ARAMARK Uniform Services (Syracuse) LLC
Former Christopher Service Company Site
3009 and 3117 Milton Avenue
Village of Solvay, New York

Voluntary Cleanup Project
VCP Site #V00665-7

Remedial Action Work Plan

November 2009

Barton & Loguidice

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1.0 Introduction and Purpose

ARAMARK Uniform Services (Syracuse) LLC ("ARAMARK") conducted an investigation of subsurface contamination in accordance with the New York State Department of Environmental Conservation's (NYSDEC) Voluntary Cleanup Program (VCP) at its 3009 and 3117 Milton Avenue facility located in the Village of Solvay, Onondaga County, New York (see Figure 1). The investigation and related activities were conducted under the oversight of The Wetlands Company, Barton & Loguidice, P.C. (B&L) and the New York State Department of Environmental Conservation (NYSDEC). The site is identified in the VCP registry as VCP #V00665-7.

The results of a sub-slab vapor survey have indicated the presence of chlorinated solvents, trichloroethene (TCE), and tetrachloroethene (PCE), above concentrations identified in the New York State Department of Health (NYSDOH) Final Guidance for Evaluating Soil Vapor in the State of New York decision matrices that warrant mitigation efforts. The elevated chlorinated solvent concentrations were limited to the western portion of the building near the former dry cleaning area (see Figure 2). Sampling of site soils and groundwater indicated only slight exceedances of respective 6 NYCRR Part 375 and Part 703 standards; however, the site and nearby parcels use the municipal water supply and there are no other downgradient receptors.

Based upon the site investigation results, sub-slab vapor conditions in a localized area of the western portion of the building require mitigation. This Remedial Action Work Plan identifies the necessary tasks to complete the sub-slab vapor mitigation system design. The Work Plan has been developed in accordance with the NYSDEC's May 2002 Voluntary Cleanup Guide and 6 NYCRR Part 375.

1.1 Site Description

The Site is approximately 0.75 acres and is situated at the southeast corner of the intersection of Milton Avenue and Bailey Street. The current primary site use is for an industrial laundry facility (3117 Milton Avenue) without dry cleaning operations. There is also a residential property (3009 Milton Avenue) located on the east side of the site which is currently vacant. The industrial laundry is served by public water.

The majority of the Site consists of a two-story block building with a small parking area between the north side of the building and Milton Avenue. Beyond the rear of the building to the south is a vacant area that historically abutted the backyards of two residential properties that were located on Third Street; these properties were purchased by ARAMARK and the houses have been demolished. This vacant area is considered off-site in regards to the site definition of the voluntary cleanup agreement (VCA).

1.2 Site History

The main use of the western portion of the Site has been for industrial laundry services, while the eastern portion of the Site was occupied by a residential property that is now vacant. Prior to 1946, the Site consisted of residential housing. From 1946 to 1953, the Site was used as a storage and automotive repair facility. Following 1953, water washing and dry cleaning operations were conducted at the Site as part of the industrial laundry services. According to previous environmental studies at the Site, the dates of the former dry cleaning operations have not been determined. The dry cleaning operations were not open to the public.

A 12,000-gallon underground storage tank containing fuel oil was removed from the Site in 1971. According to previous environmental studies at the Site, no tank closure reports or documentation are available.

More detailed information regarding the Site History is available in the May 2006 Voluntary Cleanup Site Investigation Report (VCSIR).

1.3 Previous Investigations

Previous investigations conducted at the site include a 1999 Phase I Environmental Site Assessment (Phase I ESA) completed by LCS, a 2003 Limited Environmental Site Assessment Report and Supplement to the Site Investigation Report conducted by Ransom Environmental, and the most recently conducted Voluntary Cleanup Project Site Investigation by B&L.

1.3.1 Phase I ESA (LCS, 1999)

The first investigation conducted at the site was a Phase I ESA by LCS, Inc. in 1999. The Phase I ESA included a records review and non-intrusive site reconnaissance. No samples were collected as part of the Phase I ESA. LCS concluded that there was no historical evidence supporting the presence of a release of hazardous, toxic, or other contaminants of concern.

1.3.2 Limited Environmental Site Assessment (Ransom, 2003)

Ransom Environmental conducted a Limited Environmental Site Assessment in 2003. The Ransom investigation focused on two areas of concern at the Site. The areas of concern included the former location of the 12,000-gallon fuel oil UST (located below the existing 10,000-gallon carbon dioxide AST) and the former dry cleaning area located in the interior of the western portion of the building.

The 2003 Ransom investigation included the installation of soil/groundwater borings by direct push methods, followed by the installation of temporary groundwater well points. Soil and groundwater samples were collected. The investigation identified the presence of volatile organic compounds (VOCs) including petroleum hydrocarbons and chlorinated solvents, and semi-volatile organic compounds (SVOCs) at concentrations that exceeded NYSDEC Groundwater Quality Standards. Soil samples indicated the presence of VOCs and SVOCs above the TAGM 4046 recommended soil cleanup objectives (SCOs). A summary of these results are included in Appendix A and all historic sampling locations are depicted on Figure 2. Since the Ransom investigation was completed, the promulgation of 6 NYCRR Part 375 has superseded TAGM 4046.

The source and extent of the contamination were partially defined by the 2003 Ransom site investigation, and were later fully defined by subsequent work described below. From the 2003 Ransom site investigation, significant exceedances of groundwater standards were observed in the former dry cleaning area, including 4,260 ppb of cis-1,2

DCE and 160 ppb of total SVOCs in GW-4; 381 ppb of PCE, 271 ppb of vinyl chloride, and 3,300 ppb of total SVOCs in GW-7; and 4,200 ppb of total SVOCs in GW-6. Slight exceedances of groundwater standards were observed adjacent to the former 12,000-gallon UST, including 6.5 ppb of cis-1,2 DCE, 5.3 ppb of PCE, and 26 ppb of total SVOCs. For soil, significant exceedances of SCOs were observed in the former dry cleaning area, including 29 ppm of PCE (1.3 ppm unrestricted SCO) in SB-7 and 91 ppm of total SVOCs in SB-6, including 21.9 ppm of chrysene (1 ppm unrestricted SCO). No soil impacts were observed adjacent to the residential property (3009 Milton Avenue).

Ransom Environmental prepared a Supplement to the Limited Environmental Site Assessment and Site Investigation Report in November 2003 to incorporate the collection of off-site groundwater samples. Two temporary well points were installed north of Milton Avenue, and two were installed west of Bailey Street in order to characterize off-site impacts (see Figure 2). Although off-site impacts appeared minimal, exceedances of groundwater standards included 11.7 ppb of PCE and 15 ppb of total SVOCs in GW-27, as well as 6.7 ppb of vinyl chloride and 34 ppb of total SVOCs in GW-28.

1.3.3 Voluntary Cleanup Site Investigation (2004-2006)

The Wetlands Company and B&L conducted a Voluntary Cleanup Site Investigation (VCSI), VCP Site #V00665-7, for ARAMARK in accordance with the NYSDEC's May 2002 Draft Voluntary Cleanup Program Guide (see May 2006 VCSIR for complete investigation results). Initial field activities included a site survey conducted by Ianuzi &

Romans, P.C., a site inspection by B&L personnel, and a residential well survey. The site inspection identified storm sewer catch basins along Milton Avenue and Bailey Street and underground utilities, although no significant environmental concerns were noted at the Site exterior. The primary focus of the interior inspection was the former dry cleaning area. The historic dry cleaning operations at the facility had ceased by the time of the inspection, and B&L personnel did not note any evidence of staining, spills, or leaks. The residential well survey indicated that no private wells are located within one-eighth of a mile of the Site.

The field investigation activities conducted as part of the VCSI included installation of subsurface soil borings and groundwater monitoring wells, as well as the installation of sub-slab and soil vapor survey points. Sampling at the Site included subsurface soil samples from the monitoring well borings, four rounds of groundwater samples from the permanent monitoring wells, and soil vapor samples from the sub-slab and soil vapor survey points. Indoor air samples were not included as part of the sampling, as current operations at the Site would interfere with the results, making conclusions about sources of indoor air concentrations impossible. The purpose of the vapor sampling conducted at the Site was to identify the potential for sub-slab vapor intrusion, as opposed to documenting potential indoor sources that could originate from soiled products to be laundered. For example, some of the textiles that ARAMARK receives from its customers for laundering are likely to have been exposed to solvents while at the customer location. The presence of these textiles in the ARAMARK building would confound the results of any indoor air sampling program.

Compared to the results of the Ransom investigation, the SVOC concentrations in soil appear to be stabilized on- and off-site. For example, SVOC contaminant levels in soil samples taken from the more recent MW-2 are similar in magnitude to those taken from SB-4 during the earlier Ransom investigation. Chrysene was detected at 12 ppm in the soil boring at MW-2 and at 21.9 ppm in SB-6 from the earlier Ransom Investigation. However, levels of VOCs dropped significantly from the Ransom Investigation to the VCSI. Levels of PCE in soil dropped from 28.8 ppm in SB-7 to 2.5 ppb in MW-2, and levels of vinyl chloride fell from 1.3 ppm in SB-4 to 11 ppb in MW-2. Due to their isolated nature, relatively low-level concentrations, and the apparent biodegradation of VOCs and chlorinated solvents, subsurface soil impacts can be managed through vapor intrusion mitigation. The following table illustrates the decrease in soil contaminants from the Ransom Investigation to the VCSI:

Comparison of On-Site Soil Samples		
Soil Sample Location	**Ransom Investigation (2003)**	**Voluntary Cleanup Site Investigation (2004-2006)**
SB-6/MW-2 Area	21.9 ppm chrysene	12 ppm chrysene
SB-7/MW-2 Area	28.8 ppm PCE	2.5 ppb PCE
SB-7/MW-2 Area	1.3 ppm vinyl chloride	11 ppb vinyl chloride

Groundwater also experienced a reduction in VOCs and SVOCs from the Ransom investigation to the VCSI. Cis-1,2 DCE fell from 4,260 ppb at GW-4 from the Ransom investigation to 10 ppb in MW-2. PCE experienced a similar reduction from 381 ppb in GW-7 to 12 ppb in MW-2, and vinyl chloride fell from 271 ppb in GW-7 to 18 ppb in MW-2. VOCs associated with petroleum, such as BTEX, exceeded groundwater standards during the Ransom investigation but did not exceed standards during the VCSI. SVOCs experienced a similar reduction in groundwater; total SVOCs fell from 4,200 ppb in GW-6 to 296 ppb in MW-2. The following table illustrates the decrease in groundwater contaminants from the Ransom Investigation to the VCSI:

Comparison of On-Site Groundwater Samples		
Groundwater Sample Location	**Ransom Investigation (2003)**	**Voluntary Cleanup Site Investigation (2004-2006)**
GW-4/MW-2 Area	4,260 ppb cis-1,2 DCE	10 ppb cis-1,2 DCE
GW-4/MW-2 Area	381 ppb PCE	12 ppb PCE
GW-4/MW-2 Area	271 ppb vinyl chloride	18 ppb vinyl chloride
GW-6/MW-2 Area	BTEX exceeds standards	BTEX within standards
GW-6/MW-2 Area	4,200 total SVOCs	296 total SVOCs

Off-site, concentrations of contaminants varied from the Ransom investigation to the VCSI. PCE concentrations fell northwest of the site from 11.7 ppb in GW-27 to 0.48 ppb in MW-5, while concentrations increased from non-detect in GW-28 to 7.3 ppb in MW-6. However, vinyl chloride dropped from 6.7 ppb in GW-28 to under 1 ppb in MW-6. Total SVOCs decreased from 35 ppb in GW-28 to non-detect in MW-6, while total SVOCs increased significantly from 33 ppb in GW-26 to 783 ppb in MW-6. However, overall levels of SVOCs are decreasing both on and off-site.

It appears that there are two distinct groundwater plumes emanating from the site. Former monitoring well MW-6 delineates the western (downgradient) extent of the chlorinated solvent plume (see Figure 2). A petroleum-based plume (primarily indicated by elevated SVOCs) is present closer to Milton Avenue and also encompasses a limited area below the building. The plume is delineated by historic GW locations with its terminus likely extending slightly beyond MW-5.

The depth to groundwater is approximately 5 to 6 feet below grade, with the exception of shallower depths adjacent to Milton Avenue (i.e., MW-5 and MW-6). Groundwater flows from southeast to northwest. Transport of contaminants via groundwater has been limited due to a small horizontal groundwater gradient (<0.05%). The low-level groundwater exceedances combined with a lack of downgradient receptors (as confirmed by a residential well survey) justified pursuit of a vapor mitigation approach in lieu of active groundwater remediation at the site. NYSDEC granted abandonment of the monitoring well network in light of this conclusion.

The results of the sub-slab vapor survey indicated the presence of chlorinated solvents, TCE and PCE, above concentrations identified in the NYSDEC/NYSDOH Soil/Vapor Indoor Air Decision Matrices that warrant mitigation efforts. The elevated chlorinated solvent concentrations were limited to the former dry cleaning area (see figure 2). Based upon these results, a phased approach for addressing the chlorinated solvents has been developed. First, pre-design concrete coring will be conducted in the proposed location of the suction pit. The results of the coring will then be incorporated into the design of the sub-slab ventilation system.

1.4 Summary of Environmental Conditions

There has been a reduction of VOC and SVOC concentrations between the 2003 Ransom investigation and the 2004-2006 Voluntary Cleanup Site Investigation. These reductions are likely attributable to biodegradation of chlorinated solvents, and more representative sampling techniques (i.e. well development and purging) conducted during the VCSI. The grab groundwater samples collected during the Ransom investigation may have been influenced by the soil matrices, and may not have been indicative of actual groundwater conditions. In addition to the residual chlorinated solvent impacts there are SVOC impacts adjacent to the former dry cleaning operations, as opposed to the former fuel oil underground storage tank (UST). A possible explanation for this observation is the historical usage of the site for automotive repair and storage.

Based upon observed site conditions, historical investigations and existing exposure scenarios, the following are potential contaminant migration pathways:

- Volatilization of organic constituents from subsurface soils and groundwater (vapor intrusion) under the western portion of the main building (3117 Milton Avenue).
- During potential future subsurface construction activities, one or more potential exposure pathways associated with residual subsurface soil, groundwater, and soil vapors could exist for potential construction site workers or wildlife.

The potential contaminant pathway for the volatilization of organic and chlorinated solvent vapors was verified by the results of the sub-slab and soil vapor survey. The results of the soil vapor monitoring, along with the NYSDOH

Decision Matrices that are the impetus for the remedial action are summarized in the following table (see Figure 2 for sample locations).

Parameter	Sub-slab Samples	
	VP-3 (ug/m³)	VP-4 (ug/m³)
TCE	**6,800**	**3,000**
PCE	**51,000**	**6,700**

Sub-slab PCE concentrations >1,000 ug/m³ require mitigation per Final NYS DEC/DOH matrices (October 2006).

Sub-slab TCE concentrations >250 ug/m ³ require mitigation.

*TCE/PCE concentrations in **Bold** exceed NYS DEC/DOH concentrations that require mitigation.*

TCE/PCE concentrations in the unlisted historical vapor points were below thresholds requiring mitigation.

1.5 Summary of Remedy

Soil depressurization (sub-slab ventilation system) will be utilized to prevent sub-slab vapors from entering the building. Suction fan(s) will be utilized to produce negative pressure beneath the slab, which will cause air to flow from the building into the soil, preventing the mobilization of vapors into the building. The ventilation system would be augmented by sealing potential vapor routes in the existing slab over the area of impact.

As monitored natural attenuation is proposed for groundwater remediation, a groundwater monitoring program will be implemented at the Site. The program will consist of periodic sampling of MW-2, as well as two permanent groundwater monitoring wells to be installed on the Site near the intersection of Milton Avenue and Bailey Avenue.

Following this remedy, a deed restriction will be put in place as described in Section 4.0 below. This restriction will limit the future uses of the property and prevent exposure to site soils, groundwater, and soil vapors. The limited liability release following remediation will be limited to VOCs and SVOCs included in the sampling regimen.

1.6 Contemplated Use

Current site operations (commercial laundry without dry cleaning operations) are anticipated to be the future use of the Site.

2.0 Engineering Evaluation of the Remedy

The remediation goal for the Site is to eliminate or reduce to the extent practicable the exposures of persons at the site to VOCs and SVOCs from contaminated groundwater and the intrusion of contaminated soil gas into the structure, as well as to attain groundwater standards to the extent feasible. The evaluation of the selected remedy was based on 6 NYCRR Part 375-1.8(f) including:

- Overall protectiveness of the public health and environment;
- Standards, criteria and guidance;
- Long term effectiveness and permanence;
- Reduction in toxicity, mobility or volume of contamination;
- Short term impacts and effectiveness;
- Implementability;
- Cost effectiveness; and
- Community acceptance.

2.1 Overall Protectiveness of Public Health and the Environment

The sub-slab ventilation system will reduce the potential risk of exposure due to vapor intrusion. The Site and surrounding areas are supplied with public water, so exposure to groundwater is not likely.

2.2 Standards, Criteria and Guidance (SCG)

The utilization of sub-slab ventilation would minimize mobilization of contaminants through the existing slab. State standards for soil and vapors immediately below the slab, however, would likely not be realized in the short term with standalone use of the sub-slab ventilation system. Groundwater standards are expected to be met over time through natural attenuation.

2.3 Short-Term Effectiveness

Sub-slab ventilation is a long-term mitigation practice utilized when there is no immediate threat to human health and the environment. The mitigation benefits are immediate. The installation of the ventilation system utilizes standard construction techniques and would result in short-term impacts to the Site. These impacts could be minimized by constructing the system during off-peak production hours.

2.4 Long-Term Effectiveness and Permanence

Sub-slab ventilation is a long-term mitigation system. Once in place, the system has a low maintenance and operation burden. The system, however, may need to be utilized for the duration of operations at the Site. Limited contaminant reduction will be achieved through the use of the sub-slab ventilation system. The remaining contamination will be isolated, and the potential contaminant pathway, which is currently limited to indoor volatilization, will be eliminated through the installation of the sub-slab ventilation system.

2.5 Reduction of Toxicity, Mobility and Volume

Sub-slab ventilation may not significantly reduce the volume of contamination below the slab. It will, however, eliminate the potential contaminant exposure pathway.

2.6 Feasibility

Sub-slab ventilation system design and operation is a common mitigation practice. The feasibility for implementation of sub-slab ventilation is high.

2.7 Community Acceptance

Given the limited exposure scenarios that exist, it is anticipated that the community would accept sub-slab ventilation as a mitigation practice. Some disruption to the active business at the Site is expected during operations; however, these disturbances will be of a temporary nature.

2.8 Cost-Benefit Analysis

A detailed cost estimate of the sub-slab ventilation system will be provided as part of the Plans and Specifications, but typical installations could cost in excess of $30,000. Annual operation and maintenance of the sub-slab ventilation system are typically in the range of $2,000 to $5,000. Additional costs will be incurred for the pre-design sub-slab vapor survey and concrete coring in the location of the proposed suction pit to determine the thickness of the concrete slab and the soil conditions beneath the slab. Costs will also be incurred for the future groundwater monitoring program. Installation of the required two additional monitoring wells would be approximately $5,000.00. Annual groundwater monitoring and reporting may also be in the range of $5,000.00 per year.

3.0 Project Plans and Specifications

The following section outlines the general approach for the design and installation of the sub-slab ventilation system. The project includes the installation of additional sub-slab survey points in the eastern portion of the building, preliminary concrete slab thickness and subbase testing at the proposed vapor mitigation suction pit, as well as the design of a sub-slab ventilation system to eliminate the indoor air volatilization pathway of chlorinated solvents. Detailed design specifications will be prepared and will be submitted to the NYSDEC for review prior to bidding the project.

A phased approach will be conducted, consisting of a pre-design investigation and the subsequent sub-slab ventilation system design. Pre-design data will be obtained for the sub-slab ventilation system. Core drilling will be conducted in the location of the proposed vapor mitigation suction pit to determine the thickness of the concrete slab and the subbase/soil gradation beneath the slab. The purpose of the subbase gradation testing is to determine if the underlying aggregate is reasonably close to the range of 0.5 to 1.0-inch in diameter with less than 10% passing through a 0.5-inch sieve specified in the EPA's Radon Prevention in the Design and Construction of Schools and Other Large Buildings, which is the standard design document for sub-slab ventilation systems. No additional laboratory analysis for vapor concentrations will be conducted as part of the subbase testing.

Following core drilling, the sub-slab ventilation system will be designed to mitigate soil vapor intrusion at the Site. The following sections describe the incremental approach to the pre-design investigation and sub-slab ventilation system design.

3.1 Pre-Design Investigation

A concrete core sample will be taken in the proposed location of the vapor mitigation suction pit (see Figure 3). The sample will be examined by the on-site B&L representative and will be logged as described for soil borings in the Sampling and Analysis Plan from the original VCP Site Investigation Work Plan. Soils will be screened with a photoionization detector, and readings will be logged. No subbase samples will be sent for laboratory analysis.

The data obtained from this investigation will be used to determine pre-design criteria such as the thickness of the concrete slab and soil gradation beneath the slab. Following this analysis, the sub-slab ventilation system will be designed.

3.2 Sub-Slab Ventilation System

Detailed Plans and Specifications will be submitted for review following the acquisition and analysis of the pre-design sampling data. Depending upon the size of the required system, the design will be in accordance with EPA's Radon Prevention in the Design and Construction of Schools and Other Large Buildings (June 1994).

Given the site constraints posed by the existing building slab (3-4 feet thick in locations) and facility equipment, the ventilation system will likely be comprised of a well point installed in a suction pit to create negative pressure beneath the slab. Based on the data presented in the 1994 EPA publication, one suction pit should provide sufficient vapor mitigation for the structure. The EPA indicates that a single suction pit provides sufficient coverage for 100,000 ft^2 when constructed in accordance with their guidelines; the Site structure is much less than this size at approximately 30,000 ft^2. Therefore, the entire footprint of the building will be depressurized.

The exact location of the suction pit and other design elements will be established as part of the Detailed Plans and Specifications to be submitted after the pre-design investigation. The Detailed Plans and Specifications will be stamped by a licensed Professional Engineer. The following general requirements will be incorporated into the sub-slab ventilation system design:

1. *Sealing* – the slab above the area of impact will be inspected for cracks and penetrations. Elastomeric joint sealant, caulks, mortar, grouts, expandable foam, etc. will be utilized to seal identified penetrations.

2. *Depressurization Diagnostic Test* – once the limits of the sub-slab ventilation system are determined, a diagnostic test will be conducted to determine the ability of the sub-slab suction field. A hole will be drilled in the slab near the center of the area of interest and suction will be applied. Smaller holes will be inserted around the suction hole and a digital micromanometer, or other means, will be utilized to quantify sub-slab air flow.

3. *Well Point Installation* – a well point will be installed in a radon mitigation style suction pit within the slab. Multiple well points will be constructed if necessary to ensure coverage of the entire structure. In-line active fans will be utilized for depressurization.

4. *Permanent Sub-Slab Vapor Probe Installation* – will be installed to evaluate the depressurization system and allow for future collection of sub-slab vapor samples.

5. *Vent Pipe Exhaust* – to be located above the eave of the building roof at least 25 feet from any outdoor air intakes.

6. *Labeling* – all subsurface piping will be labeled as "SSD System" (Sub-Slab Depressurization System).

7. *System Failure Warning* – the exhaust fans will be equipped with a warning device (e.g., light indicator, gauge, etc.) to indicate equipment failure. Emergency contact names and telephone numbers will be posted near the warning device.

4.0 Institutional Controls

A Site Management Plan (SMP) will be submitted for the site as part of the final design (with the Plans and Specifications submittal) and will be stamped by a licensed Professional Engineer. This SMP will include:

- An operation and maintenance plan for the sub-slab ventilation system.
- Proposed institutional controls for the site, including a deed restriction which limits future use of the property to commercial or industrial use. This deed restriction will also restrict the use of groundwater and how soils are managed.
- A soil management plan that will identify testing and handling procedures for soils if the building were ever to be demolished or if soils were exposed as part of future site construction.
- A groundwater monitoring plan that will include periodic sampling of MW-2 and two additional permanent monitoring wells to be installed near the corner of Milton Avenue and Bailey Avenue. The location of these wells is shown on Figure 3.
- A mitigation monitoring plan outlining operational monitoring requirements. Routine maintenance items to be incorporated into the mitigation monitoring plan will include:
    - Visual inspection of the complete system including vent fan, manometers, piping and labeling;
    - Calibration of the depressurization system;
    - Testing of the warning device;

- Weekly checks of pressure gauges in the vent pipes;
- Annual sub-slab soil vapor air monitoring (frequency to be reduced based upon initial results). Will include collection of sub-slab vapor samples from each of the permanent vapor probes and submission for laboratory analysis. The locations of the permanent vapor monitoring locations are shown on Figure 3;
- Annual inspection of system components including fan bearings and exhaust pipe conditions; and
- An annual inspection for cracks and penetrations in the slab.

As part of the operational and maintenance requirements under the mitigation monitoring plan, routine maintenance will occur every 12-18 months, or as described above. Before reducing the frequency of this maintenance, ARAMARK will provide justification for the proposed schedule to the State for its approval.

5.0 Health and Safety Plans

The existing VCP Health and Safety Plan (January 2004) will be utilized for the investigation. Additionally, a fact sheet will be provided to building occupants regarding the remedial activities that will take place. At minimum, this fact sheet will include information about known Site contaminants, the remedial activities that will occur, and contact information for further information. The fact sheet will be submitted for Agency review prior to the start of work.

6.0 Quality Assurance/Quality Control

The methods outlined in the VCP Sampling and Analysis Plan for QA/QC will continue to be utilized. These methods include decontamination procedures, use of field and trip blanks, proper documentation (including sampling data sheets and laboratory chain of custody), and data analysis including preparation of data summary tables. The summary tables will be prepared following thorough review of the data with the guidelines as outlined by the ASP protocol and the individual laboratory case narratives. The environmental samples collected will be analyzed by an Environmental Laboratory Accreditation Program (ELAP) certified laboratory.

7.0 Schedule

The project schedule is provided in Appendix C. The schedule is contingent upon NYSDEC review and may change depending on the results of the pre-design investigation.

8.0 Reporting

A Pre-Design Investigation Summary Report will be prepared following the core drilling event. The report will summarize the field methodologies and results and will include sub-slab ventilation Plans and Specifications, as well as a Site Management Plan. Both the Plans and Specifications and Site Management Plan will be stamped by a licensed Professional Engineer. Monthly reporting will continue in accordance with the VCP agreement.

9.0 Project Organization

The Wetlands Company is the prime engineering contractor for ARAMARK Uniform Services (Syracuse) LLC. B&L will report directly to the Wetlands Company for all services required on the project. With approval from the Wetlands Company, B&L will serve as direct liaison with the NYSDEC throughout the duration of the project.

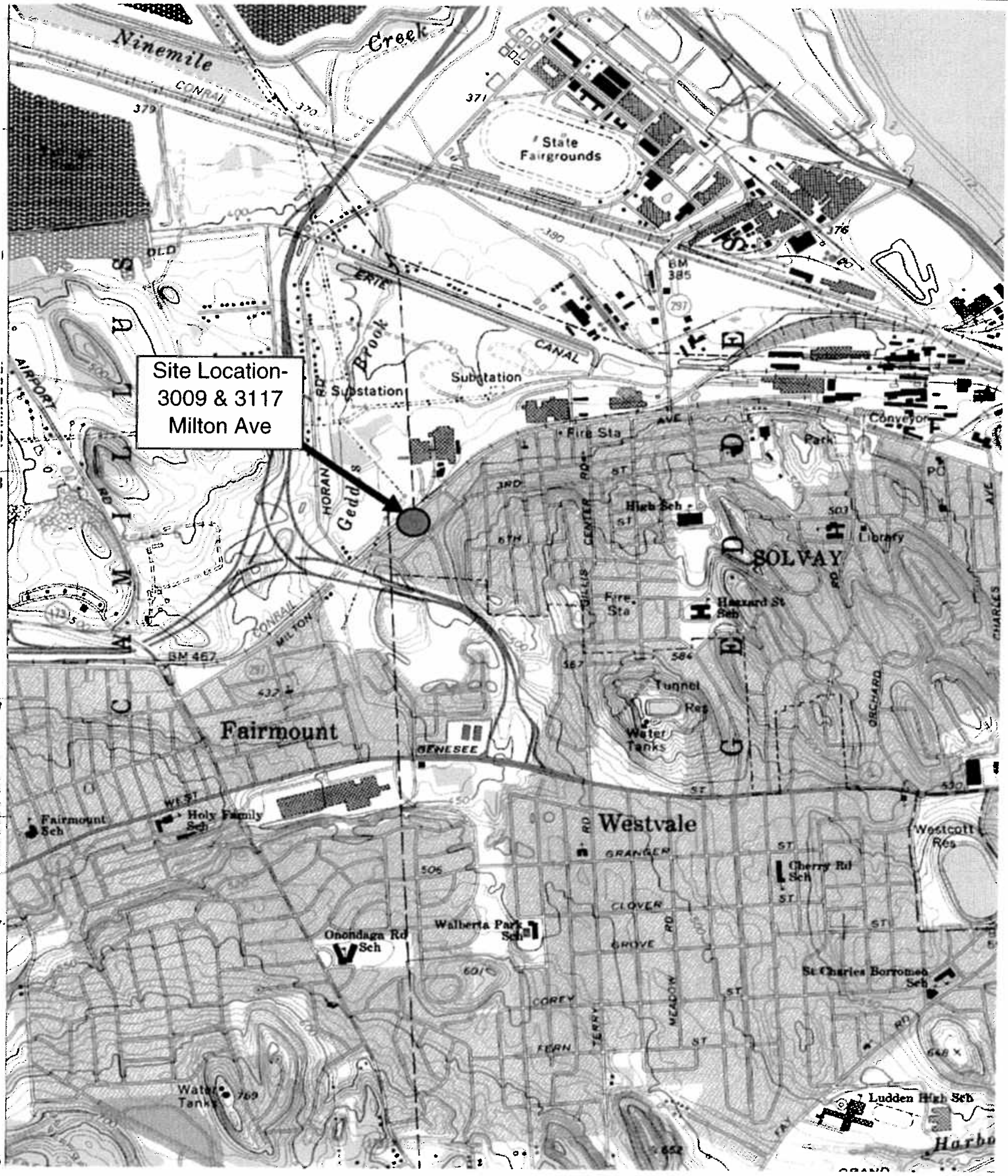
The B&L Project Officer will be Scott D. Nostrand, P.E. Mr. Nostrand has the authority to commit resources and resolve potential project scheduling conflicts. Mr. Nostrand will have primary responsibility for oversight planning and implementation of the project.

The Project Manager will be David R. Hanny. The Project Manager will be in charge of all field activities related to the Remedial Action Work Plan. The Project Manager will be responsible for scheduling and implementing the field activities, and will have primary contact with project subcontractors, The Wetlands Company, and NYSDEC. Mr. Hanny will also serve as the Quality Assurance Officer for this project. These responsibilities will include performing periodic field audits during the pre-design investigation and sub-slab ventilation system installation, and interfacing with the analytical laboratory to assure that the predetermined project objectives for data quality have been met.

Figures

Figure 1

Site Location Map



Project No. 909.001

Figure 1- Project Location Map
ARAMARK Uniform Services
Voluntary Cleanup Project

Village of Solvay | Onondaga Co., NY

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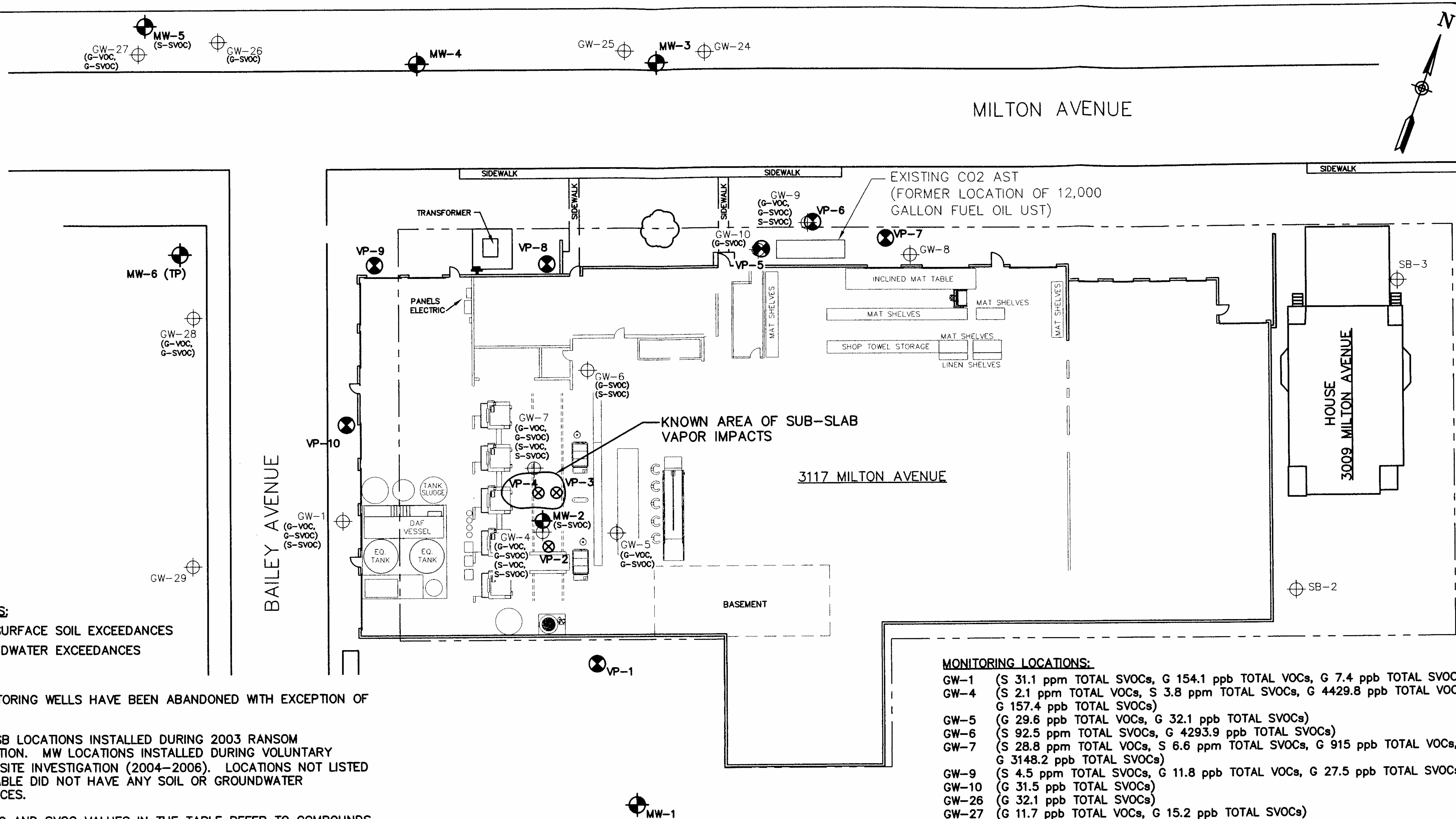
Barton & Loguidice, P.C.
Consulting Engineers

Base Map: USGS 7.5' Topographic Quadrangle Syracuse West, N.Y. (1978)

Figure 2

Historic Sample Locations



ABBREVIATIONS:

(S) SUB-SURFACE SOIL EXCEEDANCES

(G) GROUNDWATER EXCEEDANCES

NOTES:

1. ALL MONITORING WELLS HAVE BEEN ABANDONED WITH EXCEPTION OF MW-2.
2. GW AND SB LOCATIONS INSTALLED DURING 2003 RANSOM INVESTIGATION. MW LOCATIONS INSTALLED DURING VOLUNTARY CLEANUP SITE INVESTIGATION (2004-2006). LOCATIONS NOT LISTED IN THE TABLE DID NOT HAVE ANY SOIL OR GROUNDWATER EXCEEDANCES.
3. TOTAL VOC AND SVOC VALUES IN THE TABLE REFER TO COMPOUNDS THAT EXCEED THEIR RESPECTIVE STATE STANDARDS. REFER TO APPENDICES A & B FOR COMPLETE DATA SUMMARY TABLES.

LEGEND:

- — — — SITE BOUNDARY
- ⊗ SUB-SLAB VAPOR SURVEY POINT (EXISTING)
- SOIL GAS VAPOR SURVEY POINT (ABANDONED)
- FORMER TEMPORARY SOIL AND/OR GROUNDWATER SAMPLE LOCATION
- MONITORING WELL LOCATION (MW-2 ONLY EXISTING LOCATION)

SCALE: 1"= 30'

MONITORING LOCATIONS:

GW-1	(S 31.1 ppm TOTAL SVOCs, G 154.1 ppb TOTAL VOCs, G 7.4 ppb TOTAL SVOCs)
GW-4	(S 2.1 ppm TOTAL VOCs, S 3.8 ppm TOTAL SVOCs, G 4429.8 ppb TOTAL VOCs, G 157.4 ppb TOTAL SVOCs)
GW-5	(G 29.6 ppb TOTAL VOCs, G 32.1 ppb TOTAL SVOCs)
GW-6	(S 92.5 ppm TOTAL SVOCs, G 4293.9 ppb TOTAL SVOCs)
GW-7	(S 28.8 ppm TOTAL VOCs, S 6.6 ppm TOTAL SVOCs, G 915 ppb TOTAL VOCs, G 3148.2 ppb TOTAL SVOCs)
GW-9	(S 4.5 ppm TOTAL SVOCs, G 11.8 ppb TOTAL VOCs, G 27.5 ppb TOTAL SVOCs)
GW-10	(G 31.5 ppb TOTAL SVOCs)
GW-26	(G 32.1 ppb TOTAL SVOCs)
GW-27	(G 11.7 ppb TOTAL VOCs, G 15.2 ppb TOTAL SVOCs)
GW-28	(G 6.7 ppb TOTAL VOC, G 35.3 ppb TOTAL SVOCs)
MW-2	(S 22.3 ppm TOTAL SVOCs)
MW-5	(S 1.9 ppm TOTAL SVOCs)

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HISTORIC SAMPLE LOCATIONS

VILLAGE OF SOLVAY ONONDAGA COUNTY, N.Y.

Figure 2

Project No. 909.001

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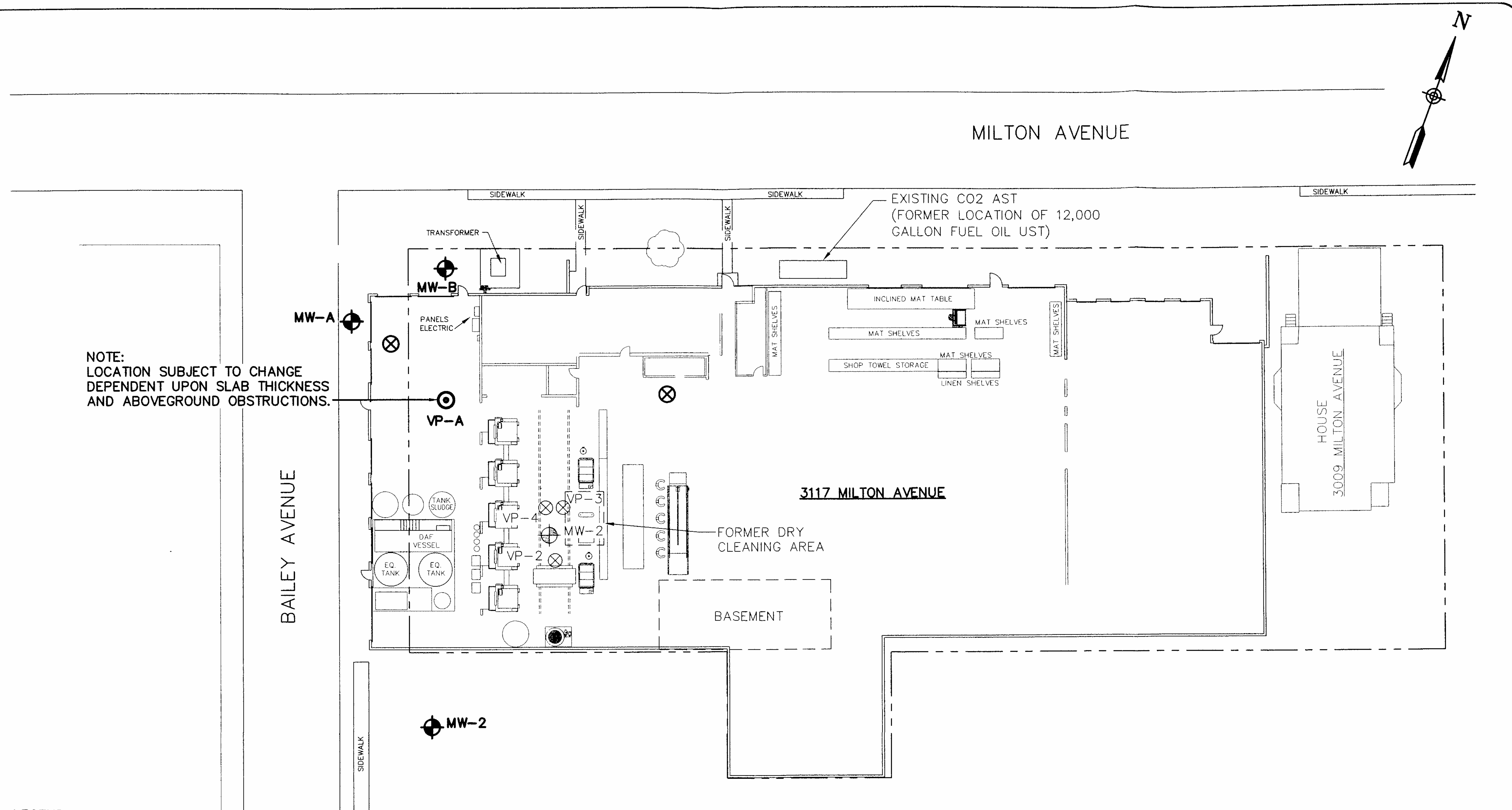

LEGEND:

— — — —	SITE BOUNDARY
⊗	SUB-SLAB VAPOR SURVEY POINT (EXISTING)
⊕ MW-2	GROUNDWATER MONITORING WELL LOCATION (EXISTING)
⊗	SUB-SLAB VAPOR SURVEY POINT (PROPOSED)
⊙ VP-A	LOCATION OF SUCTION PIT (PROPOSED)
⊕ MW-A	GROUNDWATER MONITORING WELL LOCATION (PROPOSED)

SCALE: 1"= 30'

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ARAMARK UNIFORM SERVICES

PROPOSED SUCTION PIT AND POST CONSTRUCTION MONITORING LOCATIONS

VILLAGE OF SOLVAY ONONDAGA COUNTY, N.Y.

Figure 3

Project No. 909.001

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Appendices

Appendix A

Summary Results from 2003 Ransom Investigation

Summary of Historical Groundwater Results (January/May 2003 – ug/l or ppb)								
Compound	NYSDEC Groundwater Standard	January 2003					May 2003	
		GW-1	GW-4	GW-5	GW-7	GW-9	GW-27	GW-28
Volatiles (EPA Method 8260)								
Cis-1,2-dichloroethene	5	**105**	**4,260**	ND	**71.9**	**6.51**	ND	ND
Tetrachloroethene	5	**15.1**	**21.1**	ND	**381**	**5.28**	**11.7**	ND
Trans 1,2-dichloroethene	5	ND	**65.2**	ND	**13.1**	ND	ND	ND
Trichloroethene	5	ND	**82**	ND	**16.4**	ND	ND	ND
1,1,2,2-tetra-chloroethane	5	ND	ND	ND	**6.27**	ND	ND	ND
Vinyl chloride	2	ND	ND	ND	**271**	ND	ND	**6.7**
Benzene	0.7	**4.7**	**1.48**	**1.17**	**1.69**	ND	ND	ND
Ethylbenzene	5	**29.3**	ND	ND	**13.5**	ND	ND	ND
Total xylenes	5	ND	ND	ND	**34.5**	ND	ND	ND
toluene	5	ND	ND	ND	**32.8**	ND	ND	ND
n-propylbenzene	5	ND	ND	**10.9**	ND	ND	ND	ND
Sec-butylbenzene	5	ND	ND	**17.5**	ND	ND	ND	ND
Naphthalene	10	ND	ND	ND	**52.5**	ND	ND	ND
1,2,4-trimethyl-benzene	5	ND	ND	ND	**20.3**	ND	ND	ND

No VOCs were detected above NYSDEC Groundwater Standards at locations GW-6, 8 and 10 (January 2003) or at locations GW-24, 25, 26, and 29 (May 2003).

ND – Compound not detected at minimum detection limit or above NYSDEC Groundwater Standard.

Sample locations are depicted on Figure 2.

Summary of Historical Groundwater Results (January/May 2003 – ug/l or ppb) - Continued -											
Compound	NYSDEC Ground-Water Standard	January 2003							May 2003		
		GW-1	GW-4	GW-5	GW-6	GW-7	GW-9	GW-10	GW-26	GW-27	GW-28
Semi-Volatiles (EPA Method 8270)											
Acenapthene	20	ND	ND	ND	ND	**21.4**	ND	ND	ND	ND	ND
Anthracene	50	ND	ND	ND	**185**	**160**	ND	ND	ND	ND	ND
Benzo (a) anthracene	0.002	**3.51**	**41.9**	**7.19**	**340**	**172**	**5.15**	**5.41**	**5.76**	**3.68**	**7.04**
Benzo (a) pyrene	0.002	ND	**39.5**	ND	**216**	**101**	**4.45**	**5.37**	ND	**3.64**	**6.04**
Benzo (b) fluoranthene	0.002	ND	**26.8**	**4.25**	**204**	**87.8**	**3.2**	**4.32**	**4.87**	ND	**5.16**
Benzo (k) fluoranthene	0.002	ND	**12**	**4.15**	**294**	**107**	**2.94**	**5.39**	**5.04**	**3.44**	**5.72**
Bis-phthalate	5	ND	ND	**9.2**	ND	**266**	**6.39**	ND	ND	ND	ND
Chrysene	0.002	**3.9**	**37.2**	**7.35**	**368**	**170**	**5.4**	**6.24**	**6.81**	**4.44**	**8.04**
Fluoranthene	50	ND	ND	ND	**894**	**380**	ND	ND	**9.61**	ND	ND
Fluorene	50	ND	ND	ND	ND	**369**	ND	ND	ND	ND	ND
Indeno pyrene	0.002	ND	ND	ND	**96.9**	**63**	ND	**4.81**	ND	ND	**3.28**
Naphthalene	10	ND	ND	ND	**65**	**239**	ND	ND	ND	ND	ND
Phenanthrene	50	ND	ND	ND	**742**	**695**	ND	ND	ND	ND	ND
pyrene	50	ND	ND	ND	**889**	**317**	ND	ND	ND	ND	ND

No SVOCs were detected above NYSDEC Groundwater Standards at locations GW-8 (January 2003) or at locations GW-24, 25, and 29 (May 2003).

ND – Compound not detected at minimum detection limit or above NYSDEC Groundwater Standard.

Sample locations are depicted on Figure 2.

Summary of January 2003 Subsurface Soil Boring Results (ug/kg – ppb)						
Compound	NYSDEC Soil Cleanup Objective	SB-1 (7.5-8.0)	SB-4 (7.5-8.0)	SB-6 (7.5-8.0)	SB-7 (6.5-7.0)	SB-9 (7.5-8.0)
Volatiles (EPA Method 8260)						
Tetrachloroethene	1,400	ND	ND	ND	**28,800**	ND
Trichloroethene	700	ND	**813**	ND	ND	ND
Vinyl chloride	200	ND	**1,300**	ND	ND	ND
Semi-Volatiles (EPA Method 8270)						
Benzo (a) anthracene	224	**5,730**	**1,990**	**19,400**	**3,240**	**2,320**
Benzo (a) pyrene	61	**5,780**	ND	**12,900**	ND	ND
Benzo (b) fluoranthene	1,100	**3,700**	ND	**13,100**	ND	ND
Benzo (k) fluoranthene	1,100	**6,700**	ND	**18,700**	ND	ND
Chrysene	400	**5,800**	**1,840**	**21,900**	**3,390**	**2,160**
Indeno (1,2,3-c,d) pyrene	3,200	**3,430**	ND	**6,540**	ND	ND

Note: At the time of analysis, TAGM 4046 was the reference standard. TAGM 4046 has since been superseded by 6 NYCRR Part 375, and the soil cleanup objectives may vary.

No compounds were detected above TAGM 4046 standards from locations SB-2, 3, 5, 8 and 10.

ND – Not detected above minimum detection limit or NYSDEC Recommended Soil Cleanup Objective.

Results based upon May 2003 Ransom Site Investigation Report.

Sample locations are depicted on Figure 2 (identified as SB-X or GW-X if a temporary groundwater sampling location was installed).

Appendix B

Summary Results from
2004 – 2006 Voluntary Cleanup Site Investigation

Summary of VCSI Groundwater Results (Rounds 1 and 2, 2005)							
Parameter	**NYS DEC Standard (ppb)**	**Groundwater Samples (ppb)**					
		MW-2		**MW-5**		**MW-6**	
		April '05	*June '05*	*April '05*	*June '05*	*April '05*	*June '05*
VOCs (EPA Method 8260)							
Vinyl Chloride	2	**18 J**	**64 J**	ND	ND	ND	ND
Cis-1,2-dichloroethene	5	**10 J**	**79 J**	ND	ND	ND	ND
Chloroform	7	ND	ND	**15**	**28 J**	ND	ND
Trichloroethene	5	ND	**6 J**	ND	ND	ND	ND
Bromodichloromethane	5	ND	ND	ND	**7**	ND	ND
tetrachloroethene	5	**12 J**	**19 J**	ND	ND	**10 J**	**7.3 J**
SVOCs (EPA Method 8270)							
2,4-Dimethylphenol	1	ND	**2.4 J**	ND	ND	ND	ND
Naphthalene	10	**18**	**38**	ND	ND	ND	ND
Phenanthrene	50	ND	ND	**60**	**84**	ND	ND
Flouranthene	50	ND	ND	**86**	**170**	ND	ND
Pyrene	50	ND	ND	**68**	**140**	ND	ND
Benzo (a) anathracene	[0.002]	**14**	**15**	**50**	**90**	ND	ND
Chrysene	[0.002]	ND	**13**	**3.5**	**85**	ND	ND
Benzo (b) flouranthene	[0.002]	**15**	**15**	**66**	**120**	ND	ND
Benzo (k) flouranthene	[0.002]	**8.5**	**5.9 J**	**33**	**36 J**	ND	ND
Benzo (a) pyrene	[0.002]	**12**	**11**	**47**	**89**	ND	ND
Indeno perylene	[0.002]	**2.6**	**3.5 J**	**9 J**	**28 J**	ND	ND

ND = Not detected

J = Estimated Value

Items in bold exceed NYSDEC Groundwater Standards

No compounds were detected above NYSDEC Groundwater Standards during any of the sampling rounds from locations MW-1, 3 or 4. MW-1 was dry during sampling round 2 and damaged during rounds 3 and 4.

Summary of VCSI Subsurface Soil Results (2005)				
Parameter	NYS DEC TAGM Standard (ppb)	Subsurface Soil Samples (ppb)		
		MW-2 (7-9FT)	MW-2 (9.5-11FT)	MW-5 (6-8FT)
Semi-Volatile Organic Compounds				
Naphthalene	13,000	**16,000**	ND	ND
Dibenzofuran	6,200	**8,700**	ND	ND
Benzo (a) anthracene	224 or MDL	ND	**53 J**	ND
Chrysene	400	**12,000 J**	ND	**2,300 J**
Benzo (b) flouranthene	220 or MDL	**13,000 J**	ND	**2,800 J**
Benzo (a) pyrene	61 or MDL	**9,300 J**	ND	**1,900 J**
Dibenzo (a,h) anthracene	61 or MDL	ND	ND	**250 J**

MDL = Minimum Detection Limit

ND = Not detected at minimum detection limit or above NYSDEC Recommended Soil Cleanup Objective

J = Estimated Value

Items in bold exceed NYSDEC TAGM 4046 Cleanup Values

No compounds were detected above standards in subsurface soil samples collected from MW-1, 3, 4, and 6. No VOCs were detected above standards in any samples.

Appendix C

Project Schedule

FIGURE 4
PROJECT SCHEDULE
ARAMARK Uniform Services (Syracuse) LLC
REMEDIAL ACTION WORK PLAN

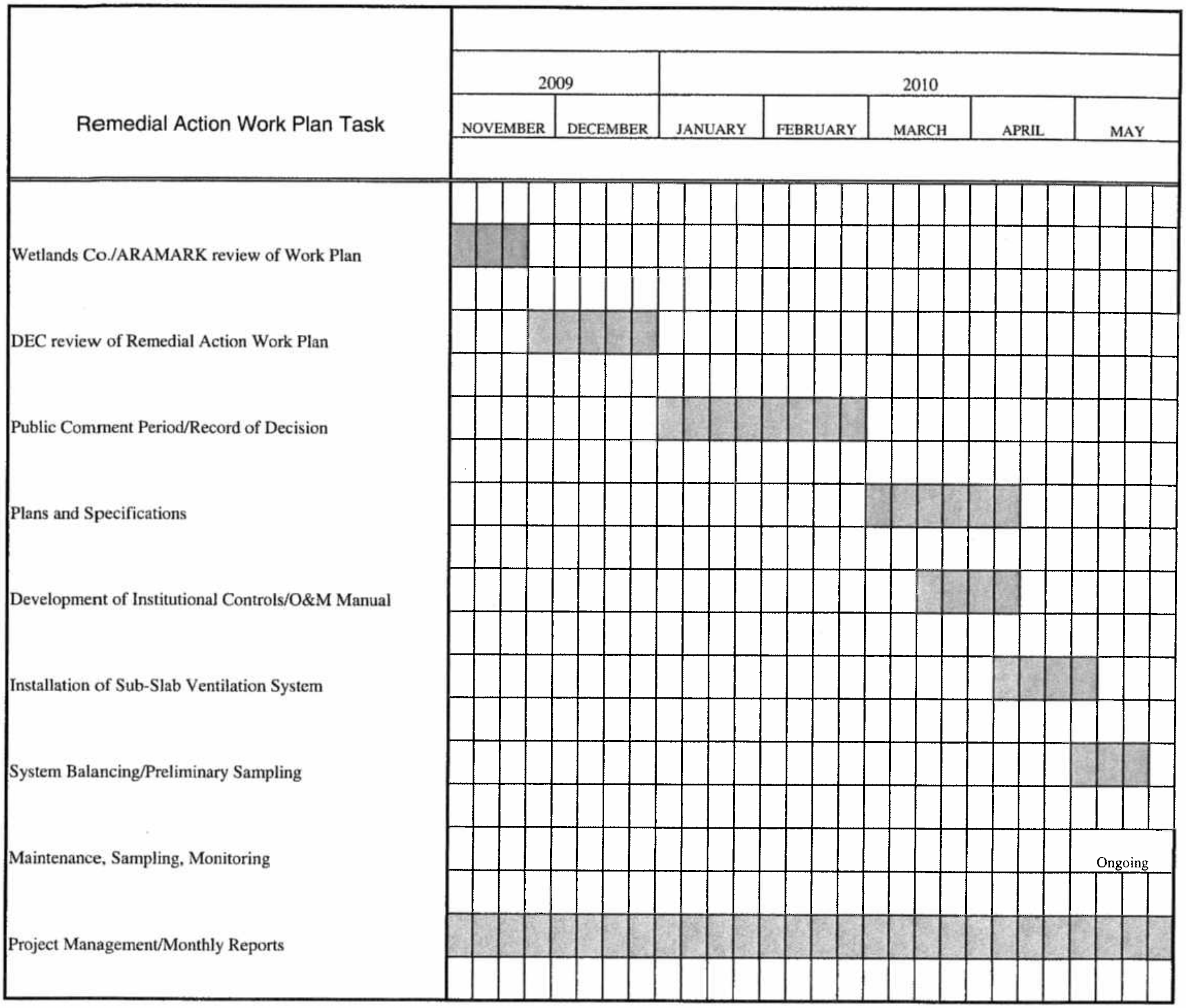

Figure 3

Proposed Suction Pit and Post-Construction Monitoring Locations