Shaw Environmental & Infrastructure, Inc.

4 Commerce Drive South
Harriman, New York 10926
845-492-3100
FAX: 845-492-3101

Shaw® Shaw Environmental & Infrastructure, Inc.

June 14, 2006

Mr. Koon Tang, P.E.
Environmental Engineer III
New York State Department of Environmental Conservation
Division of Environmental Remediation
Hunters Point Plaza
47-40 21st Street
Long Island City, New York 11101

Re: Final Remedial Action Work Plan Addenda-Mott Haven Site, 672 Concourse Village West, Bronx, New York

Dear Mr. Tang:

On behalf of the NYC School Construction Authority, please find responses to comments raised by both NYSDEC and NYSDOH during our meeting of May 3, 2006. This document shall serve as addenda to the Draft RAWP, submitted on November 15, 2005. These modifications are noted below and address the following issues:

- Groundwater monitoring frequency
- Truck cleaning and proposed traffic routes
- Community Air Monitoring Plan- CAMP (Appendix A)
- Active SSDS
- Remediation Oversight

Section 3.2.1 Hydraulic Barrier Wall
Replace the last paragraph in this section with the following paragraph:

Groundwater quality will be monitored quarterly downgradient of the hydraulic barriers and at the downgradient property line for one year following installation of the barrier walls, and semi-annually during the remainder of the Mott Haven Campus construction, to confirm that there are no changes in the existing groundwater quality. Two new monitoring wells will be installed at the downgradient ends of the two (northern and western) hydraulic barriers. In addition, the monitoring wells MW-5, MW-3, and MW-11 will be protected or re-installed to assess groundwater quality at the downgradient property line. All groundwater samples will be analyzed for VOCs utilizing EPA Method 8260.

Section 5.1.1 Soil and Material Removal
Add the following paragraph to the end of this section:

All trucks transporting soil off of the Site will be thoroughly cleaned prior to exiting the Site as follows:

1. Each loaded truck will be driven onto a wash pad (of sufficient size for the vehicle) for inspection and cleaning;
2. All soil, debris and other miscellaneous materials will be removed using a high-pressure low volume steam cleaner while on the decontamination pad. Special attention will be made to the removal of soils and materials from the undercarriages and tires/wheels of the trucks;
3. Physical/mechanical agitation (scraping with hand tools or brushes) of soil will be utilized as necessary to help minimize wastewater generation;
4. Following cleaning, each truck will be inspected prior to leaving the Site.

All trucks transporting soil off of the Site will travel the following route (See **Figure 1A**):

1. Turn right onto Morris Avenue from the Site;
2. Head south on Morris Avenue to 138th Street;
3. Turn right onto 138th Street;
4. Head west on 138th Street and enter either Interstate 87 northbound or southbound, depending upon the quickest route to the disposal facility.

Periodic monitoring will be conducted to ensure that the trucks are following the prescribed route.

Section 5.2.3 Air and Dust Control
Replace all of the section with the following paragraphs:

During all remedial activities, air and dust emissions will be monitored and controlled to protect the surrounding environment from exposure to airborne contaminants. Temporary tent-like structures will be installed over any excavation activities prior to work being started. The temporary tent-like structures are constructed of metal beams and trusses and a strong reinforced fabric. The structures are secured to the ground surface and a negative air pressure system will be installed and operated to prevent the release of vapors and dust. The air system will include a filtration system to insure air emissions meet federal, state and local standards.

Outside the structures, a Community Air Monitoring Program (CAMP) will be conducted to verify compliance with the applicable regulatory criteria. The CAMP is presented in **Appendix A**. Continuous monitoring will be required for all ground intrusive remedial activities. Ground intrusive remedial activities include, but are not limited to, soil/waste excavation and handling, test pitting or trenching, and the

installation of soil borings or monitoring wells. Monitoring will be conducted at four stationary locations as well as within a zone along the north (P.S. 156 and I.S. 151), west (Concourse Village West) and southeast areas of the remediation area (**Figure 2A**). The four stationary air monitoring stations will be located at PS 156 and IS 151 playgrounds, along Concourse Village West (in the immediate area of the remediation), and at a downwind location from the excavation area. The downwind direction is predominantly to the southeast, but this location will be modified based on actual wind conditions. Besides the four stationary locations, there will be a roving air quality monitor, utilizing handheld units, moving continuously along the northern and western perimeters of the Site. Air quality monitoring will include measurements of VOCs as well as air particulates (dust).

Within the tent-like structures, vapor and dust will be monitored for worker protection. A site-specific HASP will be developed and implemented. The HASP will address worker protection by establishing the monitoring criteria, action levels and protective equipment. The air quality inside the tent-like structures will be similarly monitored.

Section 5.4 Vapor Barrier and Sub Slab Depressurization System
Add the following paragraph to the end of this section:

As an added safeguard, all of the buildings on the Mott Haven Campus have been designed to operate under positive pressure utilizing the heating, ventilation, and air conditioning (HVAC) system, and the sub slab depressurization system (SSDS) will be installed to serve in the active mode. However, the SCA will perform sub-slab sampling subsequent to remediation and before school occupancy to demonstrate to the satisfaction of NYSDOH that we can eliminate the need for the SSDS all together.

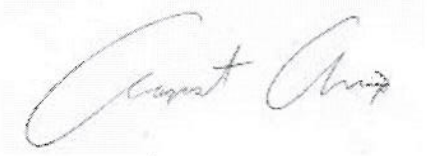
Site Remediation Engineer

The NYC School Construction Authority will provide a Site Remediation Engineer to perform continuous oversight of the environmental remedial activities presented in the RAWP. The Site Remediation Engineer will be the NYCSCA's Industrial and Environmental Hygiene (IEH) Department on-site representative that will ensure that the site remediation is implemented as presented in the Contract Specifications, in accordance with all applicable environmental regulations. The Site Remediation Engineer will act as the liasson with the NYCSCA, NYSDEC, and NYSDOH and will have the authority, acting through NYCSCA Project Mangement, to halt the remedial activities if the Contractor is not in compliance with the Contract Specifications, or if the remedial activites are creating a health hazard to the public. In addition, the Site Remediation Engineer will have the responsibility to periodically monitor the traffic routes used by the trucks removing contaminated soils from the Site to ensure the trucks are utilizing the prearranged route.

We anticipate that these RAWP addenda are acceptable to the New York State Department of Environmental Conservation and New York State Department of Health, and that the Work Plan can be approved immediately. If you have any questions or comments, please do not hesitate to contact me or Michael Sherwood.

Sincerely,

SHAW ENVIRONMENTAL AND INFRASTRUCTURE



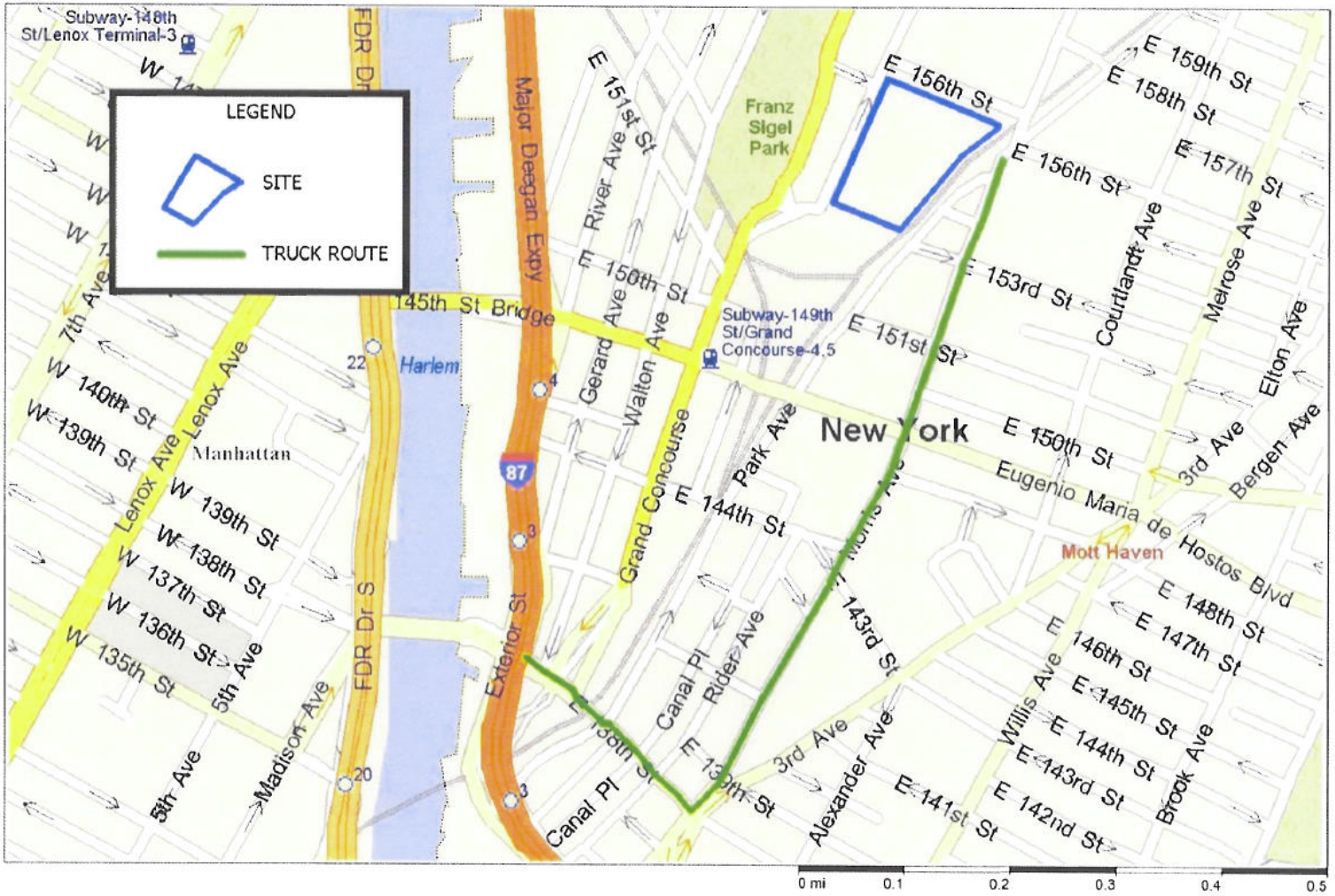
August Arrigo, P.E.
Senior Engineer
License No. 070843

Attachments: Figure 1A, Figure 2A, Appendix A (CAMP)

cc: Vinicius Castagnola, NYCSCA
Alex Lempert, NYCSCA
Lee Guterman, NYCSCA
Julia Guastella, New York State Department of Health

FIGURES

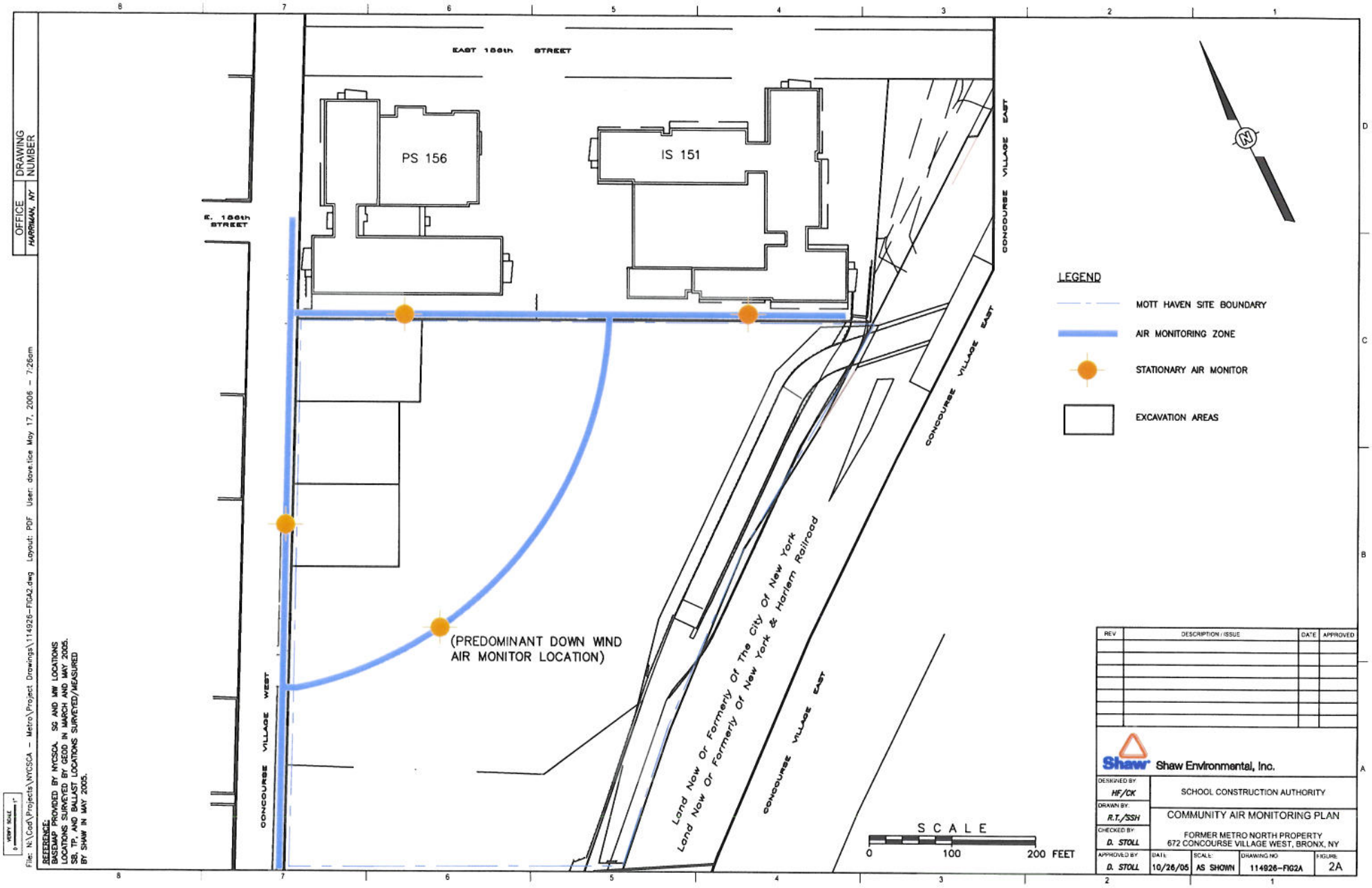
OFFICE Harriman, NY | DRAWING NUMBER 114926-FIG1A



Shaw Shaw Environmental, Inc.

DESIGNED BY: C. Kraemer	SCHOOL CONSTRUCTION AUTHORITY
DRAWN BY: R. Tagoff	REMEDIATION TRUCK ROUTE
CHECKED BY: C. Kraemer	FORMER METRO NORTH PROPERTY 672 CONCOURSE VILLAGE WEST, BRONX, NY

APPROVED BY:	DATE:	SCALE	DRAWING NO.	FIGURE
C. Kraemer	5/17/06	AS SHOWN	114926-FIG1A	1A



OFFICE: HARRIMAN, NY
DRAWING NUMBER

File: N:\Cad\Projects\NYCSCA - Metro\Project Drawings\114926-FIG2A2.dwg Layout: PDF User: dove.tice May 17, 2006 - 7:26am

REFERENCE:
BASEMAP PROVIDED BY NYCSCA. SG AND MW LOCATIONS LOCATIONS SURVEYED BY GEOD IN MARCH AND MAY 2005. SB, TP, AND BALLAST LOCATIONS SURVEYED/MEASURED BY SHAW IN MAY 2005.

REV	DESCRIPTION / ISSUE	DATE	APPROVED

Shaw Environmental, Inc.

DESIGNED BY: HF/CK	SCHOOL CONSTRUCTION AUTHORITY
DRAWN BY: R.T./SSH	COMMUNITY AIR MONITORING PLAN
CHECKED BY: D. STOLL	FORMER METRO NORTH PROPERTY 672 CONCOURSE VILLAGE WEST, BRONX, NY
APPROVED BY: D. STOLL	DATE: 10/26/05 · SCALE: AS SHOWN · DRAWING NO: 114926-FIG2A · FIGURE: 2A

APPENDIX A

COMMUNITY AIR MONITORING PLAN

CONFIDENTIAL AND PRIVILEGED

COMMUNITY AIR MONITORING PLAN (CAMP)

For

FORMER METRO NORTH PROPERTY (MOTT HAVEN)

AT

672 CONCOURSE VILLAGE WEST
BRONX, NEW YORK 10451

SCA LLW NO.: 033485
SCA CONTRACT NO.: C000009228
SCHOOL DISTRICT: 78
SCA IEH JOB NO.: 19730

CONSULTANT PROJECT NO.: 114926

JUNE 14, 2006

NEW YORK CITY SCHOOL CONSTRUCTION AUTHORITY

Prepared by:

Shaw The Shaw Group Inc.™

Shaw Environmental & Infrastructure
Engineering of New York, P.C.
4 Commerce Drive South
Harriman, New York 10926
Phone: (845) 492-3100
Fax: (845) 492-3101
Michael Sherwood

Prepared for:

NYC SCA

30-30 Thomson Avenue
Long Island City, NY 11101-3045
Phone: (718) 472-8502
Fax: (718) 472-8500
Attn: Lee Guterman

TABLE OF CONTENTS

Section **Page**

Tables

Figures

1.0 INTRODUCTION

1.1 Project Background

On behalf of the New York City School Construction Authority (SCA), a Remedial Action Work Plan (RAWP) was prepared by Shaw Environmental and Infrastructure Engineering of New York, P.C. (Shaw) to address contamination present at the former Metro North Site located at 672 Concourse Village West, Bronx, New York (hereafter referred to as the "Mott Haven Site"). **Figure 1** is a site vicinity map. Administratively, the Mott Haven Site is being addressed under the Brownfield Cleanup Program Act (BCP) Agreement between the New York State Department of Environmental Conservation (NYSDEC) and SCA. The RAWP describes the remedial actions that will be implemented on the portion of the Mott Haven Site governed by the BCP Agreement (BCP area).

During the remedial activities, air and dust emissions will be monitored and controlled to protect the surrounding environment from exposure to potential airborne contaminants. Temporary tent-like structures will be erected over all excavation areas before any remedial activities are undertaken. The temporary tent-like structures are constructed of metal beams and trusses and a strong reinforced fabric. The structures are secured to the ground surface and a negative air pressure system will be installed and operated to prevent the release of vapors and dust. The air pressure system will include a carbon filtration system to lower air emissions to meet all regulatory agency emission standards and criteria. Outside of the structures, air monitoring of the perimeter of the BCP area and haul roads will be conducted to verify compliance with all applicable emissions standards.

On behalf of the SCA, Shaw performed a Remedial Investigation of the Site between March and September 2005. The Remedial Investigation activities were completed pursuant to the NYSDEC approved Remedial Investigation Work Plan (RIWP) dated July 2005. A Supplemental Investigation was performed to the north and west of the Site to identify off-site contamination which may be impacting the Mott Haven Site. These Supplemental Investigation activities were based on a Scope of Work (SOW) presented to NYSDEC and the New York State Department of Health (NYSDOH) on July 14, 2005.

Pursuant to the RIWP and the Supplemental Investigation SOW, the following activities were conducted: geophysical investigations; installation of twenty-three (23) soil gas points / implants and collection of soil vapor samples; installation of forty-seven (47) soil borings; excavation of nine (9) test pits; installation of twenty (20) groundwater monitoring wells; installation of eight (8) bedrock soil borings; site reconnaissance on surrounding properties; laboratory analysis of soil gas, soil and groundwater samples; and permeability tests to assess hydraulic characteristics of the shallow aquifer beneath the Site.

The results of the Remedial and Supplemental Investigations indicated that semi volatile organic compounds (SVOCs) and volatile organic compounds associated with discharges of manufactured gas plant (MGP) waste and gasoline have impacted soil and groundwater in the BCP area. Based on the contamination identified by the Remedial and Supplemental Investigations, soil disturbance activities may generate VOCs and nuisance particulates (dust). It is expected that the temporary tent-like structures erected over the excavation areas, coupled with a negative air pressure system utilizing carbon filtration to eliminate VOC emissions, will prevent the release of vapors and dust from the BCP area. To document compliance with all applicable emission standards, air monitoring of the perimeter of the BCP area and haul roads will be conducted.

This Community Air Monitoring Program (CAMP) has been developed to address potential dust and subsurface VOCs that may be released during remedial activities. This CAMP was written in accordance with the NYSDEC requirements presented in Appendix 1A of the Draft DER-10 Technical Guidance for Site Investigation and Remediation (NYSDEC 2002). The CAMP requires real-time monitoring for both dust and VOCs at adjoining properties that contain sensitive receptors (e.g., P.S. 156, I.S. 151, residences and Cardinal Hayes High School) and the downwind perimeter of the BCP area and haul roads. The measures included in the CAMP will provide a level of protection for the occupants of the adjacent schools and residences, as well as the downwind community, from potential airborne releases. The CAMP sets forth specific action levels for determining the monitoring frequency and the appropriate corrective actions, including work shut-down.

1.2 Project Purpose and Objectives

The principal purpose of the CAMP is to monitor air quality in the vicinity of the BCP area and haul roads during the remedial actions. The CAMP consists of monitoring of dusts and vapors on both a real-time and continuous basis. Monitoring of this project will include all standard monitoring functions for environmental remediation projects including real-time air monitoring for particulate matter/dust and VOCs, observations for visible emissions and odors, inspection and monitoring of the contractor's work practices, and reporting to the NYSDEC and the NYSDOH. Continuous monitoring will be performed during all ground intrusive activities.

Principal objectives of the program are as follows:

- Monitor dust as PM_{10} on a real-time or continuous basis such that dust associated with the remedial actions are maintained below action levels.
- Monitor VOC vapors on a real-time or continuous basis such that vapors associated with the remedial actions are maintained below action levels.
- Monitor VOCs and visible emissions so that vapors and dust from the BCP area and haul roads do not leave the Mott Haven Site.
- In the event that dust or VOC levels exceed action levels, construction personnel will be immediately notified so that all necessary corrective actions can be taken.

1.3 Operations to be Monitored

The remedial actions to be performed at the Mott Haven Site consist of:

- A hydraulic barrier will be constructed along the northern and western boundaries of the BCP area to prevent contaminated groundwater from entering the Mott Haven Site.
- Temporary sheet piling will be installed in the BCP area to facilitate soil removal and dewatering operations.
- Contaminated soil (approximately 300 ft by 125 ft by 12 ft deep) will be excavated and removed from the BCP area.
- The excavated BCP area will be restored with clean backfill.

2.0 AIR MONITORING PROCEDURES

Air monitoring stations will be established in four (4) stationary locations and a roving air monitor utilizing hand-held instruments to monitor the air will walk the northern and western perimeters of the BCP area. **Figure 2** is an air monitoring station map. Three (3) of the stationary air monitoring stations will be located adjacent to sensitive receptors that are generally upwind of the BCP area. (The sensitive receptors include P.S. 156 and P.S. 151 on the platform located north of the BCP area and a residential building and Cardinal Hayes High School located to the west of the BCP area.) The fourth location will be located in the predominantly downwind direction of the BCP area and its location will vary depending on daily conditions (e.g., wind direction). A wind sock will be used to determine and monitor wind direction throughout the work day.

These air-monitoring activities include real-time monitoring for VOCs and particulates based on the New York State CAMP requirements. The action levels specified herein require increased monitoring, corrective actions to abate emissions, and/or work shutdown. **Table 1** summarizes dust and VOC action levels and appropriate actions. As a supplement to **Table 1**, a flow chart summarizing action levels/action is provided on **Figure 3**.

2.1 VOC Direct Reading Monitoring

VOC monitoring equipment will consist of a photo ionization detector (PID) capable of detecting the VOCs found in the soil and groundwater. The monitoring equipment will be calibrated on a daily basis and documented in a dedicated field log book. The instrument will be capable of calculating 15-minute running average concentrations, which will be compared to the prescribed action levels.

Upwind 15 minute average background concentrations will be subtracted from the downwind 15 minute average concentrations to establish concentrations reflective of work activities during the periods between collection of background readings.

The 15-minute running average concentrations will be compared to the following:

- If the ambient air concentration of total organic vapors at the downwind perimeter of the BCP area exceeds 5 parts per million (ppm) above background for the 15-minute average, work activities must be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities can resume with continued monitoring.

- If total organic vapor levels at the downwind perimeter of the BCP area persist at levels in excess of 5 ppm over background but less than 25 ppm, work activities must be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities can resume provided that the total organic vapor level 200 feet downwind of the BCP area or half the distance to the nearest potential receptor or residential structure, whichever is less - but in no case less than 20 feet, is below 5 ppm over background for the 15-minute average.

- If the organic vapor level is above 25 ppm at the downwind perimeter of the BCP area, activities must be shutdown and the engineering controls and the site work plan re-evaluated.

As an extra precautionary measure, when the downwind perimeter of the BCP area is within 20 feet of the nearest potential receptor (i.e. the existing schools or residences), then the perimeter organic vapor level must not exceed VOC background concentrations. If VOC background concentrations are exceeded at any time at any perimeter location within 20 feet of the nearest receptor, then activities must be shutdown and the engineering controls and the site work plan re-evaluated.

2.2 Particulate (Dust) Direct Reading Monitoring

Particulate (dust) concentrations will be monitored continuously at the upwind and downwind perimeters of the BCP area and haul roads. The particulate monitoring will be performed using real-time aerosol or particulate monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (PM_{10}) and capable of integrating over a period of 15 minutes (or less) for comparison to the airborne particulate action level established below. The equipment will be equipped with an audible alarm to indicate exceedance of the action level, and will be calibrated in accordance with the manufacturer's operating instructions and documented in a dedicated logbook. In addition, fugitive dust migration will be visually assessed during all work activities.

The primary standards for PM_{10} are 150 micrograms per cubic meter ($\mu g/m^3$) over a 24 hour averaging time and 50 $\mu g/m^3$ over an annual averaging time. Both of these standards are averaged arithmetically. The action level will be established at 150 $\mu g/m^3$ over the integrated period not to exceed 15 minutes. While conservative, this short-term interval will provide a real-time assessment of on-site air quality to assure both health and safety. If downwind particulate levels are detected in excess of 150 $\mu g/m^3$, the upwind background level must be measured immediately. If the downwind site particulate measurement is greater than 100 $\mu g/m^3$, but less than 150 $\mu g/m^3$ above the background level, additional dust suppression techniques will be implemented to reduce the generation of fugitive dust and corrective action taken to protect site personnel and reduce the potential for contaminant migration. If the dust suppression measures being utilized at the site do not lower particulates to an acceptable level (e.g., below 150 $\mu g/m^3$ and no visible dust from the BCP area and haul roads), work will be suspended until appropriate corrective measures are implemented to remedy the situation.

3.0 AIR MONITORING RECORDKEEPING AND OBSERVATIONS

The qualified safety officer or technician will ensure that all air-monitoring data is logged in a dedicated log book. Documentation shall be made clear, concise, and provide the data, time of entry, location, personnel, weather conditions, and background concentrations for each monitoring station. Documentation will also include all observational data that has potential for impacting results, such as potential off-site interferences, on-site public interferences, damage to instruments, site equipment problems, or weather related interferences.

All pages must be numbered; no lines shall be left blank (or put a line through it), and must be initialed on each page in ink. The last entry page for the shift or day that has blank space left at the bottom shall have a line drawn diagonally across it and signed at the bottom of the page. All corrections must be made with a single line, initialed, and dated.

Monthly and daily wind rose data will be available for use on the Mott Haven Site as a reference for assessing the frequency of available wind directions. Instrumentation shall also be used at the Mott Haven Site to determine the wind speed (anemometer), wind direction (wind sock), barometric pressure (barometer), and relative humidity (psychrometer). These weather data shall be obtained on an hourly basis while work is progressing and documented in the dedicated field log book.

Real time data (e.g., PM_{10} and VOCs) will be downloaded from the data loggers at the end of each day. The downloaded data will be electronically transmitted to the NYSDEC and NYSDOH at the end of each day. Fifteen-minute averages from each station and instantaneous readings, if any, used for decision purposes will be recorded. Daily plots of real-time data will be generated.

The NYSDEC and NYSDOH will be notified promptly via phone and electronic mail of any exceedance of an Action Level and of the corrective actions taken in connection with the exceedance. If an exceedance occurs, the SCA will prepare an Exceedance Summary Letter, following completion of the exceedance assessment, for submission to the NYSDEC within five working days of the exceedance. This will be a 1-2 page letter stating the nature of the exceedance, cause(s) of the exceedance and the corrective actions taken.

CAMP air monitoring results and records will be maintained by the contractor for a minimum period of 6 years following completion of the project and made available to officials of the SCA, upon request.

3.1 Equipment Operational Requirements

The air monitoring equipment must be operated by trained and qualified personnel. Personnel who perform air-monitoring functions described in this section shall be experienced in the use of field air monitoring equipment, as well as the air monitoring procedures described above. There must also be appropriate staff (chemist, industrial hygienist or environmental scientist) for assessing the results of air monitoring and advising field personnel and the construction manager of air quality considerations.

All monitoring equipment must be calibrated on a daily basis in accordance with the manufacturer's operating instructions. A dedicated log book for each monitoring unit will be maintained that details the date, time, calibration gas, or other standard, and name of person performing the calibration.

4.0 DUST AND VOC CONTROLS

The information and procedures presented in this section will be used for dust and VOC control during activities summarized in Section 1.3. The construction manager for the project will be responsible for implementing these procedures based on the air monitoring results and required Action Levels described in **Table 1** and **Figure 3**. The information and procedures that are to be used for dust and VOC control are presented in the following sub-sections.

The remedial work will be performed in temporary tent-like structures that will be erected over the excavation areas. The structures are secured to the ground surface and a negative air pressure system with carbon filtration will be installed and operated to prevent the release of vapors and dust. With this engineering control in place, dust and vapor emissions outside of the test-like structures are not anticipated; however, measures will be implemented within the tent-like structures and on haul roads to prevent the generation of dust and vapors.

4.1 Dust Controls

The primary measure of preventing exposure to dust during excavation or other soil disturbance activities will be wetting techniques and the use of tent-like structures with a negative air system. The construction manager will provide for engineering controls (wet techniques) or other techniques to control dust during work tasks that have the potential for generating dust. Dust controls involving the use of water (wetting or water spraying) will be employed at potential dust generating activity areas as follows.

- Before each task is initiated
- During the tasks to keep the soils damp
- When air monitoring results dictate the need for dust control

4.2 VOC Controls

Control of VOCs during excavation work or other soil disturbance activities will consist of the construction manager implementing one or more of the following methods or measures:

- Covering stockpile areas
- Wetting excavation material
- Backfilling the excavation
- Vapor suppression, such as foaming agents
- Total containment of the work area through use of tent structures with negative air system

5.0 SIGNATURES OF ENVIRONMENTAL PROFESSIONALS

Shaw Environmental and Infrastructure Engineering of New York, P.C. has completed the Community Air Monitoring Plan for the former Metro North Site located at 672 Concourse Village West, Bronx, New York.

SHAW ENVIRONMENTAL AND INFRASTRUCTURE OF NEW YORK, P.C.

Curtis A. Kraemer, P.G.
Senior Geologist

Michael Sherwood
Project Manager

Approved:

August Arrigo, P.E.

Senior Engineer
License No. 070843

6.0 REFERENCES

New York State Department of Environmental Conservation Division of Environmental Remediation. *Draft DER-10 Technical Guidance for Site Investigation and Remediation, Appendix 1A*, December 2002.

Shaw Environmental and Infrastructure Engineering of New York, P.C. *Remedial Investigation Work Plan*, July 2005.

Shaw Environmental and Infrastructure Engineering of New York, P.C. *Supplemental Investigation Scope of Work*, July 14, 2005.

Shaw Environmental and Infrastructure Engineering of New York, P.C. *Draft Remedial Action Work Plan*, November 15, 2005.

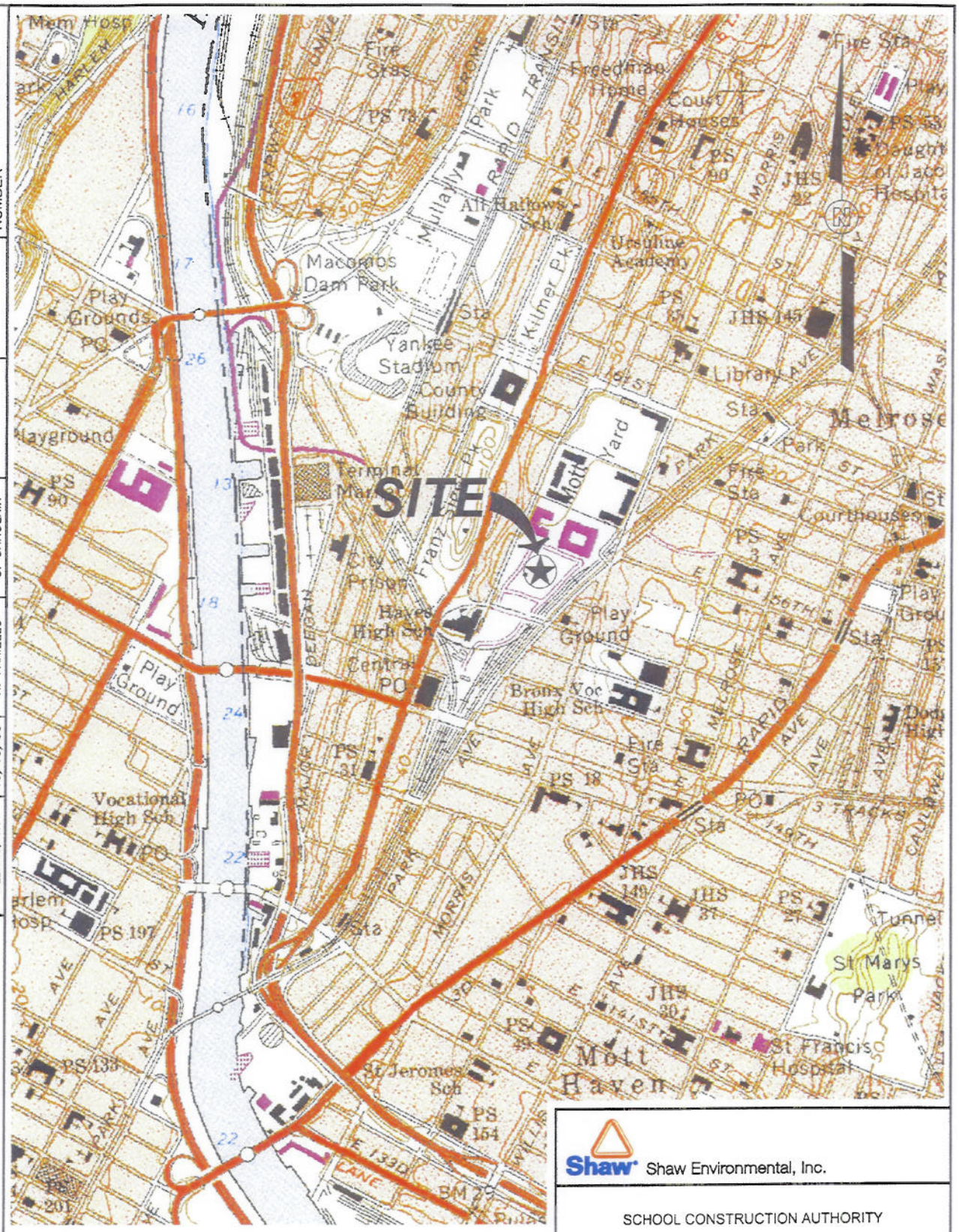
TABLE

Table 1
Air Monitoring Summary Table for Former Metro North Property

Monitoring Device	Monitoring Location/ Personnel	Monitoring Frequency	Action Level	Action
PM-10 Aerosol/ Particulate Air Monitoring Unit with Audible Alarm	Upwind and Downwind of BCP Area	Continuous during all excavation or dust producing activities for 15 minute average readings Background is the most recent upwind 15 minute average reading	<100 µg /m^3 (15 min TWA) above background at the downwind perimeter of BCP Area	Continue normal operations
			> 100 µg /m^3 (15 min TWA) above background at the downwind perimeter of BCP Area for any 15 min average, or visible dust leaving the BCP Area	Implement dust control measures*
			> 150 µg/m^3 (15 min TWA) above upwind background level downwind perimeter of BCP Area	Halt all dust disturbance work until downwind perimeter of BCP Area reading is < 150 µg/m^3 above upwind perimeter.
PID	Upwind and Downwind of BCP Area	Continuous during all excavation or dust producing activities for 15 minute average readings Background is the most recent upwind 15 minute average reading	< 5 ppm (above background)	Continue normal operations
			>5 ppm above background but < 25 ppm (15-minute TWA)	Suspend operations until readings indicate < 5.0 ppm for 15-minute TWA Take steps to abate emissions*
			> background within 20 feet of nearest receptor	Shutdown operations and re-evaluate work and controls

**See VOC and Dust Control Section*
TWA - Time Weighted Average
PID - Photo Ionization Detector
µg/m^3 – Microgram per Cubic Meter
ppm – Parts per Million

FIGURES



OFFICE	DATE	DESIGNED BY	DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
ALBANY, NY	10/13/05	H. FARIELLO	S. SHKOLNIK			114926A3

Shaw Shaw Environmental, Inc.

SCHOOL CONSTRUCTION AUTHORITY

FIGURE 1
SITE VICINITY MAP

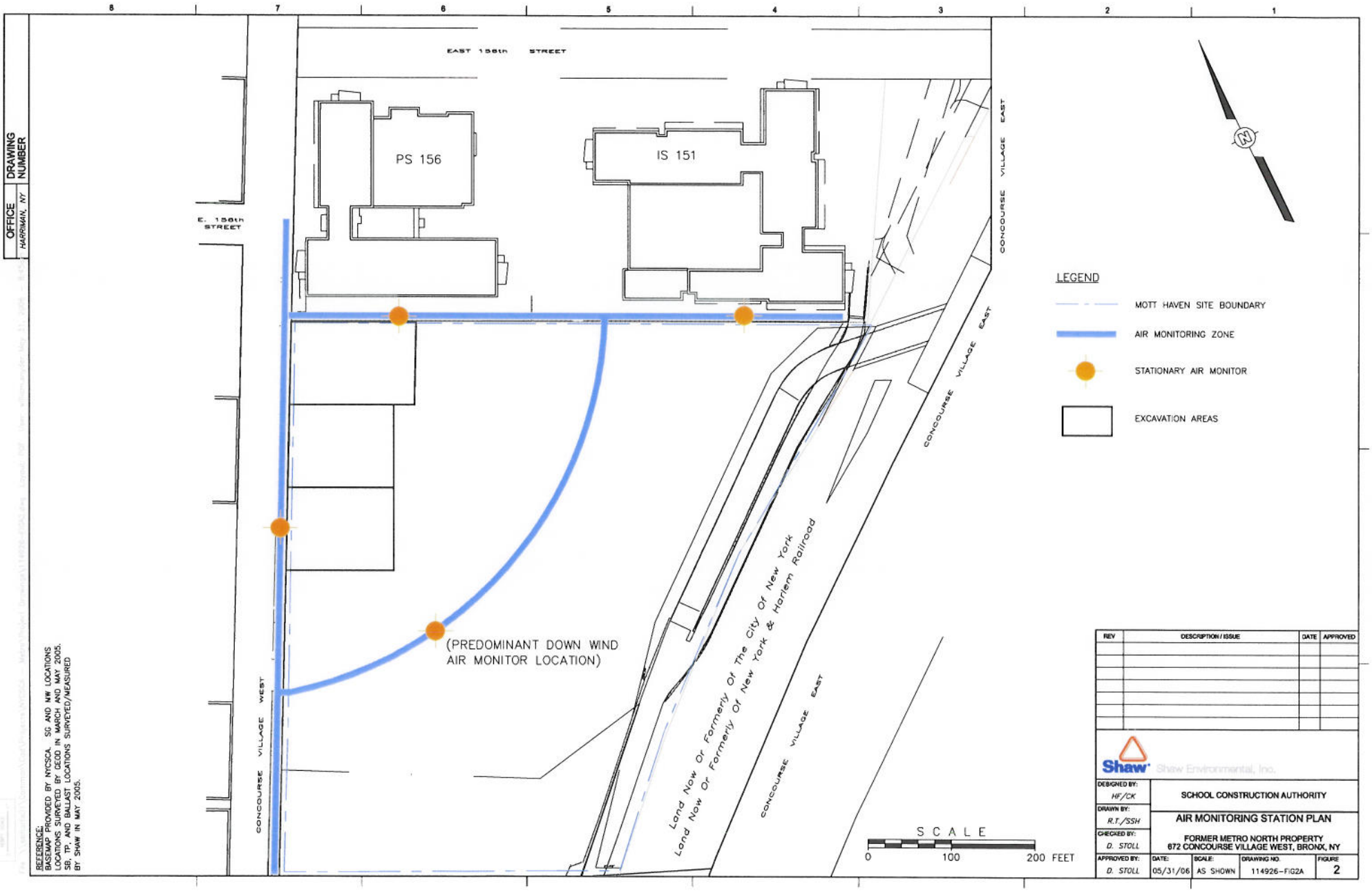
FORMER METRO NORTH PROPERTY
672 CONCOURSE VILLAGE WEST, BRONX, NY

REFERENCE:

BASE MAP SOURCR: www.nysgis.state.ny.us

L:\project\114926\114926A3.dwg
Plot Date/Time: 10/13/05 11:57am
Plotted by: Samuil.Shkolnik

Xref: .
Image: 040073G8



OFFICE: HARRIMAN, NY

DRAWING NUMBER

REFERENCE:
BASEMAP PROVIDED BY NYCSCA. SG AND NW LOCATIONS LOCATIONS SURVEYED BY GEOD IN MARCH AND MAY 2005. SB, TP, AND BALLAST LOCATIONS SURVEYED/MEASURED BY SHAW IN MAY 2005.

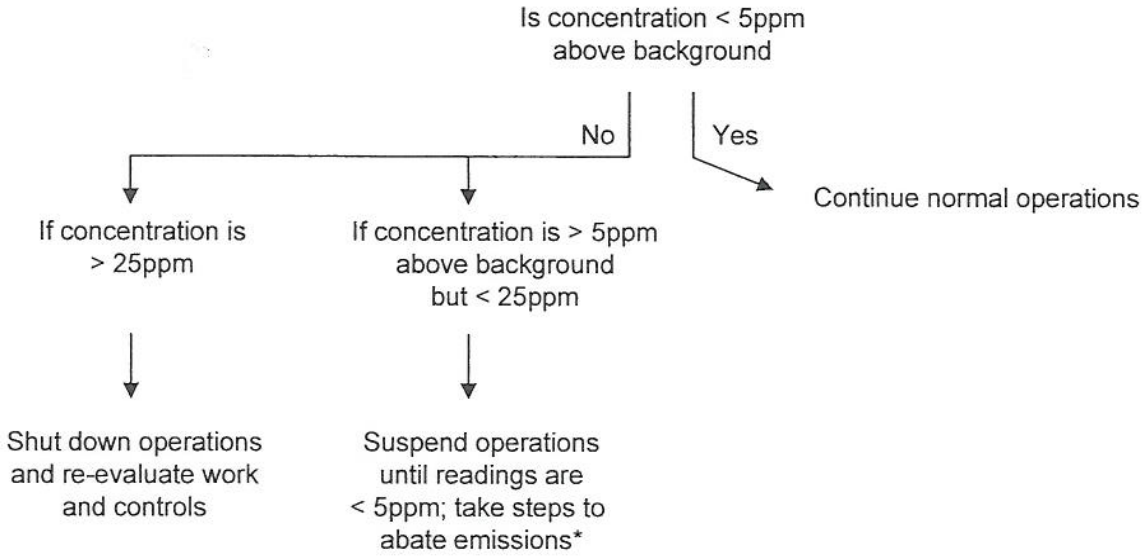
REV	DESCRIPTION / ISSUE	DATE	APPROVED

Shaw — Shaw Environmental, Inc.

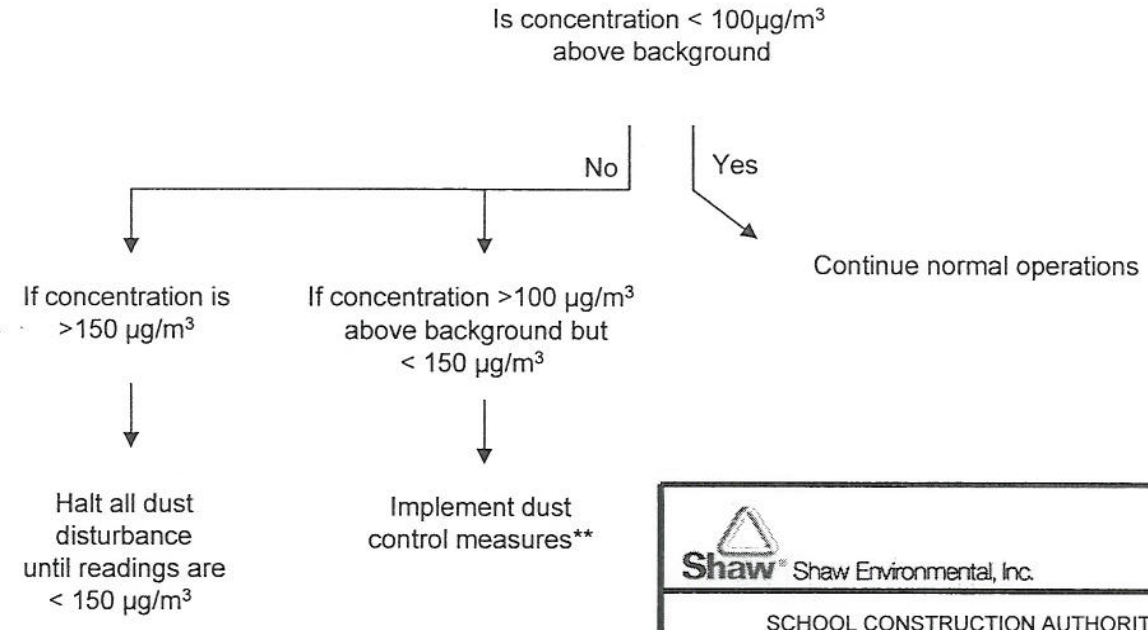
DESIGNED BY: HF/CK	SCHOOL CONSTRUCTION AUTHORITY
DRAWN BY: R.T./SSH	AIR MONITORING STATION PLAN
CHECKED BY: D. STOLL	FORMER METRO NORTH PROPERTY 672 CONCOURSE VILLAGE WEST, BRONX, NY

APPROVED BY:	DATE:	SCALE:	DRAWING NO.	FIGURE
D. STOLL	05/31/06	AS SHOWN	114926-FIG2A	2

Volatile Organic Monitoring
Downwind of BCP Area



Particulate Monitoring
Downwind of BCP Area



*See VOC control section (Section 4.2)
**See dust control section (Section 4.1)
VOC and particulate readings based on 15 minute time weighted average

Shaw Shaw Environmental, Inc.

SCHOOL CONSTRUCTION AUTHORITY

FIGURE 3

FLOW CHART FOR VOC AND PARTICUALTE MONITORING ACTION LEVELS

FORMER METRO NORTH PROPERTY
672 CONCOURSE VILLAGE WEST, BRONX, NY