

Ecosystems Strategies

a WCD Group Company

24 Davis Avenue, Poughkeepsie, NY 12603
phone 845.452.1058 fax 845.485.7083 wcdgroup.com



March 7, 2017

New York Public Library
Riverdale Branch
55-40 Moshulu Avenue
Bronx, NY 10471

via: UPS Delivery Service

Nigel Crawford, NYDEC Region 2
NYS DEC Division of Environmental Remediation
47-40 21st Street
Long Island City, NY 11101

via: UPS Delivery Service

Re: Document Repository for the Corrective Measures Work Plan for
6469 Broadway, Bronx, New York
WCD File: CB01174.50 BCP # C203048

Enclosed please find a copy of the above-referenced document prepared for the above-referenced project. We are providing this document for deposit in the public access repository.

Please contact me should you have any questions.

Sincerely,

ECOSYSTEMS STRATEGIES
a WCD Group Company

A handwritten signature in black ink, appearing to read "Paul H. Ciminello".

Paul H. Ciminello
Executive Vice President

RECEIVED

MAR 08 2017

NYS DEC REGION 2
ENVIRONMENTAL REMEDIATION

CORRECTIVE MEASURES WORK PLAN

6469 BROADWAY BCP SITE

6469 Broadway

Bronx, New York

NYSDEC BCP Site: C203048

January 2017

WCD File: CB01174.47
NYSDEC Spill File: 0108922

Prepared By:

Ecosystems Strategies

a WCD Group Company

24 Davis Avenue, Poughkeepsie, NY 12603
phone 845.452.1058 | fax 845.485.7083 | wcdgroup.com



RECEIVED

MAR 08 2017

NYS DEC REGION 2
ENVIRONMENTAL REMEDIATION



TABLE OF CONTENTS

1.0 INTRODUCTION.....	1
1.1 Purpose	1
1.2 Site Location and Description	1
1.3 Site History	1
2.0 CORRECTIVE MEASURES WORK PLAN	2
2.1 Overview of Proposed Remedial Services.....	2
2.2 Proposed Site Preparation Services	2
2.2.1 Agency Notification.....	2
2.2.2 Utility Markout	2
2.2.3 Governing Documents.....	2
2.2.4 Subcontractor Coordination	2
2.2.5 Health and Safety Plan	3
2.3 Proposed Remedial Services	3
2.3.1 Community Air Monitoring	3
2.3.2 Installation of Groundwater Monitoring Wells.....	3
2.3.3 Monitoring Well Development	4
2.3.4 Management of Investigation-Derived Waste.....	4
2.4 Documentation of Fieldwork Activities	4

APPENDICES

A FIGURES

Figure 1: Site Location Map

Figure 2: Proposed Fieldwork Map

B HEALTH AND SAFETY PLAN

C COMMUNITY AIR MONITORING PLAN

1.0 INTRODUCTION

1.1 Purpose

This Corrective Measures Work Plan (CMWP) provides a detailed description of the actions that are proposed by Ecosystems Strategies a WCD Group Company (WCD) to install two replacement monitoring wells (MW-10R and MW-13R) at the 6469 Broadway Selfhelp, LLC property located at 6469 Broadway, Bronx, New York (the Site) consistent with the requirements of the New York State Department of Environmental Conservation (NYSDEC) Brownfield Cleanup Program (BCP). All proposed work will be conducted according to a Site-specific Health and Safety Plan (Appendix B) and a Community Air Monitoring Plan (Appendix C).

1.2 Site Location and Description

The Site is a 0.40-acre property located at 6469 Broadway, Bronx, New York (City of New York tax map parcel numbers: Block 5851 and Lot 7501). The Site is occupied by an eleven-story residential structure with a partial basement in the northern portion and ground level parking in the southern portion. The Site is bounded by residential buildings to the north and west, a parking garage to the south, and Broadway and Van Cortlandt Park to the east.

1.3 Site History

The Site historically contained filling stations and associated automotive repair facilities, and NYSDEC spill number 0108922 was assigned in December 2001 based on the discovery of petroleum-contaminated soil. The Site entered into the BCP in June 2010 and remedial (and redevelopment) activities were conducted from July 2013 to March 2015 under an approved Remedial Action Workplan (RAWP), which included removal and disposal of former storage tanks and contaminated soil/bedrock, and two rounds of in-situ chemical oxidation (ISCO) treatment for groundwater remediation. The property is now occupied by a new residential building.

Monitoring has been conducted since April 2015 under the approved Site Management Plan (SMP) in order to document post-remedial groundwater quality (on-site groundwater has been impacted by petroleum). Off-site monitoring well MW-10 and on-site monitoring well MW-13 are damaged and cannot be sampled; the NYSDEC has therefore requested that these wells be replaced.

2.0 CORRECTIVE MEASURES WORK PLAN

2.1 Overview of Proposed Remedial Services

The proposed remedial services consist of the following:

- Initiation of air monitoring during ground intrusive activities (Section 2.3.1);
- Extension of two (2) soil borings, and completion of borings as new groundwater monitoring wells (Section 2.3.2); and,
- Well development (Section 2.3.3).

Prior to, or in conjunction with, the initiation of these actions (see Section 2.3), the tasks detailed in Section 2.2, below, will also be conducted.

2.2 Proposed Site Preparation Services

This section of the CMWP provides details of activities and services necessary to be initiated and/or completed prior to the implementation of Site remediation services.

2.2.1 Agency Notification

The NYSDEC will be notified in writing at least five (5) business days prior to the start of fieldwork. Notification of subsequent field activities will be in accordance with reasonable business practice, with verbal notification for immediate (within 48 hours) activities and written notification otherwise. Written notifications will be transmitted to the NYSDEC via facsimile or electronic mail.

2.2.2 Utility Markout

Prior to the implementation of any of the investigative tasks outlined in Section 2.3, below, a request for a complete utility markout of the Site will be submitted as required by New York State Department of Labor regulations. Confirmation of underground utility locations will be secured, a field check of the utility markout will be conducted prior to the initiation of work.

2.2.3 Governing Documents

All fieldwork activities will be conducted in accordance with the approved SMP for the Site, inclusive of applicable requirements of the Quality Assurance Project Plan (QAPP).

2.2.4 Subcontractor Coordination

Subcontractors will perform requested services under the direct supervision of the Remedial Engineer (RE) responsible for implementation of the SMP. Prior to the initiation of fieldwork, all subcontractors will be notified of the components of the Health and Safety Plan (Section 2.2.5). All necessary insurance certificates will be secured from subcontractors. At this time, the following subcontractors are anticipated to be used on this project: driller and analytical laboratory. The driller will secure all necessary City permits for well installation activities.

2.2.5 Health and Safety Plan

The site-specific Health and Safety Plan (HASP, Appendix B) will be reviewed with on-site personnel (including subcontractors) prior to the initiation of fieldwork. All proposed work will be performed in “Level D” personal protective equipment; however, all on-site field personnel will be prepared to continue services wearing more protective levels of equipment should field conditions warrant.

2.3 Proposed Remedial Services

This section of the CMWP provides a detailed description of the tasks that will be conducted at the Site.

2.3.1 Community Air Monitoring

A Community Air Monitoring Plan (CAMP, Appendix C) will be initiated during all ground intrusive activities. The implementation of the CAMP will document the presence or absence of specific compounds in the air surrounding the work zone, which may migrate off-site due to fieldwork activities. This plan provides guidance on the need for implementing more stringent dust and emission controls based on air quality data. Air monitoring will be conducted for VOCs and for dust.

2.3.2 Installation of Groundwater Monitoring Wells

Four (4) operable groundwater monitoring wells (on-site well MW-14 and off-site wells MW-7 to MW-9) and two (2) obstructed and/or damaged monitoring wells (off-site well MW-10 and on-site well MW-13) are currently located at the Site and in off-site sidewalk areas. Monitoring wells MW-10 and MW-13 will be replaced with new wells (MW-10R and MW-13R), at locations in close proximity to the original well. Existing and proposed monitoring well locations are identified on the Proposed Fieldwork Map (Figure 2).

Borings will be extended at the proposed well locations using mechanized equipment. Wells will be completed to a final depth corresponding to the original well to be replaced.

The wells will be constructed of two-inch PVC casing with at least 10 feet of 0.01-inch slotted PVC well screening across the water table. No glue will be used to thread the casing lengths. The wells will be constructed such that a minimum of 2 feet of screening will extend above the water table and at least 8 feet of screening will extend below the water level.

The annular space between the well screen and the borehole will be backfilled with clean #1 silica sand to a depth of 1 to 2 feet above the well screen. A 1-foot thick bentonite seal will be poured down the borehole above the sand pack and allowed to hydrate before grouting the remaining annular space with cement.

A locked cap with vent will be installed at the top of the PVC riser and the well will be protected by a secure “drive-over” metal cover. The elevation of the top of the PVC well riser will be determined relative to a permanent on-site marker using a surveyor’s transit. Monitoring well location and relative elevation will be recorded in field logs and indicated on all fieldwork maps.

2.3.3 Monitoring Well Development

The wells will be developed one week following installation. The wells will be developed with a properly decontaminated mechanical pump and dedicated polyethylene tubing in order to clear fine-grained material that may have settled around the well screen and to enhance the natural hydraulic connection between the well screen and the surrounding soils. Well development will begin at the top of the saturated portion of the screened interval to prevent clogging of the pump within the well casing. The wells will be developed until the discharge water is free of sediment and the indicator parameters (pH, temperature, turbidity, dissolved oxygen, and specific conductivity) have stabilized. Well development will be discontinued when the turbidity of the discharged water is below 50 NTUs and the other parameters have stabilized. Upon completion, the pump assembly will be removed from the well while the pump is still running to avoid discharge of purged water back into the well. All development water will be securely stored on-site pending the analytical results of groundwater sampling.

2.3.4 Management of Investigation-Derived Waste

Soil cuttings and purge water will be containerized and disposed off-site at a permitted facility. Discarded personal protective equipment and other fieldwork supplies will be disposed as municipal solid waste.

2.4 Documentation of Fieldwork Activities

All fieldwork conducted during implementation of the CMWP will be documented in a letter report, to be submitted to NYSDEC within 30 days of completion of well development.

APPENDIX A

Figures

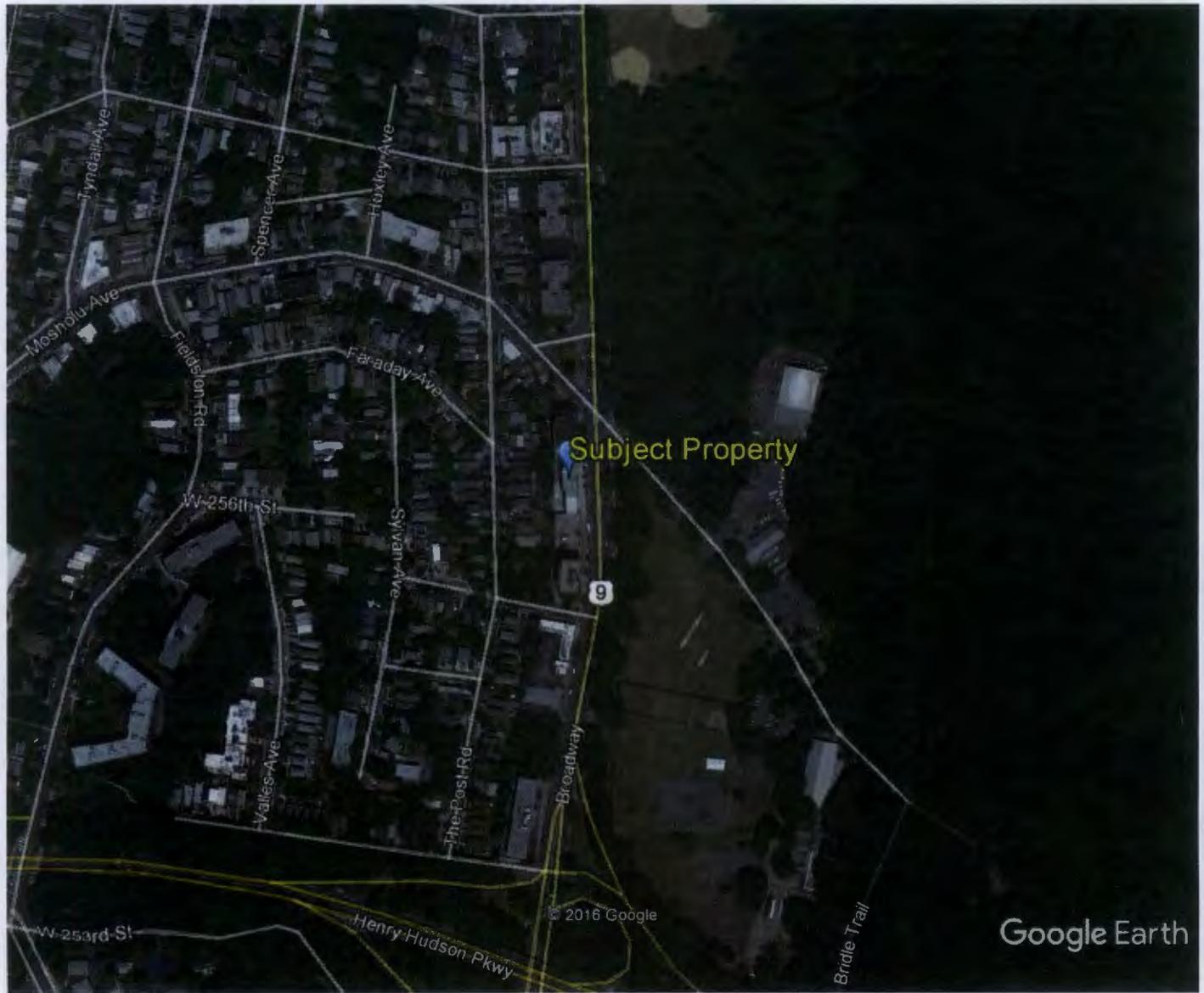


Figure 1: Site Location Map

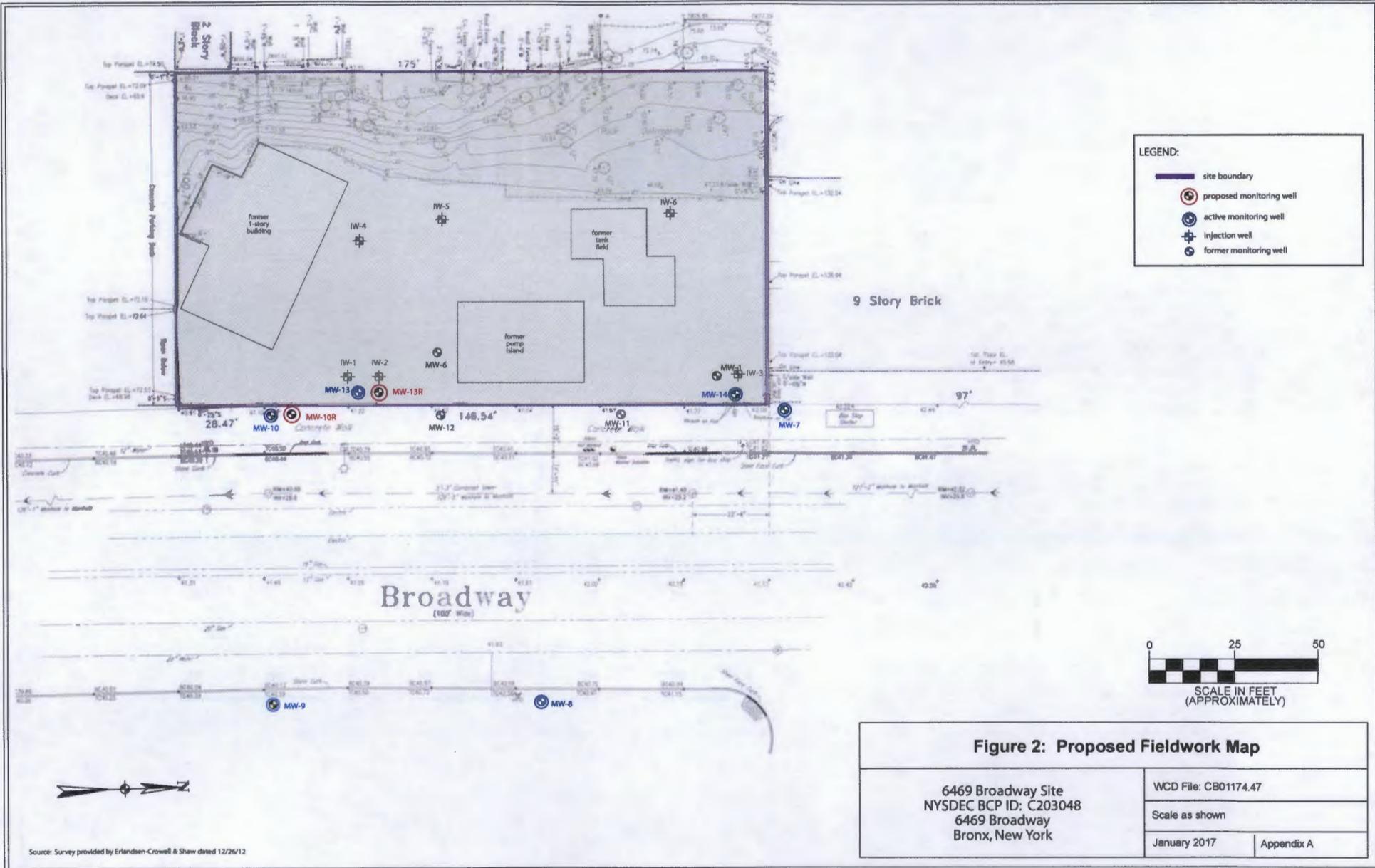
6469 Broadway
Borough of Bronx, New York



WCD File: CB01174.47

January 2017

Appendix A



APPENDIX B

Health and Safety Plan

HEALTH AND SAFETY PLAN
FOR
MONITORING WELL INSTALLATION

6469 Broadway
Bronx, New York

NYSDEC BCP Site: C203048
NYSDEC Spill File: 0108922

January 2017

WCD File: CB01174.47

Prepared By

Ecosystems Strategies

a WCD Group Company

24 Davis Avenue, Poughkeepsie, NY 12603

phone 845.452.1658 | fax 845.485.7083 | wcdgroup.com





TABLE OF CONTENTS

1.0	INTRODUCTION	1
	1.1 Purpose.....	1
	1.2 Site Location and Description	1
	1.3 Work Activities.....	1
2.0	HEALTH AND SAFETY HAZARDS	2
	2.1 Hazard Overview for On-Site Personnel.....	2
	2.2 Potential Hazards to the Public from Fieldwork Activities.....	2
3.0	PERSONAL PROTECTIVE EQUIPMENT	2
4.0	CONTAMINANT CONTROL.....	3
5.0	MONITORING AND ACTION LEVELS.....	3
6.0	SITE CONTROL/WORK ZONES	3
7.0	NOISE CONTROL	4
8.0	PERSONNEL TRAINING	4
9.0	DECONTAMINATION.....	5
10.0	EMERGENCY RESPONSE	5
	10.1 Notification of Site Emergencies.....	5
	10.2 Responsibilities	5
	10.3 Accidents and Injuries.....	5
	10.4 Communication	6
	10.5 Safe Refuge	6
	10.6 Site Security and Control	6
	10.7 Emergency Evacuation	6
	10.8 Resuming Work.....	6
	10.9 Fire Fighting Procedures.....	6
	10.10 Emergency Decontamination Procedure	7
	10.11 Emergency Equipment.....	7
11.0	SPECIAL PRECAUTIONS AND PROCEDURES	7
	11.1 Heat/Cold Stress.....	7
	11.2 Heavy Equipment.....	7
	11.3 Additional Safety Practices	8
	11.4 Daily Log Contents.....	8
12.0	TABLE AND FIGURES	9
	Table 1: Emergency Contact Information	9
	Figure 1: Directions to Hospital.....	10
	Figure 2: Map to Hospital.....	10

ATTACHMENTS

Site Location Map

Proposed Fieldwork Map



1.0 INTRODUCTION

1.1 Purpose

This Health and Safety Plan (HASP) has been developed to provide the requirements and general procedures to be followed by Ecosystems Strategies a WCD Group Company (WCD) and on-site subcontractors while performing remedial activities for the Site located at 6469 Broadway, Bronx, New York. This document supersedes all other health and safety plans prepared by WCD for this Site.

This HASP incorporates policies, guidelines, and procedures that have the objective of protecting the public health of the community during the performance of fieldwork activities, and therefore serves as a Community Health and Safety Plan (CHASP). The objectives of the CHASP are met by establishing guidelines to minimize community exposure to hazards during fieldwork, and by planning for and responding to emergencies affecting the public.

This HASP describes the responsibilities, training requirements, protective equipment, and standard operating procedures to be utilized by all personnel while on the Site. All on-site personnel and visitors shall follow the guidelines, rules, and procedures contained in this safety plan. The Project Manager or Site Health and Safety Officer (SHSO) may impose any other procedures or prohibitions believed to be necessary for safe operations. This HASP incorporates by reference the applicable Occupational Safety and Health Administration (OSHA) requirements in 29 CFR 1910 and 29 CFR 1926.

The requirements and guidelines in this HASP are based on a review of available information and evaluation of potential on-site hazards. This HASP will be discussed with Site personnel and will be available on-site for review while work is underway. On-site personnel will report to the SHSO in matters of health and safety. The on-site project supervisor(s) are responsible for enforcement and implementation of this HASP, which is applicable to all field personnel, including contractors and subcontractors.

This HASP is specifically intended for the conduct of activities within the defined scope of work in specified areas of the Site. Changes in Site conditions and future actions that may be conducted at the Site may necessitate the modification of the requirements of the HASP. Although this HASP can be made available to interested persons for informational purposes, WCD has no responsibility over the interpretations or activities of any other persons or entities other than employees of WCD or WCD's subcontractors.

1.2 Site Location and Description

The Site as is an approximate 0.4-acre, rectangular-shaped parcel having 175 feet of frontage on the western side of Broadway. A Site Location Map and a Proposed Fieldwork Map showing the groundwater monitoring system at the Site are included as Attachments.

1.3 Work Activities

Fieldwork activities are detailed in the Corrective Measures Work Plan (CMWP), which is being implemented in accordance with the approved Site Management Plan (SMP). The Scope of Work is comprised of the following tasks: implementation of the Community Air Monitoring Plan (CAMP); installation of two replacement monitoring wells (MW-10R and MW 13R); and, well development.



2.0 HEALTH AND SAFETY HAZARDS

2.1 Hazard Overview for On-site Personnel

The potential exists for the presence of elevated levels of petroleum and/or solvent compounds in soils, groundwater, and soil vapor. The possibility exists for on-site personnel to have contact with contaminated soils, groundwater, and/or vapor during Site investigative work. Contact with contaminated substances may present a skin contact, inhalation, and/or ingestion hazard. These potential hazards are addressed in Sections 3.0 through 11.0, below.

2.2 Potential Hazards to the Public from Fieldwork Activities

The potential exists for the public to be exposed to contaminated soils, groundwater, and/or vapor, which may present a skin contact, inhalation, and/or ingestion hazard. Additional potential hazards to the public that are associated with fieldwork activities include mechanical/physical hazards, traffic hazards from fieldwork vehicles, and noise impacts associated with operation of mechanical equipment.

Impacts to public health and safety are expected to be limited to hazards that could directly affect on-site visitors and/or trespassers. These effects will be mitigated through site access and control measures (see Section 6.0, below). Specific actions taken to protect the public health (presented in Sections 3.0 through 11, below, and in the Community Air Monitoring Plan) are anticipated to minimize any potential off-site impacts from contaminant migration, noise, and traffic hazards.

3.0 PERSONAL PROTECTIVE EQUIPMENT

The levels of protection identified for the services specified in the CMWP represent a best estimate of exposure potential and protective equipment needed for that exposure. Determination of levels was based on data provided by previous studies of the adjoining property. The SHSO may recommend revisions to these levels based on an assessment of actual exposures and may at any time require Site workers, supervisors, and/or visitors to use specific safety equipment.

The level of protective clothing and equipment selected for this project is Level D as follows:

Level D protective clothing will include, but is not limited to, a hard hat, steel-toed boots, nitrile gloves (when handling soils and/or groundwater), hearing protection (foam ear plugs or ear muffs, as required), and safety goggles (in areas of exposed groundwater and when decontaminating equipment).

Workers will wear Level D at all times, as designated by this HASP. Disposable gloves will be changed immediately following the handling of contaminated soils, water, or equipment. Tyvek suits will be worn during activities likely to excessively expose work clothing to contaminated dust or soil (chemically-resistant over garments will be required in situations where exposures could lead to penetration of clothing and direct dermal contact by contaminants).

The requirement for the use of PPE by official on-site visitors shall be determined by the SHSO, based on the most restrictive PPE requirement for a particular Work Zone (see Section 6 for Work Zone definitions). All on-site visitors shall, at a minimum, be required to wear an approved hardhat and be provided with appropriate hearing protection as necessary.

The need for an upgrade in PPE will be determined based upon encountered Site conditions, including measurements taken in the breathing zone of the work area using a photo-ionization detector (PID). An upgrade to a higher level of protection (Level C) will begin when specific action levels are reached (see Section 5.0, below), or as otherwise required by the SHSO. Level C PPE includes a full-face or half-mask



air-purifying respirator (NIOSH approved for the compound[s] of concern), hooded chemical-resistant clothing, outer and inner chemical-resistant gloves, and (as needed) coveralls, outer boots/boot covers, escape mask, and face shield. Level C PPE may be used only when: oxygen concentrations are not less than 19.5%; contaminant contact will not adversely affect any exposed skin; types of air contaminants have been identified, concentrations measured, and a cartridge or canister is available that can remove the contaminant; atmospheric contaminant concentrations do not exceed immediately dangerous to life or health (IDLH) levels; and job functions do not require self-contained breathing apparatus (SCBAs). The need for Level B or Level A PPE is not anticipated for the planned investigative activities at this Site.

If any equipment fails and/or any employee experiences a failure or other alteration of their protective equipment that may affect its protective ability, that person will immediately leave the work area. The Project Manager and the SHSO will be notified and, after reviewing the situation, determine the effect of the failure on the continuation of on-going operations. If the failure affects the safety of personnel, the work site, or the surrounding environment, personnel will be evacuated until appropriate corrective actions have been taken.

4.0 CONTAMINANT CONTROL

Precautions will be taken during dry weather (e.g., wetting or covering exposed soils) to avoid generating and breathing dust-generated from soils. A PID and digital dust indicator (or equivalent equipment) will be used to monitor potential contaminant levels. Response to the monitoring will be in accordance with the action levels provided in Section 5.0.

5.0 MONITORING AND ACTION LEVELS

Concentrations of contaminant compounds in the air are expected to be below the OSHA Permissible Exposure Limits (PELs). A Community Air Monitoring Plan (CAMP) will be implemented for all fieldwork (a copy of the CAMP is provided in the CMWP). Air monitoring will be conducted for VOCs and dust. Monitoring will be conducted at all times that fieldwork activities which are likely to generate emissions are occurring. PID readings consistently in excess of 5 ppm, and dust levels in excess of 100 ug/m³ of the background level (150 ug/m³ after mitigation techniques have been instituted), will be used as an indication of the need to initiate personnel monitoring, increase worker protective measures, and/or modify or cease on-site operations in order to mitigate off-site community exposure. PID and/or dust readings that consistently exceed background in the breathing zone (during any of the proposed tasks) will necessitate moving away from the source or implementing a higher PPE level.

6.0 SITE CONTROL/WORK ZONES

Site control procedures will be established to reduce the possibility of worker/visitor contact with compounds present in the soil, to protect the public in the area surrounding the Site and to limit access to the Site to only those persons required to be in the work zone. Notices will be placed near the Site warning the public not to enter fieldwork areas and directing visitors to report to the Project Manager or SHSO. Measures will be taken to limit the entry of unauthorized personnel into the specific areas of field activity and to safely direct and control all vehicular traffic in and near the Site (e.g., placement of traffic cones and warning tape).

The following Work Zone will be established:

Exclusion Zone (“Hot Zone”) - The exclusion zone will be that area immediately surrounding the work being performed for remediation purposes (i.e. the area where contaminated media are being handled). Only individuals with appropriate PPE and training are allowed into this zone. It is the responsibility of the Site Health and Safety Officer to prevent unauthorized personnel from entering the exclusion zone. When necessary, such as in high traffic areas, the exclusion zone will be delineated with barricade tape, cones, and/or barricades.

Decontamination Area - The decontamination area will be that area designated for the washing of heavy equipment before that equipment exits the Site. This area will be designed so that trucks are not recontaminated while exiting the Site. A decontamination area for personnel is not anticipated being required during completion of the CMWP; however, care will be taken to remove gloves, excess soil from boots, and soiled clothing (if necessary) before entering the Intermediate Zone.

Contamination Reduction Zone and Support Zone - Not anticipated being required during the completion of the CMWP.

Intermediate Zone (Decontamination Zone) - The intermediate zone, also known as the decontamination zone, is where patient decontamination should take place, if necessary. A degree of contamination still is found in this zone; thus, some PPE is required, although it is usually of a lesser degree than that required for the hot zone.

Command Zone - The command zone is located outside the decontamination zone. All exposed individuals and equipment from the “hot zone” and decontamination zone should be decontaminated before entering the command zone. Access to all zones must be controlled. Keeping the media and onlookers well away from the Site is critical and will be the responsibility of both the SHSO and the Project Manager, and other Site personnel as appropriate.

7.0 NOISE CONTROL

All fieldwork activities will be conducted in a manner designed to reduce unnecessary noise generation, and to minimize the potential for both on-site and off-site harmful noise levels. The Project Manager and SHSO will establish noise reduction procedures (as appropriate to the Site and the work) to meet these requirements.

8.0 PERSONNEL TRAINING

Work zones that will accomplish the general objective stated above will be established by the Project Manager and the SHSO. Site access will be monitored by the SHSO, who will maintain a log-in sheet for personnel that will include, at the minimum, personnel on the Site, their arrival and departure times, and their destination on the Site. All workers will be properly trained in accordance with OSHA requirements (29 CFR 1910). Site-specific training will be provided to each employee. Personnel will be briefed by the SHSO as to the potential hazards to be encountered. Topics will include:

- Availability of this HASP;
- General site hazards and specific hazards in the work areas, including those attributable to known or suspected on-site contaminants;
- Selection, use, testing, and care of the body, eye, hand, and foot protection being worn, with the limitations of each;
- Decontamination procedures for personnel, their personal protective equipment, and other equipment used on the Site;

- Emergency response procedures and requirements;
- Emergency alarm systems and other forms of notification, and evacuation routes to be followed; and,
- Methods to obtain emergency assistance and medical attention.

9.0 DECONTAMINATION

The SHSO will establish a decontamination system and decontamination procedures (appropriate to the Site and the work) that will prevent potentially hazardous materials from leaving the Site. Trucks will be brushed to remove materials adhering to their surfaces. Sampling equipment will be segregated and, after decontamination, stored separately from splash protection equipment. Decontaminated or clean sampling equipment not in use will be covered with plastic and stored in a designated storage area in the work zone.

10.0 EMERGENCY RESPONSE

10.1 Notification of Site Emergencies

In the event of an emergency, the SHSO will be immediately notified of the nature and extent of the emergency (the names and contact information for key site safety and management personnel, as well as other site safety contact telephone numbers, shall be posted at the Site).

Table 1 in this HASP contains Emergency Response Telephone Numbers, and immediately following is a map detailing the directions to the nearest hospital emergency room. This information will be maintained at the work Site by the SHSO. The location of the nearest telephone will be determined prior to the initiation of on-site activities. In addition to any permanent phone lines, a cellular phone will be in the possession of the SHSO, or an authorized designee, at all times.

10.2 Responsibilities

- Prior to the initiation of on-site work activities, the SHSO will:
- Notify individuals, authorities, and/or health care facilities of the potentially hazardous activities and potential wastes that may develop as a result of the investigation.
- Confirm that first aid supplies and a fire extinguisher are available on-site.
- Have a working knowledge of safety equipment available.
- Confirm that a map detailing the most direct route to the hospital is prominently posted with the emergency telephone numbers.

The SHSO will be responsible for directing notification, response, and follow-up actions and for contacting outside response personnel (ambulance, fire department, or others). In the case of an evacuation, the SHSO will account for personnel. A log of individuals entering and leaving the Site will be kept so that everyone can be accounted for in an emergency.

Upon notification of an exposure incident, the SHSO will contact the appropriate emergency response personnel for recommended medical diagnosis and, if necessary, treatment. The SHSO will determine whether and at what levels exposure actually occurred, the cause of such exposure, and the means to prevent similar incidents from occurring.

10.3 Accidents and Injuries

In the event of an accident or injury, measures will be taken to assist those who have been injured or exposed and to protect others from hazards. If an individual is transported to a hospital or doctor, a copy of the HASP will accompany the individual.

The SHSO will be notified and will respond according to the severity of the incident. The SHSO will perform an investigation of the incident and prepare a signed and dated report documenting the investigation. An exposure-incident report will also be completed by the SHSO and the exposed individual. The form will be filed with the employee's medical and safety records to serve as documentation of the incident and the actions taken.

10.4 Communication

No special hand signals will be utilized within the work zone. Field personnel will utilize standard hand signals during the operation of heavy equipment.

10.5 Safe Refuge

Vehicles will serve as the immediate place of refuge in the event of an emergency. If evacuation from the area is necessary, project vehicles will be used to transport on-site personnel to safety.

10.6 Site Security and Control

Site security and control during emergencies, accidents, and incidents will be monitored by the SHSO. The SHSO is responsible for limiting access to the Site to authorized personnel and for oversight of reaction activities.

10.7 Emergency Evacuation

In case of an emergency, personnel will evacuate to the safe refuge identified by the SHSO, both for their personal safety and to prevent the hampering of response/rescue efforts.

10.8 Resuming Work

A determination that it is safe to return to work will be made by the SHSO and/or any personnel assisting in the emergency, e.g., fire department, police department, utility company, etc. No personnel will be allowed to return to the work areas until a full determination has been made by the above-identified personnel that all field activities can continue unobstructed. Such a determination will depend upon the nature of the emergency (e.g., downed power lines -- removal of all lines from the property; fire -- extinguished fire; injury -- safe transport of the injured party to a medical facility with either assurance of acceptable medical care present or completion of medical care; etc.).

Before on-site work is resumed following an emergency, necessary emergency equipment will be recharged, refilled, or replaced. Government agencies will be notified as appropriate. An Incident Report Form will be filed.

10.9 Fire Fighting Procedures

A fire extinguisher will be available in the work zone during on-site activities. This extinguisher is intended for small fires. When a fire cannot be controlled with the extinguisher, the area will be evacuated immediately. The SHSO will be responsible for directing notification, response, and follow-up actions and for contacting ambulance and fire department personnel.

10.10 Emergency Decontamination Procedure

The extent of emergency decontamination depends on the severity of the injury or illness and the nature of the contamination. Whenever possible, minimum decontamination will consist of washing, rinsing, and/or removal of contaminated outer clothing and equipment. If time does not permit decontamination, the person will be given first aid treatment and then wrapped in plastic or a blanket prior to transport.

10.11 Emergency Equipment

The following on-site equipment for safety and emergency response will be maintained in the on-site vehicle of the SHSO:

- Fire extinguisher;
- First-aid kit; and,
- Extra copy of this Health and Safety Plan.

11.0 SPECIAL PRECAUTIONS AND PROCEDURES

The activities associated with this investigation may involve potential risks of exposure to both chemical and physical hazards. The potential for chemical exposure to hazardous or regulated substances will be significantly reduced through the use of monitoring, personal protective clothing, engineering controls, and implementation of safe work practices.

11.1 Heat/Cold Stress

Training in prevention of heat/cold stress will be provided as part of the site-specific training. The timing of this project is such that heat/cold stress may pose a threat to the health and safety of personnel. Work/rest regimens will be employed, as necessary, so that personnel do not suffer adverse effects from heat/cold stress. Special clothing and appropriate diet and fluid intake regimens will be recommended to personnel to further reduce this temperature-related hazard. Rest periods will be recommended in the event of high/low temperatures and/or humidity to counter the negative effects of heat/cold stress.

11.2 Heavy Equipment

Working in the vicinity of heavy equipment is the primary safety hazard at the Site. Physical hazards in working near heavy construction equipment include the following: overhead hazards, slips/trip/falls, hand and foot injuries, moving part hazards, improper lifting/back injuries, and noise. All workers will be properly trained in accordance with OSHA requirements (29 CFR 1910). No workers will be permitted within any excavated areas without proper personal protective equipment (PPE), including, as warranted, any necessary Level C equipment (e.g., respirators and protective suits). Air monitoring in excavation areas will be conducted for VOCs in accordance with Section 5.0 and the Community Air Monitoring Plan.

11.3 Additional Safety Practices

The following are important safety precautions which will be enforced during field activities:

- Medicine and alcohol can aggravate the effect of exposure to certain compounds. Controlled substances and alcoholic beverages will not be consumed during investigation activities. Consumption of prescribed drugs will only be at the discretion of a physician familiar with the person's work.
- Eating, drinking, chewing gum or tobacco, smoking, or other practices that increase the probability of hand-to-mouth transfer and ingestion of material is prohibited except in areas designated by the SHSO.
- Contact with potentially contaminated surfaces will be avoided whenever possible. Workers will not unnecessarily walk through puddles, mud, or other discolored surfaces; kneel on the ground; or lean, sit, or place equipment on drums, containers, vehicles, or the ground.
- Personnel and equipment in the work areas will be minimized, consistent with effective site operations.
- Unsafe equipment left unattended will be identified by a "DANGER, DO NOT OPERATE" tag.
- Work areas for various operational activities will be established.

11.4 Daily Log Contents

The SHSO will establish a system appropriate to the Site, the work, and the work zones that will record, at a minimum, the following information:

- Personnel on the Site, their arrival and departure times, and their destination on the Site.
- Incidents and unusual activities that occur on the Site such as, but not limited to, accidents, spills, breaches of security, injuries, equipment failures, and weather-related problems.
- Changes to the HASP.
- Daily information generated such as: changes to work and health and safety plans; work accomplished and the current Site status; and monitoring results.



12.0 TABLE AND FIGURES

Table 1: Emergency Response Telephone Numbers

Emergency Agencies	Phone Numbers
EMERGENCY	911
St Joseph's Medical Center 127 South Broadway, Yonkers, NY	(914) 378-7586, (914) 378-7471 or 911
Bronx 50 Precinct Police Department	(718) 543-5700 or 911
NYC Fire Department	(718) 561-4988 or 911
Mayor's Office	(718) 579-6893
Empire Water & Sewer	(718) 822-6644
Site Health and Safety Officer – Paul Ciminello and/or on-site WCD personnel	(845) 452-1658

Figure 1: Directions to Hospital

	Dist	Turn		Road	Exit	Finish Time	Finish Dist
		Start	at	6469 Broadway		00:04:18	1.79 mi
		Go straight (N)	on	US 9 (SR 9A Broadway)		00:04:18	1.79 mi
	in 1.79 mi	Finish	at	127 S Broadway		00:00:00	0.00 mi

Total Time: 00:04:18 Total Distance: 1.79 mi

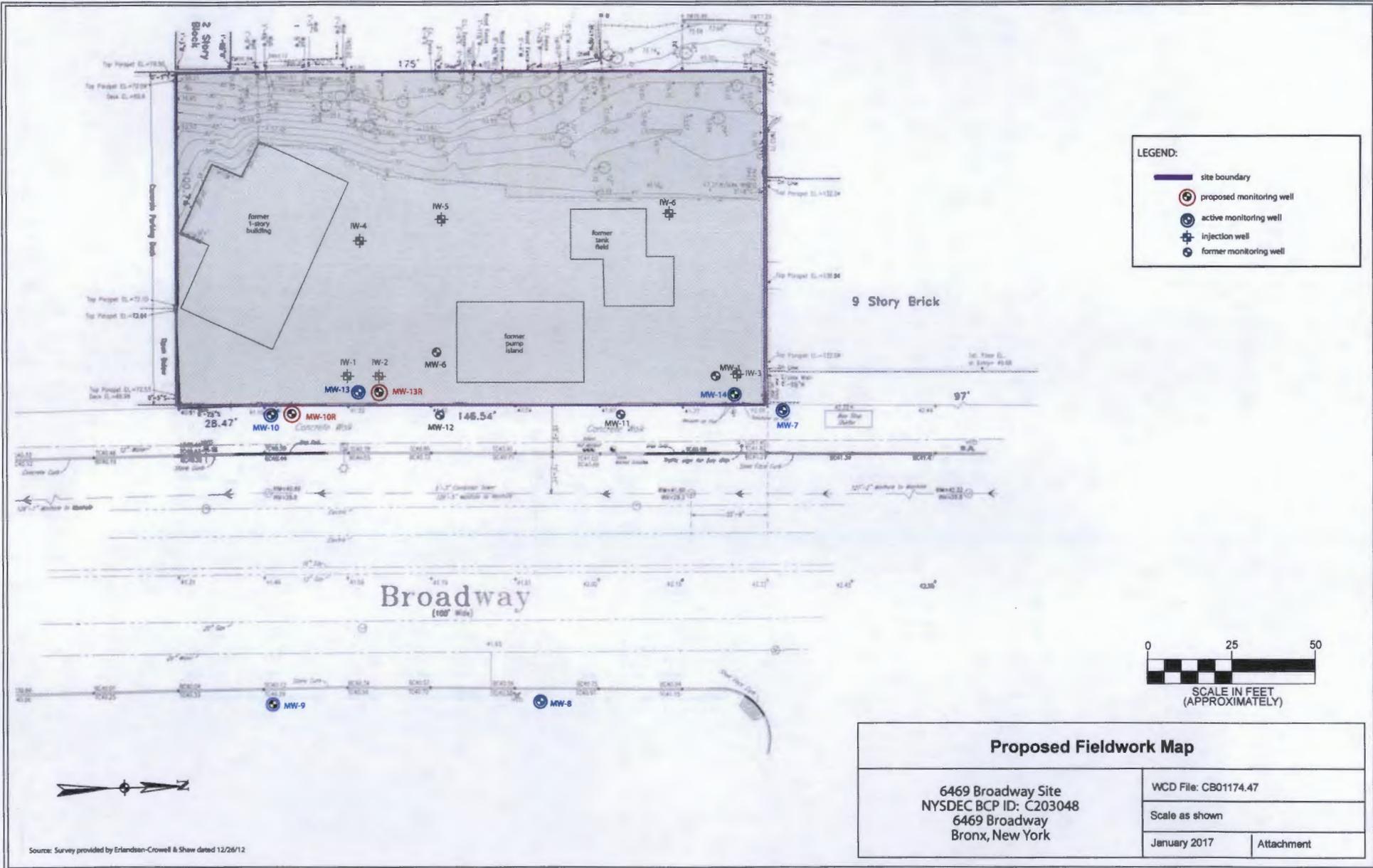
Figure 2: Map to Hospital



DELORME
 Data use subject to license.
 © 2004 DeLorme, Street Atlas USA® 2005.
 www.delorme.com

MN (13.2° W)

0 1600 3000
 Data Zoom 12-8



APPENDIX C

Community Air Monitoring Plan

New York State Department of Health Generic Community Air Monitoring Plan

A Community Air Monitoring Plan (CAMP) requires real-time monitoring for volatile organic compounds (VOCs) and particulates (i.e., dust) at the downwind perimeter of each designated work area when certain activities are in progress at contaminated sites. The CAMP is not intended for use in establishing action levels for worker respiratory protection. Rather, its intent is to provide a measure of protection for the downwind community (i.e., off-site receptors including residences and businesses and on-site workers not directly involved with the subject work activities) from potential airborne contaminant releases as a direct result of investigative and remedial work activities. The action levels specified herein require increased monitoring, corrective actions to abate emissions, and/or work shutdown. Additionally, the CAMP helps to confirm that work activities did not spread contamination off-site through the air.

The generic CAMP presented below will be sufficient to cover many, if not most, sites. Specific requirements should be reviewed for each situation in consultation with NYSDOH to ensure proper applicability. In some cases, a separate site-specific CAMP or supplement may be required. Depending upon the nature of contamination, chemical-specific monitoring with appropriately-sensitive methods may be required. Depending upon the proximity of potentially exposed individuals, more stringent monitoring or response levels than those presented below may be required. Special requirements will be necessary for work within 20 feet of potentially exposed individuals or structures and for indoor work with co-located residences or facilities. These requirements should be determined in consultation with NYSDOH.

Reliance on the CAMP should not preclude simple, common-sense measures to keep VOCs, dust, and odors at a minimum around the work areas.

Community Air Monitoring Plan

Depending upon the nature of known or potential contaminants at each site, real-time air monitoring for volatile organic compounds (VOCs) and/or particulate levels at the perimeter of the exclusion zone or work area will be necessary. Most sites will involve VOC and particulate monitoring; sites known to be contaminated with heavy metals alone may only require particulate monitoring. If radiological contamination is a concern, additional monitoring requirements may be necessary per consultation with appropriate NYSDEC/NYSDOH staff.

Continuous monitoring will be required for all ground intrusive activities and during the demolition of contaminated or potentially contaminated structures. Ground intrusive 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.

Particulate Monitoring, Response Levels, and Actions

Particulate concentrations should be monitored **continuously** at the upwind and downwind perimeters of the exclusion zone at temporary particulate monitoring stations. The particulate monitoring should be performed using real-time 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. The equipment must be equipped with an audible alarm to indicate exceedance of the action level. In addition, fugitive dust migration should be visually assessed during all work activities.

- If the downwind PM-10 particulate level is 100 micrograms per cubic meter (mcg/m^3) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques must be employed. Work may continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed $150 \text{ mcg}/\text{m}^3$ above the upwind level and provided that no visible dust is migrating from the work area.
- If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than $150 \text{ mcg}/\text{m}^3$ above the upwind level, work must be stopped and a re-evaluation of activities initiated. Work can resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within $150 \text{ mcg}/\text{m}^3$ of the upwind level and in preventing visible dust migration.

All readings must be recorded and be available for State (DEC and DOH) personnel to review.

June 20, 2000

P:\Bureau\Common\CommunityAirMonitoringPlan (CAMP)\GCAMPRI.DOC