field Team Leader: ..... Ian McNamara or designee
Work Party ..... Ian McNamara, and designee as needed to support field effort

The work party was briefed on the contents of this plan prior to commencement of work.

VIII. COMMUNICATION PROCEDURES. The Project Manager should remain in communication with the Field Team Leader. A cellular phone will be used in the field.

Continuous horn blast is the emergency signal to indicate that all personnel should leave the Work Zone.

In the event that radio communications are used, the following standard hand signals will be used in case of failure of radio communications:

Hand gripping throat	Out of air; can't breathe
Grip partner's wrist or both hands around waist	Leave area immediately
Hands on top of head	Need assistance
Thumbs up	OK; I am all right; I understand
Thumbs down	No; negative

IX. SITE HEALTH AND SAFETY PLAN.

A. The designated Site Safety Officer will have responsibility for safety recommendations on site. The Field Team Leader will be responsible for carrying out the Site Health and Safety Plan, and for enforcing it on all SWRNA employees engaged in site work.

B. Emergency Medical Care. The Saint Joesephs Hospital is located at 31 Prospect Avenue, in Syracuse, NY, approximately 6 miles from the site. A map of the route to this facility is available at the field vehicle (attached).

1. Head Northeast on Luther Ave Towards 7th North Street for 0.1 miles
2. Turn Left onto 7th North Street
3. Continue on 7th North Steet for approximately 400 feet and turn right onto I-81 South.
4. Stay on I-81 South for approximately 3 miles
5. From I-81 South Take Exit 19 For Salina Street
6. Take right onto North Salina
7. Take Left Onto Willow Street
8. Turn Left onto North Townsend Street
9. Turn Left onto Union Avenue. Hospital is on The Right Side.

First aid equipment is available on site at the following locations:

First aid kit Field vehicle

List of emergency phone numbers:

AGENCY/FACILITY	PHONE NUMBER
Syracuse Label Facility	(315) 422-1037
Police – Palmyra Police Dept	911
Fire – Palmyra Fire Dept	911
Ambulance	911
Saint Joesephs Hospital	315-448-5101

C. Environmental Monitoring. The following environmental monitoring instruments shall be used on site at the specified intervals:

- MiniRAE photoionization detector (PID). Continuous during installation of soil borings and soil gas monitoring probes.
- Dust (particulate) monitor. Continuous during installation of soil borings per Community Air Monitoring Plan (CAMP)

D. **Emergency Procedures.** The following standard procedures will be used by on-site personnel. The Site Safety Officer shall be notified of any on-site emergencies and be responsible for ensuring that the appropriate procedures are followed:

1. **Personnel Injury in the Work Zone.** Upon notification of an injury in the Work Zone, the designated emergency signal, a continuous horn blast, shall be sounded. A rescue team will enter the Work Zone (if required) to remove the injured person to safety. Appropriate first aid shall be initiated and contact should be made for an ambulance and with the designated medical facility (if required). No persons shall re-enter the Work Zone until the cause of the injury or symptoms is determined.

2. **Fire/Explosion.** Upon notification of a fire or explosion on site, the designated emergency signal, a continuous horn blast, shall be sounded and all site personnel assembled at the decontamination line. The fire department shall be alerted and all personnel moved to a safe distance from the involved area.

3. **Personal Protective Equipment Failure.** If any site worker experiences a failure or alteration of protective equipment that affects the protection factor, that person and his/her buddy shall immediately leave the Work Zone. Re-entry shall not be permitted until the equipment has been repaired or replaced.

4. **Other Equipment Failure.** If any other equipment on site fails to operate properly, the Project Team Leader and Site Safety Officer shall be notified and then determine the effect of this failure on continuing operations on site. If the failure affects the safety of personnel or prevents completion of the Work Plan tasks, all personnel shall leave the Work Zone until the situation is evaluated and appropriate actions taken.

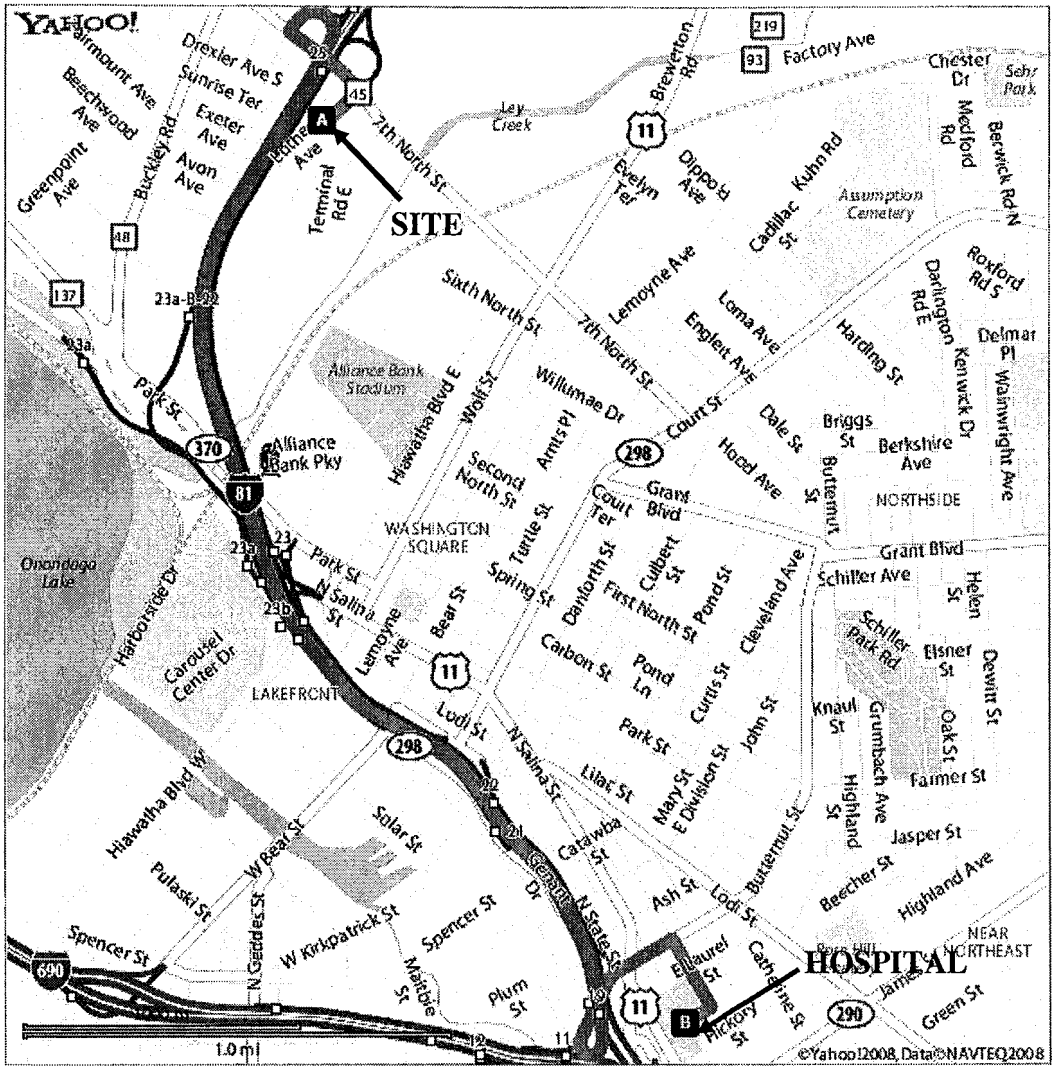
In all situations, when an on-site emergency results in evacuation of the Work Zone, personnel shall not re-enter until:

a. The conditions resulting in the emergency have been corrected.
b. The hazards have been reassessed.
c. The Site Health and Safety Plan has been reviewed.
d. Site personnel have been briefed on any changes in the Site Health and Safety Plan.

E. **Personal Monitoring.** The following personal monitoring will be in effect on site:

Personal exposure sampling: MiniRAE PID screening, sampling pumps/tubes , or organic vapor monitors.

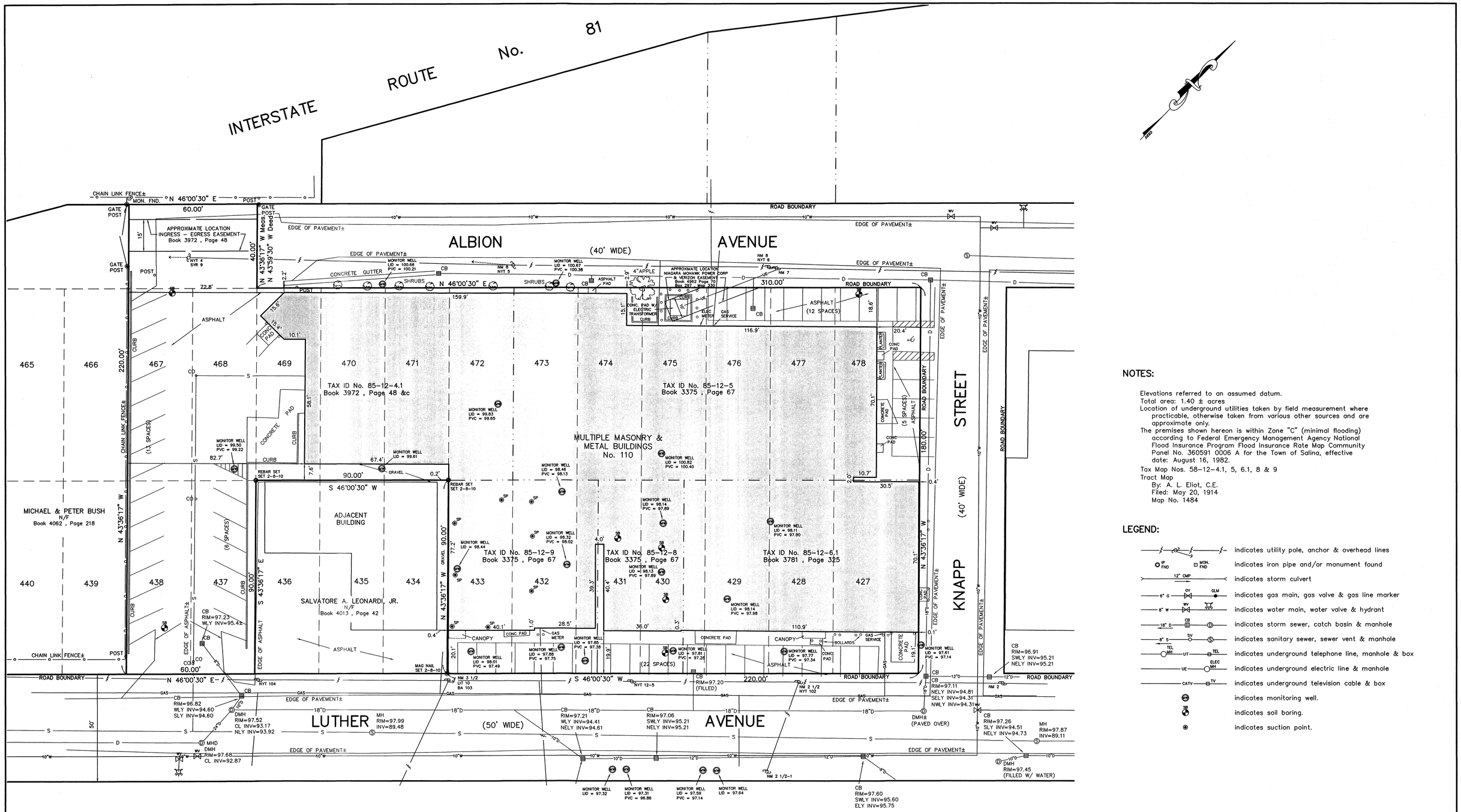
Medical monitoring: The expected air temperature will be less than 70EF. If it is determined that heat stress monitoring is required (mandatory if over 70EF), the following procedures shall be followed: Monitoring body temperature, body weight, pulse weight.


YAHOO!
SITE
HOSPITAL
A
B
7th North St
Sixth North St
Second North St
Park St
Alliance Bank Pky
Alliance Bank Stadium
WASHINGTON SQUARE
LAKEFRONT
NORTHSIDE
NEAR NORTHEAST
Onondaga Lake
Harborside Dr
Carousel Center Dr
Hiawatha Blvd W
Hiawatha Blvd E
Solar St
W Bear St
Pulaski St
Spencer St
W Kirkpatrick St
N Geddes St
Plum St
Marble St
Lodi St
N Salina St
Lemoyne Ave
Bear St
Spring St
Turtle St
Danforth St
First North St
Culbert St
Pond St
Carbon St
Pond Ln
Curtis St
John St
Park St
Lilac St
Mary St
E Division St
Catawba St
Ash St
Buttermut St
Cleveland Ave
Schiller Ave
Schiller Park Rd
Elsner St
Dewitt St
Helen St
Knaul St
Grumbach Ave
Oak St
Farmer St
Highland St
Jasper St
Beecher St
Highland Ave
Grant Blvd
Grant Ave
Court St
Court Ter
Willumae Dr
Wolf St
Amts Pl
Dale St
Briggs St
Berkshire Ave
Hazel Ave
Buttermut St
Wainwright Ave
Delmar Pl
Kenwick Dr
Darlington Rd E
Roxford Rd S
Harding St
Englert Ave
Loma Ave
Lemoyne Ave
Cadillac St
Kuhn Rd
Dipple Ave
Evelyn Ter
Assumption Cemetery
Medford Rd
Berwick Rd N
Chester Dr
Sehr Park
Factory Ave
Brewerton Rd
Ley Creek
Terminal Rd E
Luther Ave
Exeter Ave
Avon Ave
Buckley Rd
Greenpoint Ave
Beechwood Ave
Fairmount Ave
Drexler Ave S
Sunrise Ter
Catherine St
Jamesville
Green St
Hickory St
Ellwanger St
N State St
Gertrude St
Cedar St
Maple St
Prospect Ave
Union Ave
Townsend St
Irving Ave
Euclid Ave
Harvard Pl
Stadium Pl
Adams St
Comstock Ave
Westcott St
Waverly Ave
Ostrom Ave
Midland Ave
Burnet Ave
Teall Ave
Lancaster Ave
Wyoming Ave
Kensington Rd
Cornell Rd
Ainsley Dr
Fay Rd
Fairfield Rd
Lyndon Rd
Lyncrest Rd
Lyncrest Dr
Lyncrest Pl
Lyncrest Ln
Lyncrest Cir
Lyncrest Ct

ATTACHMENTS

Attachment A

Site Survey



NOTES:

Elevations referred to an assumed datum.
Total area: 1.40 ± acres
Location of underground utilities taken by field measurement where practicable, otherwise taken from various other sources and are approximate only.
The premises shown hereon is within Zone "C" (minimal flooding) according to Federal Emergency Management Agency National Flood Insurance Program Flood Insurance Rate Map Community Panel No. 360591 0006 A for the Town of Salina, effective date: August 16, 1982.
Tax Map Nos. 58-12-4.1, 5, 6.1, 8 & 9
Tract Map
By: A. L. Eliot, C.E.
Filed: May 20, 1914
Map No. 1484

LEGEND:

- indicates utility pole, anchor & overhead lines
- indicates iron pipe and/or monument found
- indicates storm culvert
- indicates gas main, gas valve & gas line marker
- indicates water main, water valve & hydrant
- indicates storm sewer, catch basin & manhole
- indicates sanitary sewer, sewer vent & manhole
- indicates underground telephone line, manhole & box
- indicates underground electric line & manhole
- indicates underground television cable & box
- indicates monitoring well.
- indicates soil boring.
- indicates suction point.

GRAPHIC SCALE

20 0 10 20 40 60

(IN FEET)
1 inch = 20 ft.

Reference: Abstract of Title by Salina Abstract and Title Agency, Inc., Title No. 65147-T, Dated October 22, 2007.

Unauthorized alteration or addition to a survey map bearing a licensed land surveyor's seal is a violation of section 7209, sub-division 2, of the New York State Education Law.

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REVISIONS
NOVEMBER 12, 2010

MONITORING WELL LOCATIONS
SYRACUSE LABEL Co., Inc.
LOT Nos. 427 THROUGH 433, 437, 437 & 467 THROUGH 478
BUCKLEY GARDENS
PART OF FARM LOT Nos. 133, 134 & 135
TOWN OF SALINA
ONONDAGA COUNTY, NEW YORK

STATE OF NEW YORK * HAL R. ROMANZI * LICENSED LAND SURVEYOR NO. 049290

IANUZI & ROMANS LAND SURVEYING, P.C.
LIVERPOOL & SYRACUSE, NEW YORK
(315) 457-7200

DATE: MARCH 11, 2010
SCALE: 1" = 20'
FILE NO.: 3405.001
SHEET NO.
F.B. NO. 1390