J.R. Holzmacher P.E., LLC

300 Wheeler Road, Suite 402, Hauppauge, New York 11788-4300
Tel: (631) 234-2220 Fax: (631) 234-2221 e-mail: info@holzmacher.com

July 14, 2011

Dana Kaplan
Environmental Engineer
New York State Department of Environmental Conservation
Division of Environmental Remediation
47-40 21st Street
Long Island City, NY 11101-5401

Re: 127-13 Merrick Blvd.
Queens, New York 11413
Site Code 241128

Dear Ms. Kaplan:

J.R. Holzmacher P.E. LLC (JRH) has prepared this Site Characterization Work Plan and appended Health & Safety Plan (HASP) for the above referenced property (Figure 1). The scope of work presented in this plan is based on our conversations, emails and site visit on April 5, 2011. The investigation plan includes: the drilling of soil borings to characterize and screen soil to groundwater; the collection and analysis of soil, groundwater and sub-slab vapor samples; and preparation of a report.

BACKGROUND

127-13 Merrick Blvd, Jamaica (Tax Map Block # 12488, Portion 1) is currently occupied by a Wig and Hair business. It is one of eleven stores in a one story retail strip shopping center. A dry cleaner (Parkway Cleaners) operated at this site for at least 25 years (ceasing operations around 2005).

The group address for the complete strip mall building constructed in 1937 is 127-01 to 127-23 Merrick Blvd. The building occupies the entire street between Selover Road and Anderson Road. It is zoned for commercial use.

Previous Investigations-

As part of a potential property transaction, JRH was retained by the previous owner to determine if the former dry cleaning operation affected the environmental integrity of the property. JRH inspected the site on September 12, 2006. A tattoo and body piercing business occupied the building at the time. The basement, however, was empty and unoccupied and a floor drain was identified. The floor drain was stuffed with rags and other debris. When these items were removed a strong perchloroethylene (perc) -odor was evident. Based on this observation, JRH recommended that soil and groundwater samples be collected in this area.

On September 21, 2006 soil samples were collected inside the floor drain using a hand auger with extensions. Soil samples were collected at 1.5, 4.0 and 6.0 feet below grade (defined as the top of the basement slab). The 1.5-foot sample consisted of a heterogeneous mix of rags, plastic, glass and sand with a strong perc odor. This fill was underlain by brown, medium to coarse-grained sand with sub rounded quartz pebbles and rock fragments. The sand unit was encountered at approximately 1.9 feet below grade with groundwater observed at 4.3 feet below grade. There was a strong perc-odor in the 4.0 and 6.0-foot samples collected in the native sand deposits. The 6.0-foot sample was collected from the saturated zone.

The three soil samples were placed on ice and hand delivered by AHM on the day of collection to Long Island Analytical Laboratories Inc. (NYSDOH ELAP 11689) for analysis by EPA Method 8260.

Because of the shallow water table, JRH requested that a two-inch diameter monitoring well be installed in the floor drain and a groundwater sample collected. Due to low clearance, the four-foot long stainless steel well point (.010 slots) was placed in the hand auger boring and driven to a depth of nine feet below the top of the basement slab. The well was finished with two-inch diameter black steel riser; cemented in place with a locking cap and protective curb box. The entire floor drain is now sealed around the top of the well casing.

The monitoring well was sampled on September 21 using a peristaltic pump. There was a chemical sheen and a strong perc-odor observed in the groundwater sample. The sample was placed on ice and delivered to Long Island Analytical for analysis by EPA Method 624.

Perc a/k/a tetrachloroethene was detected at 26,200 mg/kg or parts per million (ppm) in the 1.5-foot soil sample; 3,098 ppm in the 4.0-foot sample: and 4,737 ppm in the 6.0-foot sample. The NYSDEC Recommended Soil Clean-up Objective (RSCO) for the compound is 1.4 ppm, therefore, the detected soil concentrations are high. Please note that because concentrations were high the method detection limits for all analyzed compounds were raised so it is not clear whether other compounds are present in the soil (particularly daughter or degradation products of perchloroethylene).

The groundwater sample indicated 30,827 ug/l or parts per billion (ppb) of perc. The New York State Groundwater Standard is 5 ppb. There were no other compounds detected in the water sample.

PROPOSED SUBSURFACE INVESTIGATION

The site basement can be accessed through stairs and portable drilling equipment used. There are overhead clearance issues so it is likely that the deepest a boring can be drilled is 12 feet below basement slab grade. However, groundwater is present within 5 feet of the slab.

There is a narrow alleyway in back of the building and equipment can be carried through the store, however, borings drilled in the back of the basement are close to the alleyway.

Project Team-

Site characterization activities will be managed by James M. DeMartinis, Senior Hydrogeologist at JRH with field support from Heather Sonnenberg (Project Engineer) and field technicians as needed (resumes are included in Attachment B). JRH will retain the following subcontractors:

- Zebra Environmental Corp of Lynbrook, New York will conduct the Geoprobe™ services under JRH oversight.
- American Analytical Laboratories of Farmingdale, New York (NYSDOH ELAP #11418) will conduct the analysis of soil and groundwater samples.
- Chemtech Laboratories of Mountainside New Jersey (NYSDOH ELAP # 11376) will analyze the soil vapor samples.

Drilling of Soil Borings-

Three soil borings will be drilled through the existing concrete slab within the basement of the building. The proposed soil boring locations are shown on Figure 2, cover the entire footprint of the building and surround the area of the former floor drain.

At each boring location soil samples will be collected continuously from land surface to as deep as practicable using a portable Geoprobe™. The Geoprobe™ uses direct push technology to drive core samplers to the desired depth for soil sample collection. Geoprobe™ services will be conducted in accordance with the operation and sampling procedures outlined in the United States Environmental Protection Agency (EPA) Standard Operating Procedure SOP No. 2050. Non-disposable sampling equipment will be cleaned using distilled water and Alconox detergent with a distilled water rinse prior to the collection of each sample.

Soil samples will be collected using a four-foot long Macrocore™ sampler with dedicated acetate liners advanced by the Geoprobe™. The Macrocore™ samples will be visually characterized by a JRH hydrogeologist and field screened for the presence of volatile organic compound (VOCs) using a Mini Rae 2000 portable photoionization detector (PID). Based on these descriptions geologic soil-boring logs will be prepared.

The soil interval with the highest PID reading as well as the deepest “dry’ sample will be collected and delivered to American Analytical Laboratories, Farmingdale, New York (NYSDOH ID #11418) for analysis. Where no visual evidence or elevated PID readings are observed, only the deepest “dry” sample (above groundwater) from that boring will be submitted for analysis.

The samples will be hand delivered to American Analytical Laboratories, Farmingdale, New York (NYSDOH ID #11418) for analysis. Soil samples will be analyzed for TCL VOCs (EPA Method 8260C, rev. 2006), TCL SVOCs (EPA Method 8270D, rev. 2007) and TAL Metals (EPA Method 6010C, rev. 2007).

Monitoring Well Installation-

Once the appropriate depth is achieved, PVC well screen will be installed in each of the borings. At a minimum the screen will extend at least five feet into the water table. The monitoring wells will be constructed of two-inch diameter PVC casing and screen. Depending upon overhead clearance issues (affecting the depth a basement boring can be drilled), either a ten or fifteen-foot section of .020 well screen will be installed to bridge the water table-ideally three feet above the water table and seven or twelve feet below. The annular space around the screen and two feet above will be filled with a clean sand pack. A hydrated bentonite seal will be placed directly above the sand pack and the remainder of the annular space grouted with a cement/bentonite mixture. The wells will be protected in a metal curb box set in concrete at grade.

Off-Premises Monitoring Well Installation-

Because of the high concentrations at the former source (floor drain), JRH initially recommended additional soil and groundwater sampling in the Merrick Boulevard sidewalk outside of the building, as the regional direction of groundwater flow is southwesterly. It was hoped to determine if the groundwater contamination had reached this point and if so, define the vertical extent of perchloroethylene at this location. However, utility mark outs indicated that the sidewalk is underlain by a 36-inch water main and partially by city sewer.

The area will be marked out again for underground utilities. If two monitoring wells cannot be installed immediately outside the building in the assumed direction of groundwater flow then their locations will be adjusted along Merrick Boulevard to at least allow their use for sampling and groundwater flow determination. Please note that Merrick Boulevard is particularly wide at this location so placing monitoring wells on the opposite side is a technical risk until ground water flow direction can be determined.

Two monitoring wells will be co-located or clustered together as shown on Figure 2. Soil samples will be collected in the deeper of the two monitoring well borings using a five-foot long Macrocore™ sampler with dedicated acetate liners advanced by the Geoprobe™ to determine the presence/absence of a confining layer(s). The Macrocore™ samples will be visually characterized by a JRH hydrogeologist and field screened for the presence of volatile organic compound (VOCs) using a Mini Rae 2000 portable photoionization detector (PID). Based on these descriptions geologic soil-boring logs will be prepared.

Both monitoring wells will consist of two-inch diameter PVC casing and screen. The deeper well boring will be drilled to 50 feet below grade or shallower if a confining layer is encountered and a 15 foot screen set at the appropriate interval. For the shallow well, a fifteen-foot section of .020 well screen will be installed to bridge the water table-ideally three feet above the water table and twelve feet below.

The annular space around the screen and two feet above will be filled with a clean sand pack. A hydrated bentonite seal will be placed directly above the sand pack and the remainder of the

annular space grouted with a cement/bentonite mixture. The wells will be protected in a metal curb box set in concrete at grade. Monitoring well construction diagrams will be provided.

Investigation Derived Waste-

Soil cuttings generated on-site from the drilling of the soil borings will be presumed to be contaminated. Cuttings will be screened with the PID, stored on protective sheeting, and covered with protective sheeting if cuttings remain on ground at the end of the day.

As per DER 10 Section 3.3(e) cuttings may be disposed at the site within the borehole that generated them to within 12 inches of the surface. If the soil cannot fit into the borehole the soils will be containerized and disposed of properly (pending laboratory analysis). Disposal manifests for any excess contaminated soil generated will be provided in the report.

If a confining layer is penetrated, the borehole will be backfilled with grout (and not drill cuttings).

Monitoring Well Surveying and Sampling-

A designated measuring point on the top of each well casing will be surveyed vertically by JRH to a common datum.

The wells will be purged and sampled by an experienced JRH sampling crew. JRH will measure water levels and collect groundwater samples from the six monitoring wells using low-flow sampling methods. Prior to sampling, each well will be purged a minimum of three casing volumes with per-well dedicated tubing set in the middle of the well screen. This is performed to ensure representative samples from the formation surrounding the wells and to eliminate standing water in the wells. Temperature, pH, dissolved oxygen, turbidity and conductivity measurements will be collected and recorded after the removal of each casing volume. Well sampling logs will be prepared. The samples will be hand delivered to American Analytical Laboratories, Farmingdale, New York (NYSDOH ID #11418) for analysis. Groundwater samples will be analyzed for TCL VOCs (EPA 8260), TCL SVOCs (EPA 8270) and the TAL Metals (unfiltered and filtered).

Quality control (QA/QC) samples will include one field blank, one trip blank, one lab blank, and one MS/MSD. QA/QC for chemical analytical program and assessment of the usability of the data will be provided by Lori Beyer, Laboratory Director of American Analytical Laboratories.

Groundwater Flow Determination-

Water level measurements will be collected every three months and synoptically in each of the wells to determine the direction of groundwater flow. It is anticipated that three rounds of water level data will be collected from the wells. The data will be presented in a table and groundwater elevation contour maps generated for each round.

Soil Vapor Testing-

The Geoprobe™ will be used to drill five additional borings to install temporary sub-slab vapor sampling points (Figure 2). The Geoprobe™ will advance a Macrocore™ to two feet below the slab and/or side walk at each location.

The temporary vapor points will be installed using 1.5 –inch diameter rods and consist of six-inch diameter stainless steel implants attached to an expendable drive point. No water will be used during the installation of the temporary probes. Teflon™ lined polyethylene tubing will extend from the temporary implant to the surface. Number 2 sand will be used in the boring to create a sampling zone one to two feet in length and a bentonite seal emplaced in the borehole above the sampling zone.

Vapor sampling will be conducted following the installation of the vapor probes. Three implant volumes will be purged prior to collecting the samples at a purge rate of 0.2 liters per minute. The vapor samples will be collected using 6-liter capacity Summa™ canisters each fitted with a laboratory calibrated critical orifice flow regulation device sized to allow the collection of the soil gas samples so as not to exceed 0.2 liters per minute (to minimize outdoor air infiltration during sampling). Helium will be used as a tracer gas to confirm that the samples were not affected by ambient air. The NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York, October 2006 will be adhered to.

The vapor samples will be collected over a four hour period and analyzed using the USEPA's TO-15 gas chromatograph/mass spectrometer (GC/MS) methodology. The samples will be sent via overnight courier to Chemtech of Mountainside, New Jersey (NYSDOH ELAP # 11376).

Summary of Samples to be Collected-

Sample ID	Number	Analysis Parameters	Containers	Preservation	QA Samples	Max Holding Time
Soil Samples from Borings	*5-10*	*EPA Methods 8260B/8270C and EPA 6010 B TAL metals.*	*8-ounce glass for SVOCs & metals; 4-ounce glass for VOCs. Both with Teflon lids.*	*4*C*	*One duplicate sample for VOCs, SVOCs and metals analysis*	*Metals-180 days; mercury 26 days; VOCs 5 days unpreserved and 12 days preserved; and SVOCs 5 days to extract and 40 days to analyze extract.*

Ground Water from Monitoring wells	*6*	*EPA Methods 8260B/8270C and EPA 6010 B TAL metals.*	*2- 40 ml VOA vials for VOCs (Teflon septa). One liter amber jar with Teflon cap for SVOCs 250 ml plastic bottle for metals.*	*4*C*	*One trip blank for VOC analysis. One trip blank per coller.*	*Metals-180 days; mercury 26 days; VOCs 5 days unpreserved and 12 days preserved; and SVOCs 5 days to extract and 40 days to analyze extract.*
Sub-Slab Vapor	*5*	*TO - 15*	*Summa Canister*	*N/A*	*Helium analysis*	*14 days*

Notes:
Samples will be placed in an iced cooler immediately after collection.
The NYSDOH-certified laboratory will provide the proper containers with internal preservatives.
Dedicated equipment will be used for each sample; therefore, no equipment blanks will be necessary.

COMMUNITY AIR MONITORING PLAN

A Community Air Monitoring Plan (CAMP) requires real-time monitoring for volatile organic compounds (VOCs) and particulates (i.e., dust) in the work area and at the downwind perimeter of the work area when certain activities are in progress at potentially 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 community (i.e., 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.

To satisfy the requirements of the CAMP, the following monitoring equipment will be used.

- A Dusttrak Model 8520 meter or equivalent will be used to measure and record the amount of dust in the air.
- A portable photoionization detector with 10.6 eV lamp will be used for organic vapors.

VOC Monitoring, Response Levels, and Actions

Volatile organic compounds (VOCs) are chemicals present in gasoline, fuel oils, degreasers and solvents. There is no evidence that these chemicals are present beyond the identified floor drain, however, because vapors are a potential human health concern, their presence/absence will be continuously monitored.

VOCs will be monitored in the basement area and when outside (at the downwind perimeter of the immediate work area) during all activities. Upwind concentrations will be measured at the start of each workday and periodically thereafter to establish background conditions.

The equipment will be calibrated at least daily for the contaminant(s) of concern or for an appropriate surrogate. The equipment will be capable of calculating 15-minute running average concentrations, which will be compared to the levels specified below. All readings will be recorded and be available for review.

- If the ambient air concentration of total organic vapors in the basement (and when outside at the downwind perimeter of the work area) exceeds 5 parts per million (ppm) above background for the 15-minute average, work activities will 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 in the work area or exclusion zone 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 exclusion zone or half the distance to the nearest potential receptor or residential/commercial 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 in the work area, activities will be shut down.

Particulate Monitoring, Response Levels, and Actions

Particulate concentrations will be monitored at the upwind and downwind perimeters of the exclusion zone at temporary particulate monitoring stations. The particulate monitoring will be performed using the Dustrak 8520 which is 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 will be equipped with an audible alarm to indicate exceedance of the action level. In addition, fugitive dust migration will be visually assessed during all work activities.

- If the downwind PM-10 particulate level is 100 micrograms per cubic meter (mcg/m3) 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 mcg/m3 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 mcg/m3 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 mcg/m3 of the upwind level and in preventing visible dust migration.

Data Presentation

All readings will be recorded on a form, scanned in PDF format, placed on a data disc, and be made available for regulatory personnel to review. In addition, data will be downloaded from instruments (where appropriate) and made available on disk for distribution.

REPORT

After laboratory reports are received (projected laboratory turnaround time is 7-10 days for soil and water and 15 to 20 days for vapor), JRH will prepare a detailed site characterization report documenting field activities and evaluating results. The report will include explanatory text, data summary tables, copies of field notes, field photographs, soil boring logs, figures, disposal manifests, conclusions, and recommendations.

The Site Characterization report will be submitted to NYSDEC for review and approval. Soil analytical results will be compared to 6 NYCRR Part 375-6.8 restricted commercial Soil Cleanup Levels (SCLs) and the soil vapor analytical results to the NYSDOH perchloroethylene guidance to determine if additional investigation is warranted. Groundwater analytical results will be compared to the New York State Groundwater Standards specified in the NYSDEC TOGS 1.1.1 guidance document.

Please call if you have any questions or would like to discuss the project further. We look forward to hearing from you so we can begin the work.

CERTIFICATION

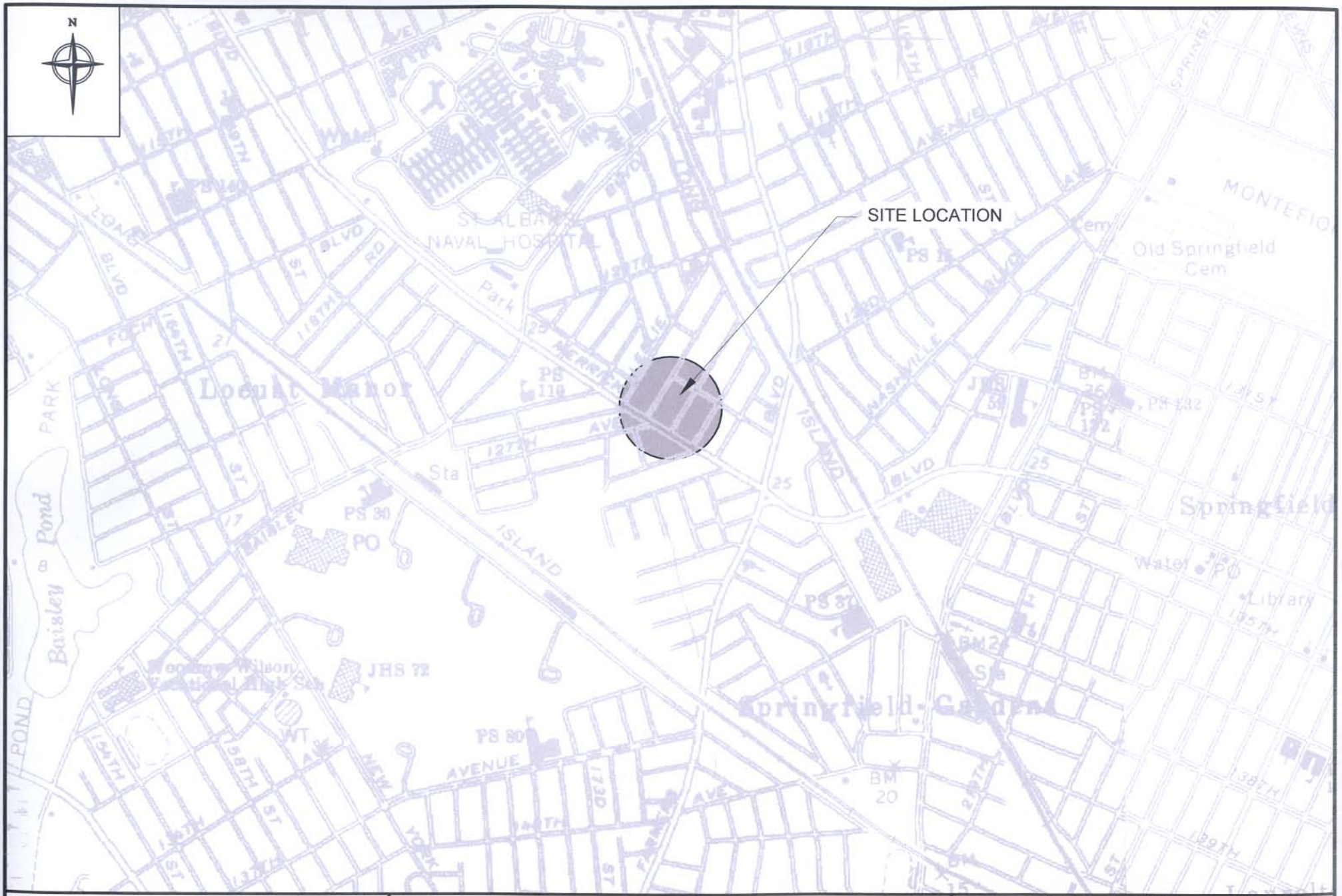
I, James M. DeMartinis, certify that I am currently a Qualified Environmental Professional as defined in 6 NYCRR Part 375 and that this Site Characterization Work Plan was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10).

Very Truly Yours,
J.R. Holzmacher P.E. LLC

James M. DeMartinis P.G.
Senior Hydrogeologist

Cc: David Koptiev
JMD/jd

Figures



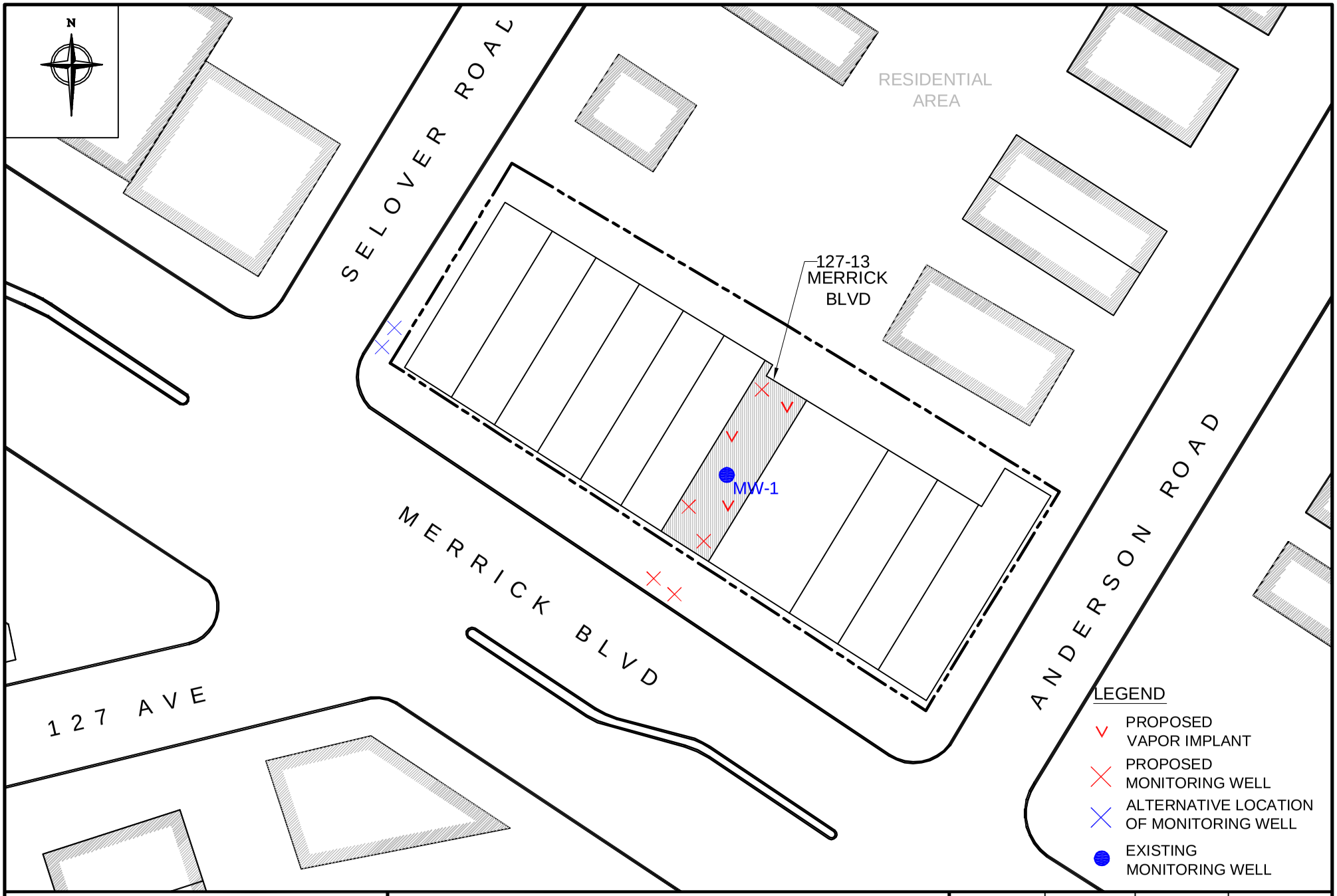
PREPARED BY:
J.R. HOLZMACHER P.E., LLC
The Third Generation of Excellence
In Water Supply, Water Resources,
Civil and Environmental Engineering
300 WHEELER ROAD
SUITE 402
HAUPPAUGE, NEW YORK 11788
PHONE # (631) 234-2220
FAX # (631) 234-2221
E-MAIL: info@holzmacher.com

TITLE:

SITE LOCATION MAP

127-13 MERRICK BLVD.
JAMAICA NY, 11434

DWN:	SCALE:	DATE:	PROJECT NO.:
DGH	1" = 1200'	3-16-2011	KoptD 11-02
CHKD:	APPD:	REV.:	NOTES:
JMD	JMD	-	-
FIGURE NO.:			
1			



PREPARED BY:
J.R. HOLZMACHER P.E., LLC
The Third Generation of Excellence
In Water Supply, Water Resources,
Civil and Environmental Engineering
300 WHEELER ROAD *PHONE # (631) 234-2220*
SUITE 402 *FAX # (631) 234-2221*
HAUPPAUGE, NEW YORK 11788 *E-MAIL: info@holzmacher.com*

TITLE:
LOCATIONS OF PROPOSED SOIL BORINGS AND MONITORING WELLS
127-13 MERRICK BLVD. (SITE CODE 241128)
JAMAICA NY, 11434

DWN:	SCALE:	DATE:	PROJECT NO.:
DGH	1" = 40'	3-16-2011	KoptD 11-02
CHKD:	APPD:	REV.:	NOTES:
JMD	JMD	-	-

FIGURE NO.: 2

Attachment A
Site-Specific Health and Safety Plan (HASP)

Health and Safety Plan
For
Property Located at

127-13 Merrick Boulevard
Queens, New York

July 2011

Prepared by
J.R. Holzmacher P.E., LLC
Consulting Engineers
300 Wheeler Road, Suite 402, Hauppauge, NY 11788

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1.0 INTRODUCTION

This section of the Health and Safety Plan (HASP) document defines general applicability and general responsibilities with respect to compliance with Health and Safety programs. This plan has been prepared for excavation/remediation activities to be conducted to determine if subsurface contamination is present. Soil sampling activities are estimated to occur during the excavation period for the proposed new building and sub-grade parking structures at the site.

1.1 Scope and Applicability of the Site Health and Safety Plan

The purpose of this HASP is to define the requirements and designate protocols to be followed during the excavation/remediation activities at the site. Applicability extends to all government employees, contractors, subcontractors, and visitors.

All personnel on site, contractors and subcontractors included, shall be informed of the site emergency response procedures and any potential fire, explosion, health, or safety hazards of the operation. This HASP summarizes those hazards in Table 3.1 and defines protective measures planned for the site.

This plan must be reviewed and an agreement to comply with the requirements must be signed by all personnel prior to entering the exclusion zone or contamination reduction zone.

During development of this plan, consideration was given to current safety standards as defined by the Environmental Protection Agency (EPA)/Occupational Health and Safety Administration (OSHA)/National Institute of Occupational Safety and Health (NIOSH), health effects and standards for known contaminants, and procedures designed to account for the potential for exposure to unknown substances. Specifically, the following reference sources have been consulted:

- OSHA 29 CFR 1910.120 and EPA 40 CFR 311
- USEPA, Office of Emergency and Remedial Response, Emergency Response Team, Standard Operating Safety Guides
- NIOSH/OSHA/USCG/EPA Occupational Health and Safety Guidelines
- American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values

1.2 Visitors

There will be no outside visitors allowed on the site during site characterization activities. Outside visitors are defined as those not directly involved with drilling and sampling activities.

2.0 KEY PERSONNEL/IDENTIFICATION OF HEALTH AND SAFETY

2.1 Key Personnel

The following personnel and organizations are critical to the excavation/remediation efforts at the site estimated to occur during the excavation activities identified in Figure 1.1 – Construction Activities Schedule. The organizational structure will be reviewed and updated periodically by the site supervisor.

Site Characterization Team Representatives:

1. J.R. Holzmacher P.E., LLC
2. Zebra Environmental Inc. (drilling contractor)

TO BE DETERMINED

2.2 Site Specific Health and Safety Personnel

The Site Health & Safety Officer (SHSO) is responsible for ensuring that the provisions of this HASP are adequate and implemented in the field. Changing field conditions may require decisions to be made concerning adequate protection programs. The SHSO is also responsible for conducting site inspections on a regular basis in order to ensure the effectiveness of this plan.

The SHSO at the site with respect to excavation/construction activities is:

J.R. Holzmacher P.E., LLC
Heather V. Sonnenberg
Project Engineer

Designated alternates include:

TO BE DETERMINED

2.3 Organizational Responsibility

1. The SHSO of the site will conduct site inspections throughout the project making sure the Health and Safety Plan is followed. His main concern is the personal protection of the workers.

3.0 TASK SAFETY AND HEALTH RISK ANALYSIS

3.1 Historical Overview of Site

127-13 Merrick Blvd, Jamaica (Tax Map Block # 12488, Portion 1) is currently occupied by a Wig and Hair business. It is one of eleven stores in a one story retail strip shopping center. A dry cleaner (Parkway Cleaners) operated at this site for at least 25 years (ceasing operations around 2005).

As part of a potential property transaction, JRH inspected the site in September 2006. A tattoo and body piercing business occupied the building at the time. The basement, however, was empty and unoccupied and a floor drain was identified. The floor drain was stuffed with rags and other debris. When these items were removed a strong perchloroethylene (perc) -odor was evident. Based on this observation, JRH recommended that soil and groundwater samples be collected in this area.

In September 2006 soil samples were collected inside the floor drain using a hand auger with extensions. Soil samples were collected at 1.5, 4.0 and 6.0 feet below grade (defined as the top of the basement slab). A two-inch diameter monitoring well point was installed in the floor drain and a groundwater sample collected. The well was finished with two-inch diameter black steel riser; cemented in place with a locking cap and protective curb box. The entire floor drain is now sealed around the top of the well casing. The monitoring well was sampled and there was a chemical sheen and a strong perc-odor observed in the groundwater sample.

Perc a/k/a tetrachloroethene was detected at 26,200 mg/kg or parts per million (ppm) in the 1.5-foot soil sample; 3,098 ppm in the 4.0-foot sample: and 4,737 ppm in the 6.0-foot sample. The NYSDEC Recommended Soil Clean-up Objective (RSCO) for the compound is 1.4 ppm, therefore, the detected soil concentrations are high. The groundwater sample indicated 30,827 ug/l or parts per billion (ppb) of perc. The New York State Groundwater Standard is 5 ppb. There were no other compounds detected in the water sample.

3.2 Task-by-Task Risk Analysis

The evaluation of hazards is based upon the knowledge of the site background presented in Section 3.1 above, and anticipated risks posed by the specific tasks to be performed.

The following subsections describe each task/operation in terms of the specific hazards associated with it. In addition, the protective measures to be implemented during completion of those tasks are also identified.

Table 3.1 provides a summary of task analysis and chemical hazards potentially encountered at the Site.

TABLE 3.1
TASK ANALYSIS
POTENTIAL CHEMICAL HAZARDS OF CONCERN

Contaminant	PEL/TLV	LEL (%)	IDLH
VOCs			
Perchloroethylene	100 ppm	N/A	150 ppm
Benzene	1/0.5ppm	1.2	500 ppm
Toluene	200/50 ppm	1.1	500 ppm
Xylenes	100/100 ppm	~1	900 ppm
Ethyl benzene	100/100ppm	0.8	800 ppm
MTBE	NE/50ppm	NE	NE
Diesel Fuel	NE/100mg/m^3		Ca (exhaust)
Gasoline	NE/300	1.4	Ca
Lead	0.05/0.05 mg/m^3	N/A	100 mg/m^3
PCBs	0.5-1 mg/m3	N/A	5 mg/m^3
PAHs	0.2 mg/m³	N/A	1750 mg/m^3
Pesticides	Variable	N/A	N/A
Arsenic	0.01 mg/m^3	N/A	5 mg/m^3
Mercury	0.025 mg/m^3	N/A	10 mg/m^3

NE – not established
N/A-not appropriate
Ca - Cancer
Notes:

1. TLV = Threshold Limit Value
2. IDLH = Immediately Dangerous to Life and Health

3.3 Chemical Hazards

A. Hazard Identification and Prevention

- Safety related work practices would be used to prevent electric shock or other injuries resulting from either direct or indirect electrical contacts. Overhead power lines, buried

cables and electrical equipment used on site all pose a danger of shock or electrocution if workers contact or sever them during field operations.

- New York State law requires that a utility mark out to be performed at a site at least 72 hours prior to starting any subsurface work. The tank removal contractor will contact New York City One Call (1-800-272-4480) to request a mark out of underground utilities in the proposed excavation and drilling areas. Work will not begin until the required utility clearances have been completed.

- Public utilities typically do not mark-out utility lines that are located on private property. Therefore, JRH will exercise due diligence and try to identify the location of any private utilities at the site. A private utility contractor will clear on-site subsurface disturbance locations for utilities prior to the commencement of any such work. JRH will also use as-built drawings for the area being investigated, perform a line locating survey, and identify a no-dig/drill zone and hand dig if there is insufficient data to determine the location of utility lines.

- Care must be taken to ensure loose clothing does not get tangled in any moving equipment while borings are being drilled.

- There may be slip or trip hazards associated with rough, slippery or elevated work surfaces at the site. The sampling sites could contain a number of slip, trip and fall hazards for site workers, such as: holes, pits, or ditches; excavation faces and slippery surfaces (steep grades, uneven grades, snow and ice and sharp objects).

- Drilling or excavating is dangerous during electrical storms. All field activity must terminate when thunderstorms are evident. Extreme heat and cold, ice and heavy rain can produce unsafe conditions for drilling work. Such conditions, when present, will be evaluated on a case-by-case basis to determine if work shall terminate.

- The use of an excavator and other equipment that are gasoline or fuel powered presents the possibility of encountering fire and explosion hazards.

- Plants and animals that are known to be hazardous to humans may affect work that takes place. Spiders, bees, wasps, hornets, ticks, poison oak and poison ivy are only some of the hazards that may be encountered. Individuals who may potentially be exposed to these hazards should be made aware of their existence and instructed in their identification. Emergencies resulting from contact with a natural hazard should be handled through the normal medical emergency channels. Individuals who are sensitive to these types of "natural" hazards should indicate their susceptibility to the SHSO.

- Work on-site will involve the use of heavy construction equipment such as an excavator. The unprotected exposure of site workers to this noise during field activities can result in

noise induced hearing loss. The SHSO will monitor the noise exposure for the initial trip and determine whether noise protection is warranted for each of the team members. The SHSO will ensure that either ear muffs or disposable foam earplugs are made available to all personnel and are used by the personnel in the immediate vicinity of the field operation as required.

3.3.1 General Description

There is potential high-level VOC contamination because the site was formerly occupied by a dry cleaner.

Potential chemical hazards below the building slab are evaluated below. It is anticipated that dry cleaning compounds and dust could be of concern. The potential for exposure to vapors, contaminated dusts, and contaminated soil/groundwater is of utmost concern.

3.3.2 Potential Chemical Health Hazards-Perchloroethylene

Perchloroethylene (also called perc) is a colorless, nonflammable liquid. It does not occur naturally but is produced in large amounts (310 million pounds in 1991) in the United States. Demand for perc declined about 35% from 1989 to 1991, and is likely to continue to fall. Solvent recycling and reduced demand for chlorofluorocarbons are major reasons for this trend. The largest user of perc is the dry cleaning industry.

Perc enters the body when breathed in with contaminated air or when consumed with contaminated food or water. It is less likely to be absorbed through skin contact. Once in the body perc can remain, stored in fat tissue. Effects of perchloroethylene on human health and the environment depend on the amount present and the length and frequency of exposure. Effects also depend on the health of a person or the condition of the environment when exposure occurs. Breathing perc for short periods of time can adversely affect the human nervous system. Effects range from dizziness, fatigue, headaches and sweating to loss of coordination and unconsciousness. Contact with perc liquid or vapor irritates the skin, the eyes, the nose, and the throat.

3.3.3 First Aid

If soil comes in contact with the eyes immediately wash the eyes with large amounts of water, occasionally lifting the lower and upper lids. Contact lenses should not be worn but can be protected by safety glasses/goggles. If lead contaminated soil comes in contact with the skin, wash the skin with soap and water prior to leaving the site. If a person breathes in large amounts of dust,

move the exposed person to fresh air at once. If contaminated soil has been swallowed, get medical attention immediately (NIOSH, 1987).

4.0 PERSONNEL TRAINING REQUIREMENTS

Consistent with OSHA 29 CFR 1910.120 regulation covering Hazardous Waste Operations and Emergency Response, all site personnel are required to be trained in accordance with the standard. At a minimum, all personnel are required to be trained to recognize the hazards on-site, the provisions of this HASP, and the responsible personnel. The SHSO at the site pre-entry briefing(s) or periodic site briefings will discuss this plan.

5.0 PERSONNEL PROTECTIVE EQUIPMENT TO BE USED

This section describes the general requirements of the EPA designated Levels of Protection (A through D), and the specific levels of protection required for each task at the Site.

5.1 Levels of Protection

Personnel will wear the appropriate protective equipment when response activities involve known or suspected atmospheric contamination, vapors, gases, or particulates may be generated by site activities, or when direct contact with skin-affecting substances may occur. Full facepiece respirators protect lungs, gastrointestinal tract, and eyes against airborne toxicants. Chemical-resistant clothing protects the skin from contact with skin-destructive and absorbable chemicals.

The specific levels of protection and necessary components for each have been divided into four categories according to the degrees of protection afforded:

Level A: Should be worn when the highest level of respiratory, skin, and eye protection is needed.

Level B: Should be worn when the highest level of respiratory protection is needed, but a lesser level of skin protection. Level B is the primary level of choice when encountering unknown environments.

Level C: Should be worn when the criteria for using air-purifying respirators are met, and a lesser level of skin protection is needed.

Level D: Should be worn only as a work uniform and not in any area with respiratory or skin hazards. It provides minimal protection against chemical hazards.

Modifications of these levels are permitted, and routinely employed during site work activities to maximize efficiency. For example, Level C respiratory protection and Level D skin protection may be required for a given task. Likewise the type of chemical protective ensemble (i.e., material, format) will depend upon contaminants and degrees of contact.

The Level of Protection selected is based upon the following:

- Type and measured concentration of the chemical substance in the ambient atmosphere and its toxicity.
- Potential for exposure to substances in air, liquids, or other direct contact with material due to work being done.
- Knowledge of chemicals on-site along with properties such as toxicity, route of exposure, and contaminant matrix.

In situations where the type of chemical, concentration, and possibilities of contact are not known, the appropriate Level of Protection must be selected based on professional experience and judgment until the hazards can be better identified.

5.2 Level D Personnel Protective Equipment:

- Disposable Tyvek^{R} coveralls (as needed)
- Disposable Nitrile Exam gloves (as needed)
- Disposable Tyvek^{R} booties (as needed)
- Steel-tipped work boots
- Safety glasses
- Hard hat
- 3M N95 Dust Masks with Exhalation Valves (if needed)

5.3 Reassessment of Protection Program

The Level of Protection provided by PPE selection shall be upgraded or downgraded based upon changes in site conditions or investigation findings. When a significant change occurs, the hazards should be reassessed. Some indicators of the need for reassessment are:

- Commencement of a new work phase.
- Change in job tasks during a work phase.
- Change of season/weather
- When temperature extremes or individual medical considerations limit the effectiveness of PPE.
- Change in work scope, which affects the degree of contact with contaminants.

5.4 Work Mission Duration

Before the workers actually begin work in their PPE ensembles, the anticipated duration of the work mission will be established. Several factors limit mission length, including:

- Air supply consumption (SCBA use)-**Not Applicable.**
- Suit/Ensemble permeation and penetration rates for chemicals-**Not Applicable.**
- Ambient temperature and weather conditions (heat stress/cold stress).
- Capacity of personnel to work in PPE.

5.5 Personal Protective Equipment Recommended for Site

The following specific clothing materials are recommended for the site:

A. Soil Sampling – Level D

Site activities will require PPE as follows: hardhat, disposable Tyvek^{R} coveralls (if needed), disposable Tyvek^{R} booties (if needed), safety glasses and chemical resistant gloves. Particulate respirator-3M N95 Dust Masks with exhalation valves will be available.

5.6 SOP for Personal Protective Equipment

Proper inspection of PPE features several sequences of inspection depending upon specific articles of PPE and it's frequency of use. The different levels of inspection are as follows:

- Inspection and operation testing of equipment received from the factory or distributor.
- Inspection of equipment as it is issued to workers.
- Inspection after use or training and prior to maintenance.
- Periodic inspection of stored equipment.
- Periodic inspection when a question arises concerning the appropriateness of the selected equipment, or when problems with similar equipment arise.
- The primary inspection of the PPE in use for activities at the Site will occur prior to immediate use and will be conducted by the user. This ensures that the specific device or article has been checked-out by the user and that the user is familiar with its use.

TABLE 5.1
SAMPLE PPE INSPECTION CHECKLIST

CLOTHING

Before use:

- Determine that the clothing material is correct for the specified task at hand.
- Visually inspect for:
  - Imperfect seams
  - Non-uniform coatings
  - Tears
  - Malfunctioning closures
- Hold up to light and check for pinholes.
- Flex product:
  - Observe for cracks
  - Observe for other signs of shelf deterioration
- If the product has been used previously, inspect inside and out for signs of chemical attack:

- Discoloration
- Swelling
- Stiffness

During the work task:

- Evidence of chemical attack such as discoloration, swelling, stiffening, and softening. Keep in mind, however, that chemical permeation can occur without any visible effects.
- Closure failure.
- Tears.
- Punctures.
- Seam Discontinuities.

GLOVES

Before use:

- Visually inspect for:
  - Imperfect seams
  - Tears
  - Non-uniform coating
  - Pressurize glove with air; listen for pinhole leaks.

5.7 Specific Levels of Protection Planned for the Site

The following levels of protection will be utilized during activities at the Site:

- Level D

6.0 FREQUENCY AND TYPES OF AIR MONITORING/SAMPLING

This section explains the general concepts of an air-monitoring program and specifies the surveillance activities that will take place during project completion at the Site.

The purpose of air monitoring is to identify and quantify airborne contaminants in order to verify and determine the level of worker protection needed. Initial screening for identification is often qualitative, i.e., the contaminant, or the class to which it belongs, is demonstrated to be present, but the determination of its concentration (quantification) must await subsequent testing. Two principal approaches are available for identifying and/or quantifying airborne contaminants:

- The on-site use of direct-reading instruments.
- Laboratory analysis of air samples obtained by a gas-sampling bag, collection media (i.e., filter, sorbent) and/or wet-contaminant collection methods.

6.1 Direct-Reading Monitoring Instruments

Unlike air sampling devices, which are used to collect samples for subsequent analysis in a laboratory, direct-reading instruments provide information at the time of sampling, enabling rapid decision-making. Data obtained from the real-time monitors are used to assure proper selection of personnel protection equipment, engineering controls, and work practices. Overall, the instruments provide the user the capability to determine if site personnel are being exposed to concentrations that exceed exposure limits or action levels for specific hazardous materials.

Of significant importance, especially during initial entries, is the potential for IDLH conditions or oxygen deficient atmospheres. Real-time monitors can be useful in identifying any IDLH conditions, toxic levels of airborne contaminants, flammable atmospheres, or radioactive hazards. Periodic monitoring of conditions is critical, especially, as exposures may have increased since initial monitoring or if new site activities have commenced.

6.2 Site Air Monitoring and Sampling Program

A. Air Monitoring Instruments

- **Organic Vapor Monitoring**

Instrument :Photoionization Detector (PID) with for use during all intrusive activities (10.6 Ev lamp).

Instrument: Detector Tubes – for measuring benzene and vinyl chloride concentrations.

Monitoring for organic vapors will be conducted in the breathing zone of employees using a PID during intrusive activities. Refer to Table 6.1 for total volatile organic vapor and benzene action levels.

- **Combustible Gas Monitoring**

  Instrument: Combustible Gas Indicator (CGI)/ Oxygen Meter

  Continuous air monitoring with a CGI/Oxygen meter will be conducted in areas where flammable vapors or gases are suspected. All work activities must stop where the monitor indicates the concentration of flammable vapors exceeds ten percent of the lower flammable limit (LEL) at a location with a potential ignition source. The area must be ventilated to reduce the concentration to below ten percent of the LEL.

- Dust Monitoring

  Instrument: TSI DustTrak Model 8520 (or equivalent)

  Continuous dust monitoring during all site activities will be conducted. Dust mitigation must be employed should readings exceed 10 mg/m^3.

- **Calibration and Record keeping**

  Equipment used will be calibrated in accordance with the manufacturers' specifications. The PID and CGI will be calibration checked before and after use under approximately the same conditions at which the instrument will be used. Calibration information will be kept in the field notebook or instrument log. The date, time, location, instrument serial number, calibration gas and concentration, will be noted.

B. Action Levels

TABLE 6.1

SITE AIR MONITORING AND SAMPLING PROGRAM SUMMARY

Instrument	Action Level	Action
PID (10.6 ev)	Continuous readings to 9ppm	Remain in level D PPE.
PID	Continuous reading of 10 to 100 ppm above background	Level D PPE but screen with Drager detection tube for benzene. If benzene detected >1 ppm upgrade to Level C and wear an organic vapor (OV) cartridge/air-purifying respirator (APR). Investigate source.

PID	Continuous reading over 100 ppm background	Stop Work. Reevaluate work conditions and procedures, Contact SHSO prior to continuing for authorization.
Drager Tubes: Benzene	1- 10 ppm	Upgrade PPE to level C with OV/APR.
Drager Tubes: Benzene	>10 ppm	Stop Work . Reevaluate work conditions and procedures. Contact SHSO prior to continuing for authorization.
Combustible Gas Indicator	Continuous reading of 0% to 1% lower explosive level (LEL).	Remain in level D PPE. If no benzene present, assume source is methane. Continuously monitoring LEL.
Combustible Gas Indicator	Continuous reading of 1% to 10% LEL	Level D unless benzene is present. Investigate source and ventilate, if possible. SHSO may require upgrade to Level C PPE.
Combustible Gas Indicator	Continuous reading > 10% LEL	Stop Work. Evacuate work area and ventilate source of combustible gas, if possible, Contact SHSO prior to continuing for authorization.
Dust Monitor	Continuous reading >10.0 mg/m^3	Suppress by spraying the dusty area with water.

Notes: PEL = Occupational Safety and Health Administration (OSHA) Permissible Exposure Limit
REL = National Institute of Occupational Safety and Health (NIOSH) Recommended Exposure Limit
TLV = American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value

C. Reporting Format

- Air Monitoring Log
-

6.3 Site Ambient Air Sampling

A. Sampling Criteria

A site ambient air sampling program will be considered if the following criteria are met:

1. Meteorological conditions
2. Health and safety observations
3. Particulate levels are two to three times above background.
4. Site specific activities
5. Site activity increases airborne contaminant(s) exposure potential.

7.0 SITE CONTROL MEASURES

The following section defines measures and procedures for maintaining site control. Site control is an essential component in the implementation of the site health and safety program.

7.1 Buddy System

During all Level B, C or D activities or when some conditions present a risk to personnel, the implementation of a buddy system is recommended if not mandatory. A buddy system requires at least two (2) people to work as a team, each looking out for each other. Table 8.1 lists those tasks, which require a buddy system and any additional site control requirements.

TABLE 7.1
PERSONNEL REQUIREMENTS

Task	Control Measures
Soil Sampling	Line of sight, buddy system

7.2 Site Communications Plan

Successful communications between field teams and personnel in the support zone is essential. The following communications systems will be available during activities at the Site.

- Hand Signals
- Direct Vocal Communication
- For hand signal communications, the following definitions will apply during activities at the Site:

TABLE 7.2
HAND SIGNAL DEFINITIONS

Signal	Definition
Hands clutching throat	Out of air/cannot breath
Hands on top of head	Need assistance
Thumbs up	OK/I am all right/I understand
Thumbs down	No/Negative
Arms waving upright	Send backup support
Grip partners wrist	Exit area immediately

7.3 Work Zone Definition

The three general work zones established at the Site are the Exclusion Zone, Contamination Reduction Zone, and Support Zone. One of the basic elements of

effective site soil remediation activities is the delineation of work zones. The purpose of establishing work zones is to:

• Reduce the accidental spread of hazardous substances by workers or equipment from the contaminated areas to the clean areas;
• Confine work activities to the appropriate areas, thereby minimizing the likelihood of accidental exposures;
• Facilitate the location and evacuation of personnel in case of an emergency; and
• Prevent unauthorized personnel from entering controlled areas.

Although a site may be divided into as many zones as necessary to ensure minimal employee exposure to hazardous substances, this plan uses the three most frequently identified zones in similar projects. These zones are the Exclusion Zone, the Decontamination Zone, and the Support Zone (sometimes referred to by others as the "clean zone"). Movement of personnel and equipment between these zones should be minimized and restricted to specific access control points to minimize the spreading of contamination, if encountered.

7.3.1 Exclusion Zone

The Exclusion Zone is the area where contamination is either known or expected to occur and where the greatest potential for exposure exists. No contamination is actually known to exist on this site. Therefore, the following protective measures will be taken in the Exclusion Zone.

Unprotected onlookers will be restricted from suspicious pre-screened soils requiring sampling such that they are 25 feet upwind or 50 feet downwind of excavation or drilling activities.

Those conducting activities and sampling in the Exclusion Zone will wear the applicable Personal Protective Equipment (PPE). The actions to be taken and PPE to be worn in the Exclusion Zone if VOCs are determined with the PID to be above background are described in Section 6 and Table 6.1.

7.3.2 Decontamination Zone

A Decontamination Zone will be established between the Exclusion Zone and the Support Zone, and will include the personnel, equipment and supplies that are needed to decontaminate equipment and personnel. The size will be selected by the SHSO to be sufficient to conduct the necessary decontamination activities. Personnel and equipment in the Exclusion Zone must pass through this zone before leaving or entering the Support Zone. This zone should always be established and maintained upwind of the Exclusion Zone.

7.3.3 Support Zone

The Support Zone will surround the Decontamination Zone and the Exclusion Zone. Break areas, operational direction and support facilities will be located in this area. Eating, smoking and drinking will be allowed only in this area.

7.4 Nearest Medical Assistance

Figure 7.1 shows a map of the route to the Flushing Hospital Medical Center (718-670-5000), which is the nearest hospital that can provide emergency care for individuals who may experience an injury or exposure on site. The route to the hospital will be verified by the SHSO, and will be familiar to all site personnel.

FIGURE 7.1

Directions	Distance
1. Start out going **NORTHWEST** on **MERRICK BLVD** toward **SELOVER RD**.	go 2.0 mi
2. **MERRICK BLVD** becomes **168TH ST**.	go 0.6 mi
3. Turn **LEFT** onto **HILLSIDE AVE / RT-25**.	go 0.2 mi
4. Turn **RIGHT** onto **164TH ST**.	go 0.7 mi
5. Make a **U-TURN** at **82ND DR** onto **164TH ST**.	go 0.0 mi
6. **8268 164TH ST**.	go 0.0 mi

Total Travel Estimate : 3.50 miles - about 12 minutes

Start:

Start at 127-13 MERRICK BLVD, QUEENS New York

End:
QUEENS HOSPITAL CENTER
(718) 883-3000
82-68 164th Street, NY 11432

7.5 Safe Work Practices

Table 7.3 provides a list of standing orders for the Exclusion Zone.
Table 7.4 provides a list of standing orders for the Decontamination Zone.

7.6 Emergency Alarm Procedures

The warning signals described in Section 9.4 "Evacuation Routes and Procedures," will be deployed in the event of an emergency. Communication signals will also be used according to Section 7.2.

TABLE 7.3
STANDING ORDERS FOR EXCLUSION ZONE

- No smoking, eating, or drinking in this zone.
- No horseplay.
- No matches or lighters in this zone.
- Check-in on entrance to this zone.
- Check-out on exit from this zone.
- Implement the communications system.
- Line of sight must be in position.
- Wear the appropriate level of protection as defined in the HASP.

TABLE 7.4
STANDING ORDERS FOR CONTAMINATION REDUCTION ZONE

- No smoking, eating, or drinking in this zone.
- No horseplay.
- No matches or lighters in this zone.
- Wear the appropriate level of protection.

8.0 DECONTAMINATION PLAN

Consistent with the levels of protection required, the decontamination table(s) provides a step-by-step representation of the personnel decontamination process. These procedures should be modified to suit site conditions and protective ensembles in use.

8.1 Standard Operating Procedures

Decontamination involves the orderly controlled removal of contaminants. Standard decontamination sequences are presented in Table 8.1. All site personnel should minimize contact with contaminants in order to minimize the need for extensive decontamination. Personnel shall clean on-site as much gross contamination from clothing and equipment, as possible.

8.2 Levels of Decontamination Protection Required for Personnel

The levels of protection required for personnel assisting with decontamination will be Level D. The SHSO is responsible for monitoring decontamination procedures and determining their effectiveness.

8.3 Equipment Decontamination

Sampling equipment will be dedicated to each sample as practicable. Appendix A is the decontamination protocol for equipment. After on-site decontamination, non-disposable materials, such as gloves and booties, will be placed in plastic bags and for proper disposal off site.

8.4 Disposition of Decontamination Wastes

Contaminated disposable materials will be left in a secured condition on-site.

TABLE 8.1	
LEVEL D DECONTAMINATION STEPS	
Step 1	Remove outer garments (i.e., coveralls) and boots
Step 2	Remove gloves
Step 3	Wash hands and face

9.0 EMERGENCY RESPONSE/CONTINGENCY PLAN

This section describes contingencies and emergency planning procedures to be implemented at the Site. This plan is compatible with local, state and federal disaster and emergency management plans, as appropriate.

9.1 Pre-Emergency Planning

During the site briefing held periodically/daily, all employees will be trained in and reminded of provisions of the emergency response plan, communication systems, and evacuation routes. Table 9.1 identifies potential hazards associated with site activities, along with the available emergency prevention/control equipment and its location. The plan will be reviewed and revised, if necessary, on a regular basis by the SHSO. This will ensure that the plan is adequate and consistent with prevailing site conditions.

TABLE 9.1
EMERGENCY RECOGNITION/CONTROL MEASURES

HAZARD	PREVENTION/CONTROL	LOCATION
Fire/Explosion	Fire Extinguisher	Site Trailer and Heavy Equipt. mounted
Spill	Sorbent Materials	Not Applicable
Air Release	Evacuation Routes	Not Applicable

9.2 Personnel Roles and Lines of Authority

The Site Supervisor has primary responsibility for responding to and correcting emergency situations. This includes taking appropriate measures to ensure the safety of site personnel and the public. Possible actions may involve evacuation of personnel from the site area, and evacuation of adjacent residents. He/she is additionally responsible for ensuring that corrective measures have been implemented, appropriate authorities notified and follow-up reports completed. The SHSO may be called upon to act on the behalf of the site supervisor, and will direct responses to any medical emergency. The individual contractor organizations are responsible for assisting the project manager in his/her mission within the parameters of their scope of work.

The Site Supervisor is: Steve Kim

9.3 Emergency Recognition/Prevention

Table 3.1 provides a listing of chemical and physical hazards on-site. Additional potential hazards associated with site activities are listed in Table 9.1, along with the

available emergency prevention/control equipment and its location. Personnel will be familiar with techniques of hazard recognition from preassignment training and site-specific briefings. The SHSO is responsible for ensuring that prevention devices and equipment are available to personnel.

9.4 Evacuation Routes/Procedures

In the event of an emergency which necessitates an evacuation of the site, the following alarm procedures will be implemented:

- Insure that a predetermined location is identified off-site in case of an emergency, so that all personnel can be accounted for.

- Personnel will be expected to proceed to the closest site exit with their buddy, and mobilize to the safe distance area associated with the evacuation route. Personnel will remain at that area until the re-entry alarm is sounded or an authorized individual provides further instructions.

9.5 Emergency Contact/Notification System

The following list provides names and telephone numbers for emergency contact personnel. In the event of a medical emergency, personnel will take direction from the SHSO and notify the appropriate emergency organization(s). In the event of a fire or spill, the site supervisor will notify the appropriate local, state and federal agencies.

TABLE 9.2
List of Emergency Contacts

Organization	Contact	Telephone
Police	NYCPD	911
Fire	NYCFD	911
Hospital	Flushing Hospital Medical Ctr.	718-670-5000
EPA Emergency Response Team		800-424-8802
NYSDEC	Spill Hotline	800-457-7362
National Response Center		800-424-8802
Center for Disease Control		404-488-4100
Chemtrec		800-424-9555

9.6 Emergency Medical Treatment Procedures

Any person who becomes ill or injured in the Exclusion Zone must be decontaminated to the maximum extent possible. If the injury or illness is minor, full decontamination should be completed and first aid administered prior to transport. If the patient's

condition is serious, at least partial decontamination should be completed (i.e., complete disrobing of the victim and redressing in clean coveralls or wrapping in a blanket.) First aid should be administered while awaiting an ambulance or paramedics. All injuries and illnesses must immediately be reported to the Site Supervisor.

Any person being transported to a clinic or hospital for treatment should take with them information on the chemical(s) they have been exposed to at the site. This information is included in Table 3.1.

Any vehicle used to transport contaminated personnel will be treated and cleaned as necessary.

9.7 Fires or Explosion

In the event of a fire or explosion, the local fire department should be summoned immediately. Upon their arrival, the project manager or designated alternate will advise the fire commander of the location, nature, and identification of the hazardous materials on site.

If it is safe to do so, site personnel may:

- Use fire fighting equipment available on site to control or extinguish the fire; and,
- Remove or isolate flammable or other hazardous materials, which may contribute to the fire.

9.8 Spill or Leaks

In the event of a spill or a leak from excavation or drilling equipment, including containers, site personnel will:

- Inform their supervisor immediately;
- Locate the source of the spillage and stop the flow if it can be done safely; and,
- Begin containment and recovery of the spilled materials.

9.9 Emergency Equipment/Facilities

The following emergency equipment/facilities will be utilized on-site.

TABLE 9.3
LIST OF EMERGENCY EQUIPMENT/FACILITIES

List of Emergency Equipment/Facilities	Storage Location
First Aid Kit	Support Zone
Fire Extinguisher	Support Zone
Spill Kits	Support Zone

Berm Materials	Support Zone
Eye Wash	Support Zone
Real Time Air Equipment	Exclusion Zone

10.0 REFERENCES

1. *Aldrich Chemical Book*, RTECS
2. *American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values*
3. *Chemical Protective Clothing Performance Index Book*, Forsburg
4. *Dangerous Properties of Industrial Materials*, SAX and Lewis
5. *Emergency Response Guide Book*, DOT P 5800.5, 1990
6. *EPA 40 CFR 311 Health and Safety Regulations*
7. *EPA/Office of Emergency and Remedial Response/Environmental Response Team Standard Operating Safety Guide*
8. *Extremely Hazardous Substances*, EPA, Noyes
9. *Guide to Occupational Exposure Values* – 1992
10. *Guidelines for the Selection of Chemical Protective Clothing*, Little
11. *Handbook of Toxic and Hazardous Chemicals and Carcinogens*, Sittig, np (Noyes)
12. *Hazardous Chemicals Data Book*, G. Weiss, ndc (Noyes)
13. *Hazardous Chemicals Desk Reference*
14. *NIOSH/OSHA/USCG/EPA Occupational Health and Safety Guidelines*
15. *OHMTADS Database*
16. *OSHA 29 CFR 1910.120 Health and Safety Regulations*
17. *The Merck Index, an Encyclopedia of Chemicals, Drugs, and Biologicals*, Merck & Co., Inc.
18. *Threshold Limit Values and Biological Exposure Indices, ACGIH*, 1991-1992
19. *V.S.L.G. Chris Man*

APPENDIX A

EQUIPMENT CLEANING AND DECONTAMINATION PROCEDURES

APPENDIX A

STANDARD OPERATING PROCEDURES

EQUIPMENT CLEANING AND DECONTAMINATION PROCEDURES

Summary

Equipment, tools, materials, etc. used in the excavation/remediation and collection of samples at the site must be properly prepared and cleaned/decontaminated during and after each sampling event. The degree of cleaning/decontamination will be dependent upon site conditions and the nature and type of contamination, if present, the intent and goal(s) of the remediation, and data quality objectives, as well as other site-specific requirements. The importance of this action must be impressed upon the sampling team and those assisting the team, such as a backhoe or drill rig operator.

Procedure

1. Heavy Equipment Decontamination

All equipment, tools and materials associated with sampling events must be cleaned or decontaminated prior to usage. Items such as drill rigs, auger flights, trackhoes, and backhoes all present potential sources of contamination to environmental samples. Therefore, all heavy equipment utilized at a site must undergo the following decontamination procedures:

- the equipment will first be high pressure, hot washed or steam-cleaned with potable water; and,
- the equipment will be rinsed thoroughly with potable water.

Contain, collect and dispose of all decontamination fluids in accordance with site/project- specific requirements. The bucket of trackhoes and backhoes may be cleaned over the excavation allowing high pressure decontamination washwater to return to the excavation.

2. Cleaning of Field Sampling Equipment

All equipment and tools used to collect samples for chemical analyses, including spatulas, spoons, scoops, trowels, split-spoons, augers, etc. will be decontaminated using the following procedures:

- non-phosphate detergent wash;
- potable water or distilled/deionized water rinse; and
- air or oven-dry.

If the equipment, listed above, is to be stored for future use, allow to dry and then wrap in aluminum foil (shiny-side out) or seal in plastic bags. Collect or dispose of all decontamination fluids in accordance with site/project-specific requirements.

3. Personal Clothing Decontamination

All footwear worn in and around a contamination area will be washed down using soap and water to remove any soil or oily residue remnants. If disposable gloves, booties or suits (such as Tyvek® suits) are worn, these suits or booties are to be removed and disposed of in a designated 55-gallon drum on site for future disposal. Any other clothing that comes in contact with contaminated soil should not be worn more than 24-hours and should be washed prior to wearing again.

APPENDIX B

MSDSs

MSDS Number: **T0767** * * * * * *Effective Date:* ***05/19/08*** * * * * * *Supercedes:* ***08/16/05***

MSDS Material Safety Data Sheet

From: Mallinckrodt Baker, Inc.
222 Red School Lane
Phillipsburg, NJ 08865

Mallinckrodt CHEMICALS J.T.Baker

24 Hour Emergency Telephone: 908-859-2151
CHEMTREC: 1-800-424-9300

National Response in Canada
CANUTEC: 613-996-6666

Outside U.S. and Canada
Chemtrec: 703-527-3887

NOTE: CHEMTREC, CANUTEC and National Response Center emergency numbers to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure or accident involving chemicals.

All non-emergency questions should be directed to Customer Service (1-800-582-2537) for assistance.

TETRACHLOROETHYLENE

1. Product Identification

Synonyms: ethylene tetrachloride; tetrachloroethene; perchloroethylene; carbon bichloride; carbon dichloride
CAS No.: 127-18-4
Molecular Weight: 165.83
Chemical Formula: Cl2C:CCl2
Product Codes:
J.T. Baker: 9218, 9360, 9453, 9465, 9469
Mallinckrodt: 1933, 8058

2. Composition/Information on Ingredients

Ingredient	CAS No	Percent	Hazardous
Tetrachloroethylene	127-18-4	99 - 100%	Yes

3. Hazards Identification

Emergency Overview

WARNING! HARMFUL IF SWALLOWED, INHALED OR ABSORBED THROUGH SKIN. CAUSES IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT. AFFECTS CENTRAL NERVOUS SYSTEM, LIVER AND KIDNEYS. SUSPECT CANCER HAZARD. MAY CAUSE CANCER. Risk of cancer depends on level and duration of exposure.

SAF-T-DATA(tm) Ratings (Provided here for your convenience)

Health Rating: 2 - Moderate (Poison)

Flammability Rating: 0 - None
Reactivity Rating: 1 - Slight
Contact Rating: 2 - Moderate (Life)
Lab Protective Equip: GOGGLES; LAB COAT; VENT HOOD; PROPER GLOVES
Storage Color Code: Blue (Health)

Potential Health Effects

Inhalation:
Irritating to the upper respiratory tract. Giddiness, headache, intoxication, nausea and vomiting may follow the inhalation of large amounts while massive amounts can cause breathing arrest, liver and kidney damage, and death. Concentrations of 600 ppm and more can affect the central nervous system after a few minutes.
Ingestion:
Not highly toxic by this route because of low water solubility. Used as an oral dosage for hookworm (1 to 4 ml). Causes abdominal pain, nausea, diarrhea, headache, and dizziness.
Skin Contact:
Causes irritation to skin. Symptoms include redness, itching, and pain. May be absorbed through the skin with possible systemic effects.
Eye Contact:
Causes irritation, redness, and pain.
Chronic Exposure:
May cause liver, kidney or central nervous system damage after repeated or prolonged exposures. Suspected cancer risk from animal studies.
Aggravation of Pre-existing Conditions:
Persons with pre-existing skin disorders or eye problems or impaired liver or kidney function may be more susceptible to the effects of the substance. The use of alcoholic beverages enhances the toxic effects.

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4. First Aid Measures

Inhalation:
Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.
Ingestion:
Aspiration hazard. If swallowed, DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person. Get medical attention immediately.
Skin Contact:
Wash skin with soap or mild detergent and water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Call a physician.
Eye Contact:
Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

Note to Physician:
Do not administer adrenaline or epinephrine to a victim of chlorinated solvent poisoning.

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5. Fire Fighting Measures

Fire:
Not considered to be a fire hazard but becomes hazardous in a fire situation because of vapor generation and possible degradation to phosgene (highly toxic) and hydrogen chloride (corrosive). Vapors are heavier than air

and collect in low-lying areas.
Explosion:
Not considered to be an explosion hazard. Containers may explode when involved in a fire.
Fire Extinguishing Media:
Use any means suitable for extinguishing surrounding fire. Water spray may be used to keep fire exposed containers cool.
Special Information:
In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

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6. Accidental Release Measures

Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Contain and recover liquid when possible. Neutralize with alkaline material (soda ash, lime), then absorb with an inert material (e. g., vermiculite, dry sand, earth), and place in a chemical waste container. Do not use combustible materials, such as saw dust. Do not flush to sewer! US Regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities. The toll free number for the US Coast Guard National Response Center is (800) 424-8802.

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7. Handling and Storage

Store in a cool, dry, ventilated area away from sources of heat or ignition. Isolate from flammable materials. Protect from direct sunlight. Wear special protective equipment (Sec. 8) for maintenance break-in or where exposures may exceed established exposure levels. Wash hands, face, forearms and neck when exiting restricted areas. Shower, dispose of outer clothing, change to clean garments at the end of the day. Avoid cross-contamination of street clothes. Wash hands before eating and do not eat, drink, or smoke in workplace. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid); observe all warnings and precautions listed for the product.

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8. Exposure Controls/Personal Protection

Airborne Exposure Limits:
-OSHA Permissible Exposure Limit (PEL):
100 ppm (TWA), 200 ppm (ceiling),
300 ppm/5min/3-hour (max)

-ACGIH Threshold Limit Value (TLV):
25 ppm (TWA), 100 ppm (STEL); listed as A3, animal carcinogen
Ventilation System:
A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.
Personal Respirators (NIOSH Approved):
If the exposure limit is exceeded, wear a supplied air, full-facepiece respirator, airlined hood, or full-facepiece self-contained breathing apparatus.
Skin Protection:

Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.
Eye Protection:
Use chemical safety goggles and/or full face shield where dusting or splashing of solutions is possible. Maintain eye wash fountain and quick-drench facilities in work area.

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9. Physical and Chemical Properties

Appearance:
Clear, colorless liquid.
Odor:
Ethereal odor.
Solubility:
0.015 g in 100 g of water.
Specific Gravity:
1.62 @ 20C/4C
pH:
No information found.
% Volatiles by volume @ 21C (70F):
100
Boiling Point:
121C (250F)
Melting Point:
-19C (-2F)
Vapor Density (Air=1):
5.7
Vapor Pressure (mm Hg):
18 @ 25C (77F)
Evaporation Rate (BuAc=1):
0.33 (trichloroethylene = 1)

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10. Stability and Reactivity

Stability:
Stable under ordinary conditions of use and storage. Slowly decomposed by light. Deteriorates rapidly in warm, moist climates.
Hazardous Decomposition Products:
Carbon dioxide and carbon monoxide may form when heated to decomposition. Hydrogen chloride gas and phosgene gas may be formed upon heating. Decomposes with moisture to yield trichloroacetic acid and hydrochloric acid.
Hazardous Polymerization:
Will not occur.
Incompatibilities:
Strong acids, strong oxidizers, strong alkalis, especially NaOH, KOH; finely divided metals, especially zinc, barium, lithium. Slowly corrodes aluminum, iron and zinc.
Conditions to Avoid:
Moisture, light, heat and incompatibles.

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11. Toxicological Information

Oral rat LD50: 2629 mg/kg; inhalation rat LC50: 4100 ppm/6H; investigated as a tumorigen, mutagen, reproductive effector.

--------\Cancer Lists\----------

Ingredient	---NTP Carcinogen--- Known	Anticipated	IARC Category
Tetrachloroethylene (127-18-4)	No	Yes	2A

12. Ecological Information

Environmental Fate:
When released into the soil, this material is expected to quickly evaporate. When released into the soil, this material may leach into groundwater. When released into the soil, this material may biodegrade to a moderate extent. When released to water, this material is expected to quickly evaporate. When released into water, this material is not expected to biodegrade. This material is not expected to significantly bioaccumulate. When released into the air, this material may be moderately degraded by reaction with photochemically produced hydroxyl radicals.
Environmental Toxicity:
The LC50/96-hour values for fish are between 1 and 10 mg/l. The LC50/96-hour values for fish are between 10 and 100 mg/l. This material is expected to be toxic to aquatic life.

13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to a RCRA approved incinerator or disposed in a RCRA approved waste facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

14. Transport Information

Domestic (Land, D.O.T.)

Proper Shipping Name: TETRACHLOROETHYLENE
Hazard Class: 6.1
UN/NA: UN1897
Packing Group: III
Information reported for product/size: 4L

International (Water, I.M.O.)

Proper Shipping Name: TETRACHLOROETHYLENE
Hazard Class: 6.1
UN/NA: UN1897
Packing Group: III
Information reported for product/size: 4L

International (Air, I.C.A.O.)

Proper Shipping Name: TETRACHLOROETHYLENE

Hazard Class: 6.1
UN/NA: UN1897
Packing Group: III
Information reported for product/size: 4L

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15. Regulatory Information

--------\Chemical Inventory Status - Part 1\---------------------------------

Ingredient	TSCA	EC	Japan	Australia
Tetrachloroethylene (127-18-4)	Yes	Yes	Yes	Yes

--------\Chemical Inventory Status - Part 2\---------------------------------

Ingredient	Korea	--Canada-- DSL	NDSL	Phil.
Tetrachloroethylene (127-18-4)	Yes	Yes	No	Yes

--------\Federal, State & International Regulations - Part 1\----------------

Ingredient	-SARA 302- RQ	TPQ	------SARA 313------ List	Chemical Catg.
Tetrachloroethylene (127-18-4)	No	No	Yes	No

--------\Federal, State & International Regulations - Part 2\----------------

Ingredient	CERCLA	-RCRA- 261.33	-TSCA- 8(d)
Tetrachloroethylene (127-18-4)	100	U210	No

Chemical Weapons Convention: No TSCA 12(b): No CDTA: No
SARA 311/312: Acute: Yes Chronic: Yes Fire: No Pressure: No
Reactivity: No (Pure / Liquid)

WARNING:
THIS PRODUCT CONTAINS A CHEMICAL(S) KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER.

Australian Hazchem Code: 2[Z]
Poison Schedule: None allocated.
WHMIS:
This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

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16. Other Information

NFPA Ratings: Health: **2** Flammability: **0** Reactivity: **0**
Label Hazard Warning:
WARNING! HARMFUL IF SWALLOWED, INHALED OR ABSORBED THROUGH SKIN. CAUSES IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT. AFFECTS CENTRAL NERVOUS SYSTEM, LIVER AND KIDNEYS. SUSPECT CANCER HAZARD. MAY CAUSE CANCER. Risk of cancer depends on level and duration of exposure.
Label Precautions:
Do not get in eyes, on skin, or on clothing.
Do not breathe vapor or mist.
Keep container closed.
Use only with adequate ventilation.
Wash thoroughly after handling.
Label First Aid:
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

If swallowed, DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person. In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. In all cases call a physician.

Product Use:
Laboratory Reagent.

Revision Information:
No Changes.

Disclaimer:
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Prepared by: Environmental Health & Safety
Phone Number: (314) 654-1600 (U.S.A.)

Attachment B
Resumes

James M. DeMartinis, P.G.

Senior Hydrogeologist

Fields of Competence

Soil and groundwater investigations and remediation in urban areas; Pesticide detection in soil and groundwater; Spill File closure; NAPL recovery and monitoring; Property transfers and site development

Experience Summary

Over 25 years experience providing consulting services to industrial and private clients. He has managed groundwater investigations involving Federal and State Superfund sites, RCRA closures, Voluntary Cleanup Agreements, Open Spill Files, Phase I and II Environmental Site Assessments and pesticide contamination.

Credentials

M.A., Earth and Environmental Sciences (Geology), Queens College, CUNY
B.S., Geology, Bates College
Professional Geologist, State of Kentucky
OSHA Health & Safety 40 Hour Training

Selected Projects

Island Trees UFSD, Levittown, New York-
Mr. DeMartinis supervised the investigation and remediation of the former indoor rifle range in the basement of the high school using innovative remedial techniques. The work was conducted under a consent order and under the scrutiny of the NYSDEC, NYSDOH, NCDH and School Board**.**

Residential Fuel Oil Spill Consulting, New York-
Mr. DeMartinis had assisted homeowners who have experienced fuel oil releases from leaky tanks and errant deliveries. He has interfaced with insurance companies/contractors on behalf of the homeowners and worked with the NYSDEC to obtain spill file closures.

Spill File Closures, New York-
Mr. Demartinis has assisted commercial clients with the closure of open spill files by compiling existing data, writing reports, supervising tank closures, soil remediation and groundwater monitoring/remediation. He has also assisted clients in determining who and what was responsible for the contamination and how to recover costs.

Panzar KFC Food, Valley Stream, New York - Mr. DeMartinis conducted Phase I Environmental Assessments at eight fast food restaurants in Brooklyn and Queens at the request of the potential buyer. As many of these sites were located on former gasoline station properties, open spill files were identified. Advice was provided to the client and law firm that led to a successful resolution of environmental issues and the completed transaction.

Major Oil Company, New York City - At over 30 service stations, Mr. DeMartinis supervised test drilling and soil/groundwater sampling in heavy traffic areas. Remedial programs were developed to remove NAPL and dissolved contaminants. File closures and consent agreements were negotiated with NYSDEC.

Allied Aviation, LaGuardia Airport, Flushing, NY – Mr. DeMartinis was the project manager for several projects at this airport fueling facility. His responsibilities include determining the extent and origin of LNAPL and dissolved product. The investigation had been complicated by historical spills/leaks, difficult drilling, heavy traffic, perched groundwater, and tidal fluctuations. The LNAPL at the facility has been removed to the satisfaction of the NYSDEC and Port Authoriy of New York and New Jersey.

City of New York Department of Parks and Recreation – Mr. DeMartinis directed the hydrogeologic studies and installation of irrigation wells at five NYC parks in Manhattan, the Bronx and Staten Island to conserve City water during a drought period. The wells were installed in crystalline bedrock, ground moraine, and glacial outwash.

City of New York Department of Parks and Recreation – Mr. DeMartinis managed the

hydrogeologic portion of the NYC Parks Golf Course Irrigation project. Responsibilities included evaluating the feasibility of installing irrigation wells at 12 locations in the Bronx, Queens, Staten Island, and Brooklyn; the test drilling and installation of wells at selected sites; reviewing water quality data; and attending meetings with the client, contractors, golf course personnel, and other consultants.

Remedial Action, Jewish Home and Hospital Bronx, NY - Mr. DeMartinis is working closely with the client and the NYSDEC to implement an approved Remedial Action Work Plan as part of a Voluntary Cleanup Agreement at a site proposed for an assisted living facility. This plan included the excavation of contaminated soils, remediation oversight, preparation of contract documents, field investigation/samples, and installation/operation of a soil vapor extraction remediation system. These actions led to the closure of an open spill file and site development.

Town of Oyster Bay - Mr. DeMartinis served as Project Manager for the groundwater monitoring program at the Old Bethpage Landfill. The purpose of the program was to acssess the progress of groundwater remediation and determine whether the Termination Criteria set forth in the Consent Decree had been met. Mr. DeMartinis was responsible for the productions of all quarterly and annual reports.

Town of North Hempstead - Mr. DeMartinis managed the upgrade and rehabilitation of an existing methane gas collection system at a Superfund site. He also directed the hydrogeologic investigations which eventually led to a groundwater remediation. Mr. DeMartinis also developed and executed a Community Relations/Citizens Participation Plan, which was accepted by the EPA and NYSDEC, as well as assisting the client in obtaining funding under the State Environmental Quality Bond Act.

Allied Aviation, JFK International Airport, Jamaica NY- Mr. DeMartinis directed the monitoring and remediation program at the Satellite Fuel Farm under the scrutiny of the NYSDEC and Port Authority of New York and New Jersey. The performance of LNAPL recovery wells is monitored on a routine basis and recommendations are made to enhance product recovery.

Oil Terminals, Bronx, NY -At one facility Mr. DeMartinis assisted in the delineation and remediation of petroleum impacts to the subsurface during a property transaction. At another terminal a NYSDEC Consent Order was closed after hydrogeologic investigations indicated that remediation of NAPL was successful.

Brookhaven National Laboratory, Upton, NY - Mr. DeMartinis investigated the source and extent of volatile organic compounds in groundwater beneath the waste management area. He developed a method to analyze core samples on-site for volatile organics and to select optimum monitoring well cluster locations and depths. A remedial program was later designed.

RI/FS, Superfund Site, Delaware - Mr. DeMartinis investigated the source and extent of a chlorinated organic plume. He installed and sampled over 40 wells to map the extent of the plume and DNAPL. Mr. DeMartinis conducted an electrical resistivity survey to determine continuity of an aquitard beneath the plume. He determined three dimensional groundwater flow patterns as part of the remedial feasibility.

RI/FS, Superfund Site, Massachusetts - This site was originally ranked 4th on the National Priorities List. Mr. DeMartinis negotiated, planned, and supervised a subsurface investigation at the 300-acre site including an extensive electromagnetic survey.

TRC Corporation, Harrisburg, PA - Mr. DeMartinis completed the investigation and remediation of a PCB oil spill in a perched aquifier. He designed and supervised the installation of a cement-bentonite slurry wall and perimeter drain to collect and prevent oil movement.

Bayer Corporation, Long Island - Mr. DeMartinis is the Project Manager for a groundwater monitoring study of an insecticide used on turf (homeowner and golf course), potatoes and vegetables. The NYSDEC required this study as a condition of registration. Mr. DeMartinis is working very closely with the NYSDEC, Suffolk County Department of Health Services, and the Cornell Cooperative Extension.

Acetochlor Registration Partnership, Midwestern United States - Mr. DeMartinis is the third party investigator for reported detections of agricultural chemicals in groundwater. Mr. DeMartinis visits well sites with reported detects, investigates and determines the likely cause. He works directly with individual state agencies and the USEPA Office of Pesticide Programs.

Monsanto, Various Sites - Mr. DeMartinis investigates pesticide detections in groundwater to determine their source. He recommends strategies to eliminate future detections.

Novartis, Groundwater Monitoring Program - Mr. DeMartinis directed this large scale groundwater monitoring program for a corn, peanut and potato herbicide. The study covered chemical use in GA, WI, IA and IL.

Novartis, California - Mr. DeMartinis investigated herbicide in soil and groundwater in four counties and reported his findings. He testified at public hearings pursuant to the California Food and Agricultural Code.

Agrichemical Company - Mr. DeMartinis evaluated hydrogeologic characteristics of approximately 500 counties in 34 states to identify areas vulnerable to groundwater contamination. Mr. DeMartinis surveyed agencies in agricultural states to obtain information on pesticide monitoring programs and data. He performed detailed analyses of the soil and geology in counties where pesticides were detected in groundwater to assess the reasonableness of the findings. Mr. DeMartinis also participated in the client's presentations to the USEPA and the USEPA Science Advisory Panel.

Publications:

"Acetochlor Ground Water Monitoring Program Investigation of Ground Water Detections." DeMartinis, JM, Hoogheem, TJ, Gustafson, JM, Hendley, P., Simmons, ND, and Durham, RB, Society of Environmental Toxicology and Chemistry, Washington, DC, November 1996, pp.17-21

"Natural and Man-Made Modes of Pesticide Entry in Agronomic Areas. DeMartinis, JM, and Cooper, SC. Mechanisms of Pesticide Movement into Ground Water. Lewis Publishers, Boca Raton, FL, 1994. (Honeycutt and Schabacker, editors).

"Agrochemical Ground-Water Studies", in Good Laboratory Practice Standards, American Chemical Society. Washington, DC, 1992

"Identification of Direct-Entry Pathways by Which Agricultural Chemicals Enter Ground Water." DeMartinis, JM, and Royce, KL, NWWA Conference on Agricultural Chemicals, February, 1990, pp.51-56

"Application of Good Laboratory Practice Standards to Agrichemical Ground-Water Field Studies." Cooper, SC, DeMartinis, JM, Society of Quality Assurance, Annual Meeting, Orlando, Florida, 1990, pp. C-120

"Hydrogeologic Site Assessment vs. Reality at One Chemical Plant," Proceedings from the Fourth National Symposium and Exposition on Aquifer Restoration and Ground-Water Monitoring, National Water Well Association, May 1984.

"Sensitivity Analysis for Pesticide Application on a Regional Site", Proceedings from NWWA Conference on Agricultural Impacts on Ground Water, Omaha, Nebraska, August 1986.

"Small-Scale Retrospective Ground-Water Monitoring Studies for Agricultural Chemicals: Study and Site Selection," Ground-Water Monitoring Review, Fall 1989.

Heather V. Sonnenberg

Project Engineer

Fields of Competence

Industrial Engineering including management, compliance and safety, plan review and design; Design and implementation of soil and ground water investigations; Soil exploration, Air emission evaluation, and regulatory compliance; Sub Surface Sanitary Disposal Systems Design; Phase I and Phase II Environmental Site Assessments; and Preparation of Municipal and regulatory applications.

Experience Summary

Prior to joining J.R. Holzmacher, Ms. Sonnenberg was employed as a production manager with an industrial engineering firm. Ms. Sonnenberg assisted in the development of the Modernized Boresight Module prototype produced for Lockheed Martin Corporation, which later resulted in a multi-million dollar contract award for the firm. Experience with both government and private contracts. Additional responsibilities included plan review and design, directing employees in operations, compliance and safety. Developed and initiated procedures to obtain ISO 9001 accreditation. Field Engineering Expertise includes oversight of soil borings, soil classification, controlled inspections, Phase I and II Environmental Site Assessments, site and building inspections, and sanitary and drainage inspections. Additional experience includes sanitary and drainage design, plan review, code review, reporting, inspection of both residential and commercial structures, and communications and submittals to regulatory agencies.

Credentials

B.S. Construction Management Engineering Technology, State University of New York at Farmingdale, 2010.

B.A. Economics, State University of New York at Stony Brook, 1999.

40-Hour HAZWOPER Training
ACI Certified
LI Healthcare Life Safety Association
NYSDEC Sediment & Erosion Control Certified
Habitat for Humanity Volunteer

Environmental Investigations

Under the direction of James M. DeMartinis, P.G., Senior Hydrogeologist, Ms. Sonnenberg has conducted several Phase I and Phase II investigations for properties located throughout Queens, Brooklyn and the Bronx. Many of these properties were previous gas stations, some with open NYSDEC spill files. Investigations include inspection of properties, identifying possible causes and issues affiliated with spills, reviewing previous record data, producing reports and correspondence with the regulatory agencies.

Ms. Sonnenberg works on several E-designated sites locates throughout the boroughs and produces the necessary reports to the NYC OER in order to obtain building permits.

Ms. Sonnenberg is certified as an inspector for the NYSDEC Sediment & Erosion Control and has provided regular weekly inspections which include SUNY Westbury and SUNY Farmingdale.

Inspections and Design

Under the direction of the lead Engineer, Ms. Sonnenberg took part in the design of site work, interior building design and is currently providing inspections for an Ambulatory Center.

Inspector of several sanitary designs and field inspections for large commercial sanitary systems.

Provided plan reviews on behalf of municipalities and owners to ensure proper site design.

Boring exploration field oversight at several locations. Provided soil classification and bearing capacities for proposed site development and assisted in preparation of geotechnical engineering reports.

Attachment C
Citizen Participation Plan

New York State Department of Environmental Conservation

State Superfund Program

Citizen Participation Plan

for

Myrtle/Irving Realty Associates, LLC

127-13 Merrick Boulevard
Jamaica, New York

April 2011

Contents

* * * * *

Note: The information presented in this Citizen Participation Plan was current as of the date of its approval by the New York State Department of Environmental Conservation. Portions of this Citizen Participation Plan may be revised during the site's investigation and cleanup process.

Responsible Party: **Myrtle/Irving Realty Associates, LLC (David Koptiev)**
Site Name: **127-13 Merrick Blvd ("Site")**
Site Address: **127-13 Merrick Blvd, Jamaica NY**
Site County: **Queens**
Site Number: **241128**

1. What is New York's State Superfund Program?

New York's State Superfund Program (SSF) identifies and characterizes suspected inactive hazardous waste disposal sites. Sites that pose a significant threat to public health or the environment, such as the Site identified above, undergo a process of investigation, evaluation, cleanup, and monitoring.

The New York State Department of Environmental Conservation (NYSDEC) administers the SSF Program with assistance and input from the New York State Department of Health (NYSDOH). When the parties responsible for the contamination of the Site are known ("Responsible Parties"), they often pay for or perform the investigation and evaluation of cleanup options under an enforceable consent order. At sites where responsible parties cannot be found or are unable or unwilling to fund an investigation, the State pays for the investigation and may try to recover costs from a Responsible Party after the investigation and cleanup are complete.

The SSF program contains investigation and cleanup requirements, ensuring that cleanups protect public health and the environment. For more information about the SSF program, go online at: http://www.dec.ny.gov/chemical/8439.html.

2. Citizen Participation Activities

Why NYSDEC Involves the Public and Why It Is Important

NYSDEC involves the public to improve the process of investigating and cleaning up contaminated sites, and to enable citizens to participate more fully in decisions that affect their health, environment, and social well being. NYSDEC provides opportunities for citizen involvement and encourages early two-way communication with citizens before decision makers form or adopt final positions.

Involving citizens affected and interest in site investigation and cleanup programs is important for many reasons. These include:

- Promoting the development of timely, effective site investigation and cleanup programs that protect public health and the environment;
- Improving public access to, and understanding of, issues and information related to a particular site and that site's remedial process;

- Providing citizens with early and continuing opportunities to participate in NYSDEC's site investigation and cleanup process;

- Ensuring that NYSDEC makes site investigation and cleanup decisions that benefit from input that reflects the interests and perspectives found within the affected community; and

- Encouraging dialogue to promote the exchange of information among the affected/interested public, State agencies, and other interested parties that strengthens trust among the parties, increases understanding of site and community issues and concerns, and improves decision making.

This Citizen Participation (CP) Plan provides information about how NYSDEC will inform and involve the public during the investigation and cleanup of the Site identified above. (The public information and involvement program will be carried out with assistance, as appropriate, from the Responsible Party.)

Project Contacts

Appendix A identifies NYSDEC project contact(s) to whom the public should address questions or request information about the site's investigation and cleanup program. The public's suggestions about this CP Plan and the CP program for the Site are always welcome. Interested people are encouraged to share their ideas and suggestions with the project contacts at any time.

Locations of Reports and Information

The locations of the reports and information related to the Site's remedial program also are identified in Appendix A. These locations provide convenient access to important project documents for public review and comment. Some documents may be placed on the NYSDEC web-site. If this occurs, NYSDEC will inform the public in fact sheets distributed about the Site and by other means, as appropriate.

Site Contact List

Appendix B contains the site contact list. This list has been developed to keep the community informed about, and involved in, the Site's investigation and cleanup process. The site contact list will be used periodically to distribute fact sheets that provide updates about the status of the project. These will include notifications of upcoming activities at the Site (such as fieldwork), as well as availability of project documents and announcements about public comment periods. The site contact list includes, at a minimum:

- Chief executive officer and planning board chairperson of each county, city, town and village in which the Site is located;
- Residents, owners, and occupants of the Site and properties adjacent to the Site;
- The public water supplier which services the area in which the Site is located;
- Any person who has requested to be placed on the site contact list;
- The administrator of any school or day care facility located on or near the Site for purposes of posting and/or dissemination of information at the facility; and
- Location(s) of reports and information.

The site contact list will be reviewed periodically and updated as appropriate. Individuals and organizations will be added to the site contact list upon request. Such requests should be submitted to the NYSDEC project contact(s) identified in Appendix A. Other additions to the site contact list may be made at the discretion of the NYSDEC project manager, in consultation with other NYSDEC staff as appropriate.

CP Activities

The table at the end of this section identifies the CP activities, at a minimum, that have been and will be conducted during the site's investigation and cleanup program. The public is informed about these CP activities through fact sheets and notices distributed at significant points during the program. Elements of the investigation and cleanup process that match up with the CP activities are explained briefly in Section 4.

- **Notices and fact sheets** help the interested and affected public to understand contamination issues related to a site, and the nature and progress of efforts to investigate and clean up a site.

- **Public forums, comment periods and contact with project managers** provide opportunities for the public to contribute information, opinions and perspectives that have potential to influence decisions about a site's investigation and cleanup.

The public is encouraged to contact project staff at any time during the Site's investigation and cleanup process with questions, comments, or requests for information.

This CP Plan may be revised due to changes in major issues of public concern identified in Section 3 or in the nature and scope of remedial activities. Modifications may include additions to the site contact list and changes in planned citizen participation activities.

Technical Assistance Grant

The Site identified above poses a significant threat to public health or the environment, so that a qualifying community group may apply for a Technical Assistance Grant (TAG). The purpose of a TAG is to provide funds to the qualifying community group to obtain independent technical assistance. This assistance helps the TAG recipient to interpret and understand existing environmental information about the nature and extent of contamination related to the Site and the development/implementation of a remedy.

An eligible community group must certify that its membership represents the interests of the community affected by the Site, and that its members' health, economic well-being, or enjoyment of the environment may be affected by a release or threatened release of contamination at the Site.

For more information about TAGs, go online at: http://www.dec.ny.gov/regulations/2590.html.

Note: The table identifying the citizen participation activities related to the Site's investigation and cleanup program follows on the next page:

Citizen Participation Requirements (Activities)	Timing of CP Activity(ies)
Before Start of Remedial Investigation (RI):	
CPrepare site contact list CEstablish document repository CPrepare Citizen Participation (CP) Plan CPlace approved RI Work Plan in document repository CDistribute fact sheet to site contact list that announces availability of RI Work Plan and describes upcoming RI field work	Before start of RI. Note: Draft CP Plan must be submitted to NYSDEC within 20 days of effective date of Consent Order. CP Plan must be approved by NYSDEC before distribution.
When NYSDEC Approves Remedial Investigation Report:	
CDistribute fact sheet to site contact list that describes RI results CPlace approved RI Report in document repository	When NYSDEC approves RI Report
When NYSDEC Releases Proposed Remedial Action Plan (PRAP):	
CPlace PRAP in document repository CDistribute fact sheet to site contact list that describes PRAP and announces 30-day comment period and public meeting CConduct 30-day public comment period CHold public meeting about PRAP	When NYSDEC releases PRAP. Comment period begins/ends as per dates identified in fact sheet. Public meeting is held during the comment period.
When NYSDEC Issues Record of Decision (ROD):	
CPlace ROD in document repository CDistribute notice to site contact list that announces availability of ROD. ROD includes responsiveness summary of significant comments about PRAP	When NYSDEC issues ROD
Before Start of Remedial Action:	
CDistribute fact sheet to site contact list that describes upcoming remedial action	Before the start of remedial action at the site.
When NYSDEC Issues Certificate of Completion (COC) or Similar Site Closure Document:	
CPlace COC in document repository CDistribute fact sheet to site contact list that announces issuance of COC	Within 10 days after NYSDEC issues COC or other similar site closure document

3. Major Issues of Public Concern

This section of the CP Plan identifies major issues of public concern that relate to the Site. Additional major issues of public concern may be identified during the course of the Site's investigation and cleanup process.

In advance of a potential property transaction, a site investigation was performed by J.R. Holzmacher P.E., LLC in 2006 to determine if a former dry cleaning operation at the Site affected the environmental integrity of the property. A floor drain was found in the basement and was stuffed with rags and other debris. When these items were removed a strong perchloroethylene (a/k/a perc or PCE) odor was evident. High concentrations of perc were detected in the soil and shallow groundwater within the floor drain.

A dry cleaning business uses a chemical dry cleaning solution of PCE to saturate clothing and remove dirt and stains. Exposure to PCE has been linked to kidney and liver damage. It causes cancer in laboratory animals. Short term exposure can result in dizziness, headaches and a rapid heart rate.

Concerns for this Site include: potential public health concerns associated with the migration and inhalation of contaminated vapors by the current tenant, adjacent tenants and neighboring residents; the potential for groundwater contamination and migration away from the Site; and the potential for significant soil contamination underneath the basement slab. Further investigation is required to understand the nature and extent of impacts to site and surrounding properties. In addition, other major issues of public concern may include potential environmental justice issues and language concerns. Potential impacts associated with future investigation and remedial work will be evaluated before those stages commence.

4. Site Information

Appendix C contains a map identifying the location of the Site.

127-13 Merrick Blvd, Jamaica (Tax Map Block # 12488, Lot 1) is currently occupied by a Wig and Hair business. It is one of eleven stores in a one story retail strip shopping center. It was reported that a dry cleaners (Parkway Cleaners) operated at this Site for at least 25 years (ceasing operations around 2005).

The group address for the complete strip mall building constructed in 1937 is 127-01 to 127-23 Merrick Blvd. The building occupies the entire street between Selover Road and Anderson Road. It is zoned for commercial use. Directly behind the building (to the north) is a residential neighborhood.

Site Description

CLocation – 127-13 Merrick Blvd, Jamaica, Queens NY
CSetting – Urban
CSite size – 1000 sq ft
CAdjacent properties – include commercial business to the east, west and south.

Residential homes are located to the north.

History of Site Use, Investigation, and Cleanup

In 2006, as part of a potential property transaction and in response to recommendation made in a Phase I Environmental Site Assessment, a limited site investigation was performed by JRH. The purpose was to determine if the former dry cleaning business affected the environmental integrity of the property. A floor drain stuffed with rags and other debris was found in the basement. When these items were removed from the drain a strong PCE -odor was evident.

On September 21, 2006 soil samples were collected by JRH inside the floor drain using a hand auger with extensions. Soil samples were collected at 1.5, 4.0 and 6.0 feet below grade (defined as the top of the basement slab). The 1.5-foot sample consisted of a heterogeneous mix of rags, plastic, glass and sand with a strong PCE odor. This fill was underlain by brown, medium to coarse-grained sand with sub rounded quartz pebbles and rock fragments. The sand unit was encountered at approximately 1.9 feet below grade with groundwater observed at 4.3 feet below grade. There was a strong perc-odor in the 4.0 and 6.0-foot samples collected in the native sand deposits. The 6.0-foot sample was collected below groundwater.

A two-inch diameter monitoring well point was installed in the floor drain and a groundwater sample collected. The monitoring well was sampled on September 21 and a chemical sheen/ strong perc-odor observed in the groundwater sample.

PCE was detected at 26,200 mg/kg or parts per million (ppm) in the 1.5-foot soil sample; 3,098 ppm in the 4.0-foot sample: and 4,737 ppm in the 6.0-foot sample. The NYSDEC Recommended Soil Clean-up Objective (RSCO) for the compound is 1.4 ppm, therefore, the detected soil concentrations are high. The groundwater sample indicated 30,827 ug/l or parts per billion (ppb) of perc. The New York State Groundwater Standard is 5 ppb.

5. Investigation and Cleanup Process

Investigation

A detailed study of the site will be performed by **Myrtle/Irving Realty Associates, LLC** under a consent order, with oversight by NYSDEC and NYSDOH. This detailed study is officially called

a Remedial Investigation. The investigation work plan is officially called a Remedial Investigation Work Plan and will be made available for public review at the locations of reports and information identified in Appendix A.

The site investigation has several goals:
1) Define the nature and extent of contamination in soil, surface water, groundwater and any other parts of the environment that may be affected;
2) Identify the source(s) of the contamination;
3) Assess the impact of the contamination on public health and the environment; and
4) Provide information to support the development of a proposed remedy to address the contamination.

NYSDOH reviews and recommends activities that will be performed during the investigation to ensure that a complete picture of potential health impacts is understood. Such activities include identifying the ways contamination can reach people, such as through direct contact, eating, drinking, or breathing.

The information collected during the site investigation will be summarized in a report.

Feasibility Study

After the site investigation has begun, **Myrtle/Irving Realty Associates, LLC**, with oversight by} NYSDEC will conduct a Feasibility Study. This study uses information developed during the site investigation to develop and evaluate potential ways to clean up contamination related to the Site. Another possibility is that the information collected during the site investigation may support the conclusion that no action, or no further action, is needed to address site-related contamination.

Proposed Remedy

The evaluation of possible remedies ends with a recommended proposal to eliminate the threat posed by contaminants at the Site. NYSDEC approves or prepares this proposal, officially called a Proposed Remedial Action Plan (PRAP). The PRAP describes the remedy preferred by NYSDEC, or a no action or no further action alternative. The PRAP summarizes the decision that led to the recommendation of the preferred remedy by discussing each alternative and the reasons for choosing or rejecting it. The goal of any cleanup plan is to protect public health and the environment. NYSDEC will present the PRAP to the public for its review and comment during a 30-day comment period and at a public meeting.

Selected Remedy

NYSDEC considers public comments as it selects the remedy to address contamination related to the Site. The selected remedy will be described in a document officially called a Record of

Decision (ROD). The ROD will explain why the remedy was selected and respond to public comments. This document will be placed in the location of reports and information. If the selected remedy is no action or no further action, NYSDEC may then take steps to reclassify the Site or remove the Site from its list of contaminated sites.

Cleanup Action

If the ROD for the Site calls for cleanup action, the project then moves to designing and performing the cleanup actions to address the Site contamination. When cleanup actions have been completed, NYSDEC will approve or prepare a Final Engineering Report (FER) that describes the cleanup actions undertaken and certifies that cleanup requirements have been achieved or will be achieved.

Certificate of Completion

Upon approval of the FER, NYSDEC may issue a Certificate of Completion (COC). The COC would recognize the findings of the FER. The COC would note that the cleanup program achieved a cleanup level consistent with specific categories of use for the Site. The recipient of the COC would be entitled to limited liability as long as it complied with the terms of the COC, and other conditions.

A COC may be modified or revoked if, for example, the recipient does not comply with the terms of the COC, or if the recipient commits fraud regarding its certification that it has met cleanup levels.

Site Management

Site management is the last phase of the site cleanup program. This phase begins when the COC is issued. Site management may be conducted by NYSDEC, or by the responsible party under NYSDEC oversight, if contamination will remain in place. Site management incorporates any institutional and engineering controls required to ensure that the remedy implemented for the Site remains protective of public health and the environment. All significant activities are detailed in a Site Management Plan (SMP).

An institutional control is a non-physical restriction on use of the Site, such as a deed restriction that would prevent or restrict certain uses of the property. An institutional control may be used when the cleanup action leaves some contamination that makes the Site suitable for some, but not all uses.

An engineering control is a physical barrier or method to manage contamination. Examples include: caps, covers, barriers, fences, and treatment of water supplies.

Site management also may include the operation and maintenance of a component of the remedy, such as a system that is pumping and treating groundwater. Site management continues until NYSDEC determines that it is no longer needed.

During the Site Management phase, NYSDEC may also take steps to reclassify the Site or remove the Site from the Registry.

Appendix A
Project Contacts and Locations of Reports and Information

Project Contacts

For information about the site investigation and cleanup program, the public may contact any of the following project staff:

New York State Department of Environmental Conservation (NYSDEC):

Dana Kaplan
Project Manager
NYSDEC Region 2
Division of Environmental Remediation
47-40 21st Street
Long Island City, NY 11101
Tel: (718) 482-7541

Thomas Panzone
Citizen Participation Specialist
NYSDEC Region 2
47-40 21st Street
Long Island City, NY 11101
Tel: (718) 482-4958

New York State Department of Health (NYSDOH):
Steven M. Bates
Project Manager
NYSDOH
547 River Street
Troy, NY 12180
Tel: (518) 402-7870

Locations of Reports and Information

The facilities identified below are being used to provide the public with convenient access to important project documents:

Rochdale Village Library
16909 137th Ave
Jamaica, NY
Attn: Mr. Booker
Phone: (718) 723-4440

NYSDEC Region 2
47-40 21st Street
Long Island City, NY 11101
Attn: Dana Kaplan
Hours: Mon-Fri 9-4
Phone: 718 482-4900
Call for an appointment.

Appendix B Site Contact List

David Koptiev
Myrtle/Irving Realty Associates, LLC
102-10 Metropolitan Ave, Suite 200
Forest Hills, NY 11375
Tel: (718) 268-1200

Queens Borough President
Helen M. Marshall
120-55 Queens Boulevard
Kew Gardens, NY 11424
Tel: (718) 286-3000
Email: info@queensbp.org

Jackie Boyce, Chairperson
Queens Community Board 12
Jamaica, New York 11432
Tel (718) 658-3308
Email: pbilbo@cb12queens.org

Yvonne Reddick, District Manager
Queens Community Board 12
Jamaica, New York 11432
Tel: (718) 658-3308
Email: pbilbo@cb12queens.org

Hon. Caswell F. Holloway
Commissioner
Department of Environmental Protection
59-17 Junction Boulevard, 13th Floor
Flushing, NY 11373

Santiago Taveras
Deputy Chancellor
for Community Engagement
New York City Department of Education
52 Chambers Street Room 320, New York, NY 10007
Tel: 212-374-5115

James DeMartinis
Senior Hydrogeologist
J.R. Holzmacher P.E., LLC
300 Wheeler Road, Suite 402
Hauppauge, NY 11788
Tel: (631) 234-2220

Greater Jamaica Development Corp.
90-04 161st Street
Jamaica, NY 11432
Tel: (718) 291-0282
Attn: Carlisle Towery, President
Email: bsg@gjdc.org

Eastern Queens Alliance, Inc.
P.O. Box 300818
Jamaica, NY 11430
Phone: 866 372-4255
Attn: Barbara Brown, Chairperson
Email: BEBrown@easternqueensalliance.org
128 Hong Kong, Inc.
127-01 Merrick Boulevard
Jamaica, NY 11434

NY Community Financial d/b/a Check Busters, LLC
127-03 Merrick Boulevard
Jamaica, NY 11434

Merrick Car Service
127-05 Merrick Boulevard
Jamaica, NY 11434

Medical Supply
127-15 Merrick Boulevard
Jamaica, NY 11434

Beauty Parlor
127-23 A Merrick Boulevard
Jamaica, NY 11434

Nail Salon
Zong Bin Wan Wan
127-11 Merrick Boulevard
Jamaica, NY 11434

Barber Shop
127-23 B&C Merrick Boulevard
Jamaica, NY 11434

Bar
127-19/21 Merrick Boulevard
Jamaica, NY 11434

John's Wig and Hair Inc.
127-13 Merrick Boulevard
Jamaica, NY 11434

Deli Store
127-17 Merrick Boulevard
Jamaica, NY 11434

Bowie LCP d/b/a Caesar's Pizza
127-09 Merrick Boulevard
Jamaica, NY 11434

John Kendrick,
Or Current Owner
176-36 Selover Rd
Jamaica, NY 11434

Donna Dickson,
Or Current Owner
178-11 Anderson Road
Jamaica, NY 11434

Andrew J Adelhardt
Current Owner
127-02 Merrick Blvd
Jamaica, NY 11434

SRJR Holdings, LLC
Or Current Owner
127-08 Merrick Boulevard
Jamaica, NY 11434

Maris Dominican Style
127-06 Merrick Blvd
Jamaica, NY 11434

Current Owner
126-19 Merrick Blvd
Jamaica, NY 11434

128 Merrick Realty LLC
Or Current Owner
128-01 Merrick Blvd
Jamaica, NY 11434

Local Elected Officials:

Hon. Michael Bloomberg
NYC Mayor
City Hall
New York, NY 10007

Hon. John Liu
NYC Comptroller
1 Centre Street
New York, NY 10007
Email: press@comptroller.nyc.gov

Hon. Bill de Blasio
Public Advocate
1 Centre Street, 15th Floor
New York, NY 10007
Email: mwing@pubadvocate.nyc.gov

Hon. Helen Marshall
Queens Borough President
120-55 Queens Boulevard
Kew Gardens, NY 11424
Email: info@queensbp.org

Hon. Charles Schumer
U.S. Senator
757 Third Avenue, Suite 17-02
New York, NY 10017
Email: senator@schumer.senate.gov

Hon. Kirsten Gillibrand
U.S. Senator
780 Third Avenue, Suite 2601
New York, NY 10017
Email: contact@gillibrand.senate.gov

Hon. Leroy Comrie
NYC Councilmember
113-43 Farmers Boulevard
Saint Albans, NY 11412
Email: comrie@council.nyc.ny.us

Hon.Shirley L. Huntley
NYS Senator
161-10 Jamaica Avenue, Suite 504
Jamaica, NY 11432
Email: shuntley@nysenate.gov

Hon. William Scarborough
NYS Assembly member
129-32 Merrick Boulevard
Jamaica, NY 11434

Hon. Gregory Meeks
U.S. House of Representatives
153-01 Jamaica Avenue, 2nd Floor
Jamaica, NY 11432

Government Officials:

John Wuthenow
Office of Environmental Planning & Assessment
NYC Dept. Environmental Protection
96-05 Horace Harding Expressway
Flushing, NY 11373

Amanda Burden
Director
NYC Dept. of City Planning
22 Reade Street
New York, NY 10007

Dr. Robert Kulikowski
Director
NYC Office of Environmental Remediation
253 Broadway, 14th Floor
New York, NY 10007

New York County Clerk's Office
Norman Goodman, County Clerk
60 Centre Street, Room 161
New York, NY 10007

Schools and Daycare Centers:

Helping Hand Daycare
6335 130th Ave # 10E
Jamaica, NY 11434-3011

Local Media Outlets:

New York Daily News
450 W. 33rd Street
New York, NY 10001
Email: news@edit.nydailynews.com

New York Post
1211 Avenue of the Americas
New York, NY 10036-8790

NY 1 News
75 Ninth Avenue
New York, NY 10011
Email: ny1news@ny1.com

Press of Southeast Queens
174-15 Horace Harding Expwy
Fresh Meadows, NY 11635

Email: editor@queenspress.com

Rochdale Village Bulletin
Phone: (718) 978-3007

Jamaica Times
41-02 Bell Blvd. 2nd Floor
Bayside, NY 11361
Email: timesledgernews@cnglocal.com

Queens Tribune
150-50 14th Road
Whitestone, NY 11357
Email: news@queenstribune.com

Queens Chronicle
P.O. Box 74-7769 62-33 Woodhaven Boulevard
Rego Park, NY 11374

Community, Civic, Religious & other Educational Institutions:

Queens Chamber of Commerce
75-20 Astoria Blvd, Suite 140
Jackson Heights, NY 11370
Attn: Jack Friedman, Executive Vice-President
Tel: (718) 898-8500
Fax: (718) 898-8599
Email: jfriedman@queenschamber.org
Website: http://www.queenschamber.org/home.html

Friendship Baptist Church
17610 127th Avenue
Jamaica, NY 11434-3342
Attn: Pastor

Beth Salem Baptist Church
17704 129th Avenue
Jamaica, NY 11434-5822
Email: info@bethsalem.com
Attn: Pastor

Springfield Community Church
17706 129th Avenue
NY 11434-5822
Attn: Pastor

Rochdale Village Civic Association
P.O. Box 340881
Rochdale Village Station
Rochdale Village, NY 11434
Attn: Hon. Clifton Stanley Diaz
Email: RochVillCivAssoc@aol.com

Residents, tenants, and property owners

RESIDENT/BUSINESS OWNER
179-01 ANDERSON ROAD
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
179-02 SELOVER ROAD
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
179-04 SELOVER ROAD
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
179-06 SELOVER ROAD
JAMAICA, NY 11434

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179-03 ANDERSON ROAD
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127-19 SIDWAY PLACE
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128-01 SIDWAY PLACE
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179-12 ZOLLER ROAD
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177-41 LESLIE ROAD
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
177-39 LESLIE ROAD
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
177-37 LESLIE ROAD
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
177-35 LESLIE ROAD
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
177-33 LESLIE ROAD
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
177-31 LESLIE ROAD
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RESIDENT/BUSINESS OWNER
177-29 LESLIE ROAD
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RESIDENT/BUSINESS OWNER
177-27 LESLIE ROAD
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
177-25 LESLIE ROAD
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
177-26 URSINA ROAD
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
177-28 URSINA ROAD
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RESIDENT/BUSINESS OWNER
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RESIDENT/BUSINESS OWNER
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RESIDENT/BUSINESS OWNER
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RESIDENT/BUSINESS OWNER
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RESIDENT/BUSINESS OWNER
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RESIDENT/BUSINESS OWNER
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RESIDENT/BUSINESS OWNER
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RESIDENT/BUSINESS OWNER
177-44 URSINA ROAD
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RESIDENT/BUSINESS OWNER
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RESIDENT/BUSINESS OWNER
177-48 URSINA ROAD
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RESIDENT/BUSINESS OWNER
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RESIDENT/BUSINESS OWNER
177-52 URSINA ROAD
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
120-52 178 STREET
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
120-54 178 STREET
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RESIDENT/BUSINESS OWNER
120-56 178 STREET
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RESIDENT/BUSINESS OWNER
120-58 178 STREET
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RESIDENT/BUSINESS OWNER
120-60 178 STREET
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
125-18 IRWIN PLACE
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
125-21 MERRICK BOULEVARD
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
125-09 MERRICK BOULEVARD
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
125-01 MERRICK BOULEVARD
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
125-02 IRWIN PLACE
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RESIDENT/BUSINESS OWNER
125-04 IRWIN PLACE
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RESIDENT/BUSINESS OWNER
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RESIDENT/BUSINESS OWNER
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RESIDENT/BUSINESS OWNER
125-16 IRWIN PLACE
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RESIDENT/BUSINESS OWNER
126-19 MERRICK BOULEVARD
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
126-07 MERRICK BOULEVARD
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RESIDENT/BUSINESS OWNER
126-01 MERRICK BOULEVARD
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RESIDENT/BUSINESS OWNER
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RESIDENT/BUSINESS OWNER
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RESIDENT/BUSINESS OWNER
127-23 MERRICK BOULEVARD
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
178-18 SELOVER ROAD
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128-13 MERRICK BOULEVARD
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178-42 ANDERSON ROAD
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RESIDENT/BUSINESS OWNER
127-14 SIDWAY PLACE
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
127-18 SIDWAY PLACE
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127-20 SIDWAY PLACE
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RESIDENT/BUSINESS OWNER
178-31 ZOLLER ROAD
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RESIDENT/BUSINESS OWNER
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RESIDENT/BUSINESS OWNER
129-21 MERRICK BOULEVARD
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128-02 SIDWAY PLACE
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128-16 SIDWAY PLACE
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RESIDENT/BUSINESS OWNER
178-29 EVELETH ROAD
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RESIDENT/BUSINESS OWNER
174-49 126 AVENUE
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125-02 MERRICK BOULEVARD
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RESIDENT/BUSINESS OWNER
127-25 176 STREET
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
127-23 176 STREET
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
127-19 176 STREET
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
127-17 176 STREET
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
127-13 176 STREET
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
127-11 176 STREET
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
127-07 176 STREET
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
127-05 176 STREET
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
127-01 176 STREET
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
176-34 127 AVENUE
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
127-02 177 STREET
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
127-06 177 STREET
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
127-08 177 STREET
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
127-12 177 STREET
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
127-14 177 STREET
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
127-18 177 STREET
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
127-20 177 STREET
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
127-24 177 STREET
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
127-06 MERRICK BOULEVARD
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
127-18 MERRICK BOULEVARD
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
127-03 177 STREET
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
127-05 177 STREET
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
127-09 177 STREET
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
128-06 MERRICK BOULEVARD
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
127-11 177 STREET
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
127-17 177 STREET
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
127-19 177 STREET
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
127-23 177 STREET
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
127-25 177 STREET
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
127-29 177 STREET
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
176-43 130 AVENUE
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
176-39 130 AVENUE
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
176-35 130 AVENUE
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
176-31 130 AVENUE
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
176-27 130 AVENUE
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
176-21 130 AVENUE
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
176-17 130 AVENUE
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
176-15 130 AVENUE
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
176-13 130 AVENUE
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
176-11 130 AVENUE
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
176-27 129 AVENUE
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
176-25 129 AVENUE
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
176-23 129 AVENUE
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
176-19 129 AVENUE
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
176-17 129 AVENUE
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
176-15 129 AVENUE
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
176-11 129 AVENUE
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
176-07 129 AVENUE
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
176-05 129 AVENUE
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
176-01 129 AVENUE
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
129-24 MERRICK BOULEVARD
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
129-26 MERRICK BOULEVARD
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
178-17 130 AVENUE
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
178-19 130 AVENUE
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
178-21 130 AVENUE
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
178-15 130 AVENUE
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
178-11 130 AVENUE
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
178-07 130 AVENUE
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
178-05 130 AVENUE
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
178-03 130 AVENUE
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
177-25 130 AVENUE
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
177-23 130 AVENUE
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
177-17 130 AVENUE
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
177-15 130 AVENUE
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
177-11 130 AVENUE
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
177-09 130 AVENUE
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
177-05 130 AVENUE
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
177-03 130 AVENUE
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
177-01 130 AVENUE
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
177-42 129 AVENUE
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
177-40 129 AVENUE
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
177-34 129 AVENUE
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
177-32 129 AVENUE
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
177-28 129 AVENUE
JAMAICA, NY 11434

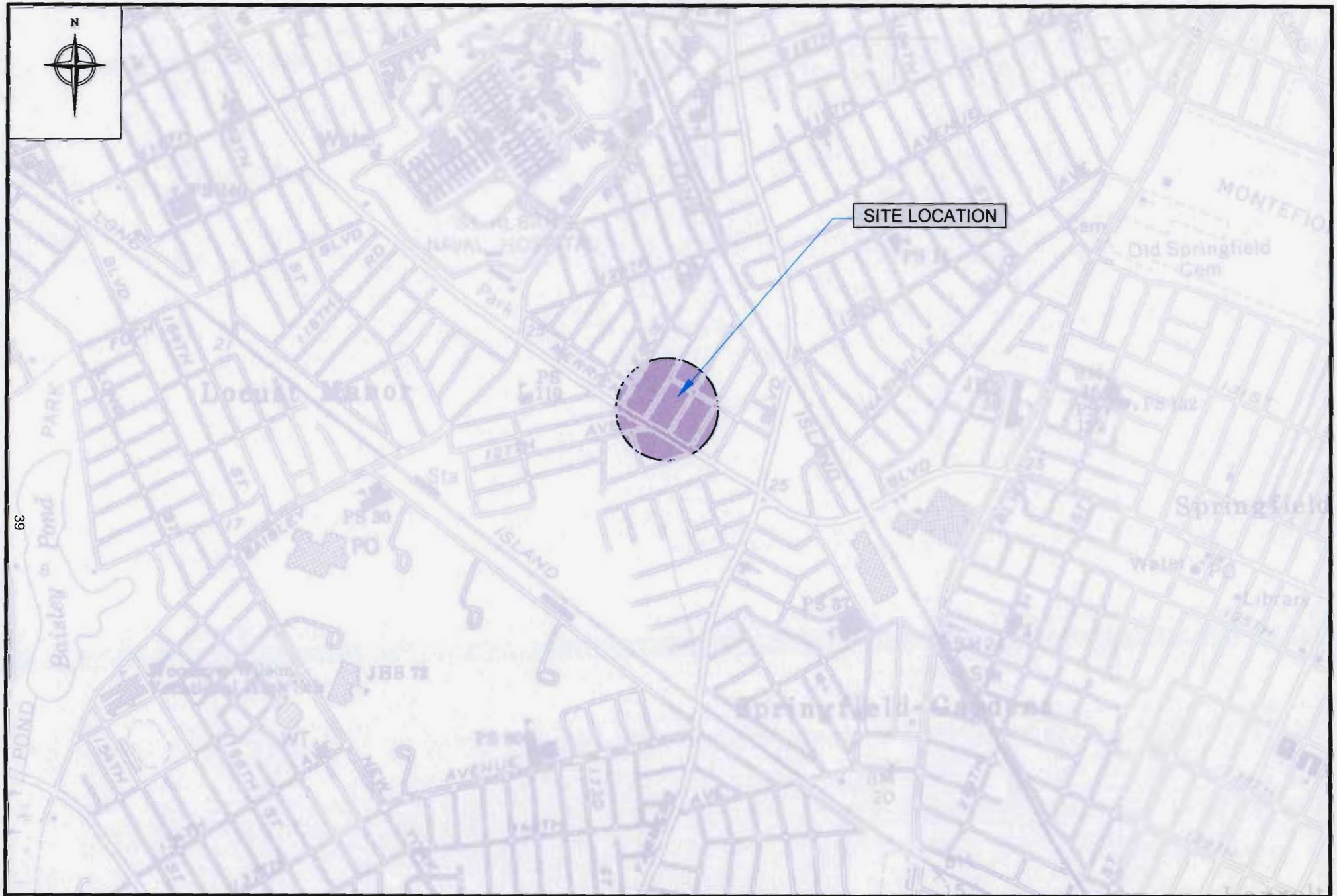
RESIDENT/BUSINESS OWNER
177-26 129 AVENUE
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
177-20 129 AVENUE
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
177-16 129 AVENUE
JAMAICA, NY 11434

RESIDENT/BUSINESS OWNER
177-12 129 AVENUE
JAMAICA, NY 11434

Appendix C Site Location Map



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PREPARED BY:

J.R. HOLZMACHER P.E., LLC

The Third Generation of Excellence
In Water Supply, Water Resources,
Civil and Environmental Engineering

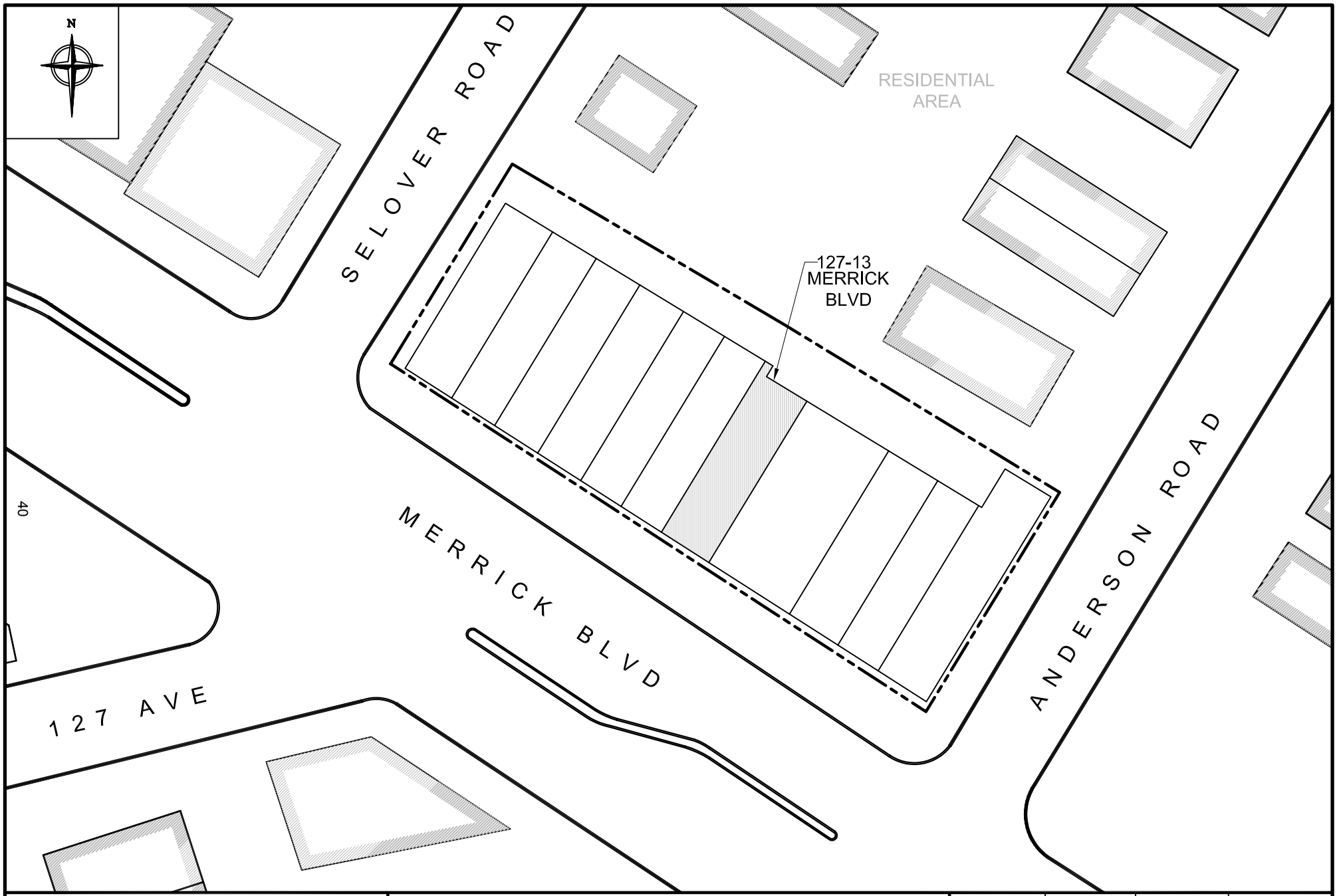
300 WHEELER ROAD
SUITE 402
HAUPPAUGE, NEW YORK 11788
PHONE ☎ (631) 234-2220
FAX ☎ (631) 234-2221
E-MAIL: info@holzmacher.com

TITLE:

APPENDIX C
SITE LOCATION MAP

127-13 MERRICK BLVD.
JAMAICA NY, 11434

DWN:	SCALE:	DATE:	PROJECT NO.:
DGH	1" = 1200'	3-16-2011	KoptD 11-02
CHKD:	APPD:	REV.:	NOTES:
JMD	JMD	-	-
FIGURE NO.:			
1			



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PHONE # (631) 234-2220
FAX # (631) 234-2221
E-MAIL: info@holzmacher.com

TITLE:

APPENDIX C
SITE PLAN

127-13 MERRICK BLVD.
JAMAICA NY, 11434

DWN:	SCALE:	DATE:	PROJECT NO.:
DGH	1" = 40'	3-16-2011	KoptD 11-02
CHKD:	APPD:	REV.:	NOTES:
JMD	JMD	-	-
FIGURE NO.:			
2			