SOIL AND GROUNDWATER MANAGEMENT PLAN
For Site Located at
420 South Avenue
Rochester, New York
NYSDEC Spill No. 1000563

PREPARED FOR:

FLOWER CITY MANAGEMENT & DEVELOPMENT
THE MEDICAL ARTS BUILDING (USGBC LEED CERTIFIED)
277 ALEXANDER STREET, SUITE 200
ROCHESTER, NEW YORK 14607

PREPARED BY:

EMPIRE GEO-SERVICES, INC.
535 SUMMIT POINT DRIVE
HENRIETTA, NEW YORK 14467

AUGUST 24, 2010

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I. INTRODUCTION AND OBJECTIVE

Empire Geo-Services, Inc. (Empire) has prepared this Soil and Groundwater Management Plan (SGMP) for the site located at 420 South Avenue in Rochester, New York. The SGMP is intended to provide guidance in the identification and management of petroleum-impacted soil that may be encountered during future subsurface activities at the site. The attached figure indicates former site features and recent subsurface investigation results.

This SGMP has been prepared in general accordance with New York State Department of Environmental Conservation (NYSDEC) Region 8 SGMP Criteria document, dated August 12, 2008. The plan is to be implemented in the event that petroleum-impacted soil is encountered during future subsurface work. The SGMP should be provided by the owner to any parties that may engage in subsurface activities at the site.

The plan at the present time for the 420 South Avenue site is to support the current property at 426 South Avenue. Ultimately, a commercial building will be constructed on the 420 South Avenue site taking advantage of the frontage on South Avenue. The immediate plan would be to create a small park in this location and construct a parking lot behind this space for parking to be used by both 426 & 428 South Avenue.

II. PLAN DISTRIBUTION

This SGMP has been distributed to the following parties:

Flower City Management & Development
The Medical Arts Building (USGBC LEED Certified)
277 Alexander Street, Suite 200
Rochester, New York 14607

New York State Department of Environmental Conservation
Region 8 Offices - Spills Management Unit
6274 East Avon-Lima Road
Avon, New York 14414

Monroe County Department of Health
111 Westfall Road Room 914
Rochester, New York 14620
Contact: Jeffrey M. Kosmala, P.E.
Senior Public Health Engineer

City of Rochester
Division of Environmental Quality
City Hall, Room 300 B
30 Church Street
Rochester, New York 14614
Contact: Joseph Biondolillo

III. SITE HISTORY

The site located at 420 South Avenue in the City of Rochester is currently vacant and was used as a gasoline filling station during 1939-1953. Associated facilities included a building, three underground storage tanks (USTs), fuel dispensing pumps, and an in-ground hydraulic vehicle lift. Site features are indicated on the attached figure.

Previous subsurface soil sampling by LCS, Inc. (2004), NYETECH (2010), and Empire (2010) indicated localized areas of petroleum impact in subsurface soils. The petroleum impacts were generally found to exist in the area of the UST located south of the building ("South Tank #1"), the UST located north of the building (Northwest Tank #3"), and near the south end of the former pump island. Evidence of petroleum impact included elevated volatile organic vapor readings obtained with a photoionization detector (PID) on sampled or excavated soils, petroleum odors and staining, and laboratory analytical data. This information is summarized in Section VI of this plan.

IV. SITE GEOLOGY AND HYDROGEOLOGY

Geology

In general, the subsurface conditions encountered consist of approximately five feet to nine feet of fill material (mixture of silty sands with varying amounts of gravel and occasional traces of cinders and cobbles) underlain by native soils typically consisting of wet sands with varying amounts of gravel and silt and occasional silty clay seams. Depth to bedrock is estimated at approximately 12 to 16 feet, based on auger refusal depth in the Empire test borings. The variability in apparent bedrock depth may indicate a localized depression in the bedrock surface.

Hydrogeology

Groundwater was encountered at a depth of approximately 11 feet in two of the nine test borings completed by Empire. The groundwater was present in the sandy native soils beneath the fills. No evaluation of groundwater flow directions has been performed at the site.

V. SITE REMEDIAL EFFORTS

The three petroleum USTs and hydraulic vehicle lift were removed by NYETECH during April, 2010. Since no evidence of petroleum impact was observed in the bottom of the UST removal excavations at depths of six feet, each excavation was advanced to a depth of 10-11 feet, where petroleum impacts were encountered in all three excavations. PID readings were 300-450 ppm at this depth interval.

Before the USTs were removed from the ground, a gasoline-water mixture was pumped from each tank. A combined total of 1,213 gallons were removed from the three tanks and was transported to Industrial Oil in Oriskany, New York for proper disposal.

PID readings and VOC and SVOC lab results for soil are summarized in the following section.

VI. CURRENT SITE CONDITIONS

This section presents the site conditions with regard to the known extent of soil and groundwater impacts at the time that this plan was prepared.

Soil

The subsurface investigation by LCS, Inc. (2004) indicated a maximum PID reading of 195 parts per million (ppm) and a total VOC concentration of 180 ppb for a soil sample collected near the south end of the former pump island. PID readings by NYETECH (April, 2010) on soils excavated from depths of approximately 10.5 feet from each of the three UST removal excavations were 300-450 ppm. Soil samples collected by NYETECH from the South Tank #1 and Northwest Tank #3 excavations had lab results indicating total VOC concentrations of 62,900 ppb and 966 ppb, respectively, with the South Tank #1 sample indicating a total SVOC concentration of 8,400 ppb. PID readings by Empire on soil samples recovered from augered test borings were 2,900 ppm at location EGS-3, 550 ppm at EGS-6, 13 ppm at EGS-9, and 6 ppm at EGS-5. Corresponding lab results indicated a total VOC concentration of 1,438 ppb for a soil

sample collected at 10-11 feet at location EGS-3 (near Northwest Tank #3) and 41 ppb for a sample collected from 10.5-10.9 feet at location EGS-6 (near South Tank #1). Lab data are summarized in Table 1 below.

As discussed in Section V., Site remediation efforts included excavation and removal of the three USTs and the vehicle lift by NYETECH during April, 2010. Empire's report of June 4, 2010 included an estimate of 220 tons of non-hazardous petroleum-impacted soil present in the subsurface, although the corresponding lab data did not indicate total VOC concentrations exceeding NYSDEC TAGM 4046 soil cleanup objectives.

Table 1 – Summary of Soil Lab Data and PID Readings

Empire (2010)	EGS-3	EGS-6	TAGM 4046 SCO (ppb)
Total VOCs (ppb)	1,438	41	10,000
Total SVOCs (ppb)	954	9.99	500,000
PID (ppm)	2,900	550	NA
NYETECH (2010)	Northwest Tank #3	South Tank #1	
Total VOCs (ppb)	966	62,900	10,000
Total SVOCs (ppb)	ND	8,400	500,000
PID (ppm)	300-450	300-450	NA
LCS, Inc.	B-2a/B-9		
Total VOCs (ppb)	180		10,000
Total SVOCs (ppb)	NT		500,000
PID (ppm)	195		NA

Groundwater

Petroleum-impacted groundwater was not encountered during previous subsurface investigations or remedial excavations.

VII. PLAN RESPONSIBILITY AND NOTIFICATION REQUIREMENTS

It is recommended that NYSDEC be notified two business days before intrusive site work is initiated. Upon discovery of petroleum-impacted soil or groundwater, NYSDEC should be notified within two hours. Contact information for NYSDEC is as follows:

New York State Department of Environmental Management
Division of Spills Management
6274 East Avon-Lima Road
Avon, New York 14414
Phone: (585) 226-2466 or 1-800-457-7362
Contact: Mr. Mike Zamiarski.

The owner will be responsible for implementing and following the SGMP. Following notification of NYSDEC, the following parties should also be contacted:

Flower City Management & Development
The Medical Arts Building (USGBC LEED Certified)
277 Alexander Street, Suite 200
Rochester, New York 14607
Phone: (585) 697-3399
Contact: Mr. John Billone, Jr. - President

Monroe County Department of Health
111 Westfall Road Room 914
Rochester, New York 14620
Contact: Jeffrey M. Komasala, P.E.
Senior Public Health Engineer

City of Rochester
Division of Environmental Quality
City Hall, Room 300 B
30 Church Street
Rochester, New York 14614
Contact: Joseph Biondolillo

VIII. PREPARATION OF HEALTH AND SAFETY PLAN

An appropriate, site-specific, health and safety plan (HASP) must be developed for any excavation or dewatering activities conducted within the areas of known or suspected petroleum impacted soil. The responsibility for the development and implementation of this HASP lies with the party(ies) conducting the activities.

IX. HANDLING OF PETROLEUM-IMPACTED SOIL AND GROUNDWATER

Any impacted materials encountered during future subsurface work must be properly handled and properly disposed of or treated. A discussion of the general handling procedures for any petroleum-impacted soil and groundwater that is encountered is presented below.

Soil

The locations of known petroleum-impacted soil are in the former UST and pump island areas as shown on the attached figure. Other areas of petroleum impacted soil may also be present. Petroleum impacts were typically encountered at depths greater than 10 feet, but localized shallower impacts are possible.

It is recommended that a qualified environmental professional be present during future excavation activities to look for evidence of petroleum impacts, and to make timely decisions if petroleum-impacted soils are encountered. The environmental professional will look for visual evidence such as odors or staining and will screen excavated materials with a photoionization detector (PID) for the presence of volatile organic vapors.

If apparent petroleum-impacted soils are encountered, excavation will be halted until a staging area for the soil can be constructed. The staging area will consist of a base of two layers of 6-mil polyethylene sheeting. The base will be of sufficient area that all excavated soil can be contained within the base with no spillage off the edges.

Additional staging areas will be constructed as needed to accommodate excavated soil. All excavated soil stockpiles will be covered with a single layer of 6-mil polyethylene sheeting to prevent exposure to precipitation which could mobilize impacted soil.

At the conclusion of the excavation activities, representative samples of the stockpiled soil will be collected and analyzed for waste characterization parameters by a New York State Department of Health (NYSDOH) approved laboratory. Laboratory testing of petroleum-impacted soils will typically include NYSDEC STARS-listed VOCs and SVOCs, as well as additional waste characterization parameters as required by the disposal facility. Following receipt of the laboratory results, approval from a permitted landfill will be obtained and the soil will be properly transported by a licensed waste hauler and disposed at the chosen facility. The staged soil must be addressed in this manner within 60 days, as per applicable regulations. The responsible party should also consult with the NYSDEC project manager regarding any additional follow-up that may be required.

Groundwater

Although petroleum-impacted groundwater has not been encountered, it may be present in localized areas of the site. If encountered, it should be managed as indicated below.

An appropriately-sized water storage container will be brought to the site and staged in the vicinity of the excavation. A suitable pump will be utilized to pump the impacted water from the excavation into the storage container. Impacted water will be removed from the excavation until such time that the excavation can be backfilled. Once the groundwater has been transferred to the storage container, options for proper disposal of the water will be evaluated. The options to be considered will be:

1) Onsite water treatment (if required), collection of appropriate laboratory analytical samples, and discharge of the water:

If this option is chosen, an appropriate discharge location (surface drainage or sewer) and the regulatory agency with jurisdiction over the location will be identified. That agency will be contacted to obtain information regarding permitting requirements for discharging the water. This option will likely require laboratory analysis by a New York State Department of Health-approved laboratory to evaluate the concentrations of contaminants in the water. If contaminant concentrations exceed the regulatory limits, treatment of the water prior to discharge will be required. Potential treatment options include carbon treatment (filtration) and air stripping, followed by the collection of additional laboratory samples. Once the permit requirements are met and approval is received by the regulatory agency, the water will be discharged.

2) *Offsite transport and disposal:*

If the stored water appears to be significantly impacted, it may be appropriate to have the water disposed offsite at an approved facility following proper characterization.

X. ENGINEERING CONTROLS

Engineering controls (ECs) may be warranted as part of site redevelopment. Appropriate regulatory agencies such as NYSDEC, the Monroe County Department of Health (MCDOH), and the City of Rochester should approve proposed EC designs prior to starting redevelopment activities at the site. The specific ECs will depend on the planned design of buildings (below-grade parking, habitable basement, uninhabited crawl space, slab-on-grade, etc.) and other property improvements (such as walkways or landscaping). The ECs may include covering portions of the site in addition to building areas to preclude direct exposure to underlying potentially impacted materials and a vapor intrusion mitigation system for new buildings.

Site Cover

A site cover of clean soil, crushed stone, etc. may be used as an EC over portions of the site where no excavation will occur as part of redevelopment. New buildings, pavements, or a minimum one-foot layer of clean soil or select fill are adequate to cover these areas.

Vapor Intrusion Mitigation System

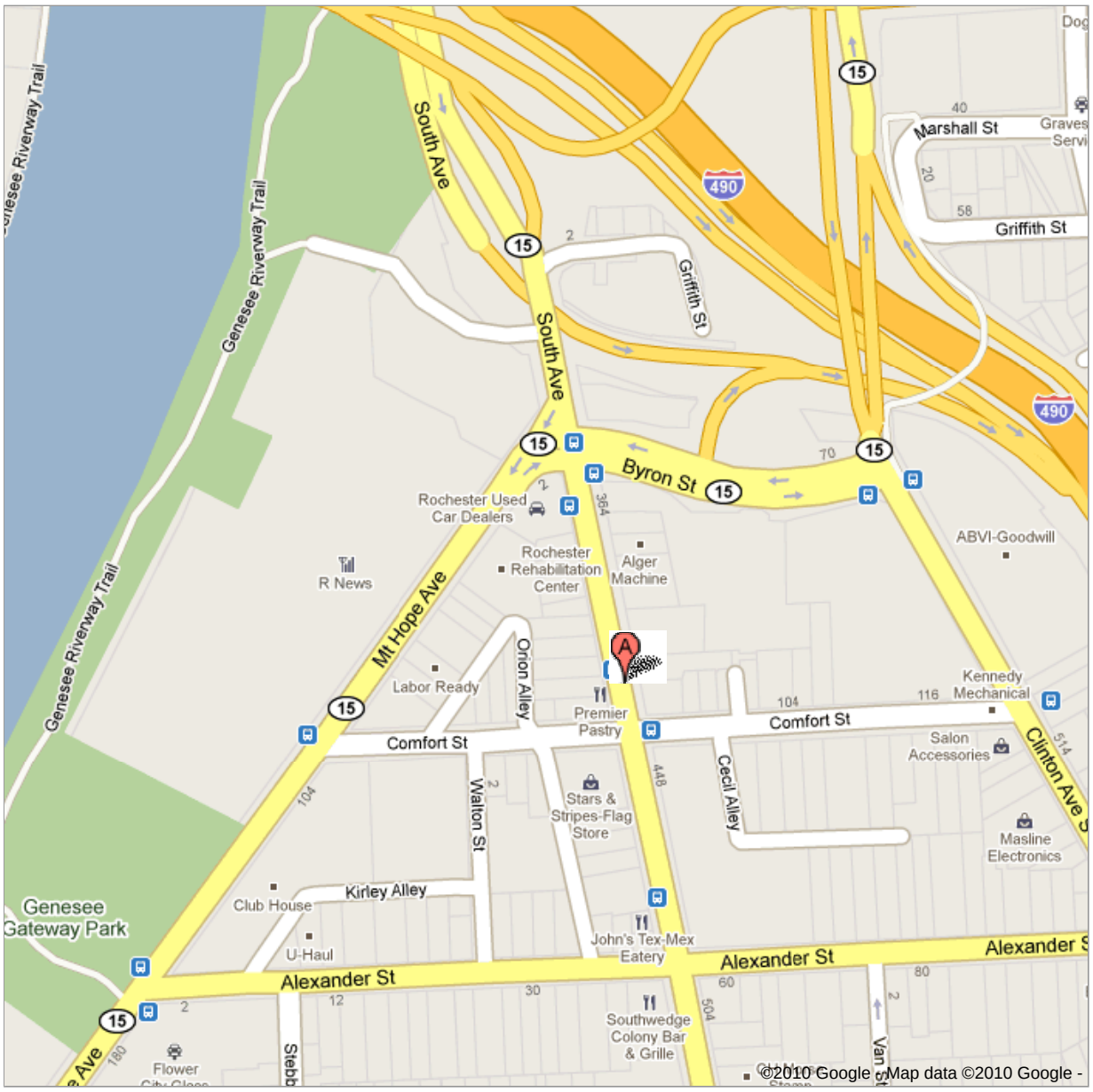
Since petroleum-based VOCs were detected in soil samples collected at various locations onsite, it is recommended that MCDOH be contacted to determine if the VOC vapor intrusion pathway needs to be addressed with regard to new site structures. Vapor intrusion may be addressed by installing a sub-slab depressurization system, a sub-membrane depressurization system, or other methods (for example, first-floor open-air parking garage or a crawl space at the ground surface). The NYSDOH document titled "Final Guidance for Evaluation of Soil Vapor Intrusion in the State of New York" (October 2006) can be obtained by contacting the NYSDOH Bureau of Environmental Exposure Investigation at 1-800-458-1158 (ext. 27850).

XI. INSTITUTIONAL CONTROLS

As an institutional control (IC), the City will "flag" the Site on its computerized Building Information System (BIS) so that environmental conditions at the Site are evaluated and addressed prior to issuing new permits for the Site that involve potentially disturbing any residual contamination or other impacted materials. A site that has been flagged in the City's BIS contains a red-colored BIS "Summary Screen" that does not allow City staff to issue a new permit, and states that environmental review by City DEQ is required. The environmental review process ensures that these existing environmental conditions are considered by both the City and the permit applicant prior to issuing a new permit. Furthermore, this process ensures that the proposed permit action does not result in disturbances to any existing engineering controls that may be in place, and that the proposed permit does not result in an unacceptable exposure to Site contamination by on-site construction workers, owners, on-site occupants or the public. In addition, the environmental review is necessary to make the permit applicant aware of the

environmental conditions which may require special environmental handling, management, characterization, off-site disposal, or on-site reuse under approved conditions. If warranted, the City coordinates with County, State or federal agencies during the environmental review process to obtain input from those agencies. This process also allows the City and other regulatory agencies the opportunity to require: Implementation of a site-specific HASP or a site-specific SGMP for the proposed work; modifications to existing environmental monitoring points (e.g., replace of monitoring wells); and new Engineering Controls or modifications to existing Engineering Controls prior to issuing a permit.

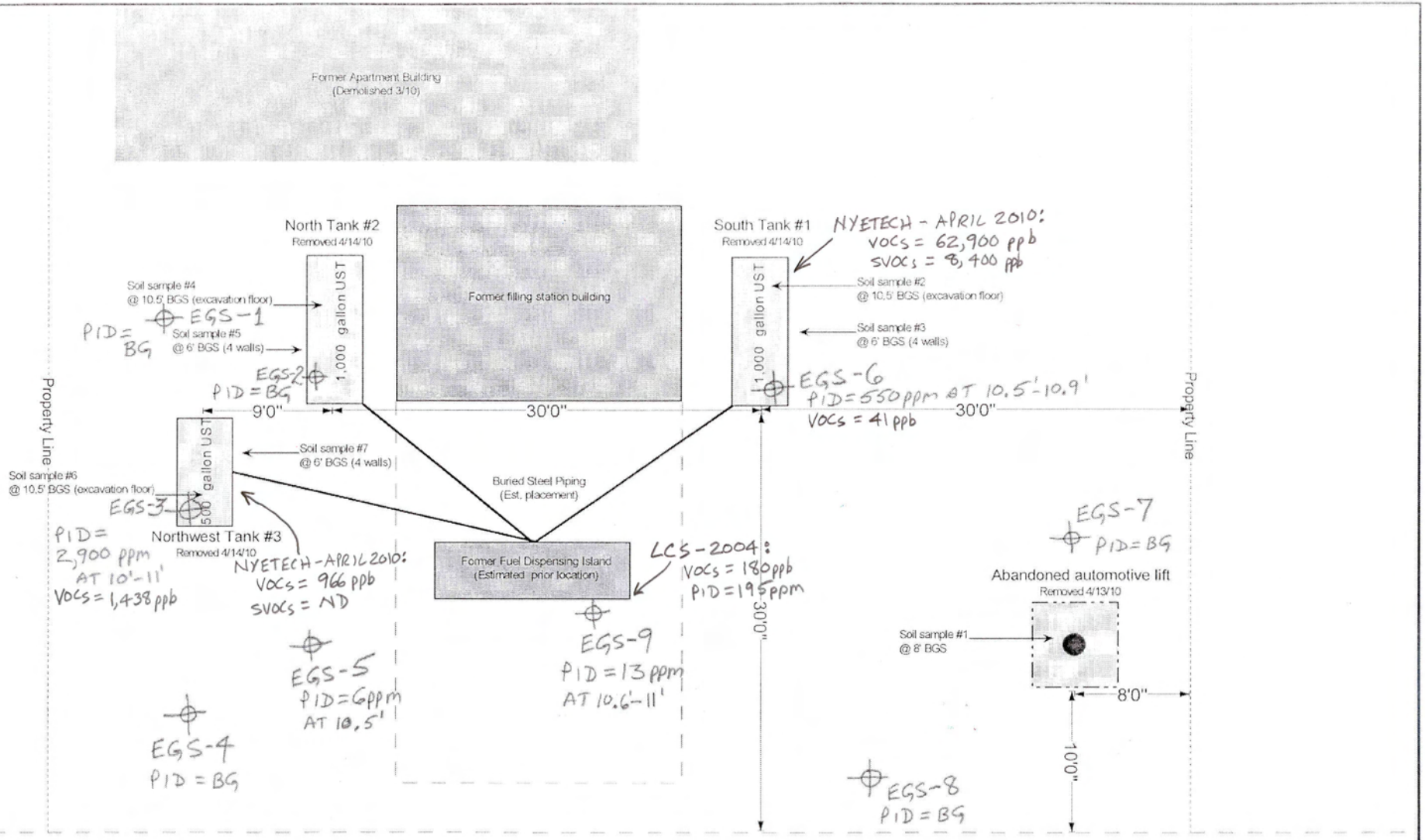
Google maps Address **420 South Ave**
Rochester, NY 14620



SITE LOCATION FIGURE

Address: 420 South Avenue, Rochester

(Approximate site location is indicated by "A")



UST Removal- Site Map

Approximate Scale 1" = 10'

Prepared by: nyetech — New York Environmental Technologies, Inc.

May 5, 2010

ENVIRONMENTAL SOIL SAMPLING
MAY 21, 2010

Site Name: 420 South Avenue
Rochester, NY 14607

EGS-2 - LOCATION OF SOIL SAMPLING ON 5-21-2010