

# Sustainable Development, Inc.

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September 24, 2012

Mr. Randy Whitcher  
New York State Department of Environmental Conservation  
Division of Environmental Remediation  
625 Broadway, 11<sup>th</sup> Floor  
Albany, New York 12233-7014

RE: Brownfield Cleanup Program  
Soil Vapor Intrusion - Operation, Maintenance & Monitoring Report Submittal  
NYSDEC Site No: C203053  
295 Locust Avenue, Bronx, New York

Dear Mr. Whitcher:

Sustainable Development, Inc. (SDI), on behalf of 295 Locust Avenue LLC, is pleased to provide the New York State Department of Environmental Conservation (NYSDEC) with the attached "*Soil Vapor Intrusion – Operation, Maintenance & Monitoring Report.*" As you know, a soil vapor intrusion (SVI) mitigation system was installed at the subject site, per NYSDEC approval, as an interim remedial measure. A Soil Vapor Intrusion – Operation, Maintenance & Monitoring (SVI OM&M) plan was developed at the request of the NYSDEC and New York State Department of Health (NYSDOH) to identify the activities necessary to confirm effectiveness of the SVI mitigation system and to ensure that the system is operated consistent with the design intent and regulatory obligations. This plan was approved by the NYSDEC in your letter dated July 19, 2012.

Briefly, the results of SDI's August 2012 sampling event indicated that, based on our review of both sub-slab and indoor air quality data, as well as the field screening parameters indicating excellent vacuum influence throughout all areas tested, it is apparent that the SVI mitigation system is having a beneficial effect in reducing sub-slab concentrations at the site and is protecting occupants from vapor intrusion.

Also as required by the NYSDEC, an electronic copy (sans attachments due to document size) of this report is being provided to you via email ([rjwhitch@gw.dec.state.ny.us](mailto:rjwhitch@gw.dec.state.ny.us)), as well as to Mr. Christopher Doroski ([cmd16@health.state.ny.us](mailto:cmd16@health.state.ny.us)) of the NYSDOH. A complete electronic copy of this document is included on the attached CD. Lastly, a copy of this submittal letter only is also being provided via email to Mr. John Nehila, Esq. ([jxnehila@gw.dec.state.ny.us](mailto:jxnehila@gw.dec.state.ny.us)) of the NYSDEC's Office of General Counsel.

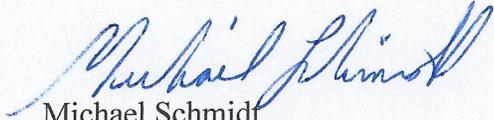
## Sustainable Development, Inc.

166 Woodside Avenue, Harrison, New York 10604 Tel: (914) 220-2404

Please do not hesitate to call me at 914.261.0314 or Al Nesheiwat at 914.220.2404 with any questions.

Sincerely,

SUSTAINABLE DEVELOPMENT, INC.



Michael Schmidt  
Project Hydrogeologist

Cc: Christopher Doroski, NYSDOH (via email)  
John Nehila, Esq., NYSDEC (w/o attachment; via email)  
Joseph Kelleher, 295 Locust Avenue LLC (via email)  
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**SOIL VAPOR INTRUSION MITIGATION SYSTEM:  
START-UP, OPERATION, MAINTENANCE AND  
MONITORING REPORT**

**295 LOCUST AVENUE  
TAX MAP PARCEL No 2-2598-46  
NYSDEC SITE No. C203053  
BRONX, NEW YORK**



*Prepared for:*

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September 21, 2012



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## **SOIL VAPOR INTRUSION MITIGATION SYSTEM: START-UP REPORT**

**295 LOCUST AVENUE  
TAX MAP PARCEL No 2-2598-46  
NYSDEC SITE No. C203053  
BRONX, NEW YORK**

### **1.0 INTRODUCTION AND BACKGROUND INFORMATION**

The subject property is located at 295 Locust Avenue, between East 139th Street and East 140th Street, in Bronx, New York. On or about May 23, 2012, the 295 Locust Avenue site was accepted into the New York State Department of Environmental Conservation (NYSDEC) Brownfield Cleanup Program (BCP) as Site No. C203053-05-12. The applicant, 295 Locust Associates, LLC, is participating in the BCP as a Volunteer as defined in Environmental Conservation Law (ECL) 27-1405(1)(b).

Under the BCP, the Volunteer has agreed to undertake certain environmental actions, including the installation of Soil Vapor Intrusion (SVI) mitigation system and the Operation, Maintenance and Monitoring (OM&M) of the system to ensure that it is meeting the objective of protecting site occupants and guests from sub-slab vapors that could potentially enter structures on the Subject Property. The SVI mitigation system was installed in May 2012 after receiving NYSDEC design acceptance and began operating in accordance with the SVI Mitigation Operation, Maintenance & Monitoring Plan (OM&M Plan) approved by NYSDEC and NYSDOH in July 2012. This Start-up, OM&M Report documents the operational performance of the system since start-up to demonstrate effectiveness at mitigating concerns related to soil vapor intrusion at the site.

#### **1.1 Site Location and Description**

The Property is located in an industrial area of the Port Morris section of the Bronx and designated as Block 2598, Lot 46 on the Tax Map of the City of New York for the Borough and County of the Bronx. The Property is currently operated as a warehousing / distribution center and comprises a one-square city block portion of the former East 138th Street Works Site. **Figure 1** indicates the warehouse building that presently occupies the Subject Property as well as the key elements of the SVI mitigation system.

The Property presently consists of a multi-story warehouse building with a footprint of approximately 70,000 square feet (sf). Based upon record drawings of the warehouse building, it was constructed with a one-foot thick reinforced concrete structural slab supported by a system of pile caps and concrete grade beams. The floor of the warehouse building is situated approximately five feet above the grade of the adjacent



street. Ten loading docks leading to exterior rollup doors are present on the southeastern portion of the warehouse building along Locust Avenue. Another loading dock and rollup door opens to East 140th Street. Office space is located in a mezzanine area above the loading docks. The recently installed SVI system blowers and main valve manifolds are located in the mezzanine area. The exterior walls of the warehouse building are constructed of concrete and sheet metal.

The building contains storage racks and aisles configured to support automated operation of warehousing functions. The majority of the concrete slab along the perimeter of the building is underlain by a storm water detention system and sprinkler system recharge trough. The storm water detention system is a water-tight concrete trough that is generally three to four feet deep by six feet wide and collects storm water from the roof via drain pipes which run through the interior perimeter wall of the building. The storm water detention system is reportedly connected to the municipal sewer system at the northern and western corners of the building along Rose Feiss Boulevard (Roux, May 2009). The building's sprinkler system recharge is located along the southeastern portion of the building parallel to East 139th Street, and is constructed of two parallel and water-tight concrete troughs. Due to the presence of the stormwater and fire water system troughs, it is not possible to install any SVI extraction well points along the interior perimeter of the building. All SVI extraction well points were therefore installed along the central portions of the building in the vicinity of support columns that serve as a means of conveyance for SVI system piping.

Floor drains within the building also connect to the sanitary sewer. There is a small maintenance storage room in the southern portion of the warehouse. A dry cleaning facility (Modern Tech Dry Cleaners) is located at 874 East 139th Street across the street and to the south of the Property.

## **1.2 Site History**

The earliest noted development on the Property was two residences shown on the 1891 Sanborn fire insurance map. By 1908, a portion of the Property was developed with several MGP features including a 2,630,000 cubic foot (cf) gas holder, a water gas purifier house, an oxide storage area, a pit, and a scrubber house used as part of Central Union Gas Company's (a Con Edison predecessor). The East 138th Street Works was reportedly constructed between 1869 and 1879 and initially produced oven gas using the coal carbonization process. By the 1930s, it appears the MGP facility was decommissioned and above-ground structures were removed. Following decommissioning, the northern portion of the Subject Property was developed with a truck storage yard with refueling facilities, including a motor fueling station with storage tanks, until the 1990s. The southeastern portion of the Property contained three adjoining warehouse-style buildings occupied throughout the 1900s by a variety of facilities including: a motor freight facility, a lumber storage facility, an iron clamp



storage facility, a building supplies facility, a refrigerator warehouse, a woodworking facility, a metal storage facility, a tire storage facility, and a furniture manufacturing facility (GEI, 2003). Construction of the existing warehouse building at the Property began in 2000, with demolition of the previous buildings, and was completed in 2002.

### **1.3 Previous Investigations and Environmental Studies**

Several investigations have previously been conducted for the Subject Property and surrounding area including:

- *Design Summary Report, Soil Vapor Intrusion Mitigation System*, TechSolutions Engineering, P.C. (TechSolutions) for Sustainable Development, LLC, February 2012;
- *Indoor Air Sample Testing, December 2011*;
- *Remedial Investigation of the 295 Locust Avenue (Block 2598 / Lot 46) Portion of the East 138th Street Works Former MGP Site, Site # V00551, Bronx, New York*, URS Corporation (URS) for Consolidated Edison of New York, Inc. (Con Ed), August 2011;
- *Phase II Environmental Site Assessment: 295 Locust Avenue (Former Distribution Center) and 901-903 East 140th Street (Former Parking Lot) Bronx, New York*, Roux Associates, Inc. (Roux) for Locust East 140th L.P, June, 2009;
- *Phase I Environmental Site Assessment: 295 Locust Avenue (Former Distribution Center) and 901-903 East 140th Street (Former Parking Lot) Bronx, New York* Roux for Locust East 140th L.P., May, 2009;
- *Indoor Air Sampling Summary Letter Report – Murray Feiss Import Corp., Bronx, NY*, Environ International Corp. (Environ), April, 2004;
- *Environmental Review of Murray Feiss Import Corp., Bronx, NY*, Environ, March, 2004;
- *Manufactured Gas Plant History: East 138th Street Works and East 137th Street Station, Bronx, NY*, GEI Consultants, Inc. (GEI) for Con Ed, January, 2003; and,
- *Phase I Environmental Site Assessment (ESA) – Murray Feiss Distribution Center 275-295 Locust Avenue – Bronx, NY*, prepared by Environmental Planning & Management, Inc. (EPM), November 1998.

### **1.4 Previous Soil Vapor Investigation Results**

The following is a brief summary of historic soil vapor studies that have formed the basis for the installation of SVI mitigation measures at the site. Information regarding additional environmental studies completed historically is provided in the reports referenced in the previous section.



An Indoor Air Sampling Report prepared by Environ International Corporation, dated April 2004, indicated that two petroleum-related compounds exceeded the highest published background level in indoor air at the Property; However, these levels were below the Permissible Exposure Limits (PELs) established by the Occupational Safety and Health Administration (OSHA). Environ concluded the concentrations did not pose a concern to human health.

A subsequent Phase II Environmental Site Assessment (ESA) was completed by Roux in 2009. Four sub-slab vapor samples, four indoor air ambient samples, and one outdoor air sample were collected as part of the Roux investigation. Concentrations of VOCs were detected in all sub-slab vapor samples. Roux concluded that the indoor air VOC concentrations were significantly lower than the VOC concentrations in the sub-slab samples; therefore, the sub-slab VOC concentrations were not impacting indoor air quality.

The most comprehensive historical investigation was completed by URS. In August 2011, URS issued a Remedial Investigation (RI) Report that focused on the Subject Property. The RI Report summarized work completed historically by others and also included supplemental studies completed by URS in the spring and summer of 2011 for Con Edison who is reportedly the responsible party for the former MGP operations areas of the site. Soil vapor sample results obtained by URS indicated a mixture of MGP- and petroleum-related compounds, and chlorinated solvents. MGP-related compounds included benzene, trimethylbenzene isomers, indane, endene, naphthalene, and thiopene. Petroleum-related compounds included include: benzene, toluene, ethylbenzene, xylenes, cyclohexane, isopropylbenzene, isooctane, n-heptane, n-hexane, and MTBE. Chlorinated solvents include PCE and its degradation products (trichloroethene, cis-1,2-dichloroethene, 1,1-dichloroethene, vinyl chloride).

Soil vapor sample locations during the RI included the following:

- Sample SVMF-01 was collected from within former gas holder #4;
- Samples SVMF-02 and SVMF-03 were collected from just outside the gas holder;
- Sample SVMF-04 was collected within the former purifying house;
- Sample SVMF-05 was collected in the eastern portion of the site; and,
- Sample SVMF-06 was collected in the vicinity of the former MGP scrubber house.



As indicated in Figure 1, TechSolutions modified the existing URS vapor sample points to ensure that the screened intervals were properly positioned below surface structural elements to be better representative of actual subsurface vapor conditions<sup>1</sup>.

The ambient air sample contained relatively low concentrations of VOCs (total VOCs 53 µg/m<sup>3</sup>) including a mixture of compounds associated with both MGP and petroleum sites. The highest concentrations of VOCs were detected in sample SVMF-04 (total VOCs 1,897,931 µg/m<sup>3</sup>), which included high concentration of pentane and cyclohexane isomers, and PCE degradation products (*cis*- 1,2-dichloroethene and vinyl chloride). High concentrations of VOCs were detected in sample SVMF-06 (total VOCs 569,542 µg/m<sup>3</sup>), the majority of which was comprised of pentane isomers. Total VOC concentrations were similar in samples in SVMF-02 (total VOCs 221,541 µg/m<sup>3</sup>), and SVMF-03 (total VOCs 160,503 µg/m<sup>3</sup>), and included high concentrations of pentane isomers in addition to lower concentrations of PCE and its degradation products (TCE, VC, *cis*-1,2-dichloroethene). SVMF-01 had a similar total VOCs concentration (203,221 µg/m<sup>3</sup>); however, highest concentrations detected included PCE and its degradation products and relatively low levels of BTEX and MTBE (no pentane and/or hexane isomers detected). The lowest concentration of VOCs were detected in SVMF-05 (total VOCs 981 µg/m<sup>3</sup>) consisting of low levels of all VOCs.

RI sub-slab soil vapor analytical results were compared to guidance values presented in the Soil Vapor/Indoor Air Decision Matrices provided in the NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York, dated October, 2006 (NYSDOH SVI Guidance) with updates provided in 2008 to include additional VOCs to the Decision Matrices as follows:

- Air Matrix 1: trichloroethene, carbon tetrachloride, vinyl chloride
- Air Matrix 2: tetrachloroethene, 1,1,1-trichloroethene, 1,1-dichlorochloroethene, *cis*-1,2-dichloroethene.

The levels of chlorinated compounds detected in soil vapor samples during the RI were at levels above the NYSDOH SVI Guidance recommended action level to mitigate.

Based upon the levels noted by URS and as requested by NYSDEC and NYSDOH, a SVI mitigation system was installed under the Brownfield's Cleanup Program. This report documents the start-up of that SVI mitigation system.

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<sup>1</sup> The URS vapor probe screen locations of some points were located above the bottom elevation of grade beams and therefore were not representative of sub-slab conditions to monitor mitigation system performance with respect to soil vapor quality and vacuum readings.



## **2.0 SVI MITIGATION SYSTEM OVERVIEW**

The following is a overview of the installed SSDS mitigation system as installed. More detailed information is available in the design report and OM&M Work Plan submitted previously by TechSolutions.

Five (5) SVI mitigation extraction wells (SVI-1 through SVI-5) are installed in close proximity to centerline columns at approximately 50 foot intervals as indicated in **Figure 1** to create sub-slab depressurization. Details including screened intervals and piping to bring the wells to the surface at each location are indicated **Appendix A**. The SVI mitigation wells (SVI-1 through SVI-5) are screened from approximately 3 feet to 8 feet below grade surface (bgs) to ensure the full radius of influence could be realized without short-circuiting created by pile caps, grade beams or the elevated water table. The water table is present as shallow as 10 to 12 feet below grade surface (bgs) underlying the center of the building and only 4 to 5 feet bgs at the building exterior beyond the stormwater and fire water retention basins incorporated into the building design (see **Appendix A**).

The pre-existing vapor monitoring probe network was incorporated into the design of the SVI system. However, review of construction logs for the pre-existing vapor probe design completed by others indicated that the depth was not appropriate for proper SVI mitigation system monitoring (i.e., it did not extend below the grade beam depth). Therefore, the TechSolutions modified four (4) of the seven (7) existing vapor monitoring probes to extend the depth to below the grade beams. The locations of vapor monitoring probes are indicated in **Figure 1** and the screen and construction details are provided in **Appendix A**. The upgraded vapor monitoring probe locations were selected to ensure monitoring in the following areas:

- One (1) probe in an area that was anticipated to be under strong vacuum influence in close location to multiple SVI mitigations wells (SVFM-02);
- One (1) probe in an area along the periphery of the anticipated radius of influence of the SVI wells and within an area where elevated soil gas concentrations were noted by others (SVFM-06);
- One (1) probe along the suspected edge of the SSDS effective area where the anticipated radius of influence was anticipated to be minimal. This probe location will serve to define the effective vacuum influence area and as confirmation of protection of the loading dock areas along Locust Avenue (SVFM-05); and,
- One (1) probe located in an area anticipated to be outside / at the extreme periphery of the radius of influence to see if better than anticipated performance is occurring and to evaluate the protectiveness of the system in the corners of the building furthest from SVI mitigation wells. (SVFM-1).



As will be discussed in the later sections of this Start-up Report, all vapor monitoring locations, even those considered to be outside the periphery of the design radius of influence, indicated excellent vacuum response.

The piping leaving the SVI mitigation wells is 3" diameter steel and notched into the existing floor slab. The 3" steel from the extraction well points transitions to 4" steel piping as it emerges from sub-grade. A ball valve is provided at each SVI well location to allow flow and vacuum regulation so that the system can be optimized during operation as necessary. Each SVI mitigation well is directly piped back to a dedicated blower (i.e., one blower per SVI mitigation well) as indicated in **Appendix A**. This design allows great operational flexibility and ensures that in the event of one blower failure, the majority of the building will still be under the influence of the other blower systems to provide an added measure of protection to site occupants and to allow system maintenance as necessary without taking the entire system off-line.

Piping from each SVI well is continued up the center support columns until approximately 65 feet above the finished floor, where it is then run to the blower systems located along the mezzanine at the east side of the facility (see **Appendix A**). Chlorinated PVC (CPVC) piping was used for the piping runs to the blowers in lieu of PVC piping to meet Fire Marshal requirements. The five (5) Radonaway RP380 Blower systems (B-1 through B-5 corresponding to SVI-1 through SVI-5, respectively) were installed on the mezzanine along the Locust Avenue wall (see **Appendix A**). Each of the five blowers is powered by a 120VAC, 60Hz receptacle within several feet of the blower. The receptacles were installed in accordance with all New York City Codes.

After leaving the blower systems, a single, 8" discharge piping exits the exterior wall at Locust Avenue and then extend to the roof top. The discharge piping extends approximately five (5) feet above the roofline and was placed away from any fresh air intakes for the building. A rain cap was fitted on the discharge.



### **3.0 SYSTEM START-UP AND TESTING**

The SVI mitigation system was run for several months from the completion of installation in June 2012 as a precautionary measure while the BCP Agreement was finalized. However, formal start-up and testing was completed on August 21, 2012, following NYSDEC approval of the OM&M Work Plan. The following is a summary of the formal system start up and monitoring completed in August 2012.

#### **3.1 Site Reconnaissance & Chemical Inventory**

A site reconnaissance was completed on August 21, 2012 to identify chemicals used or stored at the facility as well as a cursory review of neighboring properties. The reconnaissance identified the following conditions that could impact evaluation of SVI performance data:

- The warehouse was vacant except for maintenance crews during the August 21, 2012, site visit. There were no chemicals stored or in use at the site during the collection of sub-slab or indoor air quality (IAQ) samples;
- Although there were no chemicals in use at the site, there were occasional strong petroleum odors noted in the facility when the loading dock doors along the east were opened. The petroleum odors were attributable to a fueling rack located immediately across Locust Avenue to the east. Loading dock doors were closed during IAQ sampling; however, the potential for impacts to results existed because the doors were open throughout the morning on the day of testing; and,
- The dry cleaning facility adjacent to the site to the south across East 139<sup>th</sup> Street was operating during the August OM&M visit. Given that the dry cleaner has been identified as the apparent source of the chlorinated VOCs underlying the subject property, the IAQ and / or sub-slab results closest to this dry cleaning facility could potentially be impacted by neighboring site operations.

#### **3.2 Mechanical System / Field Screening Data Collection & Analysis**

The SVI mitigation system was operational with all individual well valves wide open (i.e., unbalanced operation) at the time of TechSolutions' arrival on August 21, 2012. After meeting with NYSDEC representative Randy Whitcher and owner's representative Al Nesheiwat to review the OM&M event procedures and to inspect the system, collection of operational data was initiated. The following parameters were evaluated during the OM&M event:

- Vacuum readings at each vapor monitoring point, blower inlet, and in the ambient air;
- Velocity readings at individual blower inlets and at the system effluent;



- VOC screening using a calibrated PID at each vapor point and at the vacuum blower inlet<sup>2</sup>;
- Explosive gas (i.e., Lower Explosive Limit [LEL]) readings at each vapor monitoring location as well as at the inlet to each blower and at the effluent piping; and,

Operating vacuum (or pressures) were measured and recorded using an automated magnehelic gauge at each location. The magnehelic gauge utilized was capable of detecting vacuum and pressure readings as low as 0.01 inches water column (in w.c.). Velocity readings were collected by inserting a velocity probe into the main line sample ports (or an equivalent, small diameter hole that was drilled and sealed after sampling). Velocity readings were measured as ft/minute along the approximate centerline of the piping being monitored. Explosive gas readings were collected with a calibrated multi-gas meter and were recorded as a percentage of the LEL. A calibrated PID was used for collection of VOC screening data in the field. However, as most of the monitoring locations were under significant vacuum, it was difficult to obtain representative VOC screening data so PID readings, especially non-detectable readings, should be interpreted cautiously. The lack of reliable PID readings during OM&M is not considered significant however, because actual laboratory samples were collected and submitted for TO-15 analyses at all locations screened with the PID.

The results of field screening are summarized in **Table 1**.

As indicated in **Table 1**, a significant vacuum influence was noted in all vapor monitoring probes confirming that the SVI mitigation system is operating as intended. In fact, even vapor probes located along the periphery of the design radius of influence, more than 75 feet from the nearest SVI extraction well indicated exhibited at least 0.11 inches water column vacuum. Vacuum data indicated that the monitoring points closest to the mitigation / extraction wells was stronger as would be expected (vapor monitoring points SVMP-4 and SVMP-3 exhibited vacuum readings as high as 2.23 in. w.c. and 4.00 in. w.c., at least temporarily, respectively) with steady vacuum readings well above 0.29 in. w.c. noted. Vacuum readings closest to East 139<sup>th</sup> street (SVMP-1) were 0.35 in. w.c. again indicating a strong, relatively consistent vacuum across the southern portion of the property all the way to the building exterior. The vacuum reading at SVMP-6 nearest East 140th street to the north was 0.19 in. w.c. and the reading at SVMP-5 to the east near Locust Avenue (outside the originally anticipated ROI) was 0.11 in. w.c.. All vacuum readings at all locations greatly exceed the 0.01 in. w.c. criteria generally used to indicate sufficient vacuum for effective, sub-slab depressurization in comparison to ambient interior background levels of 0.00 in. w.c. vacuum.

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<sup>2</sup> It should be noted that the vacuum was too strong at many locations to pull representative samples for PID screening and non-detectable PID readings were obtained.



Velocity data also indicated strong system performance and excellent vapor recovery from each SVI mitigation well. The lowest velocity at the blowers was noted at Blower B-5 where a velocity of 255 ft/minute was indicated. Interestingly, this is the blower connected to the SVI mitigation well closest to the blower systems (i.e., the least system head losses due to friction) so it is likely that sub-surface geology / permeability is driving the system vacuum losses more than the SVI piping systems since all blower systems are identical and were run with the influent valves wide open. The highest velocity was noted at Blower B-2 with a velocity of 515 ft/min. It is very important to note that there is some variability and error in velocity readings collected dependent upon the exact location of the velocity probe within the flow stream in any circular conduit. Although the intent was to collect all readings at the exact centerline of the flow stream, variation in velocities measured may be in some part related to the velocity probe being slightly off center.

Given the historic use of the property as an MGP site, there was some concern regarding the possibility for explosive vapors being present. Historic studies had not noted explosive vapor levels, however, LEL readings were collected as a precautionary measure at all vapor monitoring locations. No LEL detections (i.e., 0 % LEL readings) were noted.

In general, all screening parameters indicated that the SVI mitigation was performing at, or exceeding, design criteria indicating that the sub-slab depressurization system was minimizing /preventing soil vapor intrusion based upon the screening data.

### **3.3 Soil Vapor and Indoor Air Quality Sampling & Analysis**

The following sections discuss the method of sub-slab and indoor air quality sampling and the results obtained.

#### **3.3.1 Sampling Procedures and QA/QC**

During initial start-up, both sub-slab and indoor air quality samples were collected and analyzed for VOCs of concern. Four (4) sub-slab vapor samples were collected from vapor probes SVMP-1, SVMP-2, SVMP-5, and SVMP-6 (*see Figure 1*). Co-located indoor air quality samples were collected at breathing elevations (3 to 5 feet above grade) from locations co-located with the sub-slab vapor point locations (within approximately 5 feet). In addition, an upwind, ambient air sample was also collected near the intersection of Locust Avenue and 140<sup>th</sup> Street. However, it should be noted that wind was variable and possible off-site facility impacts to the testing program were noted on the day of testing (see *Section 3.1*).

Prior to sampling, each vapor monitoring point was be purged of a minimum of three tube volumes of soil vapor. Confirmation of adequate purging was determined by



utilizing a photoionization detector (PID) to confirm the absence of volatile organic compounds above the PID detection limits. A one-liter<sup>3</sup>, laboratory-supplied vacuum Summa canister was connected to the Teflon tubing subsequent to the purging and the samples were collected over a two-hour period at a flow rate of 0.05 liters per minute (LPM), which is less than the maximum flow rate of 0.2 LPM as established in the NYSDOH Guidance Document.

The four (4) indoor air quality samples, and one (1) outdoor air/ambient sample was collected utilizing one-liter, laboratory-supplied Summa canisters set at approximately 3 to 5 feet above the finished floor over a two-hour period, concurrent with the indoor sub-slab sampling. The samples were collected to establish indoor air concentrations and background conditions at the site. The sample elevation was selected in order to represent the air quality within the typical breathing zone (between three-and-five-feet above grade, as required in the NYSDOH Guidance Document).

As a quality assurance/quality control (QA/QC) measure, helium was introduced into a closed/sealed space surrounding the sampling tube as a tracer gas to confirm the integrity of the probe seals and to ensure that no outdoor air intrusion impacted the soil vapor sample (e.g., no “short circuiting” occurred). The closed/sealed space around the sampling tube was formed utilizing an inverted container placed atop of the ground at the point where sampling tubing exits the subsurface. Teflon sampling tubing was run through an air-tight fitting installed on the top of the container and polyethylene tubing was run from the helium supply through another air-tight fitting on the side of the container. During initial testing setup at SVMP-5, helium readings were noted indicating a possible concern. The helium tracer setup was inspected and it was determined that one of the fittings was loose allowing helium to escape to the exterior of the inverted container near the helium monitor. The fitting was tightened and subsequent re-testing prior to the collection of vapor samples confirmed the absence of helium and the integrity of the soil vapor probe installation. No other concerns were noted during the helium QA/QC testing.

The pertinent data related to sample collection are summarized in **Table 2a**.

### **3.3.2 Sub-Slab and IAQ Sample Results**

All soil vapor and air samples were analyzed by a NYSDOH Environmental Laboratory Accreditation Program (ELAP) - certified laboratory (with appropriate chain-of-custody) for NYSDOH-specified VOCs by EPA Method TO-15. The results of the analyses are summarized in **Table 2b**. Complete analytical reports are provided in **Appendix B**.

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<sup>3</sup> A one-liter canister was used instead of the 6 liter canister outlined in the OM&M work plan. The use of a one liter canister is approved by NYSDOH and was approved by NYSDEC in the field. This change in no way impacted sample collection or results.



Analytical data for Carbon Tetrachloride (CCL4), Trichloroethene (TCE) and Vinyl Chloride (VC) were compared to the NYSDOH Soil Vapor / Indoor Air Matrix 1 and the United States Environmental Protection Agency (USEPA) Building Assessment and Survey Evaluation (BASE) database concentrations to evaluate effectiveness of the SVI mitigation system and protection of site occupants. Analytical data for Tetrachloroethene (PCE), 1,1,1-Trichloroethane (111TCA), 1,1-Dichloroethene (11DCE), and *cis*-1,2-Dichloroethene (c12DCE) were compared to NYSDOH Soil Vapor . Indoor Air Matrix 1 and the USEPA BASE database concentrations.

As indicated in **Table 2b**, several contaminants, both MGP / petroleum related and chlorinated compounds, were detected at levels above the 95<sup>th</sup> percentile USEPA BASE concentrations in the sub-slab samples collected. A "Mitigate" recommendation following the NYSDOH Soil Vapor / Indoor Air Matrices was identified for the following compounds:

- C12DCE at the SVMP-2 location;
- PCE at the SVMP-1 and SVMP-2 locations; and,
- TCE at the SVMP-1 locations.

Since a SVI system is already in place, mitigation is already active at the facility so the recommendation for mitigation based upon elevated sub-slab vapor concentrations was not unexpected. Importantly, the mitigate recommendation following the NYSDOH matrices was driven solely by elevated sub-slab concentrations and *not* indoor air quality results. All indoor air quality results with the exception of PCE at IAQ-1 (co-located with SVMP-1) were either non-detectable or present at levels less than the 75<sup>th</sup> percentile BASE concentrations indicating the absence of any significant IAQ impacts and the effectiveness of the SVI mitigation system. As discussed previously in this report, the neighboring dry cleaning establishment that has been associated with historic chlorinated VOCs underlying the subject property is present at East 139<sup>th</sup> street immediately outside the exterior wall closest to the SVMP and IAQ sample locations with the highest concentrations. It is very likely that the sole elevated IAQ reading of 38 µg/m<sup>3</sup> TCE at IAQ-1 was related to neighboring dry cleaning operations.

Concentrations of chlorinated VOCs dropped significantly to the north and east away from the 139<sup>th</sup> street source area of chlorinated impacts in the area. In fact, concentrations of chlorinated VOCs along the east side of the site represented by SVMP-5 / IAQ-5 and the north portion of the warehouse represented by SVMP-6 / IAQ-6 were sufficiently low that the NYSDOH matrix evaluation indicated a recommendation of "No Further Action" or "Monitor" for the east and north portions of the site.

### **3.3.3 Comparison of Sub-Slab and IAQ Data to Historic Sample Results**

Data from the SVMP and IAQ sampling completed in August 2012 was also compared to historic data to analyze data trends and the effect, if any, the SVI mitigation system may



have had on VOC concentrations in the sub-slab and the indoor air. It should be noted that the August 2012 samples were collected while the SVI mitigation system was running and that may impact data interpretation when comparing results from past sampling events.

During the 2011 RI completed by URS, the ambient air sample contained relatively low concentrations of VOCs (total VOCs  $53 \mu\text{g}/\text{m}^3$ ) including a mixture of compounds associated with both MGP and petroleum sites. Ambient levels during the August 2012 event were similar ( $57 \mu\text{g}/\text{m}^3$  total VOCs) with low level MGP / petroleum compounds also detected.

The highest sub-slab concentrations of VOCs in 2011 were detected in sample SVMF-04 (total VOCs  $1,897,931 \mu\text{g}/\text{m}^3$ ), which included high concentrations of pentane and cyclohexane isomers, and PCE degradation products (*cis*- 1,2-dichloroethene and vinyl chloride). SVMF-4 was not sampled in August 2012, but a sample was collected from SVMP-2 which is located in close proximity to SVMF-4 in the center of the warehouse. The SVMP-2 sample collected as part of the start-up event in August 2012 contained total VOCs of only  $5,313 \mu\text{g}/\text{m}^3$  which represents a significant decrease in comparison to the 2011 URS data. When concentration comparisons specifically at SVMP-2 are made, significant reductions are also evident in the August 2012 sample results (SVMP-2 contained  $221,541 \mu\text{g}/\text{m}^3$  total VOCs in 2011 and only  $5,313 \mu\text{g}/\text{m}^3$  in August 2012). High concentrations of VOCs were detected by URS in sub-slab samples SVMP-01 ( $203,221 \mu\text{g}/\text{m}^3$  total VOCs) and SVMP-06 in 2011 (total VOCs  $569,542 \mu\text{g}/\text{m}^3$ ), the majority of which was comprised of pentane isomers. There was a dramatic decrease in sub-slab concentrations at both of these locations in August 2012, where total VOC concentrations of  $21,096 \mu\text{g}/\text{m}^3$  were detected at SVMP-1 and total VOC concentrations of only  $286 \mu\text{g}/\text{m}^3$  were detected at SVMP-6 during the recent sampling event.

Indoor air quality samples collected in August 2012 were also compared to historic IAQ sampling events. In December 2011, IAQ Samples were collected at the facility and analyzed for chlorinated VOCs only. The samples were identified as SS-1 through SS-4; however, specific locations were not identified in the data provided. In general, all four 2011 samples contained very low levels of chlorinated VOCs with the primary chemicals of concern at the site detected at the following concentrations:

- SS-1:  $1.9 \mu\text{g}/\text{m}^3$  PCE,  $0.37 \mu\text{g}/\text{m}^3$  TCE,  $1.0 \mu\text{g}/\text{m}^3$  c12DCE, and  $0.16 \mu\text{g}/\text{m}^3$  VC;
- SS-2:  $1.3 \mu\text{g}/\text{m}^3$  PCE,  $0.33 \mu\text{g}/\text{m}^3$  TCE,  $0.31 \mu\text{g}/\text{m}^3$  c12DCE, and  $0.077 \mu\text{g}/\text{m}^3$  VC;
- SS-3:  $2.4 \mu\text{g}/\text{m}^3$  PCE,  $0.53 \mu\text{g}/\text{m}^3$  TCE,  $0.71 \mu\text{g}/\text{m}^3$  c12DCE, and  $0.10 \mu\text{g}/\text{m}^3$  VC; and,
- SS-4:  $1.6 \mu\text{g}/\text{m}^3$  PCE,  $<0.027 \mu\text{g}/\text{m}^3$  TCE,  $0.27 \mu\text{g}/\text{m}^3$  c12DCE, and  $0.14 \mu\text{g}/\text{m}^3$  VC.



In the August 2012 sampling event, generally similar levels were noted with the exception of sample IAQ-4 which contained 38  $\mu\text{g}/\text{m}^3$  of TCE (as was discussed previously, this sample location was immediately opposite the exterior wall where a neighboring dry cleaner is present). During the August 2012 sampling event, PCE levels collected inside the building ranged from 1.3 to 4.6  $\mu\text{g}/\text{m}^3$ ; TCE levels were all non-detectable except for the one reading at IAQ-4 discussed above; c12DCE levels were all non-detectable; and vinyl chloride levels were also all non-detectable.

Based upon review of both sub-slab and IAQ data, as well as the field screening parameters indicating excellent vacuum influence throughout all areas tested, it is apparent that the SVI mitigation system is having a beneficial effect in reducing sub-slab concentrations at the site and is protecting occupants from vapor intrusion.



#### **4.0 CONCLUSIONS AND RECOMMENDATIONS**

Based upon the review of data collected, the SVI mitigation system is operating as intended to minimize soil vapor intrusion and protect site occupants from inhalation of vapors related to sub-surface contamination. The southwest and central portion of the facility appears to have the highest concentrations of sub-slab vapors warranting a "Mitigate" recommendation based upon comparison of data to the NYSDOH Soil Vapor / Indoor Air Matrices; however, concentrations were at least an order of magnitude lower in August 2012 with the SVI mitigation system running than they were in 2011 before implementation of mitigations measures. Importantly, the "Mitigate" recommendation was driven primarily by sub-slab contaminant concentrations and *not* IAQ data, where all concentrations except for one parameter in one sample were either non-detectable or detected at less than the 75<sup>th</sup> percentile BASE concentrations for indoor air quality. The one exception was the presence of 38 µg/m<sup>3</sup> PCE in IAQ-1, immediately opposite the southern facility, exterior wall where a neighboring dry cleaning facility was inappropriately storing products outside and where solvent-like odors were noted. This location should be monitored closely in conjunction with monitoring the activities at the neighboring dry cleaning establishment.

The east and north portions of the site had only minor sub-slab impacts that resulted in a NYSDOH matrix recommendation of "No Further Action" or "Monitoring only" based upon the north and east sub-slab and IAQ sampling.

It is recommended that the NYSDEC approved OM&M program be continued at this time without modification. The next OM&M report will be provided following the next sampling event scheduled for December 2012. Following the next OM&M event, it is requested that the events be conducted on a semi-annual basis.



**TABLES**



**Table 1**  
**Operations, Maintenance and Monitoring Field Scening Summary**

Date: 8/21/2012  
Location: 295 Locust Avenue, Bronx, NY

**Soil Vapor Monitoring Point Data Summary:**

Monitoring Point ID	Vacuum / Pressure (in. wc)	Explosive Gas (%LEL)	VOC by PID (ppm eq. units)	Comments
SVMP-1	-0.35	0%	0.0	Approx. 100 ft from nearest extraction well
SVMP-2	-0.29	0%	0.0	Within approx. 20 feet of nearest extraction well.
SVMP-3	-0.50	0%	0.0	Jumping around with peaks > 4.0 in. w.c., within 40 ft of nearest extraction well.
SVMP-4	-2.23	0%	0.0	Within approx. 20 feet of nearest extraction well.
SVMP-5	-0.11	0%	0.0	Approx. 100 ft from nearest extraction well
SVMP-6	-0.19	0%	0.0	Approx. 100 ft from nearest extraction well

Note: Indoor air background vacuum was 0.00 in. w.c.

**Blower System Monitoring Data:**

Monitoring Point ID	Vacuum / Pressure (in. wc)	Explosive Gas (%LEL)	VOC by PID (ppm eq. units)	Actual Velocity (ft/min)	Calculated Volumetric Flow (ACFM)	Calculated Volumetric Flow (SCFM)	Temperature (Deg. F)
B-1 Influent	-2.08	0%	0.0	396	552.6	464.0	85.1
B-2 Influent	-2.03	0%	0.0	515	718.7	601.1	87.3
B-3 Influent	-2.27	0%	0.0	463	646.1	539.5	87.9
B-4 Influent	-2.29	0%	0.0	280	390.8	326.9	86.7
B-5 Influent	-2.27	0%	0.0	255	355.9	298.5	85.3
Effluent Manifold	0.02	0%	0.0	343	478.7	403.0	86.5

**Notes:**

- PID readings may not be representative due to heavy vacuum at sample port (unable to pull sample against vacuum)
- Vacuum readings are negative, pressure readings are positive
- Blower curve indicates 510 cfm maximum flow rating at 0" static, but it was tested with a 6" pipe for ratings compared to 8" actually used.
- Effluent temperature is estimate for SCFM calculation.



**Table 2a**  
**Sub-Slab and Indoor Air Quality Sample Collection Data**

Sample ID	Date	Sample Collection Info.				Sample Location	Sample Duration
		Start	End	Vacuum at Completion (mm Hg)	Type		
SVMP-1	8/21/2012	13:14	15:14	6.5	Sub-Slab	Southwest vapor probe, 100' away from nearest SVI well	2 hr.
SVMP-2	8/21/2012	13:06	15:06	0.5	Sub-Slab	Center vapor probe within 20 ft. of SVI well	2 hr.
SVMP-5	8/21/2012	12:58	14:58	1.5	Sub-Slab	East probe near mezzanine, about 80 feet from nearest SVI well	2 hr.
SVMP-6	8/21/2012	13:20	15:20	0.5	Sub-Slab	North probe, near building exterior, approximately 100 feet from nearest SVI well.	2 hr.
IAQ-1	8/21/2012	13:16	15:20	0.0	Indoor Air	Co-located with SVMP-1	2 hr.
IAQ-2	8/21/2012	13:08	15:08	2.5	Indoor Air	Co-located with SVMP-2	2 hr.
IAQ-5	8/21/2012	13:01	15:01	0.0	Indoor Air	Co-located with SVMP-5	2 hr.
IAQ-6	8/21/2012	13:22	15:22	2.0	Indoor Air	Co-located with SVMP-6	2 hr.
AMB-1	8/21/2012	1025	1825	0.0	Ambient Air	Northeast corner of site, outside building.	2 hr.

Note: Ambient air and all IAQ samples collected approximately 3 to 5' above finished floor in breathing zone.



**Table 2B**  
**Indoor Air and Sub-Slab Vapor Sample Results Summary**

Parameter	EPA Base Values (IAQ)		Location 1 Sampling			Location 2 Sampling			Location 5 Sampling			Location 6 Sampling			Ambient AMB-1 (ug/m3)
	75th % (ug/m3)	95th % (ug/m3)	SVMP-1 (ug/m3)	IAQ-1 (ug/m3)	NYSDOH Matrix Rec'd.	SVMP-2 (ug/m3)	IAQ-2 (ug/m3)	NYSDOH Matrix Rec'd.	SVMP-5 (ug/m3)	IAQ-5 (ug/m3)	NYSDOH Matrix Rec'd.	SVMP-6 (ug/m3)	IAQ-6 (ug/m3)	NYSDOH Matrix Rec'd.	
1,1,1-Trichloroethane	10.8	33.0	< 0.83	< 0.83	No Action	< 0.83	< 0.83	No Action	< 0.83	< 0.83	No Action	< 0.83	< 0.83	No Action	< 0.83
1,1,2,2-Tetrachloroethane	NA	NA	< 1.0	< 1.0	NA	< 1.0	< 1.0	NA	< 1.0	< 1.0	NA	< 1.0	< 1.0	NA	< 1.0
1,1,2-Trichloroethane	<1.4	<1.6	< 0.83	< 0.83	NA	< 0.83									
1,1-Dichloroethane	<0.5	<0.8	< 0.62	< 0.62	NA	< 0.62									
1,1-Dichloroethene	<1.2	<1.6	3.6	< 0.60	No Action	< 0.60	< 0.60	No Action	< 0.60	< 0.60	No Action	< 0.60	< 0.60	No Action	< 0.60
1,2,4-Trichlorobenzene	<1.2	<7.2	< 1.1	< 1.1	NA	< 1.1									
1,2,4-Trimethylbenzene	5.1	13.7	12	2.0	NA	4.6	1.4	NA	24	1.5	NA	3.7	2.4	NA	1.9
1,2-Dibromoethane	<1.4	<1.6	< 1.2	< 1.2	NA	< 1.2									
1,2-Dichlorobenzene	<1.0	<1.3	< 0.92	< 0.92	NA	< 0.92									
1,2-Dichloroethane	<0.7	<1.0	< 0.62	< 0.62	NA	< 0.62									
1,2-Dichloropropane	<1.6	<1.7	< 0.70	< 0.70	NA	< 0.70									
1,3,5-Trimethylbenzene	<4.6	4.6	5.7	1.1	NA	2.1	0.50	NA	16	0.55	NA	1.9	0.85	NA	0.65
1,3-butadiene	<2.7	<7.5	< 0.34	< 0.34	NA	< 0.34									
1,3-Dichlorobenzene	<1.1	<2.5	< 0.92	< 0.92	NA	< 0.92									
1,4-Dichlorobenzene	1.4	12.5	< 0.92	< 0.92	NA	< 0.92									
1,4-Dioxane	NA	NA	< 1.1	< 1.1	NA	< 1.1	< 1.1	NA	< 1.1	< 1.1	NA	< 1.1	< 1.1	NA	< 1.1
2,2,4-trimethylpentane	NA	NA	100	0.95	NA	2400	0.95	NA	14	1.0	NA	36	2.1	NA	< 0.71
4-ethyltoluene	<3.1	5.9	4.7	0.60	NA	1.4	0.50	NA	10	< 0.75	NA	1.4	0.80	NA	< 0.75
Acetone	59.8	120.2	23	21	NA	37	24	NA	35	27	NA	44	25	NA	32
Allyl chloride	NA	NA	< 0.48	< 0.48	NA	< 0.48	< 0.48	NA	< 0.48	< 0.48	NA	< 0.48	< 0.48	NA	< 0.48
Benzene	5.1	12.5	5.0	0.75	NA	5.2	0.65	NA	0.94	0.75	NA	1.3	1.1	NA	0.55
Benzyl chloride	<1.7	<7.2	< 0.88	< 0.88	NA	< 0.88									
Bromodichloromethane	NA	NA	4.9	< 1.0	NA	< 1.0									
Bromoform	NA	NA	< 1.6	< 1.6	NA	< 1.6	< 1.6	NA	< 1.6	< 1.6	NA	< 1.6	< 1.6	NA	< 1.6
Bromomethane	<1.1	<2.1	< 0.59	< 0.59	NA	< 0.59									
Carbon disulfide	2.1	6.4	160	< 0.47	NA	74	< 0.47	NA	150	< 0.47	NA	34	0.76	NA	< 0.47
Carbon tetrachloride	<1.1	0.7	< 0.96	0.45	NA	< 0.96	0.51	NA	< 0.96	0.51	NA	< 0.96	0.51	NA	0.58
Chlorobenzene	<0.8	<1.0	< 0.70	< 0.70	NA	< 0.70									
Chloroethane	<1.0	<1.1	< 0.40	< 0.40	NA	< 0.40									
Chloroform	<1.2	1.4	220	< 0.74	NA	< 0.74	< 0.74	NA	3.5	< 0.74	NA	0.89	< 0.74	NA	< 0.74
Chloromethane	3.1	4.4	< 0.31	0.90	NA	< 0.31	1.0	NA	< 0.31	1.1	NA	< 0.31	0.84	NA	1.2
cis-1,2-Dichloroethene	<1.2	<2.0	3800	< 0.60	Mitigate	500	< 0.60	Monitor	2.8	< 0.60	No Action	39	< 0.60	No Action	< 0.60
cis-1,3-Dichloropropene	<2.0	<2.5	< 0.69	< 0.69	NA	< 0.69									
Cyclohexane	NA	NA	19	< 0.52	NA	< 0.52	< 0.52	NA	< 0.52	< 0.52	NA	5.0	< 0.52	NA	< 0.52
Dibromochloromethane	NA	NA	< 1.3	< 1.3	NA	< 1.3	< 1.3	NA	< 1.3	< 1.3	NA	< 1.3	< 1.3	NA	< 1.3
Ethyl acetate	3.2	9.5	< 0.92	1.5	NA	< 0.92	1.3	NA	< 0.92	1.8	NA	2.1	1.5	NA	1.9
Ethylbenzene	3.4	7.6	7.5	0.75	NA	1.9	0.57	NA	6.2	0.79	NA	2.2	2.1	NA	0.66
Freon 11	6.7	54.0	1.8	1.5	NA	1.5	1.6	NA	1.7	1.5	NA	1.7	1.4	NA	1.5
Freon 113	<3.0	9.4	< 1.2	1.0	NA	< 1.2	< 1.2	NA	< 1.2	< 1.2	NA	< 1.2	0.78	NA	0.86
Freon 114	NA	NA	< 1.1	< 1.1	NA	< 1.1	< 1.1	NA	< 1.1	< 1.1	NA	< 1.1	< 1.1	NA	< 1.1
Freon 12	NA	NA	2.4	2.9	NA	2.3	3.2	NA	2.6	3.2	NA	2.6	2.8	NA	3.0
Heptane	NA	NA	1.8	0.71	NA	8.0	0.83	NA	1.7	< 0.62	NA	0.87	2.5	NA	0.92
Hexachloro-1,3-butadiene	<2.5	<7.2	< 1.6	< 1.6	NA	< 1.6									
Hexane	6.4	15.2	6.0	1.4	NA	100	1.6	NA	< 0.54	2.7	NA	< 0.54	2.8	NA	< 0.54
Isopropyl alcohol	56.0	475.0	3.5	5.5	NA	5.0	5.5	NA	4.5	4.5	NA	3.9	5.2	NA	3.7
m&p-Xylene	12.2	28.5	17	1.8	NA	5.4	1.7	NA	15	1.9	NA	6.4	6.5	NA	1.5
Methyl Butyl Ketone	NA	NA	< 1.2	< 1.2	NA	< 1.2	< 1.2	NA	< 1.2	< 1.2	NA	< 1.2	< 1.2	NA	< 1.2
Methyl Ethyl Ketone	7.5	13.5	< 0.90	4.0	NA	< 0.90	2.7	NA	6.1	2.7	NA	5.2	3.2	NA	2.0
Methyl Isobutyl Ketone	NA	NA	< 1.2	< 1.2	NA	< 1.2	< 1.2	NA	< 1.2	< 1.2	NA	< 1.2	< 1.2	NA	< 1.2
Methyl tert-butyl ether	<6.4	16.1	< 0.55	< 0.55	NA	3.0	< 0.55	NA	< 0.55	< 0.55	NA	< 0.55	< 0.55	NA	< 0.55
Methylene chloride	5.0	16.0	1.3	0.78	NA	< 0.53	0.71	NA	0.67	0.88	NA	1.2	0.95	NA	< 0.53
o-Xylene	4.4	11.2	11	0.57	NA	2.4	0.53	NA	5.0	0.66	NA	2.2	2.1	NA	0.62
Propylene	NA	NA	< 0.26	< 0.26	NA	< 0.26	< 0.26	NA	< 0.26	< 0.26	NA	< 0.26	< 0.26	NA	< 0.26
Styrene	<2.3	4.3	31	< 0.65	NA	< 0.65	< 0.65	NA	3.6	< 0.65	NA	1.0	< 0.65	NA	< 0.65
Tetrachloroethylene	5.9	25.4	14000	1.3	Mitigate	1500	1.7	Mitigate	470	1.4	Monitor	37	4.6	Take Reasonable Action	0.76
Tetrahydrofuran	NA	NA	< 0.45	< 0.45	NA	< 0.45	< 0.45	NA	< 0.45	< 0.45	NA	< 0.45	< 0.45	NA	< 0.45
Toluene	25.9	70.8	23	4.5	NA	11	4.5	NA	6.1	4.5	NA	8.5	13	NA	2.9
trans-1,2-Dichloroethene	NA	NA	590	< 0.60	NA	27	< 0.60	NA	< 0.60	< 0.60	NA	23	< 0.60	NA	< 0.60
trans-1,3-Dichloropropene	NA	NA	< 0.69	< 0.69	NA	< 0.69	< 0.69	NA	< 0.69	< 0.69	NA	< 0.69	< 0.69	NA	< 0.69
Trichloroethene	1.2	6.5	2000	38	Mitigate	620	< 0.22	Mitigate	2.9	< 0.22	No Action	20	< 0.22	No Action	< 0.22
Vinyl acetate	NA	NA	< 0.54	< 0.54	NA	< 0.54	< 0.54	NA	< 0.54	< 0.54	NA	< 0.54	< 0.54	NA	< 0.54
Vinyl Bromide	NA	NA	< 0.67	< 0.67	NA	< 0.67	< 0.67	NA	< 0.67	< 0.67	NA	< 0.67	< 0.67	NA	< 0.67
Vinyl chloride	<1.0	<2.2	42	< 0.10	No Action	1.6	< 0.10	No Action	< 0.39	< 0.10	No Action	1.2	< 0.10	No Action	< 0.10
TOTAL VOCs:	225	978	21,096	94	-	5,313	56	-	782	59	-	286	84	-	57

Note: Locations 1, 2, 5 and 6 were determined in coordination with NYSDEC per approved OM&M Plan.



**FIGURES**

**LEGEND**

-  SVI-7 NEW SVI EXTRACTION WELL AND PIPING W/ APPROXIMATE RADIUS OF INFLUENCE
-  SVFM-01 ▲ EXIST VAPOR MONITORING POINT TO BE MODIFIED TO EXTEND BELOW GRADE BEAM
-  SVFM-01 □ EXIST VAPOR MONITORING POINT
-  APPROX. GRADE BEAM LOCATION W/ PILE CAP (SEE STRUCTURAL DWGS BY OTHERS FOR EXACT LOCATIONS)
-  RAIN WATER STORAGE PIT BELOW FINISHED FLOOR SLAB
-  FIRE WATER STORAGE PIT BELOW FINISHED FLOOR SLAB

**GENERAL NOTES**

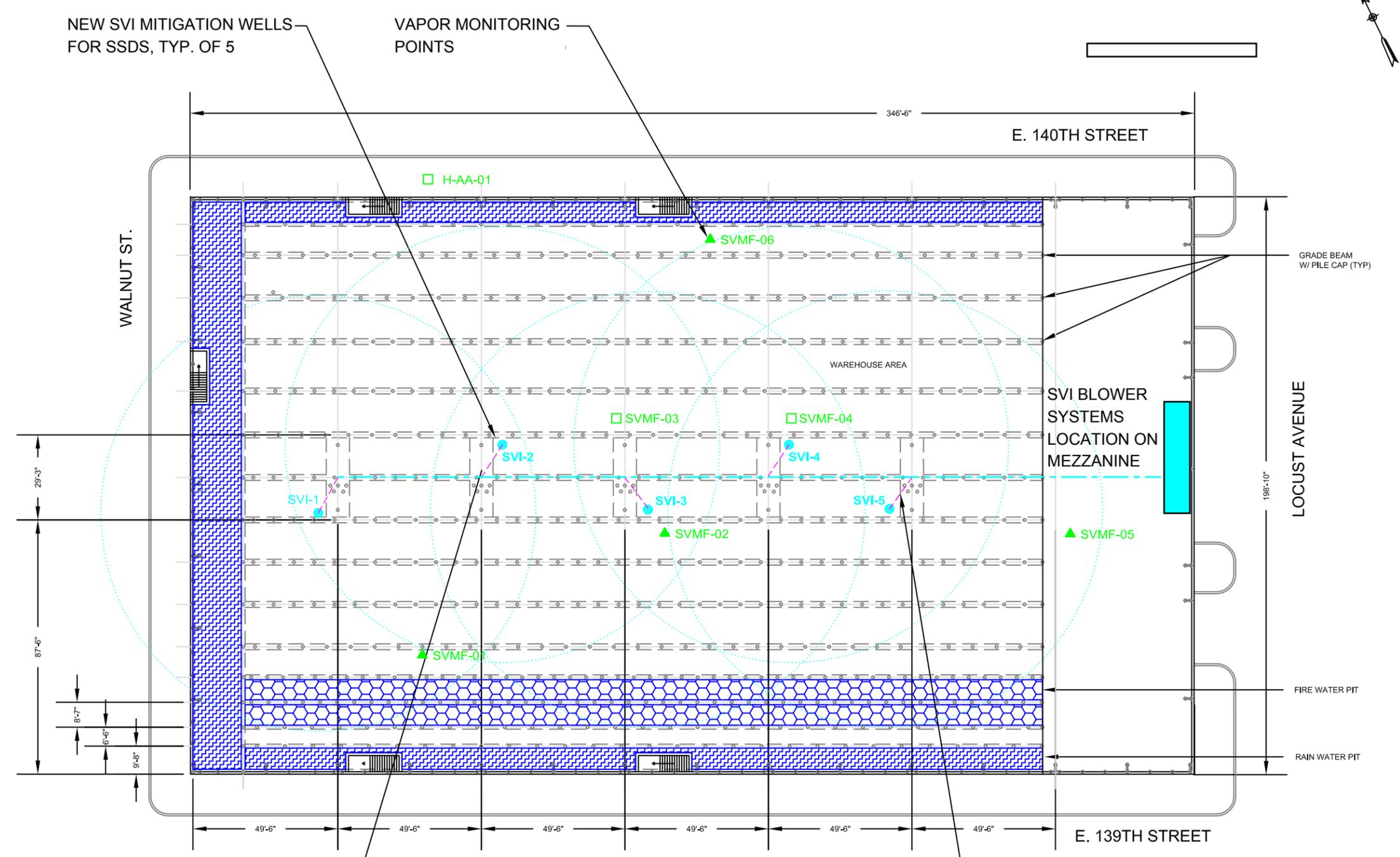
NO DISRUPTION OF CONCRETE, TRENCHING, PUNCTURES OR ANY OTHER ACTIVITIES ARE PERMITTED IN THE SLAB OVERLYING THE RAIN WATER AND / OR FIRE WATER BASINS. IN ADDITION, NO TRENCHING IS ALLOWED MORE THAN APPROXIMATELY 5' FROM CENTERLINE COLUMNS. THEREFORE IT IS NOT POSSIBLE TO INSTALL SUB-SLAB DEPRESSURIZATION WELLS ALONG THE 139TH STREET, 140TH STREET OR ROSE FEISS BOULEVARD AREAS.



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**SVI MITIGATION INSTALLATION PLAN**

LOCATION: 295 LOCUST AVENUE BRONX, NEW YORK		DESIGN: DJS
PROJECT NO / FILE: SUSDEV1201.01 Sht 2 - SVI Mitigation Plan	DRAWING DATE: 03/03/12	REV. NO.: 1
		FIGURE: <b>1</b>



NEW SVI MITIGATION WELLS FOR SSDS, TYP. OF 5

VAPOR MONITORING POINTS

E. 140TH STREET

WALNUT ST.

WAREHOUSE AREA

SVI BLOWER SYSTEMS LOCATION ON MEZZANINE

LOCUST AVENUE

E. 139TH STREET

GRADE BEAM W/ PILE CAP (TYP)

FIRE WATER PIT

RAIN WATER PIT

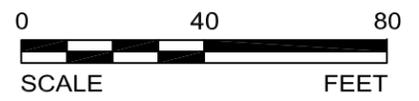
TYPICAL MANIFOLD PIPING INSTALLED IN NEW SLOT IN EXISTING CONCRETE SLAB.

NEW MANIFOLD PIPING TO BE INSTALLED IN NEW CONCRETE SLOT TO CENTERLINE COLUMNS, THEN RUN UP COLUMN TO ROOF. CONTRACTOR TO MOUNT PIPE AND PROTECT FROM CONTACT DURING NORMAL WAREHOUSE OPERATIONS

**IMPORTANT NOTE REGARDING ACCESS LIMITATIONS:**

NO DISRUPTION OF CONCRETE, TRENCHING, PUNCTURES OR ANY OTHER ACTIVITIES ARE PERMITTED IN THE SLAB OVERLYING THE RAIN WATER AND / OR FIRE WATER BASINS. IN ADDITION, NO TRENCHING IS ALLOWED MORE THAN APPROXIMATELY 5' FROM CENTERLINE COLUMNS. THEREFORE IT IS NOT POSSIBLE TO INSTALL SUB-SLAB DEPRESSURIZATION WELLS ALONG THE 139TH STREET, 140TH STREET OR ROSE FEISS BOULEVARD AREAS.

**SVI MITIGATION INSTALLATION PLAN**

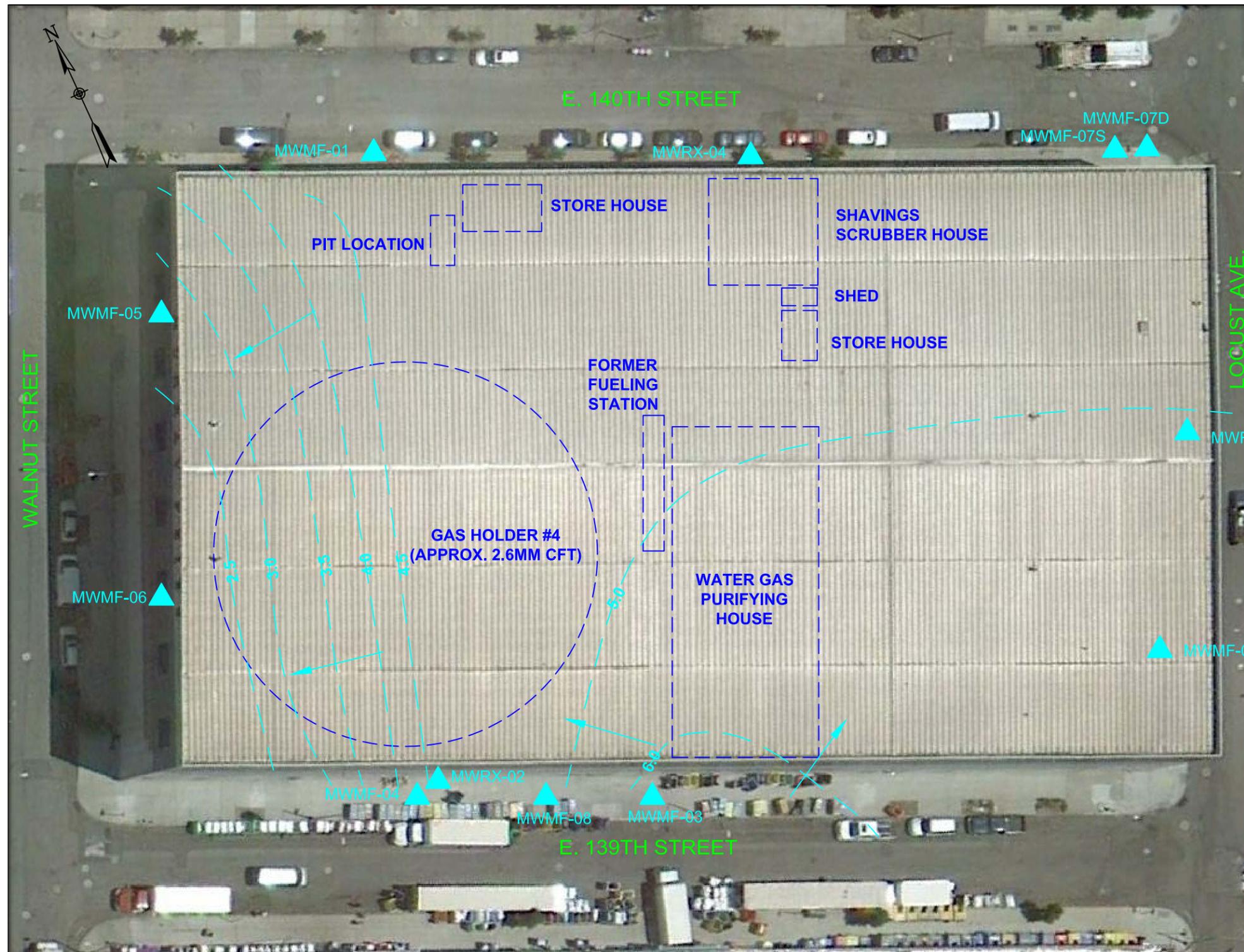


REVISION 1:  
 1. MODIFIED VAPOR MONITORING POINT LOCATIONS TO INCORPORATE EXISTING PROBES INTO DESIGN.  
 2. MODIFIED TRENCH LAYOUT TO INDICATE STRAIGHT RUN FROM SVI WELL TO COLUMN BEFORE RISER TO ROOF.

**Appendix A**

**Sub-Slab Depressurization System (SSDS) Design Drawings**

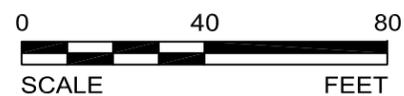




LOCATION MAP  
BRONX, NY (NTS)

- FORMER MGP INFRASTRUCTURE LOCATION (APPROX.)
- ▲ MONITORING WELL
- 3.0 --- GW ELEV. CONTOUR (APPROX. FT AMSL, 5/4/2011 URS)
- INFERRED GW FLOW DIRECTION

SITE PLAN W/ FORMER INFRASTRUCTURE

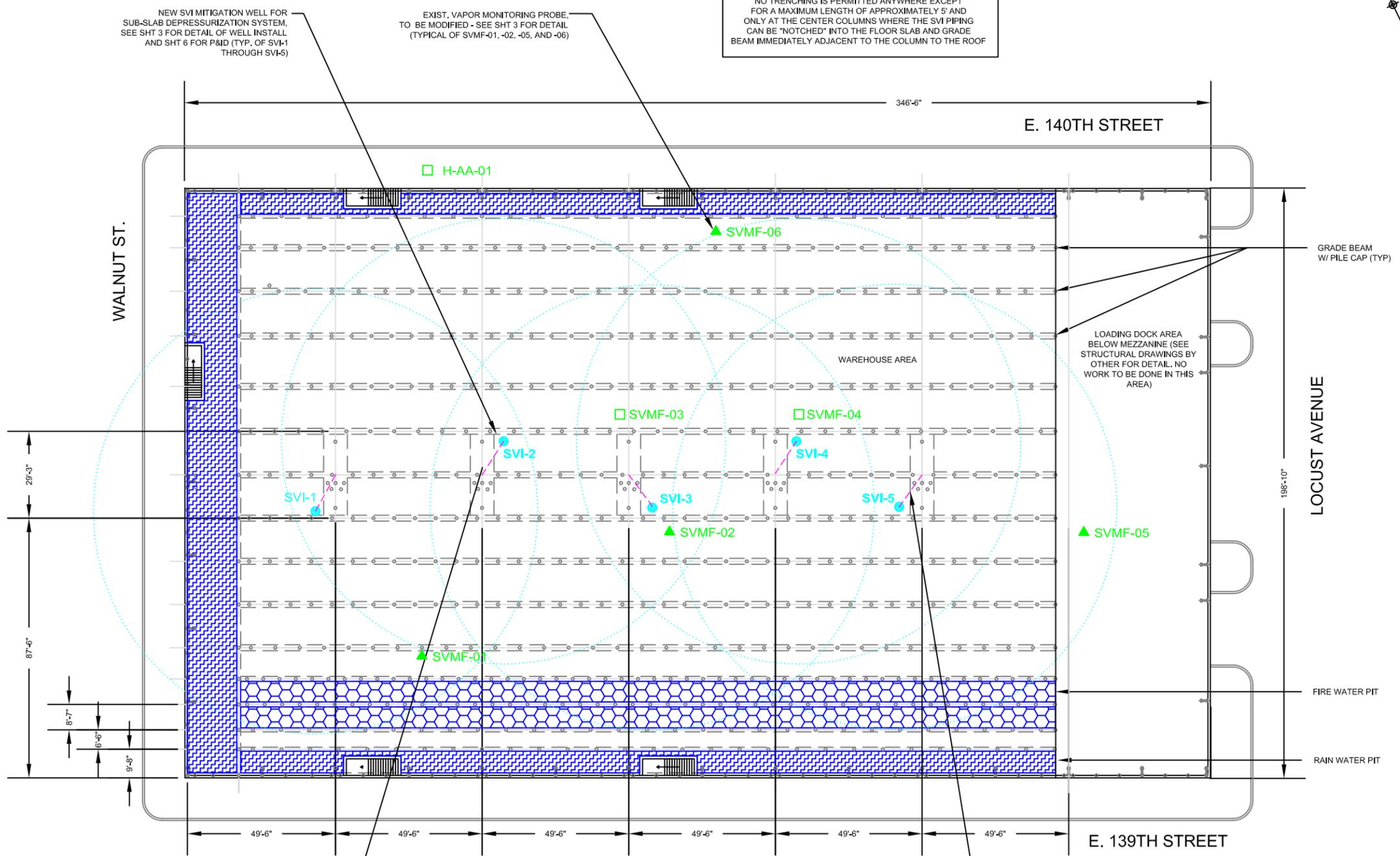


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SITE PLAN

LOCATION:	STREET ADDRESS CITY, STATE	DESIGN: DJS
PROJECT NO / FILE SUSDEV1201.01 SHEET 1 - SITE PLAN	DRAWING DATE: 02/19/12	REV. NO.: FIGURE: <b>1</b>

**IMPORTANT NOTE REGARDING ACCESS LIMITATIONS:**  
 NO TRENCHING IS PERMITTED ANYWHERE EXCEPT FOR A MAXIMUM LENGTH OF APPROXIMATELY 5' AND ONLY AT THE CENTER COLUMNS WHERE THE SVI PIPING CAN BE "NOTCHED" INTO THE FLOOR SLAB AND GRADE BEAM IMMEDIATELY ADJACENT TO THE COLUMN TO THE ROOF



NEW SVI MITIGATION WELL FOR SUB-SLAB DEPRESSURIZATION SYSTEM, SEE SHT 3 FOR DETAIL OF WELL INSTALL AND SHT 6 FOR P&ID (TYP. OF SVI-1 THROUGH SVI-5)

EXIST. VAPOR MONITORING PROBE TO BE MODIFIED - SEE SHT 3 FOR DETAIL (TYPICAL OF SVMF-01, -02, -05, AND -06)

LOADING DOCK AREA BELOW MEZZANINE (SEE STRUCTURAL DRAWINGS BY OTHER FOR DETAIL. NO WORK TO BE DONE IN THIS AREA)

TYPICAL MANIFOLD PIPING INSTALLED IN NEW SLOT IN EXISTING CONCRETE SLAB, SEE SHT. 3 FOR DETAIL AND SHT 6 FOR P&ID (TYP).

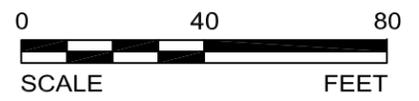
NEW MANIFOLD PIPING TO BE INSTALLED IN NEW CONCRETE SLOT TO CENTERLINE COLUMNS, THEN RUN UP COLUMN TO ROOF. CONTRACTOR TO MOUNT PIPE AND PROTECT FROM CONTACT DURING NORMAL WAREHOUSE OPERATIONS (TYP FOR ALL SVI WELL MANIFOLDS, SEE SHTS. 4 AND 5 FOR CEILING MANIFOLDS & ROOF PLANS)

LEGEND	
	NEW SVI EXTRACTION WELL AND PIPING W/ APPROXIMATE RADIUS OF INFLUENCE
	EXIST VAPOR MONITORING POINT TO BE MODIFIED TO EXTEND BELOW GRADE BEAM
	EXIST VAPOR MONITORING POINT
	APPROX. GRADE BEAM LOCATION W/ PILE CAP (SEE STRUCTURAL DWGS BY OTHERS FOR EXACT LOCATIONS)
	RAIN WATER STORAGE PIT BELOW FINISHED FLOOR SLAB
	FIRE WATER STORAGE PIT BELOW FINISHED FLOOR SLAB

- GENERAL NOTES**
- CONTRACTOR TO VERIFY LOCATIONS OF SUBSURFACE UTILITIES AND STRUCTURES PRIOR TO WORK. NEW SVI WELLS AND ASSOCIATED TRENCHING MAY NEED TO BE RELOCATED AS NEC. TO AVOID SUBSURFACE UTILITIES / STRUCTURES. DO NOT RELOCATE WITHOUT PRIOR APPROVAL OF ENGINEER. LOCATIONS OF STRUCTURAL COMPONENTS SHOWN ARE APPROXIMATE ONLY - REFER TO STRUCTURAL DRAWINGS S-1A AND S-1B, AND RELATED SECTIONS ON S-2 AND S-101 FOR DETAILED DIMENSIONS AND NECESSARY CLEARANCES FOR SVI SYSTEM INSTALLATION.
  - ALL WORK TO BE COORDINATED WITH TENANT / OWNER BEFORE START OF WORK. AREAS TO REMAIN ACCESSIBLE AT ALL TIMES INCLUDE SVI WELL LOCATIONS AND SOIL VAPOR MONITORING PROBE LOCATIONS.
  - CONTRACTOR IS RESPONSIBLE FOR PROCURING ALL PERMITS REQUIRED FOR COMPLETION OF THE WORK, INCLUDING BUT NOT LIMITED TO NYC CONSTRUCTION PERMITS, WELL PERMITS, ROAD OPENING PERMITS, ELECTRICAL PERMITS, FIRE PERMITS, ETC.
  - ALL WORK TO BE PERFORMED IN ACCORDANCE WITH APPLICABLE BUILDING CODES AND REGULATIONS.
  - ALL WASTES GENERATED TO BE PROPERLY MANAGED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS.
  - ALL WORK TO BE FINISHED AT GRADE IS TO BE FLUSH MOUNTED UNLESS SPECIFIED OTHERWISE. CONTRACTOR IS RESPONSIBLE FOR ENSURING LIQUID TIGHT SEALS AND ABSENCE OF UNEVEN SURFACES THAT COULD POSE A TRIP OR FALL HAZARD.
  - ALL WORK TO BE COORDINATED WITH NYSDEC AND NYSDOH, AS WELL AS NYC ENVIRONMENTAL AGENCIES, TO ENSURE REGULATORY APPROVALS. WHETHER EXPRESSLY INDICATED ON DESIGN DRAWINGS OR NOT, CONTRACTOR IS RESPONSIBLE FOR COMPLETION OF WORK IN CONFORMANCE WITH NYSDOH "GUIDANCE FOR EVALUATING SOIL VAPOR INTRUSION IN THE STATE OF NEW YORK," OCTOBER 2006, AS AMENDED.
  - STRUCTURAL DETAILS INDICATED IN THIS DESIGN PACKAGE WERE REPRODUCED FROM DRAWINGS PREPARED BY OTHERS AND WERE INCLUDED HEREIN SOLELY AS A POINT OF REFERENCE FOR NEW SUB-SLAB DEPRESSURIZATION / SVI MITIGATION SYSTEM COMPONENTS. TECHSOLUTIONS ENGINEERING, P.C. HAS NOT PERFORMED ANY STRUCTURAL ANALYSES, NOR IS RESPONSIBLE FOR ANY STRUCTURAL OR GEOTECHNICAL ASPECTS OF THE DESIGN. CONTRACTOR IS FULLY RESPONSIBLE FOR VERIFICATION OF ACTUAL STRUCTURAL COMPONENTS AND SUBSURFACE UTILITY LOCATIONS AND AVOIDANCE OF SAME.
  - THE SVI MITIGATION SYSTEM DESIGN PRESENTED HEREIN WAS BASED UPON ENVIRONMENTAL DATA INCLUDING BUT NOT LIMITED TO SOIL, GROUNDWATER, SOIL VAPOR, AND INDOOR AIR QUALITY DATA, COLLECTED BY OTHERS AS WELL AS LIMITATIONS FOR ACCESS IMPOSED BY THE CLIENT. TECHSOLUTIONS ENGINEERING, P.C. IS NOT RESPONSIBLE IN ANY WAY FOR ERRORS OR OMISSIONS RELATED TO DATA COLLECTED BY AND / OR PROVIDED BY OTHERS. IF DATA COLLECTED BY AND / OR PROVIDED BY OTHERS IS IN ERROR, MODIFICATIONS TO THE DESIGN HEREIN MAY BE NECESSARY TO MEET THE DESIGN INTENT.
  - THIS DESIGN HAS BEEN DEVELOPED FOR THE SOLE USE OF TECHSOLUTIONS ENGINEERING, P.C.'S CLIENT AND MAY NOT BE RELIED UPON BY OTHERS WITHOUT THE EXPRESS WRITTEN CONSENT OF TECHSOLUTIONS ENGINEERING, P.C. AND ITS CLIENT.

**IMPORTANT NOTE REGARDING ACCESS LIMITATIONS:**  
 NO DISRUPTION OF CONCRETE, TRENCHING, PUNCTURES OR ANY OTHER ACTIVITIES ARE PERMITTED IN THE SLAB OVERLYING THE RAIN WATER AND / OR FIRE WATER BASINS. IN ADDITION, NO TRENCHING IS ALLOWED MORE THAN APPROXIMATELY 5' FROM CENTERLINE COLUMNS. THEREFORE IT IS NOT POSSIBLE TO INSTALL SUB-SLAB DEPRESSURIZATION WELLS ALONG THE 139TH STREET, 140TH STREET OR ROSE FEISS BOULEVARD AREAS.

**SVI MITIGATION INSTALLATION PLAN**



**REVISION 1:**  
 1. MODIFIED VAPOR MONITORING POINT LOCATIONS TO INCORPORATE EXISTING PROBES INTO DESIGN.  
 2. MODIFIED TRENCH LAYOUT TO INDICATE STRAIGHT RUN FROM SVI WELL TO COLUMN BEFORE RISER TO ROOF.

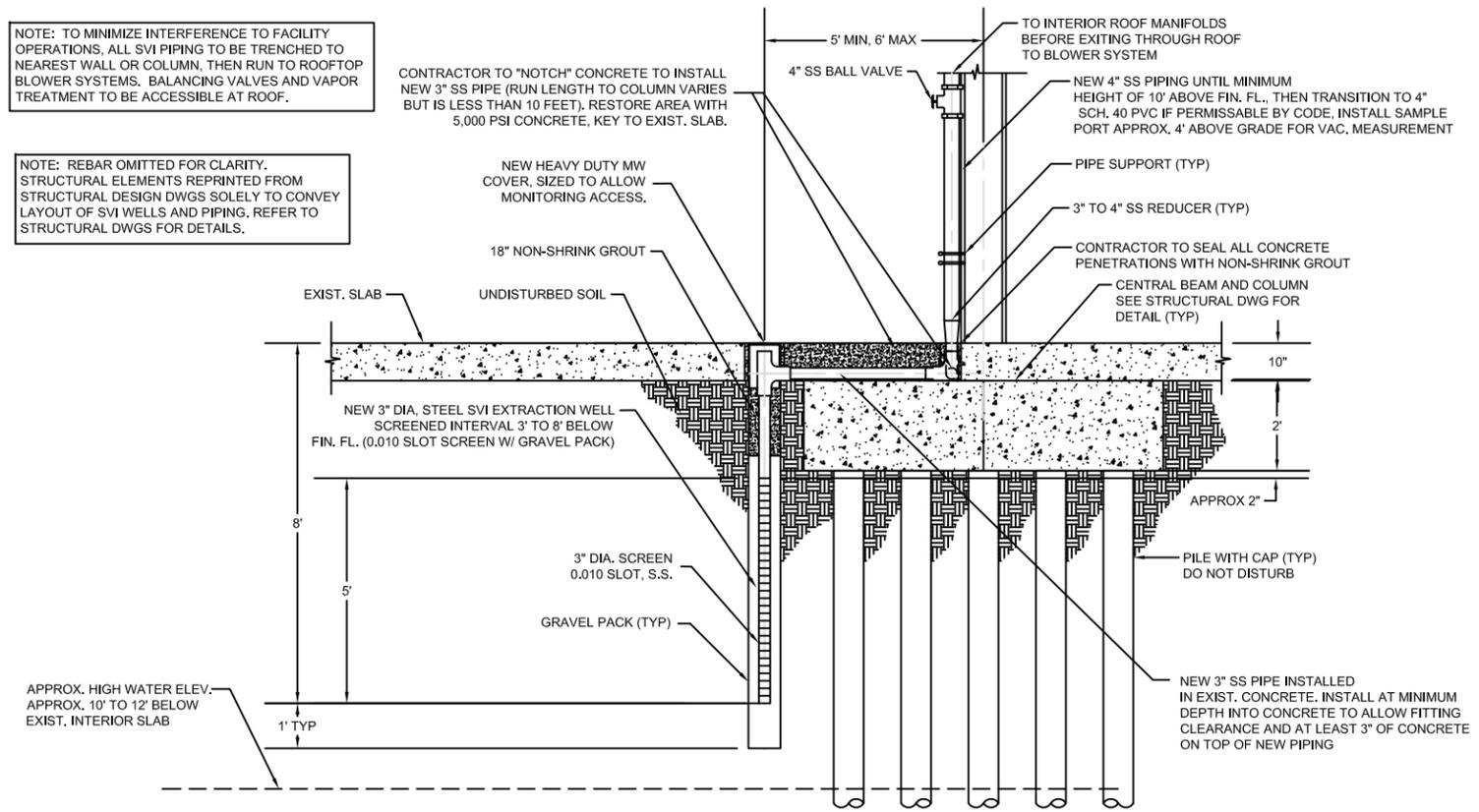


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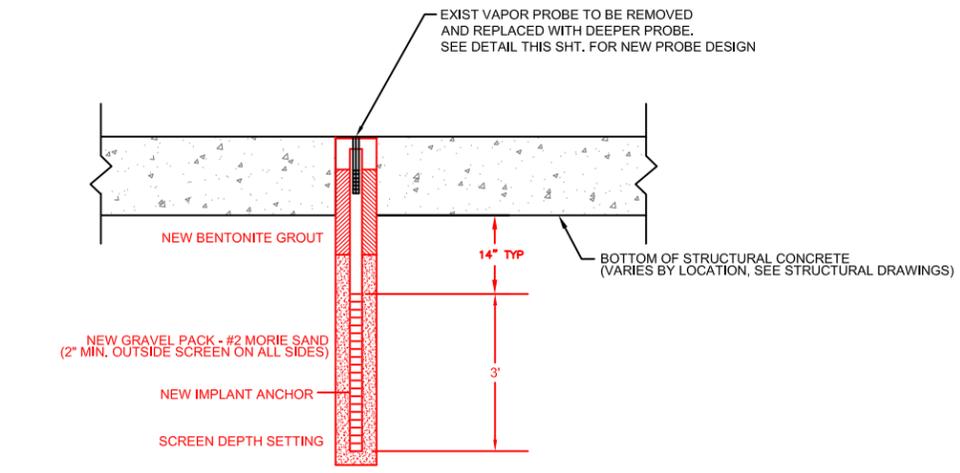
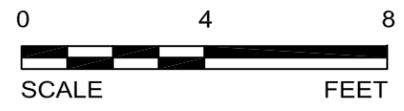
<b>SVI MITIGATION INSTALLATION PLAN</b>	
LOCATION:	295 LOCUST AVENUE BRONX, NEW YORK
DESIGN:	DJS
PROJECT NO / FILE	DRAWING DATE: REV. NO.:
SUSDEV1201.01 Sht 2 - SVI Mitigation Plan	03/03/12 1
FIGURE:	<b>2</b>

NOTE: TO MINIMIZE INTERFERENCE TO FACILITY OPERATIONS, ALL SVI PIPING TO BE TRENCHED TO NEAREST WALL OR COLUMN, THEN RUN TO ROOFTOP BLOWER SYSTEMS. BALANCING VALVES AND VAPOR TREATMENT TO BE ACCESSIBLE AT ROOF.

NOTE: REBAR OMITTED FOR CLARITY. STRUCTURAL ELEMENTS REPRINTED FROM STRUCTURAL DESIGN DWGS SOLELY TO CONVEY LAYOUT OF SVI WELLS AND PIPING. REFER TO STRUCTURAL DWGS FOR DETAILS.

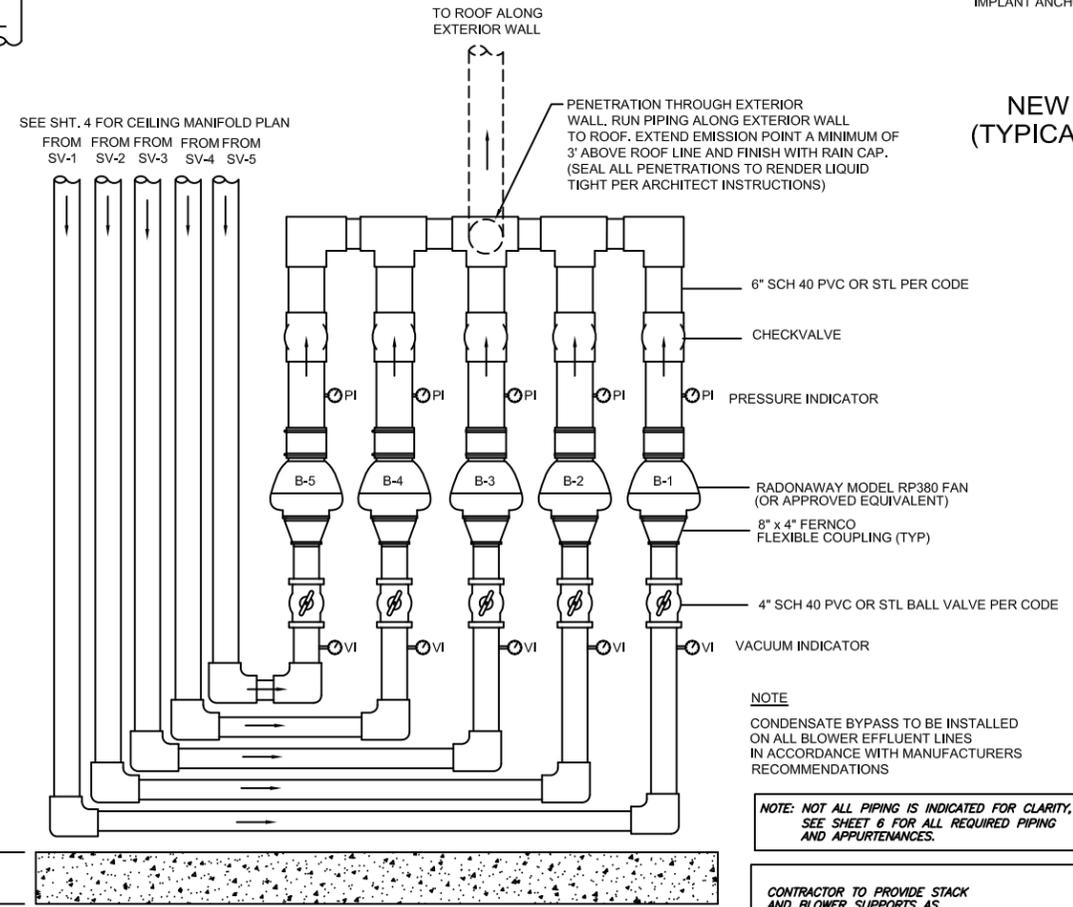


SVI EXTRACTION WELL AND PIPING DETAIL (TYPICAL FOR ALL SVI WELLS)



VAPOR MONITORING POINT MODIFICATION DETAIL (TYPICAL FOR SVMF-01, -02, -05, AND -06)

NOT TO SCALE



BLOWER MANIFOLD DETAIL

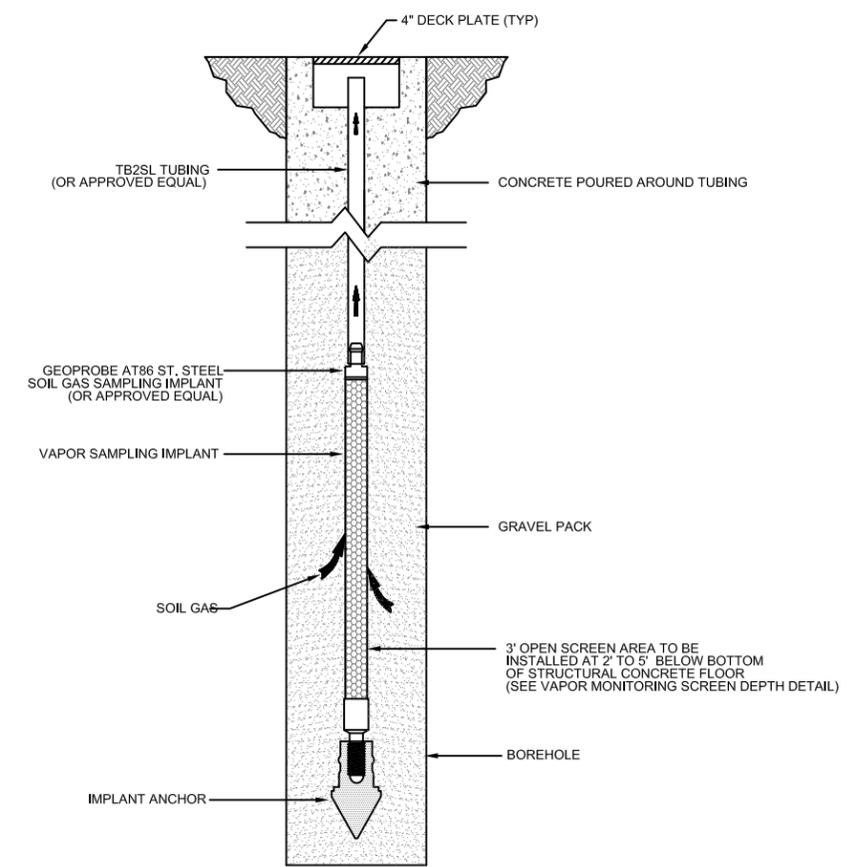
MANIFOLD TO BE INSTALLED AS CLOSE TO LOCUST AVE. WALL AS POSSIBLE

NOT TO SCALE

NOTE: CONDENSATE BYPASS TO BE INSTALLED ON ALL BLOWER EFFLUENT LINES IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS

NOTE: NOT ALL PIPING IS INDICATED FOR CLARITY, SEE SHEET 6 FOR ALL REQUIRED PIPING AND APPURTENANCES.

CONTRACTOR TO PROVIDE STACK AND BLOWER SUPPORTS AS NECESSARY TO MEET LOCAL BUILDING CODES AND TO SUSTAIN 100 MPH WIND WITHOUT DAMAGE OR FUNCTION FAILURE.



NEW SOIL VAPOR MONITORING POINT DETAIL (TYPICAL FOR MODIFIED SVFM-01, -02, -05, AND -06)

NOT TO SCALE

REVISION 1:  
1. ADDED BLOWER FOR EACH SVI WELL (TOT. 5)  
2. REVISED BLOWER DETAIL TO SHOW NEW MANIFOLD FOR 5 BLOWERS ON MEZZANINE  
3. MODIFIED VAPOR PROBE DETAIL TO SHOW RETROFIT OF EXISTING VAPOR PROBES.



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SVI MITIGATION WELL AND PIPING DETAILS / SECTIONS

LOCATION:	295 LOCUST AVE. BRONX, NEW YORK	DESIGN:	DJS
PROJECT NO / FILE	SUSDEV1201.01 Sht 3 - SVI Detail	DRAWING DATE:	03/04/12
REV. NO.:	1	FIGURE:	3

**LEGEND**

- SVI-3 NEW SVI EXTRACTION WELL & PIPING IN FIN. FL. (at grade level - shown for perspective only)
- NEW SVI PIPING MANIFOLD ON CEILING (INSTALL INSIDE PRIOR TO ROOF PENETRATION WHERE SHOWN. SEE S&I FOR DETAIL)

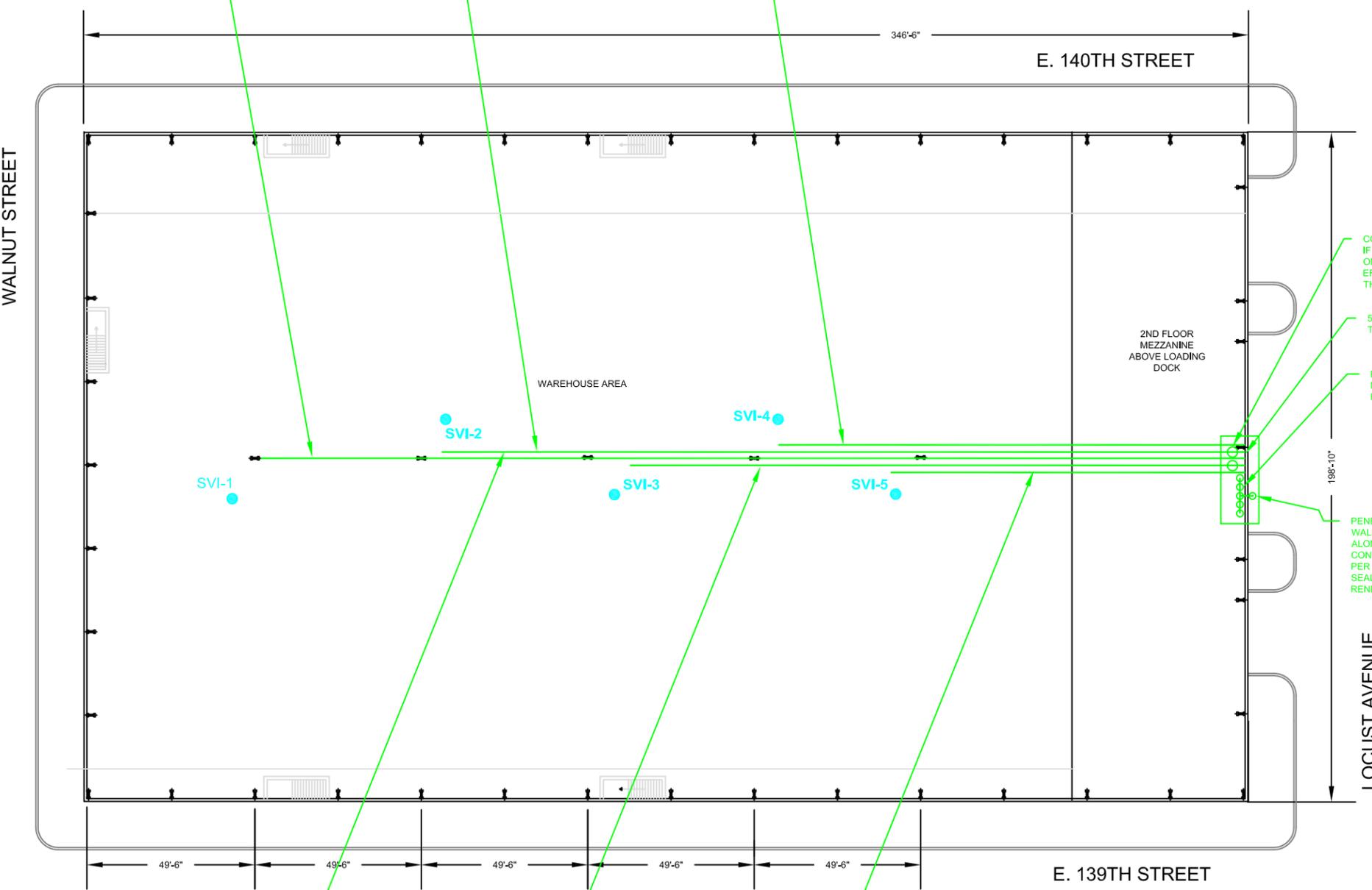
**GENERAL NOTES**

1. CONTRACTOR TO VERIFY LOCATIONS OF ROOF SUPPORTS BEFORE WORK. NEW CEILING MANIFOLDS MAY NEED TO BE RELOCATED AS NEC. TO AVOID ELECTRICAL FIXTURES, LIGHTING AND STRUCTURES. DO NOT RELOCATE WITHOUT PRIOR APPROVAL OF ENGINEER. LOCATIONS OF STRUCTURAL COMPONENTS (I.E., COLUMN CENTERLINES AND LOCATIONS) SHOWN ARE APPROXIMATE ONLY - REFER TO STRUCTURAL AND ARCHITECTURAL DRAWINGS BY OTHERS FOR DETAILED DIMENSIONS AND NECESSARY CLEARANCES FOR SVI SYSTEM INSTALLATION.
2. ALL WORK TO BE COORDINATED WITH TENANT / OWNER BEFORE START OF WORK. AREAS TO REMAIN ACCESSIBLE AT ALL TIMES INCLUDE SVI WELL LOCATIONS, BLOWER SYSTEMS ON ROOF, AND SOIL VAPOR MONITORING PROBE LOCATIONS.
3. CONTRACTOR IS RESPONSIBLE FOR PROCURING ALL PERMITS REQUIRED FOR COMPLETION OF THE WORK, INCLUDING BUT NOT LIMITED TO NYC CONSTRUCTION PERMITS, WELL PERMITS, ROAD OPENING PERMITS, ELECTRICAL PERMITS, FIRE PERMITS, ROOF REPAIR PERMITS, ETC.
4. ALL WORK TO BE PERFORMED IN ACCORDANCE WITH APPLICABLE BUILDING CODES AND REGULATIONS.
5. ALL WASTES GENERATED TO BE PROPERLY MANAGED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS.
6. ALL WORK TO BE FINISHED AT ROOF AND CEILING IS TO BE COMPLETED IN STRICT ACCORDANCE WITH ROOF MANUFACTURER AND ARCHITECT RECOMMENDATIONS TO ENSURE THAT ROOF INTEGRITY IS NOT IMPACTED. ONLY THE ROOF PENETRATIONS SHOWN ON THESE DRAWINGS ARE PERMITTED AND THOSE PENETRATIONS MUST BE MADE PER ARCHITECT AND ROOF MANUFACTURER RECOMMENDATIONS TO ENSURE A LIQUID TIGHT SEAL.
7. ALL WORK TO BE COORDINATED WITH NYSDEC AND NYSDOH, AS WELL AS NYC ENVIRONMENTAL AGENCIES, TO ENSURE REGULATORY APPROVALS. WHETHER EXPRESSLY INDICATED ON DESIGN DRAWINGS OR NOT, CONTRACTOR IS RESPONSIBLE FOR COMPLETION OF WORK IN CONFORMANCE WITH NYSDOH "GUIDANCE FOR EVALUATING SOIL VAPOR INTRUSION IN THE STATE OF NEW YORK," OCTOBER 2006, AS AMENDED.
8. STRUCTURAL AND ARCHITECTURAL DETAILS INDICATED IN THIS DESIGN PACKAGE WERE REPRODUCED FROM DRAWINGS PREPARED BY OTHERS AND WERE INCLUDED HEREIN SOLELY AS A POINT OF REFERENCE FOR NEW SUB-SLAB DEPRESSURIZATION / SVI MITIGATION SYSTEM COMPONENTS. TECHSOLUTIONS ENGINEERING, P.C. HAS NOT PERFORMED ANY STRUCTURAL ANALYSES, NOR IS RESPONSIBLE FOR ANY STRUCTURAL OR GEOTECHNICAL ASPECTS OF THE DESIGN. CONTRACTOR IS FULLY RESPONSIBLE FOR VERIFICATION OF ACTUAL STRUCTURAL COMPONENTS AND SUBSURFACE UTILITY LOCATIONS AND AVOIDANCE OF SAME.
9. THE SVI MITIGATION SYSTEM DESIGN PRESENTED HEREIN WAS BASED UPON ENVIRONMENTAL DATA INCLUDING BUT NOT LIMITED TO SOIL, GROUNDWATER, SOIL VAPOR, AND INDOOR AIR QUALITY DATA, COLLECTED BY OTHERS AS WELL AS LIMITATIONS FOR ACCESS IMPOSED BY THE CLIENT. TECHSOLUTIONS ENGINEERING, P.C. IS NOT RESPONSIBLE IN ANY WAY FOR ERRORS OR OMISSIONS RELATED TO DATA COLLECTED BY AND / OR PROVIDED BY OTHERS. IF DATA COLLECTED BY AND / OR PROVIDED BY OTHERS IS IN ERROR, MODIFICATIONS TO THE DESIGN HEREIN MAY BE NECESSARY TO MEET THE DESIGN INTENT.
10. THIS DESIGN HAS BEEN DEVELOPED FOR THE SOLE USE OF TECHSOLUTIONS ENGINEERING, P.C.'S CLIENT AND MAY NOT BE RELIED UPON BY OTHERS WITHOUT THE EXPRESS WRITTEN CONSENT OF TECHSOLUTIONS ENGINEERING, P.C. AND ITS CLIENT.

**IMPORTANT NOTE REGARDING EXTERIOR WALL PENETRATION:**  
 NO WALL OR ROOF PENETRATIONS ARE PERMITTED ANYWHERE EXCEPT FOR THE 8" EFFLUENT FROM THE BLOWER THROUGH THE EXTERIOR WALL AT LOCUST AVE. ALL PENETRATIONS ARE TO BE COORDINATED WITH SITE OWNER AND ARCHITECT AND COMPLETED BY LICENSED CONTRACTORS IN ACC. W/ MFR. RECOMMENDATIONS AND NYC CODE TO ENSURE A LIQUID-TIGHT SEAL AND NO LEAKAGE.

NEW 4" PVC OR STL MANIFOLD FROM SV-1 TO B-1 BLOWER ASSEMBLY AT MEZZANINE PER CODE

NEW 4" PVC OR STL MANIFOLD FROM SV-4 TO B-4 BLOWER ASSEMBLY AT MEZZANINE PER CODE



CONTINGENCY FOR GAC VESSELS IF REQUIRED. TO BE INSTALLED ON THE 8" MANIFOLDED EFFLUENT LINE BEFORE EXITING THROUGH EXTERIOR WALL TO ROOF.

5 - 4" LINES FROM SVI-1 THROUGH SVI-5

B-1 THROUGH B-5 BLOWER MANIFOLD, SEE SHT. 3 AND P&ID FOR DETAIL.

PENETRATION THROUGH EXTERIOR WALL FOR 8" VENT PIPE. EXTEND PIPE ALONG WALL TO MIN. 3' ABOVE ROOF LINE. CONTRACTOR TO MOUNT STL PIPE PER CODE. ALL PENETRATIONS TO BE SEALED PER OWNER AND ARCHITECT TO RENDER LIQUID TIGHT.

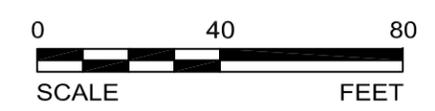
SEE PIPING AND INSTRUMENTATION DIAGRAM ON SHT 5 FOR DETAIL.

NEW 4" PVC OR STL MANIFOLD FROM SV-3 TO B-3 BLOWER ASSEMBLY AT MEZZANINE PER CODE

NEW 4" PVC OR STL MANIFOLD FROM SV-5 TO B-5 BLOWER ASSEMBLY AT MEZZANINE PER CODE

**IMPORTANT NOTE REGARDING PIPE MOUNTING & SUPPORT**  
 CONTRACTOR TO MOUNT PIPING TO CEILING SECURELY WITHOUT PENETRATING THE ROOF. PIPING OFFSET FOR CLARITY ON THIS FIGURE

**INTERIOR CEILING MANIFOLD PLAN**



- REVISION 1:**
1. REVISED MANIFOLD SO THAT EACH BLOWER HAS DEDICATED 4" PIPING TO DEDICATED BLOWER.
  2. RELOCATED BLOWER PACKAGES TO 2ND FLOOR MEZZANINE
  3. ELIMINATED ROOF PENETRATION, NEW EFFLUENT PIPE FROM BLOWER TO ROOF TO EXIT THROUGH LOCUST EXTERIOR WALL.
  4. MODIFIED PIPING TO STL. AS REQD TO MEET NYC CODE.



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**CEILING MANIFOLD PLAN**

LOCATION: 295 LOCUST AVENUE BRONX, NEW YORK		DESIGN: DJS	
PROJECT NO / FILE SUSDEV1201,01 Sht 4 - Ceiling Manifold Plan	DRAWING DATE: 03/04/12	REV. NO.: 1	FIGURE: <b>4</b>

**LEGEND**

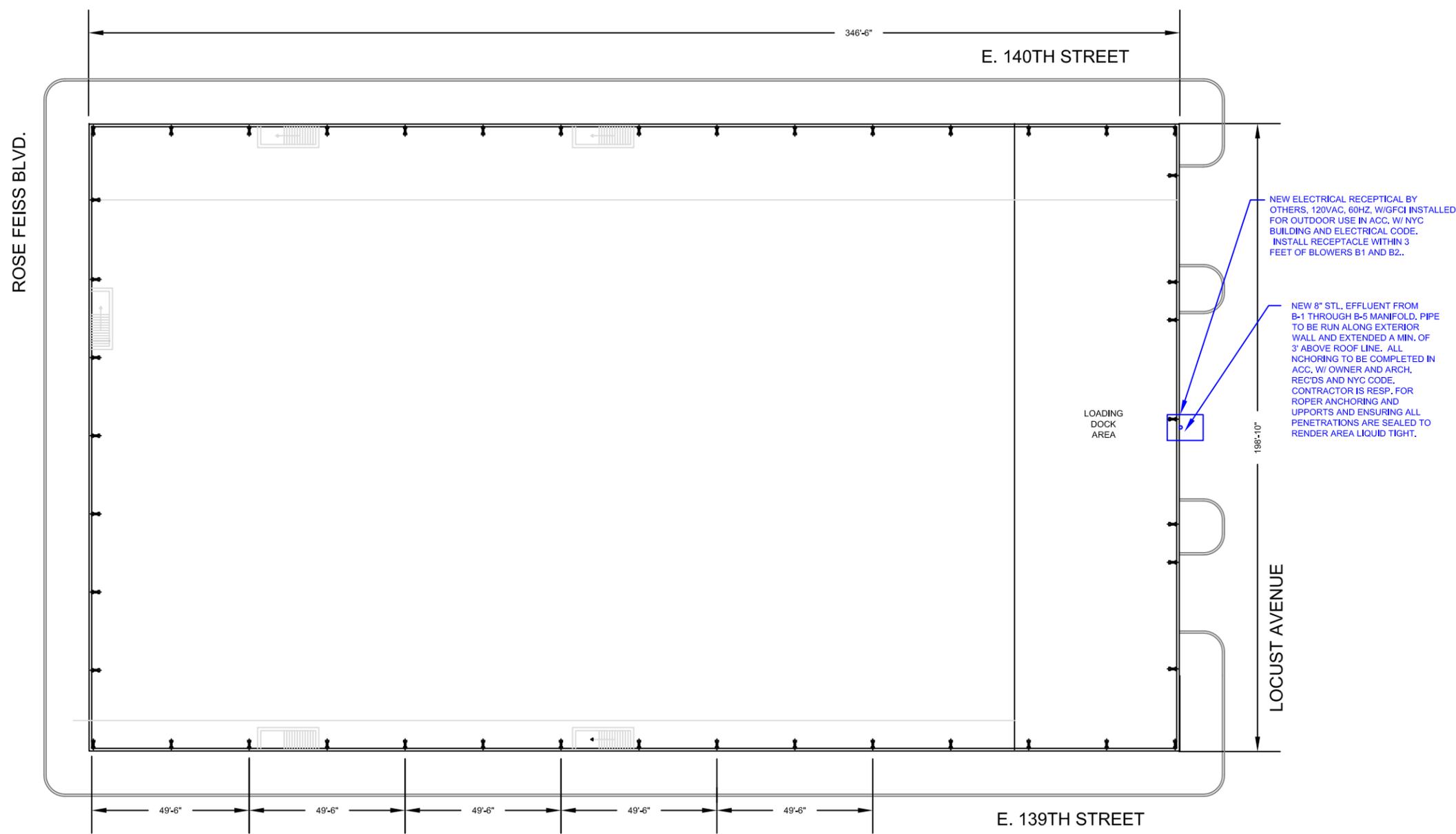


NEWMANIFOLD FROM B-1 THROUGH B-5 TO ROOF, ADJUST AS NECESSARY BASED UPON STRUCTURAL SUPPORTS FOR ROOF (BY OTHERS).

**GENERAL NOTES**

- CONTRACTOR TO VERIFY LOCATIONS OF ROOF SUPPORTS BEFORE WORK. NEW CEILING MANIFOLDS MAY NEED TO BE RELOCATED AS NEC. TO AVOID ELECTRICAL FIXTURES, LIGHTING AND STRUCTURES. DO NOT RELOCATE WITHOUT PRIOR APPROVAL OF ENGINEER. LOCATIONS OF STRUCTURAL COMPONENTS (I.E., COLUMN CENTERLINES AND LOCATIONS) SHOWN ARE APPROXIMATE ONLY - REFER TO STRUCTURAL AND ARCHITECTURAL DRAWINGS BY OTHERS FOR DETAILED DIMENSIONS AND NECESSARY CLEARANCES FOR SVI SYSTEM INSTALLATION.
- ALL WORK TO BE COORDINATED WITH TENANT / OWNER BEFORE START OF WORK. AREAS TO REMAIN ACCESSIBLE AT ALL TIMES INCLUDE SVI WELL LOCATIONS, BLOWER SYSTEMS ON ROOF, AND SOIL VAPOR MONITORING PROBE LOCATIONS.
- CONTRACTOR IS RESPONSIBLE FOR PROCURING ALL PERMITS REQUIRED FOR COMPLETION OF THE WORK, INCLUDING BUT NOT LIMITED TO NYC CONSTRUCTION PERMITS, WELL PERMITS, ROAD OPENING PERMITS, ELECTRICAL PERMITS, FIRE PERMITS, ROOF REPAIR PERMITS, ETC.
- ALL WORK TO BE PERFORMED IN ACCORDANCE WITH APPLICABLE BUILDING CODES AND REGULATIONS. ELECTRICAL RECEPTACLE INSTALLATION ON ROOF AND BLOWER ELECTRICAL CONNECTIONS BY OTHERS.
- ALL WASTES GENERATED TO BE PROPERLY MANAGED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS.
- ALL WORK TO BE FINISHED AT ROOF AND CEILING IS TO BE COMPLETED IN STRICT ACCORDANCE WITH ROOF MANUFACTURER AND ARCHITECT RECOMMENDATIONS TO ENSURE THAT ROOF INTEGRITY IS NOT IMPACTED. ONLY THE ROOF PENETRATIONS SHOWN ON THESE DRAWINGS ARE PERMITTED AND THOSE PENETRATIONS MUST BE MADE PER ARCHITECT AND ROOF MANUFACTURER RECOMMENDATIONS TO ENSURE A LIQUID TIGHT SEAL.
- ALL WORK TO BE COORDINATED WITH NYSDEC AND NYSDOH, AS WELL AS NYC ENVIRONMENTAL AGENCIES, TO ENSURE REGULATORY APPROVALS. WHETHER EXPRESSLY INDICATED ON DESIGN DRAWINGS OR NOT, CONTRACTOR IS RESPONSIBLE FOR COMPLETION OF WORK IN CONFORMANCE WITH NYSDOH "GUIDANCE FOR EVALUATING SOIL VAPOR INTRUSION IN THE STATE OF NEW YORK," OCTOBER 2006, AS AMENDED.
- STRUCTURAL AND ARCHITECTURAL DETAILS INDICATED IN THIS DESIGN PACKAGE WERE REPRODUCED FROM DRAWINGS PREPARED BY OTHERS AND WERE INCLUDED HEREIN SOLELY AS A POINT OF REFERENCE FOR NEW SUB-SLAB DEPRESSURIZATION / SVI MITIGATION SYSTEM COMPONENTS. TECHSOLUTIONS ENGINEERING, P.C. HAS NOT PERFORMED ANY STRUCTURAL ANALYSES, NOR IS RESPONSIBLE FOR ANY STRUCTURAL OR GEOTECHNICAL ASPECTS OF THE DESIGN. CONTRACTOR IS FULLY RESPONSIBLE FOR VERIFICATION OF ACTUAL STRUCTURAL COMPONENTS AND SUBSURFACE UTILITY LOCATIONS AND AVOIDANCE OF SAME.
- THE SVI MITIGATION SYSTEM DESIGN PRESENTED HEREIN WAS BASED UPON ENVIRONMENTAL DATA INCLUDING BUT NOT LIMITED TO SOIL, GROUNDWATER, SOIL VAPOR, AND INDOOR AIR QUALITY DATA, COLLECTED BY OTHERS AS WELL AS LIMITATIONS FOR ACCESS IMPOSED BY THE CLIENT. TECHSOLUTIONS ENGINEERING, P.C. IS NOT RESPONSIBLE IN ANY WAY FOR ERRORS OR OMISSIONS RELATED TO DATA COLLECTED BY AND / OR PROVIDED BY OTHERS. IF DATA COLLECTED BY AND / OR PROVIDED BY OTHERS IS IN ERROR, MODIFICATIONS TO THE DESIGN HEREIN MAY BE NECESSARY TO MEET THE DESIGN INTENT.
- THIS DESIGN HAS BEEN DEVELOPED FOR THE SOLE USE OF TECHSOLUTIONS ENGINEERING, P.C.'S CLIENT AND MAY NOT BE RELIED UPON BY OTHERS WITHOUT THE EXPRESS WRITTEN CONSENT OF TECHSOLUTIONS ENGINEERING, P.C. AND ITS CLIENT.

**IMPORTANT NOTE REGARDING ROOF PENETRATION:**  
 NO ROOF PENETRATIONS ARE PERMITTED ANYWHERE EXCEPT FOR THE TWO - 6" MANIFOLD PENETRATIONS AS SHOWN. ALL ROOF PENETRATIONS TO BE COORDINATED WITH SITE OWNER AND ARCHITECT AND COMPLETED BY LICENSED ROOFING CONTRACTORS IN ACC. W/ MFR. RECOMMENDATIONS TO ENSURE A LIQUID-TIGHT SEAL AND NO LEAKAGE.

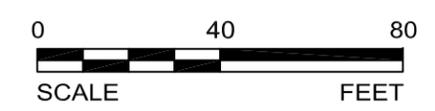


NEW ELECTRICAL RECEPTICAL BY OTHERS, 120VAC, 60HZ, W/GFCI INSTALLED FOR OUTDOOR USE IN ACC. W/ NYC BUILDING AND ELECTRICAL CODE. INSTALL RECEPTACLE WITHIN 3 FEET OF BLOWERS B1 AND B2.

NEW 8" STL. EFFLUENT FROM B-1 THROUGH B-5 MANIFOLD. PIPE TO BE RUN ALONG EXTERIOR WALL AND EXTENDED A MIN. OF 3' ABOVE ROOF LINE. ALL NCHORING TO BE COMPLETED IN ACC. W/ OWNER AND ARCH. REC'DS AND NYC CODE. CONTRACTOR IS RESP. FOR ROPER ANCHORING AND UPPTS AND ENSURING ALL PENETRATIONS ARE SEALED TO RENDER AREA LIQUID TIGHT.

**IMPORTANT NOTE REGARDING PIPE MOUNTING & SUPPORT**  
 CONTRACTOR TO MOUNT PIPING TO CEILING SECURELY WITHOUT PENETRATING THE ROOF

**ROOFING PLAN - NEW SVI COMPONENTS**



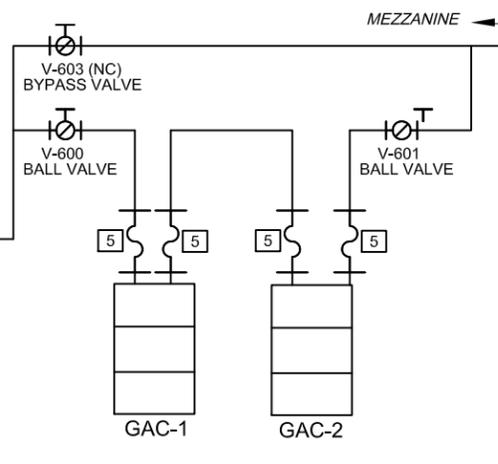
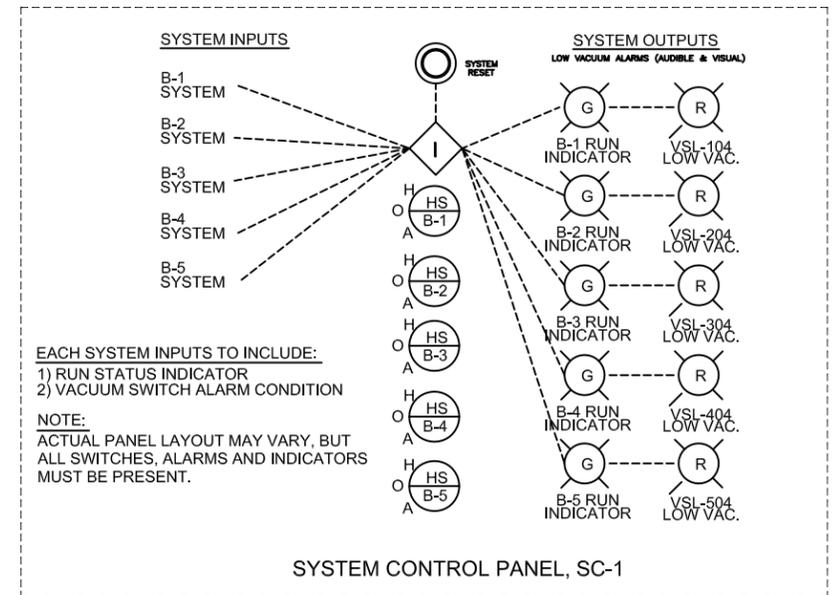
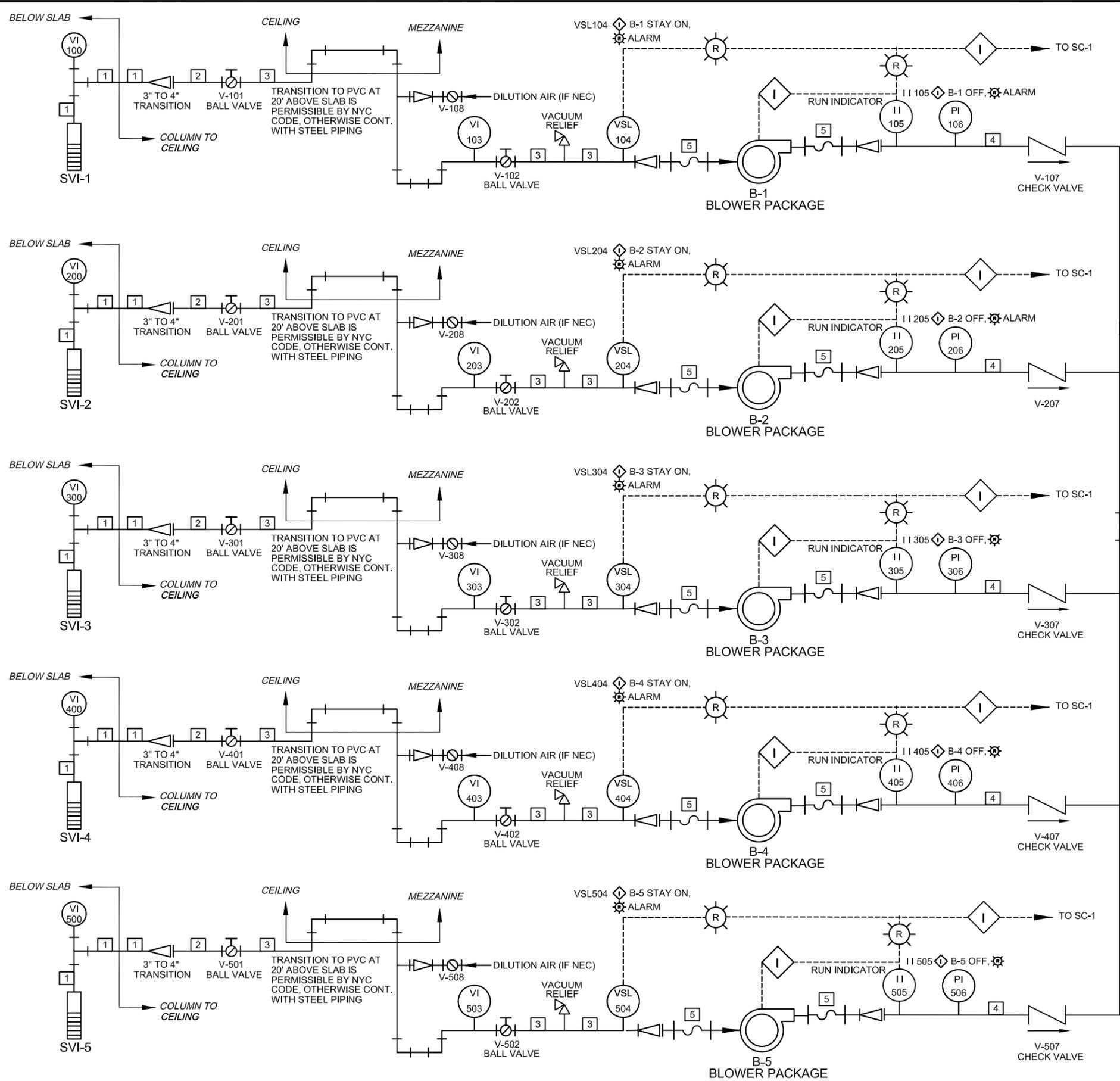
**REVISION 1:**  
 1. RELOCATED BLOWERS B-1 THROUGH B-5 TO 2ND FLOOR MEZZANINE.  
 2. ELIMINATED ALL ROOF PENETRATIONS AND REMOVED ALL EQUIPMENT FROM ROOF.  
 3. ADDED EXTERIOR WALL PENETRATION AND PIPING ALONG LOCUST AVE.  
 4. REFERENCED NYC BUILDING CODE REQT.



TechSolutions Engineering, P.C.  
 52 Oceanview Boulevard  
 Manorville, New York 11949  
 Ph: 914-319-9375  
 Email: techsolnpc@gmail.com

**ROOFING PLAN  
 NEW SVI COMPONENTS**

LOCATION: 295 LOCUST AVENUE BRONX, NEW YORK		DESIGN: DJS
PROJECT NO / FILE SUSDEV1201.01 Sht 4 - Ceiling Manifold Plan	DRAWING DATE: 03/04/12	REV. NO.: 1
		FIGURE: <b>5</b>



**PIPING SCHEDULE**

TAG #	DESCRIPTION	DIA	MATL
1	VENT SCREEN	3"	S.S. WELL
2	SINGLE WELL VENT PIPE / MANIFOLDS	4"	SS
3	SINGLE WELL VENT PIPE / MANIFOLDS	4"	SS / PVC
4	MULTI-WELL VENT PIPE / MANIFOLDS	6"	SS / PVC
5	FLEX HOSE	VARIABLES	VARIABLES

**EQUIPMENT SCHEDULE**

TAG #	DESCRIPTION	MFR.	MODEL	COMMENTS / NOTES
B1 - B5	SVI BLOWER (5 TOT.)	RADONAWAY	RP380	268 CFM @ 1.0"WC, 165 CFM @ 1.5" WC 35 CFM @ 2.0 IN H2O, 115VAC, SINGLE PH
VI	VACUUM INDICATOR	DWYER OR EQ.	2003	0 TO 3.0 IN. W.C., 0.1 INCREMENTS
PI	PRESSURE INDICAT.	DWYER OR EQ.	SGD-D0222N-PY	0 TO 15 PSI, GLYCERIN FILLED
GAC1,2	VAP. PHASE CARBON	CARBTRON	VAPOR DRUM	APPROX 55 GAL DRUM, OR EQUAL

**IMPORTANT ELECTRICAL NOTE:**

ALL ELECTRICAL CONNECTIONS TO BE DESIGNED AND INSTALLED BY OTHERS IN ACCORDANCE WITH NYC ELECTRICAL AND BUILDING CODES. IT SHOULD BE ASSUMED THAT VAPORS FROM THE SUBSURFACE MAY BE EXPLOSIVE AND AS SUCH EXPLOSION PROOF MATERIALS AND ELECTRICAL CONNECTIONS ARE RECOMMENDED

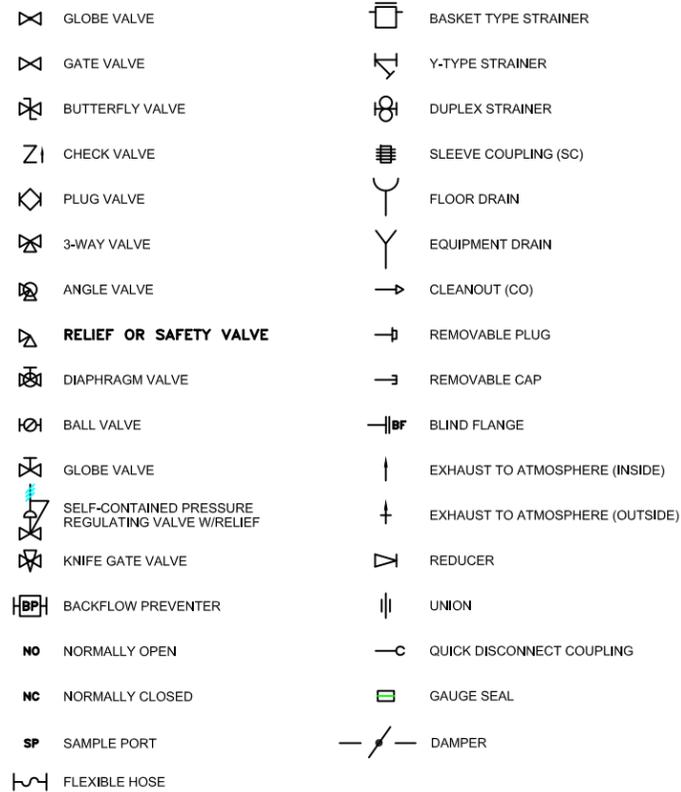
TechSolutions Engineering, P.C.  
52 Oceanview Boulevard  
Manorville, New York 11949  
Ph: 914-319-9375  
Email: techsolnpc@gmail.com

**PIPING & INSTRUMENTATION DIAGRAM & CONTROLS**

LOCATION: 295 LOCUST AVE. BRONX, NEW YORK DESIGN: DJS

PROJECT NO / FILE: SUSDEV1201.01 SHT 6 - P&ID DRAWING DATE: 03/11/12 REV. NO.: 1 FIGURE: 6

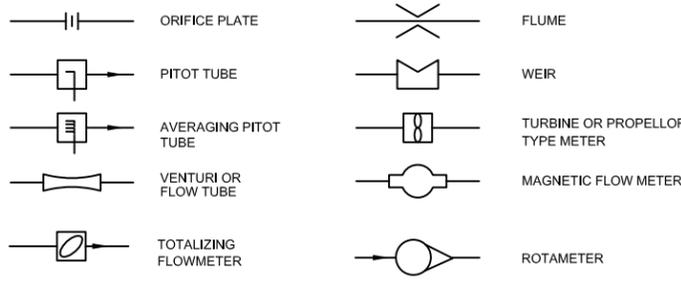
### VALVE AND PIPING SYMBOLS



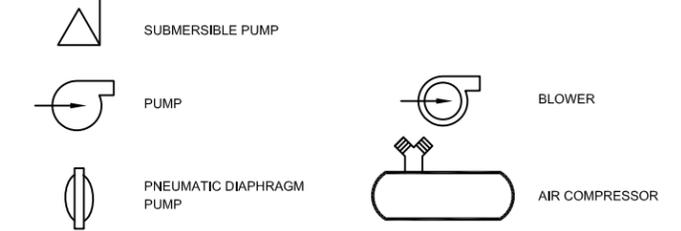
### VALVE OPERATOR SYMBOLS



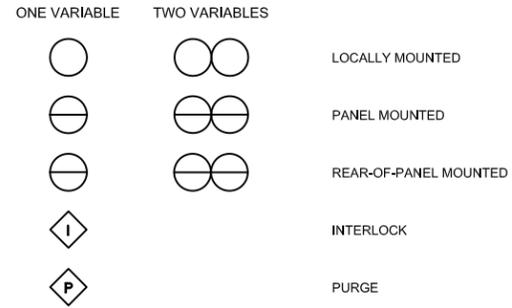
### PRIMARY ELEMENT SYMBOLS - FLOW



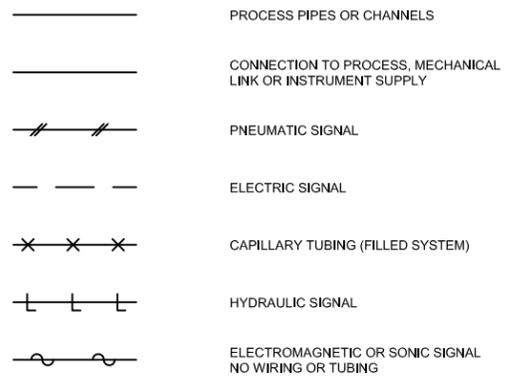
### EQUIPMENT SYMBOLS



### GENERAL INSTRUMENT SYMBOLS



### LINE SYMBOLS



### PROCESS LINE ABBREVIATIONS

AIR	AIR, ATMOSPHERIC PRESSURE
BW	BACKWASH
CA	COMPRESSED AIR
CGW	CONTAMINATED GROUNDWATER
D	DRAIN
EFF	EFFLUENT
EXH	EXHAUST
GW	GROUNDWATER
NPW	NON-POTABLE WATER
P	PRODUCT
PW	POTABLE WATER
S	SANITARY
SL	SLUDGE
SP	SAMPLE PORT
SS	STORM SEWER
TF	TOTAL FLUIDS
V	VENT
VAP	VAPOR

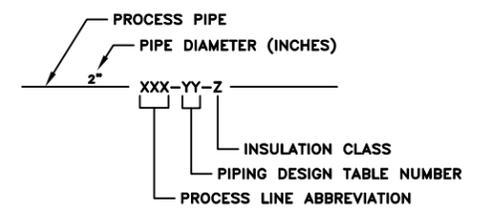
### PIPING MATERIAL IDENTIFICATION

CPVC	CHLORINATED POLYVINYL CHLORIDE
CSP	CARBON STEEL PIPE
COP	COPPER
CMP	CORRUGATED METAL PIPE
CI	CAST IRON PIPE
DIP	DUCTILE IRON PIPE
GAL	GALVANIZED STEEL PIPE
PE	POLYETHYLENE PIPE
PP	POLYPROPYLENE PIPE
PVC	POLYVINYL CHLORIDE PIPE
RCP	REINFORCED CONCRETE PIPE
RUB	RUBBER HOSE
SS	STAINLESS STEEL PIPE
VCP	VITRIFIED CLAY PIPE

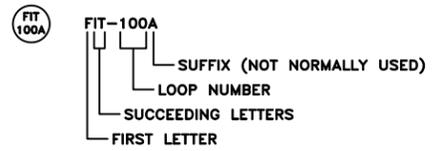
### INSTRUMENT IDENTIFICATION TABLE

FIRST LETTER	SUCCEEDING LETTERS			
	MEASURED OR INITIATING VARIABLE	MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION
A	ANALYSIS		ALARM	
B	BURNER FLAME			
C	CONDUCTIVITY			CONTROL
D	DENSITY (SP. GR.)	DIFFERENTIAL		
E	VOLTAGE		PRIMARY ELEMENT	
F	FLOW RATE	RATIO		
G	GAUGING (DIMENSIONAL)		GLASS	
H	HAND (MANUAL)			HIGH
I	CURRENT		INDICATE	
J	POWER	SCAN		
K	TIME OR SCHEDULE			CONTROL STATION
L	LEVEL		LIGHT (PILOT)	LOW
M	MOISTURE OR HUMIDITY			MIDDLE
N				
O			ORIFICE	
P	PRESSURE OR VACUUM		POINT (TEST)	
Q	QUANT. OR EVENT	INTEGRATE		
R	RADIOACTIVITY		RECORD OR PRINT	
S	SPEED OR FREQ.	SAFETY		SWITCH
T	TEMPERATURE			TRANSMIT
U	MULTIVARIABLE		MULTIFUNCTION	
V	VACUUM			VALVE OR DAMPER
W	WEIGHT OR FORCE		WELL	
X	UNCLASSIFIED		UNCLASSIFIED	
Y				RELAY OR COMPUTE
Z	POSITION			DRIVE, ACTUATE

### PROCESS PIPING IDENTIFICATION



### INSTRUMENT IDENTIFICATION



### FUNCTION ABBREVIATIONS

DO	DISSOLVED OXYGEN	OC	OPEN-CLOSE
FC	FAIL CLOSED	OO	ON-OFF (MAINTAINED)
FI	FAIL INDETERMINATE	ORP	OXIDATION REDUCTION POTENTIAL
FL	FAIL LOCKED	OSC	OPEN-STOP-CLOSE (MOMENTARY)
FO	FAIL OPEN	SS	START-STOP (MOMENTARY)
HOA	HAND-OFF-AUTOMATIC	>	HIGH SELECT
I/A	CURRENT-TO-CURRENT	<	LOW SELECT
I/P	CURRENT-TO-PNEUMATIC	√	SQUARE ROOT
LEL	LOWER EXPLOSIVE LIMIT	Σ	ADD OR TOTALIZE
LR	LOCAL-REMOTE		

### PIPING & INSTRUMENTATION DIAGRAM LEGEND

TechSolutions Engineering, P.C.  
52 Oceanview Boulevard  
Manorville, New York 11949  
Ph: 914-319-9375  
Email: techsolnpc@gmail.com

LOCATION: STREET ADDRESS CITY, STATE DESIGN: DJS

PROJECT NO / FILE: SUSDEV1201.01 DRAWING DATE: 02/20/12 REV. NO.: FIGURE: 7

SHT 6 - P&ID LEGEND

**Appendix B**  
**Analytical Laboratory Reports**





# CENTEK LABORATORIES, LLC

143 Midler Park Drive \* Syracuse, NY 13206

Phone (315) 431-9730 \* Emergency 24/7 (315) 416-2752

NYSDOH ELAP Certificate No. 11830

## **Analytical Report**

Daniel J. Smith  
TechSolutions Engineering, P.C.  
52 Oceanview Boulevard  
Manorville, NY 11949

Tuesday, August 28, 2012

Order No.: C1208075

TEL: (914) 319-9375

FAX:

RE: 295 Locust Ave

Dear Daniel J. Smith:

Centek Laboratories, LLC received 9 sample(s) on 8/23/2012 for the analyses presented in the following report.

I certify that this data package is in compliance with the terms and conditions of the Contract, both technically and for completeness. Release of the data contained in this hardcopy data package and/or in the computer readable data submitted has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

Centek Laboratories performs all analyses according to EPA, NIOSH or OSHA-approved analytical methods. Centek Laboratories is dedicated to providing quality analyses and exceptional customer service. All method blanks, laboratory spikes, and/or matrix spikes met quality assurance objective except as indicated in the case narrative. All samples were received and analyzed within the EPA recommended holding times. Test results are not Method Blank (MB) corrected for contamination.

We do our best to make our reporting format clear and understandable and hope you are thoroughly satisfied with our services. Please contact your client service representative at (315) 431-9730 or myself, if you would like any additional information regarding this report.

Thank you for using Centek Laboratories. This report can not be reproduced except in its entirety, without prior written authorization.

Sincerely,

William Dobbin  
Lead Technical Director

Disclaimer: The test results and procedures utilized, and laboratory interpretations of the data obtained by Centek as contained in this report are believed by Centek to be accurate and reliable

for sample(s) tested. In accepting this report, the customer agrees that the full extent of any and all liability for actual and consequential damages of Centek for the services performed shall be equal to the fee charged to the customer for the services as liquidated damages. ELAP does not offer certification for the following parameters by this method at present time, they are: 4-ethyltoluene, ethyl acetate and propylene.

## Centek Laboratories, LLC Terms and Conditions

### Sample Submission

All samples sent to Centek Laboratories should be accompanied by our Request for Analysis Form or Chain of Custody Form. A Chain of Custody will be provided with each order shipped for all sampling events, or if needed, one is available at our website [www.CentekLabs.com](http://www.CentekLabs.com). Samples received after 3:00pm are considered to be a part of the next day's business.

### Sample Media

Samples can be collected in an canister or a Tedlar bag. Depending on your analytical needs, Centek Laboratories may receive a bulk, liquid, soil or other matrix sample for headspace analysis.

### Blanks

Every sample is run with a surrogate or tracer compound at a pre-established concentration. The surrogate compound run with each sample is used as a standard to measure the performance of each run of the instrument. If required, a Minican can be provided containing nitrogen to be run as a trip blank with your samples.

### Sampling Equipment

Centek Laboratories will be happy to provide the canisters to carry-out your sampling event at no charge. The necessary accessories, such as regulators, tubing or personal sampling belts, are also provided to meet your sampling needs. The customer is responsible for all shipping charges to the client's destination and return shipping to the laboratory. Client assumes all responsibility for lost, stolen and any damages of equipment.

### Turn Around time (TAT)

Centek Laboratories will provide results to its clients in one business-week by 6:00pm EST after receipt of samples. For example, if samples are received on a Monday they are due on the following Monday by 6:00pm EST. Results are faxed or emailed to the requested location indicated on the Chain of Custody. Non-routine analysis may require more than the one business-week turnaround time. Please confirm non-routine sample turnaround times.

### Reporting

Results are emailed or faxed at no additional charge. A hard copy of the result report is mailed within 24 hours of the faxing or emailing of your results. Cat "B" like packages are within 3-4 weeks from time of analysis. Standard Electronic Disk Deliverables (EDD) is also available at no additional charge.

### Payment Terms

Payment for all purchases shall be due within 30 days from date of invoice. The client agrees to pay a finance charge of 1.5% per month on the overdue balance and cost of collection, including attorney fees, if collection proceedings are necessary. You must have a completed credit application on file to extend credit. Purchase orders or checks information must be submitted for

us to release results

### Rush Turnaround Samples

Expedited turn around times is available. Please confirm rush turnaround times with Client Services before submitting samples.

Applicable Surcharges for Rush Turnaround Samples:

Same day TAT = 200%

Next business day TAT by Noon = 150%

Next business day TAT by 6:00pm = 100%

Second business day TAT by 6:00pm = 75%

Third business day TAT by 6:00pm = 50%

Fourth business day TAT by 6:00pm = 35%

Fifth business day = Standard

### Statement of Confidentiality

Centek Laboratories, LLC is aware of the importance of the confidentiality of results to many of our clients. Your name and data will be held in the strictest of confidence. We will not accept business that may constitute a conflict of interest. We commonly sign Confidential Nondisclosure Agreements with clients prior to beginning work. All research, results and reports will be kept strictly confidential. Secrecy Agreements and Disclosure Statements will be signed for the client if so specified. Results will be provided only to the addressee specified on the Chain of Custody Form submitted with the samples unless law requires release. Written permission is required from the addressee to release results to any other party.

### Limitation on Liability

Centek Laboratories, LLC warrants the test results to be accurate to the methodology and sample type for each sample submitted to Centek Laboratories, LLC. In no event shall Centek Laboratories, LLC be liable for direct, indirect, special, punitive, incidental, exemplary or consequential damages, or any damages whatsoever, even if Centek Laboratories, LLC has been previously advised of the possibility of such damages whether in an action under contract, negligence, or any other theory, arising out of or in connection with the use, inability to use or performance of the information, services, products and materials available from the laboratory or this site. These limitations shall apply notwithstanding any failure of essential purpose of any limited remedy. Because some jurisdictions do not allow limitations on how long an implied warranty lasts, or the exclusion or limitation of liability for consequential or incidental damages, the above limitations may not apply to you. This is a comprehensive limitation of liability that applies to all damages of any kind, including (without limitation) compensatory, direct, indirect or consequential damages, loss of data, income or profit and or loss of or damage to property and claims of third parties.



---

**CLIENT:** TechSolutions Engineering, P.C.  
**Project:** 295 Locust Ave  
**Lab Order:** C1208075

**CASE NARRATIVE**

---

Samples were analyzed using the methods outlined in the following references:

Compendium of Methods for the Determination of Toxic Organic Compounds, Compendium Method TO-15, January 1999 and Centek Laboratories, LLC SOP TS-80:

All method blanks, laboratory spikes, and/or matrix spikes met quality assurance objective except as indicated in the corrective action report(s). All samples were received and analyzed within the EPA recommended holding times. Test results are not Method Blank (MB) corrected for contamination.

**NYSDEC ASP samples:**

Canisters should be evacuated to a reading of less than or equal to 50 millitorr prior to shipment to sampling personnel. The vacuum in the canister will be field checked prior to sampling, and must read 28" of Hg ( $\pm 2''$ , vacuum, absolute) before a sample can be collected. After the sample has been collected, the pressure of the canister will be read and recorded again, and must be 5" of Hg ( $\pm 1''$ , vacuum, absolute) for the sample to be valid. Once received at the laboratory, the canister vacuum should be confirmed to be 5" of Hg,  $\pm 1''$ . Please record and report the pressure/vacuum of received canisters on the sample receipt paperwork. A pressure/vacuum reading should also be taken just prior to the withdrawal of sample from the canister, and recorded on the sample preparation log sheet. All regulators are calibrated to meet these requirements before they leave the laboratory. However, due to environmental conditions and use of the equipment Centek can not guarantee that this criteria can always be achieved.

SAMPLE SVMP IS CANISTER # 237

# Centek Chain of Custody

143 Midler Park Drive  
Syracuse, NY 13206  
315-431-9730  
www.CentekLabs.com

Page 5

Site Name: 295 LOCUST AVE  
Project: SUSD E V  
PO#: N/A  
Quote # 0-  
Other: SPI416

Vapor Intrusion & IAQ

Check One  Rush TAT Due Date: 8/29/12  
 0% Surchage %  
 25%  
 50%  
 75%  
 100%  
 150%  
 200%

Turnaround Time:  
 5 Business Days  
 4 Business Days  
 3 Business Days  
 2 Business Days  
 Next Day by 5pm  
 Next Day by Noon  
 Same Day

Company: TECHNICAL SOLUTIONS ENGINEERING  
 Check Here If Same:   
 Invoice to:  
 Address: ATTENTION: DAN SMITH  
 City, State, Zip: 52 OCEANVIEW BLVD  
 City, State, Zip: MANORVILLE, NY 11949  
 Email: techsolops@gmail.com  
 Phone: smithd@optonline.net  
 Phone: 914-819-9375

Sample ID	Canister Number	Regulator Number	Analysis Request	Comments	Vacuum Start/Step
SUMP-1	420	156	TD-15	MYSDOH DETECTOR	29.0
IAQ-1	541	278		LIMITS	28.0
SUMP-2	85	144			28.0
IAQ-2	562	290			29.5
SUMP-5	227	156			29.5
IAQ-5	318	292			29.0
SUMP-6	78	262			29.5
IAQ-6	556	153			29.0
AMB-1	406	176		← BACKGROUND	29.0
				UPWARD	
				NOTE SUMP =	
				SUB SCAB	
				IAQ =	
				INDOOR AIR (OUTSIDE)	

Chain of Custody  
 Sampled by: DANIEL J. SMITH  
 Relinquished by: Dan Scale  
 Received at Lab by: Dan Scale

Signature: [Signature]  
 Print Name: DANIEL J. SMITH

Date/Time: 8/21/12 15:14  
 Courier: CIRCLE ONE  
 FedEx UPS Pickup/Dropoff

For LAB USE ONLY  
 Work Order #: 1208075

\*\*\* By signing Centek Labs Chain of Custody, you are accepting Centek Labs Terms and Conditions listed on the reverse side.



CENTEK LABORATORIES, LLC

Sample Receipt Checklist

Client Name: TECHSOLUTIONS

Date and Time Received:

8/23/2012

Work Order Number C1208075

Received by: JDS

Checklist completed by:

Signature

Date

Reviewed by:

Initials

Date

Matrix:

Carrier name: FedEx

- Shipping container/cooler in good condition? Yes  No  Not Present
- Custody seals intact on shipping container/cooler? Yes  No  Not Present
- Custody seals intact on sample bottles? Yes  No  Not Present
- Chain of custody present? Yes  No
- Chain of custody signed when relinquished and received? Yes  No
- Chain of custody agrees with sample labels? Yes  No
- Samples in proper container/bottle? Yes  No
- Sample containers intact? Yes  No
- Sufficient sample volume for indicated test? Yes  No
- All samples received within holding time? Yes  No
- Container/Temp Blank temperature in compliance? Yes  No
- Water - VOA vials have zero headspace? No VOA vials submitted  Yes  No
- Water - pH acceptable upon receipt? Yes  No

Adjusted? \_\_\_\_\_ Checked by \_\_\_\_\_

Any No and/or NA (not applicable) response must be detailed in the comments section below.

Client contacted: \_\_\_\_\_ Date contacted: \_\_\_\_\_ Person contacted: \_\_\_\_\_

Contacted by: \_\_\_\_\_ Regarding: \_\_\_\_\_

Comments: \_\_\_\_\_

Sample SUMP is canister # 237

Corrective Action: \_\_\_\_\_



---

**CLIENT:** TechSolutions Engineering, P.C.  
**Project:** 295 Locust Ave  
**Lab Order:** C1208075

**Work Order Sample Summary**

---

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
C1208075-001A	SVMP-1	420,456	8/21/2012	8/23/2012
C1208075-002A	IAQ-1	541,278	8/21/2012	8/23/2012
C1208075-003A	SVMP-2	85,144	8/21/2012	8/23/2012
C1208075-004A	IAQ-2	202,296	8/21/2012	8/23/2012
C1208075-005A	SVMP-5	237,156	8/21/2012	8/23/2012
C1208075-006A	IAQ-5	318,292	8/21/2012	8/23/2012
C1208075-007A	SVMP-6	78,262	8/21/2012	8/23/2012

---

---

**CLIENT:** TechSolutions Engineering, P.C.  
**Project:** 295 Locust Ave  
**Lab Order:** C1208075

## Work Order Sample Summary

---

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
C1208075-008A	IAQ-6	556,153	8/21/2012	8/23/2012
C1208075-009A	AMB-1	406,176	8/21/2012	8/23/2012

**Lab Order:** C1208075  
**Client:** TechSolutions Engineering, P.C.  
**Project:** 295 Locust Ave

**DATES REPORT**

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
C1208075-001A	SVMP-1	8/21/2012	Air	1ug/M3 by Method TO15			8/24/2012
C1208075-002A	IAQ-1			1ug/M3 by Method TO15			8/24/2012
C1208075-003A	SVMP-2			1ug/M3 by Method TO15			8/24/2012
C1208075-004A	IAQ-2			1ug/m3 w/ 0.25ug/M3 CT-TCE-VC			8/27/2012
C1208075-005A	SVMP-5			1ug/m3 w/ 0.25ug/M3 CT-TCE-VC			8/24/2012
C1208075-006A	IAQ-5			1ug/M3 by Method TO15			8/25/2012
C1208075-007A	SVMP-6			1ug/M3 by Method TO15			8/24/2012
C1208075-008A	IAQ-6			1ug/m3 w/ 0.25ug/M3 CT-TCE-VC			8/24/2012
C1208075-009A	AMB-1			1ug/m3 w/ 0.25ug/M3 CT-TCE-VC			8/24/2012
				1ug/M3 by Method TO15			8/24/2012
				1ug/M3 by Method TO15			8/25/2012
				1ug/m3 w/ 0.25ug/M3 CT-TCE-VC			8/24/2012
				1ug/m3 w/ 0.25ug/M3 CT-TCE-VC			8/24/2012
				1ug/M3 by Method TO15			8/24/2012
				1ug/m3 w/ 0.25ug/M3 CT-TCE-VC			8/24/2012
				1ug/m3 w/ 0.25ug/M3 CT-TCE-VC			8/24/2012
				1ug/M3 by Method TO15			8/24/2012

**Centek Laboratories, LLC**

Date: 28-Aug-12

**CLIENT:** TechSolutions Engineering, P.C.  
**Lab Order:** C1208075  
**Project:** 295 Locust Ave  
**Lab ID:** C1208075-001A

**Client Sample ID:** SVMP-1  
**Tag Number:** 420,456  
**Collection Date:** 8/21/2012  
**Matrix:** AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>FIELD PARAMETERS</b>		<b>FLD</b>		Analyst:		
Lab Vacuum In	-6			"Hg		8/23/2012
Lab Vacuum Out	-30			"Hg		8/23/2012
<b>1UG/M3 BY METHOD TO15</b>		<b>TO-15</b>		Analyst: <b>RJP</b>		
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	8/24/2012 4:12:00 PM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	8/24/2012 4:12:00 PM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	8/24/2012 4:12:00 PM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	8/24/2012 4:12:00 PM
1,1-Dichloroethene	0.89	0.15		ppbV	1	8/24/2012 4:12:00 PM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	8/24/2012 4:12:00 PM
1,2,4-Trimethylbenzene	2.5	1.5		ppbV	10	8/24/2012 9:49:00 PM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	8/24/2012 4:12:00 PM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	8/24/2012 4:12:00 PM
1,2-Dichloroethane	< 0.15	0.15		ppbV	1	8/24/2012 4:12:00 PM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	8/24/2012 4:12:00 PM
1,3,5-Trimethylbenzene	1.2	0.15		ppbV	1	8/24/2012 4:12:00 PM
1,3-butadiene	< 0.15	0.15		ppbV	1	8/24/2012 4:12:00 PM
1,3-Dichlorobenzene	< 0.15	0.15		ppbV	1	8/24/2012 4:12:00 PM
1,4-Dichlorobenzene	< 0.15	0.15		ppbV	1	8/24/2012 4:12:00 PM
1,4-Dioxane	< 0.30	0.30		ppbV	1	8/24/2012 4:12:00 PM
2,2,4-trimethylpentane	22	1.5		ppbV	10	8/24/2012 9:49:00 PM
4-ethyltoluene	0.94	0.15		ppbV	1	8/24/2012 4:12:00 PM
Acetone	9.5	3.0		ppbV	10	8/24/2012 9:49:00 PM
Allyl chloride	< 0.15	0.15		ppbV	1	8/24/2012 4:12:00 PM
Benzene	1.6	0.15		ppbV	1	8/24/2012 4:12:00 PM
Benzyl chloride	< 0.15	0.15		ppbV	1	8/24/2012 4:12:00 PM
Bromodichloromethane	0.72	0.15		ppbV	1	8/24/2012 4:12:00 PM
Bromoform	< 0.15	0.15		ppbV	1	8/24/2012 4:12:00 PM
Bromomethane	< 0.15	0.15		ppbV	1	8/24/2012 4:12:00 PM
Carbon disulfide	51	6.0		ppbV	40	8/24/2012 10:27:00 PM
Carbon tetrachloride	< 0.15	0.15		ppbV	1	8/24/2012 4:12:00 PM
Chlorobenzene	< 0.15	0.15		ppbV	1	8/24/2012 4:12:00 PM
Chloroethane	< 0.15	0.15		ppbV	1	8/24/2012 4:12:00 PM
Chloroform	44	6.0		ppbV	40	8/24/2012 10:27:00 PM
Chloromethane	< 0.15	0.15		ppbV	1	8/24/2012 4:12:00 PM
cis-1,2-Dichloroethene	940	120		ppbV	810	8/27/2012 4:13:00 PM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	8/24/2012 4:12:00 PM
Cyclohexane	5.3	1.5		ppbV	10	8/24/2012 9:49:00 PM
Dibromochloromethane	< 0.15	0.15		ppbV	1	8/24/2012 4:12:00 PM
Ethyl acetate	< 0.25	0.25		ppbV	1	8/24/2012 4:12:00 PM

**Qualifiers:** \*\* Reporting Limit . Results reported are not blank corrected  
 B Analyte detected in the associated Method Blank E Value above quantitation range  
 H Holding times for preparation or analysis exceeded J Analyte detected at or below quantitation limits  
 JN Non-routine analyte. Quantitation estimated. ND Not Detected at the Reporting Limit  
 S Spike Recovery outside accepted recovery limits

# Centek Laboratories, LLC

Date: 28-Aug-12

**CLIENT:** TechSolutions Engineering, P.C.  
**Lab Order:** C1208075  
**Project:** 295 Locust Ave  
**Lab ID:** C1208075-001A

**Client Sample ID:** SVMP-1  
**Tag Number:** 420,456  
**Collection Date:** 8/21/2012  
**Matrix:** AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>1UG/M3 BY METHOD TO15</b>		<b>TO-15</b>		Analyst: <b>RJP</b>		
Ethylbenzene	1.7	0.15		ppbV	1	8/24/2012 4:12:00 PM
Freon 11	0.31	0.15		ppbV	1	8/24/2012 4:12:00 PM
Freon 113	< 0.15	0.15		ppbV	1	8/24/2012 4:12:00 PM
Freon 114	< 0.15	0.15		ppbV	1	8/24/2012 4:12:00 PM
Freon 12	0.47	0.15		ppbV	1	8/24/2012 4:12:00 PM
Heptane	0.43	0.15		ppbV	1	8/24/2012 4:12:00 PM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	8/24/2012 4:12:00 PM
Hexane	1.7	0.15		ppbV	1	8/24/2012 4:12:00 PM
Isopropyl alcohol	1.4	0.15		ppbV	1	8/24/2012 4:12:00 PM
m&p-Xylene	3.8	0.30		ppbV	1	8/24/2012 4:12:00 PM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	8/24/2012 4:12:00 PM
Methyl Ethyl Ketone	< 0.30	0.30		ppbV	1	8/24/2012 4:12:00 PM
Methyl Isobutyl Ketone	< 0.30	0.30		ppbV	1	8/24/2012 4:12:00 PM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	8/24/2012 4:12:00 PM
Methylene chloride	0.37	0.15		ppbV	1	8/24/2012 4:12:00 PM
o-Xylene	2.5	1.5		ppbV	10	8/24/2012 9:49:00 PM
Propylene	< 0.15	0.15		ppbV	1	8/24/2012 4:12:00 PM
Styrene	7.2	1.5		ppbV	10	8/24/2012 9:49:00 PM
Tetrachloroethylene	2100	120		ppbV	810	8/27/2012 4:13:00 PM
Tetrahydrofuran	< 0.15	0.15		ppbV	1	8/24/2012 4:12:00 PM
Toluene	6.1	1.5		ppbV	10	8/24/2012 9:49:00 PM
trans-1,2-Dichloroethene	150	120		ppbV	810	8/27/2012 4:13:00 PM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	8/24/2012 4:12:00 PM
Trichloroethene	360	120		ppbV	810	8/27/2012 4:13:00 PM
Vinyl acetate	< 0.15	0.15		ppbV	1	8/24/2012 4:12:00 PM
Vinyl Bromide	< 0.15	0.15		ppbV	1	8/24/2012 4:12:00 PM
Vinyl chloride	16	1.5		ppbV	10	8/24/2012 9:49:00 PM
Surr: Bromofluorobenzene	125	70-130		%REC	1	8/24/2012 4:12:00 PM

**Qualifiers:** \*\* Reporting Limit . Results reported are not blank corrected  
 B Analyte detected in the associated Method Blank E Value above quantitation range  
 H Holding times for preparation or analysis exceeded J Analyte detected at or below quantitation limits  
 JN Non-routine analyte. Quantitation estimated. ND Not Detected at the Reporting Limit  
 S Spike Recovery outside accepted recovery limits

**Centek Laboratories, LLC**

Date: 28-Aug-12

**CLIENT:** TechSolutions Engineering, P.C.  
**Lab Order:** C1208075  
**Project:** 295 Locust Ave  
**Lab ID:** C1208075-002A

**Client Sample ID:** IAQ-1  
**Tag Number:** 541,278  
**Collection Date:** 8/21/2012  
**Matrix:** AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>FIELD PARAMETERS</b>		<b>FLD</b>		Analyst:		
Lab Vacuum In	-1			"Hg		8/23/2012
Lab Vacuum Out	-30			"Hg		8/23/2012
<b>1UG/M3 W/ 0.25UG/M3 CT-TCE-VC</b>		<b>TO-15</b>		Analyst: RJP		
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	8/24/2012 6:51:00 AM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	8/24/2012 6:51:00 AM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	8/24/2012 6:51:00 AM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	8/24/2012 6:51:00 AM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	8/24/2012 6:51:00 AM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	8/24/2012 6:51:00 AM
1,2,4-Trimethylbenzene	0.41	0.15		ppbV	1	8/24/2012 6:51:00 AM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	8/24/2012 6:51:00 AM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	8/24/2012 6:51:00 AM
1,2-Dichloroethane	< 0.15	0.15		ppbV	1	8/24/2012 6:51:00 AM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	8/24/2012 6:51:00 AM
1,3,5-Trimethylbenzene	0.22	0.15		ppbV	1	8/24/2012 6:51:00 AM
1,3-butadiene	< 0.15	0.15		ppbV	1	8/24/2012 6:51:00 AM
1,3-Dichlorobenzene	< 0.15	0.15		ppbV	1	8/24/2012 6:51:00 AM
1,4-Dichlorobenzene	< 0.15	0.15		ppbV	1	8/24/2012 6:51:00 AM
1,4-Dioxane	< 0.30	0.30		ppbV	1	8/24/2012 6:51:00 AM
2,2,4-trimethylpentane	0.20	0.15		ppbV	1	8/24/2012 6:51:00 AM
4-ethyltoluene	0.12	0.15	J	ppbV	1	8/24/2012 6:51:00 AM
Acetone	8.6	3.0		ppbV	10	8/24/2012 6:42:00 PM
Allyl chloride	< 0.15	0.15		ppbV	1	8/24/2012 6:51:00 AM
Benzene	0.23	0.15		ppbV	1	8/24/2012 6:51:00 AM
Benzyl chloride	< 0.15	0.15		ppbV	1	8/24/2012 6:51:00 AM
Bromodichloromethane	< 0.15	0.15		ppbV	1	8/24/2012 6:51:00 AM
Bromoform	< 0.15	0.15		ppbV	1	8/24/2012 6:51:00 AM
Bromomethane	< 0.15	0.15		ppbV	1	8/24/2012 6:51:00 AM
Carbon disulfide	< 0.15	0.15		ppbV	1	8/24/2012 6:51:00 AM
Carbon tetrachloride	0.070	0.040		ppbV	1	8/24/2012 6:51:00 AM
Chlorobenzene	< 0.15	0.15		ppbV	1	8/24/2012 6:51:00 AM
Chloroethane	< 0.15	0.15		ppbV	1	8/24/2012 6:51:00 AM
Chloroform	< 0.15	0.15		ppbV	1	8/24/2012 6:51:00 AM
Chloromethane	0.43	0.15		ppbV	1	8/24/2012 6:51:00 AM
cis-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	8/24/2012 6:51:00 AM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	8/24/2012 6:51:00 AM
Cyclohexane	< 0.15	0.15		ppbV	1	8/24/2012 6:51:00 AM
Dibromochloromethane	< 0.15	0.15		ppbV	1	8/24/2012 6:51:00 AM
Ethyl acetate	0.41	0.25		ppbV	1	8/24/2012 6:51:00 AM

**Qualifiers:** \*\* Reporting Limit . Results reported are not blank corrected  
 B Analyte detected in the associated Method Blank E Value above quantitation range  
 H Holding times for preparation or analysis exceeded J Analyte detected at or below quantitation limits  
 JN Non-routine analyte. Quantitation estimated. ND Not Detected at the Reporting Limit  
 S Spike Recovery outside accepted recovery limits

# Centek Laboratories, LLC

Date: 28-Aug-12

**CLIENT:** TechSolutions Engineering, P.C.  
**Lab Order:** C1208075  
**Project:** 295 Locust Ave  
**Lab ID:** C1208075-002A

**Client Sample ID:** IAQ-1  
**Tag Number:** 541,278  
**Collection Date:** 8/21/2012  
**Matrix:** AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>1UG/M3 W/ 0.25UG/M3 CT-TCE-VC</b>						
			<b>TO-15</b>			Analyst: <b>RJP</b>
Ethylbenzene	0.17	0.15		ppbV	1	8/24/2012 6:51:00 AM
Freon 11	0.27	0.15		ppbV	1	8/24/2012 6:51:00 AM
Freon 113	0.13	0.15	J	ppbV	1	8/24/2012 6:51:00 AM
Freon 114	< 0.15	0.15		ppbV	1	8/24/2012 6:51:00 AM
Freon 12	0.58	0.15		ppbV	1	8/24/2012 6:51:00 AM
Heptane	0.17	0.15		ppbV	1	8/24/2012 6:51:00 AM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	8/24/2012 6:51:00 AM
Hexane	0.39	0.15		ppbV	1	8/24/2012 6:51:00 AM
Isopropyl alcohol	2.2	0.15		ppbV	1	8/24/2012 6:51:00 AM
m&p-Xylene	0.40	0.30		ppbV	1	8/24/2012 6:51:00 AM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	8/24/2012 6:51:00 AM
Methyl Ethyl Ketone	1.4	0.30		ppbV	1	8/24/2012 6:51:00 AM
Methyl Isobutyl Ketone	< 0.30	0.30		ppbV	1	8/24/2012 6:51:00 AM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	8/24/2012 6:51:00 AM
Methylene chloride	0.22	0.15		ppbV	1	8/24/2012 6:51:00 AM
o-Xylene	0.13	0.15	J	ppbV	1	8/24/2012 6:51:00 AM
Propylene	< 0.15	0.15		ppbV	1	8/24/2012 6:51:00 AM
Styrene	< 0.15	0.15		ppbV	1	8/24/2012 6:51:00 AM
Tetrachloroethylene	0.19	0.15		ppbV	1	8/24/2012 6:51:00 AM
Tetrahydrofuran	< 0.15	0.15		ppbV	1	8/24/2012 6:51:00 AM
Toluene	1.2	0.15		ppbV	1	8/24/2012 6:51:00 AM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	8/24/2012 6:51:00 AM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	8/24/2012 6:51:00 AM
Trichloroethene	7.0	0.040		ppbV	1	8/24/2012 6:51:00 AM
Vinyl acetate	< 0.15	0.15		ppbV	1	8/24/2012 6:51:00 AM
Vinyl Bromide	< 0.15	0.15		ppbV	1	8/24/2012 6:51:00 AM
Vinyl chloride	< 0.040	0.040		ppbV	1	8/24/2012 6:51:00 AM
Surr: Bromofluorobenzene	108	70-130		%REC	1	8/24/2012 6:51:00 AM

**Qualifiers:** \*\* Reporting Limit . Results reported are not blank corrected  
 B Analyte detected in the associated Method Blank E Value above quantitation range  
 H Holding times for preparation or analysis exceeded J Analyte detected at or below quantitation limits  
 JN Non-routine analyte. Quantitation estimated. ND Not Detected at the Reporting Limit  
 S Spike Recovery outside accepted recovery limits

# Centek Laboratories, LLC

Date: 28-Aug-12

**CLIENT:** TechSolutions Engineering, P.C.  
**Lab Order:** C1208075  
**Project:** 295 Locust Ave  
**Lab ID:** C1208075-003A

**Client Sample ID:** SVMP-2  
**Tag Number:** 85,144  
**Collection Date:** 8/21/2012  
**Matrix:** AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>FIELD PARAMETERS</b>			<b>FLD</b>		Analyst:	
Lab Vacuum In	-1			"Hg		8/23/2012
Lab Vacuum Out	-30			"Hg		8/23/2012
<b>1UG/M3 BY METHOD TO15</b>			<b>TO-15</b>		Analyst: <b>RJP</b>	
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	8/24/2012 4:49:00 PM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	8/24/2012 4:49:00 PM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	8/24/2012 4:49:00 PM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	8/24/2012 4:49:00 PM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	8/24/2012 4:49:00 PM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	8/24/2012 4:49:00 PM
1,2,4-Trimethylbenzene	0.93	0.15		ppbV	1	8/24/2012 4:49:00 PM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	8/24/2012 4:49:00 PM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	8/24/2012 4:49:00 PM
1,2-Dichloroethane	< 0.15	0.15		ppbV	1	8/24/2012 4:49:00 PM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	8/24/2012 4:49:00 PM
1,3,5-Trimethylbenzene	0.42	0.15		ppbV	1	8/24/2012 4:49:00 PM
1,3-butadiene	< 0.15	0.15		ppbV	1	8/24/2012 4:49:00 PM
1,3-Dichlorobenzene	< 0.15	0.15		ppbV	1	8/24/2012 4:49:00 PM
1,4-Dichlorobenzene	< 0.15	0.15		ppbV	1	8/24/2012 4:49:00 PM
1,4-Dioxane	< 0.30	0.30		ppbV	1	8/24/2012 4:49:00 PM
2,2,4-trimethylpentane	500	120		ppbV	810	8/27/2012 6:04:00 PM
4-ethyltoluene	0.29	0.15		ppbV	1	8/24/2012 4:49:00 PM
Acetone	15	3.0		ppbV	10	8/24/2012 11:04:00 PM
Allyl chloride	< 0.15	0.15		ppbV	1	8/24/2012 4:49:00 PM
Benzene	1.6	0.15		ppbV	1	8/24/2012 4:49:00 PM
Benzyl chloride	< 0.15	0.15		ppbV	1	8/24/2012 4:49:00 PM
Bromodichloromethane	< 0.15	0.15		ppbV	1	8/24/2012 4:49:00 PM
Bromoform	< 0.15	0.15		ppbV	1	8/24/2012 4:49:00 PM
Bromomethane	< 0.15	0.15		ppbV	1	8/24/2012 4:49:00 PM
Carbon disulfide	23	1.5		ppbV	10	8/24/2012 11:04:00 PM
Carbon tetrachloride	< 0.15	0.15		ppbV	1	8/24/2012 4:49:00 PM
Chlorobenzene	< 0.15	0.15		ppbV	1	8/24/2012 4:49:00 PM
Chloroethane	< 0.15	0.15		ppbV	1	8/24/2012 4:49:00 PM
Chloroform	< 0.15	0.15		ppbV	1	8/24/2012 4:49:00 PM
Chloromethane	< 0.15	0.15		ppbV	1	8/24/2012 4:49:00 PM
cis-1,2-Dichloroethene	120	6.0		ppbV	40	8/27/2012 10:39:00 AM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	8/24/2012 4:49:00 PM
Cyclohexane	< 0.15	0.15		ppbV	1	8/24/2012 4:49:00 PM
Dibromochloromethane	< 0.15	0.15		ppbV	1	8/24/2012 4:49:00 PM
Ethyl acetate	< 0.25	0.25		ppbV	1	8/24/2012 4:49:00 PM

**Qualifiers:** \*\* Reporting Limit . Results reported are not blank corrected  
 B Analyte detected in the associated Method Blank E Value above quantitation range  
 H Holding times for preparation or analysis exceeded J Analyte detected at or below quantitation limits  
 JN Non-routine analyte. Quantitation estimated. ND Not Detected at the Reporting Limit  
 S Spike Recovery outside accepted recovery limits

**Centek Laboratories, LLC**

Date: 28-Aug-12

**CLIENT:** TechSolutions Engineering, P.C.  
**Lab Order:** C1208075  
**Project:** 295 Locust Ave  
**Lab ID:** C1208075-003A

**Client Sample ID:** SVMP-2  
**Tag Number:** 85,144  
**Collection Date:** 8/21/2012  
**Matrix:** AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>1UG/M3 BY METHOD TO15</b>		<b>TO-15</b>		Analyst: <b>RJP</b>		
Ethylbenzene	0.43	0.15		ppbV	1	8/24/2012 4:49:00 PM
Freon 11	0.26	0.15		ppbV	1	8/24/2012 4:49:00 PM
Freon 113	< 0.15	0.15		ppbV	1	8/24/2012 4:49:00 PM
Freon 114	< 0.15	0.15		ppbV	1	8/24/2012 4:49:00 PM
Freon 12	0.45	0.15		ppbV	1	8/24/2012 4:49:00 PM
Heptane	1.9	0.15		ppbV	1	8/24/2012 4:49:00 PM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	8/24/2012 4:49:00 PM
Hexane	29	6.0		ppbV	40	8/27/2012 10:39:00 AM
Isopropyl alcohol	2.0	0.15		ppbV	1	8/24/2012 4:49:00 PM
m&p-Xylene	1.2	0.30		ppbV	1	8/24/2012 4:49:00 PM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	8/24/2012 4:49:00 PM
Methyl Ethyl Ketone	< 0.30	0.30		ppbV	1	8/24/2012 4:49:00 PM
Methyl Isobutyl Ketone	< 0.30	0.30		ppbV	1	8/24/2012 4:49:00 PM
Methyl tert-butyl ether	0.82	0.15		ppbV	1	8/24/2012 4:49:00 PM
Methylene chloride	< 0.15	0.15		ppbV	1	8/24/2012 4:49:00 PM
o-Xylene	0.54	0.15		ppbV	1	8/24/2012 4:49:00 PM
Propylene	< 0.15	0.15		ppbV	1	8/24/2012 4:49:00 PM
Styrene	< 0.15	0.15		ppbV	1	8/24/2012 4:49:00 PM
Tetrachloroethylene	220	120		ppbV	810	8/27/2012 6:04:00 PM
Tetrahydrofuran	< 0.15	0.15		ppbV	1	8/24/2012 4:49:00 PM
Toluene	3.0	1.5		ppbV	10	8/24/2012 11:04:00 PM
trans-1,2-Dichloroethene	6.6	1.5		ppbV	10	8/24/2012 11:04:00 PM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	8/24/2012 4:49:00 PM
Trichloroethene	110	6.0		ppbV	40	8/27/2012 10:39:00 AM
Vinyl acetate	< 0.15	0.15		ppbV	1	8/24/2012 4:49:00 PM
Vinyl Bromide	< 0.15	0.15		ppbV	1	8/24/2012 4:49:00 PM
Vinyl chloride	0.60	0.15		ppbV	1	8/24/2012 4:49:00 PM
Surr: Bromofluorobenzene	114	70-130		%REC	1	8/24/2012 4:49:00 PM

**Qualifiers:** \*\* Reporting Limit . Results reported are not blank corrected  
 B Analyte detected in the associated Method Blank E Value above quantitation range  
 H Holding times for preparation or analysis exceeded J Analyte detected at or below quantitation limits  
 JN Non-routine analyte. Quantitation estimated. ND Not Detected at the Reporting Limit  
 S Spike Recovery outside accepted recovery limits



**Centek Laboratories, LLC**

Date: 28-Aug-12

**CLIENT:** TechSolutions Engineering, P.C.  
**Lab Order:** C1208075  
**Project:** 295 Locust Ave  
**Lab ID:** C1208075-004A

**Client Sample ID:** IAQ-2  
**Tag Number:** 202,296  
**Collection Date:** 8/21/2012  
**Matrix:** AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>1UG/M3 W/ 0.25UG/M3 CT-TCE-VC</b>						
				<b>TO-15</b>		Analyst: <b>RJP</b>
Ethylbenzene	0.13	0.15	J	ppbV	1	8/24/2012 7:29:00 AM
Freon 11	0.28	0.15		ppbV	1	8/24/2012 7:29:00 AM
Freon 113	< 0.15	0.15		ppbV	1	8/24/2012 7:29:00 AM
Freon 114	< 0.15	0.15		ppbV	1	8/24/2012 7:29:00 AM
Freon 12	0.64	0.15		ppbV	1	8/24/2012 7:29:00 AM
Heptane	0.20	0.15		ppbV	1	8/24/2012 7:29:00 AM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	8/24/2012 7:29:00 AM
Hexane	0.44	0.15		ppbV	1	8/24/2012 7:29:00 AM
Isopropyl alcohol	2.2	0.15		ppbV	1	8/24/2012 7:29:00 AM
m&p-Xylene	0.39	0.30		ppbV	1	8/24/2012 7:29:00 AM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	8/24/2012 7:29:00 AM
Methyl Ethyl Ketone	0.89	0.30		ppbV	1	8/24/2012 7:29:00 AM
Methyl Isobutyl Ketone	< 0.30	0.30		ppbV	1	8/24/2012 7:29:00 AM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	8/24/2012 7:29:00 AM
Methylene chloride	0.20	0.15		ppbV	1	8/24/2012 7:29:00 AM
o-Xylene	0.12	0.15	J	ppbV	1	8/24/2012 7:29:00 AM
Propylene	< 0.15	0.15		ppbV	1	8/24/2012 7:29:00 AM
Styrene	< 0.15	0.15		ppbV	1	8/24/2012 7:29:00 AM
Tetrachloroethylene	0.25	0.15		ppbV	1	8/24/2012 7:29:00 AM
Tetrahydrofuran	< 0.15	0.15		ppbV	1	8/24/2012 7:29:00 AM
Toluene	1.2	0.15		ppbV	1	8/24/2012 7:29:00 AM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	8/24/2012 7:29:00 AM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	8/24/2012 7:29:00 AM
Trichloroethene	< 0.040	0.040		ppbV	1	8/24/2012 7:29:00 AM
Vinyl acetate	< 0.15	0.15		ppbV	1	8/24/2012 7:29:00 AM
Vinyl Bromide	< 0.15	0.15		ppbV	1	8/24/2012 7:29:00 AM
Vinyl chloride	< 0.040	0.040		ppbV	1	8/24/2012 7:29:00 AM
Surr: Bromofluorobenzene	107	70-130		%REC	1	8/24/2012 7:29:00 AM

**Qualifiers:** \*\* Reporting Limit . Results reported are not blank corrected  
 B Analyte detected in the associated Method Blank E Value above quantitation range  
 H Holding times for preparation or analysis exceeded J Analyte detected at or below quantitation limits  
 JN Non-routine analyte. Quantitation estimated. ND Not Detected at the Reporting Limit  
 S Spike Recovery outside accepted recovery limits

**Centek Laboratories, LLC**

Date: 28-Aug-12

**CLIENT:** TechSolutions Engineering, P.C.  
**Lab Order:** C1208075  
**Project:** 295 Locust Ave  
**Lab ID:** C1208075-005A

**Client Sample ID:** SVMP-5  
**Tag Number:** 237,156  
**Collection Date:** 8/21/2012  
**Matrix:** AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>FIELD PARAMETERS</b>		<b>FLD</b>		Analyst:		
Lab Vacuum In	-1			"Hg		8/23/2012
Lab Vacuum Out	-30			"Hg		8/23/2012
<b>1UG/M3 BY METHOD TO15</b>		<b>TO-15</b>		Analyst: <b>RJP</b>		
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	8/24/2012 5:27:00 PM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	8/24/2012 5:27:00 PM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	8/24/2012 5:27:00 PM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	8/24/2012 5:27:00 PM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	8/24/2012 5:27:00 PM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	8/24/2012 5:27:00 PM
1,2,4-Trimethylbenzene	4.8	1.5		ppbV	10	8/25/2012 7:57:00 AM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	8/24/2012 5:27:00 PM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	8/24/2012 5:27:00 PM
1,2-Dichloroethane	< 0.15	0.15		ppbV	1	8/24/2012 5:27:00 PM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	8/24/2012 5:27:00 PM
1,3,5-Trimethylbenzene	3.2	1.5		ppbV	10	8/25/2012 7:57:00 AM
1,3-butadiene	< 0.15	0.15		ppbV	1	8/24/2012 5:27:00 PM
1,3-Dichlorobenzene	< 0.15	0.15		ppbV	1	8/24/2012 5:27:00 PM
1,4-Dichlorobenzene	< 0.15	0.15		ppbV	1	8/24/2012 5:27:00 PM
1,4-Dioxane	< 0.30	0.30		ppbV	1	8/24/2012 5:27:00 PM
2,2,4-trimethylpentane	2.9	1.5		ppbV	10	8/25/2012 7:57:00 AM
4-ethyltoluene	2.0	0.15		ppbV	1	8/24/2012 5:27:00 PM
Acetone	15	3.0		ppbV	10	8/25/2012 7:57:00 AM
Allyl chloride	< 0.15	0.15		ppbV	1	8/24/2012 5:27:00 PM
Benzene	0.29	0.15		ppbV	1	8/24/2012 5:27:00 PM
Benzyl chloride	< 0.15	0.15		ppbV	1	8/24/2012 5:27:00 PM
Bromodichloromethane	< 0.15	0.15		ppbV	1	8/24/2012 5:27:00 PM
Bromoform	< 0.15	0.15		ppbV	1	8/24/2012 5:27:00 PM
Bromomethane	< 0.15	0.15		ppbV	1	8/24/2012 5:27:00 PM
Carbon disulfide	47	6.0		ppbV	40	8/25/2012 8:33:00 AM
Carbon tetrachloride	< 0.15	0.15		ppbV	1	8/24/2012 5:27:00 PM
Chlorobenzene	< 0.15	0.15		ppbV	1	8/24/2012 5:27:00 PM
Chloroethane	< 0.15	0.15		ppbV	1	8/24/2012 5:27:00 PM
Chloroform	0.70	0.15		ppbV	1	8/24/2012 5:27:00 PM
Chloromethane	< 0.15	0.15		ppbV	1	8/24/2012 5:27:00 PM
cis-1,2-Dichloroethene	0.70	0.15		ppbV	1	8/24/2012 5:27:00 PM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	8/24/2012 5:27:00 PM
Cyclohexane	< 0.15	0.15		ppbV	1	8/24/2012 5:27:00 PM
Dibromochloromethane	< 0.15	0.15		ppbV	1	8/24/2012 5:27:00 PM
Ethyl acetate	< 0.25	0.25		ppbV	1	8/24/2012 5:27:00 PM

**Qualifiers:** \*\* Reporting Limit . Results reported are not blank corrected  
 B Analyte detected in the associated Method Blank E Value above quantitation range  
 H Holding times for preparation or analysis exceeded J Analyte detected at or below quantitation limits  
 JN Non-routine analyte. Quantitation estimated. ND Not Detected at the Reporting Limit  
 S Spike Recovery outside accepted recovery limits

# Centek Laboratories, LLC

Date: 28-Aug-12

**CLIENT:** TechSolutions Engineering, P.C.  
**Lab Order:** C1208075  
**Project:** 295 Locust Ave  
**Lab ID:** C1208075-005A

**Client Sample ID:** SVMP-5  
**Tag Number:** 237,156  
**Collection Date:** 8/21/2012  
**Matrix:** AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>1UG/M3 BY METHOD TO15</b>		<b>TO-15</b>		Analyst: <b>RJP</b>		
Ethylbenzene	1.4	0.15		ppbV	1	8/24/2012 5:27:00 PM
Freon 11	0.29	0.15		ppbV	1	8/24/2012 5:27:00 PM
Freon 113	< 0.15	0.15		ppbV	1	8/24/2012 5:27:00 PM
Freon 114	< 0.15	0.15		ppbV	1	8/24/2012 5:27:00 PM
Freon 12	0.51	0.15		ppbV	1	8/24/2012 5:27:00 PM
Heptane	0.41	0.15		ppbV	1	8/24/2012 5:27:00 PM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	8/24/2012 5:27:00 PM
Hexane	< 0.15	0.15		ppbV	1	8/24/2012 5:27:00 PM
Isopropyl alcohol	1.8	0.15		ppbV	1	8/24/2012 5:27:00 PM
m&p-Xylene	3.5	0.30		ppbV	1	8/24/2012 5:27:00 PM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	8/24/2012 5:27:00 PM
Methyl Ethyl Ketone	2.0	0.30		ppbV	1	8/24/2012 5:27:00 PM
Methyl Isobutyl Ketone	< 0.30	0.30		ppbV	1	8/24/2012 5:27:00 PM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	8/24/2012 5:27:00 PM
Methylene chloride	0.19	0.15		ppbV	1	8/24/2012 5:27:00 PM
o-Xylene	1.1	0.15		ppbV	1	8/24/2012 5:27:00 PM
Propylene	< 0.15	0.15		ppbV	1	8/24/2012 5:27:00 PM
Styrene	0.83	0.15		ppbV	1	8/24/2012 5:27:00 PM
Tetrachloroethylene	68	6.0		ppbV	40	8/25/2012 8:33:00 AM
Tetrahydrofuran	< 0.15	0.15		ppbV	1	8/24/2012 5:27:00 PM
Toluene	1.6	0.15		ppbV	1	8/24/2012 5:27:00 PM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	8/24/2012 5:27:00 PM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	8/24/2012 5:27:00 PM
Trichloroethene	0.54	0.15		ppbV	1	8/24/2012 5:27:00 PM
Vinyl acetate	< 0.15	0.15		ppbV	1	8/24/2012 5:27:00 PM
Vinyl Bromide	< 0.15	0.15		ppbV	1	8/24/2012 5:27:00 PM
Vinyl chloride	< 0.15	0.15		ppbV	1	8/24/2012 5:27:00 PM
Surr: Bromofluorobenzene	116	70-130		%REC	1	8/24/2012 5:27:00 PM

**Qualifiers:** \*\* Reporting Limit . Results reported are not blank corrected  
 B Analyte detected in the associated Method Blank E Value above quantitation range  
 H Holding times for preparation or analysis exceeded J Analyte detected at or below quantitation limits  
 JN Non-routine analyte. Quantitation estimated. ND Not Detected at the Reporting Limit  
 S Spike Recovery outside accepted recovery limits

**Centek Laboratories, LLC**

Date: 28-Aug-12

**CLIENT:** TechSolutions Engineering, P.C.  
**Lab Order:** C1208075  
**Project:** 295 Locust Ave  
**Lab ID:** C1208075-006A

**Client Sample ID:** IAQ-5  
**Tag Number:** 318,292  
**Collection Date:** 8/21/2012  
**Matrix:** AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
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**FIELD PARAMETERS**

**FLD**

Analyst:

Lab Vacuum In	-1			"Hg		8/23/2012
Lab Vacuum Out	-30			"Hg		8/23/2012

**1UG/M3 W/ 0.25UG/M3 CT-TCE-VC**

**TO-15**

Analyst: RJP

1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	8/24/2012 8:05:00 AM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	8/24/2012 8:05:00 AM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	8/24/2012 8:05:00 AM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	8/24/2012 8:05:00 AM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	8/24/2012 8:05:00 AM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	8/24/2012 8:05:00 AM
1,2,4-Trimethylbenzene	0.30	0.15		ppbV	1	8/24/2012 8:05:00 AM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	8/24/2012 8:05:00 AM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	8/24/2012 8:05:00 AM
1,2-Dichloroethane	< 0.15	0.15		ppbV	1	8/24/2012 8:05:00 AM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	8/24/2012 8:05:00 AM
1,3,5-Trimethylbenzene	0.11	0.15	J	ppbV	1	8/24/2012 8:05:00 AM
1,3-butadiene	< 0.15	0.15		ppbV	1	8/24/2012 8:05:00 AM
1,3-Dichlorobenzene	< 0.15	0.15		ppbV	1	8/24/2012 8:05:00 AM
1,4-Dichlorobenzene	< 0.15	0.15		ppbV	1	8/24/2012 8:05:00 AM
1,4-Dioxane	< 0.30	0.30		ppbV	1	8/24/2012 8:05:00 AM
2,2,4-trimethylpentane	0.22	0.15		ppbV	1	8/24/2012 8:05:00 AM
4-ethyltoluene	< 0.15	0.15		ppbV	1	8/24/2012 8:05:00 AM
Acetone	11	3.0		ppbV	10	8/24/2012 7:58:00 PM
Allyl chloride	< 0.15	0.15		ppbV	1	8/24/2012 8:05:00 AM
Benzene	0.23	0.15		ppbV	1	8/24/2012 8:05:00 AM
Benzyl chloride	< 0.15	0.15		ppbV	1	8/24/2012 8:05:00 AM
Bromodichloromethane	< 0.15	0.15		ppbV	1	8/24/2012 8:05:00 AM
Bromoform	< 0.15	0.15		ppbV	1	8/24/2012 8:05:00 AM
Bromomethane	< 0.15	0.15		ppbV	1	8/24/2012 8:05:00 AM
Carbon disulfide	< 0.15	0.15		ppbV	1	8/24/2012 8:05:00 AM
Carbon tetrachloride	0.080	0.040		ppbV	1	8/24/2012 8:05:00 AM
Chlorobenzene	< 0.15	0.15		ppbV	1	8/24/2012 8:05:00 AM
Chloroethane	< 0.15	0.15		ppbV	1	8/24/2012 8:05:00 AM
Chloroform	< 0.15	0.15		ppbV	1	8/24/2012 8:05:00 AM
Chloromethane	0.51	0.15		ppbV	1	8/24/2012 8:05:00 AM
cis-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	8/24/2012 8:05:00 AM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	8/24/2012 8:05:00 AM
Cyclohexane	< 0.15	0.15		ppbV	1	8/24/2012 8:05:00 AM
Dibromochloromethane	< 0.15	0.15		ppbV	1	8/24/2012 8:05:00 AM
Ethyl acetate	0.48	0.25		ppbV	1	8/24/2012 8:05:00 AM

**Qualifiers:** \*\* Reporting Limit . Results reported are not blank corrected  
 B Analyte detected in the associated Method Blank E Value above quantitation range  
 H Holding times for preparation or analysis exceeded J Analyte detected at or below quantitation limits  
 JN Non-routine analyte. Quantitation estimated. ND Not Detected at the Reporting Limit  
 S Spike Recovery outside accepted recovery limits

**Centek Laboratories, LLC**

Date: 28-Aug-12

**CLIENT:** TechSolutions Engineering, P.C.  
**Lab Order:** C1208075  
**Project:** 295 Locust Ave  
**Lab ID:** C1208075-006A

**Client Sample ID:** IAQ-5  
**Tag Number:** 318,292  
**Collection Date:** 8/21/2012  
**Matrix:** AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>1UG/M3 W/ 0.25UG/M3 CT-TCE-VC</b>						
		<b>TO-15</b>				Analyst: <b>RJP</b>
Ethylbenzene	0.18	0.15		ppbV	1	8/24/2012 8:05:00 AM
Freon 11	0.27	0.15		ppbV	1	8/24/2012 8:05:00 AM
Freon 113	< 0.15	0.15		ppbV	1	8/24/2012 8:05:00 AM
Freon 114	< 0.15	0.15		ppbV	1	8/24/2012 8:05:00 AM
Freon 12	0.63	0.15		ppbV	1	8/24/2012 8:05:00 AM
Heptane	< 0.15	0.15		ppbV	1	8/24/2012 8:05:00 AM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	8/24/2012 8:05:00 AM
Hexane	0.75	0.15		ppbV	1	8/24/2012 8:05:00 AM
Isopropyl alcohol	1.8	0.15		ppbV	1	8/24/2012 8:05:00 AM
m&p-Xylene	0.42	0.30		ppbV	1	8/24/2012 8:05:00 AM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	8/24/2012 8:05:00 AM
Methyl Ethyl Ketone	0.89	0.30		ppbV	1	8/24/2012 8:05:00 AM
Methyl Isobutyl Ketone	< 0.30	0.30		ppbV	1	8/24/2012 8:05:00 AM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	8/24/2012 8:05:00 AM
Methylene chloride	0.25	0.15		ppbV	1	8/24/2012 8:05:00 AM
o-Xylene	0.15	0.15		ppbV	1	8/24/2012 8:05:00 AM
Propylene	< 0.15	0.15		ppbV	1	8/24/2012 8:05:00 AM
Styrene	< 0.15	0.15		ppbV	1	8/24/2012 8:05:00 AM
Tetrachloroethylene	0.20	0.15		ppbV	1	8/24/2012 8:05:00 AM
Tetrahydrofuran	< 0.15	0.15		ppbV	1	8/24/2012 8:05:00 AM
Toluene	1.2	0.15		ppbV	1	8/24/2012 8:05:00 AM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	8/24/2012 8:05:00 AM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	8/24/2012 8:05:00 AM
Trichloroethene	< 0.040	0.040		ppbV	1	8/24/2012 8:05:00 AM
Vinyl acetate	< 0.15	0.15		ppbV	1	8/24/2012 8:05:00 AM
Vinyl Bromide	< 0.15	0.15		ppbV	1	8/24/2012 8:05:00 AM
Vinyl chloride	< 0.040	0.040		ppbV	1	8/24/2012 8:05:00 AM
Surr: Bromofluorobenzene	98.0	70-130		%REC	1	8/24/2012 8:05:00 AM

**Qualifiers:** \*\* Reporting Limit . Results reported are not blank corrected  
 B Analyte detected in the associated Method Blank E Value above quantitation range  
 H Holding times for preparation or analysis exceeded J Analyte detected at or below quantitation limits  
 JN Non-routine analyte. Quantitation estimated. ND Not Detected at the Reporting Limit  
 S Spike Recovery outside accepted recovery limits

# Centek Laboratories, LLC

Date: 28-Aug-12

**CLIENT:** TechSolutions Engineering, P.C.  
**Lab Order:** C1208075  
**Project:** 295 Locust Ave  
**Lab ID:** C1208075-007A

**Client Sample ID:** SVMP-6  
**Tag Number:** 78,262  
**Collection Date:** 8/21/2012  
**Matrix:** AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>FIELD PARAMETERS</b>			<b>FLD</b>		Analyst:	
Lab Vacuum In	-1			"Hg		8/23/2012
Lab Vacuum Out	-30			"Hg		8/23/2012
<b>1UG/M3 BY METHOD TO15</b>			<b>TO-15</b>		Analyst: <b>RJP</b>	
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	8/24/2012 6:04:00 PM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	8/24/2012 6:04:00 PM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	8/24/2012 6:04:00 PM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	8/24/2012 6:04:00 PM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	8/24/2012 6:04:00 PM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	8/24/2012 6:04:00 PM
1,2,4-Trimethylbenzene	0.75	0.15		ppbV	1	8/24/2012 6:04:00 PM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	8/24/2012 6:04:00 PM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	8/24/2012 6:04:00 PM
1,2-Dichloroethane	< 0.15	0.15		ppbV	1	8/24/2012 6:04:00 PM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	8/24/2012 6:04:00 PM
1,3,5-Trimethylbenzene	0.39	0.15		ppbV	1	8/24/2012 6:04:00 PM
1,3-butadiene	< 0.15	0.15		ppbV	1	8/24/2012 6:04:00 PM
1,3-Dichlorobenzene	< 0.15	0.15		ppbV	1	8/24/2012 6:04:00 PM
1,4-Dichlorobenzene	< 0.15	0.15		ppbV	1	8/24/2012 6:04:00 PM
1,4-Dioxane	< 0.30	0.30		ppbV	1	8/24/2012 6:04:00 PM
2,2,4-trimethylpentane	7.5	1.5		ppbV	10	8/25/2012 9:08:00 AM
4-ethyltoluene	0.29	0.15		ppbV	1	8/24/2012 6:04:00 PM
Acetone	18	3.0		ppbV	10	8/25/2012 9:08:00 AM
Allyl chloride	< 0.15	0.15		ppbV	1	8/24/2012 6:04:00 PM
Benzene	0.40	0.15		ppbV	1	8/24/2012 6:04:00 PM
Benzyl chloride	< 0.15	0.15		ppbV	1	8/24/2012 6:04:00 PM
Bromodichloromethane	< 0.15	0.15		ppbV	1	8/24/2012 6:04:00 PM
Bromoform	< 0.15	0.15		ppbV	1	8/24/2012 6:04:00 PM
Bromomethane	< 0.15	0.15		ppbV	1	8/24/2012 6:04:00 PM
Carbon disulfide	11	1.5		ppbV	10	8/25/2012 9:08:00 AM
Carbon tetrachloride	< 0.15	0.15		ppbV	1	8/24/2012 6:04:00 PM
Chlorobenzene	< 0.15	0.15		ppbV	1	8/24/2012 6:04:00 PM
Chloroethane	< 0.15	0.15		ppbV	1	8/24/2012 6:04:00 PM
Chloroform	0.18	0.15		ppbV	1	8/24/2012 6:04:00 PM
Chloromethane	< 0.15	0.15		ppbV	1	8/24/2012 6:04:00 PM
cis-1,2-Dichloroethene	9.8	1.5		ppbV	10	8/25/2012 9:08:00 AM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	8/24/2012 6:04:00 PM
Cyclohexane	1.4	0.15		ppbV	1	8/24/2012 6:04:00 PM
Dibromochloromethane	< 0.15	0.15		ppbV	1	8/24/2012 6:04:00 PM
Ethyl acetate	0.57	0.25		ppbV	1	8/24/2012 6:04:00 PM

**Qualifiers:** \*\* Reporting Limit . Results reported are not blank corrected  
 B Analyte detected in the associated Method Blank E Value above quantitation range  
 H Holding times for preparation or analysis exceeded J Analyte detected at or below quantitation limits  
 JN Non-routine analyte. Quantitation estimated. ND Not Detected at the Reporting Limit  
 S Spike Recovery outside accepted recovery limits

**Centek Laboratories, LLC**

**Date:** 28-Aug-12

**CLIENT:** TechSolutions Engineering, P.C.  
**Lab Order:** C1208075  
**Project:** 295 Locust Ave  
**Lab ID:** C1208075-007A

**Client Sample ID:** SVMP-6  
**Tag Number:** 78,262  
**Collection Date:** 8/21/2012  
**Matrix:** AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>1UG/M3 BY METHOD TO15</b>		<b>TO-15</b>		Analyst: <b>RJP</b>		
Ethylbenzene	0.49	0.15		ppbV	1	8/24/2012 6:04:00 PM
Freon 11	0.29	0.15		ppbV	1	8/24/2012 6:04:00 PM
Freon 113	< 0.15	0.15		ppbV	1	8/24/2012 6:04:00 PM
Freon 114	< 0.15	0.15		ppbV	1	8/24/2012 6:04:00 PM
Freon 12	0.51	0.15		ppbV	1	8/24/2012 6:04:00 PM
Heptane	0.21	0.15		ppbV	1	8/24/2012 6:04:00 PM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	8/24/2012 6:04:00 PM
Hexane	< 0.15	0.15		ppbV	1	8/24/2012 6:04:00 PM
Isopropyl alcohol	1.6	0.15		ppbV	1	8/24/2012 6:04:00 PM
m&p-Xylene	1.4	0.30		ppbV	1	8/24/2012 6:04:00 PM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	8/24/2012 6:04:00 PM
Methyl Ethyl Ketone	1.7	0.30		ppbV	1	8/24/2012 6:04:00 PM
Methyl Isobutyl Ketone	< 0.30	0.30		ppbV	1	8/24/2012 6:04:00 PM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	8/24/2012 6:04:00 PM
Methylene chloride	0.33	0.15		ppbV	1	8/24/2012 6:04:00 PM
o-Xylene	0.50	0.15		ppbV	1	8/24/2012 6:04:00 PM
Propylene	< 0.15	0.15		ppbV	1	8/24/2012 6:04:00 PM
Styrene	0.23	0.15		ppbV	1	8/24/2012 6:04:00 PM
Tetrachloroethylene	5.4	1.5		ppbV	10	8/25/2012 9:08:00 AM
Tetrahydrofuran	< 0.15	0.15		ppbV	1	8/24/2012 6:04:00 PM
Toluene	2.2	0.15		ppbV	1	8/24/2012 6:04:00 PM
trans-1,2-Dichloroethene	5.8	1.5		ppbV	10	8/25/2012 9:08:00 AM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	8/24/2012 6:04:00 PM
Trichloroethene	3.6	1.5		ppbV	10	8/25/2012 9:08:00 AM
Vinyl acetate	< 0.15	0.15		ppbV	1	8/24/2012 6:04:00 PM
Vinyl Bromide	< 0.15	0.15		ppbV	1	8/24/2012 6:04:00 PM
Vinyl chloride	0.48	0.15		ppbV	1	8/24/2012 6:04:00 PM
Surr: Bromofluorobenzene	117	70-130		%REC	1	8/24/2012 6:04:00 PM

**Qualifiers:** \*\* Reporting Limit . Results reported are not blank corrected  
 B Analyte detected in the associated Method Blank E Value above quantitation range  
 H Holding times for preparation or analysis exceeded J Analyte detected at or below quantitation limits  
 JN Non-routine analyte. Quantitation estimated. ND Not Detected at the Reporting Limit  
 S Spike Recovery outside accepted recovery limits

**Centek Laboratories, LLC**

Date: 28-Aug-12

**CLIENT:** TechSolutions Engineering, P.C.  
**Lab Order:** C1208075  
**Project:** 295 Locust Ave  
**Lab ID:** C1208075-008A

**Client Sample ID:** IAQ-6  
**Tag Number:** 556,153  
**Collection Date:** 8/21/2012  
**Matrix:** AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>FIELD PARAMETERS</b>		<b>FLD</b>		Analyst:		
Lab Vacuum In	-2			"Hg		8/23/2012
Lab Vacuum Out	-30			"Hg		8/23/2012
<b>1UG/M3 W/ 0.25UG/M3 CT-TCE-VC</b>		<b>TO-15</b>		Analyst: RJP		
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	8/24/2012 8:41:00 AM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	8/24/2012 8:41:00 AM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	8/24/2012 8:41:00 AM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	8/24/2012 8:41:00 AM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	8/24/2012 8:41:00 AM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	8/24/2012 8:41:00 AM
1,2,4-Trimethylbenzene	0.48	0.15		ppbV	1	8/24/2012 8:41:00 AM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	8/24/2012 8:41:00 AM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	8/24/2012 8:41:00 AM
1,2-Dichloroethane	< 0.15	0.15		ppbV	1	8/24/2012 8:41:00 AM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	8/24/2012 8:41:00 AM
1,3,5-Trimethylbenzene	0.17	0.15		ppbV	1	8/24/2012 8:41:00 AM
1,3-butadiene	< 0.15	0.15		ppbV	1	8/24/2012 8:41:00 AM
1,3-Dichlorobenzene	< 0.15	0.15		ppbV	1	8/24/2012 8:41:00 AM
1,4-Dichlorobenzene	< 0.15	0.15		ppbV	1	8/24/2012 8:41:00 AM
1,4-Dioxane	< 0.30	0.30		ppbV	1	8/24/2012 8:41:00 AM
2,2,4-trimethylpentane	0.45	0.15		ppbV	1	8/24/2012 8:41:00 AM
4-ethyltoluene	0.16	0.15		ppbV	1	8/24/2012 8:41:00 AM
Acetone	10	3.0		ppbV	10	8/24/2012 8:35:00 PM
Allyl chloride	< 0.15	0.15		ppbV	1	8/24/2012 8:41:00 AM
Benzene	0.34	0.15		ppbV	1	8/24/2012 8:41:00 AM
Benzyl chloride	< 0.15	0.15		ppbV	1	8/24/2012 8:41:00 AM
Bromodichloromethane	< 0.15	0.15		ppbV	1	8/24/2012 8:41:00 AM
Bromoform	< 0.15	0.15		ppbV	1	8/24/2012 8:41:00 AM
Bromomethane	< 0.15	0.15		ppbV	1	8/24/2012 8:41:00 AM
Carbon disulfide	0.24	0.15		ppbV	1	8/24/2012 8:41:00 AM
Carbon tetrachloride	0.080	0.040		ppbV	1	8/24/2012 8:41:00 AM
Chlorobenzene	< 0.15	0.15		ppbV	1	8/24/2012 8:41:00 AM
Chloroethane	< 0.15	0.15		ppbV	1	8/24/2012 8:41:00 AM
Chloroform	< 0.15	0.15		ppbV	1	8/24/2012 8:41:00 AM
Chloromethane	0.40	0.15		ppbV	1	8/24/2012 8:41:00 AM
cis-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	8/24/2012 8:41:00 AM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	8/24/2012 8:41:00 AM
Cyclohexane	< 0.15	0.15		ppbV	1	8/24/2012 8:41:00 AM
Dibromochloromethane	< 0.15	0.15		ppbV	1	8/24/2012 8:41:00 AM
Ethyl acetate	0.41	0.25		ppbV	1	8/24/2012 8:41:00 AM

**Qualifiers:** \*\* Reporting Limit . Results reported are not blank corrected  
 B Analyte detected in the associated Method Blank E Value above quantitation range  
 H Holding times for preparation or analysis exceeded J Analyte detected at or below quantitation limits  
 JN Non-routine analyte. Quantitation estimated. ND Not Detected at the Reporting Limit  
 S Spike Recovery outside accepted recovery limits

# Centek Laboratories, LLC

Date: 28-Aug-12

**CLIENT:** TechSolutions Engineering, P.C.  
**Lab Order:** C1208075  
**Project:** 295 Locust Ave  
**Lab ID:** C1208075-008A

**Client Sample ID:** IAQ-6  
**Tag Number:** 556,153  
**Collection Date:** 8/21/2012  
**Matrix:** AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>1UG/M3 W/ 0.25UG/M3 CT-TCE-VC</b>						
			<b>TO-15</b>			Analyst: RJP
Ethylbenzene	0.48	0.15		ppbV	1	8/24/2012 8:41:00 AM
Freon 11	0.24	0.15		ppbV	1	8/24/2012 8:41:00 AM
Freon 113	0.10	0.15	J	ppbV	1	8/24/2012 8:41:00 AM
Freon 114	< 0.15	0.15		ppbV	1	8/24/2012 8:41:00 AM
Freon 12	0.55	0.15		ppbV	1	8/24/2012 8:41:00 AM
Heptane	0.60	0.15		ppbV	1	8/24/2012 8:41:00 AM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	8/24/2012 8:41:00 AM
Hexane	0.79	0.15		ppbV	1	8/24/2012 8:41:00 AM
Isopropyl alcohol	2.1	0.15		ppbV	1	8/24/2012 8:41:00 AM
m&p-Xylene	1.5	0.30		ppbV	1	8/24/2012 8:41:00 AM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	8/24/2012 8:41:00 AM
Methyl Ethyl Ketone	1.1	0.30		ppbV	1	8/24/2012 8:41:00 AM
Methyl Isobutyl Ketone	< 0.30	0.30		ppbV	1	8/24/2012 8:41:00 AM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	8/24/2012 8:41:00 AM
Methylene chloride	0.27	0.15		ppbV	1	8/24/2012 8:41:00 AM
o-Xylene	0.48	0.15		ppbV	1	8/24/2012 8:41:00 AM
Propylene	< 0.15	0.15		ppbV	1	8/24/2012 8:41:00 AM
Styrene	< 0.15	0.15		ppbV	1	8/24/2012 8:41:00 AM
Tetrachloroethylene	0.66	0.15		ppbV	1	8/24/2012 8:41:00 AM
Tetrahydrofuran	< 0.15	0.15		ppbV	1	8/24/2012 8:41:00 AM
Toluene	3.3	1.5		ppbV	10	8/24/2012 8:35:00 PM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	8/24/2012 8:41:00 AM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	8/24/2012 8:41:00 AM
Trichloroethene	< 0.040	0.040		ppbV	1	8/24/2012 8:41:00 AM
Vinyl acetate	< 0.15	0.15		ppbV	1	8/24/2012 8:41:00 AM
Vinyl Bromide	< 0.15	0.15		ppbV	1	8/24/2012 8:41:00 AM
Vinyl chloride	< 0.040	0.040		ppbV	1	8/24/2012 8:41:00 AM
Surr: Bromofluorobenzene	109	70-130		%REC	1	8/24/2012 8:41:00 AM

<b>Qualifiers:</b>	**	Reporting Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected at or below quantitation limits
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Reporting Limit
	S	Spike Recovery outside accepted recovery limits		

# Centek Laboratories, LLC

Date: 28-Aug-12

**CLIENT:** TechSolutions Engineering, P.C.  
**Lab Order:** C1208075  
**Project:** 295 Locust Ave  
**Lab ID:** C1208075-009A

**Client Sample ID:** AMB-1  
**Tag Number:** 406,176  
**Collection Date:** 8/21/2012  
**Matrix:** AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>FIELD PARAMETERS</b>		<b>FLD</b>		Analyst:		
Lab Vacuum In	-1			"Hg		8/23/2012
Lab Vacuum Out	-30			"Hg		8/23/2012
<b>1UG/M3 W/ 0.25UG/M3 CT-TCE-VC</b>		<b>TO-15</b>		Analyst: RJP		
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	8/24/2012 9:17:00 AM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	8/24/2012 9:17:00 AM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	8/24/2012 9:17:00 AM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	8/24/2012 9:17:00 AM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	8/24/2012 9:17:00 AM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	8/24/2012 9:17:00 AM
1,2,4-Trimethylbenzene	0.39	0.15		ppbV	1	8/24/2012 9:17:00 AM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	8/24/2012 9:17:00 AM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	8/24/2012 9:17:00 AM
1,2-Dichloroethane	< 0.15	0.15		ppbV	1	8/24/2012 9:17:00 AM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	8/24/2012 9:17:00 AM
1,3,5-Trimethylbenzene	0.13	0.15	J	ppbV	1	8/24/2012 9:17:00 AM
1,3-butadiene	< 0.15	0.15		ppbV	1	8/24/2012 9:17:00 AM
1,3-Dichlorobenzene	< 0.15	0.15		ppbV	1	8/24/2012 9:17:00 AM
1,4-Dichlorobenzene	< 0.15	0.15		ppbV	1	8/24/2012 9:17:00 AM
1,4-Dioxane	< 0.30	0.30		ppbV	1	8/24/2012 9:17:00 AM
2,2,4-trimethylpentane	< 0.15	0.15		ppbV	1	8/24/2012 9:17:00 AM
4-ethyltoluene	< 0.15	0.15		ppbV	1	8/24/2012 9:17:00 AM
Acetone	13	3.0		ppbV	10	8/24/2012 9:12:00 PM
Allyl chloride	< 0.15	0.15		ppbV	1	8/24/2012 9:17:00 AM
Benzene	0.17	0.15		ppbV	1	8/24/2012 9:17:00 AM
Benzyl chloride	< 0.15	0.15		ppbV	1	8/24/2012 9:17:00 AM
Bromodichloromethane	< 0.15	0.15		ppbV	1	8/24/2012 9:17:00 AM
Bromoform	< 0.15	0.15		ppbV	1	8/24/2012 9:17:00 AM
Bromomethane	< 0.15	0.15		ppbV	1	8/24/2012 9:17:00 AM
Carbon disulfide	< 0.15	0.15		ppbV	1	8/24/2012 9:17:00 AM
Carbon tetrachloride	0.090	0.040		ppbV	1	8/24/2012 9:17:00 AM
Chlorobenzene	< 0.15	0.15		ppbV	1	8/24/2012 9:17:00 AM
Chloroethane	< 0.15	0.15		ppbV	1	8/24/2012 9:17:00 AM
Chloroform	< 0.15	0.15		ppbV	1	8/24/2012 9:17:00 AM
Chloromethane	0.55	0.15		ppbV	1	8/24/2012 9:17:00 AM
cis-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	8/24/2012 9:17:00 AM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	8/24/2012 9:17:00 AM
Cyclohexane	< 0.15	0.15		ppbV	1	8/24/2012 9:17:00 AM
Dibromochloromethane	< 0.15	0.15		ppbV	1	8/24/2012 9:17:00 AM
Ethyl acetate	0.51	0.25		ppbV	1	8/24/2012 9:17:00 AM

**Qualifiers:** \*\* Reporting Limit . Results reported are not blank corrected  
 B Analyte detected in the associated Method Blank E Value above quantitation range  
 H Holding times for preparation or analysis exceeded J Analyte detected at or below quantitation limits  
 JN Non-routine analyte. Quantitation estimated. ND Not Detected at the Reporting Limit  
 S Spike Recovery outside accepted recovery limits

**Centek Laboratories, LLC**

Date: 28-Aug-12

**CLIENT:** TechSolutions Engineering, P.C.  
**Lab Order:** C1208075  
**Project:** 295 Locust Ave  
**Lab ID:** C1208075-009A

**Client Sample ID:** AMB-1  
**Tag Number:** 406,176  
**Collection Date:** 8/21/2012  
**Matrix:** AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>1UG/M3 W/ 0.25UG/M3 CT-TCE-VC</b>						
		<b>TO-15</b>				Analyst: <b>RJP</b>
Ethylbenzene	0.15	0.15		ppbV	1	8/24/2012 9:17:00 AM
Freon 11	0.26	0.15		ppbV	1	8/24/2012 9:17:00 AM
Freon 113	0.11	0.15	J	ppbV	1	8/24/2012 9:17:00 AM
Freon 114	< 0.15	0.15		ppbV	1	8/24/2012 9:17:00 AM
Freon 12	0.60	0.15		ppbV	1	8/24/2012 9:17:00 AM
Heptane	0.22	0.15		ppbV	1	8/24/2012 9:17:00 AM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	8/24/2012 9:17:00 AM
Hexane	< 0.15	0.15		ppbV	1	8/24/2012 9:17:00 AM
Isopropyl alcohol	1.5	0.15		ppbV	1	8/24/2012 9:17:00 AM
m&p-Xylene	0.34	0.30		ppbV	1	8/24/2012 9:17:00 AM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	8/24/2012 9:17:00 AM
Methyl Ethyl Ketone	0.66	0.30		ppbV	1	8/24/2012 9:17:00 AM
Methyl Isobutyl Ketone	< 0.30	0.30		ppbV	1	8/24/2012 9:17:00 AM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	8/24/2012 9:17:00 AM
Methylene chloride	< 0.15	0.15		ppbV	1	8/24/2012 9:17:00 AM
o-Xylene	0.14	0.15	J	ppbV	1	8/24/2012 9:17:00 AM
Propylene	< 0.15	0.15		ppbV	1	8/24/2012 9:17:00 AM
Styrene	< 0.15	0.15		ppbV	1	8/24/2012 9:17:00 AM
Tetrachloroethylene	0.11	0.15	J	ppbV	1	8/24/2012 9:17:00 AM
Tetrahydrofuran	< 0.15	0.15		ppbV	1	8/24/2012 9:17:00 AM
Toluene	0.77	0.15		ppbV	1	8/24/2012 9:17:00 AM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	8/24/2012 9:17:00 AM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	8/24/2012 9:17:00 AM
Trichloroethene	< 0.040	0.040		ppbV	1	8/24/2012 9:17:00 AM
Vinyl acetate	< 0.15	0.15		ppbV	1	8/24/2012 9:17:00 AM
Vinyl Bromide	< 0.15	0.15		ppbV	1	8/24/2012 9:17:00 AM
Vinyl chloride	< 0.040	0.040		ppbV	1	8/24/2012 9:17:00 AM
Surr: Bromofluorobenzene	105	70-130		%REC	1	8/24/2012 9:17:00 AM

**Qualifiers:** \*\* Reporting Limit . Results reported are not blank corrected  
 B Analyte detected in the associated Method Blank E Value above quantitation range  
 H Holding times for preparation or analysis exceeded J Analyte detected at or below quantitation limits  
 JN Non-routine analyte. Quantitation estimated. ND Not Detected at the Reporting Limit  
 S Spike Recovery outside accepted recovery limits

# Centek Laboratories, LLC

Date: 28-Aug-12

**CLIENT:** TechSolutions Engineering, P.C.  
**Lab Order:** C1208075  
**Project:** 295 Locust Ave  
**Lab ID:** C1208075-001A

**Client Sample ID:** SVMP-1  
**Tag Number:** 420,456  
**Collection Date:** 8/21/2012  
**Matrix:** AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>1UG/M3 BY METHOD TO15</b>		<b>TO-15</b>		Analyst: <b>RJP</b>		
1,1,1-Trichloroethane	< 0.83	0.83		ug/m3	1	8/24/2012 4:12:00 PM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	8/24/2012 4:12:00 PM
1,1,2-Trichloroethane	< 0.83	0.83		ug/m3	1	8/24/2012 4:12:00 PM
1,1-Dichloroethane	< 0.62	0.62		ug/m3	1	8/24/2012 4:12:00 PM
1,1-Dichloroethene	3.6	0.60		ug/m3	1	8/24/2012 4:12:00 PM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	8/24/2012 4:12:00 PM
1,2,4-Trimethylbenzene	12	7.5		ug/m3	10	8/24/2012 9:49:00 PM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	8/24/2012 4:12:00 PM
1,2-Dichlorobenzene	< 0.92	0.92		ug/m3	1	8/24/2012 4:12:00 PM
1,2-Dichloroethane	< 0.62	0.62		ug/m3	1	8/24/2012 4:12:00 PM
1,2-Dichloropropane	< 0.70	0.70		ug/m3	1	8/24/2012 4:12:00 PM
1,3,5-Trimethylbenzene	5.7	0.75		ug/m3	1	8/24/2012 4:12:00 PM
1,3-butadiene	< 0.34	0.34		ug/m3	1	8/24/2012 4:12:00 PM
1,3-Dichlorobenzene	< 0.92	0.92		ug/m3	1	8/24/2012 4:12:00 PM
1,4-Dichlorobenzene	< 0.92	0.92		ug/m3	1	8/24/2012 4:12:00 PM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	8/24/2012 4:12:00 PM
2,2,4-trimethylpentane	100	7.1		ug/m3	10	8/24/2012 9:49:00 PM
4-ethyltoluene	4.7	0.75		ug/m3	1	8/24/2012 4:12:00 PM
Acetone	23	7.2		ug/m3	10	8/24/2012 9:49:00 PM
Allyl chloride	< 0.48	0.48		ug/m3	1	8/24/2012 4:12:00 PM
Benzene	5.0	0.49		ug/m3	1	8/24/2012 4:12:00 PM
Benzyl chloride	< 0.88	0.88		ug/m3	1	8/24/2012 4:12:00 PM
Bromodichloromethane	4.9	1.0		ug/m3	1	8/24/2012 4:12:00 PM
Bromoform	< 1.6	1.6		ug/m3	1	8/24/2012 4:12:00 PM
Bromomethane	< 0.59	0.59		ug/m3	1	8/24/2012 4:12:00 PM
Carbon disulfide	160	19		ug/m3	40	8/24/2012 10:27:00 PM
Carbon tetrachloride	< 0.96	0.96		ug/m3	1	8/24/2012 4:12:00 PM
Chlorobenzene	< 0.70	0.70		ug/m3	1	8/24/2012 4:12:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	8/24/2012 4:12:00 PM
Chloroform	220	30		ug/m3	40	8/24/2012 10:27:00 PM
Chloromethane	< 0.31	0.31		ug/m3	1	8/24/2012 4:12:00 PM
cis-1,2-Dichloroethene	3800	480		ug/m3	810	8/27/2012 4:13:00 PM
cis-1,3-Dichloropropene	< 0.69	0.69		ug/m3	1	8/24/2012 4:12:00 PM
Cyclohexane	19	5.2		ug/m3	10	8/24/2012 9:49:00 PM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	8/24/2012 4:12:00 PM
Ethyl acetate	< 0.92	0.92		ug/m3	1	8/24/2012 4:12:00 PM
Ethylbenzene	7.5	0.66		ug/m3	1	8/24/2012 4:12:00 PM
Freon 11	1.8	0.86		ug/m3	1	8/24/2012 4:12:00 PM
Freon 113	< 1.2	1.2		ug/m3	1	8/24/2012 4:12:00 PM
Freon 114	< 1.1	1.1		ug/m3	1	8/24/2012 4:12:00 PM

**Qualifiers:** \*\* Reporting Limit . Results reported are not blank corrected  
 B Analyte detected in the associated Method Blank E Value above quantitation range  
 H Holding times for preparation or analysis exceeded J Analyte detected at or below quantitation limits  
 JN Non-routine analyte. Quantitation estimated. ND Not Detected at the Reporting Limit  
 S Spike Recovery outside accepted recovery limits

# Centek Laboratories, LLC

Date: 28-Aug-12

**CLIENT:** TechSolutions Engineering, P.C.  
**Lab Order:** C1208075  
**Project:** 295 Locust Ave  
**Lab ID:** C1208075-001A

**Client Sample ID:** SVMP-1  
**Tag Number:** 420,456  
**Collection Date:** 8/21/2012  
**Matrix:** AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>1UG/M3 BY METHOD TO15</b>		<b>TO-15</b>		Analyst: <b>RJP</b>		
Freon 12	2.4	0.75		ug/m3	1	8/24/2012 4:12:00 PM
Heptane	1.8	0.62		ug/m3	1	8/24/2012 4:12:00 PM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	8/24/2012 4:12:00 PM
Hexane	6.0	0.54		ug/m3	1	8/24/2012 4:12:00 PM
Isopropyl alcohol	3.5	0.37		ug/m3	1	8/24/2012 4:12:00 PM
m&p-Xylene	17	1.3		ug/m3	1	8/24/2012 4:12:00 PM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	8/24/2012 4:12:00 PM
Methyl Ethyl Ketone	< 0.90	0.90		ug/m3	1	8/24/2012 4:12:00 PM
Methyl Isobutyl Ketone	< 1.2	1.2		ug/m3	1	8/24/2012 4:12:00 PM
Methyl tert-butyl ether	< 0.55	0.55		ug/m3	1	8/24/2012 4:12:00 PM
Methylene chloride	1.3	0.53		ug/m3	1	8/24/2012 4:12:00 PM
o-Xylene	11	6.6		ug/m3	10	8/24/2012 9:49:00 PM
Propylene	< 0.26	0.26		ug/m3	1	8/24/2012 4:12:00 PM
Styrene	31	6.5		ug/m3	10	8/24/2012 9:49:00 PM
Tetrachloroethylene	14000	830		ug/m3	810	8/27/2012 4:13:00 PM
Tetrahydrofuran	< 0.45	0.45		ug/m3	1	8/24/2012 4:12:00 PM
Toluene	23	5.7		ug/m3	10	8/24/2012 9:49:00 PM
trans-1,2-Dichloroethene	590	480		ug/m3	810	8/27/2012 4:13:00 PM
trans-1,3-Dichloropropene	< 0.69	0.69		ug/m3	1	8/24/2012 4:12:00 PM
Trichloroethene	2000	660		ug/m3	810	8/27/2012 4:13:00 PM
Vinyl acetate	< 0.54	0.54		ug/m3	1	8/24/2012 4:12:00 PM
Vinyl Bromide	< 0.67	0.67		ug/m3	1	8/24/2012 4:12:00 PM
Vinyl chloride	42	3.9		ug/m3	10	8/24/2012 9:49:00 PM

**Qualifiers:** \*\* Reporting Limit . Results reported are not blank corrected  
 B Analyte detected in the associated Method Blank E Value above quantitation range  
 H Holding times for preparation or analysis exceeded J Analyte detected at or below quantitation limits  
 JN Non-routine analyte. Quantitation estimated. ND Not Detected at the Reporting Limit  
 S Spike Recovery outside accepted recovery limits

# Centek Laboratories, LLC

Date: 28-Aug-12

**CLIENT:** TechSolutions Engineering, P.C.  
**Lab Order:** C1208075  
**Project:** 295 Locust Ave  
**Lab ID:** C1208075-002A

**Client Sample ID:** IAQ-1  
**Tag Number:** 541,278  
**Collection Date:** 8/21/2012  
**Matrix:** AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>1UG/M3 W/ 0.25UG/M3 CT-TCE-VC</b>						
		<b>TO-15</b>				Analyst: RJP
1,1,1-Trichloroethane	< 0.83	0.83		ug/m3	1	8/24/2012 6:51:00 AM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	8/24/2012 6:51:00 AM
1,1,2-Trichloroethane	< 0.83	0.83		ug/m3	1	8/24/2012 6:51:00 AM
1,1-Dichloroethane	< 0.62	0.62		ug/m3	1	8/24/2012 6:51:00 AM
1,1-Dichloroethene	< 0.60	0.60		ug/m3	1	8/24/2012 6:51:00 AM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	8/24/2012 6:51:00 AM
1,2,4-Trimethylbenzene	2.0	0.75		ug/m3	1	8/24/2012 6:51:00 AM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	8/24/2012 6:51:00 AM
1,2-Dichlorobenzene	< 0.92	0.92		ug/m3	1	8/24/2012 6:51:00 AM
1,2-Dichloroethane	< 0.62	0.62		ug/m3	1	8/24/2012 6:51:00 AM
1,2-Dichloropropane	< 0.70	0.70		ug/m3	1	8/24/2012 6:51:00 AM
1,3,5-Trimethylbenzene	1.1	0.75		ug/m3	1	8/24/2012 6:51:00 AM
1,3-butadiene	< 0.34	0.34		ug/m3	1	8/24/2012 6:51:00 AM
1,3-Dichlorobenzene	< 0.92	0.92		ug/m3	1	8/24/2012 6:51:00 AM
1,4-Dichlorobenzene	< 0.92	0.92		ug/m3	1	8/24/2012 6:51:00 AM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	8/24/2012 6:51:00 AM
2,2,4-trimethylpentane	0.95	0.71		ug/m3	1	8/24/2012 6:51:00 AM
4-ethyltoluene	0.60	0.75	J	ug/m3	1	8/24/2012 6:51:00 AM
Acetone	21	7.2		ug/m3	10	8/24/2012 6:42:00 PM
Allyl chloride	< 0.48	0.48		ug/m3	1	8/24/2012 6:51:00 AM
Benzene	0.75	0.49		ug/m3	1	8/24/2012 6:51:00 AM
Benzyl chloride	< 0.88	0.88		ug/m3	1	8/24/2012 6:51:00 AM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	8/24/2012 6:51:00 AM
Bromoform	< 1.6	1.6		ug/m3	1	8/24/2012 6:51:00 AM
Bromomethane	< 0.59	0.59		ug/m3	1	8/24/2012 6:51:00 AM
Carbon disulfide	< 0.47	0.47		ug/m3	1	8/24/2012 6:51:00 AM
Carbon tetrachloride	0.45	0.26		ug/m3	1	8/24/2012 6:51:00 AM
Chlorobenzene	< 0.70	0.70		ug/m3	1	8/24/2012 6:51:00 AM
Chloroethane	< 0.40	0.40		ug/m3	1	8/24/2012 6:51:00 AM
Chloroform	< 0.74	0.74		ug/m3	1	8/24/2012 6:51:00 AM
Chloromethane	0.90	0.31		ug/m3	1	8/24/2012 6:51:00 AM
cis-1,2-Dichloroethene	< 0.60	0.60		ug/m3	1	8/24/2012 6:51:00 AM
cis-1,3-Dichloropropene	< 0.69	0.69		ug/m3	1	8/24/2012 6:51:00 AM
Cyclohexane	< 0.52	0.52		ug/m3	1	8/24/2012 6:51:00 AM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	8/24/2012 6:51:00 AM
Ethyl acetate	1.5	0.92		ug/m3	1	8/24/2012 6:51:00 AM
Ethylbenzene	0.75	0.66		ug/m3	1	8/24/2012 6:51:00 AM
Freon 11	1.5	0.86		ug/m3	1	8/24/2012 6:51:00 AM
Freon 113	1.0	1.2	J	ug/m3	1	8/24/2012 6:51:00 AM
Freon 114	< 1.1	1.1		ug/m3	1	8/24/2012 6:51:00 AM

**Qualifiers:** \*\* Reporting Limit . Results reported are not blank corrected  
 B Analyte detected in the associated Method Blank E Value above quantitation range  
 H Holding times for preparation or analysis exceeded J Analyte detected at or below quantitation limits  
 JN Non-routine analyte. Quantitation estimated. ND Not Detected at the Reporting Limit  
 S Spike Recovery outside accepted recovery limits

**Centek Laboratories, LLC**

Date: 28-Aug-12

**CLIENT:** TechSolutions Engineering, P.C.  
**Lab Order:** C1208075  
**Project:** 295 Locust Ave  
**Lab ID:** C1208075-002A

**Client Sample ID:** IAQ-1  
**Tag Number:** 541,278  
**Collection Date:** 8/21/2012  
**Matrix:** AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>1UG/M3 W/ 0.25UG/M3 CT-TCE-VC</b>			<b>TO-15</b>			Analyst: RJP
Freon 12	2.9	0.75		ug/m3	1	8/24/2012 6:51:00 AM
Heptane	0.71	0.62		ug/m3	1	8/24/2012 6:51:00 AM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	8/24/2012 6:51:00 AM
Hexane	1.4	0.54		ug/m3	1	8/24/2012 6:51:00 AM
Isopropyl alcohol	5.5	0.37		ug/m3	1	8/24/2012 6:51:00 AM
m&p-Xylene	1.8	1.3		ug/m3	1	8/24/2012 6:51:00 AM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	8/24/2012 6:51:00 AM
Methyl Ethyl Ketone	4.0	0.90		ug/m3	1	8/24/2012 6:51:00 AM
Methyl Isobutyl Ketone	< 1.2	1.2		ug/m3	1	8/24/2012 6:51:00 AM
Methyl tert-butyl ether	< 0.55	0.55		ug/m3	1	8/24/2012 6:51:00 AM
Methylene chloride	0.78	0.53		ug/m3	1	8/24/2012 6:51:00 AM
o-Xylene	0.57	0.66	J	ug/m3	1	8/24/2012 6:51:00 AM
Propylene	< 0.26	0.26		ug/m3	1	8/24/2012 6:51:00 AM
Styrene	< 0.65	0.65		ug/m3	1	8/24/2012 6:51:00 AM
Tetrachloroethylene	1.3	1.0		ug/m3	1	8/24/2012 6:51:00 AM
Tetrahydrofuran	< 0.45	0.45		ug/m3	1	8/24/2012 6:51:00 AM
Toluene	4.5	0.57		ug/m3	1	8/24/2012 6:51:00 AM
trans-1,2-Dichloroethene	< 0.60	0.60		ug/m3	1	8/24/2012 6:51:00 AM
trans-1,3-Dichloropropene	< 0.69	0.69		ug/m3	1	8/24/2012 6:51:00 AM
Trichloroethene	38	0.22		ug/m3	1	8/24/2012 6:51:00 AM
Vinyl acetate	< 0.54	0.54		ug/m3	1	8/24/2012 6:51:00 AM
Vinyl Bromide	< 0.67	0.67		ug/m3	1	8/24/2012 6:51:00 AM
Vinyl chloride	< 0.10	0.10		ug/m3	1	8/24/2012 6:51:00 AM

**Qualifiers:** \*\* Reporting Limit . Results reported are not blank corrected  
 B Analyte detected in the associated Method Blank E Value above quantitation range  
 H Holding times for preparation or analysis exceeded J Analyte detected at or below quantitation limits  
 JN Non-routine analyte. Quantitation estimated. ND Not Detected at the Reporting Limit  
 S Spike Recovery outside accepted recovery limits

**Centek Laboratories, LLC**

Date: 28-Aug-12

**CLIENT:** TechSolutions Engineering, P.C.  
**Lab Order:** C1208075  
**Project:** 295 Locust Ave  
**Lab ID:** C1208075-003A

**Client Sample ID:** SVMP-2  
**Tag Number:** 85,144  
**Collection Date:** 8/21/2012  
**Matrix:** AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>1UG/M3 BY METHOD TO15</b>		<b>TO-15</b>		Analyst: <b>RJP</b>		
1,1,1-Trichloroethane	< 0.83	0.83		ug/m3	1	8/24/2012 4:49:00 PM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	8/24/2012 4:49:00 PM
1,1,2-Trichloroethane	< 0.83	0.83		ug/m3	1	8/24/2012 4:49:00 PM
1,1-Dichloroethane	< 0.62	0.62		ug/m3	1	8/24/2012 4:49:00 PM
1,1-Dichloroethene	< 0.60	0.60		ug/m3	1	8/24/2012 4:49:00 PM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	8/24/2012 4:49:00 PM
1,2,4-Trimethylbenzene	4.6	0.75		ug/m3	1	8/24/2012 4:49:00 PM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	8/24/2012 4:49:00 PM
1,2-Dichlorobenzene	< 0.92	0.92		ug/m3	1	8/24/2012 4:49:00 PM
1,2-Dichloroethane	< 0.62	0.62		ug/m3	1	8/24/2012 4:49:00 PM
1,2-Dichloropropane	< 0.70	0.70		ug/m3	1	8/24/2012 4:49:00 PM
1,3,5-Trimethylbenzene	2.1	0.75		ug/m3	1	8/24/2012 4:49:00 PM
1,3-butadiene	< 0.34	0.34		ug/m3	1	8/24/2012 4:49:00 PM
1,3-Dichlorobenzene	< 0.92	0.92		ug/m3	1	8/24/2012 4:49:00 PM
1,4-Dichlorobenzene	< 0.92	0.92		ug/m3	1	8/24/2012 4:49:00 PM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	8/24/2012 4:49:00 PM
2,2,4-trimethylpentane	2400	570		ug/m3	810	8/27/2012 6:04:00 PM
4-ethyltoluene	1.4	0.75		ug/m3	1	8/24/2012 4:49:00 PM
Acetone	37	7.2		ug/m3	10	8/24/2012 11:04:00 PM
Allyl chloride	< 0.48	0.48		ug/m3	1	8/24/2012 4:49:00 PM
Benzene	5.2	0.49		ug/m3	1	8/24/2012 4:49:00 PM
Benzyl chloride	< 0.88	0.88		ug/m3	1	8/24/2012 4:49:00 PM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	8/24/2012 4:49:00 PM
Bromoform	< 1.6	1.6		ug/m3	1	8/24/2012 4:49:00 PM
Bromomethane	< 0.59	0.59		ug/m3	1	8/24/2012 4:49:00 PM
Carbon disulfide	74	4.7		ug/m3	10	8/24/2012 11:04:00 PM
Carbon tetrachloride	< 0.96	0.96		ug/m3	1	8/24/2012 4:49:00 PM
Chlorobenzene	< 0.70	0.70		ug/m3	1	8/24/2012 4:49:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	8/24/2012 4:49:00 PM
Chloroform	< 0.74	0.74		ug/m3	1	8/24/2012 4:49:00 PM
Chloromethane	< 0.31	0.31		ug/m3	1	8/24/2012 4:49:00 PM
cis-1,2-Dichloroethene	500	24		ug/m3	40	8/27/2012 10:39:00 AM
cis-1,3-Dichloropropene	< 0.69	0.69		ug/m3	1	8/24/2012 4:49:00 PM
Cyclohexane	< 0.52	0.52		ug/m3	1	8/24/2012 4:49:00 PM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	8/24/2012 4:49:00 PM
Ethyl acetate	< 0.92	0.92		ug/m3	1	8/24/2012 4:49:00 PM
Ethylbenzene	1.9	0.66		ug/m3	1	8/24/2012 4:49:00 PM
Freon 11	1.5	0.86		ug/m3	1	8/24/2012 4:49:00 PM
Freon 113	< 1.2	1.2		ug/m3	1	8/24/2012 4:49:00 PM
Freon 114	< 1.1	1.1		ug/m3	1	8/24/2012 4:49:00 PM

**Qualifiers:** \*\* Reporting Limit . Results reported are not blank corrected  
 B Analyte detected in the associated Method Blank E Value above quantitation range  
 H Holding times for preparation or analysis exceeded J Analyte detected at or below quantitation limits  
 JN Non-routine analyte. Quantitation estimated. ND Not Detected at the Reporting Limit  
 S Spike Recovery outside accepted recovery limits

**Centek Laboratories, LLC**

Date: 28-Aug-12

**CLIENT:** TechSolutions Engineering, P.C.  
**Lab Order:** C1208075  
**Project:** 295 Locust Ave  
**Lab ID:** C1208075-003A

**Client Sample ID:** SVMP-2  
**Tag Number:** 85,144  
**Collection Date:** 8/21/2012  
**Matrix:** AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>1UG/M3 BY METHOD TO15</b>		<b>TO-15</b>		Analyst: <b>RJP</b>		
Freon 12	2.3	0.75		ug/m3	1	8/24/2012 4:49:00 PM
Heptane	8.0	0.62		ug/m3	1	8/24/2012 4:49:00 PM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	8/24/2012 4:49:00 PM
Hexane	100	21		ug/m3	40	8/27/2012 10:39:00 AM
Isopropyl alcohol	5.0	0.37		ug/m3	1	8/24/2012 4:49:00 PM
m&p-Xylene	5.4	1.3		ug/m3	1	8/24/2012 4:49:00 PM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	8/24/2012 4:49:00 PM
Methyl Ethyl Ketone	< 0.90	0.90		ug/m3	1	8/24/2012 4:49:00 PM
Methyl Isobutyl Ketone	< 1.2	1.2		ug/m3	1	8/24/2012 4:49:00 PM
Methyl tert-butyl ether	3.0	0.55		ug/m3	1	8/24/2012 4:49:00 PM
Methylene chloride	< 0.53	0.53		ug/m3	1	8/24/2012 4:49:00 PM
o-Xylene	2.4	0.66		ug/m3	1	8/24/2012 4:49:00 PM
Propylene	< 0.26	0.26		ug/m3	1	8/24/2012 4:49:00 PM
Styrene	< 0.65	0.65		ug/m3	1	8/24/2012 4:49:00 PM
Tetrachloroethylene	1500	830		ug/m3	810	8/27/2012 6:04:00 PM
Tetrahydrofuran	< 0.45	0.45		ug/m3	1	8/24/2012 4:49:00 PM
Toluene	11	5.7		ug/m3	10	8/24/2012 11:04:00 PM
trans-1,2-Dichloroethene	27	6.0		ug/m3	10	8/24/2012 11:04:00 PM
trans-1,3-Dichloropropene	< 0.69	0.69		ug/m3	1	8/24/2012 4:49:00 PM
Trichloroethene	620	33		ug/m3	40	8/27/2012 10:39:00 AM
Vinyl acetate	< 0.54	0.54		ug/m3	1	8/24/2012 4:49:00 PM
Vinyl Bromide	< 0.67	0.67		ug/m3	1	8/24/2012 4:49:00 PM
Vinyl chloride	1.6	0.39		ug/m3	1	8/24/2012 4:49:00 PM

**Qualifiers:** \*\* Reporting Limit . Results reported are not blank corrected  
 B Analyte detected in the associated Method Blank E Value above quantitation range  
 H Holding times for preparation or analysis exceeded J Analyte detected at or below quantitation limits  
 JN Non-routine analyte. Quantitation estimated. ND Not Detected at the Reporting Limit  
 S Spike Recovery outside accepted recovery limits

**Centek Laboratories, LLC**

Date: 28-Aug-12

**CLIENT:** TechSolutions Engineering, P.C.  
**Lab Order:** C1208075  
**Project:** 295 Locust Ave  
**Lab ID:** C1208075-004A

**Client Sample ID:** IAQ-2  
**Tag Number:** 202,296  
**Collection Date:** 8/21/2012  
**Matrix:** AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>1UG/M3 W/ 0.25UG/M3 CT-TCE-VC</b>		<b>TO-15</b>		Analyst: <b>RJP</b>		
1,1,1-Trichloroethane	< 0.83	0.83		ug/m3	1	8/24/2012 7:29:00 AM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	8/24/2012 7:29:00 AM
1,1,2-Trichloroethane	< 0.83	0.83		ug/m3	1	8/24/2012 7:29:00 AM
1,1-Dichloroethane	< 0.62	0.62		ug/m3	1	8/24/2012 7:29:00 AM
1,1-Dichloroethene	< 0.60	0.60		ug/m3	1	8/24/2012 7:29:00 AM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	8/24/2012 7:29:00 AM
1,2,4-Trimethylbenzene	1.4	0.75		ug/m3	1	8/24/2012 7:29:00 AM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	8/24/2012 7:29:00 AM
1,2-Dichlorobenzene	< 0.92	0.92		ug/m3	1	8/24/2012 7:29:00 AM
1,2-Dichloroethane	< 0.62	0.62		ug/m3	1	8/24/2012 7:29:00 AM
1,2-Dichloropropane	< 0.70	0.70		ug/m3	1	8/24/2012 7:29:00 AM
1,3,5-Trimethylbenzene	0.50	0.75	J	ug/m3	1	8/24/2012 7:29:00 AM
1,3-butadiene	< 0.34	0.34		ug/m3	1	8/24/2012 7:29:00 AM
1,3-Dichlorobenzene	< 0.92	0.92		ug/m3	1	8/24/2012 7:29:00 AM
1,4-Dichlorobenzene	< 0.92	0.92		ug/m3	1	8/24/2012 7:29:00 AM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	8/24/2012 7:29:00 AM
2,2,4-trimethylpentane	0.95	0.71		ug/m3	1	8/24/2012 7:29:00 AM
4-ethyltoluene	0.50	0.75	J	ug/m3	1	8/24/2012 7:29:00 AM
Acetone	24	7.2		ug/m3	10	8/24/2012 7:20:00 PM
Allyl chloride	< 0.48	0.48		ug/m3	1	8/24/2012 7:29:00 AM
Benzene	0.65	0.49		ug/m3	1	8/24/2012 7:29:00 AM
Benzyl chloride	< 0.88	0.88		ug/m3	1	8/24/2012 7:29:00 AM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	8/24/2012 7:29:00 AM
Bromoform	< 1.6	1.6		ug/m3	1	8/24/2012 7:29:00 AM
Bromomethane	< 0.59	0.59		ug/m3	1	8/24/2012 7:29:00 AM
Carbon disulfide	< 0.47	0.47		ug/m3	1	8/24/2012 7:29:00 AM
Carbon tetrachloride	0.51	0.26		ug/m3	1	8/24/2012 7:29:00 AM
Chlorobenzene	< 0.70	0.70		ug/m3	1	8/24/2012 7:29:00 AM
Chloroethane	< 0.40	0.40		ug/m3	1	8/24/2012 7:29:00 AM
Chloroform	< 0.74	0.74		ug/m3	1	8/24/2012 7:29:00 AM
Chloromethane	1.0	0.31		ug/m3	1	8/24/2012 7:29:00 AM
cis-1,2-Dichloroethene	< 0.60	0.60		ug/m3	1	8/24/2012 7:29:00 AM
cis-1,3-Dichloropropene	< 0.69	0.69		ug/m3	1	8/24/2012 7:29:00 AM
Cyclohexane	< 0.52	0.52		ug/m3	1	8/24/2012 7:29:00 AM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	8/24/2012 7:29:00 AM
Ethyl acetate	1.3	0.92		ug/m3	1	8/24/2012 7:29:00 AM
Ethylbenzene	0.57	0.66	J	ug/m3	1	8/24/2012 7:29:00 AM
Freon 11	1.6	0.86		ug/m3	1	8/24/2012 7:29:00 AM
Freon 113	< 1.2	1.2		ug/m3	1	8/24/2012 7:29:00 AM
Freon 114	< 1.1	1.1		ug/m3	1	8/24/2012 7:29:00 AM

**Qualifiers:** \*\* Reporting Limit . Results reported are not blank corrected  
 B Analyte detected in the associated Method Blank E Value above quantitation range  
 H Holding times for preparation or analysis exceeded J Analyte detected at or below quantitation limits  
 JN Non-routine analyte. Quantitation estimated. ND Not Detected at the Reporting Limit  
 S Spike Recovery outside accepted recovery limits

**Centek Laboratories, LLC**

Date: 28-Aug-12

**CLIENT:** TechSolutions Engineering, P.C.  
**Lab Order:** C1208075  
**Project:** 295 Locust Ave  
**Lab ID:** C1208075-004A

**Client Sample ID:** IAQ-2  
**Tag Number:** 202,296  
**Collection Date:** 8/21/2012  
**Matrix:** AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>1UG/M3 W/ 0.25UG/M3 CT-TCE-VC</b>			<b>TO-15</b>			Analyst: RJP
Freon 12	3.2	0.75		ug/m3	1	8/24/2012 7:29:00 AM
Heptane	0.83	0.62		ug/m3	1	8/24/2012 7:29:00 AM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	8/24/2012 7:29:00 AM
Hexane	1.6	0.54		ug/m3	1	8/24/2012 7:29:00 AM
Isopropyl alcohol	5.5	0.37		ug/m3	1	8/24/2012 7:29:00 AM
m&p-Xylene	1.7	1.3		ug/m3	1	8/24/2012 7:29:00 AM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	8/24/2012 7:29:00 AM
Methyl Ethyl Ketone	2.7	0.90		ug/m3	1	8/24/2012 7:29:00 AM
Methyl Isobutyl Ketone	< 1.2	1.2		ug/m3	1	8/24/2012 7:29:00 AM
Methyl tert-butyl ether	< 0.55	0.55		ug/m3	1	8/24/2012 7:29:00 AM
Methylene chloride	0.71	0.53		ug/m3	1	8/24/2012 7:29:00 AM
o-Xylene	0.53	0.66	J	ug/m3	1	8/24/2012 7:29:00 AM
Propylene	< 0.26	0.26		ug/m3	1	8/24/2012 7:29:00 AM
Styrene	< 0.65	0.65		ug/m3	1	8/24/2012 7:29:00 AM
Tetrachloroethylene	1.7	1.0		ug/m3	1	8/24/2012 7:29:00 AM
Tetrahydrofuran	< 0.45	0.45		ug/m3	1	8/24/2012 7:29:00 AM
Toluene	4.5	0.57		ug/m3	1	8/24/2012 7:29:00 AM
trans-1,2-Dichloroethene	< 0.60	0.60		ug/m3	1	8/24/2012 7:29:00 AM
trans-1,3-Dichloropropene	< 0.69	0.69		ug/m3	1	8/24/2012 7:29:00 AM
Trichloroethene	< 0.22	0.22		ug/m3	1	8/24/2012 7:29:00 AM
Vinyl acetate	< 0.54	0.54		ug/m3	1	8/24/2012 7:29:00 AM
Vinyl Bromide	< 0.67	0.67		ug/m3	1	8/24/2012 7:29:00 AM
Vinyl chloride	< 0.10	0.10		ug/m3	1	8/24/2012 7:29:00 AM

**Qualifiers:** \*\* Reporting Limit . Results reported are not blank corrected  
 B Analyte detected in the associated Method Blank E Value above quantitation range  
 H Holding times for preparation or analysis exceeded J Analyte detected at or below quantitation limits  
 JN Non-routine analyte. Quantitation estimated. ND Not Detected at the Reporting Limit  
 S Spike Recovery outside accepted recovery limits

**Centek Laboratories, LLC**

Date: 28-Aug-12

**CLIENT:** TechSolutions Engineering, P.C.  
**Lab Order:** C1208075  
**Project:** 295 Locust Ave  
**Lab ID:** C1208075-005A

**Client Sample ID:** SVMP-5  
**Tag Number:** 237,156  
**Collection Date:** 8/21/2012  
**Matrix:** AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>1UG/M3 BY METHOD TO15</b>		<b>TO-15</b>		Analyst: <b>RJP</b>		
1,1,1-Trichloroethane	< 0.83	0.83		ug/m3	1	8/24/2012 5:27:00 PM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	8/24/2012 5:27:00 PM
1,1,2-Trichloroethane	< 0.83	0.83		ug/m3	1	8/24/2012 5:27:00 PM
1,1-Dichloroethane	< 0.62	0.62		ug/m3	1	8/24/2012 5:27:00 PM
1,1-Dichloroethene	< 0.60	0.60		ug/m3	1	8/24/2012 5:27:00 PM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	8/24/2012 5:27:00 PM
1,2,4-Trimethylbenzene	24	7.5		ug/m3	10	8/25/2012 7:57:00 AM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	8/24/2012 5:27:00 PM
1,2-Dichlorobenzene	< 0.92	0.92		ug/m3	1	8/24/2012 5:27:00 PM
1,2-Dichloroethane	< 0.62	0.62		ug/m3	1	8/24/2012 5:27:00 PM
1,2-Dichloropropane	< 0.70	0.70		ug/m3	1	8/24/2012 5:27:00 PM
1,3,5-Trimethylbenzene	16	7.5		ug/m3	10	8/25/2012 7:57:00 AM
1,3-butadiene	< 0.34	0.34		ug/m3	1	8/24/2012 5:27:00 PM
1,3-Dichlorobenzene	< 0.92	0.92		ug/m3	1	8/24/2012 5:27:00 PM
1,4-Dichlorobenzene	< 0.92	0.92		ug/m3	1	8/24/2012 5:27:00 PM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	8/24/2012 5:27:00 PM
2,2,4-trimethylpentane	14	7.1		ug/m3	10	8/25/2012 7:57:00 AM
4-ethyltoluene	10	0.75		ug/m3	1	8/24/2012 5:27:00 PM
Acetone	35	7.2		ug/m3	10	8/25/2012 7:57:00 AM
Allyl chloride	< 0.48	0.48		ug/m3	1	8/24/2012 5:27:00 PM
Benzene	0.94	0.49		ug/m3	1	8/24/2012 5:27:00 PM
Benzyl chloride	< 0.88	0.88		ug/m3	1	8/24/2012 5:27:00 PM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	8/24/2012 5:27:00 PM
Bromoform	< 1.6	1.6		ug/m3	1	8/24/2012 5:27:00 PM
Bromomethane	< 0.59	0.59		ug/m3	1	8/24/2012 5:27:00 PM
Carbon disulfide	150	19		ug/m3	40	8/25/2012 8:33:00 AM
Carbon tetrachloride	< 0.96	0.96		ug/m3	1	8/24/2012 5:27:00 PM
Chlorobenzene	< 0.70	0.70		ug/m3	1	8/24/2012 5:27:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	8/24/2012 5:27:00 PM
Chloroform	3.5	0.74		ug/m3	1	8/24/2012 5:27:00 PM
Chloromethane	< 0.31	0.31		ug/m3	1	8/24/2012 5:27:00 PM
cis-1,2-Dichloroethene	2.8	0.60		ug/m3	1	8/24/2012 5:27:00 PM
cis-1,3-Dichloropropene	< 0.69	0.69		ug/m3	1	8/24/2012 5:27:00 PM
Cyclohexane	< 0.52	0.52		ug/m3	1	8/24/2012 5:27:00 PM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	8/24/2012 5:27:00 PM
Ethyl acetate	< 0.92	0.92		ug/m3	1	8/24/2012 5:27:00 PM
Ethylbenzene	6.2	0.66		ug/m3	1	8/24/2012 5:27:00 PM
Freon 11	1.7	0.86		ug/m3	1	8/24/2012 5:27:00 PM
Freon 113	< 1.2	1.2		ug/m3	1	8/24/2012 5:27:00 PM
Freon 114	< 1.1	1.1		ug/m3	1	8/24/2012 5:27:00 PM

**Qualifiers:** \*\* Reporting Limit . Results reported are not blank corrected  
 B Analyte detected in the associated Method Blank E Value above quantitation range  
 H Holding times for preparation or analysis exceeded J Analyte detected at or below quantitation limits  
 JN Non-routine analyte. Quantitation estimated. ND Not Detected at the Reporting Limit  
 S Spike Recovery outside accepted recovery limits

**Centek Laboratories, LLC**

Date: 28-Aug-12

**CLIENT:** TechSolutions Engineering, P.C.  
**Lab Order:** C1208075  
**Project:** 295 Locust Ave  
**Lab ID:** C1208075-005A

**Client Sample ID:** SVMP-5  
**Tag Number:** 237,156  
**Collection Date:** 8/21/2012  
**Matrix:** AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>1UG/M3 BY METHOD TO15</b>		<b>TO-15</b>		Analyst: <b>RJP</b>		
Freon 12	2.6	0.75		ug/m3	1	8/24/2012 5:27:00 PM
Heptane	1.7	0.62		ug/m3	1	8/24/2012 5:27:00 PM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	8/24/2012 5:27:00 PM
Hexane	< 0.54	0.54		ug/m3	1	8/24/2012 5:27:00 PM
Isopropyl alcohol	4.5	0.37		ug/m3	1	8/24/2012 5:27:00 PM
m&p-Xylene	15	1.3		ug/m3	1	8/24/2012 5:27:00 PM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	8/24/2012 5:27:00 PM
Methyl Ethyl Ketone	6.1	0.90		ug/m3	1	8/24/2012 5:27:00 PM
Methyl Isobutyl Ketone	< 1.2	1.2		ug/m3	1	8/24/2012 5:27:00 PM
Methyl tert-butyl ether	< 0.55	0.55		ug/m3	1	8/24/2012 5:27:00 PM
Methylene chloride	0.67	0.53		ug/m3	1	8/24/2012 5:27:00 PM
o-Xylene	5.0	0.66		ug/m3	1	8/24/2012 5:27:00 PM
Propylene	< 0.26	0.26		ug/m3	1	8/24/2012 5:27:00 PM
Styrene	3.6	0.65		ug/m3	1	8/24/2012 5:27:00 PM
Tetrachloroethylene	470	41		ug/m3	40	8/25/2012 8:33:00 AM
Tetrahydrofuran	< 0.45	0.45		ug/m3	1	8/24/2012 5:27:00 PM
Toluene	6.1	0.57		ug/m3	1	8/24/2012 5:27:00 PM
trans-1,2-Dichloroethene	< 0.60	0.60		ug/m3	1	8/24/2012 5:27:00 PM
trans-1,3-Dichloropropene	< 0.69	0.69		ug/m3	1	8/24/2012 5:27:00 PM
Trichloroethene	2.9	0.82		ug/m3	1	8/24/2012 5:27:00 PM
Vinyl acetate	< 0.54	0.54		ug/m3	1	8/24/2012 5:27:00 PM
Vinyl Bromide	< 0.67	0.67		ug/m3	1	8/24/2012 5:27:00 PM
Vinyl chloride	< 0.39	0.39		ug/m3	1	8/24/2012 5:27:00 PM

**Qualifiers:** \*\* Reporting Limit . Results reported are not blank corrected  
 B Analyte detected in the associated Method Blank E Value above quantitation range  
 H Holding times for preparation or analysis exceeded J Analyte detected at or below quantitation limits  
 JN Non-routine analyte. Quantitation estimated. ND Not Detected at the Reporting Limit  
 S Spike Recovery outside accepted recovery limits

**Centek Laboratories, LLC**

Date: 28-Aug-12

**CLIENT:** TechSolutions Engineering, P.C.  
**Lab Order:** C1208075  
**Project:** 295 Locust Ave  
**Lab ID:** C1208075-006A

**Client Sample ID:** IAQ-5  
**Tag Number:** 318,292  
**Collection Date:** 8/21/2012  
**Matrix:** AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>1UG/M3 W/ 0.25UG/M3 CT-TCE-VC</b>		<b>TO-15</b>		Analyst: <b>RJP</b>		
1,1,1-Trichloroethane	< 0.83	0.83		ug/m3	1	8/24/2012 8:05:00 AM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	8/24/2012 8:05:00 AM
1,1,2-Trichloroethane	< 0.83	0.83		ug/m3	1	8/24/2012 8:05:00 AM
1,1-Dichloroethane	< 0.62	0.62		ug/m3	1	8/24/2012 8:05:00 AM
1,1-Dichloroethene	< 0.60	0.60		ug/m3	1	8/24/2012 8:05:00 AM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	8/24/2012 8:05:00 AM
1,2,4-Trimethylbenzene	1.5	0.75		ug/m3	1	8/24/2012 8:05:00 AM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	8/24/2012 8:05:00 AM
1,2-Dichlorobenzene	< 0.92	0.92		ug/m3	1	8/24/2012 8:05:00 AM
1,2-Dichloroethane	< 0.62	0.62		ug/m3	1	8/24/2012 8:05:00 AM
1,2-Dichloropropane	< 0.70	0.70		ug/m3	1	8/24/2012 8:05:00 AM
1,3,5-Trimethylbenzene	0.55	0.75	J	ug/m3	1	8/24/2012 8:05:00 AM
1,3-butadiene	< 0.34	0.34		ug/m3	1	8/24/2012 8:05:00 AM
1,3-Dichlorobenzene	< 0.92	0.92		ug/m3	1	8/24/2012 8:05:00 AM
1,4-Dichlorobenzene	< 0.92	0.92		ug/m3	1	8/24/2012 8:05:00 AM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	8/24/2012 8:05:00 AM
2,2,4-trimethylpentane	1.0	0.71		ug/m3	1	8/24/2012 8:05:00 AM
4-ethyltoluene	< 0.75	0.75		ug/m3	1	8/24/2012 8:05:00 AM
Acetone	27	7.2		ug/m3	10	8/24/2012 7:58:00 PM
Allyl chloride	< 0.48	0.48		ug/m3	1	8/24/2012 8:05:00 AM
Benzene	0.75	0.49		ug/m3	1	8/24/2012 8:05:00 AM
Benzyl chloride	< 0.88	0.88		ug/m3	1	8/24/2012 8:05:00 AM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	8/24/2012 8:05:00 AM
Bromoform	< 1.6	1.6		ug/m3	1	8/24/2012 8:05:00 AM
Bromomethane	< 0.59	0.59		ug/m3	1	8/24/2012 8:05:00 AM
Carbon disulfide	< 0.47	0.47		ug/m3	1	8/24/2012 8:05:00 AM
Carbon tetrachloride	0.51	0.26		ug/m3	1	8/24/2012 8:05:00 AM
Chlorobenzene	< 0.70	0.70		ug/m3	1	8/24/2012 8:05:00 AM
Chloroethane	< 0.40	0.40		ug/m3	1	8/24/2012 8:05:00 AM
Chloroform	< 0.74	0.74		ug/m3	1	8/24/2012 8:05:00 AM
Chloromethane	1.1	0.31		ug/m3	1	8/24/2012 8:05:00 AM
cis-1,2-Dichloroethene	< 0.60	0.60		ug/m3	1	8/24/2012 8:05:00 AM
cis-1,3-Dichloropropene	< 0.69	0.69		ug/m3	1	8/24/2012 8:05:00 AM
Cyclohexane	< 0.52	0.52		ug/m3	1	8/24/2012 8:05:00 AM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	8/24/2012 8:05:00 AM
Ethyl acetate	1.8	0.92		ug/m3	1	8/24/2012 8:05:00 AM
Ethylbenzene	0.79	0.66		ug/m3	1	8/24/2012 8:05:00 AM
Freon 11	1.5	0.86		ug/m3	1	8/24/2012 8:05:00 AM
Freon 113	< 1.2	1.2		ug/m3	1	8/24/2012 8:05:00 AM
Freon 114	< 1.1	1.1		ug/m3	1	8/24/2012 8:05:00 AM

**Qualifiers:** \*\* Reporting Limit . Results reported are not blank corrected  
 B Analyte detected in the associated Method Blank E Value above quantitation range  
 H Holding times for preparation or analysis exceeded J Analyte detected at or below quantitation limits  
 JN Non-routine analyte. Quantitation estimated. ND Not Detected at the Reporting Limit  
 S Spike Recovery outside accepted recovery limits

# Centek Laboratories, LLC

Date: 28-Aug-12

**CLIENT:** TechSolutions Engineering, P.C.  
**Lab Order:** C1208075  
**Project:** 295 Locust Ave  
**Lab ID:** C1208075-006A

**Client Sample ID:** IAQ-5  
**Tag Number:** 318,292  
**Collection Date:** 8/21/2012  
**Matrix:** AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>1UG/M3 W/ 0.25UG/M3 CT-TCE-VC</b>			<b>TO-15</b>			Analyst: RJP
Freon 12	3.2	0.75		ug/m3	1	8/24/2012 8:05:00 AM
Heptane	< 0.62	0.62		ug/m3	1	8/24/2012 8:05:00 AM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	8/24/2012 8:05:00 AM
Hexane	2.7	0.54		ug/m3	1	8/24/2012 8:05:00 AM
Isopropyl alcohol	4.5	0.37		ug/m3	1	8/24/2012 8:05:00 AM
m&p-Xylene	1.9	1.3		ug/m3	1	8/24/2012 8:05:00 AM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	8/24/2012 8:05:00 AM
Methyl Ethyl Ketone	2.7	0.90		ug/m3	1	8/24/2012 8:05:00 AM
Methyl Isobutyl Ketone	< 1.2	1.2		ug/m3	1	8/24/2012 8:05:00 AM
Methyl tert-butyl ether	< 0.55	0.55		ug/m3	1	8/24/2012 8:05:00 AM
Methylene chloride	0.88	0.53		ug/m3	1	8/24/2012 8:05:00 AM
o-Xylene	0.66	0.66		ug/m3	1	8/24/2012 8:05:00 AM
Propylene	< 0.26	0.26		ug/m3	1	8/24/2012 8:05:00 AM
Styrene	< 0.65	0.65		ug/m3	1	8/24/2012 8:05:00 AM
Tetrachloroethylene	1.4	1.0		ug/m3	1	8/24/2012 8:05:00 AM
Tetrahydrofuran	< 0.45	0.45		ug/m3	1	8/24/2012 8:05:00 AM
Toluene	4.5	0.57		ug/m3	1	8/24/2012 8:05:00 AM
trans-1,2-Dichloroethene	< 0.60	0.60		ug/m3	1	8/24/2012 8:05:00 AM
trans-1,3-Dichloropropene	< 0.69	0.69		ug/m3	1	8/24/2012 8:05:00 AM
Trichloroethene	< 0.22	0.22		ug/m3	1	8/24/2012 8:05:00 AM
Vinyl acetate	< 0.54	0.54		ug/m3	1	8/24/2012 8:05:00 AM
Vinyl Bromide	< 0.67	0.67		ug/m3	1	8/24/2012 8:05:00 AM
Vinyl chloride	< 0.10	0.10		ug/m3	1	8/24/2012 8:05:00 AM

**Qualifiers:** \*\* Reporting Limit . Results reported are not blank corrected  
 B Analyte detected in the associated Method Blank E Value above quantitation range  
 H Holding times for preparation or analysis exceeded J Analyte detected at or below quantitation limits  
 JN Non-routine analyte. Quantitation estimated. ND Not Detected at the Reporting Limit  
 S Spike Recovery outside accepted recovery limits

# Centek Laboratories, LLC

Date: 28-Aug-12

**CLIENT:** TechSolutions Engineering, P.C.  
**Lab Order:** C1208075  
**Project:** 295 Locust Ave  
**Lab ID:** C1208075-007A

**Client Sample ID:** SVMP-6  
**Tag Number:** 78,262  
**Collection Date:** 8/21/2012  
**Matrix:** AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>1UG/M3 BY METHOD TO15</b>		<b>TO-15</b>		Analyst: <b>RJP</b>		
1,1,1-Trichloroethane	< 0.83	0.83		ug/m3	1	8/24/2012 6:04:00 PM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	8/24/2012 6:04:00 PM
1,1,2-Trichloroethane	< 0.83	0.83		ug/m3	1	8/24/2012 6:04:00 PM
1,1-Dichloroethane	< 0.62	0.62		ug/m3	1	8/24/2012 6:04:00 PM
1,1-Dichloroethene	< 0.60	0.60		ug/m3	1	8/24/2012 6:04:00 PM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	8/24/2012 6:04:00 PM
1,2,4-Trimethylbenzene	3.7	0.75		ug/m3	1	8/24/2012 6:04:00 PM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	8/24/2012 6:04:00 PM
1,2-Dichlorobenzene	< 0.92	0.92		ug/m3	1	8/24/2012 6:04:00 PM
1,2-Dichloroethane	< 0.62	0.62		ug/m3	1	8/24/2012 6:04:00 PM
1,2-Dichloropropane	< 0.70	0.70		ug/m3	1	8/24/2012 6:04:00 PM
1,3,5-Trimethylbenzene	1.9	0.75		ug/m3	1	8/24/2012 6:04:00 PM
1,3-butadiene	< 0.34	0.34		ug/m3	1	8/24/2012 6:04:00 PM
1,3-Dichlorobenzene	< 0.92	0.92		ug/m3	1	8/24/2012 6:04:00 PM
1,4-Dichlorobenzene	< 0.92	0.92		ug/m3	1	8/24/2012 6:04:00 PM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	8/24/2012 6:04:00 PM
2,2,4-trimethylpentane	36	7.1		ug/m3	10	8/25/2012 9:08:00 AM
4-ethyltoluene	1.4	0.75		ug/m3	1	8/24/2012 6:04:00 PM
Acetone	44	7.2		ug/m3	10	8/25/2012 9:08:00 AM
Allyl chloride	< 0.48	0.48		ug/m3	1	8/24/2012 6:04:00 PM
Benzene	1.3	0.49		ug/m3	1	8/24/2012 6:04:00 PM
Benzyl chloride	< 0.88	0.88		ug/m3	1	8/24/2012 6:04:00 PM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	8/24/2012 6:04:00 PM
Bromoform	< 1.6	1.6		ug/m3	1	8/24/2012 6:04:00 PM
Bromomethane	< 0.59	0.59		ug/m3	1	8/24/2012 6:04:00 PM
Carbon disulfide	34	4.7		ug/m3	10	8/25/2012 9:08:00 AM
Carbon tetrachloride	< 0.96	0.96		ug/m3	1	8/24/2012 6:04:00 PM
Chlorobenzene	< 0.70	0.70		ug/m3	1	8/24/2012 6:04:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	8/24/2012 6:04:00 PM
Chloroform	0.89	0.74		ug/m3	1	8/24/2012 6:04:00 PM
Chloromethane	< 0.31	0.31		ug/m3	1	8/24/2012 6:04:00 PM
cis-1,2-Dichloroethene	39	6.0		ug/m3	10	8/25/2012 9:08:00 AM
cis-1,3-Dichloropropene	< 0.69	0.69		ug/m3	1	8/24/2012 6:04:00 PM
Cyclohexane	5.0	0.52		ug/m3	1	8/24/2012 6:04:00 PM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	8/24/2012 6:04:00 PM
Ethyl acetate	2.1	0.92		ug/m3	1	8/24/2012 6:04:00 PM
Ethylbenzene	2.2	0.66		ug/m3	1	8/24/2012 6:04:00 PM
Freon 11	1.7	0.86		ug/m3	1	8/24/2012 6:04:00 PM
Freon 113	< 1.2	1.2		ug/m3	1	8/24/2012 6:04:00 PM
Freon 114	< 1.1	1.1		ug/m3	1	8/24/2012 6:04:00 PM

**Qualifiers:** \*\* Reporting Limit . Results reported are not blank corrected  
 B Analyte detected in the associated Method Blank E Value above quantitation range  
 H Holding times for preparation or analysis exceeded J Analyte detected at or below quantitation limits  
 JN Non-routine analyte. Quantitation estimated. ND Not Detected at the Reporting Limit  
 S Spike Recovery outside accepted recovery limits

# Centek Laboratories, LLC

Date: 28-Aug-12

**CLIENT:** TechSolutions Engineering, P.C.  
**Lab Order:** C1208075  
**Project:** 295 Locust Ave  
**Lab ID:** C1208075-007A

**Client Sample ID:** SVMP-6  
**Tag Number:** 78,262  
**Collection Date:** 8/21/2012  
**Matrix:** AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>1UG/M3 BY METHOD TO15</b>		<b>TO-15</b>		Analyst: <b>RJP</b>		
Freon 12	2.6	0.75		ug/m3	1	8/24/2012 6:04:00 PM
Heptane	0.87	0.62		ug/m3	1	8/24/2012 6:04:00 PM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	8/24/2012 6:04:00 PM
Hexane	< 0.54	0.54		ug/m3	1	8/24/2012 6:04:00 PM
Isopropyl alcohol	3.9	0.37		ug/m3	1	8/24/2012 6:04:00 PM
m&p-Xylene	6.4	1.3		ug/m3	1	8/24/2012 6:04:00 PM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	8/24/2012 6:04:00 PM
Methyl Ethyl Ketone	5.2	0.90		ug/m3	1	8/24/2012 6:04:00 PM
Methyl Isobutyl Ketone	< 1.2	1.2		ug/m3	1	8/24/2012 6:04:00 PM
Methyl tert-butyl ether	< 0.55	0.55		ug/m3	1	8/24/2012 6:04:00 PM
Methylene chloride	1.2	0.53		ug/m3	1	8/24/2012 6:04:00 PM
o-Xylene	2.2	0.66		ug/m3	1	8/24/2012 6:04:00 PM
Propylene	< 0.26	0.26		ug/m3	1	8/24/2012 6:04:00 PM
Styrene	1.0	0.65		ug/m3	1	8/24/2012 6:04:00 PM
Tetrachloroethylene	37	10		ug/m3	10	8/25/2012 9:08:00 AM
Tetrahydrofuran	< 0.45	0.45		ug/m3	1	8/24/2012 6:04:00 PM
Toluene	8.5	0.57		ug/m3	1	8/24/2012 6:04:00 PM
trans-1,2-Dichloroethene	23	6.0		ug/m3	10	8/25/2012 9:08:00 AM
trans-1,3-Dichloropropene	< 0.69	0.69		ug/m3	1	8/24/2012 6:04:00 PM
Trichloroethene	20	8.2		ug/m3	10	8/25/2012 9:08:00 AM
Vinyl acetate	< 0.54	0.54		ug/m3	1	8/24/2012 6:04:00 PM
Vinyl Bromide	< 0.67	0.67		ug/m3	1	8/24/2012 6:04:00 PM
Vinyl chloride	1.2	0.39		ug/m3	1	8/24/2012 6:04:00 PM

**Qualifiers:** \*\* Reporting Limit . Results reported are not blank corrected  
 B Analyte detected in the associated Method Blank E Value above quantitation range  
 H Holding times for preparation or analysis exceeded J Analyte detected at or below quantitation limits  
 JN Non-routine analyte. Quantitation estimated. ND Not Detected at the Reporting Limit  
 S Spike Recovery outside accepted recovery limits

**Centek Laboratories, LLC**

Date: 28-Aug-12

**CLIENT:** TechSolutions Engineering, P.C.  
**Lab Order:** C1208075  
**Project:** 295 Locust Ave  
**Lab ID:** C1208075-008A

**Client Sample ID:** IAQ-6  
**Tag Number:** 556,153  
**Collection Date:** 8/21/2012  
**Matrix:** AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>1UG/M3 W/ 0.25UG/M3 CT-TCE-VC</b>						
		<b>TO-15</b>				Analyst: RJP
1,1,1-Trichloroethane	< 0.83	0.83		ug/m3	1	8/24/2012 8:41:00 AM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	8/24/2012 8:41:00 AM
1,1,2-Trichloroethane	< 0.83	0.83		ug/m3	1	8/24/2012 8:41:00 AM
1,1-Dichloroethane	< 0.62	0.62		ug/m3	1	8/24/2012 8:41:00 AM
1,1-Dichloroethene	< 0.60	0.60		ug/m3	1	8/24/2012 8:41:00 AM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	8/24/2012 8:41:00 AM
1,2,4-Trimethylbenzene	2.4	0.75		ug/m3	1	8/24/2012 8:41:00 AM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	8/24/2012 8:41:00 AM
1,2-Dichlorobenzene	< 0.92	0.92		ug/m3	1	8/24/2012 8:41:00 AM
1,2-Dichloroethane	< 0.62	0.62		ug/m3	1	8/24/2012 8:41:00 AM
1,2-Dichloropropane	< 0.70	0.70		ug/m3	1	8/24/2012 8:41:00 AM
1,3,5-Trimethylbenzene	0.85	0.75		ug/m3	1	8/24/2012 8:41:00 AM
1,3-butadiene	< 0.34	0.34		ug/m3	1	8/24/2012 8:41:00 AM
1,3-Dichlorobenzene	< 0.92	0.92		ug/m3	1	8/24/2012 8:41:00 AM
1,4-Dichlorobenzene	< 0.92	0.92		ug/m3	1	8/24/2012 8:41:00 AM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	8/24/2012 8:41:00 AM
2,2,4-trimethylpentane	2.1	0.71		ug/m3	1	8/24/2012 8:41:00 AM
4-ethyltoluene	0.80	0.75		ug/m3	1	8/24/2012 8:41:00 AM
Acetone	25	7.2		ug/m3	10	8/24/2012 8:35:00 PM
Allyl chloride	< 0.48	0.48		ug/m3	1	8/24/2012 8:41:00 AM
Benzene	1.1	0.49		ug/m3	1	8/24/2012 8:41:00 AM
Benzyl chloride	< 0.88	0.88		ug/m3	1	8/24/2012 8:41:00 AM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	8/24/2012 8:41:00 AM
Bromoform	< 1.6	1.6		ug/m3	1	8/24/2012 8:41:00 AM
Bromomethane	< 0.59	0.59		ug/m3	1	8/24/2012 8:41:00 AM
Carbon disulfide	0.76	0.47		ug/m3	1	8/24/2012 8:41:00 AM
Carbon tetrachloride	0.51	0.26		ug/m3	1	8/24/2012 8:41:00 AM
Chlorobenzene	< 0.70	0.70		ug/m3	1	8/24/2012 8:41:00 AM
Chloroethane	< 0.40	0.40		ug/m3	1	8/24/2012 8:41:00 AM
Chloroform	< 0.74	0.74		ug/m3	1	8/24/2012 8:41:00 AM
Chloromethane	0.84	0.31		ug/m3	1	8/24/2012 8:41:00 AM
cis-1,2-Dichloroethene	< 0.60	0.60		ug/m3	1	8/24/2012 8:41:00 AM
cis-1,3-Dichloropropene	< 0.69	0.69		ug/m3	1	8/24/2012 8:41:00 AM
Cyclohexane	< 0.52	0.52		ug/m3	1	8/24/2012 8:41:00 AM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	8/24/2012 8:41:00 AM
Ethyl acetate	1.5	0.92		ug/m3	1	8/24/2012 8:41:00 AM
Ethylbenzene	2.1	0.66		ug/m3	1	8/24/2012 8:41:00 AM
Freon 11	1.4	0.86		ug/m3	1	8/24/2012 8:41:00 AM
Freon 113	0.78	1.2	J	ug/m3	1	8/24/2012 8:41:00 AM
Freon 114	< 1.1	1.1		ug/m3	1	8/24/2012 8:41:00 AM

**Qualifiers:** \*\* Reporting Limit . Results reported are not blank corrected  
 B Analyte detected in the associated Method Blank E Value above quantitation range  
 H Holding times for preparation or analysis exceeded J Analyte detected at or below quantitation limits  
 JN Non-routine analyte. Quantitation estimated. ND Not Detected at the Reporting Limit  
 S Spike Recovery outside accepted recovery limits

**Centek Laboratories, LLC**

Date: 28-Aug-12

**CLIENT:** TechSolutions Engineering, P.C.  
**Lab Order:** C1208075  
**Project:** 295 Locust Ave  
**Lab ID:** C1208075-008A

**Client Sample ID:** IAQ-6  
**Tag Number:** 556,153  
**Collection Date:** 8/21/2012  
**Matrix:** AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>1UG/M3 W/ 0.25UG/M3 CT-TCE-VC</b>			<b>TO-15</b>			Analyst: <b>RJP</b>
Freon 12	2.8	0.75		ug/m3	1	8/24/2012 8:41:00 AM
Heptane	2.5	0.62		ug/m3	1	8/24/2012 8:41:00 AM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	8/24/2012 8:41:00 AM
Hexane	2.8	0.54		ug/m3	1	8/24/2012 8:41:00 AM
Isopropyl alcohol	5.2	0.37		ug/m3	1	8/24/2012 8:41:00 AM
m&p-Xylene	6.5	1.3		ug/m3	1	8/24/2012 8:41:00 AM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	8/24/2012 8:41:00 AM
Methyl Ethyl Ketone	3.2	0.90		ug/m3	1	8/24/2012 8:41:00 AM
Methyl Isobutyl Ketone	< 1.2	1.2		ug/m3	1	8/24/2012 8:41:00 AM
Methyl tert-butyl ether	< 0.55	0.55		ug/m3	1	8/24/2012 8:41:00 AM
Methylene chloride	0.95	0.53		ug/m3	1	8/24/2012 8:41:00 AM
o-Xylene	2.1	0.66		ug/m3	1	8/24/2012 8:41:00 AM
Propylene	< 0.26	0.26		ug/m3	1	8/24/2012 8:41:00 AM
Styrene	< 0.65	0.65		ug/m3	1	8/24/2012 8:41:00 AM
Tetrachloroethylene	4.6	1.0		ug/m3	1	8/24/2012 8:41:00 AM
Tetrahydrofuran	< 0.45	0.45		ug/m3	1	8/24/2012 8:41:00 AM
Toluene	13	5.7		ug/m3	10	8/24/2012 8:35:00 PM
trans-1,2-Dichloroethene	< 0.60	0.60		ug/m3	1	8/24/2012 8:41:00 AM
trans-1,3-Dichloropropene	< 0.69	0.69		ug/m3	1	8/24/2012 8:41:00 AM
Trichloroethene	< 0.22	0.22		ug/m3	1	8/24/2012 8:41:00 AM
Vinyl acetate	< 0.54	0.54		ug/m3	1	8/24/2012 8:41:00 AM
Vinyl Bromide	< 0.67	0.67		ug/m3	1	8/24/2012 8:41:00 AM
Vinyl chloride	< 0.10	0.10		ug/m3	1	8/24/2012 8:41:00 AM

**Qualifiers:** \*\* Reporting Limit . Results reported are not blank corrected  
 B Analyte detected in the associated Method Blank E Value above quantitation range  
 H Holding times for preparation or analysis exceeded J Analyte detected at or below quantitation limits  
 JN Non-routine analyte. Quantitation estimated. ND Not Detected at the Reporting Limit  
 S Spike Recovery outside accepted recovery limits

**Centek Laboratories, LLC**

Date: 28-Aug-12

**CLIENT:** TechSolutions Engineering, P.C.  
**Lab Order:** C1208075  
**Project:** 295 Locust Ave  
**Lab ID:** C1208075-009A

**Client Sample ID:** AMB-1  
**Tag Number:** 406,176  
**Collection Date:** 8/21/2012  
**Matrix:** AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>1UG/M3 W/ 0.25UG/M3 CT-TCE-VC</b>						
		<b>TO-15</b>				Analyst: RJP
1,1,1-Trichloroethane	< 0.83	0.83		ug/m3	1	8/24/2012 9:17:00 AM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	8/24/2012 9:17:00 AM
1,1,2-Trichloroethane	< 0.83	0.83		ug/m3	1	8/24/2012 9:17:00 AM
1,1-Dichloroethane	< 0.62	0.62		ug/m3	1	8/24/2012 9:17:00 AM
1,1-Dichloroethene	< 0.60	0.60		ug/m3	1	8/24/2012 9:17:00 AM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	8/24/2012 9:17:00 AM
1,2,4-Trimethylbenzene	1.9	0.75		ug/m3	1	8/24/2012 9:17:00 AM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	8/24/2012 9:17:00 AM
1,2-Dichlorobenzene	< 0.92	0.92		ug/m3	1	8/24/2012 9:17:00 AM
1,2-Dichloroethane	< 0.62	0.62		ug/m3	1	8/24/2012 9:17:00 AM
1,2-Dichloropropane	< 0.70	0.70		ug/m3	1	8/24/2012 9:17:00 AM
1,3,5-Trimethylbenzene	0.65	0.75	J	ug/m3	1	8/24/2012 9:17:00 AM
1,3-butadiene	< 0.34	0.34		ug/m3	1	8/24/2012 9:17:00 AM
1,3-Dichlorobenzene	< 0.92	0.92		ug/m3	1	8/24/2012 9:17:00 AM
1,4-Dichlorobenzene	< 0.92	0.92		ug/m3	1	8/24/2012 9:17:00 AM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	8/24/2012 9:17:00 AM
2,2,4-trimethylpentane	< 0.71	0.71		ug/m3	1	8/24/2012 9:17:00 AM
4-ethyltoluene	< 0.75	0.75		ug/m3	1	8/24/2012 9:17:00 AM
Acetone	32	7.2		ug/m3	10	8/24/2012 9:12:00 PM
Allyl chloride	< 0.48	0.48		ug/m3	1	8/24/2012 9:17:00 AM
Benzene	0.55	0.49		ug/m3	1	8/24/2012 9:17:00 AM
Benzyl chloride	< 0.88	0.88		ug/m3	1	8/24/2012 9:17:00 AM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	8/24/2012 9:17:00 AM
Bromoform	< 1.6	1.6		ug/m3	1	8/24/2012 9:17:00 AM
Bromomethane	< 0.59	0.59		ug/m3	1	8/24/2012 9:17:00 AM
Carbon disulfide	< 0.47	0.47		ug/m3	1	8/24/2012 9:17:00 AM
Carbon tetrachloride	0.58	0.26		ug/m3	1	8/24/2012 9:17:00 AM
Chlorobenzene	< 0.70	0.70		ug/m3	1	8/24/2012 9:17:00 AM
Chloroethane	< 0.40	0.40		ug/m3	1	8/24/2012 9:17:00 AM
Chloroform	< 0.74	0.74		ug/m3	1	8/24/2012 9:17:00 AM
Chloromethane	1.2	0.31		ug/m3	1	8/24/2012 9:17:00 AM
cis-1,2-Dichloroethene	< 0.60	0.60		ug/m3	1	8/24/2012 9:17:00 AM
cis-1,3-Dichloropropene	< 0.69	0.69		ug/m3	1	8/24/2012 9:17:00 AM
Cyclohexane	< 0.52	0.52		ug/m3	1	8/24/2012 9:17:00 AM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	8/24/2012 9:17:00 AM
Ethyl acetate	1.9	0.92		ug/m3	1	8/24/2012 9:17:00 AM
Ethylbenzene	0.66	0.66		ug/m3	1	8/24/2012 9:17:00 AM
Freon 11	1.5	0.86		ug/m3	1	8/24/2012 9:17:00 AM
Freon 113	0.86	1.2	J	ug/m3	1	8/24/2012 9:17:00 AM
Freon 114	< 1.1	1.1		ug/m3	1	8/24/2012 9:17:00 AM

**Qualifiers:** \*\* Reporting Limit . Results reported are not blank corrected  
 B Analyte detected in the associated Method Blank E Value above quantitation range  
 H Holding times for preparation or analysis exceeded J Analyte detected at or below quantitation limits  
 JN Non-routine analyte. Quantitation estimated. ND Not Detected at the Reporting Limit  
 S Spike Recovery outside accepted recovery limits

# Centek Laboratories, LLC

Date: 28-Aug-12

**CLIENT:** TechSolutions Engineering, P.C.  
**Lab Order:** C1208075  
**Project:** 295 Locust Ave  
**Lab ID:** C1208075-009A

**Client Sample ID:** AMB-1  
**Tag Number:** 406,176  
**Collection Date:** 8/21/2012  
**Matrix:** AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
<b>1UG/M3 W/ 0.25UG/M3 CT-TCE-VC</b>						
			<b>TO-15</b>			Analyst: RJP
Freon 12	3.0	0.75		ug/m3	1	8/24/2012 9:17:00 AM
Heptane	0.92	0.62		ug/m3	1	8/24/2012 9:17:00 AM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	8/24/2012 9:17:00 AM
Hexane	< 0.54	0.54		ug/m3	1	8/24/2012 9:17:00 AM
Isopropyl alcohol	3.7	0.37		ug/m3	1	8/24/2012 9:17:00 AM
m&p-Xylene	1.5	1.3		ug/m3	1	8/24/2012 9:17:00 AM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	8/24/2012 9:17:00 AM
Methyl Ethyl Ketone	2.0	0.90		ug/m3	1	8/24/2012 9:17:00 AM
Methyl Isobutyl Ketone	< 1.2	1.2		ug/m3	1	8/24/2012 9:17:00 AM
Methyl tert-butyl ether	< 0.55	0.55		ug/m3	1	8/24/2012 9:17:00 AM
Methylene chloride	< 0.53	0.53		ug/m3	1	8/24/2012 9:17:00 AM
o-Xylene	0.62	0.66	J	ug/m3	1	8/24/2012 9:17:00 AM
Propylene	< 0.26	0.26		ug/m3	1	8/24/2012 9:17:00 AM
Styrene	< 0.65	0.65		ug/m3	1	8/24/2012 9:17:00 AM
Tetrachloroethylene	0.76	1.0	J	ug/m3	1	8/24/2012 9:17:00 AM
Tetrahydrofuran	< 0.45	0.45		ug/m3	1	8/24/2012 9:17:00 AM
Toluene	2.9	0.57		ug/m3	1	8/24/2012 9:17:00 AM
trans-1,2-Dichloroethene	< 0.60	0.60		ug/m3	1	8/24/2012 9:17:00 AM
trans-1,3-Dichloropropene	< 0.69	0.69		ug/m3	1	8/24/2012 9:17:00 AM
Trichloroethene	< 0.22	0.22		ug/m3	1	8/24/2012 9:17:00 AM
Vinyl acetate	< 0.54	0.54		ug/m3	1	8/24/2012 9:17:00 AM
Vinyl Bromide	< 0.67	0.67		ug/m3	1	8/24/2012 9:17:00 AM
Vinyl chloride	< 0.10	0.10		ug/m3	1	8/24/2012 9:17:00 AM

**Qualifiers:** \*\* Reporting Limit . Results reported are not blank corrected  
 B Analyte detected in the associated Method Blank E Value above quantitation range  
 H Holding times for preparation or analysis exceeded J Analyte detected at or below quantitation limits  
 JN Non-routine analyte. Quantitation estimated. ND Not Detected at the Reporting Limit  
 S Spike Recovery outside accepted recovery limits