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September 25, 2001

Mr. Jeff Trad
NYSDEC
Bureau of Eastern Remediation
625 Broadway 11th Floor
Albany, NY 12233-7015

Re: Atlas Graphics Site # 1-30-043B

Dear Mr. Trad,

Anson Environmental Ltd. (AEL) will be conducting a round of ground water sampling at Atlas Graphics on Wednesday, October 10, 2001. AEL plans to arrive onsite around 10am and will be completed with the work by 4pm.

If you have any questions please feel free to contact me at 631-351-3555 x15 or Dean Anson at x12.

Respectively

Matthew Schieferstein
Environmental Scientist

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Remedial Design/Remedial Action Work Plan

Atlas Graphics
567 Main Street
Westbury, NY 11590

Site #1-30-043B

September 20, 2000

"Your Environmental Partner"

Remedial Design/Remedial Action Work Plan
Atlas Graphics Inc.
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Figures and Appendices

1.0 Introduction/Purpose of Remedial Design/Remedial Action (RD/RA) Work Plan

The New York State Department of Environmental Conservation (NYSDEC) has performed an environmental investigation at the Atlas Graphics, Inc. (Atlas) site. That investigation identified contamination in the former cesspool. Trichloroethene (TCE) and toluene were accidentally discharged to that pool when Atlas initiated operations. This accidental discharge resulted in soil and groundwater contamination. These findings resulted in the site being designated a New York State Inactive Hazardous Waste Disposal Site, # 130034B. Based on NYSDEC's Remedial Investigation/ Feasibility Study, a Record of Decision (ROD) was prepared that identified soil vapor extraction and air sparging as the selected remedial technologies.

This RD/RA Work Plan addresses on-site soil remediation and groundwater remediation at Atlas, 567 Main Street, Westbury, Nassau County, New York. Activities conducted pursuant to the Work Plan will be conducted under NYSDEC oversight; the implementation of this Work Plan is pursuant to an Order on Consent between Atlas and the NYSDEC. The objective of this Work Plan is to remediate on-site contaminated subsurface soils using Soil Vapor Extraction (SVE) as well as air sparging (AS) to address the contamination in the groundwater on-site. Annual groundwater sampling will be performed in three adjacent off-site existing groundwater monitoring wells.

2.0 Summary of Existing and Background Information

2.1 Site Location, Ownership and Access

The NYSDEC designated Inactive Hazardous Waste Disposal Site, Atlas Graphics, Inc., is located at 567 Main Street, Westbury, Nassau County, New York. The site is approximately 0.2 acres in size. The designation on the New York State Registry of Inactive Hazardous Waste Disposal Sites (Registry) is #1-30-034B. HDP Printing, Inc. owns the property. The site and its proximate environs are shown on Figure 1.

2.2 Site Description

The property is roughly rectangular in shape, and is approximately 72 feet by 122 feet in size. There is a two story commercial building on site that occupies approximately 4,330 square feet (roughly ½) of the site's plan area. It is built on a concrete slab and has no basement, except for a small boiler room in the southwestern corner of the building.

It was erected in the 1950's and past site occupants include a heating company, a construction company, a development association, and a mill supply company. Atlas began operations at the site in 1977 and continues to utilize the site today. It is presently connected to the municipal water and sewer systems.

The building abuts the site's eastern boundary. The site is bounded by Swalm Street on the west, commercial buildings and parking lots on the north and east, and Main Street on the south. It is wholly within that area designated by NYSDEC as the New Cassel Industrial Area (NCIA).

2.3 Background Information

2.3.1 Hydrogeology

The site is located near the southern perimeter of the Town of North Hempstead. The groundwater reservoir underlying the Town of North Hempstead is composed of unconsolidated local deposits of Holocene age, glacial deposits of Pleistocene Age, and coastal-plain deposits of continental and marine origin of the Late Cretaceous Age. The deposits consist of clay, silt, and bedrock. Weathered and crystalline bedrock of Low Paleozoic and/or Precambrian Age underlies the unconsolidated deposits and forms the virtually impermeable base of the groundwater reservoir.

From oldest (deepest) to youngest (shallowest) these sediments have been identified and divided into a series of hydrogeologic units: the Lloyd Aquifer; the Raritan clay confining unit; the Magothy Aquifer; and the Upper Glacial Aquifer.

The Upper Glacial Aquifer consists of late Pleistocene and Holocene Age poorly sorted sand, gravel, silt, and clay deposits. The upper surface of the Upper Glacial deposits comprise present day land surface except in areas such as the Westbury site where they are overlain by recent Holocene deposits and/or fill materials. The Upper Glacial Aquifer at the site is found in this aquifer at a depth of approximately 60 feet below grade.

The southernmost part of the Town is underlain by highly permeable glacial outwash consisting of stratified sand and gravel and occasional thin clay layer. The deposits forming the Upper Glacial Aquifer range in thickness from 6 feet to more than 350 feet. The extreme variation in thickness results from the highly eroded surface upon which these materials were deposited and the irregularity of their upper surface that is the present land surface. The outwash deposits range in thickness from 14 feet to about 165 feet.

2.3.2 Public Water Supply Wells

The NCIA is immediately north of and serviced by public water provided by the Bowling Green Water District. As the Record of Decision (ROD) dated February 2000 for the site states, " (a) supplemental treatment system, air stripping followed by carbon polishing, was constructed in 1996 to mitigate the impact of groundwater contamination (emanating from the NCIA) on the Bowling Green public water supply wells. Presently, no site-specific contaminants exceeding drinking water standards have been detected in water distributed to the public. Guard wells have been installed south of Old Country Road, in locations down gradient of the NCIA hazardous waste disposal sites and up gradient of the water supply wells as a precautionary measure. Therefore, use of the groundwater in the area is not currently considered to be an exposure pathway of concern".

Moreover, the public water supply wells are located southeast of the site. The groundwater beneath the site flows southerly. Hence, the public wells are cross rather than down gradient of the Atlas site, and contaminated groundwater from beneath the Atlas site would not impact the public supply wells.

2.3.3 Previous Investigations

The building at 567 Main Street was built in 1950, and used as a warehouse for construction vehicles until 1977 (see Section 2.2 supra). In 1977, the property was taken over by Atlas, which currently operates a photo engraving manufacturing operation. This operation reportedly utilized approximately 300 gallons of trichloroethene (TCE) annually. At the time, Atlas originally commenced operations on site there was a documented discharge of approximately 50 gallons of TCE to the site's on-site septic system. In 1978 the site's cesspool collapsed. As a result of this collapse, the site was connected to the public sewer system and the on-site sanitary system abandoned.

In 1988, the NYSDEC classified the entire NCIA as a class 2 inactive hazardous waste disposal site. Based on the results of a subsequent Site Investigation (SI) and Preliminary Site Assessment (PSA) performed by Lawler, Matusky, and Skelly, LLP (LMS) the individual sites responsible for contamination were identified and placed on the Registry as class 2 sites. Atlas is one such site.

LMS conducted an Immediate Investigation Work Assignment (IIWA) at the Atlas site pursuant to a NYSDEC commission. The IIWA concluded that the contamination appeared to be the result of past disposal practices. LMS concluded that on-site waste disposal to the site's former cesspool was the most likely source of this contamination. However, as the ROD states, "(t) he overall nature and extent of groundwater contamination is difficult to determine since the Atlas site is directly upgradient of the Former IMC Magnetics (IMC) site...Past investigations at this (IMC) facility indicate that the soils and groundwaters (sic) at this (IMC) site were heavily contaminated with similar contaminants as those used at the Atlas site. It is likely that the large contaminant concentrations found in HP-05, NC-2, and NC-2D (the off-site downgradient ground water monitoring wells proximate to Atlas) are the result of past disposal practices at IMC Magnetics."

3.0 Scope of the On Site Remedial Design / Remedial Action Measures

3.1 Approach and Objectives

The initial objective of the Work Plan is to implement the remedy selected by NYSDEC in the February 2000 Record of Decision (ROD) for the site and to monitor the extent of groundwater contaminant removal associated with the combined effects of this remediation system and the one at IMC immediately down gradient of the Atlas site.

3.2 Land Survey

The surface elevations of the three monitoring wells have been determined by Welsh Engineering Associates, a NYS certified land surveying and professional engineering firm. All elevations were measured within less than one tenth of a foot. During this survey, the building, property lines and other major land features were surveyed with their locations identified on the survey. A drawing has been prepared using a scale of one-inch equals twenty feet. A copy of the survey is included in this report.

3.3 Laboratory Analysis

All soil and groundwater samples and quality control blanks collected will be kept in an ice-filled cooler and delivered to Upstate Laboratories, a New York State certified laboratory. Current certifications are included in the Quality Assurance/Quality Control Plan.

Groundwater samples will be analyzed for volatile organic compounds via EPA Method 8260. The soil samples from each boring location will be submitted for laboratory analysis for volatile organic compounds via EPA method 8260. Air samples collected monthly from the SVE will be analyzed via EPA Method 8260 in Air for volatile organic compounds to determine the system's operating efficiency as well as its compliance with contaminant emission criteria .The information collected from the laboratory results and field screening will be used to determine the extent of soil contamination on-site and the groundwater quality beneath the site.

3.4 Deliverables

The following reports will be prepared using the data gathered during the above described soil and groundwater sampling events.

3.4.1 Site History Report

The historical uses of the site will be described identifying building modifications, if any, and site changes. The operations on-site will be described. Previous environmental investigations will be summarized. The current status of the facility's printing and graphics operations will be included. This report will be prepared as part of the final RD/RA Report.

3.4.2 Remedial Design / Remedial Action Report

The remediation system constructed for this facility consists of two units. A Soil Vapor Extraction (SVE) unit was installed to collect and treat the remaining TCE and toluene from the vadose zone below the former cesspool. Concurrent with the operation of the SVE, an Air Sparging (AS) unit was constructed to strip TCE from the ground water in the Upper Glacial Aquifer beneath the property.

3.4.2.1 Soil Vapor Extraction Well Design

The SVE system for this site includes two wells that will be screened at different depths. The shallow well will remove the TCE and toluene from the soils in the out-of-service cesspool. The second well will be installed in the same location but will be screened at a deeper depth so it can work in concert with the AS system.

The shallow and deep SVE wells will be installed using a hollow stem auger drill rig. The shallow well will be screened from 5 to 20 feet below grade to address the VOC contamination identified by the NYSDEC in borings AGCP-02 and AGCP-03.

The deep extraction well will be screened from approximately 29 to 49 feet below grade. This will be approximately three feet above the groundwater interface.

Both wells will be constructed of 2-inch diameter, Schedule 40 PVC, 0.020-inch slotted (20 slot) PVC well screen. This will be followed by solid PVC pipe to the ground surface. A bentonite seal will be placed above the screened section of pipe. Morie number 2 sand will be placed around the well screens followed by a bentonite seal. Non-contaminated native sand and gravel from the borehole will be used as backfill above the seal.

Each of the SVE wells will be completed at grade with a regulating valve and manifolded such that each SVE screened section can be operated independently. The vents were connected to a 2-inch diameter header line that will be trenched to an equipment shed.

Piezometers will be installed to measure the area of influence (i.e. vacuum) created in the subsurface by the operation of the SVE system. A two-foot length of 0.020-inch slotted (20 slot), one-inch diameter PVC screen followed by 10 feet of one-inch diameter solid PVC pipe will be placed in each of these boreholes. They will be finished at grade with one-inch slip caps and flush-mounted covers.

3.4.3 Soil Vapor Extraction System Design

The soil vapor will be extracted using a Gast, 4½ -horsepower blower located in the equipment shed. The soil vapor will pass through a moisture knock-out drum, into the blower and flows through a series of 2 vapor-phase carbon units located outside of the shed. The primary unit filtration is provided by two Carbtrol, 170-pound units -- models G-2 and GK-2. A 4-inch PVC discharge stack will be attached to the side of the building with the discharge point at a height of 8 feet above the existing building elevation. An electrical connection will be made directly from the blower to a utility panel inside the shed.

3.4.4 Air Sparging Point Design

One shallow air sparging point and one deep air sparing point will be installed using a hollow stem auger rig in the vicinity of the SVE wells. Each of the sparge points will be constructed of 2-inch diameter x 2-foot long 0.010-inch slotted (10 slot) PVC well screens connected to 2-inch diameter PVC pipe. The shallow sparge point will be placed from 20 to 22 feet below the water table surface (70-72 dbg) while the deeper sparge point will be screened from 93 to 95 feet below grade. Each sparge point will be surrounded with a Morie No. 2 sand pack followed by a 5-foot thick bentonite seal.

3.4.5 Air Sparging System Design

Air sparging will use an Ingersol-Rand type T-30, model 2545, 10-horsepower reciprocating compressor equipped with a heat exchanger. The shallow and deep sparge points are connected and will operate in an alternating configuration using a electromechanical timer and 2 solenoid valves. The frequency of alternation will initially be set to 30 minutes during system start-up.

The air compressor will be placed in the equipment shed located in the boiler room along with the SVE blower. An electrical connection will be made directly from the air compressor to a utility panel inside the shed.

Each of the air sparging points will be connected to the air blower using ½ -inch diameter polypropylene tubing trenched from the sparge points to the equipment shed.

3.5 SVE and AS System Monitoring and Equipment Termination Criteria

The following monitoring schedule will be used during the operation of the SVE and AS systems. The historical data generated during the operation of this equipment will be used to determine when it is appropriate to shut the remediation equipment off and collect soil and groundwater samples to demonstrate compliance with SCGs.

3.5.1 SVE Unit Monitoring and Termination Criteria

A soil vapor sample will be collected of the untreated vapor stream between the exhaust side of the blower and the inlet side of the carbon canisters using a PID to determine the total VOCs that are being removed from the ground at the start of the remediation systems. A discrete sample will be collected in a Tedlar bag that will be analyzed via EPA method 8260.

At the exhaust stack, total VOC measurements using a PID will be collected on a frequency of at least once per week during the first month the system is in full operation. After the first month, PID readings will be collected monthly to evaluate the progress of the cleanup. In addition to the PID readings, samples will be collected in Tedlar bags on a monthly basis for the first 3 months of operation and then quarterly thereafter.

As the operation of the SVE unit progresses, the PID and Tedlar bag laboratory data will be plotted versus time of operation on graphs. Once the levels of total VOCs, TCE and

toluene in the SVE wells decreases to a near constant or asymptotic concentration, operation of the system will be suspended. An asymptotic condition will be defined as three consecutive quarterly concentrations with a net decrease of 10 percent or less of total VOCS. Graphs of the concentration of total VOCs, TCE and toluene versus time will be compiled after each round of monthly monitoring.

A soil boring will then be placed in the out-of-service cesspool that houses the SVE wells. Soil samples will be collected at 8 to10 feet, 15 to 17 feet, 20 to 22 feet below grade and analyzed for VOCs. If the concentration of TCE and toluene in these samples do not exceed the NYSDEC TAGM Cleanup Objectives, the system will remain off and the cleanup of the unsaturated zone will be deemed complete. If the levels exceed the Cleanup Objectives, the SVE system will be restarted and the monitoring program will continue. The same criteria will be used to determine when additional soil samples should be collected.

The SVE also serves to capture off gassing contaminants from the AS system. Therefore, aside from the criteria described above, the SVE system will remain in operation as long as the AS system described in the next section is in operation.

3.5.2 AS System Monitoring and Termination Criteria

The on-site upgradient well NC-11843 and downgradient offsite wells NC-2 and NC2D will serve as compliance points for the operation of this remediation system. Prior to start up of the AS system, "base line" samples will be collected from these compliance wells. The sample from NC-11843 will serve as an upgradient monitoring point to determine the quality of ground water entering the property from upgradient sources of contamination.

Once the SVE/AS systems are placed in full operation, the compliance wells will be sampled on a semi-annual basis and analyzed via EPA method 8260. Graphs of the concentration of total VOCs, TCE and toluene versus time will be compiled after each round of monitoring. The system will be kept in operation until the concentration of TCE and its degradation products meets the criteria established in the Record Of Decision (ROD) for this project. Specifically, the SVE/AS system will operate until the on-site and shallow groundwater meets the New York State Standards, Criteria, and Guidance (SCGs), or the NYSDEC concludes that further operation of the system is no longer effective.

The AS/SVE system will remain in operation until the groundwater samples from the compliance wells indicate one of the following conditions: 1) they meet the SCGs for TCE and its degradation products; 2) the data shows that TCE and its degradation products have reached an asymptotic condition and is no longer effectively removing the contaminants of concern; or, 3) the on-site and down-gradient groundwater contamination is at or less than the up-gradient groundwater contamination at the time of re-evaluation.

3.6 Pilot Testing Program

3.6.1 SVE Unit

A pilot test of the SVE system will be performed. Prior to the initial start up of the SVE system, a round of static vacuum measurements will be measured at each of the Vapor Monitoring Probes (VMPs) using a magnehalic. The blower will then be started with the valves open to the SVES. The vacuum in the VMPs will be measured until stabilized vacuum readings were recorded in each of the probes. These readings will be plotted on a base map.

It is anticipated that the radius of influence of the SVE unit will be on the order of 35 to 100 feet. At the IMC Magnetics site, the SVE system had a radius of influence of 35 feet with a reading of 3 inches of water while at the Tishcon site on Brooklyn Avenue, the SVE system illustrated a radius of 100 feet.

3.6.2 Air Sparging Unit

A pilot test of the air sparging points will be performed. The depth to water in each well and piezometer will be recorded prior to the start of the test. Compressed air was then being delivered to each point individually and the rise in the water table in the adjoining monitoring wells and piezometers will be recorded at approximately 10-minute intervals. These readings will be plotted on a base map and are included in a report. The results of these tests are expected to indicate that the radius of influence of the sparge points is on the order of 50 feet based on the findings at Tishcon Corp.'s Brooklyn Avenue system.

3.7 Operation, Maintenance and Monitoring Schedule

3.7.1 Introduction

This Operations and Maintenance (O&M) plan has been prepared for the operation of the Soil Vapor Extraction and Air Sparging system at the Atlas Graphics Corp. The components of the system consist of 2 soil vapor extraction (SVE) wells and 2 air sparge points. Each SVE excavation well combination consists of one deep and one shallow extraction well. The soil vapor is extracted using a Gast 4½ -horsepower blower located in the equipment shed. The soil vapor passes through a moisture separator drum, into the blower and flows through a series of 2 vapor-phase carbon units located outside of the shed. The primary unit filtration is provided by Carbtrol 170-pound units Model G-2 and a secondary carbon unit Model GK-2. Air sparging is achieved using an Ingersol-Rand type T-30, model 2545, 10-horsepower reciprocating compressor.

This O&M plan addresses, component by component, the standard maintenance needed to operate the system as provided by the manufacturers. Copies of the owner's manuals for new equipment purchased for this project are included in the Appendices.

3.7.2 Maintenance Procedures

The door to the equipment shed should be opened once a day on Monday through Friday and a brief check should be performed for possible air leaks, vacuum leaks, excessive temperatures, freezing conditions or other equipment related issues.

The air compressor should be inspected on the following basis.

Weekly

- Turn off the power to the compressor using the circuit breakers marked in the electric panel. Check lubricant level. Fill as needed.
- Ensure beltguards and covers are securely in place.
- Clean screen in automatic drain valve.

Monthly

- Inspect for air leaks.
- Check tightness of screws and bolts. Tighten as needed. Clean Exterior.

Yearly or after 2000 operating hours

- Change lubricant while crankcase is warm.
- Replace air filter.

Coalescing Oil-Removal Filter

- Check filter service indicator weekly. Replace filter element when indicator changes from green to red.
- This is a self-draining unit; no other maintenance is required.

Pressure Regulators

- There are no periodic maintenance procedures recommended by the manufacturer,

SVE Blower (Ring Compressor)

Weekly

- Check vacuum gauge at inlet and record value.
- Check rainwater reservoir at bottom of stack and drain as needed,

Monthly

- Clean the inside and outside of the cooling fan

Moisture Separator Drum

- The water level in the drum should be check once a month. Turn off the power to the blower using the circuit breakers marked in the electric panel, place a container in front of the drain valve at the bottom of the drum and open the drain valve. If water flows out of the drum, the drum should be drained and the water stored in a suitable plastic container with a watertight lid. The system can then be

restarted. Contact Anson Environmental to arrange for the proper disposal of the water.

- The moisture knockout drum contains an air filter to prevent sediment from entering the blower. The filter should be check every 6 months or after a significant increase in the measured vacuum at the inlet to the blower. The filter element should be either cleaned or replaced depending on the condition of the element.

Vacuum Relief Valve

- There are no periodic maintenance procedures recommended by the manufacturer.

Carbon Canisters

- The sampling ports on the discharge side of the blower should be monitored weekly using a PID meter and the values recorded. Once the meter indicates breakthrough of the carbon, Anson Environmental should be contacted to arrange for replacement of the unit.

- There are no periodic maintenance procedures recommended by Carbtrol.

Exhaust Fan

- Lubricate motor every six months using SAE 20 non-detergent oil. Insert 2-3 drops of oil in the oiling hole on the back plate of the motor.

Timer

- There is no periodic maintenance required for the timer as specified by the manufacturer. If there is a power outage, check that the clock is operating properly.

Solenoid Valve

- The solenoid valve does not require periodic maintenance as specified by the manufacturer, if the valve sticks, it should be cleaned and lubricated.

3.7.3 Records, Monitoring, and Sampling

Records and Monitoring

A copy of the SVE and Air Sparging system log sheets are attached in the Appendix. These forms are kept in the equipment shed on a clipboard. The following information should be recorded.

Information	Frequency
Blower Vacuum	Weekly
Concentration of Vapor Discharge using PID	Weekly for first 3 months Monthly months 4 to end
Sparging Pressures in Deep and Shallow Wells	Weekly

Sampling

There are two types of samples that have to be collected on a periodic basis as discussed above.

Soil Vapor

- Anson Environmental will collect samples of the extracted soil vapor on a monthly basis for the first three months and then on a quarterly basis thereafter. The samples will be analyzed for TCE and non-halogenated VOCs including toluene via EPA method 8260.

Groundwater

- The groundwater samples require the use of portable pumps. These sample collections will be performed on a semi-annual basis. The samples will be analyzed for VOCs including TCE and toluene via EPA method 8260.

Reporting

The soil vapor and groundwater laboratory data will be summarized in quarterly reports that will be submitted to the NYSDEC. The reports will include tables and/or graphs presenting the baseline concentrations measured before startup of the system and the quarterly results acquired thereafter. In addition, estimates will be made of the mass of contaminants that have been removed by the SVE/AS systems.

Progress reports will be prepared monthly to demonstrate that the remediation system is operating in compliance with SCGs.

The initial report will include an as-built drawing illustrating the AS/SVE systems, underground piping and location of other significant on-site structures. This drawing will be prepared by a New York State licensed land surveyor. The scale of the drawing will be approximately one-inch equals 20 feet.

4.0 Project Management

4.1 Project Schedule and Key Milestones

Key milestones are identified in order to monitor work progress. Specific deadlines for completion of tasks and subtasks are established throughout the project schedule in a manner to ensure timely completion of work. The following list of milestones is proposed for this project:

Milestone	Description	Expected Start Date
1	Pilot Test	20 days after the execution of the consent order
2	Off-site Groundwater Sampling in accordance with the Feb 2000 ROD	20 days after the execution of the consent order and twice a year thereafter
3	Start On Line SVES Operation	60 days after the execution of the consent order
4	Operations & Maintenance	Per schedule in Section 3.7.2

4.2 Project Management, Organization and Key Technical Personnel

AEL will be the prime consultant responsible for the RD/RA. Subcontractors will provide assistance in performing tasks identified in the work plan. The key AEL technical personnel will be:

Project Manager	John Tegins
QA/QC Officer	Dean Anson II
Professional Engineer	John V. Soderberg, P.E.
Land Surveyor	William Welsh, P.E., L.S.

Dean Anson II will act as the Quality Assurance Manager and will be responsible to ensure that the data collected is precise and valid. The QA Manager will make unannounced field visits to observe data collection procedures. The 8-hour Refresher training certificate will be included with the on-site HASP to demonstrate compliance with OSHA 29CFR1910.120.

The New York State licensed professional engineer on this project will be John V. Soderberg, P.E., License Number 49975.

The resumes of the key personnel are located in the Appendix.

5.0 Field Operations and Investigation Plan

5.1 Site Management Plan

5.1.1 Site Access and Security

Primary access to the property is via Main Street, Westbury. Access authorization for the NYSDEC will be granted following proper notification of AEL and Atlas.

5.1.2 Organization and Responsibilities

For the purpose of undertaking technical aspects of the Remedial Design / Remedial Action, the following firms will assist in project implementation. Prior to commencing fieldwork, the qualifications of the subcontractors will be submitted to the NYSDEC for review and approval. These include:

Anson Environmental Ltd. – AEL will be the environmental consultants with prime responsibility for completion of the RD/RA.

Analytical Laboratory- Upstate Laboratories Inc., East Syracuse, New York (Laboratory ID # 10170)

Geoprobe Services – Zebra Environmental (or other approved subcontractor)

Drilling Services –Fenley & Nicol, Deer Park, New York (or other approved subcontractor)

5.1.3 Utility Mark out for Subsurface Investigation

After the locations for the proposed AS/SVE penetrations have been finalized, the necessary clearances for access, work, and utility mark outs will be obtained. Access and clearances to public property will be obtained by AEL. Access and clearances for private property will be obtained by the NYSDEC. Once these proposed locations have been cleared for access, a utility mark out will be conducted.

5.2 Field Activity Plan

The following is a description of the field activities to be conducted at the Atlas site. The NYSDEC may choose to collect split soil and/or groundwater samples. Detailed descriptions of the sampling procedures are included in the Quality Assurance/Quality Control Plan.

5.2.1 Groundwater Sampling Plan

Groundwater sampling of the on-site and available off-site two monitoring wells (NC-2 and NC-2D) will be conducted. NC-2 (well #NC11843) is a 2- inch diameter well completed to a depth of 54 feet. NC-2D is a 2-inch diameter well completed to a depth of 122 feet.

The basic sampling protocol follows: Protective tarp will be placed around the groundwater monitoring well location. The monitoring well will be opened and the depth to water measured. The monitoring well will be purged of three to five volumes of standing water using a Redi-Flo variable pump or comparable submersible pump.

The groundwater samples will be collected using dedicated polyethylene bailers. The groundwater will be put into laboratory-cleaned 40-milliliter vials. The labels on the vials will be completed and the vials will be placed in a cooler. Collecting de-ionized water, which is poured through the decontaminated field tools, will be the field blank for each day of sampling. At the laboratory, a trip blank will be placed with the sampling glassware and will remain with each cooler until it arrives at the laboratory, where it will be analyzed.

6.0 Citizens Participation Program

The New York State Department of Environmental Conservation, in coordination with Atlas Graphics and AEL, will have the prime responsibility for preparation and implementation of a community relations program for the site. Information will be provided to the public that may include written documents, drawings, charts, slides, and/or transparencies. Presentation of this material will be made available to the public at meetings to be held after the completion of the RD/RA. This program will be conducted in compliance with 6 NYCRR Part 375, 375-1.5 Public Participation. These documents will be placed in the document repository designated by NYSDEC.

The Generic Work Plan guidance document provided by the NYSDEC requires that a citizen participation activity be included as part of the Remedial Design/ Remedial Action process. To achieve this objective, copies of this Work Plan and all other relevant documents will be provided to the NYSDEC. These copies will be placed in local libraries, the DEC's Stony Brook office and/or at local document repositories for viewing by the public. At the end of the Remedial Design/Remedial Action activities, one fact sheet summarizing these activities will be prepared for the NYSDEC for use at a public meeting.

7.0 Quality Assurance/Quality Control Plan

It is the objective of this project to ensure that all measurements be made so that the results are representative, precise, accurate, complete and comparable. Procedures to meet this objective in the field are included in Section 5 of this report. Within this section, sampling, decontamination, and field measurement procedures are described which will ensure the QA/QC of all data collected.

The above objectives apply to laboratory sample analysis as well. To meet these objectives, standard methods will be applied.

7.1 Sampling and Analytical Procedures and Protocol

This phase of the project, as fully described in the Work Plan, entails the collection of groundwater samples. Groundwater samples will be collected using dedicated polyethylene bailers. A description of the sampling method to be used for the collection of samples is addressed in the following section.

7.2 Groundwater Samples

A groundwater samples will be collected semi-annually from the two existing off-site monitoring wells. All groundwater sampling will follow strict USEPA QA/QC protocols. Prior to sampling the wells, a 4-foot by 4-foot plastic sheet will be placed at the foot of each well. This will be the designated work zone for the sampling event. All sampling equipment will be placed on the sheet to minimize the possibility of contaminating sampling equipment from the surrounding surfaces. Upon opening the monitoring well, the PID will be used to screen for total volatile organic contaminants in the ambient atmosphere and in the headspace of the well. Any readings will be recorded and compared to ambient background readings. Ambient air sampling for this project will be performed with a PID calibrated to manufacturer's instructions.

The following procedure will be followed for groundwater sampling:

(1) Prior to the purging of the wells for sample collection, a synoptic static water level measured to the nearest 0.01 foot in each monitoring well will be taken.

(2) To ensure a representative sample from the monitoring well, purging of the wells is required. The standing water will be purged from the top of the water column. In general, the groundwater standing in the well casing prior to sample collection will be similar in quality to that in the surrounding aquifer or local groundwater, but it may not be representative.

(3) A volume of water equal to three to five times the volume of standing water in the well will be purged from the well before taking the sample. If the monitoring well has a low yield, standing water will be evacuated until the well is dry and a sample will be collected upon recovery. Wells with high yield can be sampled immediately after evacuation. A dedicated polyethylene bailer will be used to collect the groundwater sample. Prior to the sampling event, sampling equipment

shall be decontaminated. All water removed during the evacuation process shall be placed in clearly labeled 55-gallon drums and stored on site pending analysis.

(4) Dedicated, laboratory-cleaned, polyethylene disposable bailers will be attached to dedicated polypropylene rope or nylon line. The sample will be collected from the screen zone. The first bailer volume shall be placed in a pre-cleaned glass jar and used to conduct analytical field tests such as temperature, pH and specific conductivity. The measurements will be recorded in the field book. All field instruments shall be calibrated daily prior to the sampling events. And cleaned between each sampling point. The balance of the samples will be collected in the following order: volatiles, semivolatiles and metals.

The groundwater samples shall be collected in laboratory-cleaned containers on the second bail. The first round of groundwater samples will be analyzed using EPA method 8260, following appropriate laboratory protocols for that method. The purpose of this analysis is to determine if there are measurable quantities of volatile organic compounds that were used on site in the groundwater.

One (1) trip and one (1) field blank QA/QC sample will accompany the groundwater sampling per sample day. A trip blank is used in order to determine if outside contamination has been introduced in the course of the transportation of the samples. The trip blank vials are filled in the laboratory using analyte-free distilled/deionized water and will accompany the glassware from the laboratory to the field and back to the laboratory. The field blank vial will be filled during the sampling by adding distilled/deionized water to one of the bailers and then filling the empty field blank vials from the bailer. The blank samples will be analyzed for the same parameters as the groundwater samples. Given the limited number of groundwater samples to be collected in this phase of the investigation, duplicate samples will not be collected.

Field tests will include temperature, pH, salinity, and specific conductivity and will be taken immediately upon collection. The pH probe will be field calibrated with a No. 7 buffer solution. The specific conductivity probe will be calibrated in air to zero. Complete calibration procedures are included in the copies of the instrument instruction manuals in the Appendix. A mercury thermometer will be used to measure temperature and will be visibly inspected. The above calibration procedures will be performed each day of groundwater sampling.

The well cap shall be secured and the above process repeated at each groundwater sampling location.

7.3 Preparation and Preservation of Sample Containers

Groundwater samples will be placed in a cooler provided with ice packs as soon as they are collected. All samples will be delivered the same day or shipped for overnight delivery.

The scope of the project necessitates that 40 milliliter vials and 4 ounce sampling containers be used. The laboratory will provide sample containers. Each sample container will be provided with a label for sample identification purposes. The amount of information will include identification number, time, date, and initials of sample collector. A full chain-of-custody as outlined by the USEPA will accompany all sample containers.

All sample containers will be thoroughly cleaned by the laboratory prior to sampling. The 40-milliliter vials will contain hydrochloric acid (HCl). The 4-ounce soil sampling jars will be not preserved.

7.4 Groundwater Level Monitoring

Groundwater levels will be obtained from the two existing monitoring wells. Water levels will be taken using an electronic water level indicator. The depth to water will be measure to the nearest 0.01 foot and referenced to the top of the well casing. After use in each monitoring well, the measuring device will be cleaned to prevent cross contamination between wells. A licensed land surveyor will survey the well casings in order to determine the direction of groundwater flow.

7.5 Field Sampling Quality Assurance

7.5.1 Field QA/QC

Blanks will be used to verify the quality of the field sampling results. A field blank will be used to determine the effectiveness of the decontamination of the sampling devices (i.e. bailers and split spoon samplers). Analyte free water will be poured into the device and then transferred to sample containers before use in sampling. Dedicated disposable polyethylene bailers will be used; however, these equipment blanks will be used to ensure that the manufacturer does not introduce contamination.

7.5.2 Field Records

All information pertinent to any field activities will be recorded in bound, waterproof field books. Duplicates of all notes will be prepared and kept in a ringed binder. The binder will be stored in a secure place in the office of AEL. Proper documentation will consist of field personnel maintaining records of work accomplished including the items listed below:

-Date and time of work events
-Weather
-Purpose of work
-Description of methods
-Description of samples
-Number and size of samples
-Description of sampling
-Date and time of collection of sample

-Sample collector's name
-Field observations
-Any field measurements with portable instruments

Each sample collected in the field will be labeled using waterproof ink. Each bottle will be labeled with a number or location, parameter to be analyzed, sampling time and date.

Data obtained from borings shall be recorded in the field notebook and shall include the following:
-name, location and job number
-date of boring
-boring number
-surface elevation (if available)
-sample number and depth
-method of advancing sampler, penetration and recovery lengths
-type and size of sampler
-PID reading during field screening
-description of soil
-thickness of layer
-depth to water
-type of equipment used
-size of casing, depth to well
-blow counts

7.6 Decontamination of Field Equipment

Proper decontamination protocols will be followed during field activities in order to minimize the possibility of introducing contaminants into non-contaminated areas of the site and to ensure that samples and data collected are representative of the actual conditions.

7.6.1 Equipment Requiring Decontamination

The field equipment and sampling devices that require decontamination include:
1. Drilling Equipment-paying particular attention to down-hole tools, back of the drilling rig and drilling rod racks.
2. Sampling Equipment-split spoons, trowels, pumps and hoses, stainless steel bailers, temporary well screen and casing, water level measuring device, etc.
3. Personnel Protective Equipment-respiratory protection and protective clothing.

7.6.2 Decontamination Procedures

The water level meter, sampling rods and miscellaneous tools will be decontaminated according to the following procedure:
-non-phosphate detergent and tap water wash
-tap water rinse

-distilled/deionized water rinse
-total air dry

Field decontamination for drilling equipment, split spoons, temporary well screening and casing, and other sampling equipment will consist of steam cleaning and/or manual scrubbing to remove foreign material and steam cleaning inside and out. These items will then be stored in such a manner as to preserve their clean condition.

Field decontamination for pumps and hoses shall consist of manual scrubbing to remove foreign materials followed by a non-phosphate detergent scrub and flushing.

Field personnel protective equipment decontamination procedures shall consist of the minimum decontamination stations outlined in the Health and Safety Plan prepared for this project. The contractor will prepare a decontamination station whose perimeter is diked to prevent ground contamination from wash waters running out of the area. All drilling equipment shall be decontaminated in this zone. Wash waters from equipment requiring decontamination will be contained and stored in 55-gallon drums pending laboratory analyses.

7.7 Sample Custody

The purpose of sample custody procedures is to document the history of sample containers and samples from the time of preparation of sample containers through sample collection and analysis. To maintain and document sample possession, chain of custody procedures will be followed. A chain-of-custody form contains the signatures of individuals who have possession of the samples after collection and identification in the field.

A sample is in custody if it is in:
1. your actual possession; or,
2. your view, after being in your physical possession; or,
3. your physical possession and then you locked it up or sealed it to prevent tampering; or,
4. a designated secure place restricted to authorized personnel.

Each person involved with the samples will know chain of custody procedures. A discussion of the various stages of sample custody, transfer of custody and laboratory custody is presented below.

7.8 Environmental Sample Chain of Custody

The field sampler initiates the chain of custody procedure in the field and is the first to sign the form upon collection of samples.

The field sampler is personally responsible for the care and custody of the samples until they are transferred and properly dispatched. Sample labels shall be completed for each sample using waterproof ink and packaged to preclude breakage during shipment. Every

sample shall be assigned a unique identification number that is entered on the chain of custody form. Samples can be grouped for shipment using a single form.

The record shall be completed in the field so as to indicate: project number, unique sample number, sample location, sampling date and time, person obtaining the sample and method of sample preservation. The paperwork will be done and checked at an on-site location.

7.9 Transfer of Custody

A chain of custody record will accompany all samples. When transferring possession of samples, the individuals relinquishing and receiving will sign, date and note the time of the transfer. This record documents transfer of custody of samples whether from the sampler to another person or mobile laboratory or to a permanent laboratory.

Whenever samples are split with a facility or government agency, a separate chain of custody record will be prepared for those samples and marked to indication with which the samples were split.

7.10 Laboratory Custody Procedures

The laboratory utilized will follow a minimum standard operating procedure for documenting receipt, tracking and sample preparation. A full explanation of laboratory procedures is included in the laboratory documentation in the appendix. Sample custody is described briefly below:

7.10.1 Sample Custody

1. Shipping or Pickup of Cooler by Client
   a. Cooler packed at lab after contact with client.
   b. Cooler wrapped with evidence tape.
   c. Chain of custody forms filled out by lab personnel.
   d. Client supplied with evidence tape to seal cooler prior to shipment back to laboratory.

2. Delivery of Cooler to Lab
   a. Samplers check for external damage (such as leaking).
   b. Lab signs for cooler from shipper.

3. Cooler Delivery to Sample Custodian
   a. Samplers place cooler in air lock to special process lab.
   b. Sample custodian or assistant removes cooler.

4. Opening of Cooler
   a. Check condition of external seal.
   b. Open cooler.
   c. Remove chain of custody forms, fill out and sign.
   d. Check to see if any samples are broken or damaged

1. If the samples are broken, note manner of disposal and contact client immediately.

5. Report Sent to Client
   a. Traveler's Way Bill
   b. Final Report
   c. Log-out Sheet

6. Final Steps
   a. Raw data stored on file.

7.10.2 Sample Storage

Samples will be maintained in storage in the GC/MS laboratory in a locked refrigerator prior to sample preparation and analysis. The storage refrigerators will be maintained at 4 degrees Celsius. The samples will be stored no longer than the required holding time before analysis. It is the responsibility of the laboratory to properly dispose of samples beyond the holding period.

7.11 Field Notebook Chain of Custody

Dedicated field notebooks will be used for the duration of the project. These will be numbered and assigned to field personnel. A log of the notebook number, the personnel assigned to the notebook and the date and time signed out and signed in will be the responsibility of the field hydrogeologist. Sufficient number of notebooks will be provided.

All field notes during drilling data will be copied and stored in a ringed binder. Sample chain of custody forms will also be retained in the binder.

7.12 Calibration Procedures and Frequency

The in-field analytical instruments to be used in the site investigation include:

Photoionization Air Monitor (PID)
pH meter
Specific conductivity meter
Depth to water measuring tape.

The instruments will be calibrated in compliance with manufacturer's recommended schedule.

7.13 Documentation, Data Reduction, Validation and Reporting

7.13.1 Field and Technical Data Documentation

All information pertinent to any field activities will be recorded in bound, field books. Duplicates of all notes will be prepared each night and kept in a ring binder, at the AEL office. Proper documentation will consist of all field personnel maintaining detailed records of all work accomplished including:

1. date and time of work events
2. purpose of work
3. names and address of people relevant to the project
4. description of all methods
5. description of all samples
6. number and size of samples
7. description of sampling point
8. date and time of collection of sample
9. sample collector's name
10. reference to sit map and/or photographs
11. field observations
12. any field measurements with portable instruments

7.13.2 Field and Technical Reporting

During the performance of the project, field and technical data will be assembled and will be made available to those individuals who need the data. Data reported will be as follows:

1. data collected by the field manager
2. data will be reduced by the field manager
3. data will then by reviewed by the project manager

After the data in the field books are checked, the data will be reduced to tabular form and entered into data files. Objective data such as water table measurements will be compiled on a spreadsheet. Subjective data such as boring logs will be included as hard copies.

7.13.3 Field and Technical Data Validation

The two levels upon which the field and technical data will be validated will be:

Validated at the time of collection
After data reduction into tables and charts

Inconsistencies will be resolved by reviewing the original data or by discussing the inconsistencies with the field personnel or laboratory performing the analysis.

Where possible, peer review will be used to maximize consistency among field personnel.

7.14 Laboratory Data

7.14.1 Laboratory Data Documentation

A complete description of the Upstate Laboratories standard operating procedures is presented in the appendix.

7.14.2 Laboratory Data Reporting

Applicable data presentation and all laboratory reports will conform to full reporting standards including:

1. Laboratory data will be reviewed and approved by laboratory manager.
2. Data presentation will include:
   Sample identification numbers used by laboratory,
   Chemical parameters analyzed, report values, and units of measurement,
   Detection limits,
   Data for chemical parameters,
   Results of QA sample analysis, and
   Footnotes if required.

7.14.3 Laboratory Data Reduction

The laboratory data report must be in the NYSDEC Analytical Services Protocol (ASP) Category B deliverable package format. This level of reporting provides the necessary documentation to evaluate the usability of the data and the validity of the analytical reporting limits.

7.14.4 Laboratory Data Validation

Data validation procedures performed internally by Upstate Laboratories is based upon the following document as reference:

Technical Directive Document No. HQ-8410-01
"Functional Guidelines for Evaluation of Organic Analysis".

In addition, Environmental Standards of Valley Forge, PA will perform third party validation.

8.0 Health and Safety Plan

Described below are Anson Environmental Ltd.'s (AEL) project health and safety requirements, responsibilities, and procedures to protect workers during the RD/RA Work Plan for the Atlas site located in Westbury, Nassau County, New York.

The purpose of the RD/RA Work Plan is to install a soil vapor extraction system and air sparging system as an onsite remedial measure. This Health and Safety Plan is designed to protect on-site workers and to mitigate the potential of off-site releases. As part of this plan, access to the areas of concern and ambient air monitoring will be performed at the location of soil disturbance, downwind and at the site perimeter to minimize the potential for possible on-site and off-site exposure.

8.1 Requirements

The requirements for worker health and safety area based on the following:
-The Standard Operating Safety, U.S. Environmental Protection Agency (EPA), Office of Emergency and Remedial Response.

-The Occupational Safety and Health Administration (OSHA) Regulations, 29 CFR Parts 1910.120 and 1992.

-Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities, NIOSH, OSHA, USCG and EPA.

-Superfund Amendments Reauthorization Act (SARA), Title I, Section 126.

8.2 Applicability

The protection of AEL's workers' and subcontractors' health and safety and the environment are major concerns during the RD/RA at the Atlas property. Personnel must be protected from the risk of incurring illness or injury during the field investigation at the site. Since each and every safety hazard associated with the site cannot be anticipated, precautions will be taken to prevent illness or injury to workers during the project. Based on these considerations, this health and safety plan will be applicable for each phase of the RD/RA at this site as described in this work plan. The implementation of this plan will be based on the judgment of the Project managers as described in the work plan.

8.3 Site Specific Information

The Atlas site is a commercial building located in Westbury, New York. The principal areas of concern are remediation of on-site soil contamination and off-site groundwater monitoring.

8.4 Hazard Characterization/Identification

The primary concern at the site is to protect the workers from contaminated subsurface soils and groundwater beneath the site. During this portion of the investigation, exposure to a potential source of contamination is limited. Ambient air monitoring will be performed during any soil disturbance procedures (soil borings) and any field operations that warrant it. The health and safety officer and/or field project manager will discuss the chemical exposure concerns for the site with all field personnel at the beginning of each workday.

Each day that field work is to be performed, AEL personnel and subcontractors will be made aware of the chemical compounds that may be present on site. The health and safety symptoms of exposure to those chemical compounds will be discussed. Workers on site the previous day will be interviewed to see if they experience any of the symptoms of exposure.

8.5 Potential Exposures

Potential exposure during the RD/RA will be considered on a daily basis during the investigation. Therefore, disposable gloves will be worn during any contact with any medium being sampled on the property.

8.5.1 Level of Protection

Level of protection during the field investigations will be Level D and will be upgraded, if conditions require.

8.5.2 Site Personnel

The project will require the interaction of government agencies (NYSDEC), contractors, site facility operators and technical specialists. The project team will be composed of AEL and various subcontractors. The Health and Safety Plan will be implemented during all field operations performed on the property. The Field Operations Manager will be responsible for implementing safety precautions during all field activities/sampling phases.

8.5.3 General Work Practices

The following general health and safety requirement will apply to all persons working at the site:

1. All personnel working on the site investigation team shall read the Health and Safety Plan. A copy of the Acknowledgement Form is provided at the last page of this work plan.
2. No employee will be allowed in the active field investigation areas without the prior knowledge of the field project manager.
3. All personnel involved in the investigation at the site will notify the field operations manager of any unsafe conditions or activities.
4. Standard hygiene practices will be implemented such as no smoking, eating or drinking during site investigative work activities and require a thorough washing of hands and face prior to smoking, eating or drinking. At all times, personnel should perform investigative activities from upwind directions.
5. Workers will avoid unnecessary contamination such as walking through, sitting on, leaning on, or kneeling in areas that are known or suspected to be hazardous.
6. All site personnel shall observe their partners for any signs of adverse effects associated with the work activity and will inform their partner or supervisor of any unusual signs or symptoms that they are experiencing themselves.

8.6 Orientation and Training

Each member of the field investigation team has completed the 40-hour training course required by the Occupational Safety and Health Administration for personnel working at hazardous waste sites. Each field team member is trained and experienced in the standard field sampling techniques and procedures to be utilized in this project.

Each person who may be required to use respiratory protection had been medically approved, trained and fit tested with a NIOSH approved respirator appropriate for the conditions likely to be encountered. In addition, each field team member participated in an orientation session prior to commencing work at the site. The orientation will include the following:

-Project goals and objectives
-Overview of the Health and Safety Plan
-Health and safety requirements and procedures
-Chemicals contaminating the site and their properties
-Potential health and safety hazards
-Safe sampling procedures
-First aid and emergency procedures

-Use of respiratory protection and respirator fit testing
-Use of protective clothing
-Decontamination procedures
-Waste disposal procedures

8.7 Monitoring Equipment

The principal forms of chemical contamination at the site are known and are generally low hazard levels if appropriate precautionary measures are used. However, routine monitoring for health and safety purposes will be performed during all site activities.

Monitoring equipment will be operated, maintained and calibrated each working day in accordance with the manufacturer's instructions and AEL's quality assurance procedures. Organic vapor monitoring will be conducted during field activities. Should contaminant levels indicate high hazard potential, operations will be discontinued until situation is evaluated.

Organic vapor monitoring will be performed as outlined in the NYSDOH Community Air Monitoring Plan. If TOV levels exceed 5 parts per million (ppm) above established pre-work background levels, work activities will be halted and monitoring will continue under the provision of the Vapor Emission Response Plan.

8.8 Injuries

Injured or over-exposed person will be removed from the area immediately. Where applicable, first aid will be administered and/or emergency rescue team called. Depending on the nature of the injury/emergency, appropriate notifications will be made.

8.9 Levels of Protection

Four protection levels (A, B, C and D) will be used as benchmarks for selection of personal protection equipment.

Level A requires the highest degree of protection including fully encapsulating, chemical resistant suit with full face piece, SCBA or supplied air respirator. No situations are anticipated in this investigation that would require this level of protection.

Level B protection requires full chemical resistant clothing with a full-face piece SCBA or supplied air respirator. No levels of VOCs or toxic chemical expected at this site that would require this level of protection. However, provisions will be made to have this equipment available should its use to be determined to be required. Investigative activities that may result in this level of projection being required will not be implemented until the equipment has been transported to the site. Implementation of

level B protection shall only be performed when sufficient trained personnel (minimum of two) are available.

Level C protection requires full-face piece, air purifying cartridge-equipped respirator (or a half-face, air purifying cartridge-equipped respirator if specifically approved), and protective coveralls, (Tyvek or full chemical resistant clothing or other protective clothing if specifically approved). Level of contaminants in the study area is not expected to require this level of protection. Activities that significantly disturb the soil or generate dust will be closely monitored to determine if upgrading to this level of protection is appropriate. Sampling and handling of highly contaminated waste or soils onsite could result in potential exposures to where this level of protection is warranted. The decision to require this level of protection will be made on a case-by-case basis. Unknown hazardous conditions suspected of containing risks that have not been identified, as part of this plan shall be investigated with Level C protection.

Level D protection requires standard work clothes, such as protective coveralls, work boots, safety glasses/goggles, and hardhat. This protection level applies to situations in which there is minimal risk of dust generation with subsequent inhalation and dermal risk to hazardous chemicals. It is currently anticipated that this level of protection will be applicable to all investigative activities both on and off site.

Should ambient air monitoring during the study indicate a need for higher protection levels that those currently in use, implementation of the appropriate level or cessation of all activities, which are generating the excessive levels, shall be performed. The level at which initial work activities would be halted is concentrations which exceed 5 ppm above established pre-work background levels.

In addition, protection and first aid will be provided for common health hazards associated with outdoor work such as poison ivy, insect bites and stings, and ticks. Since ticks are known disease vectors, affected persons are instructed to report tick bites to a physician. Poison ivy contact should be treated immediately. A medical kit for first aid will be available in the field. Any signs of rashes, inflammation, irritation, or burning sensation will be reported immediately.

8.10 Personal Protective Equipment

All employees at the site will be required to use appropriate equipment for protection against potential hazards at the site. Since Level D is anticipated for the field investigation, equipment listed under Level D in Section 4.0 will be required.

8.11 Emergency Information

8.11.1 Emergency Services and Notification

The emergency procedure will include notifying emergency and other affected personnel and keeping their locations and emergency telephone numbers in a convenient and

readily accessible area at the project site. A map showing the route from the project site to the nearest emergency medical facility will be provided at the project area.

Emergency services for the Atlas site include:

Nearest Emergency Medical Facility
Winthrop University Hospital
295 First Street
Mineola, NY
Emergency Room: (516) 663-211

Fire/emergency calls: (516) 334-7924

Police Department
Nassau County Police Department
Third Precinct
220 Hillside Avenue, Williston Park
Emergency calls: 911
Non-emergency calls: (516) 573-6300

Poison Control Center
General Area Number: (516) 542-2323

8.11.2 Community Air Monitoring Plan

Real-time air monitoring for volatile organic compounds and particulate levels at the perimeter of the work area are advisable. The plan includes the following parameters-volatile organic compounds will be monitored at the downwind perimeter of the work area on a continuous basis. If total organic vapor levels exceed 5 ppm above background, work activities must be halted and monitoring continued under the Vapor Emissions Response Plan. All readings must be recorded and be available for State (DEC and DOH) personnel to review.

8.11.3 Vapor Emission Response Plan

If the ambient air concentrations of organic vapors exceed 5 ppm above background at the perimeter of the work area, activities will be halted and monitoring continued. If the organic vapor levels decrease below the 5-ppm above background, activities can resume. If the organic vapor levels are greater than 5 ppm over background but are less than 25 ppm over background at the perimeter of the work area of half the distance to the nearest residential or commercial structure, whichever is less, is below 5 ppm above background.

If the organic vapor level is above 25 ppm at the perimeter of the work area, activities must be shut down. When work shutdown occurs, downwind air monitoring as directed

by the Safety Officer will be implemented to ensure that he vapor emissions do not impact the nearest residential or commercial structure.

8.11.4 Major Vapor Emission

If any organic levels greater than 5 ppm over background are identified 200 feet downwind from the work area of half the distance to the nearest residential or commercial property, whichever is less, all work activities must be halted.

If, following the cessation of the work activities, or as a result of an emergency, organic levels persist above 5 ppm above background 200 feet downwind of half the distance to the nearest residential or commercial property from the work area, then the air quality must be monitored with 20 feet of the perimeter of the nearest residential or commercial structure (20 Foot Zone).

If efforts to abate the emission source are unsuccessful and if the following levels persist for more than 30 minutes in the 20-Foot Zone, then the Major Vapor Emission Response Plan shall automatically be placed in effect if the organic vapor levels are approaching 5 ppm above background.

If the organic vapor levels are greater than 10 ppm above background in the 20-Foot Zone, the major vapor emission response plan shall be implemented immediately.

8.11.5 Major Vapor Emission Response Plan

Upon activation, the following activities will be undertaken:

-All Emergency Response contacts as listed in Section 6 of the Health and Safety Plan will go into effect.

-The local police authorities will be conducted immediately by the Safety Officer and advised of the situation.

-Frequent air monitoring will be conducted at 30-minute intervals with the 20-Foot Zone. If two successive readings below action levels are measured, air monitoring may be halted or modified by the safety officer.

8.12 Written Directions to Winthrop University Hospital

From the Atlas site on Main Street, Westbury

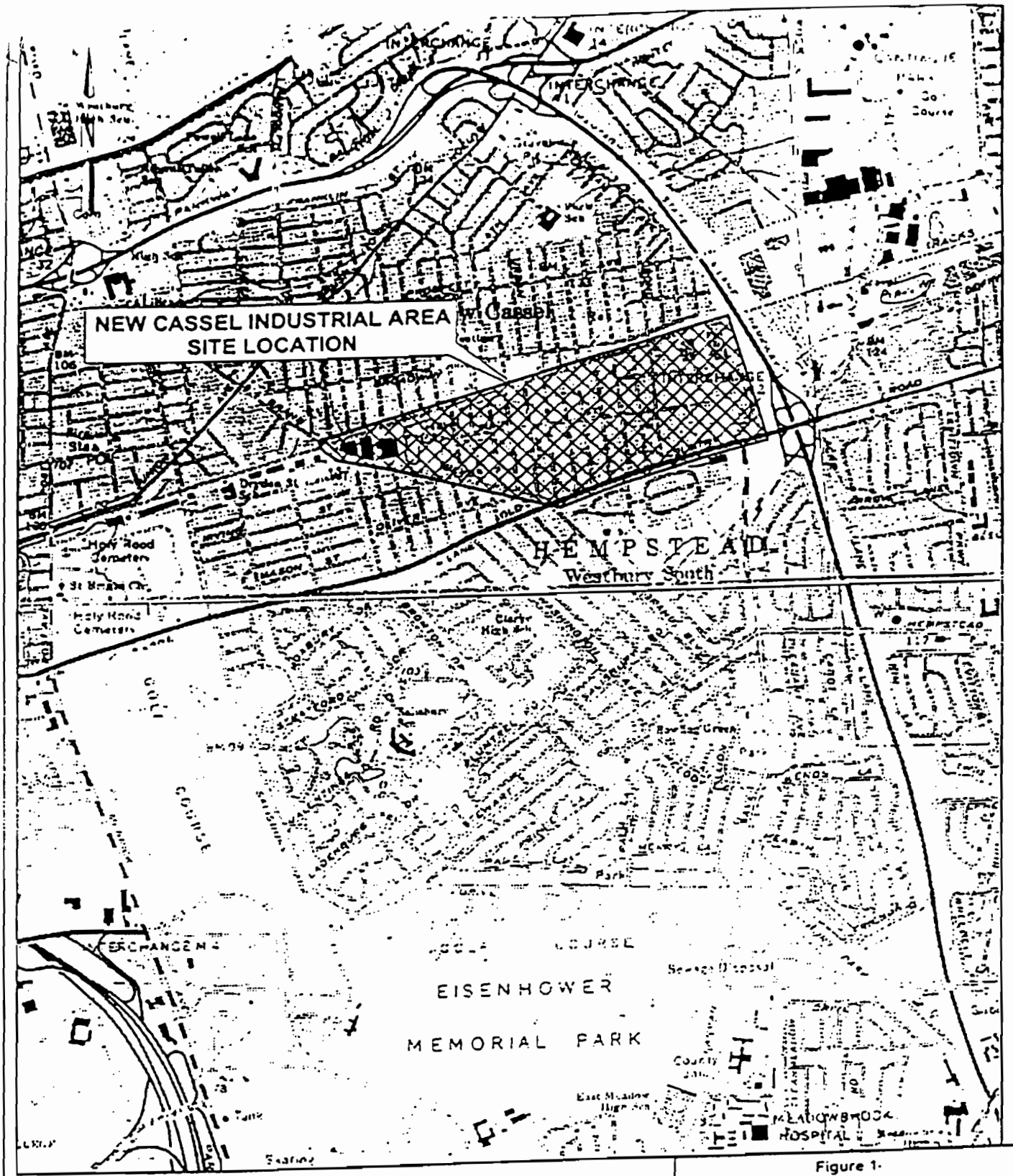
Take Swalm Street south to Old Country Road
Make a right turn onto Old Country Road and proceed west
Make a right turn onto Mineola Blvd and proceed north three blocks
Make a left onto 2nd Street and proceed west directly into the hospital facility

Winthrop University Hospital is located at the end of 2nd Street and the emergency entrance is clearly marked.

9.0 Certification

We hereby certify that the construction of the Atlas Graphics Corp. Remediation System was performed as specified in the Remedial Design Report. A Registered Engineer will approve changes to the layout specified in the Remedial Design described in this document. We also certify that work will be witnessed either by the Project's Engineer or by a qualified person working under his direct supervision. The Project Engineer is a Registered Engineer under the regulations of the State of New York.

John V. Soderberg, P.E., Esq.
#49975



0 2000 ft

SCALE
1 in. = 2000 ft

Map source:
USGS 7.5-minute quadrangle series.
Freeport, NY, 1969, photorevised 1979.
Hicksville, NY, 1967, photorevised 1979.

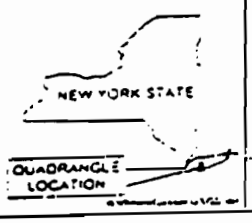
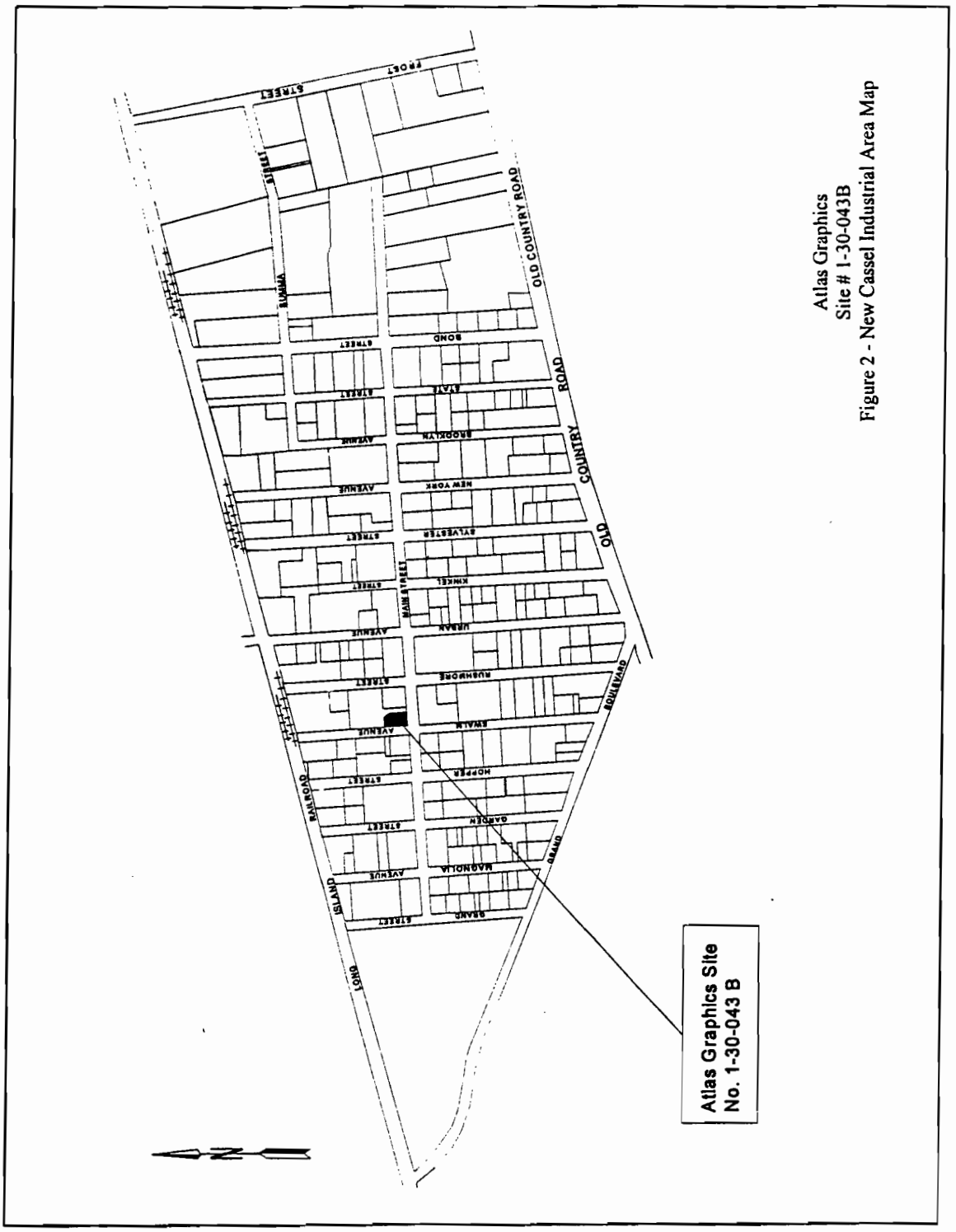


Figure 1-

New Cassel Industrial Area Site Location

ATLAS GRAPHICS
NEW CASSEL INDUSTRIAL AREA
NYSDEC I.D. No. 130043 B

LAWLER, MATUSKY & SKELLY ENGINEERS LLP
Pearl River, New York



Atlas Graphics
Site # 1-30-043B
Figure 2 - New Cassel Industrial Area Map

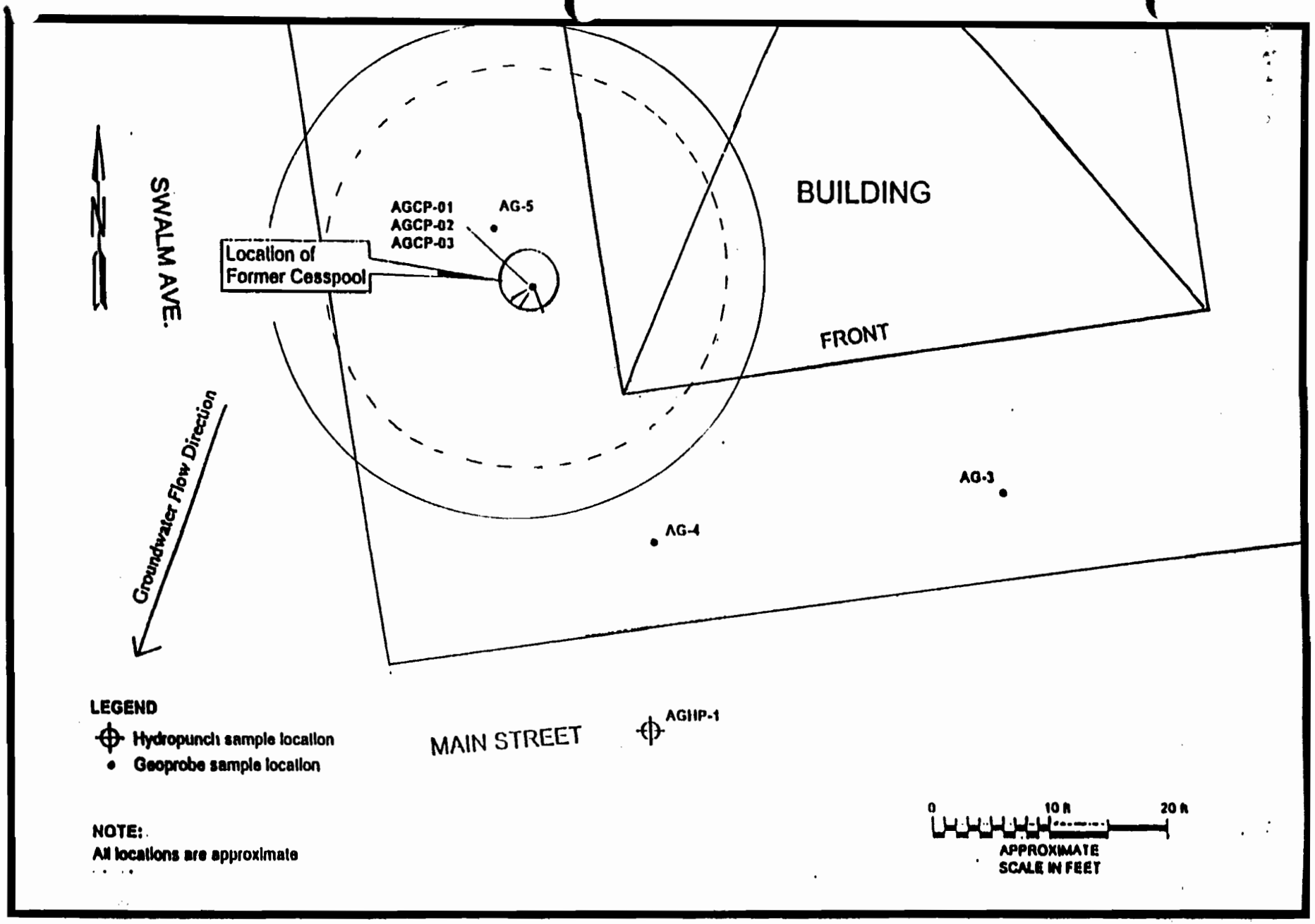


Figure 3 Remediation Stytems
Atlas Graphics
SVES Radius of Influence ——
AS Radius of Influence - - - -