REMEDIAL WORK PLAN
1830 WHITESTONE EXPRESSWAY
WHITESTONE, QUEENS, NEW YORK

Prepared By:

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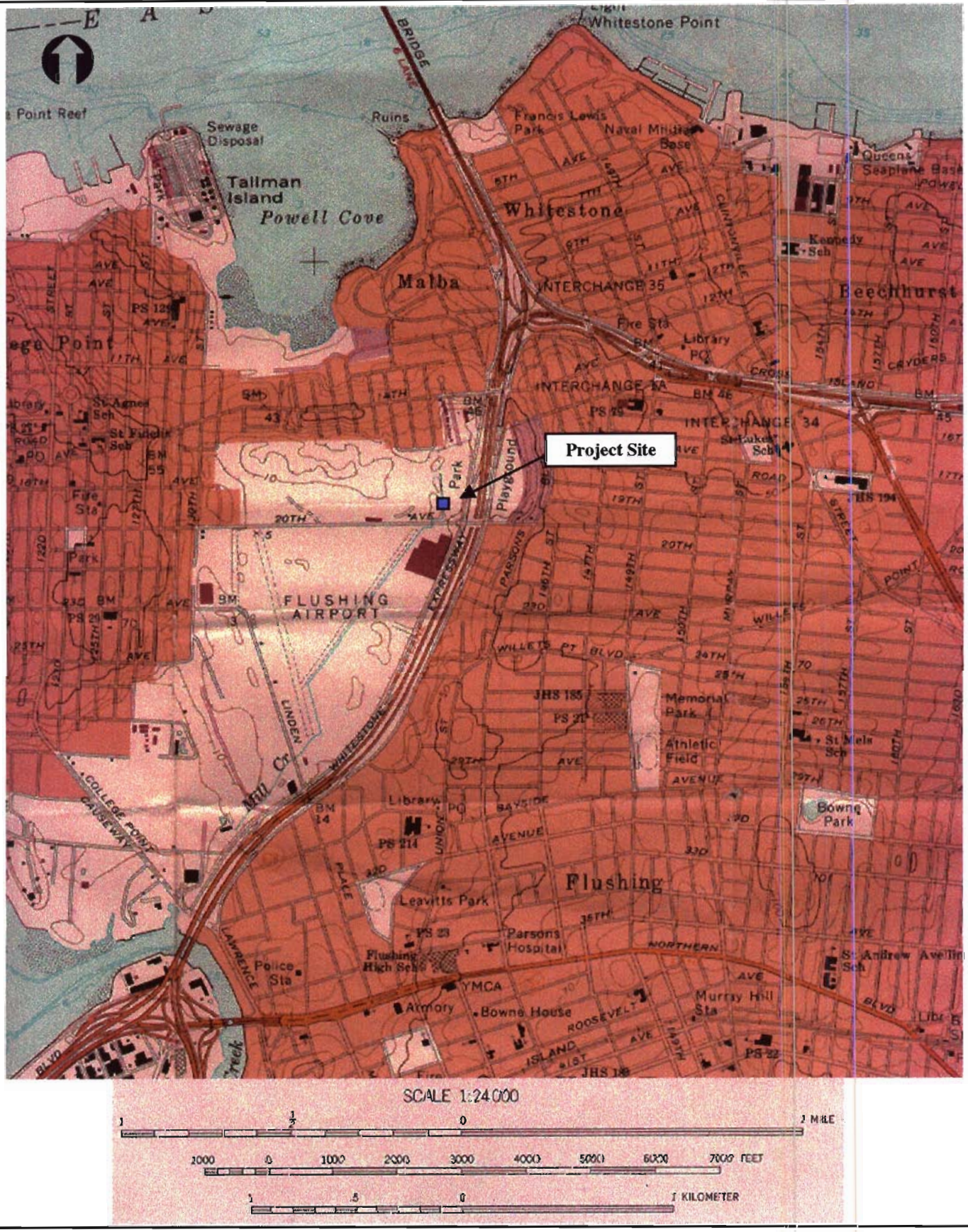
Revised December 1998



Source: USGS Topographic Map - Weehawken, Central Park, Brooklyn, and Jersey City Quadrangles: New Jersey/New York
Dated 1967, 1966, 1967, 1967; Photorevised 1981, 1979, 1979, 1981.
Contour Interval 10 feet.
Quadrangle Longitudes: 73° 52'30"and 74° 00' Quadrangle Latitudes: 40° 37' 30" and 40° 45'
National Geodetic Vertical Datum of 1929.

FIGURE 1
PROJECT SITE LOCATION

1. INTRODUCTION

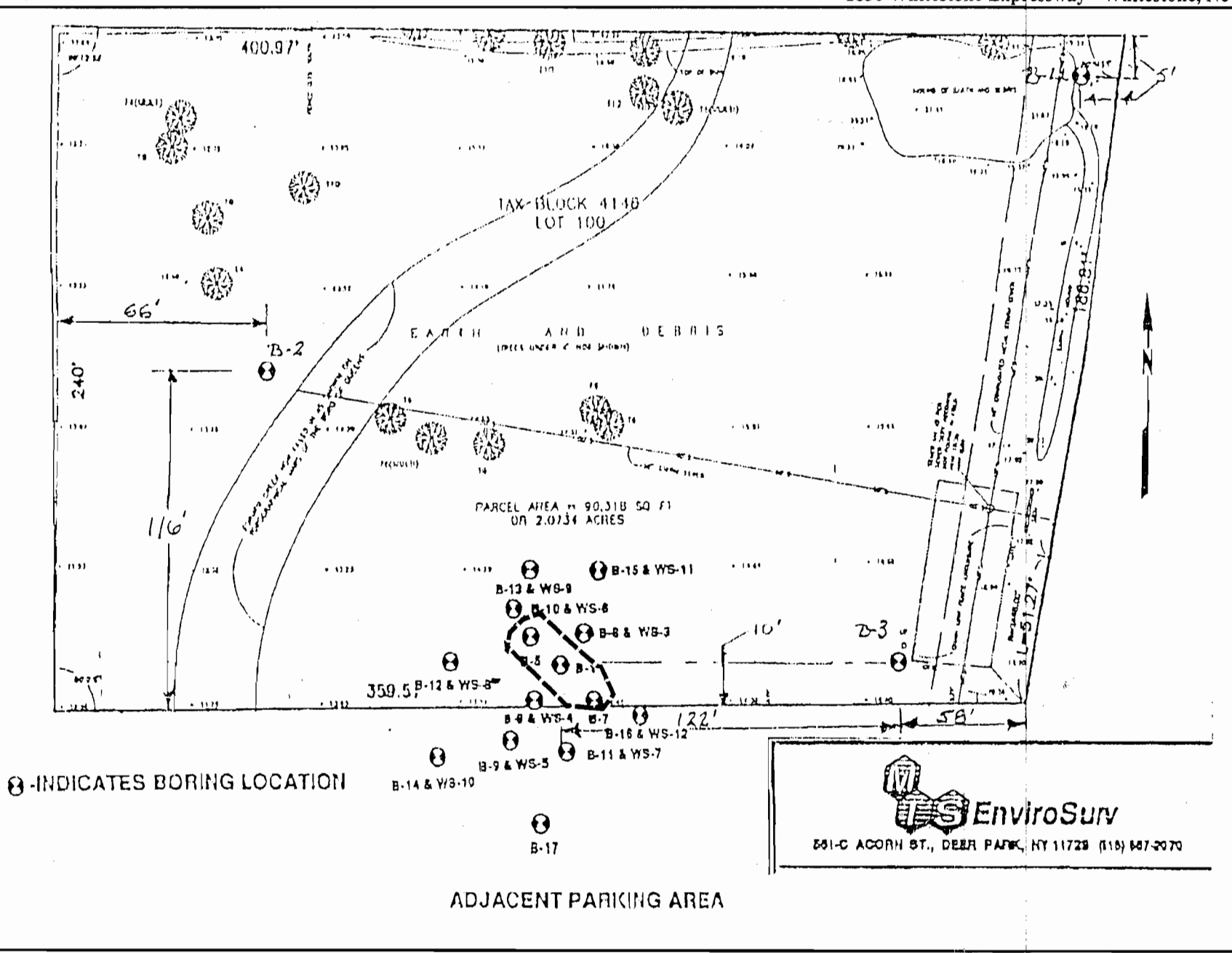
The Voluntary Cleanup site is located on the west side of the Whitestone Expressway, north of 20th Avenue, in College Point, Queens (see site location, Figure 1). The property is approximately 240 feet north-south by 400 feet east-west for a total of just over two acres. The property is designated as Block 4148, Lot 100. The site is vacant and undeveloped. A copy of a site survey is attached. The site is bounded on the north and south by paved parking lots for the adjacent facilities, by a fence on the west and by the sidewalk along Whitestone Expressway to the east.

The site is part of the 550-acre College Point Corporate Park. The Urban Renewal Plan for the Corporate Park designates the site and the surrounding area for commercial development. The properties to the north, south, and east of the site are all developed with low-rise (1 to 5 story) commercial office buildings with accessory parking lots. The zoning for the site and most of the Corporate Park is M1-1, a light industrial zone allowing a variety of light industrial, commercial, and community facility uses. Residential use is not allowed in manufacturing zones.

This Remedial Work Plan presents the conceptual plan for remediation of the site. Further submissions will be made to DEC as described below. The goal of the remediation is to clean soil to DEC's recommended cleanup objectives as presented in Technical and Administrative Guidance Memorandum 4046.

2. OVERVIEW OF REMEDIATION PLAN

The preliminary site assessment performed in 1995 and the current testing program established that the only contaminants of concern were PCBs located at the south end of the site. The investigation performed in March and April, 1998 collected samples on a rough grid with 10 to 30 foot spacings and thus established the horizontal extent of contamination. Previous lab reports will be sent under separate cover. The proposed work plan involves excavation and removal of soil with total PCB levels greater than DEC's recommended cleanup objective of 10 parts per million for subsurface soil. Field screening of soil samples for PCBs will be performed using an immunoassay method (SW-846 Method 4020). As PCB contamination in fill material is often associated with a visually identifiable stratum of fill--stained or oily soil, or soil containing a particular type of debris, we could use visual identification to supplement the field screening in excavating the PCB-contaminated fill. Confirmatory testing will be performed by laboratory analysis using Method 8080. All confirmatory samples will be analyzed at Severn Trent Laboratories, a New York State Department of Health ELAP- certified laboratory.



Excavation Area

FIGURE 2
EXCAVATION LOCATION MAP

# Samples	Matrix	Analytical Method	Bottle	Holding Time	Data Reporting Level
To be determined in the field	Soil	Method 8080 for PCBs	Glass jar with Teflon lined cap	Extract within 7 days; Analyze up to 40 days thereafter*	NYSDOH ASP Category B Deliverables

* Holding time starts from the verified time of sample receipt (VTSR) at the laboratory. The laboratory should receive samples within 48 hours of sampling.

FIGURE 3
SAMPLE/METHODS CHART

The basic remediation methods for the site will be:

- Delineation of Contaminated Areas
- Excavation and Disposal of Contaminated Soil
- End Point Sampling

The project organization for this project will be:

Project Manager ..... Andrew Rudko
Quality Assurance Officer ..... Elizabeth Nemeth
Field Manager ..... James Weingartner

Resumes are included in Appendix C. All investigation and remediation operations on the site will be performed in accordance with the project Health and Safety Plan (Appendix B).

3. SOIL REMEDIATION

3.1 Delineation of Contaminated Areas

The extent of contamination in the soil will be delineated by field screening of soil samples using an immunoassay method (SW-846 Method 4020) possibly aided by visual inspection. An initial test pit will be excavated at the location of former boring B-1, located 10 feet from the southern boundary of the site and 180 feet from the eastern boundary of the site (see Figure 2). The pit will be dug in two-foot lifts. At least two samples for each two-foot depth will be field screened including samples from all distinct fill layers. When the vertical extent of PCB-contamination in the fill is delineated, the excavation will be extended to delineate the horizontal extent. At least one sample from ten feet beyond the excavation will be collected for each 10-foot by 10-foot area. Any location with reading above non-detect will be targeted for removal.

When field screening shows PCB concentrations at the edge of the excavation are below action level, a second confirmatory sample will be collected and analyzed. If the duplicate sample is also below the action level, a sample from ten feet beyond the excavation will be extended. See Figure 3.

3.2 Excavation and Disposal of Contaminated Soil

All removed impacted soils that show staining, or in which field-screening instruments detect significant (>10 ppm) levels of PCBs will be stockpiled on plastic sheeting. Any unimpacted soil which must be excavated to remove the contaminated soil will be stockpiled

separately. One composite sample per 200 cubic yards of unimpacted soil will be tested for PCBs. Soil below action level may be backfilled on-site.

The stockpiles will be securely covered with 6-mil plastic sheeting. Piles will be sized to be manageable, coverable, and fit in available areas. Plastic covering will be sized and lapped to completely enclose the stockpiled soils. Plastic covering will be applied and secured to protect the soils from wind and weather, and will be shaped and secured to drain runoff. The soil stockpiles and plastic covering will be maintained in good condition until the soil can be removed from the site.

Soil samples from the impacted soil stockpile will be collected and submitted for analysis for disposal characterization. The number and type of samples and the parameters analyzed will depend on disposal facility requirements. Contingent on analytical results, the impacted soils will be transported by a licensed hauler and disposed of in a regulated disposal facility, in accordance with all local, State and Federal regulations.

3.3 End Point Sampling

(Grab)

Five soil samples will be taken from the sidewalls and bottom of the excavated area for laboratory analysis. One composite sample will be collected from each of the sidewalls at a distance of approximately one third up from the bottom of the pit, and one composite sample will be collected from the bottom of the excavated area. Additional grab samples will be collected from areas with greater potential for contamination, the number of which will be related to the quantity of excavated soil. All soil samples will be properly containerized, each container will be properly labeled, sealed, and refrigerated at approximately 4°C for shipment to the laboratory. A chain of custody will be maintained throughout the field sampling, transport of samples to the laboratory, and during lab analysis. All soil samples will be analyzed for PCBs by Method 8080 by a New York State Department of Health ELAP-certified laboratory. If PCB levels in any of the soil samples significantly exceeds the clean-up objective of 10 parts per million, then additional soil will be removed. The excavation will not be backfilled until the end point samples meet the clean-up objective. Backfill material which must be brought in to restore grades prior to development will be clean soil meeting the TAGM 4046 clean-up objectives.

4. QUALITY ASSURANCE/ QUALITY CONTROL

4.1 Field Decontamination Procedures

To avoid contamination and cross-contamination of samples, all sampling equipment will be cleaned before collection of each sample. The procedure to be used is derived from that of the United States Environmental Protection Agency (EPA) Region II, as published by the New Jersey Department of Environmental Protection *Field Sampling Procedures Manual,* February

1988. (It differs from this reference in allowing alternatives to acetone and in the use of HCl for stainless steel.) The following procedure will be followed for all samples:

Step 1: Steam clean or pressure wash equipment.

Step 2: Scrub equipment with a bristle brush using a non-phosphate detergent in hot tap water.

Step 3: Rinse with hot tap water.

Step 4: Rinse with 0.1N nitric acid (HNO3). For stainless steel equipment, rinse with 0.1N hydrochloric acid (HCL).

Step 5: Rinse twice with deionized water.

Step 6: Rinse with spectrographic-grade acetone or methanol.

Step 7: Air dry.

Step 8: Double rinse with deionized, distilled water.

Step 9: Air dry the equipment.

Step 10: Package in clean unused aluminum foil.

4.2 Chain of Custody

To ensure the integrity of samples taken, a strict chain of custody record must be maintained on each sample. This begins after sampling with the entry in the sampler's field log book of the sampling details:

a) Date and time of sampling;

b) Sample location (as specific as possible);

c) The unique sample number, size, and container(s) used;

d) Sample description;

e) Weather conditions (if applicable); and

f) Any additional comments.

In addition, a record must be kept of the sample's progress from the sample site to the laboratory where it will be analyzed. This is the chain-of-custody form. The form must include:

a) The sample number;

b) The sampler's name;

c) Date and time of sampling;

d) Location at which the sample was taken, including the address, if possible;

e) A description of the sample, as best known;

f) Signatures of people involved in the chain of possession; and

g) Inclusive dates of possession of each person in the chain.

The chain-of-custody form must accompany the sample throughout its trip to the laboratory. If the sample(s) must be shipped to a laboratory, most shipping agents will refuse to sign or separately carry the chain-of-custody form. In this one case, it is permissible to put the chain-of-custody form into the box with the sample and then seal the box. The recipient of the box, the laboratory's sample custodian, can then attest to the box's arrival still sealed and un-opened.

Accompanying the chain-of-custody record, or included in it, must be a request to the laboratory for sample analyses. Information required includes:

a) Name of person receiving the sample;

b) Laboratory sample number;

c) Date of sample receipt;

d) Sample allocation; and

e) Analyses to be performed.

Finally, on arrival at the laboratory, the sample custodian must enter the sample in the laboratory's sample log book. The chain-of-custody should be kept on file at the laboratory.

4.3 Laboratory Testing

New York State ELAP CLP-certified laboratories will be used for all laboratory analyses. The laboratory will operate a Quality Assurance/Quality Control (QA/QC) program that will consist of proper laboratory practices (including the required chain-of-custody), an internal quality control program, and external quality control audits by New York State.

A field blank will be included in each batch of samples, or 1 for each 20 samples, whichever is greater in frequency. Field blanks will be analyzed for PCBs to check for contamination during transport and sampling procedures.

4.4 Data Usability Summary Report (DUSR)

A DUSR will be prepared by the Quality Assurance Officer according to NYS DEC guidelines . The data will be reviewed and the DUSR questions will be addressed. Data deficiencies, analytical protocol deviations, and quality control problems will be identified and their effect on the data discussed.

5. REMEDIATION REPORT

Upon completion of all on site remedial activities, a remediation report will be submitted to the NYS DEC. The following items will be included in the report:

- a narrative section describing all remedial activities on site
- a copy of the daily activity log book
- copies of the laboratory data for the confirmatory sample analysis
- hazardous waste material tracking and manifests
- non-hazardous waste material tracking and bills-of-lading
- results of air monitoring performed in accordance with the Health and Safety Plan

APPENDIX A

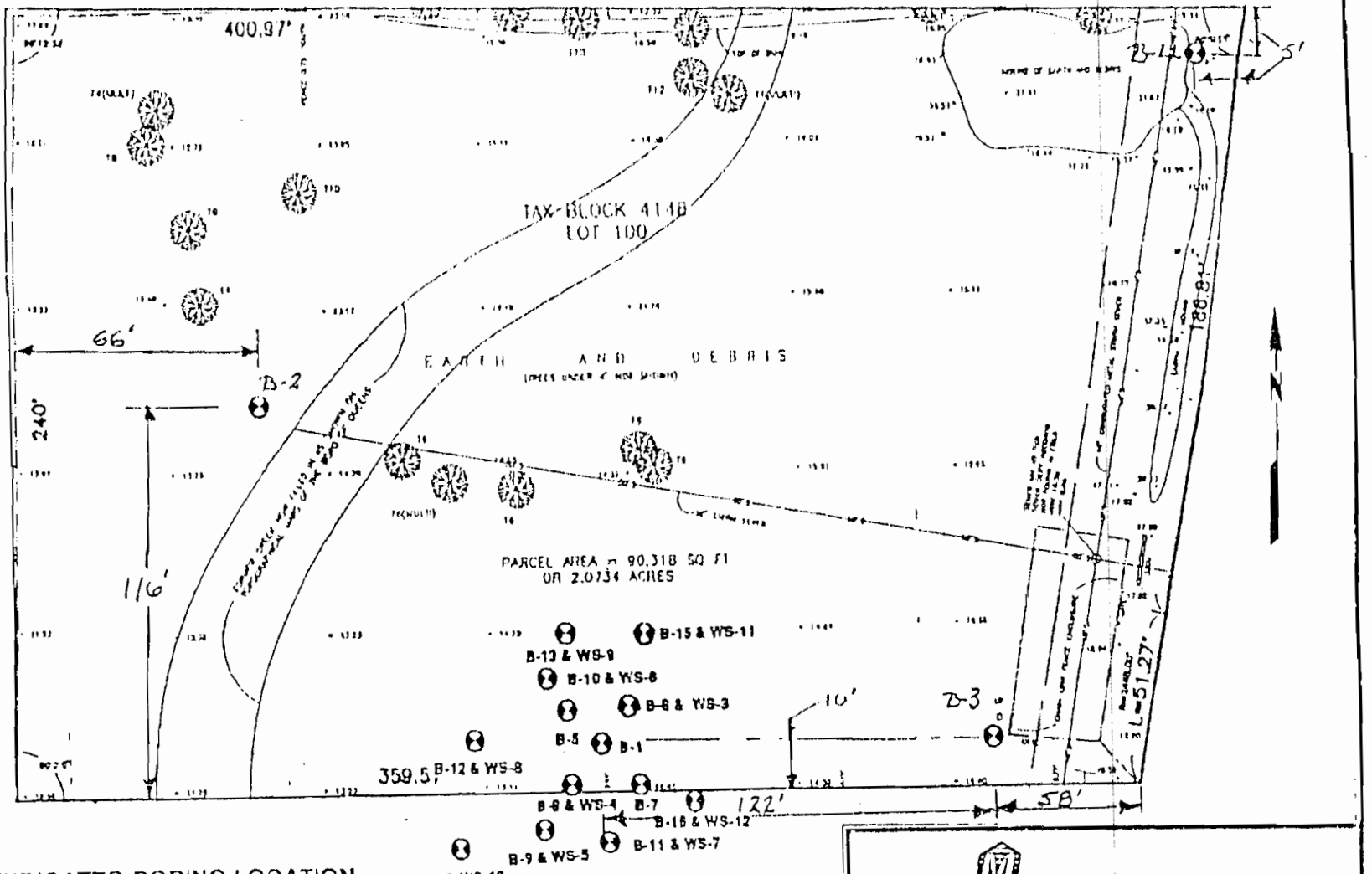
SUMMARY OF PRIOR TESTING DATA

The tables below illustrate the analytical results for the soil and groundwater samples as compared to the TAGM guidelines. Highlighted samples exceed the standard of 1.0 part per million (ppm) for soil and the groundwater action level of 0.1 parts per billion (ppb).

TABLE # 3: PCB ANALYTICAL RESULTS

Sample Number	Depth Number	PCB Results (ppm)
B5-S1	*5'-7'*	~~45~~ 45
B5-S3	15'-17'	ND
B6-S1	*5'-7'*	*1.19*
B6-S3	15'-17'	0.04
B7-S1	*5'-7'*	*14.1*
B7-S3	15'-17'	ND
B8-S1	*5'-7'*	*2.14*
B8-S2	15'-17'	ND
B9-S1	5'-7'	0.06
B9-S3	15'-17'	ND
B10-S1	5'-7'	ND
B10-S3	15'-17'	ND
B11-S1	5'-7'	ND
B11-S3	15'-17'	ND
B12-S1	5'-7'	ND
B12-S3	15'-17'	ND
B13-S1	5'-7'	0.2
B13-S3	15'-17'	ND
B14-S1	5'-7'	ND
B14-S3	15'-17'	ND
B15-S1	*5'-7'*	*2.5*
B15-S3	15'-17'	ND
B16-S1	*5'-7'*	*6.5*
B16-S3	15'-17'	ND
B17-S1	5'-7'	ND

Note: ND indicates levels below detection limit



⊗ -INDICATES BORING LOCATION

ADJACENT PARKING AREA

EnviroSurv
581-C ACORN ST., DEER PARK, NY 11729 (516) 667-2070

BORING LOCATION PLAN
1900 WHITESTONE EXPRESSWAY
COLLEGE POINT, QUEENS, NEW YORK
PROJECT NO. A-759A

APPENDIX B

SITE HEALTH AND SAFETY AND COMMUNITY AIR MONITORING PLAN

1830 Whitestone Expressway
Whitestone, New York

Prepared By:

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New York, New York 10016
(212) 696-0670

October 1998

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1. INTRODUCTION

The site is located on the west side of the Whitestone Expressway, north of 20th Avenue, in College Point, Queens. It is currently vacant and undeveloped.

The purpose of this Health and Safety Plan (HSP) is to protect field personnel and others during the implementation of the Work Plan. It is in conformance with the various Occupational Safety and Health Administration (OSHA) standards and other applicable regulations governing site investigation operations, and all AKRF, Inc. policies and procedures on health and safety. It has been prepared to establish practices and procedures to protect the health of AKRF personnel and others during implementation of all investigative and remedial work on the site.

2. HEALTH AND SAFETY GUIDELINES AND PROCEDURES

A. HAZARD EVALUATION

Prior testing on the site has detected polychlorinated biphenyls (PCBs) in the subsurface soil at levels ranging up to 45 parts per million. PCBs are known carcinogens. Potential exposure pathways are by accidental ingestion, inhalation, and direct contact.

B. DESIGNATED PERSONNEL

AKRF will appoint one of its on-site personnel as the on-site Health and Safety Officer (HSO). This individual will be responsible for the implementation of the HSP. The HSO will have a 4-year college degree in occupational safety or a related science/engineering field, and 2 years of experience in implementation of air monitoring and hazardous materials sample programs. The HSO will have completed a 40-hour training course that meets OSHA requirements of 29 CFR Part 1910, Occupational Safety and Health Standards.

The HSO will be present on-site during the conduct of all field operations involving drilling or other subsurface disturbance, and will be responsible for all health and safety activities and the delegation of duties to the field crew. The HSO has stop-work authorization, which he/she will execute on his/her determination of an imminent safety hazard, emergency situation, or other potentially dangerous situation. If the HSO must be absent from the field, he/she will designate a replacement who is familiar with the health and safety plan, air monitoring, and protection equipment.

C. TRAINING

All those who enter the work area while intrusive activities are being performed must recognize and understand the potential hazards to health and safety. All field personnel must attend a training program, whose purpose is to:

- Make them aware of the potential hazards they may encounter;
- Provide the knowledge and skills necessary for them to perform the work with minimal risk to health and safety;
- Make them aware of the purpose and limitations of safety equipment; and
- Ensure that they can safely avoid or escape from emergencies.

Each member of the field crew will be instructed in the above objectives before he/she goes onto the site. The HSO will be responsible for conducting the training program.

D. MEDICAL SURVEILLANCE PROCEDURE

All AKRF, Inc. and subcontractor personnel performing field work involving drilling or other subsurface disturbance at the site are required to have passed a complete medical surveillance examination in accordance with 29 CFR 1910.120 (f). A physicians medical release for work will be confirmed by the HSO before an employee can begin site activities. The medical examination will, at a minimum, be provided annually and upon termination of hazardous waste site work.

E. SITE WORK ZONES

During any activities involving drilling or other subsurface disturbance, the work area must be divided into various zones to prevent the spread of contamination, ensure that proper protective equipment is donned, and provide an area for decontamination.

The Exclusion Zone is defined as the area where PCB-contaminated materials are generated as the result of drilling, sampling, or similar activities. The Contamination Reduction Zone (CRZ) is the area where decontamination procedures take place and is located next to the Exclusion Zone. The Support Zone is the zone area where support-facilities-such as vehicles, a field phone, fire extinguisher, and first aid supplies-are located. The emergency staging area (part of the Support Zone) is the area where all workers on site would assemble in the event of an emergency. These zones shall be designated daily, depending on that day's activities. All field personnel will be informed of the location of these zones before work begins.

Control measures such as "Caution" tape and traffic cones will be placed around the perimeter of the work area when work is being done in the areas of concern to prevent entrance onto the area with exposed soil.

F. AIR MONITORING

Background Monitoring

Prior to initiating any on-site activities, background ambient air quality monitoring for particulate matter will be performed to generate baseline data. Three sampling stations (one upwind and one downwind) will be established around the perimeter and one at the center of the site.

Real-Time Air Monitoring During Field Operations

Real-time monitoring serves to establish and reaffirm the level of protection and to identify the areas of potential contamination. The following monitoring instruments will be available for use during field operations as necessary:

- Dust Track dust monitor or equivalent.

The dust monitor shall be used to measure concentration of particulate matter to which on-site workers may be exposed during the excavation and excavation support phase of the operation and during other activities as necessary. The SO shall interpret the monitoring results using professional judgment. The data collected may be used to establish 8-hour TWAs for comparison with OSHA standards for nuisance dust, lead, and PCBs.

Other real-time monitoring instruments will be available on-site and shall be utilized during the course of project operations based on the conditions that may be encountered. These instruments include:

- Flame Ionization Detector (FID), Foxboro Model 128 or equivalent; and/or
- Photoionization Detector (PID), H-Nu 10.2 probe or equivalent.

Organic vapor concentrations shall be measured using the PID and/or the FID during the soil disturbances and handling activities by the SO or designee should conditions warrant monitoring for such parameters. When such monitoring is to be conducted then organic vapor concentrations shall be measured upwind of the work site to determine background concentrations first, prior to monitoring at the work areas. The SO will interpret the monitoring results using professional judgment.

Action Levels

The SO shall use professional judgment in interpreting the instrumentation response. The action levels set in Table 1 may be modified by the SO in consultation with the PM as additional information becomes available regarding the extent, type of contamination and the potential for exposure to those contaminants during planned site activities.

The action levels for particulates are based on the presence of PCBs.Consistent with NYSDEC's Particulate Monitoring Guidance (TAGM 4031), calculations based on the maximum observed soil PCB concentration of 45 ppm demonstrate that the respirable particulate and OSHA BELs and NAAQS provide an adequate degree of protection for PCBs during both work area and perimeter air monitoring.

Perimeter Monitoring

During the excavation phase, with the exception of backfilling operations, monitoring for airborne concentration of respirable particulates will be conducted at a downwind location of the perimeter of each active exclusion zone using a Miriam or equivalent, except during rainy conditions. Airborne concentrations of volatile organic vapors will also be conducted daily at downwind locations of the perimeter of the exclusion zone using a PID and/or a FID during this phase of operations at two (2) hour intervals. Action levels for perimeter monitoring have been set in accordance with New York State Department of Health (NYSDOH) Community Air Monitoring Plan and NYSDEC TAGM 603 (See Table 2).

If downwind dust particulate levels, integrated over a period of 15 minutes, exceed 0.15 mg/m^3, then particulate levels upwind of the work site area will be measured. If downwind particulate levels are more than 0.10mg/m^3 greater than the upwind particulate level, then operations will be halted and appropriate dust suppression measures implemented.

If ambient air concentration of organic vapors exceed 5 ppm above background at the perimeter of the exclusion zone, then operations will be halted and further monitoring continued. If total organic levels decrease below 5 ppm above background, then work will be resumed however, the frequency of monitoring will be increased. If organic vapor concentrations are greater than 5ppm but below 25 ppm above background, then work may resume provided:

- The organic vapor level 200 feet downwind of the exclusion zone or half the distance to the nearest residential or commercial structure, whichever is less, is below 5 ppm over background; and
- More frequent intervals of monitoring as directed by the site SO are conducted.

If organic vapor levels at the perimeter of the exclusion zone is above 25 ppm, then all activities must be suspended and the procedures outlined in the Community Air Monitoring Plan in Attachment I will be implemented.

G. PERSONAL PROTECTION EQUIPMENT

The personal protection equipment required for various kinds of site investigation tasks are based on 29 CFR 1910.120, Hazardous Waste

Operations and Emergency Response, Appendix B, "General Description and Discussion of the Levels of Protection and Protective Gear."

AKRF field personnel and other site personnel shall wear Level D personal protective equipment. During activities such as drilling, well installation, or sampling where is a chance of contact with contaminated materials modified Level D equipment will be worn. The protection will be upgraded to Level C if the results of the air monitoring indicates that Level C equipment is warranted.

Level D
Respiratory Protection: None
Protective Clothing: Coveralls, work shoes

Modified Level D
Respiratory Protection: None
Protective Clothing: Coveralls, work shoes, overshoes, gloves

Level C
Respiratory Protection: Air purifying respirator with organic vapor cartridges.
Protective Clothing: Same as modified Level D

H. GENERAL WORK PRACTICES

No activities involving subsurface disturbance such as drilling, well installation, or sampling will be performed while school is in session and children are present on the site. To protect the health and safety of the field personnel, all field personnel will adhere to the guidelines listed below during activities involving subsurface disturbance.

- Eating, drinking, chewing gum or tobacco, and smoking are prohibited, except in designated areas on the site. These areas will be designated by the HSO.

Workers must wash their hands and face thoroughly on leaving the work area and before eating, drinking, or any other such activity. The workers should shower as soon as possible after leaving the site.

- Workers must wash their hands and face thoroughly onleaving the owrk area and before eating, drinking, or any other such activity. The owrkers should shower as soon as possible after leaving the site.
- Contact with contaminated or suspected surfaces should be avoided.
- Contact lenses should not be worn on-site.
- The buddy system should always be used; each buddy should watch for signs of fatigue, exposure, and heat stress.

I. EMERGENCY PROCEDURES AND EMERGENCY RESPONSE PLAN

The field crew will be equipped with emergency equipment, such as a first aid kit and disposable eye washes. In the case of a medical emergency, the HSO will determine the nature of the emergency and he/she will have someone call for an ambulance, if needed. If the nature of the injury is not serious—i.e., the person can be moved without expert emergency medical personnel—he/she should be driven to a hospital by on-site personnel. There will be an on-site field phone. The location of the nearest hospital, Flushing Hospital Center, is at Northern Boulevard and Parsons Boulevard. Telephone numbers are:

Ambulance 911

All emergencies shall be reported to:

Triangle Equities - (718) 463-5757 x105
Elysa Goldman, Project Manager

New York State DEC Region 2 - (718) 482-4065
Ioana Munteanu-Ramnic, Project Manager

NEAREST HOSPITAL SITE LOCATION

3. ACKNOWLEDGMENTS OF HSP

Below is an affidavit that must be signed by all workers who enter the site. A copy of the HSP must be on-site at all times and will be kept by the HSO.

AFFIDAVIT

I, _____ (name), of _____ _____ (company name), have read the Health and Safety Plan (HSP) for the site at 1830 Whitestone Expressway. I agree to conduct all on-site work in accordance with the requirements set forth in this HSP and understand that failure to comply with this HSP could lead to my removal from the site.

Signed: Date:

S _____ _____

Table 1
Action Levels

Instrument	Reading	Level of Respiratory Protection/Action
Respirable Dust Monitor	0 - 1 mg/m^3 (15-minute average)	Level D
Respirable Dust Monitor	1 - 5 mg/m^3 (15-minute average)	Level C Conduct perimeter monitoring. Initiate dust suppression measures.
Respirable Dust Monitor	5 mg/m^3	Stop work and evaluate. Conduct perimeter monitoring. Initiate dust suppression measures. Proceed on the advise of the HSM.
PID/FID (non-methane)	Background-5 ppm (NT* > Bkgd in BZ)	Level D
PID/FID (non-methane)	5 - 25 ppm (NT > Bkgd in BZ)	Level C Conduct perimeter monitoring.
PID/FID (non-methane)	>50 (NT > Bkgd in Bz)	

Note:
* Non-Transient.

Table 2
Site Perimeter Monitoring Action Levels

Instrument	Reading	Action
Respirable Dust Monitor	> 0.05 mg/m^3 at downwind location of the perimeter of the exclusion zone (15 minutes TWA)	1. Check dust readings at upwind location of the exclusion zone. 2. If downwind conc. is more than 0.15 mg/m^3 higher than upwind conc., initiate dust suppression measures. 3. Conduct monitoring to determine that levels are below 0.15 mg/m^3 higher than upwind concentrations at 200 feet downwind of the zone or half the distance to the nearest residential/commercial structure. If above 0.15 mg/m^3, suspend operations.
PID/FID (non-methane)	5 ppm above Bkgd (5-minute period) at downwind location of the perimeter of the exclusion zone	1. Suspend operations. 2. Conduct monitoring to determine that levels are below 5 ppm prior to resuming work. 3. Increase frequency of monitoring to every 15 minutes.
PID/FID (non-methane)	> 5 < 25 ppm above Bkgd (5-minute period) at downwind location of the perimeter of the exclusion zone	1. Suspend operations. 2. Conduct monitoring to determine that levels are below 5 ppm at 200 feet downwind of the zone or half the distance to the nearest residential/commercial structure prior to resuming work.
PID/FID (non-methane)	> 25 ppm above Bkgd (5-minute period) at downwind location of the perimeter of the exclusion zone	1. Suspend operations. 2. Initiate monitoring as stated in the NYSDOH Community Air Monitoring Plan provided in Attachment 1. 3. Implement Major Vapour Emission Plan, if needed.

APPENDIX C

RESUMES

ANDREW D. RUDKO, Ph. D.

Andrew D. Rudko, Ph.D. is the firm's senior environmental scientist with almost 20 years of experience in the analysis of the environmental impacts of urban development, industrial facilities, and transportation projects, with particular emphasis on air quality, noise, public health, hazardous materials, and traffic.

Dr. Rudko's recent experience includes the management of environmental impact studies for a wide variety of projects. These include:

- US Truck Body Manufacturing Facility EIS. The New York City Public Development Corporation is sponsoring this proposed industrial development, which would be located on an environmentally sensitive site adjacent to Jamaica Bay. The effects on the ecology of the Bay, and particularly on birds that may use the site and the surrounding waters, is a major issue. Other important issues include impacts on wetlands and water resources, waterfront development policies, traffic, and possible noise and pollutant emissions from manufacturing operations.
- Columbia University Center for Engineering and Physical Science Research EIS. This high-technology research center on the Columbia University campus is being funded, in part, by the New York State Urban Development Corporation. The project includes a new central boiler plant for the University campus. Major issues include the effects on adjacent landmark structures and districts, and the effects of air pollutant emissions from the boiler plant and from research laboratories.
- Rockefeller University Laboratory Building. This proposed facility would be located on the Rockefeller University campus in Manhattan, and would contain laboratories for research in genetics, biochemistry, molecular biology, and related disciplines. The analysis of potential impacts included modeling the effects of possible chemical spills and other detailed studies of air emissions.

Dr. Rudko has developed and managed sampling programs to assess the potential for contamination of sites by hazardous materials. These studies—which have included the Tibbett Gardens and Fordham Landing housing sites in the Bronx, and the 17 Penn Plaza development site in Manhattan—involved the preparation of site histories, the development of detailed sampling and analysis protocols, the coordination and supervision of drilling crews, sampling personnel, and laboratories, the analysis and interpretation of laboratory data, and the development of conceptual remediation plans.

He has been responsible for assessing potential impacts on public health for a number of projects involving the use of hazardous chemicals, biohazards, and radioactive materials. These include the Rockefeller University and Columbia University research facilities described above, the proposed Audubon Research Park in Upper Manhattan, and a proposed addition to the New York University Medical Center.

Dr. Rudko's experience includes management of air quality analyses for the New York City Public Development Corporation's Downtown Brooklyn Mitigation Study. This project analyzed measures to mitigate projected traffic and air quality impacts from a number of proposed major development projects in Downtown Brooklyn. Dr. Rudko also completed air quality studies for the initial phase of the West Side Highway Replacement Project. This involved assessing the relative air quality impacts of proposed alternative replacements for the West Side Highway.

Previously, Dr. Rudko was a senior environmental scientist at Parsons Brinckerhoff Quade & Douglas, Inc. He was responsible for environmental analyses for a variety of development, transportation, and solid waste disposal projects in New York City and throughout the county. His projects included the Barney Circle Freeway Study EIS, a major urban highway planning project; a toxic pollutant testing program for the Fresh Kills Landfill on Staten Island; environmental studies and permitting for a

connection between New Jersey Transit and Amtrak rail lines in Kearny, New Jersey; air quality impact analyses for projects in New York City and in New Jersey, Virginia, Connecticut, and New Mexico; and environmental analyses for transit projects in New York City, Jacksonville, Baltimore, and Milwaukee.

Education

Cornell University, B.S., Biochemistry, 1965; Columbia University, Ph.D., Biochemistry, 1972.

Membership in Professional Organizations

National Ground Water Association

Years of Experience

With AKRF: 12. With other firms: 8.

ELIZABETH A. NEMETH

Elizabeth A. Nemeth is an environmental analyst with AKRF, Inc., specializing in environmental site assessments. She performs Phase I and Phase II Assessments and is responsible for EAS work.

Her current and recent work for AKRF includes:

- Assessment of a former gas station in Manhattan. Oversaw the installation of ground water monitoring wells, field-screening soils for volatile organic compounds, and plume delineation of a former gas station located at Sixth Avenue and Church Street.
- New York City Department of Transportation (NYCDOT) Shore Road Bridge Replacement Project. For this city, state and federally funded project, Ms. Nemeth prepared the natural resources, water quality and hazardous waste chapters for this environmental impact statement (EIS) analyzing potential environmental impacts of bridge construction over a heavily utilized navigable waterway in a city park adjacent to a landfill. She also coordinated the work of several subcontractors' work in these areas.
- The Doe Fund 138th Street Housing Project. Prepared the EAS for the reuse of three abandoned residential buildings in the Bronx for graduates of the Fund's rehabilitation program and for low-income residents of the community.
- Phase I Assessments. Ms. Nemeth has performed numerous Phase I Assessments, including those for 101 Quintard Street, a former health club and auto repair facility; 175 Water Street, a 31-story office building in Lower Manhattan; Queens Center Mall, a gas station/auto repair facility and municipal parking lot.

Ms. Nemeth's field experience includes supervising the installation of ground water monitoring wells and the collection of soil and groundwater samples. She is actively involved in data interpretation and report preparation. Her understanding of site contamination and hazardous materials analysis is reinforced by the knowledge gained in her own research (isotope geochemistry).

As a project manager, Ms. Nemeth has been responsible for coordinating subcontractors and other professionals in the preparation of EISs and EASs. Her other project management duties have included proposal writing, project scheduling, budgeting, and acting as a liaison between clients and regulatory agencies.

Education

College of Charleston, Charleston, South Carolina, B.S., Biology, 1993
University of Florida, Gainesville, Florida, M.S., Geology, expected 1999

Certifications

40-Hour Hazardous Waste Worker/Supervisor
New York State Licensed Asbestos Inspector

Years of Experience

With AKRF: ½. With other firms:1.

JAMES A. WEINGARTNER

James Weingartner is an environmental scientist with AKRF, Inc. who specializes in performing Phase II environmental assessments, underground storage tank (UST) system inspections, site audits, and asbestos surveys.

He recently conducted a series of Phase II investigations for the Forest City Ratner Companies. His specific duties included supervision of the installation of groundwater monitoring wells, collection of soil and groundwater samples, and interpretation of analytical laboratory data.

Mr. Weingartner's additional field skills include performing Phase I and Phase II assessments, subsurface investigations, and underground storage tanks (UST) installation and removal. He is experienced in the collection of soil and water samples, verification of chain of custodies and holding times, site investigation audits, interpretation of laboratory analyses, and remedial investigations (both soil and water).

He is versed in federal and state codes, and has a thorough knowledge of New York and New Jersey field sampling manuals. He has developed quality assurance plans that are consistent with established standards.

His management skills include an understanding of state public bidding laws; project planning and coordination, particularly time-phase plans and cost estimates; and negotiation with and coordination of subcontractors.

Education

Rutgers University, B.S., Environmental Planning, 1994.

Certifications

40-Hour Hazardous Waste Site Investigation Personnel/Supervisor
New York State Department of Health Asbestos Inspector
New Jersey Department of Environmental Protection Subsurface Investigator
New Jersey Department of Environmental Protection Install-Entire
New Jersey Department of Environmental Protection Closure

Years of Experience

With AKRF: ½. With other firms: 2